

HAINES HIGHWAY

MILEPOSTS 3.5 TO 25.3

HAINES, ALASKA



ENVIRONMENTAL ASSESSMENT

JULY 2013

DOT&PF Project No. 68606
FEDERAL Project No. SHAK-095-6(28)



Federal Project SHAK-095-6(28)
AKSAS Projects 68606

Haines Highway Mileposts 3.5 to 25.3
Haines, Alaska

Environmental Assessment and Section 4(f) Evaluation

Submitted Pursuant to 42 USC 4332(2)(c), 23 USC 138, and 49 USC 303

By the:

United States Department of Transportation
Federal Highway Administration

And:

State of Alaska Department of Transportation and Public Facilities, Southeast Region

This action complies with Executive Order 12898, Environmental Justice; Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetlands; Executive Order 13112, Invasive Species; Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks; Executive Order 13007, Indian Sacred Sites; Executive Order 11593, Protection and Enhancement of the Cultural Environment; and Executive Order 13175, Consultation and Coordination with Indian Tribal Governments.

7/4/13

Date of Approval



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Project Summary: The Proposed Action would improve the Haines Highway between Milepost 3.5 to 25.3 by widening shoulders to 6 feet on each side, realigning most curves, providing sight distance to allow for passing zones, and replacing the Chilkat River Bridge that would have a width that matches the proposed roadway. Enhanced drainage would be provided at MPs 19 and 23 where water and sediments frequently overtop the highway.

TITLE VI POLICY STATEMENT

The State of Alaska Department of Transportation and Public Facilities (DOT&PF) hereby gives public notice that it is the policy of the DOT&PF to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, and related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America shall, on the grounds of race, color, sex, national origin, disability, or age, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the DOT&PF receives federal financial assistance.

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LIMITATION OF CLAIMS NOTICE

Per Section 1307 of the Federal Highway Administration (FHWA) Moving Ahead for Progress in the 21st Century Act (MAP-21), a Federal agency may publish a notice in the Federal Register, pursuant to 23 USC §139(I)(1), indicating that one or more Federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those Federal agency actions will be barred unless such claims are filed within 150 days after the date of publication of the notice, or within such shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims will apply.

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Appendix C	Section 4(f) References
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Appendix E	Section 106 Consultation
Appendix F.....	Essential Fish Habitat Assessment
Appendix G.....	Bald Eagle Conservation Measures
Appendix H.....	Comments and Coordination

(NOTE - STATION NUMBERS MAY DIFFER SLIGHTLY IN THE TECHNICAL REPORTS IN THE APPENDICES AS A RESULT OF MINOR DESIGN SHIFTS THAT HAVE OCCURRED TO AVOID SENSITIVE RESOURCES)

LIST OF ACRONYMS

AAC	Alaska Administrative Code
AADT	annual average daily traffic
AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council on Historic Preservation
ADF&G	Alaska Department of Fish and Game
AP&T	Alaska Power and Telephone
APDES	Alaska Pollutant Discharge Elimination System
ARC	Alaska Road Commission
AS	Alaska Statute
BMPs	Best Management Practices
CE	Categorical Exclusion
CFR	Code of Federal Regulations
CMP	corrugated metal pipe
CRC	Cultural Resource Consultants LLC
DCCED	Alaska Department of Commerce, Community and Economic Development
DCRA	Alaska Department of Commerce, Community and Economic Development Division of Community and Regional Affairs
DEC	State of Alaska Department of Environmental Conservation
DLWD	State of Alaska Department of Labor and Workforce Development
DMLW	State of Alaska Department of Natural Resources Division of Mining, Land and Water
DNR	State of Alaska Department of Natural Resources
DOT&PF	State of Alaska Department of Transportation and Public Facilities
DPOR	State of Alaska Department of Natural Resources Division of Parks and Outdoor Recreation
E.O.	Executive Order
EA	Environmental Assessment
EFH	Essential Fish Habitat
ESCP	Erosion and Sediment Control Plan
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
H&H	Hydrology and Hydraulics
HMCP	Hazardous Materials Control Plan
IDT	Interdisciplinary Team
IPEC	Inside Passage Electric Cooperative, Inc.
LWCF	Land and Water Conservation Fund
MOA	Memorandum of Agreement
MP	milepost
mph	miles per hour
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	United States National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OHW	ordinary high water
PEM1B	Palustrine, Emergent, Persistent, Saturated Wetland
PEM1H	Palustrine, Emergent, Persistent, Permanently Inundated Wetland
PER	Preliminary Engineering Report
PFO1C	Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded Wetland
PM	particulate matter
PMP	pipeline milepost
Preserve, the	Chilkat Bald Eagle Preserve

LIST OF ACRONYMS (cont)

PSS1B	Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Saturated Wetland
PSS1E	Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Seasonally Flooded/Saturated
PSS1H	Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Permanently Inundated Wetland
R3OW	Riverine, Upper Perennial, Open Water, Unknown Bottom
ROW	right-of-way
S&HI	Stream and Habitat Inventory
SHPO	State Historic Preservation Office(r)
SWPPP	Stormwater Pollution Prevention Plan
U.S.	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USNPS	United States National Park Service

1.0 PROPOSED ACTION

1.1 Introduction/Affected Environment

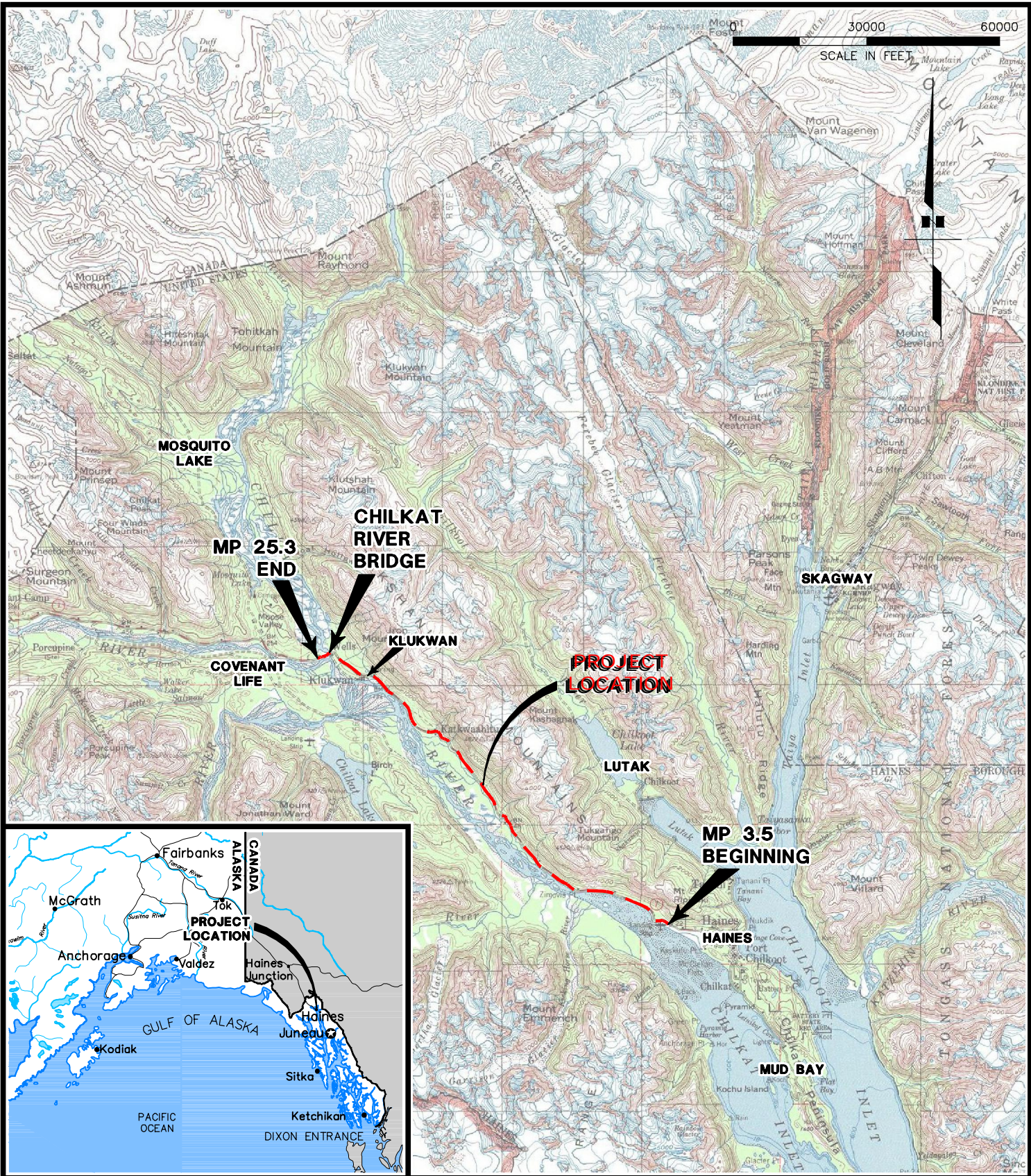
The State of Alaska Department of Transportation and Public Facilities (DOT&PF) in partnership with the Federal Highway Administration (FHWA) is proposing to address deficiencies on the Haines Highway from Milepost (MP) 3.5 to 25.3 (Figure 1.1-1). This Environmental Assessment (EA) is prepared in accordance with the DOT&PF Alaska Environmental Procedures Manual (DOT&PF, 2013a) and FHWA Technical Advisory 6640.8A. The purpose of this document is to provide environmental documentation and analysis in accordance with the National Environmental Policy Act (NEPA) for federally funded projects.

The Haines Highway begins in Haines, Alaska, and ends at the Alaska Highway in Haines Junction, Yukon Territory, Canada. It generally follows a travel corridor used for centuries by the Chilkat Tlingit as well as the Dalton Trail established in the 1890s from Haines to Klukshu Lake in the Yukon Territory (www.Sheldonmuseum.org; Gates, 2012). From Klukshu, it veers west to join the Alaska Highway at Haines Junction. The Haines Highway is one of two major highways connecting Southeast Alaska to the continental highway system via the Alaska Highway and the Alaska Marine Highway System. The Haines Highway was originally constructed in 1943 and has been periodically upgraded over the years, with the portion from the Bluffs (MP 25.3) to the Canadian border (MP 40) being the most recently completed.

The Haines Highway is constructed to meet a 55 miles per hour (mph) design standard¹ on either side of the proposed project corridor. A road or highway designed to a 55 mph standard has travel lanes and shoulder widths, curves, sight distances, and intersections or driveways constructed to provide safe traffic conditions at a moving speed of 55 mph.

Haines Highway is on the northeastern side of the Chilkat River, a glacial fed braided river system that is up to 1 mile wide at the beginning of the project and about 0.1 mile wide at the Chilkat River Bridge near the end of the project. Riverine, wetland, and forest habitats in the Chilkat River Valley support multiple salmon runs. Bald eagles, bear, and other species prey on

¹ DOT&PF, 2005; AASHTO, 2011; AASHTO, 2013



Project Location
and
Vicinity Map

TS 28/29/30 South, R56/57/58/59 East,
Copper River Meridian, Alaska.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

DOT & PF Project No. 68606
HAINES HIGHWAY
MILEPOST 3.5 - 25.3

Haines, Alaska

DATE: JANUARY 2013

FIGURE 1.1-1

salmon and other fish species. The Chilkat Valley is within the traditional territory of the Chilkat Tlingit. Subsistence fishing and hunting are important activities today.

The Haines Highway passes through and provides access to the Chilkat Bald Eagle Preserve (the Preserve). The Preserve hosts the largest concentration of bald eagles in the world and attracts high numbers of visitors during the peak eagle gathering period each year.

The Chilkat Valley also provides multiple recreation opportunities including wildlife viewing, camping, hiking, fishing, hunting, and boating.

In some areas above Haines Highway, the Chilkat Mountain slopes are unstable resulting in slide areas. Boulders, cobbles, gravels, sands and silts (combined into what is call “debris”) erode from the Chilkat Mountains. When debris becomes saturated with rain or snowmelt, it flows down the mountainside, sometimes at high rates of speed. These debris flows emerge onto broader valley slopes, losing velocity and depositing the sediments as a fan shape. As a result, debris and water frequently overtop the highway near MP 19 and 23. The debris flow areas near MP 19 and 23 are designated as the number one and number nine slope stability hazards for the entire state of Alaska (DOT&PF, 2011b).

Adjacent to the Haines Highway is the Haines-Fairbanks Pipeline, constructed in the 1950s to transport fuel from the port at Haines to military bases in the Interior. The portion of the pipeline from Haines to Tok was shut down in 1970. Subsequently, local utility companies have used the abandoned pipeline as a conduit for utility services. The Haines-Fairbanks Pipeline has been determined to be eligible for the National Register of Historic Places (NRHP) as a discontinuous district. There is a Haines-Fairbanks Pipeline gate valve within the Proposed Action’s footprint near the Chilkat River Bridge.

In 2007 the *Haines Highway Corridor Partnership Plan* was prepared by the Haines Borough for submission to FHWA (Haines City and Borough, 2007). The Haines Highway was subsequently designated a National Scenic Byway.

1.2 Proposed Action Components

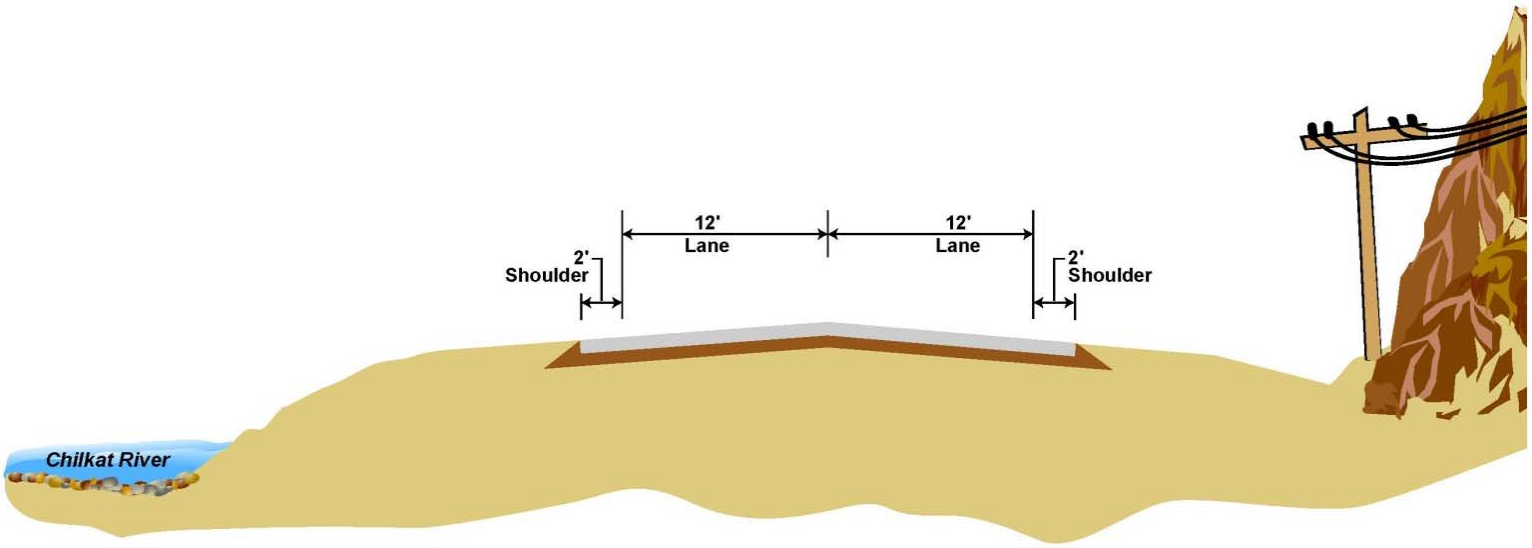
The Haines Highway is a low volume rural highway and is classified as a rural principle arterial. The annual average daily traffic (AADT) counts are less than 600 vehicles per day. Access is typically provided by driveways rather than intersections. Its primary function is to provide mobility² for long distance through travel. The secondary purpose is to provide access to local destinations. The highway has two 12-foot travel lanes and 2-foot shoulders (Figure 1.2-1). A vehicular capacity analysis for the project was completed as a portion of a Preliminary Engineering Report (page 17, DOWL HKM, 2010c) and concluded two travel lanes would meet present and future traffic demands for a required design life of 20 years (2033).

The existing Chilkat River Bridge would be replaced with a new bridge with a required design life of 75 years (American Association of State Highway and Transportation Officials [AASHTO], 2013). Design standards for bridges require durability beyond highway design life to reduce long-term capital costs.

The Proposed Action would improve the Haines Highway, replace the Chilkat River Bridge, provide highway protection at debris flow areas, and improve intersections, driveways, and recreational turnout accesses. The Proposed Action components are listed below and provided in more detail by highway segment in Table 1.2-1. Figure Set A, at the end of this EA text, visually provides the existing right-of-way (ROW), proposed ROW acquisitions/relinquishments, and cut and fill limits of Proposed Action over aerial photographs.

Construction of the Proposed Action would occur in multiple phases. The order and number of phases would vary depending on funding.

² The FHWA Planning Glossary defines mobility as, “The ability to move or be moved from place to place”



**Figure 1.2-1: Existing Typical Section
(not to scale)**

Table 1.2-1: Proposed Action

Approximate Highway Segment	Highway Improvements	Resource	Proposed Actions
MP 3.5 to 7.5	Minor highway realignment to meet design standards	Utilities	Realignment affects utility corridor; relocation of utilities required
		Wetlands	Wetland fill for widening from MP 4.5 to 7.5
		Essential Fish Habitat (EFH)/Streams	Fill in Chilkat River to widen shoulders in eight areas between MP 5.5 to 7.5; 10 anadromous streams impacted
		ROW	ROW acquisition of private land in rock cut areas in areas; conservation easement on private land needed for river realignment
MP 7.5 to 10	Highway realignment toward Chilkat River	Utilities	Widening affects utility corridor for most of segment; relocation of utilities required
		Wetlands	Wetland fill for widening and realignment from MP 9.5 to past MP 10
		EFH/Streams	Fill in Chilkat River for realignment in sixteen areas; three anadromous streams impacted
		ROW	ROW encroachments to be resolved between MP 7.5 and 8; ROW acquisition from the Preserve at MP 8.5; ROW acquisition from Native Allotment near MP 9.5, ROW acquisition of private land near MP 10
		Section 4(f)	ROW acquisition from the Preserve
MP 10 to 16.5	Minor highway realignment to meet design standards with design exceptions between Sta. 625 and Sta. 670 to avoid impacts to sensitive resources	Utilities	Realignment affects utility corridor near MPs 10, 11.5, 13.5 to 14.5, and 15.5 to 16.5; relocation of utilities required
		Wetlands	Wetland fill primarily for widening from MP 10 to 11.5, wetland fill for realignment from MP 11.5 to 12; wetland fill in three areas from MP 12.5 to 13.5 for widening; wetland fill near MP 14 for realignment; wetland fill in four areas from MP 14.5 to 16.5 for widening
		EFH/Streams	Fill in Chilkat River for realignment in fifteen areas; eight anadromous streams impacted
		ROW	Special use permit from the Preserve near MP 10 for stream realignment; ROW acquisition from State near MP 13.5

Table 1.2-1 (cont): Proposed Action

Approximate Highway Segment	Highway Improvements	Resource	Proposed Actions
MP 16.5 to 17.5	Highway realignment	Utilities	Realignment affects utility corridor from MP 16.5 to 17.5; relocation of utilities required
		Wetlands	Wetland fill near MP 17 and 17.5 for realignment
		EFH/Streams	Two anadromous streams impacted
		ROW	Special use permit from the Preserve near MP 17 for stream realignment; ROW acquisition from State near MP 17; ROW acquisition from the Preserve near MP 17; ROW acquisition of private land near MP 17; conservation easement on private land needed for river realignment
		Section 4(f)	ROW acquisition from the Preserve
MP 17.5 to 20.5	Minor highway realignment and major drainage improvements at MP 19 debris flow area	Utilities	Realignment affects utility corridor from MP 19 to 19.5 and MP 20 to 20.5; relocation of utilities required
		Wetlands	Wetland fill for widening in three small areas between MP 17.5 to 20.5
		EFH/Streams	One anadromous stream impacted
		ROW	ROW acquisition from Chilkat Indian Village near MP 20.5
MP 20.5 to 23	Minor highway realignment and major drainage improvements at MP 23 debris flow area. Re-alignment of Chilkat Ave. intersection with Haines Highway.	Utilities	Realignment affects utility corridor from MP 20.5 to 20 and MP 22.5 to 23; relocation of utilities required
		Wetlands	Wetland fill for widening near MP 21.5 and near MP 23
		ROW	Small ROW acquisition from Chilkat Indian Village at intersection.
		EFH/Streams	One anadromous stream impacted
MP 23 to 24	Highway realignment and construct new bridge	Utilities	Realignment affects utility corridor from MP 23 to 24; relocation of utilities required
		Wetlands	Wetland fill at Chilkat River Bridge site and near MP 24
		EFH/Streams	Fill in Chilkat River for new bridge abutments and piers; one anadromous stream impacted
		ROW	Requires partial acquisition of Native allotments from MP 23 to 24 for highway realignment
		Section 4(f)	Removal of Chilkat River Bridge (historic property); removal of Gate Valve 4 (historic property)
MP 24 to 25.3	Highway widening only	NA	NA

Improvements to Haines Highway

1. Realign sections of the highway and straighten most curves to meet design standards with the exception of two curves. Curves in the vicinity of MP 13 would not be straightened to avoid sensitive resources and to keep the project costs within available funding.
2. Add passing zones³.
3. Widen the roadway shoulders to a continuous 6-foot width and provide minimum sight distance to meet design standards (Figures 1.2-1 through 1.2-3).
4. Construct drainage ditches and upgrade, replace, and/or add new culverts where appropriate.
5. Repave and restripe the roadway and add new signage.
6. Rehabilitate or relocate driveways, turnout access points, and road intersections (including Chilkat Avenue, Klukwan), to meet design standards.
7. Install or upgrade guardrails and other safety features along the highway where needed (Figure 1.2-3).
8. Modify the Haines-Fairbanks Pipeline Gate Valve 4's surrounding concrete vault to protect the gate valve and provide a safe road embankment.
9. Acquire approximately 25 acres of ROW.
10. Relocate utilities where required. Maintain access to utilities not relocated.

Replacement of Chilkat River Bridge

1. Install a temporary bridge downstream to be used as a construction staging platform.
2. Construct a new bridge directly adjacent to and downstream of the existing bridge with the same lane and shoulder widths as the proposed road (Figure 1.2-4). The new bridge would be constructed to meet the following criteria:
 - a. a 55 mph design speed,
 - b. current seismic standards, and

³ A passing zone is an area on the highway route where the roadway geometry and sight distance permits faster vehicles to overtake slower vehicles in the lane normally used by opposing traffic. Dashed yellow centerline markings indicate where passing is permitted on two-lane, two-way roadways. Personal communication Pat Carroll, P.E., DOT&PF to Jane Gendron, DOT&PF Environmental Impact Manager, May 20, 2013.

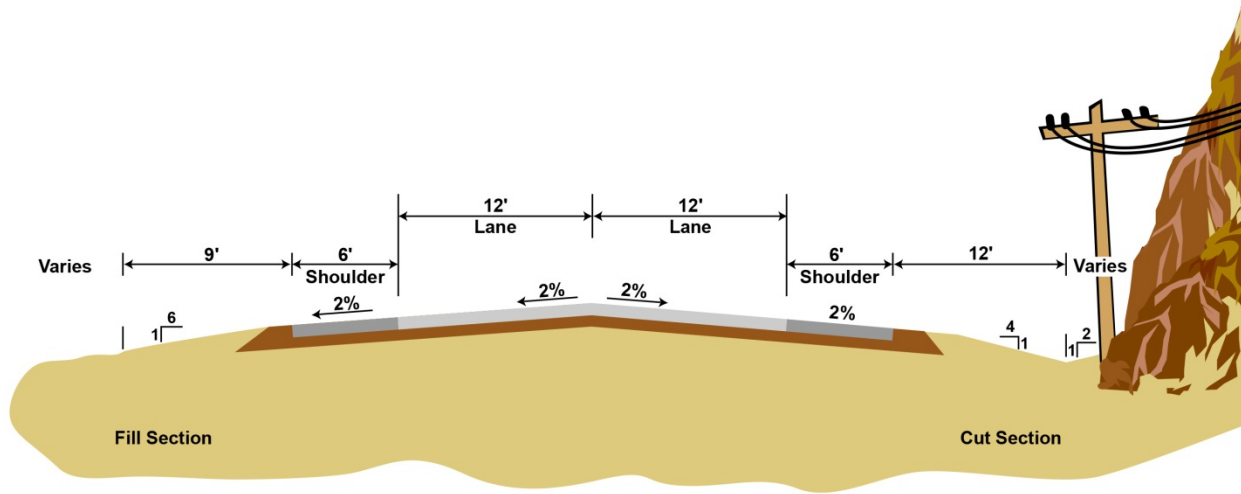


Figure 1.2-2: Proposed Typical Section
(not to scale)

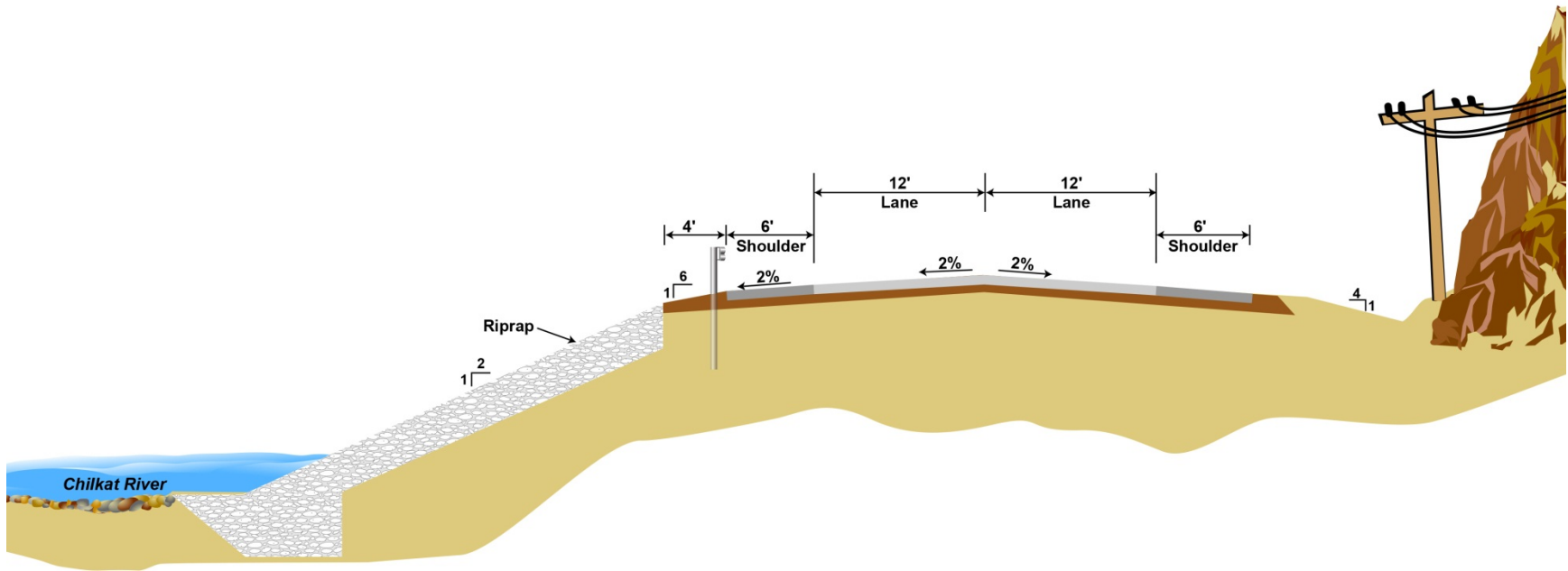
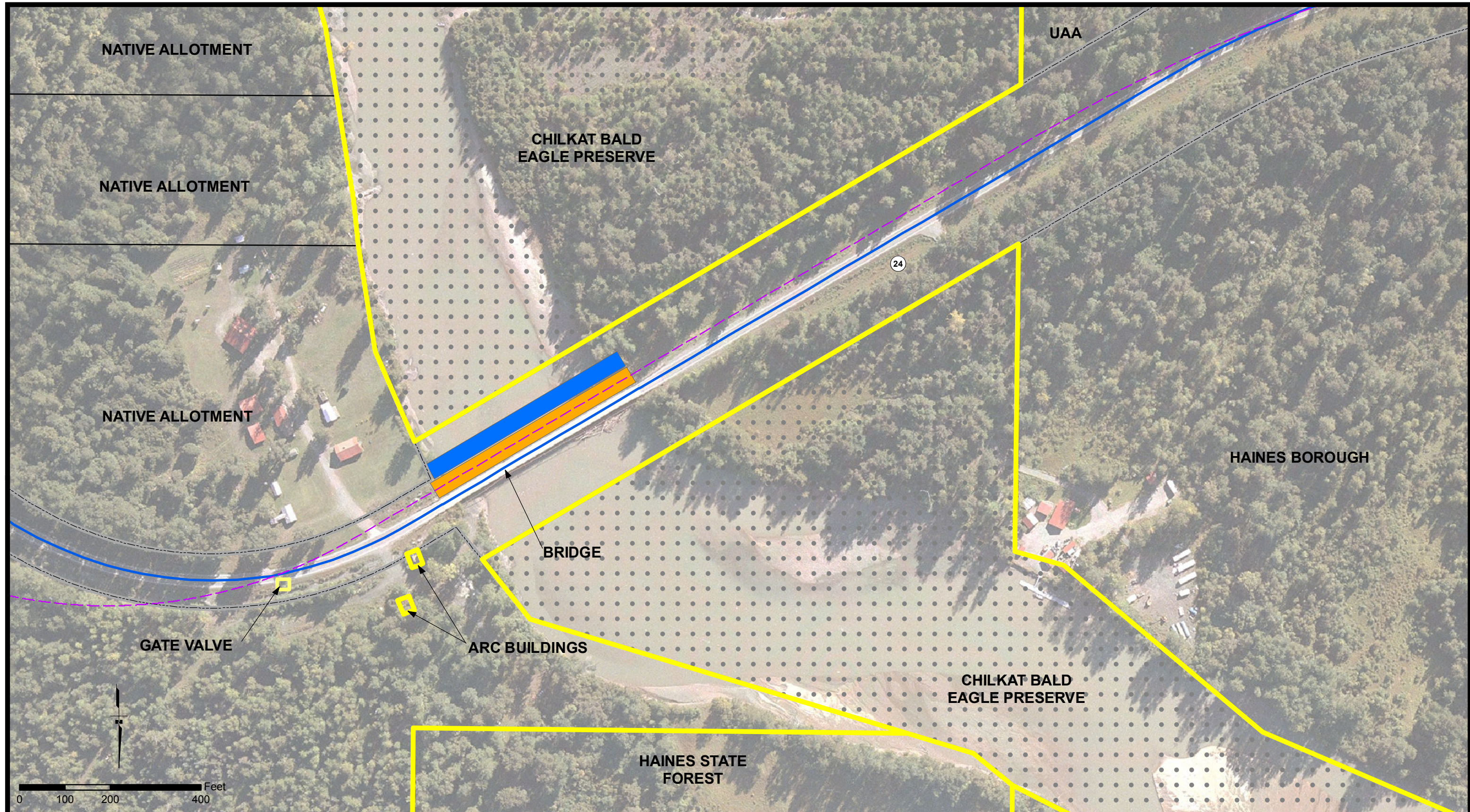


Figure 1.2-3: Typical Section with Guardrail
(not to scale)

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- Existing Road Centerline
- - - Proposed Alignment
- Existing ROW
- Milepost
- Proposed New Bridge
- Temporary Work Bridge
- Chilkat Bald Eagle Preserve
- Section 4(f) Property

Proposed New Chilkat River Bridge Alignment

TS 28/29/30 S, R 56/57/58/59 E,
Copper River Meridian, Alaska



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
DOT & PF Project No. 68606
HAINES HIGHWAY
MILEPOST 3.5 - 25.3

Haines, Alaska

DATE: July 05, 2013

FIGURE 1.2-4

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- c. accommodate freight vehicles carrying heavier industrial loads than currently accommodated by the bridge to provide for potential future needs beyond the highway design life of 20 years.
3. Remove existing bridge deck and rail; cut and remove foundation structures including remnant pilings from previous bridge structures.

Improvements for Highway Protection at Debris and Water Flood Flow Areas

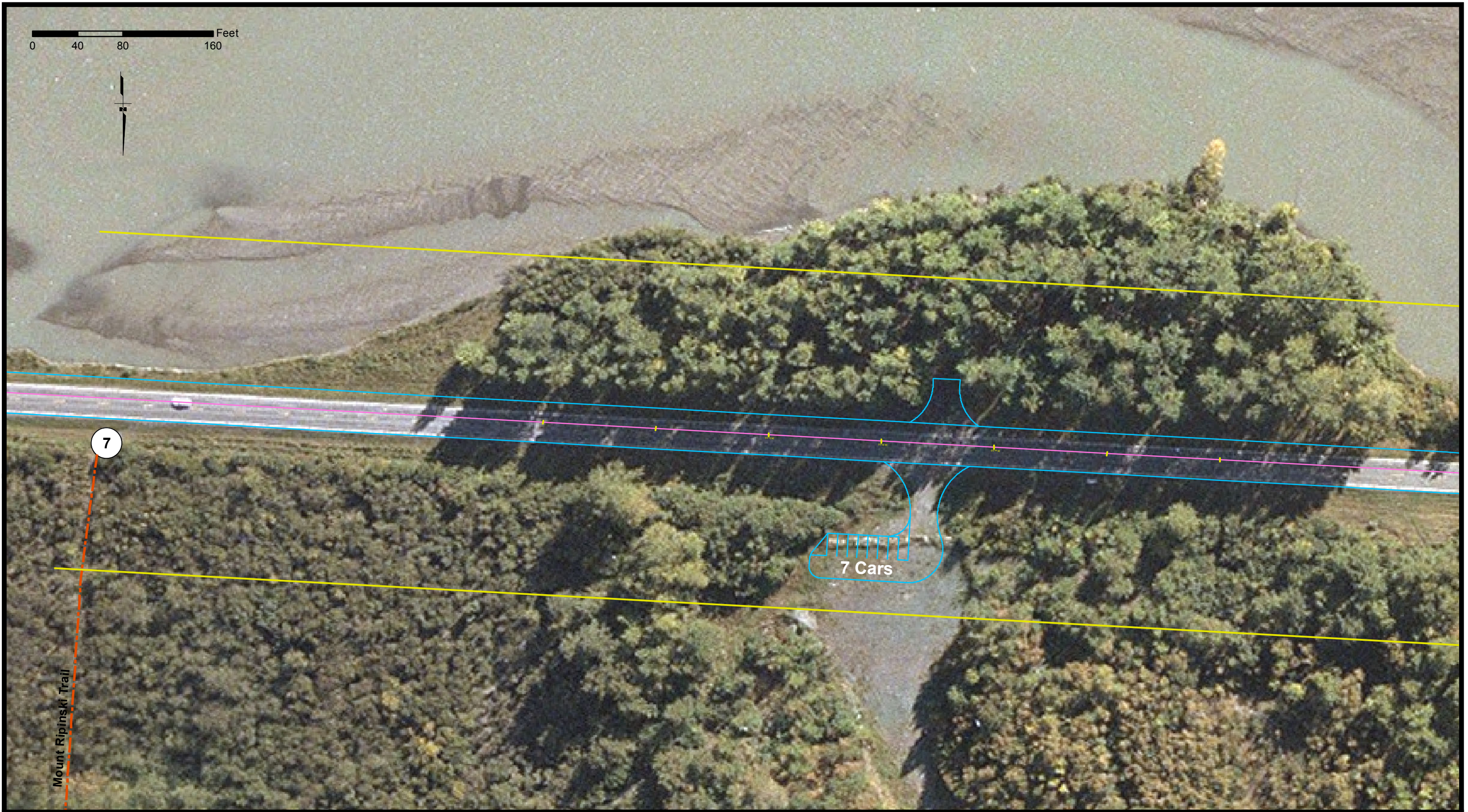
1. Raise the elevation of the highway 15 to 18 feet at MP 19 and 23.
2. Install four to six larger diameter culverts each at debris flow areas near MP 19 and 23.

Improvements for Recreational Access






1. Widen roadway shoulders from 2 feet to 6 feet to improve bicycle capacity.
2. Construct parking area for access to the Mount Ripinski Trailhead (Figure 1.2-5).
3. Improve surfacing and grading of turnouts within ROW.
4. Improve safe access to the Chilkat River recreational areas.

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0 40 80 160 Feet



Mount Ripinski Trail

-  Proposed Centerline
-  Proposed Edge of Pavement
-  ROW
-  Milepost
-  Mount Ripinski Trail

New Mount Ripinski Trailhead Turnout

TS 28/29/30 S, R 56/57/58/59 E,
Copper River Meridian, Alaska



STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 DOT & PF Project No. 68606
 HAINES HIGHWAY
 MILEPOST 3.5 - 25.3

Haines, Alaska

DATE: May 22, 2013

FIGURE 1.2-5

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1.3 Use of State Funds

Preliminary engineering was performed using Federal funds to document the design criteria and technical issues as necessary to sufficiently evaluate alternatives and assess impacts. Due to funding obligations and pressure to begin the project, the schedule would not accommodate the FHWA required linear sequence of ROW acquisition and final design tasks following the completion of the EA and the Decision Document. In order to meet the schedule requirements, DOT&PF initiated the ROW acquisition efforts and final design efforts using State funds in advance of completion of the NEPA process and FHWA approval. The FHWA was notified of this action. FHWA will assure that the results of these early activities will not bias the required NEPA process for the Proposed Action.

If the Proposed Action is selected to move forward, DOT&PF will also use State funds to add structural components (beyond what is necessary for current and projected traffic) to the Chilkat River Bridge that would allow the new bridge to support heavier traffic loads. DOT&PF proposes this additional action because the design life of the bridge is 75 years and constructing a stronger bridge now would accommodate potential future needs. The footprint of a bridge that supports heavier loads would be the same as a standard loading bridge and construction and operation impacts would be the same.

2.0 PURPOSE AND NEED

Project Purpose

The Haines Highway is a major highway linking Southeast Alaska with the intercontinental network of road and is the primary surface transportation link between Southeast Alaska and Interior Alaska.

The purpose of this project is to address:

1. highway deficiencies between MP 3.5 and 25.3 and bring the highway up to a 55 mph design standard, as practicable, so it is consistent with the adjacent highway segments;
2. bridge deficiencies;
3. highway instability caused by debris and water flooding; and
4. recreational access deficiencies.

Project Need

The project is needed to address the following listed deficiencies found in the 21.8 miles of Haines Highway between MP 3.5 and 25.3:

1. Highway curves:
 - a. Eighty-five percent of curves are below minimum curve length and 25% are below minimum curve radius for a 55 mph roadway (*Preliminary Engineering Report*, DOWL HKM 2010c).
 - b. Approximately 85% of the corridor is a no passing zone, resulting in drivers spending an average of 35% of the time following slower vehicles (*Preliminary Engineering Report*, DOWL HKM 2010c).
2. Highway shoulders do not provide:
 - a. a stable clear recovery area for drivers that leave the driving lane,
 - b. emergency storage of disabled vehicles,

- c. a continuous and adequate width needed for safe pedestrian or bicycle use,
 - d. snow management and storage, and
 - e. maintenance vehicles space to work safely outside the driving lanes.
3. Highway pavement has exceeded its 20-year life expectancy and is showing signs of wear and cracking.
4. Driveways entering the highway do not have minimum sight distance for a 55 mph design speed.
5. The Chilkat River Bridge is deficient because:
- a. The bridge was built in 1958, has exceeded its 50-year life expectancy, and is showing signs of deterioration.
 - b. The bridge width does not meet the 55 mph design speed standard.
 - c. The bridge is 24-foot-wide and does not match the adjacent 28-foot-wide highway pavement.
 - d. The bridge does not meet current seismic standards and places the bridge at increased risk of collapse during a seismic event.
6. Saturated debris flows from the mountainsides periodically overtop the highway near MP 19 and 23. Excessive maintenance is needed for highway stability and safety at these two locations. Debris and water flow events:
- a. Erode and damage the highway surface. Between 2004 and 2012, the highway has been closed about ten times including a three- to four-day closure during Thanksgiving of 2005. Most of these closures were for a day or so (personal communication, Scott Gray, DOT&PF Southeast Region Maintenance Chief to Jim Scholl, DOT&PF Environmental Analyst, April 2013).
 - b. Requires frequent maintenance to clean up deposits on the highway. Depths of debris material can be 5 to 20 feet.

7. The Haines Highway between MP 3.5 and 25.3 has deficiencies for recreational users including vehicles, bicycles, and pedestrians:
 - a. Many vehicle turnouts do not meet sight distance or intersection criteria for this location. The State of Alaska Department of Natural Resources (DNR) has identified a number of minor driveway issues on twenty-seven existing recreational turnouts along this roadway as it passes through the Preserve.
 - b. There is no parking for the Mount Ripinski Trail. Cars parked near the trail partially obstruct the driving lanes.
 - c. Pedestrians and bicycles share the highway with vehicles. The 12-foot traffic lanes and 2-foot shoulders are not designed for pedestrian and bicycle use.

3.0 ALTERNATIVES

Two alternatives are evaluated in this document: the No-Action and the Proposed Action Alternatives. One other major road and bridge realignment alternative was considered but dismissed from further evaluation and is discussed briefly below. No alternate road corridors were considered.

Proposed Action Alternative

This alternative includes upgrades to the existing roadway with a goal of meeting design standards by addressing deficiencies listed in Section 2.0. The Proposed Action is described in detail in Section 1.0. Environmental effects of this alternative are provided in Section 4.0.

No-Action Alternative

Under this alternative, no action would be taken other than continued maintenance activities. Deficiencies described in Section 2.0 would not be addressed. The No-Action Alternative would make no changes to Haines Highway MP 3.5 to 25.3 and would not meet the purpose and need for this project. Environmental effects of this alternative are provided in Section 4.0.

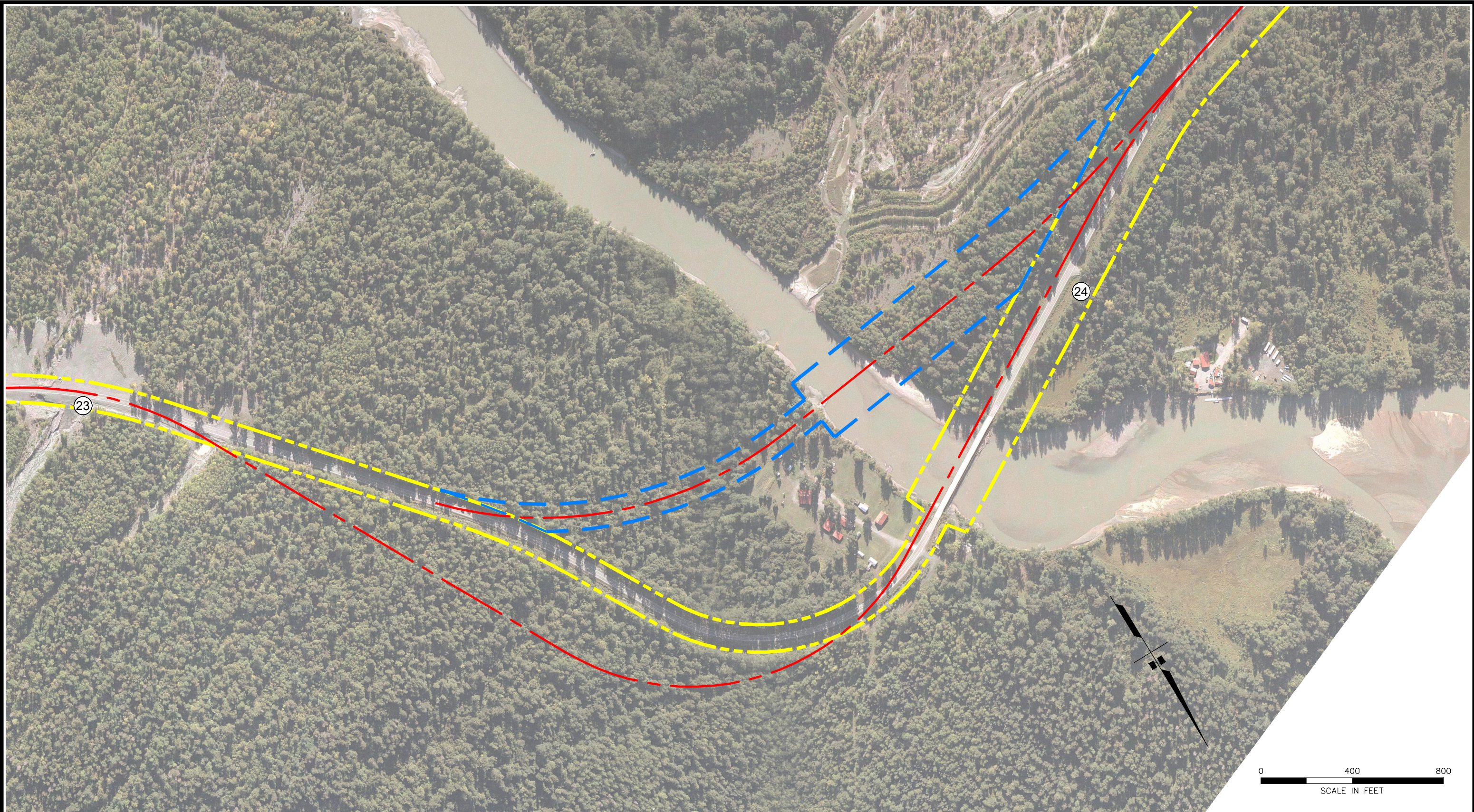
3.1 Alternative Considered, But Dismissed

Alternative 2 - Under this alternative, improvements to the existing highway were considered using a typical rural arterial highway section (Figures 1.2-2 and 1.2-3) with a 55 mph design speed (*Updated Final Alignment Study*, DOWL HKM, 2009) along the entire project corridor. Major highway realignments were analyzed to straighten the highway with no provision for design exceptions. This alternative was dismissed because it could result in a significant impact to a historic property and would have substantial impacts to other environmental resources.

One of the segments reevaluated included two different bridge alignment alternatives. One of these bridge alternatives was dismissed; the other alternative was retained and is the Proposed Action. Under the dismissed bridge alternative, a new bridge would be constructed approximately 820 feet south (downstream) of the existing bridge (Figure 3.1-1). While this location would improve road alignment and minimize the number of in-river structures, it was dismissed because it would impact a subsistence site and require more Native allotment land and Preserve acquisition compared to the Proposed Action.

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- - - PROPOSED CENTERLINE
- - - ALTERNATIVE 1A: REPAIR AND WIDEN EXISTING BRIDGE (NO ROAD REALIGNMENT)
- - - ALTERNATIVE 2B: REALIGN ROAD TO REDUCE CURVATURE - NEW BRIDGE DOWNSTREAM
- # MILEPOST

**HAINES HIGHWAY MP 3.5 - 25.3
CHILKAT RIVER BRIDGE ALTERNATIVES
CONSIDERED BUT DISMISSED**

TS 28/29/30 S, R 56/57/58/59 E,
Copper River Meridian, Alaska



DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

DOT & PF Project No. 68606
HAINES HIGHWAY
MILEPOST 3.5 - 25.3

Haines, Alaska

DATE: MARCH 2012

FIGURE 3.1-1

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4.0 ENVIRONMENTAL CONSEQUENCES

This chapter provides a description of the existing human and natural environment and analyzes the potential environmental consequences that could result from the Proposed Action and No-Action Alternatives. This is an issues-based EA, meaning that only those resources potentially affected are analyzed in this document. The following resources do not exist within the project corridor and are not analyzed in this EA:

1. Farmlands - No prime farmland or farmland of state or local importance is located in the vicinity of the project (United States Department of Agriculture [USDA], 2010).
2. Coastal Barriers - No Coastal Barrier Resources are located within Alaska (United States Fish and Wildlife Service [USFWS], 2010).
3. Wild and Scenic Rivers - No designated state or federal wild and scenic rivers are in the vicinity of the project area (United States National Park Service [USNPS], 2010).
4. Threatened and Endangered Species - There are no species listed under the Endangered Species Act as threatened or endangered or their designated critical habitats that would occur in the project area (USFWS, 2013).

The following sections describe environmental consequences in terms of direct, indirect, and cumulative impacts. Direct impacts are caused by the action and occur at the same time and place. Indirect impacts are reasonably foreseeable impacts caused by the action, but occur later in time or are further removed in distance. Direct and indirect impacts of the alternatives are discussed in each resource category section as are the avoidance and minimization efforts that have been incorporated into the Proposed Action. Mitigation measures and environmental commitments associated with assessed resource impacts are also discussed by resource. Cumulative impacts result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts are described in Section 4.21.

4.1 Local Land Use and Transportation Plans

4.1.1 Affected Environment

This section describes existing landownership, land use, and land use plans for the project area. Land uses in the project area include private residences, commercial properties, and public lands including the DNR Chilkat Bald Eagle Preserve (the Preserve) and the DNR Haines State Forest. This section introduces the Preserve, and Section 4.2 describes the Preserve and its management plans in more detail.

Landownership - Table 4.1-1 identifies landownership within the Haines Borough. Less than 1% of the land in the Haines Borough is owned privately. The vast majority of the land is owned by the federal or state government.

Table 4.1-1: Haines Borough Landownership

Owner	Acres	Percent of Total
Tongass National Forest	916,354	54.6%
Haines State Forest	270,000	16.1%
Other State and Federal	224,178	13.4%
Mental Health Trust	159,493	9.5%
Chilkat Bald Eagle Preserve	48,000	2.9%
Other State Parks	19,209	1.1%
University of Alaska	14,952	0.9%
Native Allotments	11,930	0.7%
Private Ownership	10,424	0.6%
Haines Borough	2,260	0.1%
Total	1,676,800	100.0%

Source: *Haines Borough Comprehensive Plan*, 2004.

This table does not include land within Klukwan, which is organizationally not part of the Haines Borough, but is surrounded by the Haines Borough. Much of the land within Klukwan is owned by the Chilkat Indian Village or tribal members. Native allotments are also present in the study area outside Klukwan. These are part of Haines Borough.

The majority of the land in the project area is State owned: lands in the Preserve managed by DNR Division of Parks and Outdoor Recreation (DPOR), and lands in the Haines State Forest, managed by DNR Division of Mining, Land and Water (DMLW). The Chilkat River Critical Habitat Area of the Preserve is located at and downstream of the confluence of the Chilkat and Tsirku Rivers and is co-managed by DPOR and Alaska Department of Fish and Game (ADF&G) to protect and preserve the natural habitat.

Associated land management plans are discussed below. In addition to these major landholders, parcels of land along the highway are owned by the University of Alaska and by the Alaska Mental Health Trust.

Land Use and Land Management Plans

Haines Borough Code - All lands within Haines Borough are subject to the Borough's adopted land use policies and ordinances. Lands in the vicinity of the project area consist primarily of state lands used for recreation and other uses, as well as privately owned lands used for residences and commercial businesses. The study area is zoned General Use Planning/Zoning District, under the Borough's land use and development code. This zoning allows for a broad range of land uses. Conditional use permits are required for uses, such as landfills, power generation facilities, or hazardous materials storage.

Haines Borough Comprehensive Plan (Haines Borough, 2012) - The Haines Borough Future Growth Maps identify the area along Haines Highway as rural settlement, which allows for low-density rural development. The plan identifies the need to improve the Haines Highway and the Chilkat River Bridge to handle industrial loads to allow the community to capitalize on its port infrastructure and serve as a transportation hub for development in the Yukon Territory and Interior Alaska. The plan also calls for improvements to the pullouts along the highway to improve public access to the river. The plan specifically identifies the Haines Highway improvements proposed in this project, including replacement of the existing highway bridge, as transportation improvement priorities.

Northern Southeast Area Plan (DNR DMLW, 2002b) - This plan was developed concurrently with the *Chilkat Bald Eagle Preserve Land Management Plan* (see Section 4.2) and the *Haines State Forest Plan* because the management areas share common boundaries. The *Northern Southeast Area Plan* provides guidance for multiple uses of state lands. The Plan's management intent is to maintain recreational opportunities and wildlife habitat for the area.

Haines State Forest Management Plan (DNR DMLW, 2002c) - The *Haines State Forest Management Plan* identifies preferred uses for forest lands and policies for managing these uses, emphasizing management flexibility. Transportation projects within the forest must comply with

the State of Alaska Forest Resources and Practices Act and its regulations, including use of Best Management Practices (BMPs).

Let 's Get Moving 2030, Alaska Statewide Long-Range Transportation Policy Plan (DOT&PF, 2008) - *Let's Get Moving 2030* is a policy plan that guides state transportation policies, programs, and investments in Alaska. The first policy identified in plan call for developing a multimodal transportation system that provides safe, cost-effective, and energy-efficient accessibility and mobility for people and freight. Other relevant polices address systems development to support economic development; to provide access to local, national, and international markets; and to increase the safety of the state transportation system. Although this policy plan does not list specific projects, the Haines Highway MP 3.5 to 25.3 project is consistent with the state transportation policy plan.

Southeast Alaska Transportation Plan (DOT&PF, 2004) - Haines Highway is considered an essential corridor for community connectivity within the State of Alaska. The *Southeast Alaska Transportation Plan* (SATP) recognizes the importance of Haines Highway and calls for continued maintenance and improvements. The SATP recommends that future transportation projects incorporate improvements for visitors, such as turnouts, restroom facilities, and pedestrian pathways. It notes that developed and improved transportation systems throughout Southeast Alaska are critical to promoting a strong and healthy economic climate in the future.

Haines Highway Corridor Partnership Plan (Haines City and Borough, 2007) - This advisory partnership was developed for local byway planning purposes under FHWA's National Scenic Byways Program. The plan suggests that future highway projects incorporate improvements for visitors such as scenic lookouts, interpretive opportunities, bicycle and pedestrian amenities, trailheads, and improved signage. The plan's goals are to ensure that the highway's special qualities and access to unique sites are maintained.

4.1.2 Environmental Consequences

Proposed Action - The Proposed Action is consistent with existing state and local land use plans summarized in this section. Highway and bridge improvements would meet specific local and regional transportation plans.

Widened shoulders, improved access to the river, and a new parking area for the Rapinski trail are aspects of the *Haines Comprehensive Plan* and *Corridor Partnership Plans* that would be met if the Proposed Action is built. A discussion of the environmental consequences to the Preserve is included in Section 4.2.

Land use in the majority of the project area would remain unchanged because most of the proposed improvements would take place within DOT&PF's existing ROW. Some additional ROW would be required (see Section 4.3).

Property acquisition from private landowners consists of either narrow "takes" along the highway frontage or from swaths of land needed for highway realignments. Potential effects from ROW acquisition and resolution of ROW encroachments are discussed in Sections 4.3 and 4.4.

Indirect impacts related to land use and development are expected to be negligible because the proposed project would not change travel routes or open access to any formerly inaccessible areas.

No-Action Alternative - The No-Action Alternative would have no effect on landownership or use patterns in the study area. This alternative would not be consistent with the local comprehensive plan or the corridor partnership plan that call for improvements to the highway, bicycle and pedestrian amenities, and replacement of the bridge.

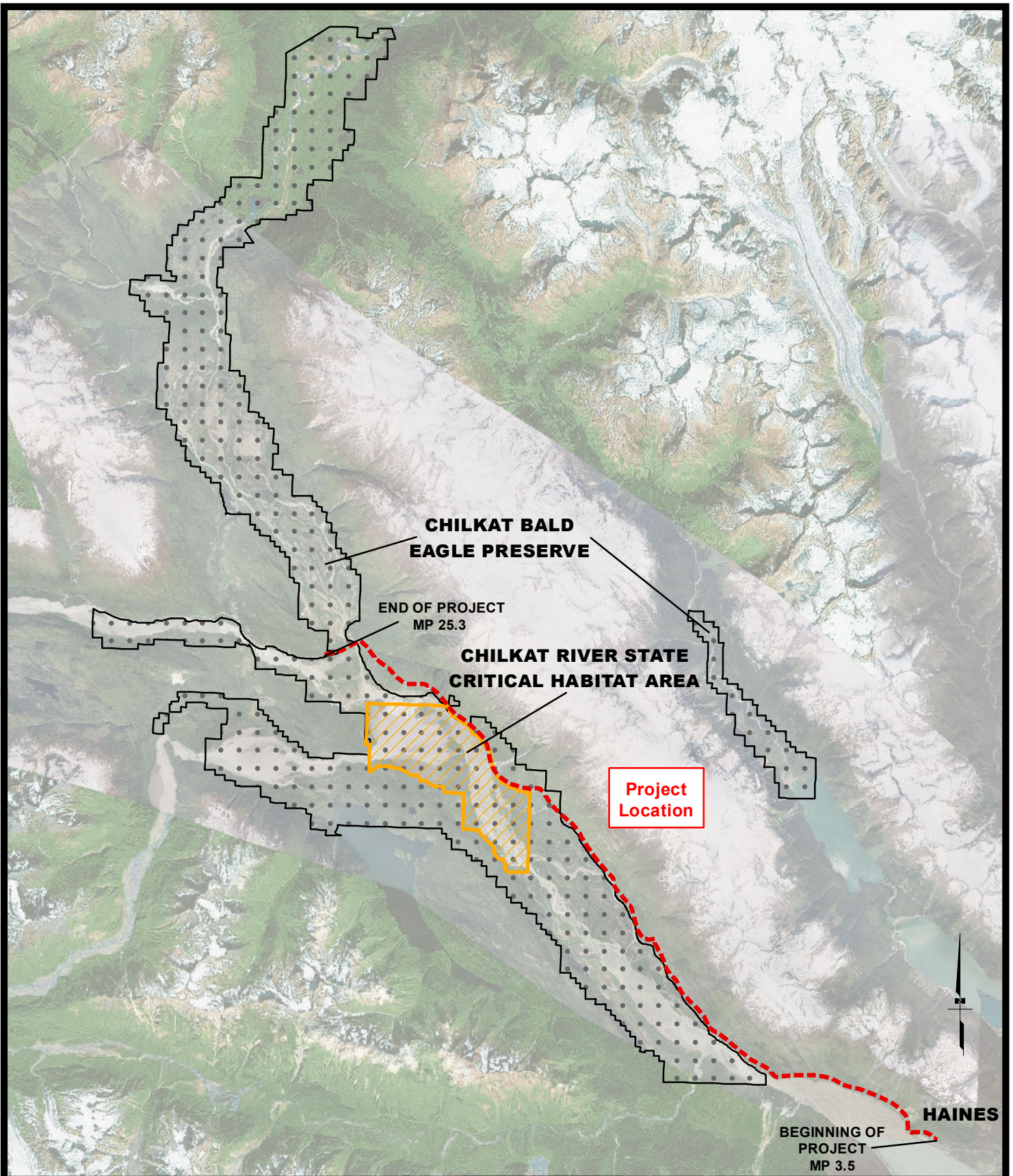
4.1.3 Avoidance, Minimization, and Mitigation Measures

The Proposed Action has avoided and minimized changes in land use to the extent practicable. Mitigation measures appropriate for the project would be identified during development of the project final design and following public comments.

4.2 Chilkat Bald Eagle Preserve

4.2.1 Affected Environment

In 1973, the Alaska Legislature established a 4,800-acre Chilkat Bald Eagle Preserve (Preserve) to manage a large concentration of bald eagles. In 1980, a three-year research study provided the basis for establishing the now nearly 50,000-acre Preserve (Figure 4.2-1). The Haines Highway,



Chilkat Bald Eagle Preserve

TS 28/29/30 S, R 56/57/58/59 E,
Copper River Meridian, Alaska



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

DOT & PF Project No. 68606
HAINES HIGHWAY
MILEPOST 3.5 - 25.3

Haines, Alaska

DATE: May 8, 2013

FIGURE 4.2-1

in particular the Proposed Action corridor, provides the primary access to the Preserve and its features. These features include bald eagle nesting and roosting trees, used by the one of the largest concentration of bald eagles in the world. To better understand the primary purpose of the Preserve, a discussion of bald eagles is provided in this section.

The Preserve, which is owned by the State of Alaska and managed by DNR DPOR, was established to protect and perpetuate bald eagles and their essential habitat (*Chilkat Bald Eagle Preserve Land Management Plan*, DNR DMLW, 2002a). The Preserve was also established to achieve the following goals:

1. Protect and sustain natural salmon spawning and rearing areas of the Chilkat River and Chilkoot River systems within the Preserve in perpetuity;
2. Provide continued opportunities for research, study, and enjoyment of bald eagles and other wild life;
3. Ensure to the maximum extent practicable water quality and necessary water quantity under applicable laws;
4. Provide for other public uses consistent with the primary purpose for which the Preserve is established; and
5. Provide an opportunity for the continued traditional and natural resource based lifestyle of the people living in the general areas described in AS 41.21.611 (b), consistent with the other purposes noted.

ADF&G also has jurisdiction over a specified 4,800-acre critical habitat area within the Preserve (a section of Chilkat River from the mouth of the Tsirku River south to a line approximately across from MP 17) (Figure 4.2-1).

The critical habitat area was established in 1973 and was the first official recognition of the concentration of fall and winter bald eagles and the special conditions that supported the salmon runs that draw the eagles to this location.

The USFWS has authority to control the taking (including disturbance), possession, and transportation within the United States (U.S.) of bald eagles (*Haliaeetus leucocephalus*) and their parts, nests, and eggs.

Unlike most state lands that are managed for multiple uses, the Preserve is managed by DNR with an exclusive use management intent focused on the protection of bald eagles and their associated habitat, as well as the spawning and rearing areas of the anadromous streams that provide food for the bald eagle population. The land management plan identifies five management units, two of which are crossed by the project corridor: the Bald Eagle Council Grounds Management Unit (Council Grounds) and the Haines Highway and Adjacent Lands Management Unit. The area along Chilkat River, near the community of Klukwan, is referred to as the Council Grounds.

The plan specifies that traditional access to and use of the area may continue, allows for utility corridors if compatible with the Preserve purposes, and allows for municipal selections of land.

The boundary of the Preserve abuts the riverside of the Haines Highway ROW between MP 8.3 and 16.8 and between MP 20.2 and 21.5. The ROW divides the Preserve property between MP 16.8 and 20.2 and MP 23.6 to 25. DNR DPOR and DOT&PF signed a Cooperative Agreement in 1987 to cooperatively develop and manage the road system adjacent to and within the Preserve. The agreement calls for collaboration between the agencies on highway alignment, pull-offs, signage, and other road design and construction matters (Appendix C).

Natural features include bald eagle nesting and roosting habitat, the Chilkat River, clear tributary streams, forests, and spectacular views of mountains. Cultural features include continuing subsistence uses (fishing, gathering, and hunting) by Native peoples and other residents of the area. Activity-related features include highway turnouts for access to the river and/or other areas of the Preserve, boat launches, and picnic and hiking areas. Many of these features have been established by frequent public use rather than any DOT&PF or DNR construction projects; the Preserve has little development. Common public activities within the Preserve include boating, sightseeing, wildlife viewing, camping, hiking, picnicking, fishing, and hunting. The turnouts along Haines Highway used for access to the Preserve, wildlife viewing, and other Chilkat River access are all within the DOT&PF ROW. A more detailed discussion of these turnouts is contained in Section 4.6 in the Recreation subsection.

The Preserve is a publicly owned wildlife refuge and is a designated Section 4(f) property. It is protected under 23 U.S.C. 138 and 49 U.S.C. 303.

Bald Eagles - Approximately 200 to 400 bald eagles are year-round residents within the Preserve, and populations can swell to over 3,000 bald eagles during fall congregations. Bald eagles are attracted to the area by the availability of salmon and open waters in late fall and winter. The Chilkat River flats along Haines Highway between MP 18 and 21 are the main viewing area for eagle watchers (*Chilkat Bald Eagle Preserve Management Plan*, DNR DMWL, 2002a). This area corresponds with the Chilkat River Critical Habitat Area.

USFWS and DOT&PF staff surveyed bald eagle nest locations along the project corridor by helicopter in January 2006 and 2011. The 2011 survey documented twenty-five bald eagle nests in the project area. Eleven identified nests were within 330 feet of the proposed construction areas; one nest was just beyond at 356 feet from the construction area. The USFWS has designated 330 feet to be a threshold for possible eagle disturbance for certain construction activities.

4.2.2 Environmental Consequences

Proposed Action - Approximately 17 miles of the Proposed Action are adjacent to the Preserve. The project would impact the Preserve directly by acquiring land for ROW and indirectly by modifying highway turnouts in the DOT&PF ROW that provide access to recreational activities in the Preserve. The project would also obtain a special use permit from DNR for temporary access to the Preserve for stream enhancement. The Proposed Action activities within the Preserve and associated environmental consequences are described below and are summarized in Table 4.2-1.

Direct Impacts - Approximately 3.9 acres of the Preserve would be permanently acquired to accommodate the Proposed Action (see Table 4.2-1 and Figure Set B). On the south side of the highway near MP 8.5 and 12, DOT&PF would acquire 0.51 and 0.27 acres, respectively, of riverine habitat to straighten and widen the highway. Near MP 17, DOT&PF would acquire 3.59 acres of forested and wetland habitat on either side of the highway in order to straighten and widen the highway. Within these acquired lands, any terrestrial vegetation would be cleared and grubbed, the areas would be filled, and the road and/or embankment constructed on top. None of

Table 4.2-1: Proposed Actions Within and Adjacent to the Preserve

Approximate Location Closest Milepost (MP) Highway Station No. (STA) Reference Figure Set A	Proposed Action (direct actions occur within the Preserve, while indirect actions occur within the DOT&PF ROW adjacent to Preserve)	Environmental Consequences
MP 8.5 STA 419+50 Figure (Fig) Set A Sheet 8	Indirect. In DOT&PF ROW, provide driveway on river side for boat launch.	Improved access, no changes to Preserve use.
MP 8.5 STA 420+50 to STA 436+00 Fig Set A Sheet 8	Direct. Acquire 0.27 acres of riverine habitat to south side of highway for embankment widening.	Loss of riverine habitat within Preserve.
MP 10 STA 503+25 Fig Set A Sheet 10	Indirect. In DOT&PF ROW, provide access to boat launch with one 24-foot-wide approach.	Some improvement to Preserve access; no change to Preserve use.
MP 10 STA 512+25 to STA 523+40 Fig Set A Sheets 10-11	Direct. Enhance stream habitat in Preserve by converting marsh habitat on south side of highway to fish stream, riparian, and wetland habitat (see <i>Section 4.15 Fish</i>).	Fish habitat in Preserve is increased and improved. Change in visual character of habitat from marsh to stream, riparian, and wetland.
MP 11 STA 550+50 to STA 562+00 Fig Set A Sheet 12	Indirect. In DOT&PF ROW, construct new parking area at HNS 9* for adjacent pond that is sometimes used for ice-skating; remove access at HNS 10 and 11.	Consolidation of access to recreation in the Preserve would improve safety for users. Construction of sanctioned parking area and blocking access to unsanctioned areas would discourage garbage dumping.
MP 11.5 STA 582+50 to STA 584+25 Fig Set A Sheet 13	Indirect. In DOT&PF ROW, provide a widened shoulder that will accommodate parking for access to Preserve recreation.	Improved access, no changes to Preserve use.
MP 13 STA 649+50 to STA 651+75 Fig Set A Sheet 15	Direct. Use scrub-shrub wetland habitat in the Preserve on south side of highway to temporarily access stream enhancement area in the ROW (see <i>Section 4.15 Fish</i>).	Fish habitat in ROW adjacent to Preserve is improved; temporary change in visual character of shrub wetland habitat in Preserve.
MP 13 STA 655+75 Fig Set A Sheet 15	Indirect. In DOT&PF ROW, provide fill to reduce slope and resurface pullout for river access and boat launch.	Improved access, no changes to Preserve use.
MP 14 STA 705+50 to STA 708+00 Fig Set A Sheet 16	Indirect. In DOT&PF ROW, provide two 24-foot approaches and gravel surface to provide parking for up to 10 vehicles and maintain access.	Improved access, no changes to Preserve use.
MP 14 STA 709+00 Fig Set A Sheet 16	Indirect. In DOT&PF ROW, improve driveway intersection in order to maintain access to boat launch site.	Improved access, no changes to Preserve use.

Table 4.2-1 (cont): Proposed Actions Within and Adjacent to the Preserve

Approximate Location Closest Milepost (MP) Highway Station No. (STA) Reference Figure Set A	Proposed Action (direct actions occur within the Preserve, while indirect actions occur within the DOT&PF ROW adjacent to Preserve)	Environmental Consequences
MP 14.5 STA 727+00 to STA 732+00 Fig Set A Sheet 17	Indirect. In DOT&PF ROW, provide widened shoulder and re-grade from edge of pavement to existing driveway to improve slope for commercial rafting operation's bus traffic. Obliterate and vegetate abandoned road footprint.	Improved access, no changes to Preserve use.
MP 16 STA 820+50 Fig Set A Sheet 20	Indirect. In DOT&PF ROW, ditch across access driveway to remove access to area used for parties and dumping garbage.	Discourage undesirable activity within Preserve.
MP 17 STA 863+50 to STA 883+00 Fig Set A Sheets 21- 22	Direct. Acquire 3.59 acres of forested and wetland habitat on either side of the highway and fill to widen road embankment. Use forested and scrub-shrub wetland habitat on south side of highway to temporarily access and construct a new fish stream channel (see <i>Section 4.15 Fish</i>).	Loss of wildlife habitat in Preserve. Fish habitat in Preserve is increased and improved; visual character of forested and shrub wetland habitat is changed to stream habitat.
MP 19 STA 966+00 to STA 972+50 Fig Set A Sheet 24	Indirect. In DOT&PF ROW, the highway would be raised approximately 15 feet through this area, and parking would be accommodated along the highway for eagle viewing.	No changes to Preserve access.
MP 19.5 STA 981+25 Fig Set A Sheet 24	Indirect. In DOT&PF ROW, provide access to launch site for commercial rafting operation with one 24-foot-wide approach. Pave to curve return.	Improved access, no changes to Preserve use.
MP 19.5 STA 986+40 to STA 990+75 Fig Set A Sheet 25	Indirect. In DOT&PF ROW, provide access to scenic view point with two 24-foot-wide plow-friendly approaches. Pave to curve return. Obliterate and vegetate abandoned road footprint.	Improved access, no changes to Preserve use.
MP 20 STA 1004+75 to STA 1008+75 Fig Set A Sheet 25	Indirect. In DOT&PF ROW, improve driveway and intersection in order to maintain access to scenic view point.	Improved access, no changes to Preserve use.
MP 20 STA 1030+75 to STA 1034+40 Fig Set A Sheet 26	Indirect. In DOT&PF ROW, improve driveway and intersection in order to maintain access to scenic view point.	Improved access, no changes to Preserve use.
MP 20.5 STA 1059+00 to STA 1062+50 Fig Set A Sheet 27	Indirect. In DOT&PF ROW, provide access to scenic view point with two 24-foot approaches. Improve exit/entrance return radii to ease snow plow maintenance.	Improved access, no changes to Preserve use.
MP 21 STA 1069+50 Fig Set A Sheet 27	Indirect. In DOT&PF ROW, provide access with one 24-foot-wide approach.	Improved access, no changes to Preserve use.

* Refers to identified access point (HNS-#); Haines Access Numbers are identified in Table 4.6-2 and shown in more detail in Appendix A of the EA.

the areas proposed for ROW acquisition have any developed features within them but they do contain habitats for a variety of wildlife. None of the areas to be acquired are within critical habitat areas. No known eagle nesting trees exist in the ROW acquisition areas.

Indirect Impacts. The Proposed Action would shift the alignment of Haines Highway in several locations and widen the shoulders. Some of these shifts would change the distance between an eagle nest and the road centerline and widening shoulders would add pavement next to eagle habitat. Table 4.2-2 summarizes the changes in the proximity of Haines Highway to bald eagle nests identified within the project corridor in 2009. The alignment shifts the centerline slightly closer to some nests and further away from other nests.

While the Proposed Action would shift the highway closer to some nests, long-term impacts are expected to be minimal because the bald eagles along Haines Highway are habituated to highway noise (USFWS letter dated July 13, 2010, Appendix G).

Construction-related impacts are discussed in Section 4.20. In general, construction noise and activities can disturb eagles especially during nesting activities. DOT&PF would apply for bald eagle disturbance permits from USFWS.

Along much of the project area, the proposed highway alignment requires minor modifications to turnout and parking area approaches. Additionally, DOT&PF proposes to implement some of the turnout and parking area improvements that DNR suggested during consultation with the agency (see Section 4.4 and Appendix A).

In many cases, DOT&PF would maintain or improve existing access to boat launches, scenic view points, or other turnouts by constructing approaches from the new highway alignment. Improvements to the intersections and driveway approaches would maintain and improve access to the Preserve, but would not change types of use of the Preserve or change the capacity of the boat launches, view points or turnouts. Only the access points would improve. See Section 4.6 for a complete evaluation of the proposed turnout improvements and the consequences for recreation.

Table 4.2-2: Changes to Bald Eagle Nest Separation based on 2011 Survey

Distance of Proposed Action			
Nest Number	Current Distance from Centerline	Proposed Action Distance from Centerline	Change in Separation Distance
3	294'	315'	21'
4	91'	112'	21'
5	236'	218'	-18'
6	185'	170'	-15'
8	202'	149'	-53'
9	356'	214'	-142'
10	131'	142'	11'
11	204'	218'	14'
13	239'	246'	7'
14	325'	345'	20'
15	295'	298'	3'
24	115'	128'	13'

Note: Numbers in bold indicate distance would be closer to a nest.

Three informal parking areas near MP 11 that provide access to a ice skating pond in winter would be consolidated with the construction of one parking area, which would improve safety for recreational users of the Preserve and would discourage unwanted activities such as partying and garbage dumping in the Preserve (personal communication, Preston Kroes, DNR Park Ranger, to Jim Scholl, DOT&PF Environmental Analyst, May 2013).

As partial mitigation for loss of fish habitat in other areas of the project, DOT&PF proposes to enhance some stream areas within and adjacent to the Preserve (see Section 4.15). A temporary construction easement would be obtained from DNR in order to construct new stream habitat (Sheets 2 and 3 of Figure Set B).

Areas affected include:

- marsh habitat near MP 10 that would be converted to fish stream, riparian, and wetland habitat;
- scrub-shrub wetland habitat near MP 13 that would be used to access new stream channel construction; and
- forested wetland and shrub habitat near MP 17 that would be used for a new stream channel.

DNR DPOR and DOT&PF have reviewed the Proposed Action for the Haines Highway project for its consistency with the Cooperative Management Agreement (Appendix C). Improvements to several vehicle turnouts, closure of two turnouts, and blocking access to an area used for dumping garbage are being included in the project as a result of consultation with DNR.

No Action - The No-Action Alternative would not result in any Preserve acquisitions, nor would there be changes in access to the Preserve or closure of unsanctioned access points that result in negative impacts to Preserve land.

4.2.3 Avoidance, Minimization, and Mitigation Measures

Many of the activity-related developed features of the Preserve are located within the highway ROW and access to the Preserve and its features is primarily by the highway. To avoid and minimize indirect uses of the Preserve, DOT&PF has worked with DNR to identify improvements to Preserve features within the existing and/or proposed ROW that would benefit the Preserve. A new parking area would be constructed at MP 11 and a shoulder widened to accommodate parking at MP 11.5 (see Table 4.2-1). Parking would also be accommodated on the shoulder at MP 14.5 and 19. Existing turnouts would be resurfaced or regraded at MP 13 and 14.5. Two existing turnouts at MP 11 that attract nuisance uses would be closed (see Table 4.2-1). Although there would be some adverse effects during construction (traffic delays, noise, disturbance of wildlife), the long-term effect would be to maintain public access to the Preserve's recreation features and uses through road shoulder and turnout improvements and enhancements.

Additionally, highway design efforts have avoided and minimized changes to the ROW throughout the corridor including the Preserve. Guardrails have allowed steeper embankments at some locations along the Chilkat River to avoid or minimize fill in the Preserve. Straightening curves avoided constructing passing lanes that would have required ROW acquisition from the Preserve. An early Chilkat River Bridge alternative that would have minimized cost was rejected because it would have required additional ROW acquisition within the Preserve.

To mitigate for direct impacts, DOT&PF proposes to relinquish approximately 6.0 acres of road ROW to the Preserve (see Figure Set B). At MP 8.5, a 0.52-acre area of riverine habitat on the south side of the highway within the ROW is proposed to be relinquished to the Preserve. At MP

17, two parcels of forested and wetland habitat within the ROW on either side of the highway totaling 5.5 acres are proposed to be relinquished to the Preserve. The land proposed to be relinquished to the Preserve is similar in location, habitat type, and quality to the areas being acquired for ROW.

DOT&PF has consulted with DNR under the 1987 Cooperative Management Agreement between DNR and DOT&PF for the Haines Highway (Appendix C). Both agencies participated in a site visit, followed by several meetings. As a result of these consultations, DNR's recommendations for turnout improvements have been addressed and incorporated into the preliminary design plan (Appendix A).

Based on the proposed mitigation and the preliminary approval from DNR, FHWA intends to make a *de minimis* impact finding for the Proposed Action impacts to this section 4(f) property (see Section 5.0).

4.3 Right-Of-Way

4.3.1 Affected Environment

The Haines Highway MP 3.5 to 25.3 project is primarily within DOT&PF ROW. Adjacent land owners include private individuals, the DNR Preserve, the DNR Haines State Forest, the Chilkat Indian Village of Klukwan, other Native allotments, and other state lands. The existing ROW from MP 3.5 to 25.3 varies in width from 120 to 300 feet and is situated between Chilkat River and Chilkat Mountain Range. The Haines Highway ROW is owned and maintained by the State of Alaska.

4.3.2 Environmental Consequences

Proposed Action – This summary is based on the specific footprint of the proposed road and re-alignment areas. Additional acreage could be identified during final design and the ROW phase of the project as the detailed evaluation of property acquisitions is conducted.

Based on the preliminary design, construction of the Proposed Action would require partial acquisition of an estimated seventeen parcels. No full parcels would be acquired. Acquisitions would involve five private properties, the Chilkat Indian Village, five Native allotments, the Preserve, Haines State Forest, and Mental Health Trust. Estimated acreage is summarized in

Table 4.3-1 and acquisition areas are shown on Figure Set A. Construction easements would also be needed for proposed stream mitigation actions that would occur outside of the DOT&PF ROW.

Table 4.3-1: Proposed Permanent Right-of-Way Acquisitions

Property Owner	Estimated Acres	Number of Parcels
Chilkat Bald Eagle Preserve	3.8	N/A
State (non-Preserve)	5.1	5
Native Allotments	7.2	5
Private Property	8.1	6
Chilkat Indian Village	0.8	2
TOTAL	25.0	18

Estimated private property acquisitions and the impacts to the land owners are summarized in Table 4.3-2. These estimates would be finalized during final design and ROW acquisition activities.

Property acquisitions would result in direct impacts to affected property owners. Five of the acquisitions (Parcels E1, E2, E4, E8, and E12) would be narrow strips of undeveloped land along the highway. The land use on the remainder of the properties is not expected to be affected in these areas because of the relative small size and locations of these acquisitions.

Five partial parcel acquisitions (Parcels E9, E13, E14, E15, and E16) would be used for new highway alignments; the existing highway roadbeds are within those same parcels.

The realignment shown on Sheet 22 of Figure Set A (E9) would adversely affect the land use of that parcel: a developed landing strip and adjacent driveway would be shortened. The type of aircraft using that landing strip would be affected. A strip of vegetated/forested buffer between the highway and the residence would be removed.

The property containing the existing highway roadbed may not be relinquished because continued access to the utility easement and adjoining parcels is needed.

**Table 4.3-2: Proposed Right-of-Way Acquisition Impacts
Excluding Tribal and Public Lands**

Parcel ID (Figure Sheet)	Land Use in Areas to be Acquired	Total Size (acres)	Estimated Size of Take (acres)	Percent	Impact
E-1 (3 of 34*)	Undeveloped forest	34.29	0.40	1.2	Loss of forested land (narrow strip next to highway)
E-2 (4 of 34)	Undeveloped forest	7.75	0.71	9.2	Loss of forested land (narrow strip next to highway)
E-4 (10 of 34)	Undeveloped pond	32.80	0.50	1.5	Loss of forested land (narrow strip next to highway)
E-8 (22 of 34)	Undeveloped forest	9.05	1.25	13.8	Loss of forested land (narrow strip next to highway)
E-9 (22 of 34)	Developed-airstrip and driveway; forest between road and residence	52.91	4.10	7.8	Loss of wetland (new road alignment); limitation on airstrip use, driveway shortened loss of forest buffer between road and residence
E-12 (31 of 34)	Undeveloped forest	20.57	0.15	0.7	Loss of forested land (narrow strip next to highway)
E-13 (31 of 34)	Undeveloped forest	21.93	0.66	3.0	Loss of forested land (new road alignment)
E-14 (31 of 34)	Undeveloped forest	22.76	0.98	4.3	Loss of forested land (new road alignment)
E-15 (31 of 34)	Undeveloped forest	23.25	0.98	4.2	Loss of forested land (new road alignment)
E-16 A&B (31 & 32 of 34)	Undeveloped forest and clearing between highway and residences	147.87	4.41	3.0	Loss of forested land (new road alignment); highway and bridge would be closer to residences

* See Figure Set A for referenced figure.

The other four partial parcel acquisitions where the highway would be realigned are primarily undeveloped forest lands (E-13, E-14, E-15, E-16). These parcels are Native allotments. After construction, these parcels would have the existing roadbed and the new highway alignment. If the Proposed Action is selected by FHWA, decisions about disposal of the old ROW would be made during the ROW Phase. If the existing ROW and roadbed is to be disposed, the property owners would be consulted about how that land would be left after construction.

Most residents of Klukwan and Native allottees are members of a minority population under E.O. 12898 (Environmental Justice). ROW acquisition would involve 0.8 acre of Chilkat Indian Village land and the partial acquisitions from 5 different Native allotments (5 owners) with total ROW acquisition of approximately 7.2 acres; 33.3% of the total ROW acquisition needed for this project (see discussion in Section 4.6). ROW takes of Native allotments range from less than 1.0% of the parcel to 4.4% of the parcel.

Property acquisition would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

In stream mitigation areas, the Proposed Action would require conservation easements on private lands and a special use permit on public lands (see Section 4.14 and Appendix D for detailed stream mitigation information).

No-Action Alternative - No ROW acquisition would be required for this alternative.

4.3.3 Avoidance, Minimization, and Mitigation Measures

The Proposed Action has been designed to avoid and minimize ROW takes to the extent practicable. DOT&PF is proposing to relinquish approximately 6.0 acres of ROW to the Preserve to mitigate for the acquisition of land necessary to construct the Proposed Action. ROW relinquishment areas are summarized in Table 4.3-3 and shown on Figure Set B.

Table 4.3-3: Summary of Right-of-Way Relinquishment

Figure Number (Figure Set B)	Acres	Beginning Station	Ending Station
1 of 4	0.52	420+50	428+00
4 of 4	2.95	864+00	877+50
4 of 4	2.55	872+50	884+50
Total Acreage	6.0		

4.4 Encroachments

4.4.1 Affected Environment

Over the years, unpermitted structures or other features have been constructed within the DOT&PF ROW of the Haines Highway. The DOT&PF is required to address these encroachments as part of this project. The following table identifies encroachments within the

existing ROW and the proposed ROW action to resolve the encroachment (see Figure Set A for locations). All owners of the identified encroachments have been given a 30-day notice to remove the encroachments, apply for an encroachment permit, or purchase the ROW. It should be noted that the Proposed Action listed in the following table is based on current information and may change.

Table 4.4-1: Encroachments with the Proposed Action Right of Way

Property Description and Approximate Station	Encroachment Description	Proposed Action
Lot 2, Fraction of Lot 3 S19, T30S, R59E, CRM Sta. 230	Fence, Concrete wall	Encroachment Permit sent to landowner. No response from landowner at this point.
Lot 1, Fraction of Lot 3 S19, T30S, R59E, CRM Sta. 233	Rock Wall	Encroachment Permit sent to landowner. No response from landowner at this point.
Lot 2A, USS 3394 Sta. 370	Deck of house	Encroachment Permit sent to landowner. No response from landowner at this point.
Lot 2B, USS 3394 Sta. 372	House with deck, New shed	Relinquishment in process & Currently Permitted
Lot 3, USS 3394 Sta. 378	Cabin, Shed, Smokehouse	Received paperwork for permit
Lot 1, USS 5685 Sta. 425	6'X6' building, Stairs, House with Deck	Working on permit
Lot 2B, USS 5685 Sta. 430	Deck of House, Containers	Relinquishment in process
Lot 2A, USS 5685 Sta. 433	Shed, House, Stairs with overhang, Shed	Has permit, process relinquishment when project complete
Lot 3, USS 5685 Sta. 466	Old stairs, New stairs, Shed Building	Sent 30 day notice for removal

4.4.2 Environmental Consequences

The final number of ROW encroachments would be determined after final design. DOT&PF would resolve these encroachments during the ROW phase of this project through the actions of permitting, removal, or vacating the DOT&PF ROW.

DOT&PF would review and analyze each individual encroachment for the following:

1. safety hazards,
2. utilities,
3. traffic concerns, and
4. effects to the community.

Depending upon the results of the analysis, DOT&PF will either permit or remove the structures. At this time, some property owners have applied for ROW relinquishment. Some property owners have applied for and been granted ROW encroachment permits. Other permit applications are currently undergoing review. If an encroachment permit is denied, State procedures allow for an appeal process; however, the applicant could ultimately be required to remove the encroachment. Some of the encroachments initially identified have already been removed. The Attorney General's office has given notice for the removal of one house.

Should an encroachment need to be removed, that removal would be done by the owner or the DOT&PF. No compensation is given to owners of unpermitted encroachments if they must be removed.

Proposed Action - ROW encroachments will be resolved by permitting or removing encroachments.

No-Action Alternative - ROW encroachments will be resolved by permitting or removing encroachments.

4.4.3 Avoidance, Minimization, and Mitigation Measures

Avoidance and minimization of impacts to residents in encroachments would be achieved through the review process described above. Mitigation is not appropriate for encroachments.

4.5 Utilities

4.5.1 Affected Environment

The Haines Highway MP 3.5 to 25.3 ROW also serves as a corridor for underground and aboveground utilities that provide power and telecommunications to the Haines and Chilkat Valleys. Electricity (located overhead and underground) is provided by Alaska Power and Telephone (AP&T) and Inside Passage Electric Cooperative, Inc. (IPEC). Telephone service via buried and overhead fiber-optic cable is provided by AP&T. AP&T uses some underground sections of the decommissioned Haines-Fairbanks Pipeline as their utilities conduit. Cable television service is provided by Haines Cable TV, which uses an overhead coaxial cable between MP 3 and 5. The majority of the utilities within the project area parallel Haines Highway and are located within the DOT&PF ROW on the north side of the highway.

Water and sanitary sewer service within the project area is provided through private wells and septic systems, which are generally outside of the ROW except where residential structures encroach into the ROW. The City of Haines water and sewer service boundary extends only to MP 3, and so is outside the project area. Natural gas is not provided within the project area.

The Chilkat Indian Village provides water and sanitary sewer service to the village at Klukwan. According to the Division of Community and Regional Affairs (DCRA), 90% of the residences in the village are connected to piped water and sewer service (DCRA, 2012).

4.5.2 Environmental Consequences

Proposed Action - Direct impacts to utilities may occur where the roadway realignment would require relocation or replacement of electric and fiber-optic utility lines and removal of sections of the Haines-Fairbanks Pipeline.

AP&T and IPEC have been notified of the proposed project and have been working with DOT&PF regarding the possible relocation of existing utilities. The relocation of AP&T's fiber-optic cable would be avoided to the extent practicable. Access to aboveground and belowground utilities would be maintained where the proposed Haines Highway alignment shifts away from its existing location and does not conflict with the utilities. Potential utility relocations are summarized in the Preliminary Engineering Report (*Preliminary Engineering Report*, DOWL HKM, 2010c). Detailed utility relocation plans would be completed during the final design phases of the project.

The following is a list of the primary utilities and their major segments that may be impacted within the project area.

- AP&T MPs 3-5 overhead telephone, and fiber-optic telephone
- AP&T MPs 3-10 overhead power
- AP&T MPs 5-25 buried fiber-optic cable
- IPEC MPs 10-25 buried electric cable
- Haines Cable MPs 3-5 overhead coaxial cable television

Coordination with utility providers during development of utility relocation plans would minimize any adverse effect on utilities or their customers.

No-Action Alternative - No changes to existing utilities would occur under the No-Action Alternative.

4.5.3 Avoidance, Minimization, and Mitigation Measures

The proposed alignment has minimized the footprint of the roadway and the need to relocate utilities to the degree practicable. Where there are ROW shifts, access to utilities would be maintained if those utilities are not relocated. DOT&PF would contact utility providers and property owners prior to construction to coordinate final utility details.

4.6 Social

4.6.1 Affected Environment

The social environment within the proposed project area (Haines Highway MP 3.5 to 25.3) is primarily a rural setting with high accessibility to public lands for recreation, hunting, and fishing.

The project area is located within the Haines Borough and adjacent to Klukwan. The Borough is a consolidated municipal government, having merged with the City of Haines in 2002. Although there are no incorporated cities within the Haines Borough, there are five unincorporated communities: Covenant Life, Haines (formerly a first-class city), Lutak, Mud Bay, and Mosquito Lake. Klukwan is not within Haines Borough and is discussed below. The project area begins north of the community of Haines and terminates just south of the road to the community of Covenant Life (see Figure 1.1-1).

The Chilkat Indian Village of Klukwan is a Federally-recognized Indian tribe. Klukwan is an area of Native land that is surrounded by but not included in the Haines Borough (see Figure 1.1-1). It is located 22 miles north of Haines along Haines Highway and is adjacent to the proposed project. Klukwan is an ancient Tlingit settlement area.

Population/Income - The populations of the Haines Borough and Klukwan in 1990, 2000, and 2010 are listed in Table 4.6-1 (U.S. Census Bureau). The population of the Haines Borough was

14.0% of Native heritage in 2010 (U.S. Census Bureau⁴). People of Klukwan identifying Native heritage made up 90.5% of the population of Klukwan in 2010.

Table 4.6-1: Area Population

	1990	2000	2010
Haines Borough	2,117	2,392	2,508
Klukwan	129	139	95

Source: U.S. Census Bureau, 1990, 2000, and 2010;
State of Alaska Department of Labor and Workforce Development (DLWD), 2010

Per capita income in the Haines Borough averaged \$30,090 from 2007 through 2011 (Source: *2007-2011 American Community Survey 5-year estimates*, accessed through the U.S. Census Bureau American Fact Finder, April 2013). Mean family income for the Borough was \$80,678. The 2010 census data listed 5.9% of the people in the Borough below the poverty level.

Based on the same reference as above, Klukwan’s average per capita income over this period was \$22,432; mean family income was \$58,085. The percentage of people below the poverty level was 1.8%.

Housing/Community Facilities/Public Services - The majority of Haines Borough residents (68%) live in Haines. Most public facilities and services are located in Haines including public water and wastewater facilities, public safety services (fire, medical care, emergency service, police), and recreation facilities (public pool, soccer field). The Haines Borough School District operates four schools; three are located in the Haines town site and one is at Mosquito Lake. The Alaska State Troopers provide public safety services to Klukwan and Klukwan has its own volunteer fire department and infrastructure.

Housing along the project area is primarily single-family structures. Residences’ water supply is from wells and sanitation is provided by septic systems. Most of the housing in Klukwan is single-family houses or mobile homes. Borough and Klukwan residents use Haines Highway to access facilities and services in the Haines town site, as few are available outside Haines.

Transportation - As discussed in Section 1.0, Haines Highway is one of two road links between Southeast Alaska and Canada. The segment of highway between Haines and MP 3.5 (the airport)

⁴ It should be noted that the percentage includes people that identified themselves as multi-racial with Native heritage from 2000 on.

is designed and signed as a 55 mph highway. The segment of highway from MP 25.3 to and beyond the Canadian border is similarly designed. The Proposed Action segment is signed as a 55 mph road with reduced speeds (45 mph) at curves.

A Safety Analysis (DOWL HKM, 2010c) indicates the following:

- Most intersections have low crash rates. The intersections at MP 6.5, Klukwan Road, and driveways near the Chilkat River Bridge have elevated crash rates for a road with an ADT of 600.
- All segments have a relatively low crash rate.

Data on accidents within the proposed project corridor revealed that between 1998 and 2007 there were 16 vehicle crashes within 200 feet of an intersection and 57 crashes along highway segments beyond the influence of an intersection.

Recreation - The Haines Highway is the primary access area to outdoor recreation opportunities within the Preserve and other public lands in this area. Important recreation activities include wildlife viewing, camping, hiking, bicycling, boating, hunting, and fishing.

In June, the corridor is host to the Kluane-Chilkat International Bike Relay from Haines Junction, Yukon Territory to Haines. Up to 1,300 riders from Alaska, Yukon Territory, and the Lower 48 participate each year. In November of each year, the American Bald Eagle Foundation in Haines hosts a Bald Eagle Festival. People from around the world are drawn to see the largest concentration of bald eagles in the world at the Preserve.

Approximately 27 developed and/or undeveloped turnouts along the Haines Highway are used to access recreational and fishing areas. Table 4.6-2 identifies these turnouts (each identified as HNS #). Access into these turnouts and the land where vehicles park are all within the DOT&PF ROW. Twenty-one of these turnouts directly access lands within the Preserve. Early in the design process, the DOT&PF project team met with DNR staff to conduct an inventory of existing turnouts along the project corridor and to get DNR's recommendations for needed improvements. DNR provided input on all turnouts, not just those in the Preserve.

**Table 4.6-2: Turnouts/Recreational Facilities within the Haines Highway (Mileposts 3.5 to 25.3) Project Corridor
(Refer to Appendix A)**

Turnout ID	Approximate Milepost/Figure Set A Sheet Number	Description	Proposed Improvement
HNS1	4.3/1	Camping and fishing	Accepted recommendation. Maintain access and provide wider approaches (24 feet wide). Pave to curve return.
HNS2	4.4/1	Fishing	Accepted recommendation. Provide a widened shoulder for parking.
HNS3	5.7/4	Informal parking/camping area, fishing.	Modified recommendation. Provide access with one 24-foot-wide driveway. Pave to curve return. Eliminate second driveway.
HNS4	7.3/5	Camping and fishing access.	Accepted recommendation. Provide access with one 24-foot-wide driveway.
HNS4A	7.2/5	Mount Ripinski Trailhead (currently no parking area for this trailhead).	New proposal. Develop turnout with parking spaces for 7 vehicles to access the Mount Ripinski trailhead near MP 7.
HNS5	7.8/6	River flats, boat launch at high water.	Accepted recommendation. Provide a widened shoulder for parking.
HNS6	8.1/7	Fishing	Accepted recommendation. Provide a widened shoulder for parking.
HNS7	8.5/8	Access road to boat launch, parking for trailers.	Accepted recommendation. Provide driveway on river side for boat launch only.
HNS8	9.9/10	Boat launch and trailer parking	Modified recommendation. Provide access with one 24-foot-wide approach.
HNS9	10.9/12	Parking area and unauthorized trash dump.	Accepted recommendation. Develop new parking area for adjacent pond that is sometimes used for ice-skating (see HNS 10 and 11).
HNS10	11/12	Approach to an old loop road that encircled a small pond used sometimes for ice-skating (road is no longer drivable).	Accepted recommendation. Remove access. HNS 9 would be improved with additional parking for pond area.
HNS11	11.1/12	Approach to an old loop road that encircled a small pond used sometimes for ice-skating (road is no longer drivable).	Accepted recommendation. Remove access. HNS 9 would be improved with additional parking for pond area.
HNS12	11.5/13	Canoe launch.	Modified recommendation. Provide a widened shoulder for parking.
HNS 13	12.9/15	Steep approach to a small road leading to the river; sometimes used by sport fishermen. Recent river alignment shifts have made boat launching difficult here.	Modified recommendation. Provide fill to reduce slope and resurface HNS 13 instead of creating new access at HNS 14.
HNS14	13/15	DNR proposed potential new boat launch site to replace HNS 13.	Modified recommendation. It was decided to improve HNS 13 instead of creating new access at HNS 14.

**Table 4.6-2 (cont): Turnouts/Recreational Facilities within the Haines Highway (Mileposts 3.5 to 25.3) Project Corridor
(Refer to Appendix A)**

Turnout ID	Approximate Milepost/Figure Set A Sheet Number	Description	Proposed Improvement
HNS15	13.8/16	River access, fishing	Modified recommendation. Provide two 24-foot approaches and gravel surface to provide parking for up to 10 vehicles. Pave to curve return. DNR Parks would maintain this turnout.
HNS16	13.9/16	Boat launch site.	Did not incorporate recommendation. Maintain existing access. No proposed improvements at this time.
HNS17	14.3/17	Commercial raft operation retrieval site.	Modified recommendation. Provide widened shoulder and re-grade from edge of pavement to existing driveway to improve slope for bus traffic. Obliterate and vegetate abandoned road footprint.
HNS18	16/20	Currently used as unauthorized trash dump and for parties.	Modified recommendation. Ditch across access driveway to remove access.
HNS19	19.2/24	Eagle viewing turnout (high use).	Did not incorporate recommendation. The highway would be raised approximately 15 feet through this area, and parking would be provided along the highway.
HNS20	19.4/25	Commercial raft launch and retrieval site.	Modified recommendation. Provide access with one 24-foot-wide approach. Pave to curve return. There is room for parking one van with trailer and one bus along the existing gravel drive.
HNS21	19.5/25	Eagle viewing.	Modified recommendation. Provide access with two 24-foot-wide plow-friendly approaches. Pave to curve return. Obliterate and vegetate abandoned road footprint.
HNS22	19.8/25	Eagle viewing (photograph opportunities).	Accepted recommendation. Maintain access to existing turnout.
HNS23	20.2/26	Eagle viewing.	Accepted recommendation. Maintain access to existing turnout.
HNS24	20.6/27	Boat launch site.	No modifications proposed at this time.
HNS25	20.6/27	Eagle viewing.	Modified recommendation. Provide access with two 24-foot approaches Improve exit/entrance return radii to ease snow plow maintenance.
HNS26	20.8/27	Fishing, bird watching.	Modified recommendation. Provide access with one 24-foot-wide approach.
HNS27	23.9/32	Informal boat launch site along Chilkat River banks; DNR recommended construction of a new boat launch.	Did not incorporate recommendation. No access proposed.

4.6.2 Environmental Consequences

Proposed Action - In the long term, the Proposed Action would not result in any changes to population, community cohesion, or neighborhoods, or adversely impact community facilities or services. Some ROW acquisition would occur. As discussed in Section 4.3, proposed ROW acquisitions are partial acquisitions. There would be no relocation of residences or businesses except as noted for structures encroaching within the existing ROW.

The project is not expected to change long-term travel patterns or volumes but is expected to improve traffic safety on this key community transportation route. By reducing some curves (such as between MP 17 and 18 and between MP 23 and 24) and widening road shoulders, the Proposed Action would improve sight distance and driving conditions for vehicles (including school buses), walking conditions for pedestrians, and riding conditions for bicyclists.

It would also improve local residents' access to social and recreation facilities, and response time by State Troopers, police, and emergency medical services.

Impacts to recreation are primarily beneficial. Approved Preserve access points would not be lost. The Proposed Action would implement DNR's recommendations or modifications to those recommendations at twenty-four of the twenty-seven turnouts (refer to Table 4.6-2 and Appendix A for further details). At DNR's request, HNS 10 and 11 would be removed as part of this project. Access to the ice-skating pond near these turnouts would be provided through improvements to a nearby turnout (HSN 9).

Access to turnout HNS 18, an illegal garbage dump, would be prohibited by construction of a ditch. A new turnout at HNS 14 recommended by DNR would not be constructed; rather, needed improvements would be made at HNS 13. DNR's recommended formalization of an access next to the Chilkat River Bridge (HNS 27) would not be provided.

New and/or improved turnouts and wider shoulders would enhance public access to recreation sites and allow for safer pedestrian and recreational use along Haines Highway, resulting in long-term benefits to recreation.

Short-term adverse impacts are expected during construction due to possible temporary disruptions in traffic and accessibility to existing recreation sites. Construction impacts are discussed further in Section 4.20.

Under *Executive Order (E.O.) 12898- Environmental Justice*, FHWA must ensure that all federally funded transportation-related programs, policies, or activities having the potential to adversely affect human health or the environment consider the effects on minority and low-income populations.

As stated in Section 4.3, ROW, the following acreage summary is based on the specific footprint of the proposed road and re-alignment areas. Additional acreage could be identified during final design and the ROW phase of the project as the detailed evaluation of property acquisitions is conducted.

Most residents of Klukwan and Native allottees are members of a minority population under E.O. 12898 (*Environmental Justice*). Based on the current design, ROW acquisition would involve 0.8 acre of Chilkat Indian Village land, including a small area at the intersection of Chilkat Avenue, and the partial acquisitions from five different Native allotments (five owners) with total ROW acquisition of approximately 7.2 acres; 30% of the total ROW acquisition needed for this project (see Section 4.3). ROW takes of Native allotments range from less than 1.0% of the parcel to 4.4% of the parcel. Four of the five parcels that would be acquired would result in the land bisected by the new road alignment.

An estimated 8.1 acres of non-Native private properties, 32.4% of the total ROW acquisition acreage (a total of six owners), would be impacted by ROW acquisition. ROW takes for the non-Native private landowners range from 1.2% of the parcel to 13.8% of the parcel. One of the six parcels that would be acquired would be bisected by the new highway alignment.

The remaining acreage required for the project is 3.9 acres of Preserve and 5.1 acres of other State-owned land (37.5% of the total ROW acquired).

Land use in the Native allotment acquisitions is primarily undeveloped forest land that provides habitat to many species including those species hunted for subsistence. The proximity to the Highway limits the amount of hunting allowed by law. Berry picking and gathering are other

typical uses of these types of lands. As discussed in Section 4.3, DOT&PF and FHWA, in consultation with the allottees and the U.S. Bureau of Indian Affairs, would decide whether or not the old road alignment would be relinquished after construction. If the old road alignment is relinquished back to the Native allotments, the condition of how that old alignment would be left would be determined during final ROW negotiations. The Haines-Fairbanks Pipeline may be vacated within these parcels and active utilities moved to the new ROW.

Land acquired from non-minority individuals primarily consist of sliver takes of land adjacent to the highway and one section (5.4 acres) of land that bisects a parcel of land that has a developed air strip. One end of the air strip would be taken and the type of aircraft capable of using that strip would be affected. The property may not be relinquished to the private land owner because of the need to:

1. maintain utilities and access to them
2. maintain access to adjoining properties, and
3. proposed mitigation to restore wetlands and improve stream habitat at this location.

The number of minority individuals impacted is equivalent to the number of non-minority individuals and the amount of land affected is also equivalent. Land use in the Native-owned property is not developed and proposed acquisitions would bisect four of those parcels.

Subsequent land use or value is not known at this time. Five of the non-Native land owners would lose a sliver of land; use of the remaining land would not be affected. One non-Native land owner would have diminished land use after ROW acquisitions are completed.

The Native population in this area and representatives have been consulted during this assessment process and have not expressed concerns that the proposed effects are disproportionate.

Based on these factors, the Proposed Action does not appear to result in disproportionately high or adverse impacts to minority or low-income populations, and is intended to comply with E.O. 12898. A formal finding on compliance with E.O. 12898 would be made during finalization of the EA and the Decision Document.

No-Action Alternative - The No-Action Alternative would not resolve the highway deficiencies in the project corridor. It would not improve safety for vehicles, pedestrians, or bicyclists. It would not improve access to recreation facilities, or response time by police, emergency medical, and fire services.

The Klukwan Road intersection, the driveway intersections at the Chilkat River Bridge, and other segments and intersections would not be improved.

4.6.3 Avoidance, Minimization, and Mitigation Measures

ROW acquisition areas have been avoided through the use of guardrails and by eliminating passing lanes. Acquisitions have been minimized by widening on the existing alignment, to the extent practicable. Mitigation would be negotiated by DOT&PF as a part of the acquisition process under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act).

4.7 Economy and Subsistence

4.7.1 Affected Environment

The economy of Southeast Alaska has faced challenges over the last decade with job losses in six of ten years between 2000 and 2009 (State of Alaska Department of Labor and Workforce Development [DLWD], 2010). These losses have been associated with stresses facing the timber and fishing industries and, in some years, tourism.

Much of the project area is used by Tlingit people of Klukwan and Haines for subsistence, defined in the Alaska National Interest Lands Conservation Act of 1980 as the “customary and traditional use by rural Alaska residents of wild renewable resources for direct personal or family consumption as food, shelter, clothing, tools, or transportation.” Subsistence activities that occur in the project vicinity include fishing for salmon, eulachon (hooligan), and other species, as well as hunting and gathering.

Haines Borough

The economy of the Haines Borough is primarily based on government, tourism, and support services for a large retirement community (Table 4.7-1). The Haines Borough School District,

State of Alaska, Haines Borough, and Southeast Alaska Regional Health Consortium are the largest employers in the Borough.

Table 4.7-1: Haines Borough Employment

	2000	2011	%Change
Haines Borough Employment ⁵	992	1,008	1.6
Goods Producing	216	148	-31.5
Construction	131	90	-31.3
Manufacturing	28	23	-17.8
Agriculture, Forestry, Fishing, Mining	57	35	-38.5
Services	776	548	-2.8
Trade, Transportation, Utilities	195	206	-5.6
Professional Services	363	207	-43.0
Leisure/Hospitality Services (Tourism)	145	135	-6.8
Public Administration	73	283	287.6

Source: U.S. Census 2000, DLWD 2010 (Alaska Local and Regional Information, Workers by Industry)

Following is a brief highlight of some of the major economic sectors within the Haines Borough.

Government - According to the 2005-2009 American Community Survey 5-year estimates, 38.5% of employed workers in the Haines Borough were employed by the city, borough, state, or federal government (DCRA, 2012). In 2010 and 2011, local and state government alone employed 28% of the Borough’s employed residents (DLWD, 2012).

Tourism - In 2011 (latest data available), about 35,783 state ferry passengers disembarked at Haines (Haines Convention and Visitors Bureau, 2012). Data also reported 30,533 people crossed the International Border from Canada into the U.S. on the Haines Highway. More than 27,000 visitors arrived by cruise ship, down from a peak of 187,000 in 2000. Nearly 9,000 passengers flew on commercial air carriers into and out of Haines airport in 2010.

Special events that draw visitors to the Haines area include the Southeast Alaska State Fair in August, the Chilkat Bald Eagle Festival in November, the Kluane to Chilkat International Bike Relay in June, the Great Alaska Craftbeer and Homebrew Festival in May, and the Alcan 200 International Snowmachine Race in January.

⁵ Total includes 29 workers employed in “other” industry group not shown elsewhere in the table.

Over 100 businesses are licensed in the community provide visitor services to some extent. The town supports about twenty-two different hotels, inns, and bed and breakfasts, and six wilderness cabin facilities. Four state campgrounds are located in the general Haines area.

The *Haines Borough Comprehensive Plan* (2012) indicates that area residents support increased tourism, and implementation objectives call for increasing cruise ship and ferry activities as well as expanding outdoor and winter recreation services.

Other Industries and Development Projects - Haines supported a larger timber processing industry in the past; the last large sawmill closed in the early 1990s. Haines currently supports a small sawmill that is mainly used to cut cedar for locally produced hot tubs.

Haines remains an attractive port because of the availability of waterfront for transshipment facilities. Possible future uses of the port at Haines could be transshipment of goods and equipment needed to construct an Alaskan natural gas pipeline or to support mining exploration and development in the future. The Alaska natural gas pipeline project remains on hold and future mining projects are speculative (email from Mark Earnest, Haines Borough Manager, 3/7/2013).

Fiscal Conditions - The Haines Borough levies a property tax, a 5.5% sales tax, and a 4% hotel bed tax. In 2011, the property tax generated \$2.5 million on \$259.2 million of assessed value (State of Alaska Department of Commerce, Community and Economic Development [DCCED], 2012). The Haines Borough sales tax generated \$2.7 million, and a hotel bed tax generated \$71,928. Total Haines Borough 2011 tax revenues were \$5.3 million or \$2,116 per capita.

The Haines Borough government provides a variety of services within the Borough including public safety (police and fire), public works (street maintenance, water, sanitary sewer, and solid waste service), economic development, animal control, and others.

Klukwan

DLWD estimates of 2011 (DLWD 2013) employment in Klukwan were 45 persons, or 41% higher than the 2000 census estimate of 32. Klukwan saw a substantial increase in government employment (public administration) between 2000 and 2011 (Table 4.7-2). The Alaska State

Troopers provide public safety services and Klukwan has its own volunteer fire department and infrastructure.

Table 4.7-2: Klukwan Employment

	2000	2011
Klukwan Employment	32	45
Goods Producing	7	5
Construction	7	3
Manufacturing	0	1
Agriculture, Forestry, Fishing, Mining	0	1
Services	25	40
Trade, Transportation, Utilities	2	1
Professional Services	17	4
Leisure/Hospitality Services (Tourism)	0	2
Public Administration	6	33

Source: U.S. Census Bureau 2000; American Community Survey, 2013

In addition to the cash economy, subsistence hunting, fishing and gathering remains a major component of life in this area and the Chilkat River is important to the community’s subsistence activities. Klukwan is designated a rural place with customary and traditional use of various resources by the Alaska Joint Board of Fisheries and Game and the Federal Subsistence Board. From 1985 to 1999, annual sockeye subsistence harvests by Klukwan households ranged from 4,483 to 9,075 fish annually (DCCED, 2006). ADF&G surveys in 1983 and 1987 found that 100% of Klukwan households used subsistence resources and 95% of households participated in the harvest of those resources (ADF&G, 1994).

Southeast Alaska’s largest run of hooligan occurs up the Chilkat River, usually in early spring. Hooligan are highly prized for their oil, which is a customary trade item for Tlingit people of Southeast Alaska. The Tlingit people of Haines and Klukwan continue to harvest, process, and trade hooligan grease to many communities of the region (ADF&G, 1994; DCCED, 2006). Salmon are also important. About half of the subsistence harvest in the mid-1980s was salmon, with Klukwan taking mostly sockeye and chum by set net.

4.7.2 Environmental Consequences

Proposed Action - In the long term, the Proposed Action would provide decreased travel time and improved safety and access for those using the Haines Highway; this would have some benefit to the economy of Haines. However, because this highway is a major transportation

resource for the region, the benefit would be felt on a regional scale. The improved facilities along the highway could have a minor beneficial impact on tourism operations in the area.

Similarly, the Proposed Action could have beneficial long-term impacts to future economic opportunities in the Haines Borough because the Proposed Action would provide improved access to the Haines port and related facilities.

Construction of the Haines Highway improvements is expected to cost approximately \$132.9 million (DOWL HKM, 2010c). The construction would occur in multiple phases over several years as described in Section 2.0. Construction would result in short-term beneficial effects on local employment and wages during the construction period. A study of the potential economic impact of project construction was completed in 2009-2010, based on the \$132.9 million cost estimate and the four-part phasing estimate in the Preliminary Engineering Report (see Appendix B - Southeast Strategies Economic Impacts of Construction IMPLAN Analysis; DOWL HKM 2010c). This study estimated that construction expenditures (direct business revenues) of \$132.9 million could support almost 300 jobs for each of the four construction phases. Actual construction cost and phasing may differ from these early estimates, but would be expected to have comparable economic benefits.

Although impacts of the construction spending are expected to be beneficial in the short term, some short-term adverse effects could occur to tourism businesses if access to key recreational areas is limited or the areas are avoided due to construction. This includes the potential for short-term adverse effects on Chilkat River boat traffic during replacement of the bridge.

Proposed Action impacts on subsistence would result from fill in 14,230 linear feet of the banks of the Chilkat River. Figure Set C shows fill proposed in the Chilkat River and Section 4.15.2 (Essential Fish Habitat) discusses potential impacts of the fill.

The project was designed in consultation with the people of the Chilkat Indian Village and the Chilkoot Indian Association to avoid impacts to identified subsistence use areas. The primary concern raised by Klukwan residents during project scoping was potential impacts to one of their subsistence use areas from relocation of the Chilkat River Bridge downstream. As discussed in

Section 3.1, this bridge alternative was dismissed from further consideration due to several factors including the concerns over impacts to this important subsistence fishing area.

The Proposed Action would result in a long-term effect on the general safety and access to subsistence areas through improvements to the highway design, widened shoulders, and parking areas. These improvements would improve safety but could also increase non-subsistence recreational use of the area resulting in indirect adverse impacts to subsistence fishing.

Short-term effects on subsistence during construction would include river traffic interruptions and other potential construction disturbance impacts. Construction impacts on subsistence are discussed further in Section 4.20.

No-Action - The No-Action Alternative would have a moderate long-term adverse impact on the economic environment. This important transportation route would continue to have deficiencies that in the long term could potentially have adverse effects on local businesses and/or visitors to the area through decreased transportation efficiency and access. There would be no effect on subsistence from the No-Action Alternative.

4.7.3 Avoidance, Minimization, and Mitigation Measures

To avoid and minimize adverse impacts on the economy and subsistence activities in the project area, construction activities would be coordinated with:

1. local businesses and subsistence users to reduce the potential for adverse effects during key time periods,
2. DNR to reduce impacts to the Preserve during the Bald Eagle Festival, and
3. festival and other activity organizers to minimize impacts to scheduled events.

4.8 Visual

4.8.1 Affected Environment

The Haines Highway project corridor parallels the Chilkat River and provides views of the Chilkat River Valley; flanked by steep mountainsides, glaciers, and the forested river banks that are used by one of the world's largest congregation of bald eagles (the Preserve). Major eagle

roosting trees exist along many sections of the project corridor, dozens of eagle nests can easily be seen from the highway, and both local and out-of-state visitors have the opportunity to view the estimated 3,500 to 4,000 bald eagles that reside in the Preserve each year between October and February.

In 1998, the Alaska portion of the Haines Highway received state recognition as an Alaska State Scenic Byway. Scenic byways are special routes offering travelers access to beautiful scenery and cultural and natural riches. In 2009, Haines Highway was also designated as a National Scenic Byway (FHWA, 2013).

4.8.2 Environmental Consequences

Proposed Action - Preserving the scenic value of Haines Highway was identified as a special consideration for this project. The visual changes associated with the Proposed Action would be located on Haines Highway itself or in the area immediately adjacent to it. DOT&PF consulted with Preserve staff to determine appropriate improvements to the existing turnouts along the project corridor to maintain or improve access to the viewshed. The proposed turnout improvements are described in detail in Section 4.6 in the Recreation subsection, as well as in Appendix A.

The Proposed Action would expand some of the views for motorists traveling on Haines Highway. Sections with elevated highway grades and the higher Chilkat River Bridge would extend motorists' views of the Chilkat River and the Preserve. However, the open guardrail on the existing bridge would be replaced by a solid crash-tested railing. Typical passenger vehicles are not high enough for passengers to see over the railing. Guardrail would be installed in highway sections along the side of the Chilkat River. Depending on the height of the vehicle, the guardrail could partially obscure the viewshed.

Widening of Haines Highway and turnout improvements would result in minor additional vegetative clearing. Cleared areas would be re-vegetated; however, there may be some loss of mature, dense vegetation that currently provides screening.

Areas of large eagle roosting trees between the road and the river were specifically avoided where practicable. Following construction of the Proposed Action, motorists who drive this

corridor may perceive the highway improvements to be a minor adverse impact to the visual character of the highway, since they will be able to see some vegetation clearing, a slightly wider roadway footprint, and the abandoned roadway sections where the road is realigned.

Over time, this visual impact will be reduced as new vegetation fills in the cleared and abandoned areas.

No-Action Alternative - Changes to the scenic value of Haines Highway would not occur under the No-Action Alternative.

4.8.3 Avoidance, Minimization, and Mitigation Measures

Mature vegetation clearing has been avoided and minimized to the extent feasible. Vegetation would be added in select locations.

Surfacing of the relinquished highway sections would be determined in coordination with property owners during ROW negotiations. Surfacing of abandoned highway sections that would remain within DOT&PF ROW would be determined:

1. in coordination with utility companies to provide future access to existing utilities, or
2. if utilities do not exist, surfacing and embankment may be restored to original ground.

4.9 Noise

4.9.1 Affected Environment

Highway noise levels have not been measured within the project area. Noise is affected by the volume of traffic, the speed of traffic, and the number of trucks in the traffic. Highway noise along Haines Highway is not pervasive because traffic is relatively sparse and intermittent with a 2011 AADT volume of only 520 to 580 vehicles (less than 40 vehicles per hour) (DOT&PF, 2013b). The speed along the highway is posted at 55 mph with reduced speed at curves.

Noise sensitive receptors, as defined in the DOT&PF Noise Policy (DOT&PF, 2011a), do exist along the project corridor. Receptors include residences (a Noise Category B activity) and recreation areas (Noise Category C activities). The Preserve, a wildlife refuge and recreation area, is a resource that could be affected by excessive noise. The *Chilkat Bald Eagle Preserve Management Plan* (DNR DMLW, 2002a) recognized the existence of the Haines Highway and

does not identify traffic noise as being inconsistent with the plan. The management plan does not identify the Preserve as a Noise Category A activity; lands on which serenity and quiet are of extraordinary significance.

4.9.2 Environmental Consequences

FHWA regulations and DOT&PF policies require noise analysis and evaluation of noise abatement measures for certain types of projects (Type I projects). Type I projects are specifically defined (Code of Federal Regulations [CFR] 23 CFR Part 772 and DOT&PF Noise Policy, April 2011) and include a highway on a new location, the addition of new lanes, and horizontal and vertical realignments. These realignments must be considered substantial (halves the distance between the traffic noise source and the closest noise-sensitive receptor) in order to be a Type I project.

Proposed Action - There are multiple proposed horizontal and vertical alignment changes for this project. Proposed realignments near residents were analyzed and none halved the distance between the traffic noise source and these receptors. None resulted in the removal of shielding and exposing the line-of-sight between the noise source and the receptors. DNR-identified turnouts/recreational areas along the corridor were also evaluated and none of the realignments resulted in a halving of the distance between the highway and the defined sites. Realignments through the Preserve do include two substantial shifts; however, the receptor is not a single point. The Proposed Action is not a Type I project.

The Proposed Action would not increase the design speed or volume of traffic. While there are no data to characterize the existing noise levels, the low traffic volumes along the project corridor are not expected to exceed the regulated threshold sound level decibels for residences and recreational areas (67 dBA).

Construction noise impacts are discussed in Section 4.20 of this EA.

No-Action Alternative - There would be no change in the noise level along the project corridor from the No-Action Alternative except as projected from normal growth.

4.9.3 Avoidance, Minimization, and Mitigation Measures

The Proposed Action would not result in an increase in traffic noise impacts. During project development, the need for additional vehicle passing opportunities was identified. Design allowed for safe passing zones that avoided the need for passing lanes. Passing lanes could have shifted traffic closer to receptors and resulted in noise impacts.

4.10 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) of 1966 (U.S. Code [USC] 16 USC 470) requires projects that have federal funding to consider effects on any properties listed, or eligible for listing, on the NRHP. Federal regulations for implementing Section 106 are contained in 36 CFR 800, Protection of Historic Resources. As required by regulation, the project corridor Area of Potential Effect (APE) has been reviewed to determine if any eligible sites would be affected by the project.

The Section 106 consulting parties are the State Historic Preservation Officer (SHPO); Chilkat Indian Village; Chilkoot Indian Association; Central Council of Tlingit and Haida Indian Tribes of Alaska; Sealaska Corporation; Klukwan, Inc.; Bureau of Indian Affairs; and the Sealaska Heritage Institute.

Cultural Resource Consultants LLC (CRC) conducted archaeological and historic resource surveys for the proposed project in June 2006 and September of 2009. Following consultations and design modifications, the APE was expanded, and an additional survey of several new APE sections was conducted in April 2013.

4.10.1 Affected Environment

The project corridor lies within the traditional territory of the Chilkat Tlingit Nation. Stretching north from Berners Bay on Lynn Canal, the territory encompasses the Chilkat Inlet, the Chilkat and Klehini Rivers, Chilkoot and Taiya Inlets, and up to the Canadian border (CRC, 2011). The Chilkat Indian Village of Klukwan and the Chilkoot Indian Association of Haines participated in the 2006 survey. The 2006 and 2007 surveys focused on select areas of known and potential cultural sensitivity (CRC, 2011). Additional research was given to historic resources including the Department of Defense Haines-Fairbanks Pipeline that transported fuel from Haines to the

Interior of Alaska during the cold war (1953-1973). This pipeline is located along the entire proposed project corridor.

Twenty-five cultural and historical resource sites were evaluated for potential eligibility within the APE following the 2006 survey. FHWA determined that eleven of those sites met one or more of the significance criteria and retained enough integrity to convey their historic significance. These eleven sites were determined to be eligible for the NRHP. The SHPO concurred with this determination on February 24, 2012. No additional resources were found during the April 2013 survey. A summary of correspondence with SHPO and the consulting parties is included in Appendix E.

Of the eleven eligible sites, seven (7) are related to the cultural setting of the Chilkat Valley and the Chilkat Tlingit and four (4) are associated with early history of the development of the State of Alaska and Haines. To protect the resources and comply with the requirements of the NHPA and Alaska Statute (AS), NRHP-eligible sites identified as part of the cultural/archaeological investigation for this project are listed below by their AHRS database number, discussed in general terms, and are not shown on any maps within this document.

1. SKG-054, an important permanent village of the Chilkoot Tlingit.
2. SKG-057 is a commemorative property with symbolic significance.
3. SKG-044, a main traditional eulachon oil rendering area.
4. SKG-050, a site that played an important role in traditional Tlingit subsistence and settlement patterns, has association with a prominent Chilkat Tlingit.
5. SKG-543, SKG-544, and SKG-545, small cultural sites.
6. Gil Smith House (SKG-537). Gil Smith was a well-known landscape artist that focused on Alaskan and Chilkat Valley scenes. He lived in the Haines area from the 1940s to the 1980s. Gil Smith House sits on the northern side of Haines Highway, facing the Chilkat Valley, a setting that inspired Gil Smith's art.
7. The Alaska Road Commission (ARC) Buildings/Donnelly Cabin Site (SKG-085). The Donnelly Cabin Site, also known as the ARC Buildings, consists of two intact buildings:

a log cabin and a log barn with a loft. The latter, probably built in the 1920s, was reportedly used as a bunkhouse for ARC workers in the 1930s and 1940s.

8. Chilkat River Bridge (SKG-247). The Chilkat River Bridge was determined eligible for its distinctive characteristics. The Alaska Road Commission (ARC) built the Chilkat River Bridge, the fourth bridge to span the Chilkat River at Wells, in 1958. The bridge remains one of the longest steel stringer bridges with a reinforced concrete deck in the state.
9. The Haines-Fairbanks Pipeline District and Gate Valve 4 (both under SKG-206). In 2007, the USACE Alaska District identified the Haines-Fairbanks Pipeline District as a discontinuous historic district with multiple property types. The above ground portion of the district retains the integrity to convey its significance and is eligible for the NRHP. The buried pipeline portion does not retain sufficient integrity to convey its historic character and significance and is not determined eligible for the NRHP. The types of above ground pipeline features include tank farms, buildings, structures, and other features represented at pump stations along the length of the pipeline. One of these features is a gate valve located adjacent to the Haines Highway near the Chilkat River Bridge. Generally, gate valves are used in fuel pipelines to start or stop the flow of fuel. They are especially important during spills or pipeline leaks. According to a report by M. A. Grover (*Haines-Fairbanks Pipeline Formerly Used Defense Site (FUDS): Cultural Resources Monitoring and Survey Report*, Updated November 2007), USACE engineers believe that gate valves in the Haines-Fairbanks Pipeline were also used to bleed air or fuel from the line after the pipeline was cleaned in preparation to transmit different types of fuels. Along buried sections of the pipeline, the valves were not easily visible. The contractors constructed tall metal posts immediately adjacent to the buried gate valves to be able quickly locate these mechanical devices.

The USACE identified Gate Valve 4 as a contributing element to the eligible portion of the district (Photograph 4.10-1). It was constructed within a concrete vault through which the pipeline passes. A hinged steel lid is on top of the vault to allow access. This valve is located approximately 12 feet from the shoulder of Haines Highway. Photograph 4.10-1 shows the gate valve structure within its vault.



Photograph 4.10-1: Haines-Fairbanks Pipeline Gate Valve 4

Section 4(f) of the Department of Transportation Act of 1966 (49 USC 303) requires protection of public parks and recreation lands, wildlife and waterfowl refuges, and historic sites. Section 4(f) specifies that the Secretary of Transportation may only approve a transportation project requiring the use of a historic site if there is no prudent and feasible alternative to using that land or site, and if the project includes all possible planning to minimize harm to the historic site. The Chilkat River Bridge and Gate Valve 4 are historic sites protected under Section 4(f).

4.10.2 Environmental Consequences

Proposed Action - Impacts to historic resources are categorized by criteria established by Section 106 (36 CFR 800). Impact categories include no effect, no adverse effect, or adverse effect. FHWA has determined one historic property would be adversely affected (Table 4.10-1).

FHWA has determined that The Proposed Action would have a direct adverse effect on the Chilkat River Bridge (SKG-247), and SHPO has concurred (Appendix E). The Chilkat River Bridge would be replaced by a new bridge, and the existing bridge would be removed. Alternatives to minimize or avoid impacts to the Chilkat River Bridge were considered, but dismissed. This is described briefly below and in detail in Section 5.0, Preliminary Section 4(f) Analysis.

Table 4.10-1: Findings of Effect

Historic Property		Findings of Effect		
AHRS No.	Name	No Effect	No Adverse Effect	Adverse Effect
SKG-054		X		
SKG-057		X		
SKG-044			X	
SKG-050			X	
SKG-545			X	
SKG-544			X	
SKG-543		X		
SKG-537	Gil Smith House		X	
SKG-085	Donnelly Cabin Site	X		
SKG-247	Chilkat River Bridge			X
SKG-206	Haines-Fairbanks Pipeline, Gate Valve 4		X	

The Proposed Action would realign Haines Highway in the vicinity of Gate Valve 4. East of the Gate Valve, there is a major realignment and the Gate Valve would be within the proposed fill slope but outside the proposed pavement (see Figure 5.2-1). Based on the preliminary design, the concrete vault would be within the new embankment. The Gate Valve’s location marker post would be located outside the clear zone needed for a 55 mph highway.

DOT&PF proposes to construct an enclosure vault to the surface of the embankment completely encasing the existing Gate Valve concrete vault. A manhole or other protective cover would be placed over this new vault. The Gate Valve marker post would remain in place and not be affected. The existing vault steel hinged cover would remain in place and continue to provide access to Gate Valve 4. Based on this Proposed Action, FHWA has determined there would be no adverse effect to the eligible portion of the Haines-Fairbanks Pipeline (SKG-206) District’s Gate Valve 4 (agreed with by S. duVall, SHPO regulatory compliance staff, personal communication with Jane Gendron, DOT&PF Environmental Impact Manager, July 2013).

In addition, Gil Smith House (SKG-537) would be affected by the Proposed Action, but not adversely. The Gil Smith House is outside the project limit, but the Proposed Action would shift Haines Highway slightly closer to it. Only the driveway would incur minor changes from project construction. The highway has always been a part of the visual setting associated with Gil Smith House. Therefore, FHWA found that the Proposed Action’s changes to the highway would not

adversely affect character-defining features of the property and it would retain eligibility for the NRHP.

Four eligible archaeological resources (SKG-044, -050, -545, -544) are also in close proximity to the proposed project; however, FHWA has found that the Proposed Action would not adversely affect these properties; they would retain eligibility for the NRHP.

As required by Section 4(f), FHWA evaluated alternatives that would avoid any impact to the Chilkat River Bridge as well as all other Section 4(f) properties in the vicinity. FHWA found that no avoidance alternatives existed that would avoid all Section 4(f) properties and meet the purpose and need of the project. These avoidance alternatives are briefly presented below under Avoidance, Minimization, and/or Mitigation Measures and detailed in Section 5.0, Section 4(f) Analysis.

No-Action Alternative - No new construction activities would occur; therefore, the No-Action Alternative would not have an effect on historical and cultural resources.

4.10.3 Avoidance, Minimization, and Mitigation Measures

An alternative to repair and widen the existing bridge was dismissed because it would destroy the bridge's historic integrity (Appendix E). An alternative to construct a new single-lane bridge for one-way traffic and retain the historic bridge for traffic going the other way was eliminated because the existing bridge does not meet current design or seismic standards, shows signs of deterioration, and presents a safety hazard.

Leaving the existing bridge in place and constructing a new bridge either upstream or downstream was also considered and dismissed due to safety and navigation issues, among others.

A Memorandum of Agreement (MOA) is being developed to mitigate for the adverse effect to the Chilkat River Bridge. Following are the mitigation measures being considered at this time:

1. Prepare and submit the Chilkat River Bridge architectural details and historic documents to SHPO and the Sheldon Museum.

2. Design and construct interpretive features in the project corridor that would provide the public with information about the history of the Chilkat River Bridge, as well as the Haines-Fairbanks Pipeline and the role it played in Alaska and the Nations' history.

4.11 Water Body Involvement, Hydrology, and Water Quality

4.11.1 Affected Environment

Haines Highway is located along the shores of the Chilkat River and crosses many tributaries. The highway crosses the Chilkat River at Wells, northwest of Klukwan. The Chilkat River is glacially fed and tidally influenced within its first three (3) miles upstream from Chilkat Inlet. This river carries a significant amount of sediment or bedload. The floodplain is characteristically very broad, providing significant capacity to accommodate flood flows. Sediments are continually redistributed across the floodplain by ever changing river channel configurations (personal communication, R. Trousil, P.E., DOT&PF to Jim Scholl, DOT&PF Environmental Analyst, April 2013).

Major tributaries include the Klehini and Tsirku Rivers. Along the Haines Highway, there is a complex network of Chilkat River side channels on the northeast bank of the river between MP 10 and 19. In a number of locations, side channels point directly into the highway embankment before turning downstream at sharp angles (H&H Report, Inter-Fluve, 2009). Road embankment scour does occur at some locations.

Smaller tributaries are relatively clear of glacial silt and are not intertidal. Many of these smaller tributaries parallel Haines Highway and have banks that are regularly cleared of vegetation for sight distance resulting in erosion and increased turbidity (Inter-Fluve, 2009). Inter-Fluve located 106 culvert crossings between MP 3.5 and 25.3. Most culverts are adequately sized to carry water flows as intended except when clogged with debris and sediment. The exceptions are at MP 19 and 23 as discussed below.

Haines Highway crosses large alluvial fans near MP 19 and 23. These fans were produced by creeks that normally flow in well-defined channels at low volumes and low velocities. However, periodic rain or rain-on-snow events can increase the flow dramatically. The steep topography and type of materials contribute to soils instability. The unstable soils become fluid when saturated, producing debris flows that periodically cross the highway. Even with continual

maintenance, flows overtop the existing road every 3 to 5 years on average. These debris flows plug the stream culverts, deposit sand and gravel several feet deep on the road, and reroute the stream channels (DOWL HKM, 2010a). The photographs below show the conditions at these culverts during a recent debris flow event.



Photograph 4.11-1: Debris Flows

The nine bridge piers supporting the existing Chilkat River Bridge are affected by river hydrology. Water flowing past these piers cause riverbed scour and sedimentation patterns that are different than if no bridge piers were present.

None of the waterways in the project area are listed as impaired on the State of Alaska's Section 303(d) Listed Water Quality-Limited Water Bodies (DEC, 2010b). Most of the small tributary streams in the project area originate in undeveloped alpine areas and are clear and low in dissolved solids.

The overall water quality in the project area is relatively good, except during periods of heavy runoff when plumes of silt can be seen at the mouth of most streams.

Homes and businesses along the project corridor obtain potable water from wells or surface water supplies. Klukwan obtains potable water from a spring near the village (Chilkat Indian Village, 2007). The last three years of testing indicated the water source for the village met the U.S. Environmental Protection Agency (USEPA) safe drinking water standards. There are no readily available water quality data for private drinking wells in the project area.

4.11.2 Environmental Consequences

Proposed Action - The Proposed Action would result in multiple changes to hydrologic conditions and water quality as listed in Table 4.11-1 below.

Table 4.11-1: Hydraulic Changes Due to Proposed Action

Proposed Action	Environmental Consequence
Chilkat River Bridge-longer and wider structure with three in-water piers; Each pier would consist of 3 ft or 4 ft diameter individual piles replacing nine piers with solid 1'-8" wide by 25'-6" long concrete walls	Localized hydraulic changes at the piers/pilings; scour and sedimentation patterns would change because there would be individual piles rather than solid piers. Outside of the influence of the piers/pilings, river bottom sediments would be shifting as a normal river channel. Biological systems would respond to these hydraulic changes and stabilize over time.
Culverts in 24 fish streams replaced	Localized hydraulic changes; fish passage maintained at some locations and improved at others.
Debris flow culverts at two locations (MP 19 and 23) replaced with larger structures	Debris would be conveyed past the highway and some could directly enter the Chilkat River; turbidity and sediment loads to the river would increase; reduced water quality during debris flow events because of an increase in turbidity at and below debris flow areas; the riverbank configurations at the discharge point or downstream could grow and change its shape as sediment accumulates. This could result in added land areas and shoreline vegetation.
Road realignment and river embankment hardening (fill in Chilkat River) (fill in 8.5 acres)	Localized hydraulic changes; erosion reduced at some locations; water quality improved.
Wetland fill (about 24 acres)	In relation to the large area of wetlands in the Chilkat watershed, wetlands water retention and recharge would be minimally reduced. Residential water supplies would not be affected given the size of the watershed and the relative small water withdrawal at these homes.
Tributary streams realigned away from the Highway	Stream hydraulic changes; water quality improved.
Highway widening	Impervious area increased by an estimated 20 acres (25%); additional stormwater runoff.

Changes in hydraulics can affect sedimentation and river bottoms. This could change fish habitat and water quality. The proposed new bridge, improved fish stream culverts, and tributary stream realignments are expected to improve fish habitat and water quality. Replacing debris flow culverts at MP 19 and 23 could result in more rock, sand, and sediment directly flowing into the Chilkat River. Given the Chilkat River's wide channel and heavy bed load, this would have a

negligible effect except for immediately downstream of these two areas during debris flow events. Localized changes to the river banks and beds could occur at and downstream of the debris flow areas. Sediment accumulation could occur and stabilize over time resulting in expanded river banks and vegetated areas. Changes to the water quality beyond the debris flow areas would be temporary.

No-Action Alternative - No changes to the water quality are anticipated as a result of the No-Action Alternative. Insufficient or damaged culverts would continue to restrict natural water and debris flows. Higher than normal maintenance at MP 19 and 23 would continue and highway damage is expected to continue during certain storm events. Water quality in some tributaries would continue to be impacted by erosion of the highway embankment.

4.11.3 Avoidance, Minimization, and Mitigation Measures

Mitigation associated with the Proposed Action would include:

1. replacing/upgrading existing culverts,
2. enhancing some tributaries in the project area by realigning them further from the roadway and reducing roadway runoff into these streams, these areas are:
 - a. approximately 200 feet of a tributary near MP 4.5
 - b. approximately 1,000 feet of a tributary near MP 10.2
 - c. approximately 200 feet of a tributary near MP 10.5
 - d. approximately 500 feet of a tributary near MP 12.5
3. paying fees to an approved in-lieu fee agent (Appendix D).

Mitigation of hydrologic functions from wetlands filled as part of the project is discussed further in Section 4.14.

In-water work is anticipated to cause short-term impacts to surface water quality during construction. Construction activities could also result in some short-term groundwater quality effects if shallow wells are located in close proximity to construction work areas.

A Section 401 Water Quality Certificate from the DEC is required for project construction and would be issued concurrently with USACE's Section 404 Permit during the final design and permitting phase of this project. Minor short-term impacts to water quality and proposed mitigation associated with general construction activities are discussed further in Section 4.20.

4.12 Navigability

4.12.1 Affected Environment

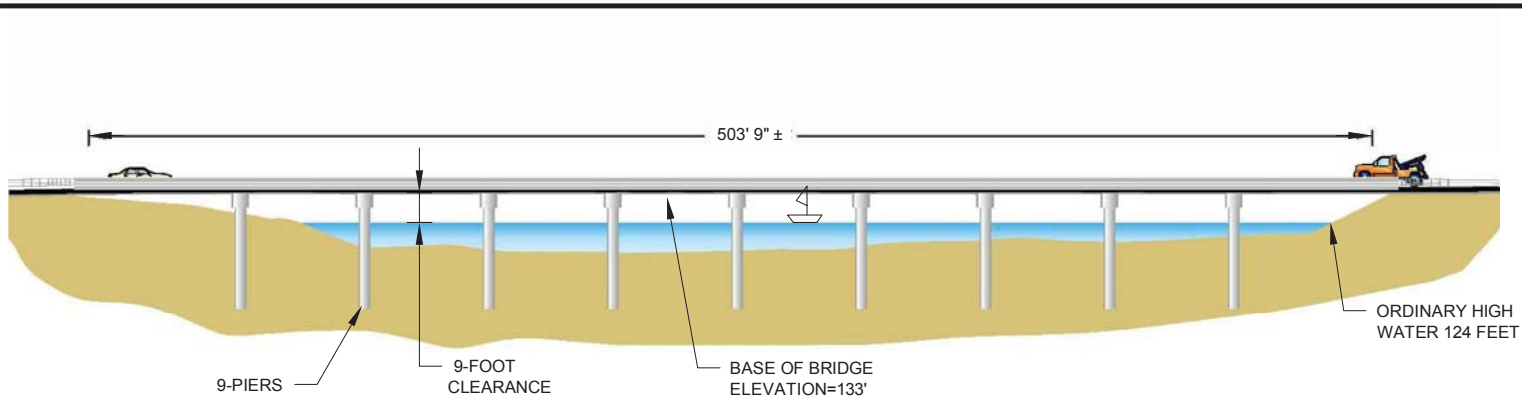
The Chilkat River Bridge (DOT&PF Bridge No. 742) is the only bridge across the main stem of the Chilkat River. This bridge is approximately 504 feet long. It has nine in-water piers, providing seven 48 feet wide and 9 feet high openings above ordinary high water (OHW) at its center (Figure 4.12-1). Shoreline openings vary in width based on water flows.

Directly upstream from the bridge was the Haines-Fairbanks Pipeline river crossing. In the past, the combined piers in the river resulted in logjams as shown in Photograph 4.12-1. The pipeline river crossing was removed in the winter of 2013.

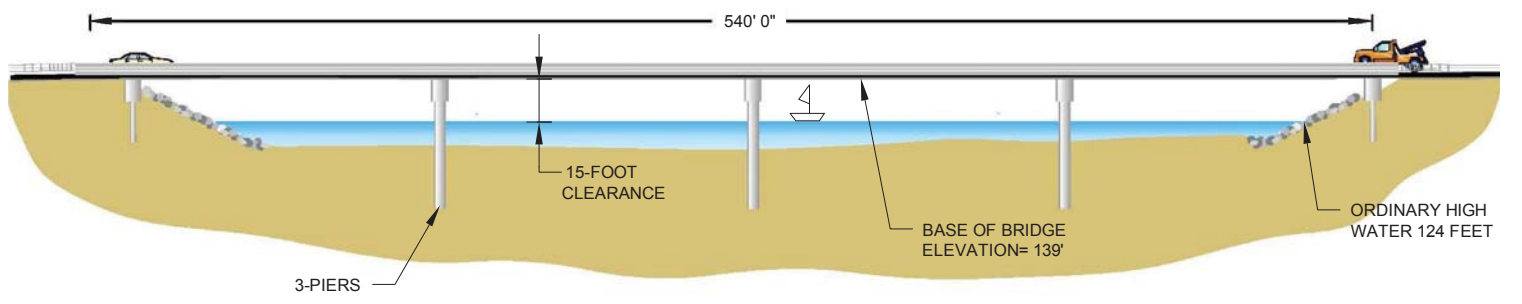


Photograph 4.12-1: Logjam Underneath Bridge

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EXISTING BRIDGE



PROPOSED BRIDGE

<p>CHILKAT RIVER BRIDGE TYPICAL SECTIONS</p> <hr/> <p>T 28/29/30 S, R 56/57/58/59 E, Copper River Meridian, Alaska</p>		<p>DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES</p> <hr/> <p>DOT & PF Project No. 68606 HAINES HIGHWAY MILEPOST 3.5 - 25.3</p> <hr/> <p>Haines, Alaska</p> <hr/> <p>DATE: MARCH 2012</p>
		<p>FIGURE 4.12-1</p>

The Chilkat River is a navigable river according to the U.S. Coast Guard (USCG Navigable Waters of the United States within the Seventeenth Coast Guard District; Revision date March 2012). Current navigational uses of the Chilkat River along the length of the project corridor include recreation, fishing, commercial tours, and ADF&G research. There are two commercial river boat operators permitted to operate within the Preserve by DNR. Commercial river sightseeing and fishing tours originate near the confluence of the Klehini and Chilkat Rivers. Commercial raft float trips are conducted near the confluence with the Tsirku River through the Preserve to about MP 15. Other than tourism and guided fishing, little commercial activity occurs on the Chilkat River.

Recreational canoes, kayaks, and rafts are also used along the Chilkat River. The frequency of recreational use of the River is not recorded. Other than tourism and guided fishing, little commercial activity occurs on the Chilkat River. A commercial riverboat operator has stated that, during high water events or when there are logjams built up against the piers, it can be difficult or impossible for boats to pass underneath the bridge (personal communication, D. Hess, boat operator, to J. Scholl, DOT&PF Environmental Analyst, July 12, 2010 [Appendix H]).

4.12.2 Environmental Consequences

Proposed Action - The Chilkat River Bridge would be replaced with a new bridge immediately adjacent to and downstream of the existing bridge. The new bridge would be 6 feet higher and 36 feet wider than the existing bridge. There would be three piers in the water. There would be two main openings for navigation measuring at 128 feet wide by 15 feet high at OHW. The two shoreline openings' width would vary with water flow.

Water flow past the bridge would be less constricted than the existing conditions. There would be less scour potential and debris accumulation.

The Proposed Action would have a positive effect on navigability.

A temporary work bridge would be constructed within the ROW near the existing bridge. The exact number of piers and configuration of that work bridge would be determined by the contractor. Navigability during construction would be maintained.

Temporary river traffic delays may occur during construction of the temporary work bridge, construction of the new bridge, and the removal of the existing bridge. This is discussed further under Section 4.20, Construction Impacts.

No-Action Alternative - Under the No-Action Alternative, the existing bridge would not be replaced. Navigability would not be improved. The bridge would continue to provide insufficient clearance for boaters during high water events and navigation would continue to be restricted at low water.

4.12.3 Avoidance, Minimization, and Mitigation Measures

The Proposed Action would be a net benefit to navigability. No avoidance, minimization, or mitigation measures are proposed.

4.13 Floodplains

4.13.1 Affected Environment

The Chilkat River is a broad, dynamic, glacially-fed fluvial system consisting of multiple channels within an extensive floodplain. Sediments consist of coarse materials dominated by cobbles and gravels with finer sands and silts. The river is braided with sediment deposition occurring as continual shifting sand/silt bars or levees and shifting of stream channels.

The Chilkat River floodplain is broad, varying in width from 1,000 feet in the upper reaches of the river near the end of the project (Mile 25), to 1.1 miles near the Haines Airport. Due to shifting sand/silt bars and changing stream channel configurations, normal flows of the river can rapidly change. Flooding occurs within the numerous side channels that exist within and adjacent to the floodplain.

In the wider areas of the Chilkat River floodplain, flood flow depths remain shallow even when flood discharge rates increase dramatically. However, shifting sand/silt bars often result in the formation of levees. Riverbanks may become susceptible to erosion in localized areas should flood flows become concentrated by these levees when formed on the fringes of the floodplain.

The Haines Borough has participated in the National Flood Insurance Program since 2004 and manages floodplain development in accordance with the City of Haines Floodplain and Flood

Hazards Map (1987)⁶ on file in the Haines Borough Administrative Office. The Haines Highway MP 3.5 to 25.3 project lies outside of the Haines Borough's regulatory floodplain, and there are no Federal Emergency Management Agency (FEMA) maps covering the project area. Therefore, no regulatory floodway or floodplain exists within the project area, and a flood zone permit is not required from the Haines Borough.

Additional information about the Chilkat River and flooding issues, including at the debris flow areas at MP 19 and 23 is in Section 4.11, Water Body Involvement, Hydrology, and Water Quality.

4.13.2 Environmental Consequences

Proposed Action - The Proposed Action would occur within the Klehini and Chilkat River floodplains. The Proposed Action includes fill within the Chilkat River for roadway widening where realignment cannot avoid encroaching into the river and for construction of the new Chilkat River Bridge.

A Location Hydraulic Study was conducted for this project (DOWL HKM, 2009a). The model predicted a very small increase in water surface elevation (0.02 feet) for the Proposed Action. Risks associated with the Proposed Action are considered to be similar in scale to those of the existing roadway.

Culvert replacements would also be installed within the floodways and floodplains of numerous small tributaries to the Chilkat River where streams cross underneath the existing highway. The culverts would be designed to accommodate the estimated 100-year flood flows. The proposed new culverts would be larger than the existing culverts, which would improve stream processes and provide more natural floodplain connectivity.

The new Chilkat River Bridge would have six fewer in-water piers and would be 6 feet higher than the existing bridge, reducing the potential for upstream flooding.

No-Action Alternative - The No-Action Alternative would not affect the floodplain of the Chilkat River or its tributaries. E.O. 11988 requires that no federal action be developed within

⁶ The City of Haines Floodplain and Flood Hazards Map on file in the Haines Borough Administrative Office in Haines

the base floodplain unless there is no practicable alternative. River fill was avoided to the extent practicable during the preliminary design; however, due to a variety of constraints, including the need to avoid eagle nesting trees, private property, and steep rock cliffs to the north of the highway, some river fill (approximately 7.4 acres) was unavoidable. Avoiding the floodplain with this transportation facility has been determined not practicable.

4.13.3 Avoidance, Minimization, and Mitigation Measures

As noted above, the measures to minimize floodplain impacts include designing and installing adequately sized structures that would limit the increase in backwater and adequately pass the 50- and 100-year floods without significant damage to the floodplain, roadway embankment, or Chilkat River Bridge. Although there are no FEMA-mapped floodplains in the area, this project should lessen the risk of erosion losses within the floodplain consistent with FEMA regulations.

As discussed in Section 4.11, the Proposed Action would also reduce the potential for road flooding resulting from mountainside debris flows. New debris flow culverts would allow the flows to run under the road and follow their natural path to the river.

4.14 Wetlands and Other Waters of the United States

4.14.1 Affected Environment

A preliminary wetlands delineation was done in 2005 that covered a study area of about 900 acres (DOWL HKM, 2006b). The study area was 150 feet on either side of the existing road centerline and was wider where the road was proposed to be realigned. This study area is shown in Figure Set C. Wetlands and riverine habitat comprised approximately 248 acres (28%) of the study area. Wetlands were grouped into six habitat types as shown in Table 4.14-1 and on Figure Set C.

Table 4.14-1: Wetland Habitat Types

Wetland Habitat Type	National Wetlands Inventory (NWI) Designation	Acres	Percent of Study Area
Riverine	Riverine-Chilkat River, Upper Perennial Open Water Scrub Shrub-Saturated (R30W)	99.2	11.0%
Shrub Swamp	Scrub Shrub-Seasonally Flooded Scrub Shrub Permanently Flooded (PSS1B, PSS1E, PSS1H)	72.5	8.1%
Herbaceous Swamp	Emergent-Permanently Flooded (PEM 1 H)	40.6	4.5%
Seasonally Flooded Black Cottonwood	Forested-Seasonally Flooded (PFO1C)	11.8	1.3%
Fresh Sedge Meadow	Emergent-Saturated (PEM1B)	8.9	1.0%
Bluejoint Meadow	Emergent-Saturated (PEM1B)	15.4	1.7%
All Wetlands and Waters of the U.S.	N/A	248.4	27.7%

On February 9, 2010, the USACE issued a Preliminary Jurisdictional Determination based on the wetland data submitted to them April 17, 2009. The USACE determined these 248.4 acres are regulatory wetlands or waters of the U.S. In 2012, the functions and values of the wetland complexes were evaluated (DOWL HKM, 2012). Based on this assessment, the primary functions of the wetlands adjacent to Haines Highway are to provide fish rearing and passage, nutrient cycling, and retain water to minimize flooding.

4.14.2 Environmental Consequences

Proposed Action - The Proposed Action would directly impact (excavate or fill in) approximately 23.7 acres of wetlands plus fill 7.4 acres of open water in the Chilkat River.

Approximately 14,244 linear feet of the Chilkat River and 2,315 linear feet of its tributaries would be affected. Table 4.14-2 and Figure Set C present the project impacts to wetlands and other waters of the U.S. (Note that wetlands and waters of the U.S. are combined as wetlands in this section.)

Table 4.14-2: Impacts to Wetlands and Waters of the United States

Habitat Type	Value	Impacts		
		Square Feet	Acres	Linear Feet
Wetlands				
Emergent - Permanently Flooded (PEM1H)	High	394,792	9.1	NA
Emergent- Saturated (PEM1B)	High	149,520	3.4	NA
Forested - Seasonally Flooded (PF01 C)	Low	61,058	1.4	NA
Scrub Shrub - Saturated (PSS1B)	Medium	795	<0.1	NA
Scrub Shrub - Seasonally Flooded (PSS1E)	Medium	73,870	1.7	NA
Scrub Shrub - Pennanently Flooded (PSS1H)	Medium	346,091	8.0	NA
Total Wetlands		1,022,990	23.6	NA
Other Waters of the U.S.				
Riverine- Chilkat River, Upper Perennial Open Water (R30W)	High	335,436	7.7	15,550
Riverine- Tributaries to Chilkat River (open water)	High	24,789	0.6	2,435
Total Other Waters of the U.S.		360,225	8.3	17,985

The Proposed Action would fill in approximately 8.3 acres of other waters of the U.S. (riverine areas) that provide for water storage to protect against flooding and for feeding fish streams, wildlife and fish habitat, sediment/toxicant retention, nutrient cycling and other functions. The Proposed Action would also fill in approximately 12.5 acres of high value palustrine emergent wetlands. These are saturated wetlands that provide flood control, sediment/toxicant retention, nutrient cycling, and wildlife habitat. About 8.7 acres of scrub shrub wetlands and 1.4 acres of forested wetlands would also be lost.

The Proposed Action would require a USACE Section 404, Wetlands and Waters of the US, Permit. To receive a permit, the project must demonstrate that it has avoided and minimized the impacts to wetlands to the extent practicable and that compensation is provided for impact that cannot be avoided. This project was planned and would be designed in compliance with these requirements. The Proposed Action would comply with E.O. 11990, Protection of Wetlands.

No-Action Alternative - The No-Action Alternative would have no effect on wetlands in the project area. Stream habitat would not be restored or enhanced, and existing culverts would not be replaced to provide improved fish passage.

4.14.3 Wetlands Avoidance, Minimization, and Compensatory Mitigation

E.O. 11990, Protection of Wetlands, requires that there be no practicable alternative to the Proposed Action that affects less wetland and that the project includes all practicable measures to

minimize harm to wetlands. Because much of the project corridor is bordered by wetlands and the Chilkat River, it is not possible to completely avoid impacting wetlands and riverine habitat if the highway is to be improved. The project design has focused on avoiding and minimizing wetland impacts through the measures described below.

Avoidance - Wetlands would be avoided by:

1. following the existing highway alignment to the extent feasible,
2. widening and/or realigning into uplands, rather than wetlands, to the extent possible,
3. maintaining natural flow patterns through use of culverts and cross-drainage structures, and
4. improving sight distance to remove the need for passing lanes.

Minimization - Wetland fills would be minimized by:

1. adjusting the elevation of the highway,
2. adding guardrails, and
3. constructing a road embankment slope that is as steep as practical (2:1).

Construction measures would also be implemented to minimize impacts, as listed below:

1. staking and/or flagging construction limits in wetland areas prior to construction, to limit impacts to permitted areas;
2. limiting construction staging areas, material sites, and disposal sites to upland areas and/or within permitted fill limits of the roadway; and
3. implementing erosion and sediment controls to reduce impacts to wetlands from stormwater runoff as specified in an approved Stormwater Pollution Prevention Plan (SWPPP) required by the Alaska General Construction Permit. The SWPPP would be based on an *Erosion and Sediment Control Plan* (ESCP) that would be included in the construction contract.

Section 4.20 provides additional construction-related impacts and avoidance and minimization measures.

Compensatory Mitigation - Beyond the avoidance and minimization measures listed above, compensatory mitigation is required by USACE and USEPA for the unavoidable impacts to

wetlands. During project scoping and preliminary design in 2006, DOT&PF established a team comprised of persons representing resource agencies with jurisdiction (National Marine Fisheries Service [NMFS], USFWS, USACE, EPA, ADF&G, DNR) and the local watershed council. The purpose of this Interdisciplinary Team (IDT) was to discuss this project and obtain agency input on the proposed mitigation plan. The IDT indicated that the most important wetland function in the project area was to provide fish habitat. IDT identified mitigation options including stream enhancement and creation as well as a number of small wetland creation sites. In response, DOT&PF has developed a Conceptual Mitigation Opportunities plan (see Appendix D).

Following the development of the conceptual stream mitigation plan, USACE's 2008 Mitigation Rule and USACE Alaska District's Regulatory Guidance Letter on this new rule (RGL ID No. 09-01) were published. These guidelines establish a hierarchy for preferred types of compensatory mitigation, with wetland mitigation banks being the most preferred, followed by in-lieu fee programs, and "permittee-responsible" (on-site, in-kind) mitigation being the least preferable. Because there is no wetland mitigation bank in the Haines Borough, the proposed mitigation for this project would include proposed stream mitigation areas and a fee-in-lieu of compensatory mitigation, at a ratio negotiated with the USACE. It should be noted that when the Conceptual Mitigation Opportunities plan was developed, the resource agencies' preference was for on-site, in-kind mitigation with the focus on restoring and enhancing fish habitat. The IDT considered this to be the most important function provided by wetlands in the area.

Based on the functions and values assessment, some of the functions and values lost would be replaced with the proposed mitigation and restoration plan described in Appendix D. The following is a brief description of the proposed wetlands mitigation plan.

Stream Restoration/Enhancement Sites - DOT&PF is proposing on-site mitigation to restore and enhance fish habitat in eight tributaries adjacent to the project corridor, as described and shown in detail in Appendix D.

Each of the eight sites provides an opportunity to restore and/or enhance the existing stream channels through various methods such as:

1. relocation of fish-bearing streams away from the road, beyond where DOT&PF needs to brush for maintaining visibility;
2. installation two new fish passage culverts designed to improve fish habitat;
3. upgrading three existing fish bearing culvert with culverts designed for fish passage;
4. constructing additional fish bearing tributary features, such as vegetation and root wads, to improve stream complexity and nutrient supply; and
5. removal and partial excavation of existing road embankment to create a hydrologically connected flood terrace/wetland area adjacent to a fish stream (Appendix D).

Creation of the stream restoration/enhancement sites (sites) would also improve the aquatic ecosystem by improving the water quality of tributaries within each site. The faunal carrying capacity of each of the sites would be improved by providing surface water drinking sources. The sites would be constructed within herbaceous swamp and meadow (PEM1H and PEM1B) and shrub swamp (PSS1H, PSS1E) wetlands. Improved fish habitat would improve the value of each site's wetlands.

Seasonally flooded cottonwood forest wetlands (PFO1C), adjacent to the sites would also be improved. Fish habitat improvements in adjacent wetlands would provide an improved food source for eagles perching in the forested wetlands.

Fish Stream Culvert Improvements - Fish stream culverts would be replaced in accordance with the Memorandum of Agreement (MOA) between ADF&G and DOT&PF regarding culvert replacements (see the table summary with Figure Set C). The fish passage culvert upgrades would improve fish access to the enhanced aquatic habitat, providing a functional benefit to these fish streams.

4.15 Fish

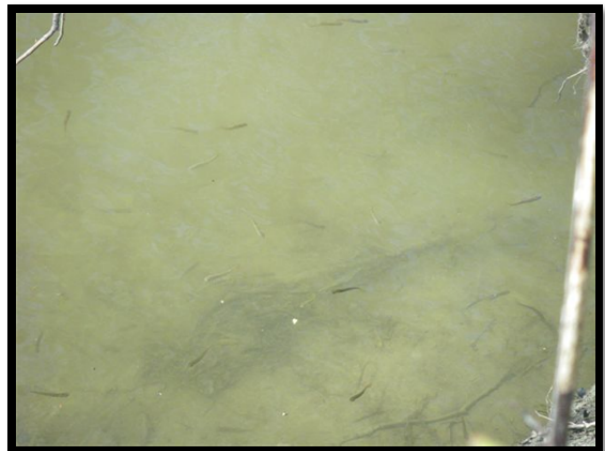
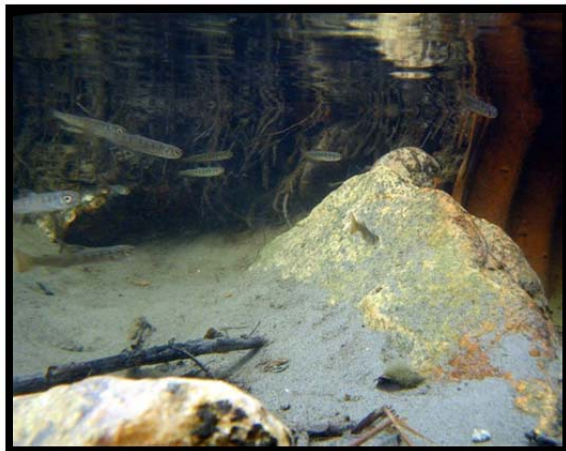
4.15.1 Affected Environment

The Chilkat River and 25 tributaries to the river provide fish habitat in the project area. Twenty of the tributary channels are catalogued by the *ADF&G Catalog of Waters Important for the*

Spawning, Rearing, or Migration of Anadromous Fishes (ADF&G, 2012; the Catalog). In addition to these 20 cataloged tributaries, ADF&G has identified and is in the process of adding five more tributaries in the project area to the Catalog. Tributary channels were mapped during the Wetlands Delineation (DOWL HKM, 2006b) and the Stream and Habitat Inventory (S&HI) survey (Inter-Fluve, 2006) and are shown in Figure Set C and listed in a table that accompanies Figure Set C.

All areas of the Chilkat River adjacent to the project area likely serve as migration and rearing habitat for all five species (chinook, coho, sockeye, chum, pink) of Pacific salmon. Gravel side channels of the river provide spawning habitat for chum and coho salmon from September through December. The small-bodied anadromous eulachon (commonly called hooligan) spawn within the first 8 miles of the river. Other fish species present in the Chilkat River include steelhead, cutthroat, Dolly Varden, whitefish, and Pacific lamprey. The five salmon species and eulachon are highly valued resources and are the focus of an Essential Fish Habitat (EFH) Assessment prepared for this project in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (Appendix F).

The tributary channels primarily provide rearing habitat for salmon (Photograph 4.15-1); some also have gravels suitable for spawning. In contrast to the turbid Chilkat River, the tributary channels provide rearing fish with relatively clear water and more abundant sources of food and cover.



Photograph 4.15-1: Fry in Stream Proposed for Enhancement Near Milepost 13

EFH - The Magnuson-Stevens Fisheries Conservation Act requires that EFH for certain fish species be identified, and measures taken to conserve and enhance the habitat necessary for fish to carry out their life cycles. The Chilkat River and its tributaries are EFH for all five salmon species and the forage fish, eucalon. DOT&PF submitted an EFH Assessment to NMFS on behalf of FHWA on May 11, 2012 (Appendix F).

4.15.2 Environmental Consequences

Proposed Action - The components of the proposed project that would affect fish species and their habitat (essentially EFH) and what those impacts would be are listed in Table 4.15-1.

Direct impacts to fish can occur from changes in water quality, sedimentation of spawning gravels, changes to their food supply, and changes in stream structure (used for resting, hiding, and overwintering spaces). These types of fish impacts would occur during and after construction until conditions stabilize and new habitats are established. The Proposed Action or work in areas to enhance habitat (proposed mitigation measures) could cause these direct impacts to fish present during construction.

Temporary impacts include sedimentation, loss of vegetation and prey, changes in water quality, and noise and vibration during pile driving at the bridge. These impacts are discussed in Section 4.20, Construction Impacts.

Table 4.15-1: Proposed Action Impacts to Essential Fish Habitat

Proposed Action	Impacts to EFH	Impacts to Fish
Place about 8.5 acres of fill in the Chilkat River and 22 of its tributaries. Note: Fill in tributaries would be mitigated by stream realignment (see below).	<ul style="list-style-type: none"> • Eliminate riparian areas, stream channels, waterways and associated wetlands. • Loss of substrate type/habitat at fill locations. • Armor rock could affect sediment movement and chemical processes. • Changes to hydrology/water flow: develop scour holes at some locations and build up sediment at other locations. • Open habitat for invasive species. 	<ul style="list-style-type: none"> • Loss of available food at fill sites. • ability to move from one part of the stream to another for shelter from predators or to find favorable habitat. • Loss of spawning gravels. • Burying of eggs and alevins in sediments. • Changes to fish passage patterns/routes.
Realign 8 tributaries along the highway corridor.	<ul style="list-style-type: none"> • Changes to flow and substrate types from addition of large woody debris and alignments into gravel bars as well as stream depth changes and meanders. • Changes to aquatic life colonizing these new substrates. • Long-term increase in riparian vegetation along banks because vegetation would not be cut for sight distance on highway. • Possible changes in water quality/characteristics. • Stream channel may be dry during periods of low precipitation (dry cold or dry hot weather). • Unstable stream channels with bank erosion, channel incision, sediment deposition and possibly variable water regime until water reshapes the constructed channels into a more natural geometry. 	<ul style="list-style-type: none"> • Reduction of available food. • Inability to move from one part of the stream to another for shelter from predators, to find favorable habitat. • Degradation of spawning gravels. • Entombment of eggs and alevins in sediments. • Changes to aquatic life colonizing these new substrates. • Changes to fish passage patterns/routes.
Replace and/or upgrades of culvert at 25 anadromous stream crossings (most would be larger).	<ul style="list-style-type: none"> • Stream geomorphology would be more stable. 	<ul style="list-style-type: none"> • Ability to move upstream and downstream in response to changing water levels, velocities, and temperatures. • Fish passage is provided at all stream flows, as required by the DOT&PF/ADF&G MOU.
Construct larger culverts at Debris Flow MP19 and 23.	<ul style="list-style-type: none"> • Long-term increase in sediments moving directly to Chilkat River and subsequently downstream. • Localized river bank instability. • Habitat near MP 19 and 23 in the Chilkat River could be buried/changed with each flood flow event. • Additional sediment and nutrients to river system. 	<ul style="list-style-type: none"> • Direct impacts du ring flooding events.
Construct new bridge down river of the existing bridge requiring almost 6,000 square feet of new disturbance for riprap protection of the embankments.	<ul style="list-style-type: none"> • Change sediment and debris flow at the new bridge site resulting in materials moving downriver more naturally rather than being caught in pilings at the existing bridge. 	<ul style="list-style-type: none"> • Fish hiding from construction activity may be buried by the new riprap.

No-Action Alternative – The No Action Alternative would not alter the Chilkat River fish habitat or its tributaries. This alternative would not move the tributaries directly adjacent to the highway where vegetation removal is part of regular maintenance. Erosion of those stream banks would continue.

4.15.3 Avoidance, Minimization, and Mitigation for Fish and Essential Fish Habitat Impacts

Avoidance

1. Along the Chilkat River, the design avoided fill in the river by incorporating passing zones in lieu of expanding the roadway section for passing lanes.
2. At the Chilkat River Bridge, the design avoided a relatively long in-water construction period by selecting driven piles rather than placement of concrete bridge foundations.
3. At the Chilkat River Bridge, DOT&PF has avoided some impacts to EFH by placing abutments for the new Chilkat River Bridge above OHW. Riprap would still be needed for abutment protection.
4. The addition of 8 guardrails avoided the fill in the Chilkat River at those locations. (See Chilkat River Impacts table in Appendix F for specific locations.) Impacts from fill in an estimated 3,822 square feet along 610 linear feet of riverbank were avoided.
5. DOT&PF would adhere to ADF&G permitted in-water work windows to avoid and minimize impacts to fish during key periods. Based on previous permits and understanding of sensitive seasons, proposed times when Chilkat River in-water work may be avoided at specific locations are in Table 4.15-2. Actual in-water work windows would be set during permitting.

Table 4.15-2: Proposed Timing of Chilkat River In-Water Work by Location

EFH of Concern	Location (Stream Habitat Inventory, Appendix F)	In-Water Work Avoidance
Areas associated with eulachon spawning, rearing and out migrating	In-water work locations downstream of Station 390+00:	Avoid fill in river during April & May
Areas associated with salmonid spawning, rearing, and out migrating	Station 733+00 to 736+80	Avoid fill in river from September to July.

Minimization

1. The Chilkat River fill footprint was minimized by making the slope of the road embankment as steep as feasible (2:1).
2. Along the Chilkat River, DOT&PF has minimized impacts to EFH by adding guardrails at several locations. Impacts to Chilkat River habitat were reduced by 40,900 square feet along 1,360 linear feet through minimization.
3. At the Chilkat River Bridge, DOT&PF has minimized impacts to EFH by reducing the total number of in-water piers to three compared with the existing nine piers (see Figure 4.12-1).
4. To minimize adverse impacts of fill in the Chilkat River, DOT&PF proposes to use rough angular rock to stabilize the fill and prevent erosion; additional stabilization and erosion control may be provided by incorporating large and small woody debris and other biostabilization techniques into the riprap (Figure 4.15-1). Biostabilization techniques increase bank re-vegetation, reduces sediment loads, and improves water quality. Using the rough angular rock would provide interstitial voids for cover of juvenile fish and increase macroinvertebrate biomass and density (USACE, 2003).

Mitigation

1. The 25 sub-standard culverts conveying anadromous fish through the project area (Appendix F) would be replaced with culverts designed to meet ADF&G fish passage standards as outlined in the MOA between the DOT&PF and the ADF&G.
2. Incorporation of woody debris would also improve habitat by creating additional cover for juvenile fish (Inter-Fluve, 2012).
3. Three highway turnouts that provide access to wetland and riverine habitat would be permanently closed to prevent further damage to EFH caused by operation of off-road motor vehicles and unregulated dumping.

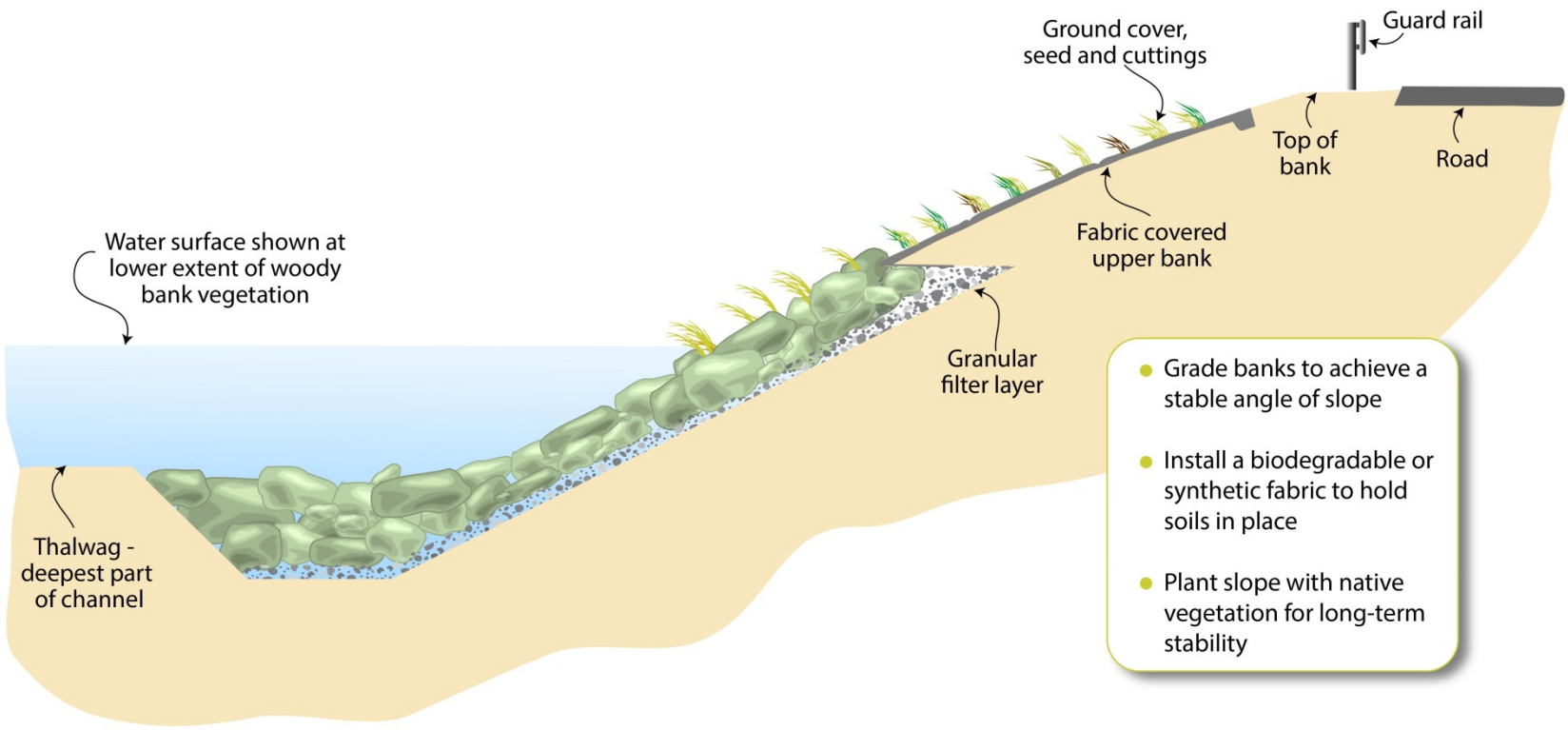


Figure 4.15-1: Conceptual View of Proposed Stream Bank Erosion Control

4. As mitigation for the loss of 2,460 linear feet of EFH in anadromous tributary channels, DOT&PF proposes to realign and/or create approximately 5,260 linear feet of enhanced fish stream habitat at eight locations in the project area as described in Appendix D. Stream enhancements include:
 - a. relocation of eight fish-bearing streams away from the road, beyond where DOT&PF needs to brush for maintaining visibility;
 - b. two new crossings of the highway with culverts designed for fish passage;
 - c. three existing crossings of the highway upgraded with culverts designed for fish passage;
 - d. additional tributary features requested by the IDT, such as vegetation and root wads, to improve stream complexity and nutrient supply; and
 - e. removal and partial excavation of existing road embankment to create a hydrologically connected flood terrace/wetland area adjacent to a stream (Appendix D).

As mitigation for loss of approximately 200 linear feet of spawning habitat in a side channel of the Chilkat River, DOT&PF proposes to create new spawning habitat of approximately the same length directly adjacent to the existing habitat, as summarized in Appendix D.

Agency Consultation - DOT&PF provided NMFS, USFWS, ADF&G, and USACE with a draft EFH Assessment for review on February 8, 2012. DOT&PF then met with representatives from NMFS, USFWS, and ADF&G February 16, 2012, to discuss the draft and solicit feedback.

DOT&PF addressed the comments received from NMFS and the other agencies to revise and finalize the EFH Assessment. Recommended conservation measures would be incorporated including using BMPs, standard erosion and control measures, and other commitments. See Section 4.20 for temporary construction impacts and environmental commitments.

Agency Determination - Based on the project design; avoidance, minimization, and mitigation measures; and proposed construction environmental commitments; DOT&PF recommends that impacts to EFH would not be adverse.

4.16 Wildlife Resources

4.16.1 Affected Environment

Areas adjacent to the project corridor are relatively undeveloped lands within the Chilkat River Valley. Wildlife habitat types in the project footprint consist of the broad braided Chilkat River, small tributaries, small ponds, riparian fringes, wetlands, meadows, and forests. Black cottonwood, Sitka spruce, and birch dominate the different forest habitats. Forest understory and fringe vegetation include alders, willows, red osier dogwood, highbush cranberry, soapberry, Nootka rose, and meadow horsetail. Bluejoint grass, sedge, and fireweed meadows area also found. Wetlands, as described in Section 4.14, vary from forested wetlands to muskeg.

Of the many mammals, birds, and amphibians in the area, the species of interest related to this project consist of bald eagles, moose, mountain goats, trumpeter swans, black and brown bear, martens, mink, beaver, and river otters. During the winter, moose (*Alces alces*) are present along the major river valleys. Mountain goats (*Oreamnus americanus*) also migrate into river valleys.

Important moose winter range habitat is the riparian willow communities and mixed deciduous-coniferous forests that are found along the Chilkat River. Seasonal concentrations of black bear (*Ursus Euarctos americanus*) occur on beaches and tidal areas during the spring and along salmon streams in the fall. Brown bear (*U. arctos*) prefer more open grassland or tundra habitats. Brown bear concentrate in beach and sedge flats in the spring and along salmon streams in the late summer and fall.

The Lynn Canal and the Chilkat and Klehini valleys are a major waterfowl migration route to and from the interior of Alaska and Canada. The estuaries and wetlands along these migration routes are critical resting and feeding areas for many species including swans, shorebirds, geese, and ducks. Major nesting and molting areas are located in the Chilkat River basin. The Chilkat River is the southernmost known Trumpeter swan (*Cygnus buccinator*) nesting area in Alaska, with the principal swan concentrations located in the Upper Chilkat River upstream of the Chilkat River Bridge (*Chilkat Bald Eagle Preserve Management Plan*, DNR DMLV, 2002a). Ptarmigan, grouse, ravens, magpies, jays, crossbills, chickadees, juncos, and numerous other songbirds either nest or migrate through the Haines area.

All of these species could use the habitat within the project corridor.

Bald eagles and their habitat are discussed in Section 4.2.

Vehicular traffic affects wildlife in the project area. There are wildlife-related (primarily moose) vehicle accidents along Haines Highway; however, it is not considered a high incident highway. Highway traffic data do indicate that there are selected sections where wildlife-related accidents are more common than others.

4.16.2 Environmental Consequences

Proposed Action- Approximately 116 acres of undeveloped land, including approximately 23.6 acres of wetlands and 8.3 acres of riverine areas, would be developed as a result of the Proposed Action. This would result in direct impacts to wildlife. The loss of 8.3 acres of riverine habitats, which are assumed to be used at near capacity levels, could result in an adverse effect on (loss of) individual animals using those areas. Although the loss of habitat and individual animals could be adverse in localized areas, the relative loss of habitat and individual animals is expected to be minimal in relation to the size of the surrounding undeveloped habitat and the wildlife populations using these habitats within the Chilkat and Klehini Valleys. Combined, these valleys provide over a million acres of habitat.

Approximately 19 miles (92%) of the alignment would not shift outside of the existing corridor (travelled way, shoulders, and utility corridors). In several areas (in total about 3 miles), the alignment would shift into relatively undisturbed habitat. See Table 4.16-1 below.

Table 4.16-1: Shift of Alignment and Undisturbed Habitats

Approximate Milepost/Sta.	Approximate Length of Shift (feet)	Habitat(s)
8.5-8.6/430-440	1,500	Chilkat River bank
9.5/484-494	1,000	Wetland
16.8-18/858-904*	9,600	Forest, small streams, wetland
23.3-23.8/1180-1220	4,000	Forest

*The alignment shifts across the existing highway three times within this section.

Habitat fragmentation that would result from the shifts into undisturbed habitat could disrupt some species more than the slight modifications along the remaining highway. Large mammals and birds would not be adversely affected by these habitat fragmentation but small mammals and

amphibians would be, especially during the first few years after the realignments. Traveling across highways to get to water, feeding, and nests or burrows is relatively dangerous to smaller species. Impacted populations are expected to rebound after adjusting to the new alignment.

The wider shoulders and straightening of existing curve radii provided by the Proposed Action would improve sight distance. Removal of willows along roadside ditches would reduce moose browse near the highway. Relocation of selected roadside stream channels would shift willow growth along those streams to areas that would not need to be cleared for roadway sight distance. These changes may reduce the potential for animal-related collisions, resulting in an indirect beneficial effect.

Short-term impacts that may occur during construction are addressed further in Construction Impacts.

No-Action Alternative - The No-Action Alternative would have no effects on wildlife resources. However, this alternative would not improve sight distance or roadside browse availability and would not reduce the percentage of vehicle-animal collisions.

4.16.3 Avoidance, Minimization, and Mitigation Measures

Elimination of passing lanes and the use of guardrails have reduced the footprint of the Proposed Action avoiding sensitive wildlife habitat. Wildlife habitat impacts have been minimized because the Proposed Action deviates as little as practicable from its current alignment. Vegetation/habitat clearing would be avoided during the nesting season in compliance with the Migratory Bird Act. Disturbance to bald eagles in breeding season would be minimized by compliance with USFWS Bald Eagle Disturbance Permit conditions. These conditions typically require mufflers on all construction equipment and restricting blasting while eagles are in the immediate vicinity of each shot. Mitigation measures may be required as part of the Bald Eagle Disturbance Permit. Those measures would be identified during the permitting process.

4.17 Invasive Plant Species

4.17.1 Affected Environment

Executive Order (EO) 13112, Invasive Species, requires federal agencies to combat the introduction or spread of invasive species. This EO defines invasive species as those species

not native to an ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health. Invasive species can crowd out native species, diminishing habitat values for native wildlife (U.S. Bureau of Reclamation, 2010). Southeast Alaska and the Haines area have experienced the introduction and spread of invasive plant species, similar to other areas across the country. The U.S. Forest Service (USFS) has surveyed Southeast Alaska for invasive species and found several present in the Haines area (USFS, 2007). USFS data has been entered into the Alaska Exotic Plants Information Clearinghouse (AKEPIC) database. The ADF&G recommends controlling invasive plant species listed on AKEPIC. The DNR Plant Materials Center has also developed a prohibited and noxious weed list. The species listed in Table 4.17-1 were found by the USFS within the project corridor and are on AKEPIC invasive plant species list or on the DNR prohibited weed list.

Table 4.17-1: Invasive Plant Species in Haines Area

Scientific Name	Common Name
<i>Centaurea stoebe</i>	spotted knapweed
<i>Cirsium arvense</i>	Canada thistle
<i>Convolvulus arvensis</i>	field bindweed
<i>Melilotus alba</i>	white sweetclover
<i>Galeopsis tetrahit</i>	brittlestem hempnettle
<i>Linaria vulgaris.</i>	yellow toadflax
<i>Elymus repens</i>	quackgrass

4.17.2 Environmental Consequences

Proposed Action - Most invasive species spread in disturbed areas, including construction sites and along highways. The Proposed Action has the potential to introduce and spread invasive plants along the corridor during construction activities.

No-Action Alternative - No changes to invasive species would occur under this alternative.

4.17.3 Avoidance, Minimization, and/or Mitigation Measures

BMPs designed to reduce the potential for the introduction and spread of invasive species would be incorporated into the construction contract for the project. In compliance with the Executive Order on Invasive Species (E.O. 13112), the following avoidance and minimization measures and BMPs are proposed:

1. Surveys for invasive species would be conducted and a management plan developed to be included in the construction contract. The management plan will identify invasive species, location, and techniques to be used to prevent the spread of those species during construction.
2. Construction equipment will be pressure washed to remove soil, seed, and plant material prior to moving on or off the project site.
3. Use of clean fill material, native plants, and certified native seed.
4. Stabilize disturbed areas as soon as practicable. Stabilization can include paving, laying down a designed gravel layer, or seeding/vegetating. Certified native seed would be used when seeding is the selected stabilization method.

4.18 Air Quality

4.18.1 Affected Environment

Haines is not a non-attainment area or a maintenance area.

4.18.2 Environmental Consequences

Proposed Action - Long-term impacts to air quality are not anticipated as a result of this project. Localized short-term impacts to air quality may result during construction (see Section 4.20, Construction Impacts).

No-Action Alternative - No changes to air quality are anticipated as a result of the No-Action Alternative.

4.18.3 Avoidance, Minimization, and Mitigation Measures

See Section 4.20, Construction Impacts.

4.19 Hazardous Waste

4.19.1 Affected Environment

A Phase I Environmental Site Assessment was performed in support of this environmental document (DOWL HKM, 2006). Federal and state databases of known or potential hazardous sites were researched (DEC, 2013). Site inspections in 2006 investigated possible petroleum

product contamination in the area in locations identified from database research and other information sources. The primary possible hazardous waste source identified is the Department of Defense Haines-Fairbanks Pipeline that was in service from 1954 to 1973 transporting fuels to military bases throughout interior Alaska. Remnants of this underground pipeline and associated features are adjacent to the Haines Highway in the Proposed Action corridor.

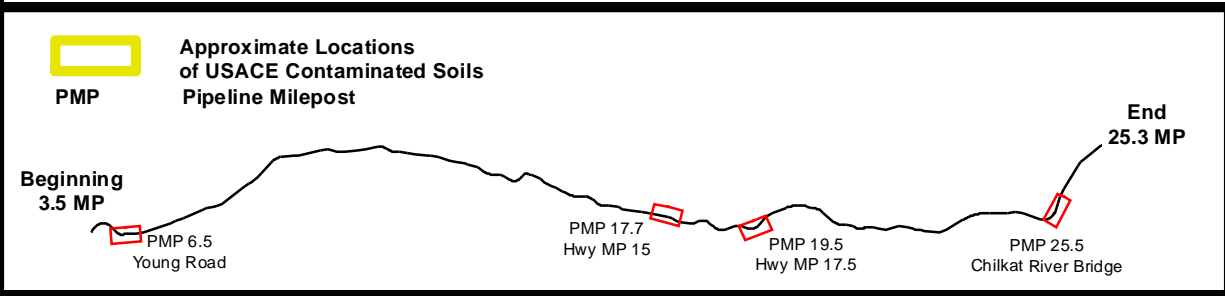
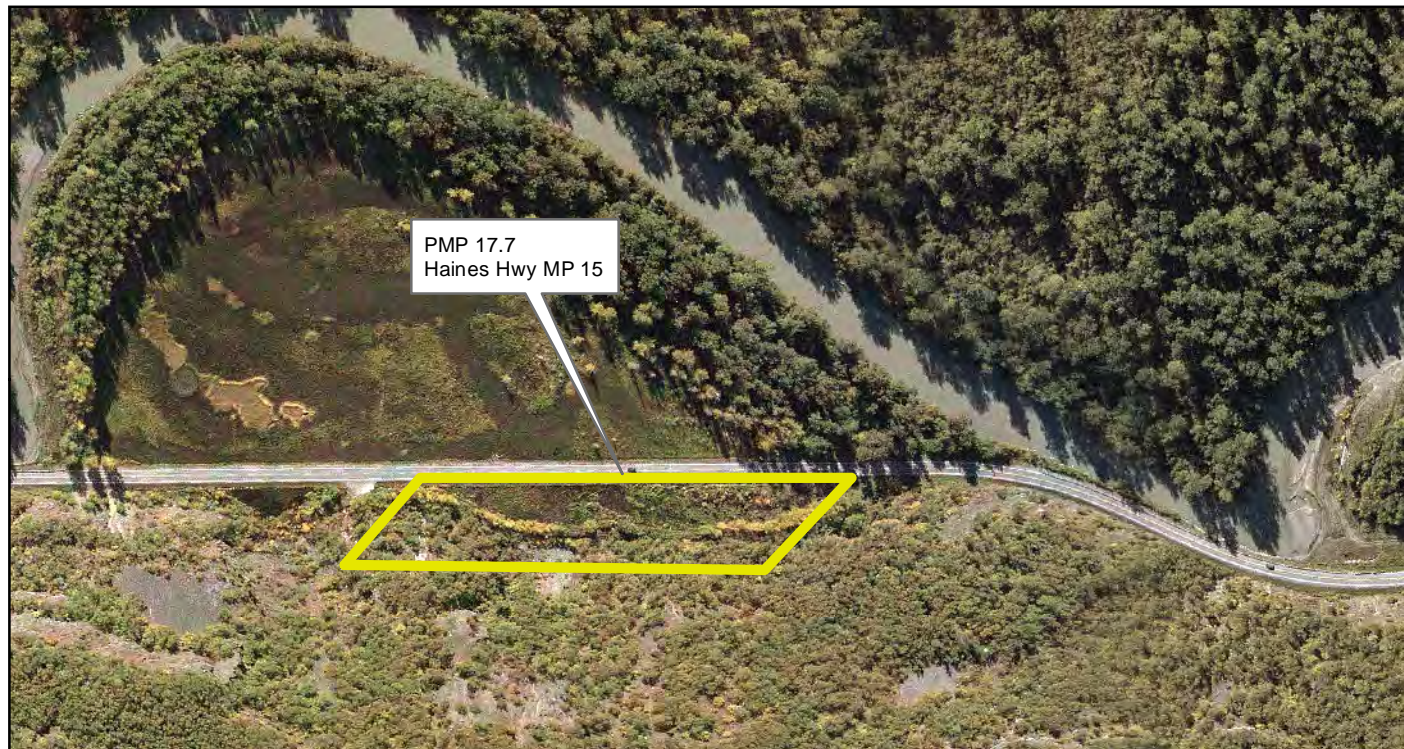
The Site Assessment reported that known petroleum-contaminated soils exist at three sites that may be in the project area (Figure 4.19-1). Since the pipeline is owned and was operated by the U.S. Army, the USACE retains responsibility for clean-up of contaminated materials from pipeline operations prior to construction. The contaminated sites that may be within the project area are named by pipeline milepost (PMP) and consist of the following:

1. PMP 17.7 (Release, Haines Highway Mile 1 5.5),
2. PMP 19.5 (Release, Haines Highway Mile 17.5), and
3. PMP 25.5 (Gate Valve No.4, Chilkat River Bridge East).

Preliminary results of a recent soil investigation (USACE, 2013) include the recommendations below.

1. No additional investigation or removal activity at PMP 17.7 is recommended. This site is outside the project area.
2. An ecological risk assessment is recommended at PMP 19.5 due to extensive soil and groundwater contamination.
3. Remedial action is recommended at PMP 25.5.

The Bureau of Land Management (BLM) intends to transfer title to the State of Alaska DNR for an approximate 10-acre parcel of land near MP 7. DOT&PF intends to construct trailhead parking for the Mount Ripinsky trail within ROW on this parcel (see Figure 1.2-5). The uplands portion of this BLM parcel is currently an ad hoc shooting range. Lead-contaminated soils must be removed prior to transferring title to the lot. A non-invasive soil test shows deeper potential contamination within the DOT&PF ROW. DOT&PF is performing further testing in June 2013 to determine if material within ROW is contaminated soils or hazardous waste. If either is discovered, the cleanup would be performed by DOT&PF prior to construction.



Identified Contaminated Sites

TS 28/29/30 S, R 56/57/58/59 E,
Copper River Meridian, Alaska



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
DOT & PF Project No. 68606
HAINES HIGHWAY
MILEPOST 3.5 - 25.3
Haines, Alaska

DATE: May 23, 2013 FIGURE 4.19-1

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4.19.2 Environmental Consequences

Proposed Action - The Proposed Action would not impact any known hazardous material sites.

No-Action Alternative - The No-Action Alternative would not impact any known hazardous material sites.

4.19.3 Avoidance, Minimization, and Mitigation Measures

Prior to construction, the USACE will take primary responsibility for dealing with known contaminated soils at PMP 19.5 in the project area associated with the pipeline. The Proposed Action would avoid PMP 25.5 (Gate Valve 4) and would not preclude subsequent cleanups planned by the USACE. DOT&PF will dispose of contaminated soils near MP 7 in coordination with a *Corrective Action Plan* approved by DEC.

The contractor would be required to develop a *Hazardous Materials Control Plan* to address contamination, cleanup, and disposal of all construction related discharges of petroleum products (fuel, oils, etc.) and/or other hazardous substances. Wastes generated during construction demolition of the Chilkat River Bridge would be properly handled, contained, and disposed of at a permitted disposal facility, in accordance with State and Federal laws.

Should contamination be discovered within the ROW, DOT&PF would stop work at the discovery location, identify the nature of the contamination, and coordinate the appropriate response with the DEC and, if appropriate, with the USACE.

4.20 Construction Impacts

Construction would likely occur in phases over several years as funding becomes available. Construction impacts typically involve short-term impacts and are discussed below along with proposed mitigation measures.

4.20.1 Affected Environment

Construction of the Proposed Action would involve clearing, grubbing, excavation and fill, blasting for some road cuts, installing guardrails, new culverts and culvert replacements, pile driving for new bridge, bridge construction and demolition, embankment and associated ditch construction, and paving. Associated impacts would be mitigated through design considerations

and contractual requirements imposed on contractors. The follow sections summarize potential short-term construction impacts on the human and natural resources and proposed avoidance, minimization, and mitigation measures associated with the Proposed Action.

4.20.2 Environmental Consequences and Avoidance, Minimization, and Mitigation Measures

Chilkat Bald Eagle Preserve

Short term impacts to the Preserve would include impacts that may disturb breeding and roosting bald eagles and public access disruption from traffic delays.

Construction activities may disturb nesting eagles within 660 feet of construction activities (USFWS, 2007b). Blasting could disturb nesting eagles up to a half-mile away. DOT&PF would obtain an eagle disturbance permit from USFWS (50 CFR 22). DOT&PF would also consult with DNR DPOR staff assigned to the Preserve to identify avoidance and minimization measures to protect bald eagles specifically during the fall concentration period.

DOT&PF and its construction contractor would adhere to all stipulations included in the permit. Stipulations commonly associated with blasting activities are listed below. Additionally, monitoring may be required to determine disturbances to eagles.

Under the expected stipulations of the permit, blasting activities would be minimized during the breeding season. If blasting activities must occur during the breeding season, blasting would:

1. be restricted to times when there are no bald eagles within the immediate vicinity of the blast, and
2. proceed only within work-hour limits.

Travelers to the Preserve would experience temporary traffic delays to allow for construction activities. The longest delays would be during blasting. To minimize traffic delays in the Preserve the contractor would need to develop a *Traffic Control Plan* (TCP) that minimizes traffic disruptions. The TCP would be approved by DOT&PF prior to construction.

Social

Short-term impacts of the Proposed Action would include temporary traffic disruption and delays to vehicles, bicycles, and pedestrians. Although the Chilkat River Bridge would remain open, short-term minor delays would be anticipated. Traffic control during construction would be in accordance with the standards and guidelines in the current edition of DOT&PF's *Alaska Traffic Manual*. A TCP detailing measures to minimize impacts to motorists, bicyclists, pedestrians, and boaters would be developed by the construction contractor and approved by DOT&PF prior to ongoing construction.

Short-term impacts to recreation may include temporary traffic disruption and change of access to recreation sites. Temporary noise and other disruption may impact enjoyment of recreational activities in the area.

Economics and Subsistence

Short-term adverse impacts to subsistence fishers as well as permitted Chilkat River commercial tour boat operators could occur. Navigation under the existing and proposed bridge as well as the temporary construction bridge would be either delayed or restricted at times during bridge construction. Removal of the existing bridge could also disrupt subsistence and commercial operations. To minimize impacts to navigation, in-water work would occur primarily in the winter, and a navigation plan would be developed by DOT&PF in coordination with the commercial tour boat operators and implemented by the construction contractor.

Short-term impacts may occur to other subsistence locations along the project corridor where widening and realigning of the roadway footprint requires fill in the Chilkat River. As a part of the USACE permitting process, DOT&PF would coordinate with local tribal organizations to minimize construction impacts during important subsistence fishing periods.

A short-term economic stimulus would likely result from construction. Construction activities may increase local jobs as well as demand for food, lodging, and other services. A socioeconomic assessment of construction spending by Southeast Strategies (Appendix B) estimates that nearly \$108 million would be contributed to the economy over the course of construction and an average of almost 300 jobs per phase could be supported.

Hazardous Waste

A *Corrective Action Plan* has been developed by USACE to outline procedures for pipeline-related petroleum-contaminated soils that might be encountered during construction near the Haines-Fairbanks underground pipeline. The plan outlines field-screening procedures for potentially contaminated soils, describes the contingency plan for stockpiling or reusing contaminated soils during construction, and addresses worker safety. The *Corrective Action Plan* would be a required element in the construction contractor's *Hazardous Materials Control Plan* (HMCP) that would be approved by DOT&PF prior to construction.

The contractor would be required to prepare and implement a HMCP to address, equipment fueling, hazardous materials that would be used during project construction, as well as inadvertent discovery of hazardous wastes. Hazardous waste generated by the contractor during construction activities would be removed and properly disposed of in accordance with DEC regulations. In addition, equipment fueling and serving operations would not occur within 100 feet of water bodies. Sorbent materials would be kept in an approved on site location(s) designated in the HMCP to contain or clean up any petroleum spill.

Air Quality

Short-term localized degradation to air quality may result from heavy machinery emissions and construction-related dust. These impacts would be minor and would not be expected to exceed any regulatory thresholds, given the ambient air quality conditions in the area and frequent precipitation. The contractor would be required to use BMPs to control dust. In the event work areas need watering for dust control, an approved water source would be used and erosion and sediment control BMPs would be put in place prior to watering to prevent water quality impacts.

Noise

Construction activities would cause periodic, temporary noise impacts from the operation of heavy equipment and increases in traffic due to construction activities. These impacts would be localized and short-term in nature, and would occur in an existing transportation corridor that already generates noise. Measures to minimize construction noise impacts include:

1. adhering to work-hour limits to blasting activities, and
2. adhering to equipment muffler requirements.

Water Quality

Ground disturbing activities could cause short-term direct and indirect water quality impacts. Construction activities could increase sediment loads in nearby rivers and streams. Although the Chilkat River is glacial and carries heavy silt loads there are also numerous clear streams that could be affected. To minimize impacts, BMPs would be used to protect wetlands and stream channels in compliance with a SWPPP and the Alaska Pollutant Discharge Elimination System (APDES) General Permit for Stormwater Discharge from Construction Activities in Alaska. In-water construction would also be timed in accordance with ADF&G and USACE permit requirements.

DOT&PF proposes the following avoidance and minimization measures to protect water quality:

1. BMPs identified in the ESCP would be used during construction to minimize the introduction of suspended sediment to the Chilkat River and its tributaries. Specific BMPs may include, but are not limited to, the use of silt fences, straw wattles, inlet and outlet protectors, check dams, and diversionary dams.
2. The contractor would be required to prepare a SWPPP in accordance with DEC's APDES General Permit for Construction Activities in Alaska. The contractor would also be required to develop a HMCP to address hazardous material that would be used during project construction and to detail measures to control discharges of such material into waters of the U.S.

Fish and Wildlife

Temporary adverse effects to EFH could occur during the in-water work necessary for the culvert replacements, stream restoration work, and erosion control measures. Construction impacts on fish habitat would be minimized by using EFH and related fish mitigation measures such as scheduling construction work in accordance with timing restrictions in the Fish Habitat Permit and conforming to APDES general construction permit and HMCP requirements including plans for erosion control, fuel handling, and other construction-related activities. Additionally:

1. No excess material would be disposed of in any waterway.
2. Stream flow would not be impaired during timing windows stipulated by ADF&G.
3. Areas to be cleared would be limited to the minimum extent necessary. All disturbed areas would be permanently re-vegetated.

Construction activities would likely have a short-term impact on wildlife that use the corridor, causing them to avoid adjacent areas during construction activity. When the construction disruption ends, wildlife are expected to resume use of the area.

Invasive Species

Construction activities have the potential to introduce and or spread invasive species. BMPs for cleaning of construction equipment prior to and after use on a construction site have been developed to reduce the potential for introducing species. Additionally, DOT&PF would survey the construction areas for invasive plants prior to construction and an invasive plant control plan would be developed and implemented as part of construction. DOT&PF construction specifications for re-vegetation would require use of certified native seed for stabilization of disturbed areas. DOT&PF would include a list of BMPs for preventing the spread of invasive species during construction, such as cleaning earth moving equipment before being moved onto, and leaving, the construction site.

Material Sources and Disposal Sites

Likely material sites, disposal sites and access roads were identified by DOT&PF and are identified in the PER (DOWL HKM, 2010c). Material sources needed for the project would be contractor supplied, although most of the necessary sand, gravel, and rock would come from areas along the project corridor that need to be excavated or blasted for the proposed new alignment. Disposal would be primarily comprised of material unsuitable for road construction. The contractor would be responsible for ensuring that all environmental permitting is completed for any material sites, disposal sites, or staging areas. Potential material sites and disposal sites identified in the PER (DOWL HKM, 2010c) occur on uplands.

No-Action Alternative - The No-Action Alternative would have no construction impacts.

4.20.3 Summary Avoidance, Minimization, and Mitigation Measures

Table 6.1-1 summarizes the proposed avoidance, minimization, and mitigation measures that are offered for construction of the Proposed Action.

4.21 Cumulative Impacts

Cumulative impacts are those that result from the incremental consequences of an action when added to other past, present, and reasonably foreseeable future actions. Cumulative effects can result from several individually minor impacts that collectively are substantial over time (40 CFR 1508.7).

Cumulative impacts are not discussed for the No-Action Alternative because this alternative would not change existing conditions.

Past, present, and reasonably foreseeable projects for the Haines area are listed below (DCRA, 2012). These projects are primarily intended to enhance the Haines Borough by improving basic infrastructure and providing public facilities and community areas. Listed projects that have occurred over the past 15 years as well as current and reasonably foreseeable projects are grouped as follows:

1. Large infrastructure and pedestrian facility/utility improvement projects:
 - a. planned replacement of Klehini River Bridge in the vicinity of MP 27 of Haines Highway;
 - b. planned improvements to pedestrian access and vehicle traffic from Beach Road widening and Front Street intersection improvements;
 - c. planned pedestrian improvements for cruise ship passengers adding sidewalks and curbs from Old Haines Highway to Third Avenue;
 - d. planned Beach Road force main extension;
 - e. improved water tower and water line replacement repairs, completed in 2010;
 - f. planned construction of new pedestrian facilities from Klukwan to the roadside trail at the Council Grounds;
 - g. Native history interpretative planning project for the Chilkoot River Corridor, completed 2007;
 - h. various utility and road improvements;

- i. Port Chilkoot dock infrastructure construction, completed 2006; and
 - j. planned development of a wayside and interpretive signage to resolve adverse effects to the Chilkat River Bridge.
2. New buildings:
 - a. construction and improvements to the Haines Medical Center, completed 2008; and
 - b. planned assisted living facility.
3. Harbor and airport projects:
 - a. temporary repairs to Lutak Dock, completed in 2007;
 - b. planned improvement for pedestrians at Port Chilkoot Waterfront, adding restrooms and sidewalks;
 - c. Alaska Marine Highway System mooring improvements and replacement of the dock retaining wall, scheduled for construction in 2013; and
 - d. planned rehabilitation of the seaplane base.
4. Other projects:
 - a. removal of Haines-Fairbanks Pipeline Chilkat River crossing completed in 2013;
 - b. planned contaminated soil remediation at MP 7, 17, and 24; and
 - c. various housing rehabilitation and construction projects (ongoing).

Proposed Action - Several planned projects could overlap the construction timeframe of the Proposed Action. These projects include replacement of the Klehini River Bridge, the Front Street/Old Haines Highway improvements, and Beach Road/Front Street improvements.

The Klehini River Bridge replacement project is located in the vicinity of the proposed Chilkat River Bridge replacement. Construction of the Proposed Action simultaneously with the Klehini River Bridge project could result in increasing the level of traffic disruptions, noise and air emissions. If the projects occur at different times, the traffic, noise, and emission effects could be less intense, but could occur over a longer time period.

Front Street and Old Haines Highway improvements project repave existing roads and provide pedestrian access for cruise ship passengers by adding sidewalks and curbs to from Front Street to the Old Haines Highway. Beach Road and Front Street improvements project would convert

the existing roads and dock facility into a pedestrian-safe cruise ship transit facility. Both projects would have beneficial impacts by improving pedestrian facilities and providing more separation between pedestrians and vehicles, improving the safety of pedestrians traveling to and from cruise ships.

The cumulative effects of multiple construction projects may have an adverse impact on the human environment by adding to the seasonal traffic delays that occur every summer. However, projects that improve roads, pedestrian traffic, and other infrastructure have a long-term beneficial impact on the human environment by increasing health and safety, reducing travel time, and improving services and accessibility.

The Haines Borough has indicated there is mining exploration underway in both Alaska and Canada and these operations may increase in the area within the next 10 to 20 years and may result in a potential increased use of the Haines Highway and Haines Harbor. However, potential mine production and mine operators' potential use of the Haines Highway and Haines Harbor remain speculative (Appendix I).

A natural gas pipeline project is currently being proposed by the oil industry and the Alaskan and Canadian governments. If a portion of this pipeline project were to be supported out of Haines, the level of activity and development in and around Haines and along the Haines Highway would increase. This would have beneficial effects on the local economy, but could result in increased air and noise emissions, as well as additional effects on traffic, habitat, water quality, and other environmental resources.

There are areas of contaminated soil located within the corridor that are proposed to be remediated. Areas impacted by spills from the Haines-Fairbanks Pipeline are proposed to be cleaned up by the USACE. An area near MP 7 is may be remediated by DOT&PF. These activities may result in short-term effects on traffic, noise and air emissions during the remediation activities. In the long-term, these activities would result in beneficial effects on vegetation, wildlife and human health and safety.

The Chilkat Indian Village is proposing construction of a trail from the Council Grounds trail in the Preserve into Klukwan. The Proposed Action would not preclude construction of that

proposed trail. If construction of the trail were to coincide with construction of this project, increased delays and impacts to Preserve visitors are possible. The planned Village trail could also impact bald eagle nesting and roosting trees. If these trees lost at the same time as trees are lost during construction of the Proposed Action, additional impacts to eagles could occur. USFWS would be aware of potential cumulative impacts during issuance of Bald Eagle Disturbance Permits for these two activities and additional stipulations may be needed to avoid and minimize impacts to the population.

There are no species protected under the Endangered Species Act present within the vicinity of the Proposed Action. No direct, indirect or cumulative impacts are expected.

Given the current low level of development and activity in the Haines area, the cumulative effects of the past, current, and reasonably foreseeable projects are not expected to be substantial. The majority of the effects would be related to construction activities and would be short term in nature, lasting the duration of construction activities. The long-term effects would not be expected to result in substantial adverse effects on social or environmental resources. Therefore, these projects do not cumulatively pose an unacceptable risk or significant impacts to any of the environmental resources analyzed in this EA.

4.22 Permits and Authorizations

Table 4.22-1 describes the permits that may be required for the Proposed Action. Preparation of final permit applications would be conducted during final design.

Table 4.22-1: Required Permits and Approvals needed for the Proposed Action

Regulated Activity (Required Permit/Approval)	Regulatory Agency	Authority	Description
Federal Authority			
Discharge of dredged or fill material into wetlands and other waters of the U.S. (USACE Permit/USEPA Review)	USACE USEPA	Section 404, Federal Water Pollution Control Act of 1972, as amended in 1977 (Clean Water Act) (33 USC 1344)	1. USACE must authorize the discharge of dredged or fill material into, and excavation in U.S. waters, including wetlands. USACE determines compliance with the Section 404(b)(1) guidelines. 2. USEPA reviews USACE Section 404 Permit under its Section 404(b)(1) "Guidelines for Specifications of Disposal Sites for Dredged or Fill Material."
Impacts to resources protected under Section 4(f) (Section 4(f) Evaluation)	FHWA	49 USC 1653(f) (Section 4(f) of the USDOT Act of 1966)	The FHWA is required to evaluate potential impacts of highway projects on publicly owned parks, recreation areas, wildlife and waterfowl, refuges, and historic sites.
Construction of bridges over navigable waters (USCG Section 9 Bridge Permit)	USCG	Section 9, Bridges Over Navigable Waters	Plans and location for construction or alteration of bridges and causeways across navigable waters of the U.S. must be approved by the USCG prior to construction.
Development possibly affecting historical or archaeological sites (Section 106 Consultation)	DNR Office of History and Archaeology/SHPO	NHPA of 1966, as amended (16 USC 470)	All federal agencies are required to consult with SHPO and tribes regarding potential impacts to historic sites, in accordance with Section 106 of the NHPA.
Construction Activities that may adversely affect EFH (EFH Consultation)	NMFS	Magnuson-Stevens Fishery Conservation and Management Act of 1976	All federal agencies are required to consult with the Secretary of Commerce on any action that may adversely affect EFH.
Bald Eagle disturbance (Bald Eagle Permit)	USFWS	Bald and Golden Eagle Protection Act (16 USC 668-668c), 50 CFR Part 22	A permit is required to take a bald eagle or golden eagle or their nest.
State of Alaska Authority			
Wastewater discharges to waterways, APDES Permit for Stormwater Discharges, Dewatering General Permit	DEC	Section 402, Federal Water Pollution Control Act of 1972 (Clean Water Act) (33 USC 1251)	DEC must authorize any activity or wastewater system that would discharge waste from one or more points into a waterway.
Purchase of materials from State of Alaska (Material Sale)	DNR DMLW	AS 38.05; 11 AAC 71.070 through .075	DNR must issue a Material Site Permit prior to the removal of borrow material from a state operated quarry site.
Temporary Water Use/Water Rights/Dewatering	DNR DMLW	AS 46.15; 11 AAC 93	DNR must issue water rights prior to any appropriation of freshwater from a well, spring, or stream. Temporary use is typically during the construction phase of the project.
Title 16 Fish Habitat Permit	ADF&G Division of Fish Habitat	Fishway Act: AS 16.05.841 through .861, Fish Passage; Anadromous Fish Act: AS 16.05.871 through .901, Anadromous Fishes	ADF&G must issue a Fish Habitat Permit for activities within or across a stream used by fish.

5.0 SECTION 4(f) ANALYSIS

This Section contains the 4(f) evaluations that have been done to document potential effects on properties protected by Section 4(f) of the Transportation Act of 1966 within the Haines Highway project corridor. Section 4(f) properties include publicly owned public parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately owned historic site listed or eligible for listing on the NRHP. The proposed project has the potential to affect two resources that qualify for protection under Section 4(f):

- the Chilkat Bald Eagle Preserve (Preserve),
- the Chilkat River Bridge and

The State of Alaska established the Preserve as part of the state park system in 1982. The proposed project would affect the Preserve by acquiring property for ROW within the Preserve.

The Chilkat River Bridge was constructed in the 1950s and has been determined eligible for listing on the NRHP (Section 4.10). This historic bridge is proposed to be demolished and replaced with a new bridge over the Chilkat River built to current design standards.

Table 5.0-1 summarizes each property and the effect on each property.

Table 5.0-1: Properties Protected by Section 4(f)

Property	Type of Site	Use	Section 4(f) Approval Type
Chilkat Bald Eagle Preserve	Wildlife Preserve	3 Acres ROW Acquisition	<i>De minimis</i> Finding
Chilkat River Bridge	Historic Bridge	Demolition/Replacement of Bridge	Programmatic Historic Bridge Evaluation

Each of the Section 4(f) properties is described and evaluated below. Appendix C contains referenced information.

5.1 Chilkat Bald Eagle Preserve



Section 4(f) *De Minimis* Impact Finding

for

Parks, Recreation Areas, and Wildlife and Waterfowl Refuges For Federal Highway Administration (FHWA) Projects

Project Name: Haines Highway Mileposts 3.5 to 25.3

Project Number (State and Federal): 68606/SHAK-095-6(28)

Property Name: Chilkat Bald Eagle Preserve (Site 1)

Property Name: _____ (Site 2)

Applicable only if the use of the Section 4(f) property including consideration of avoidance, minimization, mitigation or enhancement measures, does not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

I. Project Description:

The State of Alaska Department of Transportation and Public Facilities (DOT&PF), in partnership with the Federal Highway Administration (FHWA), is proposing to upgrade Haines Highway from Milepost (MP) 3.5 to Milepost 25.3 (see Section 1.0 of the Environmental Assessment [EA] and EA Figure Set A). The section between MPs 3.5 and 25.3 would be brought up to a 55 mile-per-hour (mph) design standard (AASHTO 2011), as practicable, consistent with the design standards for the remainder of the Haines Highway in Canada and the United States, under the Shakwak program agreement. The Project would also improve recreational access points adjacent to Chilkat Bald Eagle Preserve (the Preserve), replace the Chilkat River Bridge, and provide for stability and safety of the roadway at locations where storm-related debris commonly overtop the roadway. The Proposed Action includes:

Highway Improvements

1. Straighten most curves to meet design standards (with the exception of two curves);
 - a. Acquire approximately 25 acres of right-of-way (ROW).
 - b. Relocate utilities where required. Maintain access to utilities not relocated.
2. Add passing zones.
3. Widen the roadway shoulders from the existing 2 feet up to 6 feet.
4. Construct drainage ditches and upgrade, replace, and/or add new culverts where appropriate.
5. Repave and restripe the roadway and add new signage.
6. Rehabilitate or relocate driveways and road intersections to meet design standards.
7. Install guardrails and other safety appurtenances along the highway where needed.

Recreational Access Improvements

1. Widen roadway shoulders from 2 feet to 6 feet.
2. Construct a parking area for the Mount Ripinski Trailhead.
3. Improve the layout and grading of turnout driveways within ROW.
4. Maintain and/or improve functional, existing, sanctioned access to the Chilkat River recreational areas.

Chilkat River Bridge Replacement

1. Construct a new bridge with the same lane and shoulder widths as the proposed road. The new bridge would be constructed to meet the following criteria:
 - a. a 55 mph design speed,
 - b. current seismic standards, and
 - c. heavier loads for freight vehicles than required by bridge design standards to provide for unanticipated needs beyond the highway design life of 25 years.
2. Install a temporary bridge to be used as a construction staging platform.
3. Remove existing bridge deck and rail; cut and remove foundation structures including remnant pilings from previous bridge structures.

Highway Protection Improvements at Debris Flow Areas

1. Install four to six new larger diameter culverts each at debris flow areas near MP 19 and 23.

Specific project activities that would occur within or directly adjacent to the Preserve are summarized in Table 5.1-1.

II. Section 4(f) Property Description(s):

Describe each impacted Section 4(f) property. Description should include size, location, type of property, ownership and identification of official with jurisdiction over the Section 4(f) property, and existing and/or documented planned activities, features and attributes of the property. Include a map depicting the boundaries and major features of the Section 4(f) property.

The 48,000-acre Preserve is primarily located along the Chilkat River near Haines. The Preserve is a wildlife preserve owned by the State of Alaska and managed by the Department of Natural Resources (DNR) Division of Parks and Outdoor Recreation (DPOR) (see Figure 5.1-1). The Preserve's purpose is to protect and perpetuate the world's largest concentration of bald eagles and their critical habitat. Other goals of the Preserve are to:

1. Protect and sustain natural salmon spawning and rearing areas of the Chilkat River.
2. Provide continued opportunities for research, study, and enjoyment of bald eagles and other wildlife.
3. Maintain water quality and quantity to support fish and eagle populations.
4. Provide for continued traditional and natural resource based lifestyle of the people living in the area.
5. Provide for other public uses consistent with the primary purpose of the Preserve.

The Preserve also provides for a wide variety of low-impact recreation uses, including many types of water sports (fishing, rafting, boating), hunting, hiking and camping. Other uses of the area are associated with subsistence harvests along the Chilkat River. Facilities located adjacent to or within the Preserve include vehicle pullouts to allow for wildlife viewing, parking areas, picnic facilities, a boardwalk/viewing platform, latrines, and a boat launch. More details on the pullouts and recreational facilities in the study area are provided in Appendix A of the EA.

The Preserve is primarily surrounded by Haines State Forest lands, which are multi-use lands also used for many of the recreation activities that occur in the Preserve, such as fishing, hunting, camping, hiking, and wildlife viewing.

The boundary of the Preserve abuts the riverside of the Haines Highway ROW between MP 8.3 and 16.8 and between MP 20.2 and 21.5. The ROW divides the Preserve property between MP 16.8 and 20.2 and MP 23.6 to 25 (Figure 5.1-1). The Haines Highway provides the primary access to the Preserve and its features.

The Preserve does include some lands that were purchased with federal assistance under the Land and Water Conservation Fund (LWCF) Act and come with restrictions on use. Although one parcel of LWCF land is located adjacent to the Haines Highway ROW, the project has been designed to avoid this property.

III. Project Use of the Section 4(f) Property(s):

Identify the impacts the project will have on the activities, features, and attributes of the Section 4(f) property that qualify the property for protection under Section 4(f).

The project would use the Preserve directly by acquiring land for ROW. Approximately 3.8 acres of the Preserve would be permanently acquired to accommodate the Proposed Action (see attached Table 5.1-1 and Figures 5.1-2 and 5.1-3). On the south side of the highway near MP 8.5, DOT&PF would acquire 0.51 acre of riverine habitat to straighten and widen the highway. Near MP 17, DOT&PF would acquire 3.08 acres of forested and wetland habitat on either side of the highway in order to straighten and widen the highway. Within these acquired lands, any terrestrial vegetation would be cleared and grubbed, the areas would be filled, and the road and/or embankment constructed on top. None of the areas proposed for ROW acquisition have any developed features within them but they do contain habitats for a variety of wildlife. None of the areas to be acquired are within critical habitat areas. No known eagle nesting trees exist in the ROW acquisition areas.

At the request of the DPOR, three turnouts (HNS 10, 11, and 18⁷) with access to the Preserve would be closed and nearby access enhanced in order to limit unsanctioned activities such as garbage dumping, use of all-terrain vehicles, and parties in those three areas. See Table 5.1-1, Attachment 5.1.1 and EA Appendix A for additional details.

⁷ Refers to identified access point (HNS #); Haines Access Numbers are identified in EA Table 4.6-2 and shown in more detail in Appendix A of the EA.

IV. Impact Avoidance, Minimization, and Mitigation or Enhancement Measures to the Section 4(f) Property(s):

Identify any avoidance (such as avoidance of a feature), minimization, and mitigation or enhancement measures that are included in the project to address the Section 4(f) use.

Highway design efforts have avoided and minimized changes to the ROW throughout the corridor including the Preserve. Guardrails have allowed steeper embankments at some locations along the Chilkat River to avoid or minimize fill in the Preserve. Straightening curves avoided constructing passing lanes that would have required ROW acquisition from the Preserve. An early Chilkat River Bridge alternative that would have minimized cost was rejected because it would have required additional ROW acquisition within the Preserve.

To mitigate for direct impacts, DOT&PF would relinquish approximately 6.0 acres of road ROW to the Preserve (see Figures 5.1-2 and 5.1-3). At MP 8.5, a 0.52-acre area of riverine habitat on the south side of the highway within the ROW would be relinquished to the Preserve. At MP 17, two parcels of forested and wetland habitat within the ROW on either side of the highway totaling 5.8 acres would be relinquished to the Preserve. The land proposed to be relinquished to the Preserve is similar in location, habitat type, and habitat quality to the areas being acquired for ROW, so there would be a net gain in Preserve acreage, features, and attributes from this project.

Enhancement measures within the Preserve are listed in Table 5.1-1. In other locations beyond the boundaries of the Preserve, DOT&PF would make improvements that also enhance access to recreation within and adjacent to the Preserve. Near MP 7, DOT&PF would develop a new parking lot at the Mount Ripinski Trailhead (EA Figure 1.2-5). Between MP 3.5 and 8, DOT&PF would improve driveway and intersections in order to maintain access to camping and fishing, and would provide a widened shoulder to accommodate parking for fishing and near a boat launch area (Table 5.1-1).

V. Coordination with the Public:

The information supporting FHWA's intent to make a de minimis impact finding will be included in the National Environmental Policy Act (NEPA) document and the public will be afforded the opportunity to comment during the NEPA review process. For those actions that may not require public review and comment, a public notice for opportunity to review and comment will be needed. Public involvement efforts must state FHWA's intent to make a de minimis impact finding and provide information necessary to solicit comments.

Public Notice Date: To be determined

Name of Newspaper: Chilkat Valley News; Juneau Empire

Summarize Issues Raised and Responses to comments (attach all comments received and a copy of the Public Notice):

A public notice of the proposed use of the Preserve including the avoidance, minimization, and mitigation or enhancement measures is published online on the Office of the Lieutenant Governor's website (<http://aws.state.ak.us/OnlinePublicNotices/>) and in the Chilkat Valley News and the Juneau Empire concurrent with public availability of the EA for review.

VI. Coordination with Official(s) with Jurisdiction over the Section 4(f) Property:

Describe the coordination that was done prior to and after the coordination with the public. A request for written concurrence from the official with jurisdiction must be initiated after the public has been afforded the opportunity to comment.

DOT&PF consulted with DNR under the 1987 Cooperative Management Agreement between DNR and DOT&PF for Haines Highway (Appendix C of the EA). Both agencies participated in a site visit, followed by several meetings. In a letter to DNR in December 2010, FHWA requested DNR's concurrence that the Proposed Action would not adversely affect the features, attributes, or activities of the Preserve. On March 2, 2011, DNR concurred that the proposed work would not directly or indirectly affect the features, attributes, or activities qualifying the Preserve for protection under Section 4(f) property (Attachment 5.1-1).

The official(s) with jurisdiction over the Section 4(f) property concurs in writing that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f) and has been informed of FHWA's intent to make a *de minimis* impact finding based on this documentation. Attach documentation.

YES NO

VII. Signatures:

A. I recommend that the FHWA find the impacts on the Section 4(f) property to be *de minimis* based on the fact that this project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

Date: _____

DOT&PF Regional Environmental Manager

B. I have determined that:

1. The transportation use of the Section 4(f) property, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f);
2. The public has been informed of FHWA's intent to make a *de minimis* finding and been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) property;
3. The official(s) with jurisdiction over the property were informed of FHWA's intent to make the *de minimis* impact finding based on written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f); and
4. The project will have a *de minimis* impact on the Preserve (Property 1).
5. The project will have a *de minimis* impact on _____ (Property 2 if applicable).

Date: _____

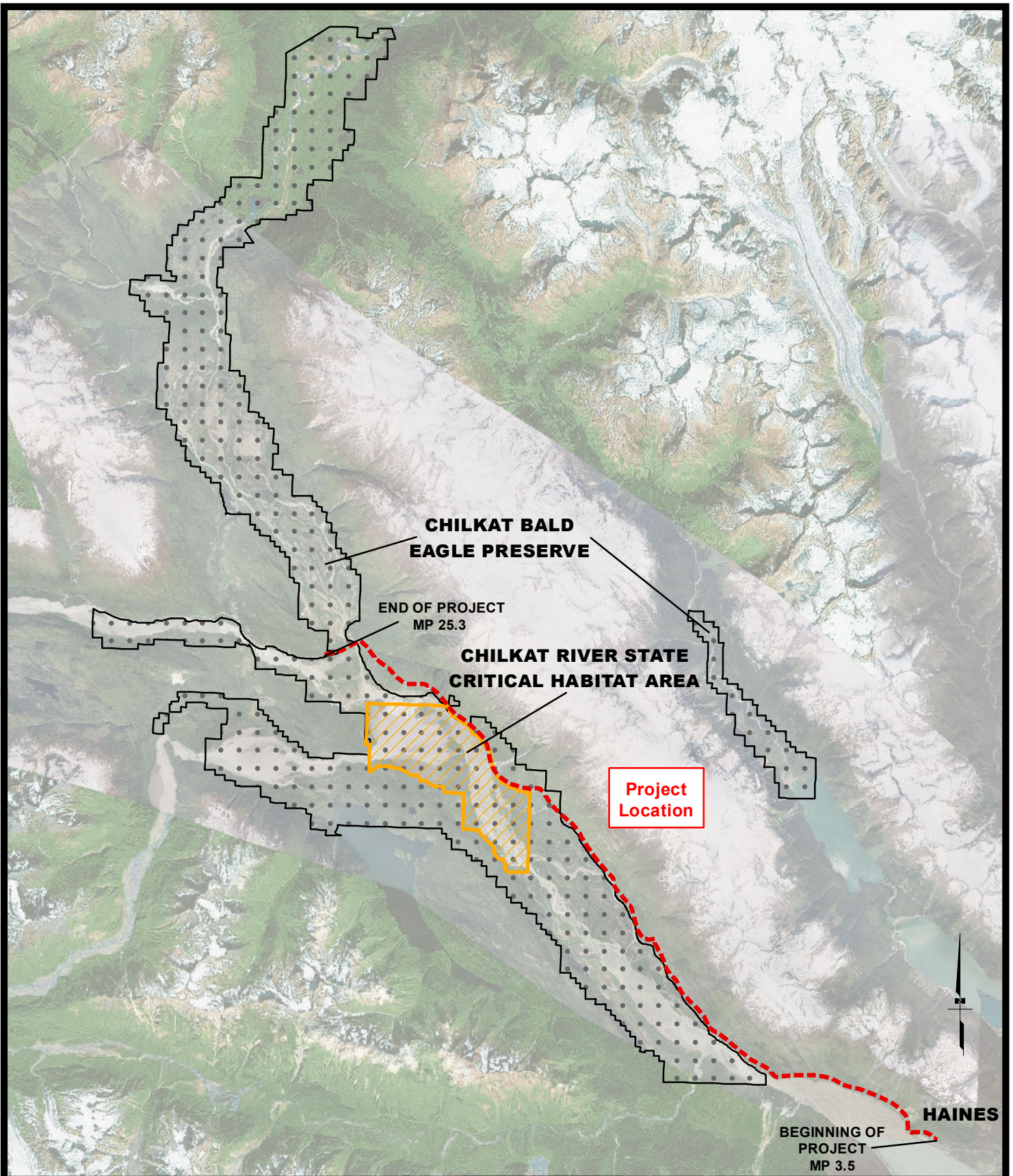
FHWA Environmental Program Manager

Table 5.1-1: Proposed Activities Within or Adjacent to Preserve

Approximate Location Closest Milepost (MP) Highway Station Number (STA) Reference Graphic	Proposed Action (Actions occur within the Preserve, or within the DOT&PF ROW adjacent to the Preserve)
MP 8.5 STA 419+50 Figure Set A Sheet 8	In DOT&PF ROW, provide driveway on river side for boat launch.
MP 8.5 STA 420+50 to STA 436+00 Figure Set A Sheet 8	Acquire 0.51 acres of riverine habitat to south side of highway for embankment widening.
MP 10 STA 503+25 Figure Set A Sheet 10	In DOT&PF ROW, provide access to boat launch with one 24-foot-wide approach.
MP 10 STA 512+25 to STA 523+40 Figure Set A Sheets 10-11	Enhance stream habitat in Preserve by converting marsh habitat on south side of highway to fish stream, riparian, and wetland habitat (see <i>Section 4.15 Fish</i>).
MP 11 STA 550+50 to STA 562+00 Figure Set A Sheet 12	In DOT&PF ROW, develop new parking area at HNS 9* for adjacent pond that is sometimes used for ice-skating; at DNR's request, project would remove access at HNS 10 and 11.
MP 11.5 STA 582+50 to STA 584+25 Figure Set A Sheet 13	In DOT&PF ROW, provide a widened shoulder for parking to access sport fishing and hunting.
MP 13 STA 649+50 to STA 651+75 Figure Set A Sheet 15	Enhance stream habitat by using scrub- shrub wetland habitat in the Preserve on south side of highway to access an area in the ROW proposed for a new stream channel (see <i>Section 4.15 Fish</i>).
MP 13 STA 655+75 Figure Set A Sheet 15	In DOT&PF ROW, provide fill to reduce slope and resurface pullout for river access and boat launch.
MP 14 STA 705+50 to STA 708+00 Figure Set A Sheet 16	In DOT&PF ROW, provide two 24-foot approaches and gravel surface to provide parking for up to 10 vehicles and maintain access.
MP 14 STA 709+00 Figure Set A Sheet 16	In DOT&PF ROW, improve driveway intersection in order to maintain access to boat launch site.
MP 14.5 STA 727+00 to STA 732+00 Figure Set A Sheet 17	In DOT&PF ROW, provide widened shoulder and re-grade from edge of pavement to existing driveway to improve slope for commercial rafting operation's bus traffic. Obliterate and vegetate abandoned road footprint.
MP STA 820+50 Figure Set A Sheet 20	In DOT&PF ROW, ditch across access driveway to remove access to area used for parties and dumping garbage (HNS 18). Access removed at DNR's request.
MP 17 STA 863+50 to STA 883+00 Figure Set A Sheets 21-22	Acquire 3.08 acres of forested and wetland habitat on either side of the highway and fill to widen road embankment. Use forested and scrub-shrub wetland habitat on south side of highway to access and construct a new fish stream channel (see <i>Section 4.15 Fish</i>).
MP 19 STA 966+00 to STA 972+50 Figure Set A Sheet 24	In DOT&PF ROW, the highway would be raised approximately 15 feet through this area, and parking would be accommodated along the highway for eagle viewing.

Approximate Location Closest Milepost (MP) Highway Station Number (STA) Reference Graphic	Proposed Action (Actions occur within the Preserve, or within the DOT&PF ROW adjacent to the Preserve)
MP 19.5 STA 981+25 Figure Set A Sheet 24	In DOT&PF ROW, provide access to launch site for commercial rafting operation with one 24-foot-wide approach. Pave to curve return.
MP 19.5 STA 986+40 to STA 990+75 Figure Set A Sheet 25	In DOT&PF ROW, provide access to scenic view point with two 24-foot-wide plow-friendly approaches. Pave to curve return. Obliterate and vegetate abandoned road footprint.
MP 20 STA 1004+75 to STA 1008+75 Figure Set A Sheet 25	In DOT&PF ROW, improve driveway and intersection in order to maintain access to scenic view point.
MP 20 STA 1030+75 to STA 1034+40 Figure Set A Sheet 26	In DOT&PF ROW, improve driveway and intersection in order to maintain access to scenic view point.
MP 20.5 STA 1059+00 to STA 1062+50 Figure Set A Sheet 27	In DOT&PF ROW, provide access to scenic view point with two 24-foot approaches. Improve exit/entrance return radii to ease snow plow maintenance.
MP 21 STA 1069+50 Figure Set A Sheet 27	In DOT&PF ROW, provide access with one 24-foot-wide approach.

* Refers to identified access point (HNS-#); Haines Access Numbers are identified in EA Table 4.6-2 and shown in more detail in Appendix A of the EA.



Chilkat Bald Eagle Preserve

TS 28/29/30 S, R 56/57/58/59 E,
Copper River Meridian, Alaska



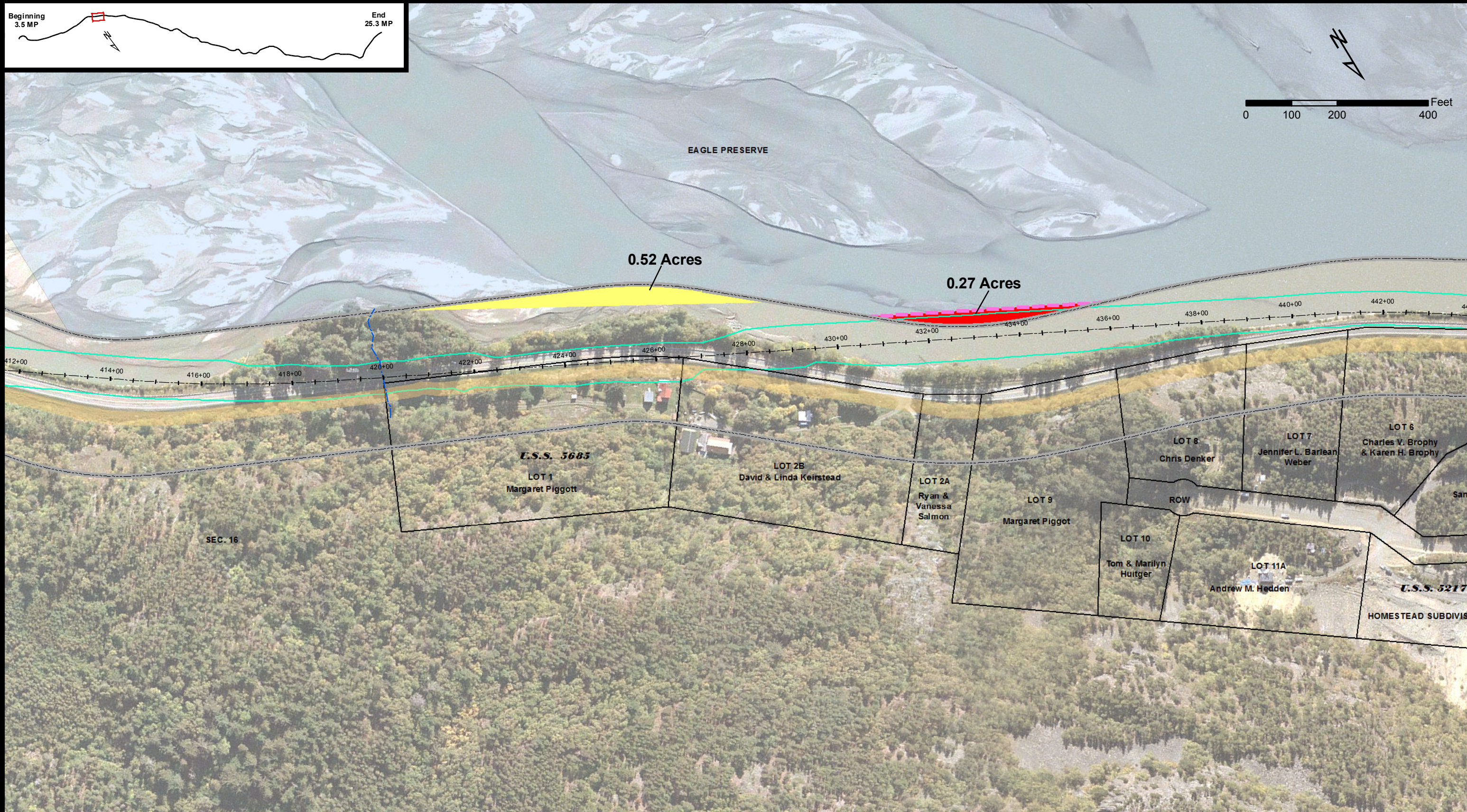
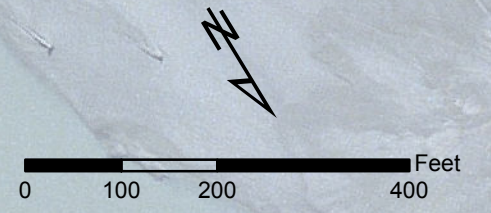
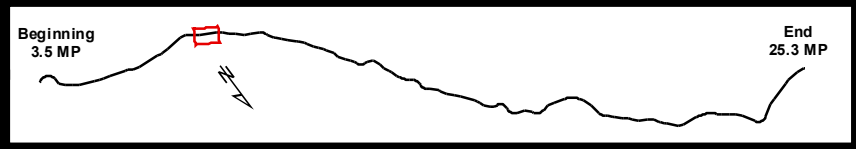
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

DOT & PF Project No. 68606
HAINES HIGHWAY
MILEPOST 3.5 - 25.3

Haines, Alaska

DATE: May 8, 2013

FIGURE 5.1-1



4 (f) ROW Changes		Stream Mitigation	
	Chilkat Bald Eagle Preserve (Preserve)		Stream Impacts
	Existing ROW to be allocated to Preserve		Proposed New Streams
	Proposed ROW acquisition within Preserve		Existing Streams
	Special Use Permit Area for Stream Mitigation in Preserve		Proposed Centerline
	Approximate Utility Corridor		Existing ROW
	Proposed shift in ROW		Eagle Nest 330' Radius
	Cut & Fill Limits		

**Chilkat Bald Eagle Preserve
 Property Acquisition and
 ROW Relinquishment**

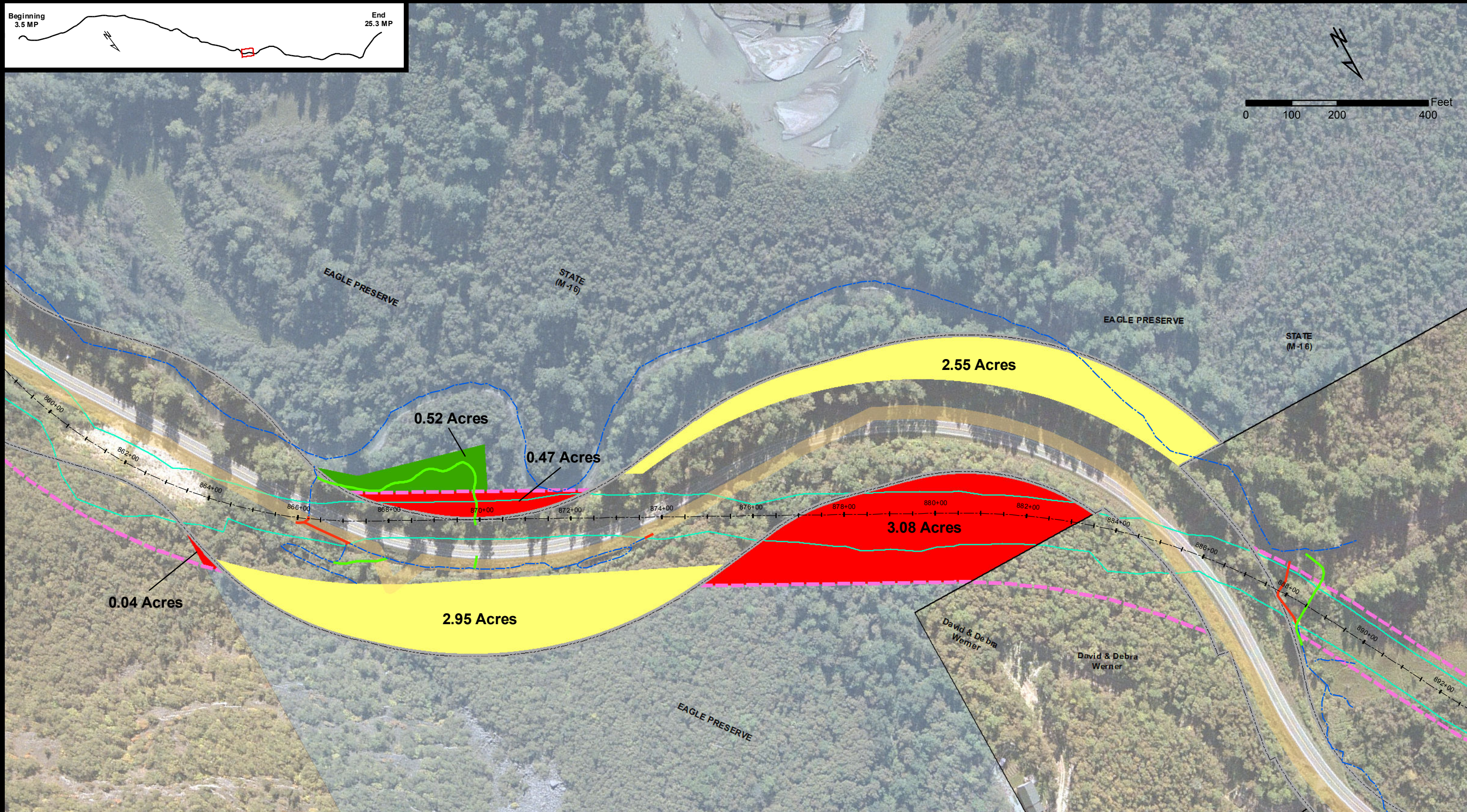
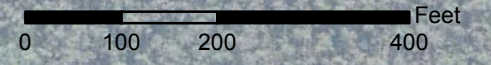
TS 28/29/30 S, R 56/57/58/59 E,
 Copper River Meridian, Alaska



STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 DOT & PF Project No. 68606
 HAINES HIGHWAY
 MILEPOST 3.5 - 25.3
 Haines, Alaska

DATE: June 25, 2013 FIGURE 5.1-2

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|---|------------------------------|--------------------------|------------------|
| 4 (f) ROW Changes | | Stream Mitigation | |
| Chilkat Bald Eagle Preserve (Preserve) | Approximate Utility Corridor | Stream Impacts | Existing Streams |
| Existing ROW to be allocated to Preserve | Proposed Centerline | Proposed New Streams | |
| Proposed ROW acquisition within Preserve | Proposed shift in ROW | Eagle Nest 330' Radius | |
| Special Use Permit Area for Stream Mitigation in Preserve | Cut & Fill Limits | | |

**Chilkat Bald Eagle Preserve
Property Acquisition and
ROW Relinquishment**

TS 28/29/30 S, R 56/57/58/59 E,
Copper River Meridian, Alaska



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
DOT & PF Project No. 68606
HAINES HIGHWAY
MILEPOST 3.5 - 25.3
Haines, Alaska

DATE: June 25, 2013 FIGURE 5.1-3

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**ATTACHMENT 5.1-1: CORRESPONDENCE BETWEEN THE STATE OF
ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC
FACILITIES AND THE STATE OF ALASKA DEPARTMENT OF
NATURAL RESOURCES**

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MEMORANDUM

State of Alaska

Department of Transportation & Public Facilities (ADOT&PF)
Design and Engineering Services – Southeast Region
Preconstruction / Preliminary Design & Environmental

TO: Arne Oydna
Project Manager

DATE: March 10, 2009

TELEPHONE NO: 465-4498

FAX NUMBER: 465-4414

FROM: Jim Scholl JS
Project Environmental
Coordinator

SUBJECT: 68606 Haines Highway: MP 3.5
to 25.3 / Pullouts for
Recreational Access

Reference: Plan Sheets 1
through 19 of the attached
Turnout/Recreation Facilities

Arne, A summary of our meeting with :

- Joel Telford, Alaska Department of Natural Resources, Parks Division (DNR Parks) and
- Mike Eberhart, DNR Parks and
- Arne Oydna, ADOT&PF, and
- Jim Heumann, ADOT&PF, and
- Jim Scholl, ADOT&PF is:

Pullout Number	Recommendation / Notes
HNS1	Accept design recommendation.
HNS2	Accept design recommendation.
HNS3	Change design recommendation to provide 1 approach rather than 2.
HNS4	Accept design recommendation. Wayside / parking area is in the Borough; work with Borough to accept operations and maintenance. Clear area right of station 366 is a potential fill site.
HNS4	Accept design recommendation with caveat to check driveway permit for driveway right of station 398+50.
HNS5	Accept design recommendation.
HNS6	Accept design recommendation. Wayside / parking area is in the Borough; work with Borough to maintenance.
HNS7	Accept design recommendation.
HNS8	Change design recommendation to provide 1 approach rather than 2. DNR Parks will need to discuss maintenance with Alaska Department of Fish and Game (ADF&G).

"Providing for the movement of people and goods and the delivery of state services."

Pullout Number	Recommendation / Notes
HNS	Accept design recommendation.
HNS1	Accept design recommendation to remove access only.
HNS11	Accept design recommendation to remove access only.
HNS12	Change design recommendation to provide 1 approach rather than 2.
HNS13	Do not accept design recommendation. ADOT&PF will work with Joel Telford of DNR Parks on an acceptable approach.
HNS14	Do not accept design recommendation. ADOT&PF will work with Joel Telford of DNR Parks on an acceptable approach.
HNS15	Change design recommendation to provide 2 approaches rather than 1. DNR Parks will accept operations and maintenance. Limit parking to 10 vehicles and provide gravel surface.
HNS16	Maintain existing access.
HNS17	Change design recommendation to provide two aprons, only. DNR Parks will maintain the pullout.
HNS18	Work with Joel Telford, DNR Parks, on a design recommendation.
HNS1	No change to existing condition.
HNS2	Accept design recommendation.
HNS21	Accept design recommendation. Talk to ADOT&PF Maintenance and Operations about improving access for busses and improvements for snow removal activities.
HNS22	Accept design recommendation.
HNS23	Accept design recommendation.
HNS24	Work with Joel Telford, DNR Parks, on pullout design.
HNS25	Work with Joel Telford, DNR Parks, on pullout design.
HNS26	Provide 1 approach rather than 2. Pullout not supported by Lukwan.
HNS27	Work with Joel Telford, DNR Parks, on design recommendation.

During the meeting we referenced the, Haines Highway Corridor Partnership Plan . This is a Haines Borough document prepared as part of the submission for National Scenic Byway designation for the Haines Highway.

CC: Joel Telford, DNR Parks,
Mike Eberhardt, DNR Parks,
Lori Stepansky, Haines Borough, Tourism Director
Kristen Hansen, DOW Engineers
file

See EA Appendix A for the referenced enclosures.
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Enclosure: Haines Highway, Turnout/Recreation Facilities



U.S. Department
of Transportation

**Federal Highway
Administration**

Alaska Division

December 15, 2010

709 West 9th Street, Rm. 851

P.O. Box 21648

Juneau, AK 99802

(907) 586-7418

(907) 586-7420 Fax

www.fhwa.dot.gov/akdiv

Mr. Joel Telford
Park Ranger
Alaska Department of Natural Resources
Division of Parks and Outdoor Recreation
Juneau, AK 99811

In Reply Refer To:

Subject: Haines Highway MP 3.5 – 25.3. Improvements
State / Federal Project No. 68606 / SHAK-095-6(28)
Request for concurrence on no adverse effect

Dear Mr. Telford:

As you are aware, the Department of Transportation and Public Facilities (DOT&PF), in cooperation with the Federal Highway Administration (FHWA), plans to improve the Haines Highway from Milepost 3.5 – 25.3. Most of the proposed project would take place within DOT&PF's existing right-of-way (ROW), however, approximately 3.0 acres of the Chilkat Bald Eagle Preserve (the Preserve) would be needed for the proposed road widening and straightening of curves, as described further below. Also, some of the proposed stream relocation and enhancement work would take place within the Preserve. In order to mitigate project impacts to the Preserve, DOT&PF is proposing to relinquish to the Preserve approximately 6.0 acres of similar adjacent habitat within the existing DOT&PF ROW.

The purpose of this letter is to provide you with an overview of the project, describe the anticipated impacts to the preserve and adjacent habitat, and explain our proposed measures to mitigate impacts and enhance Preserve resources. We also request your concurrence that the proposed action will not adversely affect the features, attributes, or activities of the Preserve. We make this request because FHWA has determined that the Preserve is protected by Section 4(f) of the Department of Transportation Act of 1966. Section 4(f) regulations (23 CFR Part 774) prohibit the use of publicly owned land of a wildlife and waterfowl refuge of national, State, or local significance unless: 1) there is no feasible and prudent alternative and the action includes all possible planning to minimize harm to the property from such use, or 2) the use of the property, including measures to minimize harm, would have a "*de minimis*" impact. FHWA will use your written determination regarding impacts in making its 4(F) determination.

Project Description:

The proposed project is located in Haines, Alaska, within the United States Geological Survey (USGS) Quadrangles Skagway A-2, B-2, B-3 (Township 30S, Range 59E, Section 19; Township



30S, Range 58E, Sections 6, 7, 8, 14, 15, 16, 17, 23, 24; Township 29S, Range 58E, Section 31; Township 29S, Range 57E, Sections 5, 6, 8, 9, 14, 15, 16, 23, 25, 26, 36; Township 28S, Range 56E, Sections 29, 32, 33, 34 – Copper River Meridian, Haines Recording District). Refer to Figure 1 for a location/vicinity map.

The goal of this project is to bring the last portion of the Haines Highway up to National Highway System Standards for a design speed of 55 mph by realigning, widening and straightening portions of the existing roadway. The upgrades will improve the safety, consistency and efficiency of the highway corridor. In addition, DOT&PF is proposing to replace the existing Chilkat River Bridge (also known as the Wells Bridge), and to construct a long-term solution to debris flow problems near mileposts 19 and 23. The Proposed Action includes the following:

Roadway Improvements

- Straighten curves to meet current 55 mph design standards and add additional passing zones.
- Widen the existing roadway shoulders from 2 feet to 6 feet.
- Construct drainage ditches along the roadway for snow removal storage and storm water runoff.
- Repave and restripe the roadway, including new signage.
- Construct driveways to meet the minimum sight distance for a design speed of 55 mph.
- Construct new larger diameter culverts at debris flow areas (MP 19 and MP 23) that would reduce potential for debris overtopping the road and simplify the removal of debris for DOT&PF maintenance staff.

Right-of-Way (ROW), Utilities, and Pipeline

- Acquire approximately 16.3 acres of private property and 3.0 acres of publically owned property from the Preserve (refer to attached Figure Set - Chilkat Bald Eagle Preserve Property Acquisition and ROW Relinquishment).
- Relinquish approximately 6.0 acres of existing DOT&PF ROW to the Preserve as 2:1 mitigation to offset ROW acquisition impacts to this publically owned property.
- Replace and / or relocate utilities and remove existing pipeline in areas where the proposed road alignment differs from the existing alignment.
- Maintain access to utility corridor where utilities are no longer located adjacent to the road.

Proposed New Chilkat River Bridge

- Remove existing bridge and construct a new bridge that meets the following design criteria:
 - 55-mph design speed,
 - Current seismic standards, and
 - Current load requirements for heavy freight vehicles.

Recreation and Pedestrian Accommodations

- Improve surfacing and grading of twenty-three turnouts along the roadway corridor, per your recommendations, to maintain and / or improve existing access to the Chilkat River recreational areas (refer to attached Figure Set – Proposed Turnout Improvements).
- Construct a new parking area to access the Mount Ripinski Trailhead (see attached Figure 2).
- Shift roadway alignment near the Klukwan turn-off to provide space for a possible future pathway connecting the Klukwan Village to the existing roadside trail at the Council Grounds.

As part of the mitigation plan, the Proposed Action also includes the following:

- Replace and upgrade 27 existing fish stream culverts with new appropriately sized culverts to improve fish passage underneath the highway.
- Construct 12,455 linear feet of erosion control along the banks of the Chilkat River, where road widening requires fill in the river. The erosion control will consist of riprap, live cuttings, woody debris, root wads, and/or other bio-stabilization techniques.
- Reconstruct and / or enhance approximately 5,965 linear feet of fish-bearing streams and adjacent riparian habitat.

Proposed Impacts to the Chilkat Bald Eagle Preserve

Approximately 3.0 acres of the Chilkat Bald Eagle Preserve would be permanently acquired to accommodate the Proposed Action. Also, 1.6 acres that would be temporarily accessed for proposed stream mitigation. (DOT&PF would apply for Special Use Permits for the stream mitigation areas.)

The proposed ROW acquisition within the Preserve is summarized below and shown on the attached Figure Set (Chilkat Bald Eagle Preserve Property Acquisition and ROW Relinquishment).

Table 1: Summary of Proposed ROW Acquisition

Acres	Beginning Station	Ending Station	Nearest MP or Landmark	Habitat Type	Figure Number
0.26	431+00	436+00	MP 8.5 / Turnout 7	River Bank / River Bottom	1 of 4
0.02	863+50	864+50	MP 18	Forested Upland	4 of 4
0.47	866+00	872+50	MP 18	Forested Upland	4 of 4
2.26	875+50	883+50	MP 18	Forested Upland	4 of 4
Total Acreage	3.01				

Impact Avoidance, Minimization and Mitigation Measures

Avoidance Measures:

The following design modifications were implemented to avoid adverse impacts to the Preserve:

- The existing road alignment was followed to the extent feasible.
- In areas where realignments are required to improve safety, the alignment was designed to avoid ROW acquisition to the extent feasible.
- The elevation of the road was adjusted to minimize the extent of the fill footprint.
- The existing 300 foot ROW adjacent to the Preserve was reduced to 60 feet from the proposed new centerline where additional ROW from the Preserve is required.
- The curve radius was minimized to the extent possible while still meeting project design criteria.

Mitigation and Enhancement Measures:

To mitigate for the unavoidable ROW acquisition, DOT&PF proposes to relinquish approximately 6.0 acres of existing DOT&PF ROW to the Preserve. The table below summarizes the areas where DOT&PF proposes to relinquish ROW. These areas are also shown on the attached figure set (Chilkat Bald Eagle Preserve Property Acquisition and ROW Relinquishment).

Table 2: Summary of Existing DOT&PF ROW to Potentially be Relinquished

	Acres	Beginning Station	Ending Station	Nearest MP or Landmark	Habitat Type	Figure Number
	0.52	420+00	428+50	MP 8	River Bank, River Bottom	1 of 4
	2.95	864+50	875+50	MP 17 Salmon egg incubation boxes	Forested Upland	4 of 4
	2.55	873+00	885+50	MP 17 Salmon egg incubation boxes	Forested Upland	4 of 4
Total	6.02					

In compliance with the 1987 Cooperative Management Agreement (MOA) between DNR and DOT&PF for this roadway corridor, DOT&PF has consulted with your office regarding the proposed project. As a result of the site visit that you participated in with project team members, followed by several meetings, most of your recommendations for turnout improvements have been incorporated into the preliminary design plan (refer to attached Figure Set – Proposed

Turnout Improvements). Please note that, as explained at our most recent meeting, the project plans do not include a new boat launch that was suggested at the Chilkat River Bridge, however, we intend to construct an access road to the river parallel to the new bridge as part of the project.

In addition to the proposed turnout improvements, DOT&PF is also proposing on-site mitigation to restore and enhance fish habitat along the project corridor. The stream mitigation proposal is based on extensive coordination with a multi-discipline team composed of state and federal resource agency staff, including a Division of Parks and Outdoor Recreation representative. While originally conceived as mitigation for stream and wetland impacts within the ROW, some of these proposed stream mitigation sites would be on Preserve property and would enhance the Preserve. (These areas are shown on the attached Figure Set – Chilkat Bald Eagle Preserve Property Acquisition and ROW Relinquishment.) Each of the sites provides an opportunity to restore and / or enhance the existing stream channels through various methods such as:

Lengthening the channel to provide more fish habitat,
Shifting the stream further away from the road to avoid storm water pollutants, and
Constructing additional meanders and riparian buffers, and or stream bank stabilization.

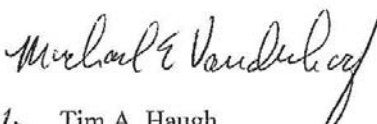
Table 3: Summary of Proposed Stream Mitigation within the Preserve

	Acres	Linear Feet	Beginning Station	Ending Station	Nearest MP or Landmark	Habitat Type	Figure Number
	0.3	168.5	512+00	515+00	MP 10	Forested wetland with stream	2 of 4
	0.5	480.9	519+00	523+50	MP 10.5 Turnout 9	Forested wetland with stream	2 of 4
	0.3	Root Wad	649+50	652+00	MP 12.5 Turnout 13	Wetland with stream	3 of 4
	0.5	436.5	866+00	872+50	MP 16.5	Forested upland with stream	4 of 4
Total	1.6						

By a separate letter, we will ask for your concurrence that the temporary access for stream work does not constitute a use of the Preserve as defined by Section 4(f) regulations.

Based on the above information, FHWA respectfully requests your written concurrence that the proposed action presented would not adversely affect the activities, features and/or attributes of the Chilkat Bald Eagle Preserve. Please contact me at (907) 586-7430, or by email at Tim.Haugh@dot.gov, if you have any questions or would like to discuss this request. If you wish we can schedule a meeting between FHWA, DOT&PF and the Division of Parks and Outdoor Recreation to go over any details of concern.

Sincerely,


TH Tim A. Haugh
Environmental Program Manager

Enclosures: Referenced enclosures can be found in the EA as noted below.

Figure 1 – Location / Vicinity Map (see EA Figure 1.1-1)
Figure 2 – New Ripinski Trailhead Parking (see EA Figure 1.2-5)
Figure Sets: Chilkat Bald Eagle Preserve Property Acquisition and ROW
Relinquishment (Figures 1-4) (see EA Figure Set B)
Proposed Turnout Improvements (Figures 1-19) (see EA Appendix A)

cc w/o enclosures:

Reuben Yost, DOT&PF Project Manager
James Scholl, DOT&PF Environmental Analyst

SEAN PARNELL, GOVERNOR

550 W. 7TH AVE., SUITE 1380
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DEPARTMENT OF NATURAL RESOURCES
DIVISION OF PARKS & OUTDOOR RECREATION

March 2, 2011

Tim Haugh
Environmental Program Manager
Federal Highway Administration, Alaska Division
709 West 9th Street, Rm. 851
P.O. Box 21648
Juneau, AK 99802

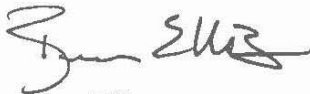
Subject: Haines Highway MP 3.5 – 25.3 Improvements
State / Federal Project No. 68606 / SHAK-095-6(28)
FHWA Request for concurrence on no adverse effect

Dear Mr. Haugh:

I have reviewed the information in your December 15, 2010 letter and the accompanying figures. The proposal you present would mitigate the unavoidable acquisition of approximately three acres of Chilkat Bald Eagle Preserve land for highway improvements by relinquishing approximately six acres adjacent to the preserve within the current Haines Highway right-of-way. This two to one replacement with land of similar habitat value, along with improvements to several pullouts and access points to the Preserve, will ensure that highway improvements do not harm the Preserve.

I hereby concur that the proposed action would not adversely affect the activities, features, and/or attributes of the Chilkat Bald Eagle Preserve.

Sincerely,



Ben Ellis
Director
Division of Parks and Outdoor Recreation
State of Alaska

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5.2 Chilkat River Bridge



Alaska Department of Transportation and Public Facilities

PROGRAMMATIC SECTION 4(f) EVALUATION FORM for Use of Historic Bridges

Project Name: Haines Highway MP 3.5 to 25.3
Project Number (Federal and State): SHAK-095-6(28)/68606
Bridge Name & Number (Federal and State): Chilkat River
(Wells) Bridge, DOT&PF Bridge No. 0742
Date: May 16, 2013

This programmatic Section 4(f) form is to be used when a project will "use" a bridge that is on or eligible for listing on the National Register of Historic Places (NRHP) and when the action will impair the historic integrity of the bridge either by rehabilitation or demolition. Rehabilitation that does not impair the historic integrity of the bridge as determined by procedures implementing the National Historic Preservation Act (NHPA) of 1966 is not subject to Section 4(f).

If any of your responses are contained within [brackets], do not continue filling out the form, but consult the State of Alaska Department of Transportation and Public Facilities (DOT&PF) Statewide National Environmental Policy Act (NEPA) Manager for 6004 (for assigned Categorical Exclusion [CE]) or the Federal Highway Administration (FHWA) Environmental Program Manager (for all non-assigned projects) for the appropriate action.

I. Applicability

YES **NO**

The Proposed Action will replace or rehabilitate a bridge with Federal funds.

Include a project description:

The Proposed Action would improve the Haines Highway, replace the Chilkat River Bridge, provide highway protection at debris flow areas, and improve intersections, driveways, and recreational turnout accesses. The Proposed Action components are listed below:

Improvements to Haines Highway

1. Realign sections of the highway and straighten most curves to meet design standards with the exception of two curves. Curves in the vicinity of Milepost (MP) 17 would not be straightened to avoid sensitive resources and to keep the project costs within available funding.
2. Add passing zones
3. Widen the roadway shoulders to a continuous 6-foot width and provide minimum sight distance to meet design standards (Environmental Assessment [EA] Figures 1.2-1 through 1.2-3)
4. Construct drainage ditches and upgrade, replace, and/or add new culverts where appropriate.
5. Repave and restripe the roadway and add new signage.

bridge, is unique. This bridge has its original reinforced concrete piers and abutments and reinforced concrete deck. The railings appear like the original and may have been replaced in kind. The bridge has its original four steel stringers; although additional stiffening plates appear to have been added to these sometime later. Additional information on the bridge is included Appendix C of the EA.

6. Describe the Section 4(f) site (include a map/plan set/diagram depicting the boundaries and features of the historic bridge in relation to the proposed replacement or rehabilitation):

A. Type (Design) of Historic Bridge:

Continuous-span steel girder construction with concrete piers and abutments

B. Ownership:

DOT&PF

C. Location:

At approximately MP 23.8 of the Haines Highway (EA Figure 1.1-1)

D. Historic Significance:

The bridge is eligible for the NRHP under Criteria C as characteristic of a type, period or method of construction. It is a continuous-span steel girder bridge with concrete piers, abutments and the bridge deck is characteristic of mid-century bridge architecture. A detailed analysis of the historic significance of this bridge is included in Appendix C of the EA.

7. Fully describe the project impacts to the historic bridge. Include a map/diagram depicting the boundaries and features of the historic bridge in relation to the proposed replacement or rehabilitation (it may be possible to include this on the earlier referenced figure).

The historic bridge would be demolished and a new bridge constructed adjacent to and just downstream of it within the DOT&PF ROW (Figure 5.2-1). This Proposed Action would adversely effect the historic bridge.

8. Has State Historic Preservation Office (SHPO) and Advisory Council on Historic Preservation (ACHP) (if appropriate) concurred in writing with the assessment of impacts (i.e., finding of effect) and the proposed mitigation? YES NO

Attach documentation:

SHPO has concurred with the finding of adverse effect. DOT&PF and FHWA are currently working with SHPO and other consulting parties on a Memorandum of Agreement (MOA) to resolve the adverse effects and would be finalized prior to FHWA issuance of a decision document. The ACHP has declined to participate in the MOA. Documentation of the SHPO concurrence and the ACHP decision follows this evaluation (Attachment 5.2-2).

II. Alternatives and Findings

Support the following project alternatives with evaluations that clearly discuss potential impacts and demonstrate each finding. Include maps and diagrams.

1. Discuss the impacts of the No-Build Alternative:

Demonstrate:

A. Maintenance: That the action does not correct the situation that causes the bridge to be considered structurally deficient or deteriorated, and normal maintenance is not considered adequate to cope with the situation; **or**

B. Safety: That the action does not correct the situation that causes the bridge to be considered deficient, and the bridge poses serious and unacceptable safety hazards to the traveling public or places intolerable restriction on transport and travel.

No-build Alternative Discussion:

The No-Build Alternative is also called the No-Action Alternative in this document. Under this alternative, no improvements to the Haines Highway would occur and the bridge would be left as is.

A. Maintenance:

The Chilkat River Bridge was constructed in 1958 using design standards from that period and with a design life of 50 years. The bridge is now beyond its 50-year design life and many of its components do not meet current code requirements for performance in the future. DOT&PF bridge inspections have identified structural deficiencies and deterioration of the Brotherhood Bridge that normal maintenance would not address. For example:

BRIDGE RAILS. The existing bridge rails do not meet current safety standards and, if the bridge were to be retained in service, DOT&PF bridge engineers recommend replacement of the rail with one that is crash-tested (Appendix C of the EA). Normal maintenance would not address this deficiency.

BRIDGE DECK and STEEL GIRDERS. Neither the bridge deck nor the steel girders have adequate strength to meet current design standards for accommodating potential future industrial loads related to mining and gas pipeline activities (Appendix C of the EA). The most common method for strengthening girders involves welding additional steel to the existing structure. Unfortunately, the poor quality of the older steel relative to modern steel makes this technique susceptible to weld cracking which often leads to cracks through the entire steel section and potentially to the failure of the girder. Considering the age of the girders, replacing the girders would be more effective, and may be less expensive, than strengthening them. Normal maintenance would not address these deficiencies.

GIRDER END SUPPORTS. The bridge is located in a high seismic zone and, based on current seismic design standards, the girder end supports are inadequate to accommodate the seismic movements anticipated at this site. Bridges with the same type of inadequate bearing seat width have failed during earthquakes (Photo 2, Attachment 5.2-1). To bring the bridge up to current seismic design standards, DOT&PF Bridge Section recommends several retrofit details such as driving large diameter pipe piles on either side of the existing piers, filling the piles with reinforcing concrete, and casting a concrete cap beam above the piles to encapsulate the upper portion of the existing pier wall. Additional retrofit details include the use of cable restrainers to tie adjacent girder ends together and installation of concrete shear keys between the steel girders. Retrofitting the girder end supports by driving large diameter pipe piles or by adding cable restrainers and concrete shear keys between the steel girders is beyond normal maintenance (Appendix C of the EA). Normal maintenance would not address these deficiencies.

DOT&PF bridge inspections have also identified structural deficiencies and deterioration of the Chilkat River Bridge that normal maintenance would not address. For example:

"SCOUR CRITICAL" BRIDGE. The concrete piers are pile extensions encased in concrete walls, which normally are buried below the riverbed. In some locations, the walls in the Chilkat River Bridge are not buried and the piles supporting the walls are exposed. Because the piles only extend about 45 feet into the riverbed, they are

susceptible to the effects of 'scour', or erosion caused by flowing water where exposed. For this reason, the bridge is classified as 'scour critical' (Appendix C of the EA). To address the scour critical condition of the piles, the DOT&PF Bridge Section recommends driving large diameter pipe piles on either side of the existing piers. The pipe piles would be filled with a reinforced concrete core. A concrete cap beam would be cast above the two large diameter piles, encapsulating the upper portion of the existing pier wall. The lower portion of the wall would be removed once the cap beam was installed. Normal maintenance would not address these deficiencies nor implement these measures.

The concrete pier walls are also showing signs of deterioration, including concrete spalls (chipping, flaking or scaling damage on the surface) that need to be repaired if the bridge is retained.

BRIDGE DECK. The concrete deck has damaged and delaminated concrete and exposed reinforcing bars. Repair would include cleaning and coating exposed reinforcing steel; chipping the concrete to expose sound material; and then patching with concrete or high-strength grout. These measures are considered beyond normal maintenance. Additionally, the deck expansion joints leak water onto the end diaphragms and substructure, contributing to deterioration of the structure as a whole. The joints would need to be replaced, which is also beyond normal maintenance.

BRIDGE PAINT. The paint on the steel girders is deteriorated and needs repainting, which in most cases would be considered normal maintenance. However, due to girder age they are likely coated with lead-based paint which needs to be removed prior to repainting. Removal of the lead-based paint and repainting the girders is beyond normal maintenance because the work would require specialized contractors.

NAVIGATION. The Chilkat River is on the U.S. Coast Guard (USCG) list of navigable waters in Alaska. Navigational clearance is reduced during high water events or when there are logjams built up against the piers. Photograph 3 (Attachment 5.2-1) illustrates the lack of clearance at high water, and Photograph 4 (Attachment 5.2-1) shows how debris can accumulate around the piers at low water. Normal maintenance would not address low clearance during high water events.

The No-Build Alternative does not address bridge deficiencies.

B. Safety:

N/A

Finding: The No-Build Alternative has been evaluated and has been YES NO determined for impacts for reasons of maintenance and safety not to be feasible and prudent.

The bridge is at the end of its design life and is showing signs of deterioration. The no-build alternative would result in a bridge that remains deficient.

2. Discuss building a new structure at a different location without using the historic bridge or affecting the historic integrity of the old bridge:

Demonstrate:

A. Terrain: That the present bridge structure has already been located at the only feasible and prudent site (i.e., a gap in the land form, the narrowest point of the river canyon, etc.), and to build a new bridge at another site will result in extraordinary bridge and approach engineering and construction difficulty or costs, or extraordinary disruption to established traffic patterns;

OR

B. Adverse Social, Economic or Environmental Effects: That building a new bridge away from the present site would result in social, economic, or environmental impact of extraordinary magnitude, and such impacts as extensive severing of productive farmlands, displacement of a significant number of families or businesses, serious disruption of established travel patterns, and access and damage to wetlands may individually or cumulatively weigh heavily against relocation to a new site;

OR

C. Engineering and Economy: Where difficulty associated with the new location is less extreme than those encountered above, a new site would not be feasible and prudent where cost and engineering difficulties reach extraordinary magnitude, and factors supporting this conclusion include significantly increased roadway and structure costs, serious foundation problems, or extreme difficulty in reaching the new site with construction equipment; additional design and safety factors to be considered include an ability to achieve minimum design standards or to meet requirements of various permitting agencies such as those involved with navigation, pollution, and the environment;

AND

D. Preservation of Old Bridge: That it is not feasible and prudent to preserve the existing bridge, even if a new bridge were to be built at a new location. This could occur when the historic bridge is beyond rehabilitation for transportation or an alternative use, when no responsible party can be located to maintain and preserve the bridge, or when a permitting authority, such as the USCG requires removal or demolition of the old bridge.

New structure in different location discussion:

This alternative changes the road curve geometry between MP 23 and 24, constructs a bridge parallel to and just downstream of the existing bridge, and leaves the historic bridge in place.

A. Terrain:

N/A

B. Adverse Social, Economic or Environmental Effects:

Retaining the historic bridge and building a new structure parallel to it would result in additional structures in the water, continued reduced navigational clearance under the bridges during periods of high water, and accumulation of debris around the historic bridge during periods of low water. When the bridge fails due to current deficiencies, it could result in damage to the new structure and emergency measures that could have a temporary adverse effect on travel and commerce through the transportation corridor, as well as fish and fish habitat. These effects are discussed below.

1. Reduced River Navigation

If the historic bridge is left in place its nine piers would also remain in addition to the three new piers that would support the new structure, resulting in a total of 12 off-set piers in the river. The vertical clearance of the reach of river at this location would be determined by the structure with the least amount of clearance. The historic bridge has a vertical clearance of 9 feet at ordinary high water (OHW), while the new structure would provide a vertical clearance of 16 feet at OHW (EA Figure 4.12-1). If the historic bridge is left in place, vertical clearance would remain at 9 feet at OHW. Benefits to navigation on the river would not occur.

2. Failure of Historic Bridge

As discussed above in the No-Build Alternative discussion, the existing bridge is beyond its design life, is comprised of components that do not meet current design standards, and is structurally deficient and deteriorated. When the historic bridge fails at some future time, it would potentially damage the adjacent new bridge, a situation which would likely require temporary emergency measures that could include restricting load limits on new bridge, bridge closure, and equipment working in the water. Closures or restrictions on the new bridge would disrupt the major transportation route into and out of Haines, resulting in economic impacts related to freight transportation, tourism, and mobility of residents. Any emergency work in the water to remove bridge debris or repair the new bridge could have a direct adverse effect on fish and fish habitat, and indirect impacts to fisheries harvests.

C. Engineering and Economy:

Leaving the historic bridge in place adjacent to the new bridge would result in continued navigational hazards due to debris gathering around the bridge piers and the low clearance under the bridge at high water. Addition of a new bridge while the existing bridge remains would increase navigation hazards to boaters as it would result in nine extra piers in the water (Figure 4.12-1 in the EA).

D. Preservation of Old Bridge:

DOT&PF finds that constructing a replacement bridge immediately downstream of the existing bridge as described above would not resolve any problems related to the historic bridge's condition or design. The historic bridge is beyond rehabilitation for either motorized or non-motorized transportation use. It is also beyond rehabilitation for an alternative use such as a visual display because of the potential impacts that would be caused by failure of the historic bridge, as discussed above under A. Adverse Social, Economic or Environmental Effects. Construction of a new bridge in a location immediately adjacent to the old bridge would result in additional structures in the water and associated navigational issues. In-water structures would consist of the existing nine concrete piers plus three new piers offset from the existing, for a total of 12 distinct structures.

No responsible party could be located to maintain and preserve the historic bridge (Appendix C of the EA).

- DOT&PF's Bridge Design Section considered the potential to reuse the bridge on the Klehini Bridge Replacement project, but found it was not prudent since the existing bridge would not meet standards for the seismic conditions in Klehini crossing area.
- DOT&PF approached Southeast Roadbuilders in Haines to see if they were interested in salvaging, restoring, and reusing the bridge. Although Southeast Roadbuilders has acquired bridges for reuse in the past, they noted that they have not been successful in using the bridges obtained and that they did not see the value in trying to salvage this bridge, given the time and effort it would take to keep it structurally sound.
- DOT&PF also approached the Haines Borough to assess their interest in salvaging the bridge. The Haines Borough indicated that they could not salvage and reuse the bridge.

Finding: Constructing a bridge on a new location or parallel to the historic bridge has been evaluated and is not considered feasible and prudent. YES NO

Building a new bridge downstream within the DOT&PF ROW, adjusting the geometry of the road curve between MP 23 and 24, and leaving the historic bridge in place is feasible from an engineering perspective, but is not prudent because:

- it would result in social, economic and environmental impacts;
- it would have high cost; and
- no responsible party can be located to maintain and preserve the bridge.

3. Discuss rehabilitating the historic bridge without affecting the historic integrity of the structure, as determined by the Section 106 procedures implementing the NRHP and fully discuss the resulting impacts.

Demonstrate:

- A.** That the bridge is so structurally deficient that it cannot be rehabilitated to meet minimum acceptable load requirements without affecting the historic integrity of the bridge; **OR**
- B.** That the bridge is seriously deficient geometrically and cannot be widened to meet the minimum required capacity of the highway system on which it is located without affecting the historic integrity of the bridge. Flexibility in the application of AASHTO geometric standards should be exercised, as permitted in Code of Federal Regulations (CFR) 23 CFR Part 625, during the analysis of this alternative.

Rehabilitating the bridge discussion:

A. Structural Deficiencies

The strength of the bridge deck and steel girders can be improved for anticipated future loads, the 'scour critical' condition of the bridge can be corrected, and seismic retrofits can be constructed to meet current design standards. However, the measures needed to rehabilitate the bridge include either replacement and modification of existing bridge components, or addition of new components such as large diameter pipe piles. Taking these rehabilitation measures would result in the bridge losing its historic integrity (Attachment 5.2-3) and it would no longer be eligible for listing on the NRHP.

B. Geometric Deficiencies

N/A

Finding: Rehabilitation without affecting the historic integrity of the bridge has been evaluated and is not considered feasible or prudent. YES NO

These measures would impair the historical integrity of the bridge (Attachment 5.2-3). Rehabilitation of the bridge, while feasible, would affect its historic integrity and is not considered prudent.

III. Minimization of Harm

1. Have you identified measures to minimize harm on the Section 4(f) property? YES NO

Measures to minimize harm will consist of those measures necessary to preserve the historic integrity of the site and agreed to, in accordance with 36 CFR Part 800 by FHWA (or DOT&PF if the project qualifies as an assigned Categorical Exclusion [CE]), SHPO, and as appropriate, ACHP:

For bridges that are to be rehabilitated, the historic integrity of the bridge is preserved, to the greatest extent possible, consistent with unavoidable transportation needs, safety, and load requirements.

Not Applicable

For bridges that are to be rehabilitated to the point that the historic integrity is affected or that are to be moved or demolished, the FHWA (or DOT&PF if the project qualifies as an assigned CE) ensures that, in accordance with the Historic American Engineering Record standards, or other suitable means developed through consultation, fully adequate records are made of the bridge.

Not Applicable

For bridges that are to be replaced, the existing bridge is made available for an alternative use, provided a responsible party agrees to maintain and preserve the bridge.

The bridge was made available; no responsible party was identified.

For bridges that are adversely affected, written agreement with SHPO and ACHP (as appropriate) is reached through the Section 106 process of the NHPA on measures to minimize harm and those measures are incorporated into the project. This programmatic Section 4(f) evaluation does not apply to projects where such an agreement cannot be reached.

An MOA is being developed among DOT&PF, FHWA, SHPO, and other consulting parties for resolution of adverse effects on the bridge. The MOA will be executed prior to approval of this document. Mitigation concepts will be developed and established within the MOA, and may include recordation, historic interpretation opportunities, and archaeological construction monitoring.

Discuss minimization measures and attach relevant documentation:

The Proposed Action, which includes replacement of the bridge, includes all possible planning to minimize harm. The existing bridge was made available for alternative use, but no responsible party was identified that would agree to maintain and preserve the bridge.

An MOA is being negotiated among DOT&PF, FHWA, SHPO, and other consulting parties for resolution of adverse effects on the bridge. The MOA will be implemented prior to and in coordination with any Haines Highway MP 3.5 to 25.3 project related actions that could disturb historic properties. Mitigation concepts will be developed and established within the MOA, and may include recordation, historic interpretation opportunities, and archaeological construction monitoring.

IV. Coordination

YES **NO**

1. Has the proposed project been coordinated with SHPO, ACHP, Tribal and other interested parties (including property owners) as called for in 36 CFR Part 800; and has SHPO (and ACHP if appropriate) concurred in writing with the assessment of the impacts on the proposed project on and the proposed measures to minimize harm for the Section 4(f) property?

2. Summarize coordination and include documentation of concurrence from SHPO. (The regional environmental manager should prepare a letter with the specific language required for the official's concurrence. A "concurrence line" on the letter is acceptable documentation for compliance.)

A memorandum of agreement is under negotiation with SHPO and other consulting parties.

V. Certification and Approval

I certify that all applicable coordination and consultations have occurred during the development of this Section

4(f) Evaluation, and that this project meets all criteria and findings required for approval under the FHWA, programmatic Section 4(f) evaluation approval dated July 5, 1983.

Certified by: _____ **Date:** _____
Regional Environmental Manager

Based on the above considerations, there is no feasible and prudent alternative to the use of land from the **Chilkat River** Bridge and the Proposed Action includes all possible planning to minimize harm to the **Chilkat River** Bridge resulting from such use.

It has been determined that the project complies with the July 5, 1983, "Final Nationwide Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges" (1983 Programmatic), and that:

1. This project meets the applicability criteria prescribed.
2. All of the alternatives set forth have been fully evaluated.
3. The findings in this document, which include that there is no feasible and prudent alternative to the use of the historic bridge is clearly applicable to the project.
4. The project complies with the Measures to Minimize Harm section of the 1983 Programmatic, and
5. The coordination called for in the 1983 Programmatic has been successfully completed.
6. For bridge replacement projects, FHWA has coordinated with the USCG.
7. Documentation in the project file clearly identifies the basis for the above determinations and assurances.

The approving authority has ensured that the measures to minimize harm will be incorporated into the project.

Non-Assigned Projects

Approved by: _____ **Date:** _____
FHWA Environmental Program Manager

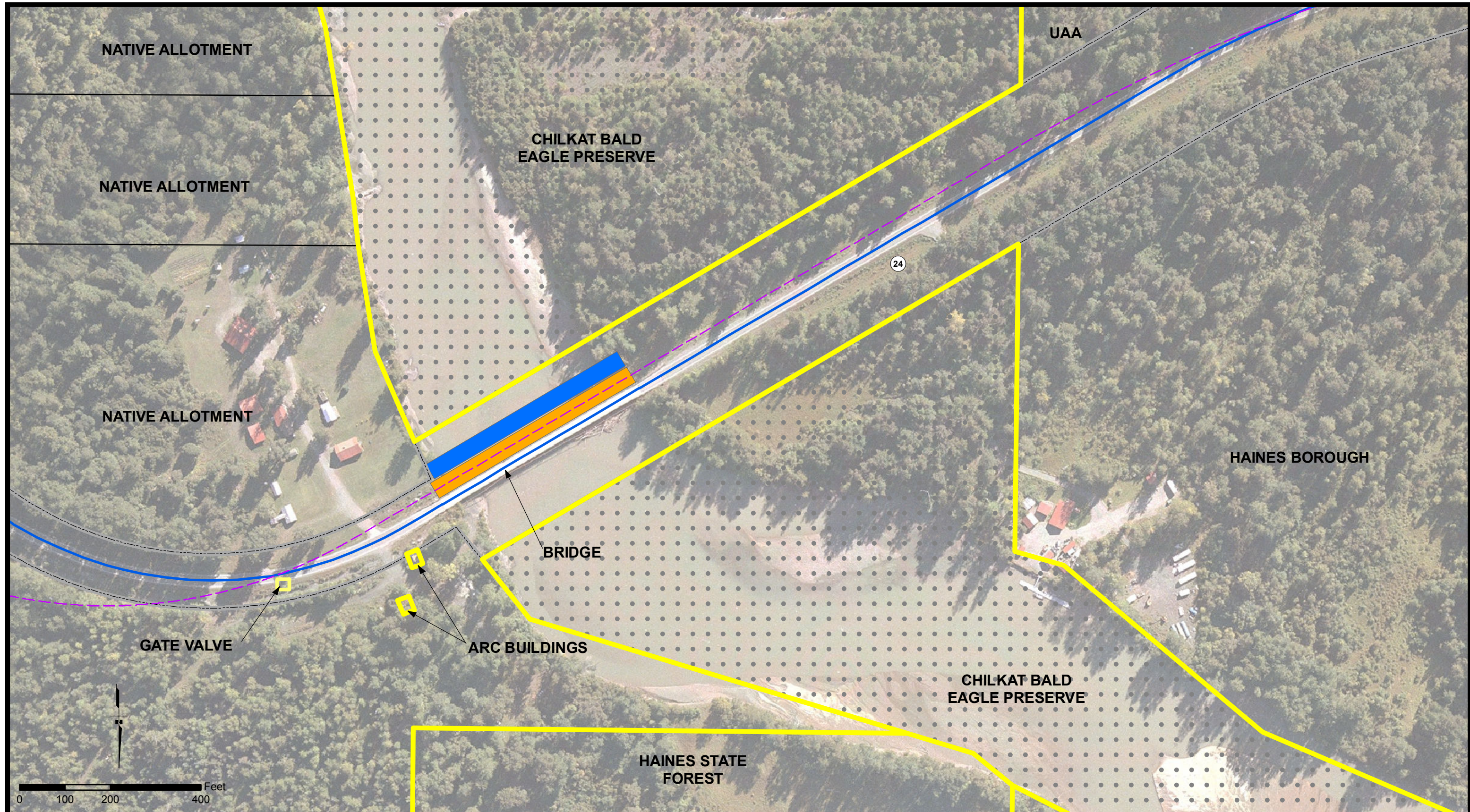
OR

Assigned CE Projects

Approved by: _____ **Date:** _____
DOT&PF Statewide NEPA Manager for 6004

List of Attachments:

- Figure 5.2-1 Section 4(f) Properties in Vicinity of Chilkat River Crossing
- Attachment 5.2-1 Photographs
- Attachment 5.2-2 SHPO/ACHP Documentation
- Attachment 5.2-3 CRC Memorandum



- Existing Road Centerline
- Proposed Alignment
- Existing ROW
- Ⓜ Milepost
- Proposed New Bridge
- Temporary Work Bridge
- Chilkat Bald Eagle Preserve
- Section 4(f) Property

**Section 4f Properties in the Vicinity
of the Chilkat River Crossing**

TS 28/29/30 S, R 56/57/58/59 E,
Copper River Meridian, Alaska



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
DOT & PF Project No. 68606
HAINES HIGHWAY
MILEPOST 3.5 - 25.3

Haines, Alaska

DATE: July 05, 2013

FIGURE 5.2-1

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ATTACHMENT 5.2-1: PHOTOGRAPHS

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Photograph 1: Chilkat River Bridge



Photograph 2: Example of Bridge Damage from Earthquake



Photograph 3: Bridge Low Clearance



Photograph 4: Logjam Underneath Bridge

**ATTACHMENT 5.2-2: STATE HISTORIC PRESERVATION
OFFICE/ADVISORY COUNCIL ON HISTORIC PRESERVATION
DOCUMENTATION**

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THE STATE
of ALASKA
GOVERNOR SEAN PARNELL

Department of Natural Resources

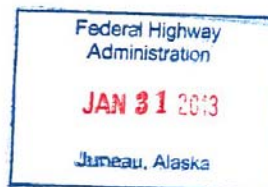
DIVISION OF PARKS AND OUTDOOR RECREATION
Office of History and Archaeology

550 West 7th Avenue, Suite 1310
Anchorage, Alaska 99501-3565
Web: <http://dnr.alaska.gov/parks/oha>
Phone: 907.269.8721
Fax: 907.269.8908

January 28, 2013

File No.: 3130-1R FHWA

AV
Alex Viteri Jr., P.E.
Federal Highway Administration
Southeast Region Area Engineer
P.O. Box 21648
Juneau, AK 99802-1648



Subject: Haines Highway Improvements between Milepost (MP) 3.5 and 25.3 near Haines, Alaska

Dear Mr. Viteri:

The Alaska State Historic Preservation Office (AK SHPO) received your correspondence (dated January 15, 2013) on January 17, 2013.

As noted within this most recent documentation, our office has previously provided concurrence with FHWA's determinations of eligibility for 25 resources documented within the project's area of potential effects (APE). In addition to this past consultation, our staff has greatly appreciated opportunities to participate in consultation meetings among FHWA and Chilkat Indian Tribal Council and Tribal members to discuss the project.

We understand that a property of religious and cultural significance was identified by the Chilkat Indian Tribe, about which they have requested no information be recorded or shared. We understand that FHWA intends to treat this property as eligible for the National Register of Historic Places (NRHP) and has worked out measures to avoid and minimize adverse effects to it directly through their government-to-government consultation with the Tribe. To honor the Tribe's request and FHWA's government-to-government relationship with the Tribe, our office withholds any further comment on the eligibility of or effect to this property. We have no objection to FHWA's intent to make a Section 4(f) *de minimus* impact finding with respect to this property.

Regarding FHWA's findings of effect for the subject undertaking on the other eligible sites within the APE, we offer the following comments:

- We concur that a finding of **no historic properties affected** is appropriate for the subject undertaking with respect to the following properties: SKG-054 (Yindastuki), SKG-543, SKG-057, and SKG-085.
- We concur that a finding of **no adverse effect** is appropriate for the subject undertaking with respect to the following properties: SKG-044 (Smokehouse Village), SKG-050 (T'Anu Fort), SKG-544, SKG-545, and SKG-537 (Gil Smith House).

- We concur that a finding of **adverse effect** is appropriate for the subject undertaking with respect to the following properties: SKG-247 (Chilkat River Bridge) and SKG-206 (Haines-Fairbanks Pipeline District, Gate Valve #4).

We look forward to receiving the results of the additional field survey that is planned for the expanded APE area in the Klukwan vicinity, as noted within your cover letter.

Additionally, we look forward to continued consultation with FHWA, DOT&PF, and other consulting parties on the subject undertaking and to developing a Memorandum of Agreement (MOA) that would stipulate measures to resolve adverse effects. Please note that the agency official shall notify the Advisory Council of the adverse effect finding (36 CFR 800.6[a][1]).

We agree that archaeological Construction Monitoring as well as opportunities for a Tribal observer during construction should be incorporated into the MOA. The specific stipulations for monitoring requirement as well as stipulations measures to mitigate adverse effects should be developed through consultation amongst FHWA, DOT&PF, the Tribe, SHPO, and other consulting parties, as appropriate.

Please note that as additional information provided by the local government, Tribes or other consulting parties may cause our office to re-evaluate our comments and recommendations.

Thank you for the opportunity to comment. Please contact Shina duVall at 269-8720 or shina.duvall@alaska.gov if you have any questions or if we can be of further assistance.

Sincerely,



Judith E. Bittner
State Historic Preservation Officer

JEB:sad



Preserving America's Heritage

January 30, 2013

David C. Miller
Division Administrator
Federal Highway Administration
Alaska Division
P.O. Box 21648
Juneau, AK 99802-1648

Ref: *Proposed Haines Highway Improvement Project between MP 3.5 and 25.3
Haines, Alaska*

Dear Mr. Miller:

The Advisory Council on Historic Preservation (ACHP) has received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer, affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and it is determined that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the Alaska State Historic Preservation Office (SHPO), and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the MOA, and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with the notification of adverse effect. If you have any questions or require further assistance, please contact Ms. Najah Duvall-Gabriel at 202-606-8585 or at ngabriel@achp.gov.

Sincerely,

LaShavio Johnson
Historic Preservation Technician
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 803 • Washington, DC 20004
Phone: 202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov

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ATTACHMENT 5.2-3: CRC MEMORANDUM

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CULTURAL RESOURCE CONSULTANTS LLC

3504 East 67th Avenue
Anchorage, Alaska 99507
(907) 349-3445

August 9, 2010

To: Kristen J. Hansen, Senior Environmental Planner, DOWL HKM
From: Michael Yarborough, Senior Archeologist
Re: Chilkat River Bridge

Here are the comments of CRC's industrial archeologist Lawrence Mishkar on the relative effects of widening the Chilkat River Bridge versus adding a new, single lane bridge next to the existing structure.

The Alaska Department of Transportation & Public Facilities (DOT&PF) has set forth two options for possible construction at this site:

1. Widening the existing 1958 steel girder bridge for future traffic needs;
2. Building an entirely new structure and converting the historic bridge to single lane.

Historically, four bridges have carried people and goods across this river near this location, known as "Welles" and "Jacquot's Landing." The first timber trestle bridge was south of the current crossing location. Some of its piles are still visible in the river channel. The current steel and concrete bridge is the third highway bridge constructed at its site.

During the first half of the twentieth century, the time period of the second and third bridge crossings at this locale, remnants of these two timber trestles were visible to the general public. Old pilings and bents presented passersby with a sense of history, illustrating changes in bridge designs and the reconstruction of certain sections destroyed by flooding. In this respect, there has always been a historic record of previous bridges across the Chilkat River.

Even today, pilings and bent components--the remains of the first timber trestle carrying the Dawson Highway and the last timber trestle built here in 1943—remind the public of this historic crossing. A few sets of bents stand upright next to the highway to show the location of the earlier approach from the north as well.

CRC recommended the existing, 1958 bridge as eligible for the National Register because of its unaltered condition. Widening of the bridge deck and changing the concrete abutments, required for a wider deck, would adversely affect the bridge's integrity. The bridge, in its entirety, communicates the traffic requirements and design principals of a time period. It reflects the level of understanding bridge engineers had concerning safety requirements and construction techniques. Alterations to this bridge would forever change this message. While it is possible that the new construction would not greatly change the profile of the bridge, it is not the profile that the general viewing public sees; it is the bridge deck itself, its width and its plan view.

The addition of an entirely new structure next to the current bridge could adversely affect the current bridge's integrity of setting. However, the development would be another bridge, not some structure unrelated to the crossing of the river. And, as outlined above, the remains of former bridges have been, and are currently still, in situ at this location.

It is CRC's opinion that the construction of a new bridge next to the current bridge would not adversely affect the eligibility of the 1958 structure. However, any alteration of the current bridge to meet modern engineering and traffic requirements is not possible without degrading and in the end, causing an adverse affect on the historic structure.

6.0 ENVIRONMENTAL COMMITMENTS

6.1 Avoidance, Minimization, and Mitigation

Following is a brief summary of preliminary avoidance, minimization, and mitigation measures, and environmental commitments that have been incorporated into the Haines Highway MP 3.5 to 25.3 project to reduce potential environmental impacts (Table 6.1-1). A more detailed discussion of proposed avoidance, minimization, and mitigation is included at the end of each of the resource category sections in Section 4.0.

Table 6.1-1: Proposed Avoidance, Minimization, and Mitigation Measures

SHORT-TERM IMPACTS FROM CONSTRUCTION	
Resource Category	Proposed Avoidance, Minimization, and Mitigation Measure
Chilkat Bald Eagle Preserve	<ol style="list-style-type: none"> 1. Migratory bird nesting periods would be avoided if possible. 2. Conduct pre-construction surveys to confirm bald eagle nest locations prior to bald eagle nest disturbance permit application. 3. All work would be in accordance with a Bald Eagle Nest Disturbance Permit issued by USFWS. 4. Access delays would be minimized under a TCP approved prior to construction.
ROW	Temporary construction permits or easements may be required.
ROW Encroachment	1. ROW encroachments will be resolved by permitting or removing encroachments.
Utilities	<ol style="list-style-type: none"> 1. Relocation of the IPEC and AP&T utility lines would be avoided to the extent possible. 2. Utility access would be maintained where the proposed Haines Highway alignment shifts away from its existing location.
Social (Traffic)	<ol style="list-style-type: none"> 1. The project would be constructed in stages to accommodate existing traffic during construction with a minimum of traffic delay and detour routing. 2. Traffic control during construction would be in accordance with the standards and guidelines in DOT&PF's Alaska Traffic Manual. 3. Navigation restrictions would be coordinated to avoid sensitive time periods and would be publicized through public notices and communicate to permitted commercial tour boat operators. 4. Access delays would be minimized under a TCP approved prior to construction.
Economy and Subsistence	<ol style="list-style-type: none"> 1. Prior to construction, DOT&PF would consult with Native Tribal members regarding the timing of construction activities in subsistence fishing areas and critical access points in an effort to avoid times when subsistence fishing is most active. 2. Construction of the bridge replacement would be timed to allow river traffic to pass to maintain access to subsistence areas as practicable. 3. Navigation restrictions would be coordinated to avoid sensitive time periods and would be publicized through public notices and communicate to permitted commercial tour boat operators.
Noise	<ol style="list-style-type: none"> 1. The contractor would adhere to work-hour limits. 2. The contractor would adhere to equipment muffler requirements.
Cultural Resources	1. Archaeological monitors would be used during construction in areas with high potential for uncovering archaeological resources.
Water Body Involvement, Hydrology, and Water Quality	<ol style="list-style-type: none"> 1. Temporary water quality impacts would be minimized during construction through use of BMPs to minimize erosion and sedimentation. 2. A SWPPP that provides project-specific BMPs would be prepared and implemented by the construction contractor, in compliance with APDES General Permit for Stormwater Discharge from Construction Activities. 3. An ESCP and HMCP would be developed to minimize effects on water quality.

Table 6.1-1 (cont): Proposed Avoidance, Minimization, and Mitigation Measures

SHORT-TERM IMPACTS FROM CONSTRUCTION	
Resource Category	Proposed Avoidance, Minimization, and Mitigation Measure
Wetlands and Other Waters of the U.S.	<ol style="list-style-type: none"> 1. Temporary water quality impacts would be minimized during construction through use of BMPs to minimize erosion and sedimentation. 2. Construction areas in or near wetlands and other waters of the U.S. will be flagged prior to construction. 3. Construction staging areas, material sites, and disposal sites will be limited to upland areas and/or within permitted fill limits.
Fish (EFH)	<ol style="list-style-type: none"> 1. BMPs for erosion and sediment control would be used during construction to minimize the introduction of suspended sediment to Chilkat River and its tributaries. 2. Specific BMPs include, but are not limited to, the use of silt fences, straw wattles, inlet and outlet protectors, check dams, and diversionary dam to isolate work from flowing waters. 3. In-water work would occur during timing windows that are stipulated by ADF&G.
Wildlife	<ol style="list-style-type: none"> 1. Migratory bird nesting periods would be avoided if possible. 2. Conduct pre-construction surveys to confirm bald eagle nest locations prior to bald eagle nest disturbance permit application. 3. All work would be in accordance with a Bald Eagle Nest Disturbance Permit issued by USFWS. 4. It is expected that the USFWS permit would require eagle nest monitoring before and after construction.
Invasive Plant Species	<ol style="list-style-type: none"> 1. Construction areas would be surveyed for invasive species prior to disturbance. 2. Measures to control introduction and spread of invasive species would be included in the construction contract specifications, including requirements for clean materials, native plants, and certified native seed. 3. Construction equipment will be pressure washed to remove soil, seed, and plant material prior to moving on or off the project site.
Air Quality	<ol style="list-style-type: none"> 1. Use BMPs to minimize dust.
Hazardous Waste	<ol style="list-style-type: none"> 1. A <i>Corrective Action Plan</i> has been developed by USACE to outline procedures if petroleum-contaminated soils are encountered in the vicinity of the Haines-Fairbanks Pipeline during construction. 2. USACE would be responsible for removing and disposing of any contaminated soils related to the pipeline prior to construction. DOT&PF would coordinate with USACE regarding the timing of excavation in areas with potential contamination. Contaminated soils would be stockpiled in a DEC-approved area until disposed of by approved methods. 3. DOT&PF would remove and dispose of contaminated soils near MP 7. 4. Equipment fueling and serving operations would not occur within 100 feet of water bodies and sorbent material would be kept on site to contain or clean up any petroleum spill. 5. The contractor would be required to prepare and implement a HMCP to address hazardous materials that would be used during project construction and to detail measures to control discharge of such materials into waters of the U.S.

Table 6.1-1 (cont): Proposed Avoidance, Minimization, and Mitigation Measures

LONG-TERM IMPACTS	
Resource Category	Proposed Avoidance, Minimization, and Mitigation Measure
LONG-TERM IMPACTS	
Resource Category	Proposed Avoidance, Minimization, and Mitigation Measure
Chilkat Bald Eagle Preserve	<ol style="list-style-type: none"> 1. Design modifications were incorporated to minimize ROW requirements. 2. Relinquish approximately 6 acres of ROW to the Preserve. 3. Improve other features in the Preserve as noted in Table 4.6-2.
ROW	<ol style="list-style-type: none"> 1. See measure in Chilkat Bald Eagle Preserve above. 2. Follow Uniform Act to minimize impacts from ROW acquisition.
Utilities	<ol style="list-style-type: none"> 1. Maintain access to utilities where practicable.
Visual	<ol style="list-style-type: none"> 1. Areas of large eagle roosting trees were specifically avoided, where feasible, during the design of this project. 2. Cleared areas would be re-vegetated.
Cultural Resources	<ol style="list-style-type: none"> 1. An MOA is being developed among DOT&PF, FHWA, and SHPO documenting measures to resolve adverse effects to historic resources. DOT&PF would comply with the measures outlined in the final MOA. These could include submitting reports and photographs that document the significance of the Chilkat River Bridge to SHPO and Sheldon Museum, and constructing interpretive signage with historic photographs of the historic Chilkat River Bridge.
Water Body Involvement, Hydrology, and Water Quality	<ol style="list-style-type: none"> 1. Long-term water quality impacts would be avoided or minimized through riverbank stabilization where roadway improvements require fill in the Chilkat River. 2. Some streams would be relocated away from the roadside ditch, reducing the potential for adverse impacts from road runoff. 3. Embankments constructed in and along the Chilkat River as part of this project would be stabilized with riprap. 4. Culverts would be replaced, modified, or added to maintain natural water flows.
Floodplains	<ol style="list-style-type: none"> 1. Design and install additional culverts to improve drainage and debris flow areas.

Table 6.1-1 (cont): Proposed Avoidance, Minimization, and Mitigation Measures

SHORT-TERM IMPACTS FROM CONSTRUCTION	
Resource Category	Proposed Avoidance, Minimization, and Mitigation Measure
Wetlands and Other Waters of the U.S.	<ol style="list-style-type: none"> 1. Design avoided wetlands and other waters of the U.S. by following existing alignment to the extent feasible, widening and/or realigning into uplands where practicable, and reducing highway footprint by eliminating the need for passing lanes. 2. Design minimized impacts by adjusting the elevation of the highway and adding guardrails to reduce the footprint and minimize fill in the Chilkat River. 3. Design minimized impacts by using steepest slope feasible for the road embankment (2:1). 4. Stream mitigation and enhancements are proposed at eight different sites along the project corridor, as shown in detail in Appendix D - Stream Mitigation Concepts. This includes partial excavation of the existing roadbed near MP 17 to create a hydrologically connected flood terrace adjacent to a stream. 5. Fifteen fish stream culverts would be replaced using Tier 1 (stream simulation) methods, six would be replaced using Tier 2 methods, and three would be replaced with either Tier 1 or Tier 2 methods, depending on further analysis. The proposed culvert replacements would provide improved fish passage and better use of spawning and rearing habitat upstream of the culverts. 6. DOT&PF would pay a fee to an approved in-lieu fee agent to mitigate for impacts not mitigated through permittee-required mitigation discussed above. 7. See measures in Water Body Involvement, Hydrology, and Water Quality above.
Fish (EFH)	<ol style="list-style-type: none"> 1. See measures in Wetlands and Other Waters of the U.S. above. 2. Design minimized the number of bridge structures in the Chilkat River crossing. 3. Design avoided impacts to EFH by placing new bridge abutments above OHW. 4. DOT&PF would enhance the habitat value of the riprap by using larger stone along the bottom portion to increase the size of interstitial spaces and the amount of velocity refugia and cover for fish. 5. Culverts in fish bearing streams would be constructed to fish passage standards as specified in an MOA between DOT&PF and ADF&G. 6. Vegetated riprap would be incorporated in Chilkat River fill areas to maintain habitat. 7. A turnout used by off-road vehicles that have damaged EFH would be closed.
Wildlife	<ol style="list-style-type: none"> 1. See measure to minimize habitat loss in Wetlands and Other Waters of the U.S. above.
Section 4(f)	<ol style="list-style-type: none"> 1. DOT&PF proposes to relinquish 6.0 acres of roadway ROW back to the Preserve as mitigation for the 4(f) impacts to the Preserve, in addition to constructing numerous turnout improvements requested by DNR. 2. See measure 1 under Archaeological and Historic resource category above.

7.0 COMMENTS AND COORDINATION

Information was gathered from the public and agencies on the purpose and need for the project, potential alternatives, and possible issues and concerns to be addressed during the environmental review and design. This information gathering process is called scoping. Comments received from the public and agencies during the initial scoping period were compiled in a Scoping Summary Report (DOWL HKM, 2006a). The project team has continued soliciting input from the agencies and the public during public and agency meetings. Comments received after the Scoping Summary Report have been compiled and are attached in Appendix H. All comments received have been considered during the development of this project.

7.1 Project Website

A project website (http://dot.alaska.gov/sereg/projects/haines_hwy/index.shtml) was developed to provide specific information regarding the project area, objectives, schedule, documents, team members, and a place to provide public comments. The site has been updated as new information and documents have become available.

7.2 Mailing List of Potential Affected Interests

A public mailing list has been developed and it includes residents and property owners within the vicinity of the proposed project as well as those persons who have shown an interest in the project, or have expressed interest in previous projects in the area. Two newsletters were mailed out to individuals on the mailing list, one in May 2006 and another in February 2009 (Appendix H).

The agency mailing list included local, state, and federal resource agencies and tribal governments who were likely to have an interest or concern, environmental or otherwise, in the project. These entities have also received the newsletters as well as specific correspondence pertinent to their role in the project.

7.3 Scoping Meetings

Scoping began in December 2005, but the project was delayed for approximately two years due to funding issues. Additional scoping efforts were conducted in 2009 when funding became available to continue the project.

December 2005 scoping efforts include the following meetings:

1. Agency meeting held December 5, 2005;
2. Chilkat Bald Eagle Preserve Advisory Council meeting held on December 6, 2005;
3. Public meeting held on December 6, 2005; and
4. Chilkat Indian Village meeting held on December 7, 2005.

March 2009 scoping efforts included additional scoping meetings as described below:

1. Agency meeting held on March 3, 2009;
2. Chilkat Bald Eagle Preserve Advisory Council meeting held on March 4, 2009;
3. Public meeting held on March 4, 2009; and
4. Chilkat Indian Village meeting held on March 5, 2009.

Scoping efforts since 2009 have included Government-to-Government meetings with the Chilkat Indian Village of Klukwan (see Section 7.3.2), an agency meeting to discuss EFH in February 2012, updates to the project website, a postcard updating the public in March 2012, and a community information meeting held in Klukwan in June 2012.

7.3.1 Public Scoping Meetings

A public scoping meeting was held in Haines on December 6, 2005, at the Chilkat Center. A flyer announcing the meeting was sent to the public mailing list on November 23, 2005. In the week preceding the meeting, the local radio station ran a public service announcement and the meeting flyer was posted at various locations in the Haines area. Advertisements for the public scoping meeting appeared in the Juneau Empire Newspaper on November 27 and December 6, 2005. Additional advertisements for the public scoping meeting appeared in the Chilkat Valley News on December 1 and December 6, 2005. The public scoping meeting was held in an open house format, and project team members were available to answer questions and take comments. Project information was displayed around the room to introduce the project to the public. Approximately 30 people attended the December 2005 meeting. The scoping comment period ran through December 23, 2005. The public meeting materials and a summary of comments received and responses provided are included in the Scoping Summary Report (DOWL HKM, 2006a).

A second public meeting was held at the Chilkat Center on March 4, 2009. A newsletter announcing the meeting and reporting progress on the project was mailed on February 16, 2009. The mailing list included property owners whose property is adjacent to the proposed alignment alternative as well as other interested parties. The meeting was advertised in the Juneau Empire on February 18, 2009, and in the Chilkat Valley News on February 19, 2009. Public service announcements were transmitted to the local radio and cable stations in Haines on February 23, 2009. The meeting was conducted in an open house format with a formal presentation and project information was displayed around the room. The presentation provided a summary of the project activities to date, analysis of the project corridor, information about the project alternatives remaining (mainly for the bridge), and an environmental overview of the corridor. Representatives from the project team were on hand at the meeting to answer questions and discuss the project with the public. Approximately 75 people attended the March 2009 meeting.

The public was provided with comment forms to have their opinions recorded as part of the project record. The public meeting materials and a summary of comments received and the responses provided are attached in Appendix H.

7.3.2 Meetings with Native Tribal Organizations

FHWA sent an Initiation of Consultation letter to Native tribal organizations on December 2, 2005, to inform them of the project and ask for information regarding traditional or cultural places of importance.

Meetings were held in the Chilkat Indian Village of Klukwan, including formal tribal consultation meetings on December 7, 2005, and October 25, 2011. The meetings were used to present the project and solicit comments (Appendix H).

Members of the Chilkat Indian Village of Klukwan and the Chilkoot Indian Association of Haines participated in much of the field survey that was conducted by the archaeological consultants in 2006.

An additional informational meeting was held in the community of Klukwan on March 5, 2009, to provide an update on the status of the project. In 2009, the Tribe expressed three primary concerns:

1. the proposed Chilkat Bridge location,
2. room for a future pedestrian path near MP 21, and
3. potential impacts to subsistence activities in the river near MP 21.

The Chilkat Indian Village specifically requested that DOT&PF return to provide information on how these issues were addressed. The October 25, 2011, Government-to-Government meeting was held between FHWA and Chilkat Indian Village in Klukwan for that purpose.

At the October 25, 2011, Government-to-Government meeting there was discussion about the challenges of the highway alignment at MP 21. It would not be possible to avoid subsistence use areas and a nearby cultural resource, while simultaneously accommodating the Chilkat Indian Village's other requests. The Tribal Council of the Chilkat Indian Village requested more information be provided before making decisions about the highway alignment in this area (Appendix H).

DOT&PF met with the Chilkat Indian Village on June 14, 2012, to discuss their February 23, 2012, comments on FHWA's Determination of Eligibility. Additional Government-to-Government meetings were held in July and August for FHWA and the Chilkat Indian Village to discuss project effects and possible measures to avoid or minimize impacts to cultural resources. DOT&PF met informally with the Chilkat Indian Village in October 2012 to discuss proposed project changes. A final Government-to-Government meeting was held in November 2012 to confirm that project changes were acceptable to the Chilkat Indian Village.

7.3.3 Meetings with Chilkat Bald Eagle Preserve Advisory Council

A copy of the letter requesting scoping comments that was sent to agencies was also sent to members of the Chilkat Bald Eagle Preserve Advisory Council on November 25, 2005. This letter explained the project briefly and asked for feedback. The project team attended a regular meeting of the Advisory Council in Haines on December 6, 2005. A brief presentation was conducted by the project team and was followed by a question and answer period (DOWL HKM, 2006a).

A second meeting with the Advisory Council was held on March 4, 2009, at the Assembly Chambers in Haines, Alaska. The meeting included additional information related to project, work completed to date, on environmental overview and the project schedule (Appendix H).

A third meeting was held on February 21, 2013, to update the Advisory Council on the project status.

7.3.4 Agency Meetings

The agency scoping process was designed to communicate the purpose, need, details of the proposed project, and to solicit comments and information from various agencies.

A formal letter requesting scoping comments was sent to the agencies on November 25, 2005, notifying them of the proposed project and the agency scoping meeting that was scheduled for December 5, 2005, in Juneau. The meeting was used to present the project to the agencies, to gain an understanding of the existing environmental resource data available, and to identify the type of environmental studies that the agency representatives expected to see as part of the environmental analysis for the EA. Agency comments were solicited through December 27, 2005. Follow-up calls were made to solicit additional comments from agency staff that did not comment by the December 27, 2005, deadline. A summary of comments and responses is provided in the Scoping Summary Report (DOWL HKM, 2006a).

Given the environmental issues identified, the project team determined that an Agency IDT should be formed to facilitate an open and cooperative process between the federal, state, and local resource agencies, and formed a project IDT.

To date, DOT&PF has met with IDT members three times in Juneau (Appendix H).

1. April 18, 2006. The project team presented a project update and conceptual plans for stream and habitat mitigation. Plans were submitted to the IDT members for their review before the meeting. IDT members were notified by a letter and e-mail sent in March 2006 and follow up telephone calls in April 2006.
2. July 17, 2006. The project team presented a project update, reviewed the final S&HI, gave an update on the conceptual mitigation ideas, and provided a brief description of the

proposed turnout improvements planned as part of the project. IDT members were notified by a letter and a follow-up e-mail sent in July 2006.

3. March 2009. The project team provided a project update and discussed the stream and habitat mitigation plan. IDT members were notified by a letter and e-mail invitations about the meeting were sent on January 28, February 27, and March 2, 2009.

Agency comments and DOT&PF responses from the 2009 meeting are summarized in Appendix H.

DOT&PF met with representatives from NMFS, USFWS, and ADF&G on February 16, 2012, to discuss a draft EFH Assessment provided to the agencies on February 8, 2012. DOT&PF addressed the comments received from NMFS and other agencies to revise and finalize the EFH Assessment, located in Appendix F.

Other agency-specific consultations have occurred, and are included in the appendices as listed below.

1. Appendix A - Coordination with DNR regarding recreation turnouts.
2. Appendix C - Section 4(f) Impacts to the Preserve.
3. Appendix E - Section 106 Consultation with SHPO and tribes regarding potential impacts to historic and archaeological sites.
4. Appendix G - Consultation with USFWS regarding eagle nests.
5. Appendix H - USACE coordination regarding Jurisdictional Determination.

7.4 Issues of Concern

Public and agency comments received are documented in the Scoping Summary Report (DOWL HKM, 2006a) and Appendix H.

The primary issues of concern raised by the public, agencies, and tribal representatives during the project and where they are addressed in this document are summarized in Table 7.4-1 below.

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Table 7.4-1: Summary of Public and Agency Issues Raised

Comment No.	Comment Source	Date/Communication	Issue/Impact	Comment or Question	Response/Resolution
Purpose and Need					
1	Patty A Campbell	02-21-13 Email	Purpose and Need	As a business owner and resident of Haines for 34 years. I have seen a lot of ups and downs. Haines needs to have these upgrades in order to provide safe, consistent and efficient roadways. The replacement of the existing Chilkat River bridge also needs to be replaced. The Haines Highway is a major highway out of Southeast Alaska, it connects to the Alaska Marine Highway System and is also entrance and exit from Canada Transportation System. We need these improvements. Thank you for listening to me and taking my comments. IN SUPPORT OF.	Comment acknowledged.
2	Fred Gray	02-23-13 Email	Purpose and Need	We have been operating the 10,000 gallon B-Train trucks to Canada for over 20 years now. Est. 9,000 trucks up and back through the Eagle Preserve + our heating oil trucks that go all the way to the border and back. Obviously we support the Road Improvements for Safety. And as I see it, the only issue is the Safety Issue. I also support lower speed limits during the Eagle/Salmon season.	Comment acknowledged.
3	Brenda Jones	03-11-13 Email	Purpose and Need	Thank you for taking the time to explain the project to the public at the recent event held at the Haines Borough Assembly Chambers. I am pleased to see the safety improvements. The Haines Highway is a common route for bikers that are both residents and tourists. The improvements are important for safety reasons. I am also glad to see the environmental upgrades. The project is very much needed in the Haines area.	Comment acknowledged.
4		03-04-09 Public Meeting	Purpose and Need	Will the road be built to handle support for the gas pipeline project?	The proposed project is designed to improve mobility and safety. See Section 1.2 for a discussion of the proposed new bridge and its freight capabilities.
5		03-04-09 Public Meeting	Purpose and Need	Can the existing road handle support for the gas pipeline project?	The proposed project is designed to improve mobility and safety. See Section 1.2 for a discussion of the proposed new bridge and its freight capabilities.
6		03-04-09 Public Meeting	Purpose and Need	Why even do this project? ..this project has the potential to disrupt subsistence fishing holes, affect residents along the highway, disrupt salmon spawning habitat. The river has a life of its own and is not unpredictable. How will you work with ROW? How will you respect salmon habitat and wetlands? How will you avoid having a negative impact?	The proposed project is designed to improve mobility and safety. Various sections of the EA address the potential effects on residents (Sections 4.3 and 4.4), salmon (Section 4.15) and subsistence (Section 4.7).
Proposed Project Components					
7	Chilkat Indian Village	12-09-05 Letter	Project Components - Bridge Design	If built, new bridge should be built elevated enough to accommodate the height of any airboats needing to pass under the bridge.	See Navigability (Section 4.12)
8	Duck Hess	02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Project Components - Bridge Design	Has there been any thought put into our boat's access under the Chilkat River Bridge?	The proposed bridge provides an extra 6 feet of clearance at high tide and has 6 fewer piers to reduce debris accumulation.
9		03-04-09 Public Meeting	Project Components - Bridge Design	What is the protocol for replacing the bridge? Will the old bridge be removed?	The proposed project would construct a new bridge and remove the existing bridge.
10		02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Project Components - Design Speed	Is there more information the public can access regarding speed limits and how communities can influence them and should the community be involved in the EA process for public comments?	The FHWA website provides information on design standards and speeds. Comments can be submitted via the project e-mail address at any time and the EA public comment period is a good time to comment.
11	Sherrie Myers	02-20-13 Email	Project Components - Design Speed	As for the major purpose of the project, to allow for a design speed of 55 MPH, my experience is that I have not, nor do other drivers seem to have difficulty maintaining a speed of 55 or higher on this road. I'm not convinced that a wider, straighter road will lead to greater safety or efficiency, but it will lead to speeds well in excess of 55 MPH, with increased consequences for people, property damage, and wildlife. Private driveways to residential areas exist along much of this stretch of the road. Scenic pullouts, recreational users accessing the river, and scenic and wildlife attractions (the eagles) all suggest a slower pace is safer for all who use the roadway.	See Purpose and Need for project (Section 2.0). Haines Highway is the primary road corridor for this area and bringing this section of the highway up to the same standard as other sections is expected to improve mobility and safety. Project effects on recreation, land use and wildlife are addressed in the appropriate sections in this EA.
12	Kathleen Menke	12-06-05 Comment Form	Project Components - Design Speed	Prefer that public access, river views, and habitat (riparian) take priority over speed and straightening curves.	See Purpose and Need for project (Section 2.0). DOT&PF mission is to provide for safe transportation and public safety takes the highest priority on capital improvement projects.
13	Public Member	12-06-05 Public Scoping Meeting	Project Components - Design Speed	This is a scenic road. Curves should be kept in to force people to drive slower.	See response above.

Table 7.4-1 (cont): Summary of Public and Agency Issues Raised

Comment No.	Comment Source	Date/Communication	Issue/Impact	Comment or Question	Response/Resolution
14	Mike Eberhardt, DNR DPOR	12-22-05 Letter	Project Components - Recreation	There are two sites at Mile 19 and 21 where parking facilities are available for eagle viewers. Design improvements are needed. Consider a future pullout between Mile 21 and Klukwan.	DOT&PF coordinated with DNR DPOR on pullout improvements that would be incorporated into the project. See Appendix A.
15	Mike Eberhardt, DNR DPOR	12-22-05 Letter	Project Components - Recreation	There have been complaints regarding the lack of boat launch facilities along the highway. An undeveloped but highly used boat launch facility exists just below Wells Bridge.	See response 14 above.
16	Mike Eberhardt, DNR DPOR	12-05-05 Meeting	Project Components - Recreation	Accesses to the river need to be evaluated. Major pullouts include river access points at Mile 10, 13, 14, 14.5, and 16.	See response 14 above.
17	Mike Eberhardt, DNR DPOR	12-22-05 Letter	Project Components - Recreation	The legal and illegal accesses to the river need to be evaluated. These major pullouts include river access points at Mile 10, 13, 14, 14.5, and 16. Some access points should be limited, while others should be preserved.	See response 14 above.
18	Linda Geise	12-06-05 Public Meeting	Project Components - Parking	A pullout parking area at the trailhead for the Seven Mile Saddle Trail is needed. Currently people just pull off the side of the highway and it creates a safety issue.	See response 14 above
19	Chilkat Indian Village	12-09-05 Letter	Project Components - Parking	A pullout parking area at the trailhead for the Seven Mile Saddle Trail is needed. Currently people just pull off the side of the highway and it creates a safety issue.	See response 14 above.
20	Alan Traut	12-12-05 Comment Form	Project Components - Parking	A pullout parking area at the trailhead for the Seven Mile Saddle Trail is needed.	See response 14 above.
21	Paul Swift	12-20-05 Comment Form	Project Components - Parking	A pullout parking area at the trailhead for the Seven Mile Saddle Trail is needed. Currently people just pull off the side of the highway and it creates a safety issue.	See response 14 above.
22	Joel Telford, DNR DPOR	12-06-05 AK Chilkat Bald Eagle Preserve Meeting	Project Components - Parking	Off-highway parking is a concern at access points if the widening of the road encroaches into existing parking areas.	See response 14 above.
23	Mike Eberhardt, DNR DPOR	12-05-05 Meeting	Project Components - Recreation	Request the DOT&PF consider extending the existing pathway one mile to Klukwan.	DOT&PF consulted with Chilkat Indian Village regarding the trail and tradeoff with other impacts.
24	Joel Telford, DNR DPOR	12-06-05 AK Chilkat Bald Eagle Preserve Meeting	Project Components - Recreation	Would like to see DOT&PF provide enough room so the future Klukwan Trail can be constructed.	See response 23 above.
25	Tribal Member	12-07-05 Tribal Consultation Meeting	Project Components - Recreation	Support for future Klukwan Trail.	See response 23 above.
26	Chilkat Indian Village	12-09-05 Letter	Project Components - Recreation	Support for future Klukwan Trail.	See response 23 above.
27		03-04-09 Public Meeting	Project Components - Recreation	I have already commented at earlier meetings pertaining to un-attached sidewalks that could be used for seasons and give a meaningful connection with Klukwan and other border communities as equivalent pedestrian parallel roads.	Acknowledged.
28	George Campbell	03-18-13 Email	Project Components - Shoulder Width	It would be a great idea to have a very wide shoulder between 19 mile and 21 mile. This area has a high concentration of pedestrians and photographers, with the highest concentration being in snow months. During summer there is a walking path that folks use, however once it snows that path does not get plowed, so the pedestrians and photographers use the road, often with tripods set up in traffic lanes. If the shoulder on the river side could be expanded to 12 feet there would be room for the folks to walk, set up tripods or whatever else they want without becoming a danger. Making it part of the shoulder will allow for easy snow removal using the road plows. In the long run, having an easily maintained pedestrian area will save lives and encourage safety.	Acknowledged.
29		02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Project Components - Shoulder Width	There is a need for a wider road because vehicle traffic sometimes needs to get off the highway. We need a shoulder that is 8 feet wide for safety, but the current standard is 4 feet.	The design width is typically 4 feet for rural arterial highways – DOT&PF opted for 6 feet to make the section consistent with other sections. Driver anxiety from varying widths can cause traffic accidents. Traffic volume on this road is low enough that the 6-foot should show provide room for vehicles that need to stop and pull off.
30	Kathleen Menke	12-06-05 Comment Form	Project Components - Shoulder Width	Support for 6-foot shoulders.	Acknowledged.
31	Tribal Member	12-07-05 Tribal Consultation Meeting	Project Components - Shoulder Width	Support for 6-foot shoulders.	Acknowledged.

Table 7.4-1 (cont): Summary of Public and Agency Issues Raised

Comment No.	Comment Source	Date/Communication	Issue/Impact	Comment or Question	Response/Resolution
32	Kathleen Menke	12-06-05 Comment Form	Project Components - Recreation	Would like to see more pullouts for photography and the public.	See response 14 above.
33	Mark Allen	12-06-05 Comment Form	Project Components – Recreation	Please consider a bicycle path along the highway.	The proposed highway would have 6-foot shoulders that bicyclists can use. A separated path is not within the funding for this project.
34	Public Member	12-06-05 Public Scoping Meeting	Project Components - Recreation	Support for bicycle path along highway.	See response 20 above.
35	Andrew D. Shaw	4-28-09 via website	Project Components - Recreation	I own property on Chilkat Lake and enjoy biking and hiking. Please include a bike/hike path with any improvements.	See response 20 above.
36		03-04-09 Public Meeting	Project Components – Recreation	Will there be bike lanes, and if not, how can the community work to get bike lanes?	See response 20 above.
37		03-04-09 Public Meeting	Project Components – Recreation	In Alaska bike lanes along the highway don't work well –used for snow storage, etc. Would like to see a separated bike path if possible, from the airport to Klukwan at least.	See response 20 above.
38	Chilkat Indian Village	12-09-05 Letter	Project Components - Debris Flow Areas	Ensure that slides are diverted away from village property.	Debris flow area solutions would be designed to allow flows to continue natural path under road. See Sections 1.2.1 and 4.11.
39	Todd Buxton, Northern Southeast Regional Aquaculture Association	09-26-05 Phone	Project Components - Debris Flow Areas	Will there be a bridge over the slide area at MP 21?	See response 23 above.
40	Linda Geise	12-06-05 Public Scoping Meeting	Project Components - Debris Flow Areas	The road and culverts need to be fixed and elevated at slide area MP 23.	See response 23 above.
41	Rocky Seward	12-06-05 Public Scoping Meeting	Project Components - Debris Flow Areas	Concerns about slide area MP 23.	See response 23 above.
42	Henry Jacquot	12-28-05 Comment Form	Project Components - Debris Flow Areas	Concerns about slide area MP 23.	See response 23 above.
43	Sally Burratin, Klukwan Tribal Council Member	03-05-09 Comment Form	Project Components - Debris Flow Areas	There are 2 slide area on the hill one right on top of hill, the other at the bottom near 21 mile.	Acknowledged. See response 23 above.
44	Chilkat Indian Village	12-09-05 Letter	Project Components - Other	Need wind breaks at MP 8 to avoid large snowdrifts in the winter.	This issue will be forwarded to DOT&PF maintenance personnel in the area for consideration.
45	Klukwan Elder	12-07-05 Tribal Consultation Meeting	Project Components - Other	There is a need for outhouses at MP 4 and 20.	Visitor facilities at the Preserve are outside the scope of this highway safety improvement project.
46	Mark Allen	12-06-06 Letter	Project Components - Other	Consider facilitating an emergency airstrip around MP 25.3 to 25.5 (left side) developed for bush aircraft.	This project is funded for highway improvements and will not incorporate airfield improvements, as funding for that would come from a different federal agency (Federal Aviation Administration instead of FHWA).
47		03-04-09 Public Meeting	Project Components – Other	Projected airport (seaplane/road surface) runway is a necessary allocation with the byway corridor.	See response above.
48	Public Member	12-06-05 Public Scoping Meeting	Project Components - Other	Cost of new bridge is a concern.	Acknowledged.
49		03-04-09 Public Meeting	Project Components – Other	Is this project affiliated with the Scenic Byways project? It would be good if they could work together.	Acknowledged. The proposed project is consistent with the byway partnership plan as discussed in Section 4.1.
50	Toni Dotson	12-06-05 Comment Form	Project Timing	Would like to see the road projects start as soon as possible.	Acknowledged.
51	Robert Venables	12-06-05 Comment Form	Project Timing	Would like to see the road projects start as soon as possible.	Acknowledged.
52	Frank Clotsen	12-06-05 Comment Form	Project Timing	Would like to see the road projects start as soon as possible.	Acknowledged.
53		02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Project Timing	Which part of the highway would be worked on first?	The first phase is likely to be the section near the community of Haines (MP 3.5 to MP 12).
54		03-04-09 Public Meeting	Project Timing	Once construction starts, how long will it continue?	The project would be constructed in phases. The timing will depend on funding and construction periods will depend on the size of each phase.
55		03-04-09 Public Meeting	Project Timing	If funding is available, how long will construction take?	Each phase is likely to take one to two construction seasons.
56		03-04-09 Public Meeting	Project Timing	Could pieces with few or no environmental issues be constructed first?	Construction would not begin until the EA for the entire corridor is complete.
57		03-04-09 Public Meeting	Project Timing	Could the EA be broken into smaller sections?	One EA is preferred to address the entire roadway.

Table 7.4-1 (cont): Summary of Public and Agency Issues Raised

Comment No.	Comment Source	Date/Communication	Issue/Impact	Comment or Question	Response/Resolution
58	Bud Stewart	12-07-05 In Person	Project Components - Disposal	Would like to see the existing roadway obliterated when the new road is constructed.	Final disposition of abandoned sections of roadway would be determined based on the need for continued access to private properties and/or utilities in the Haines-Fairbanks Pipeline corridor as well as negotiations with adjacent landowners.
59	NMFS - Linda Shaw	12-05-05 Meeting	Project Components - Disposal	What will happen to the old bridge if a new alignment for the bridge is chosen?	The old bridge will be demolished and removed.
Alternatives					
60	Bud Stewart	12-07-05 In Person	Bridge	He likes the idea of relocating the bridge downstream and straightening out the road.	Acknowledged.
61	Kathleen Menke	12-6-05 Comment Form	Bridge	Supports widening the curve rather than build a new bridge, because of impact on spawning/traditional subsistence areas.	Acknowledged.
62	Tribal Member	12-07-05 Tribal Consultation Meeting	Bridge	Keeping the current location of the bridge is important for subsistence issues and salmon spawning.	Acknowledged.
63	Chilkat Indian Village	12-09-05 Letter	Bridge	Keeping the current location of the bridge is important for subsistence issues and salmon spawning.	Acknowledged.
64	Eric Holle, Lynn Canal Conservation	12-14-05 Comment Form	Bridge	Keeping the current location of the bridge is important for subsistence issues and salmon spawning.	Acknowledged..
65	Neil Stichert - USFWS	03-03-09 IDT Meeting	Road Alignment	Has the alignment been chosen?	See discussion of alignments considered in Section 3.1.
Socioeconomic Issues					
66	Tribal Member	12-07-05 Tribal Consultation Meeting	Highway Safety	There is a safety issue with tourists parking on the road during eagle viewing season.	Acknowledged. See Section 4.1.5.
67	Frank Clotsen	12-06-05 Comment Form	Highway Safety	The roads are in terrible shape and amount of traffic makes it hard on the life of the road.	Acknowledged.
68	Larry Geise	12-06-05 Public Scoping Meeting	Highway Safety	The curve near the bridge is bad in winter and needs to be straightened.	Acknowledged. See Section 4.6.
69	Robert Venables (Haines Borough Manager)	12-06-05 Public Scoping Meeting	Highway Safety	Wants the road upgraded for safety.	Acknowledged. See Section 4.6.
70		02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Highway Safety	Statistically speaking...do more accidents happen at 45 mph or 55 mph? Are vehicle speeds investigated after an accident?	It is hoped that fewer accidents occur in areas that meet design standards. Excessive speed is one of the causes that State Troopers can choose when reporting accident information.
71		02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Highway Safety	Are there 2 main areas where most accidents happen? Will the width of the section improved in 1994 match this new section? Was there a geotechnical study of the 1980s project?	Accident information is addressed in Section 4.6. This project is designed to match the section done in 1994. Geotechnical work was done on previous projects and reviewed as part of this project.
72		02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Highway Safety	It seems like a lot of wildlife accidents happen at night when it is dark.	Generally when there is an area with a high level of animal collisions, DOT&PF uses wildlife awareness signs that are highly-reflective to vehicle headlights.
73		02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Highway Safety	Considering the limited resources for law enforcement, are there concerns about turning the 55 mph highway into a 75 mph highway?	This concern is acknowledged. DOT&PF is trying to improve the safety on this 55 mph highway.
74	Frank Clotsen	12-06-05 Comment Form	Jobs	The project will provide much needed jobs for the town of Haines.	Acknowledged. See Section 4.7.
75	Tribal Member	12-07-05 Tribal Consultation Meeting	Jobs	There is a desire for phased construction to enhance local economy and allow more opportunities for local hire.	Acknowledged. See Section 4.5.
Land Use					
76	Mark Allen	12-06-05 Comment Form	Bridge	The relocation of the Wells Bridge may have some implications for residents of this area, especially for existing airstrip.	See discussion of bridge relocation effects in Section 5.4.
77	Bud Stewart	12-07-05 In Person	MP 17 Airstrip	Would rather not shorten the private airstrip to accommodate the new alignment.	Road alignment options and options for realignment of the airstrip were discussed with the landowner.
78	Darsie Culbeck	12-09-05 Phone	Construction	Blasting into the rock will have a negative impact on the landowners who have houses and cabins on the bluff around MP 8.6. Should move the road towards the river versus toward the hillside.	The proposed highway alignment was based on addressing highway safety issues associated with road curvature and design while minimizing effects on the Chilkat River and minimizing rock cuts.
79	Todd Buxton, Northern Southeast Regional Aquaculture Association (NSRAA)	09-26-05 Phone	MP 17	NSRAA collects eggs at the culvert outlet. The boxes are approximately 80 feet from the existing road.	DOT&PF is aware of the incubation boxes and will coordinate with NSRAA regarding proposed changes in that area.

Table 7.4-1 (cont): Summary of Public and Agency Issues Raised

Comment No.	Comment Source	Date/Communication	Issue/Impact	Comment or Question	Response/Resolution
80	Lisa Krebs	12-13-05 Email	Property Impacts	What will the impacts be on houses or property as the road is straightened and widened? What will be the impacts to the existing buildings in the ROW?	See discussion of land use effects in Sections 4.3 and 4.4. Encroachments in the DOT&PF ROW would be resolved through ROW vacation, encroachment permits or removal prior to road construction.
81	Margaret Piggott	12-06-05 Comment Form	Property Impacts	What will the impacts be on houses or property as the road is straightened and widened? What will be the impacts to the existing buildings in the ROW?	See response 80 above.
82	Darsie Culbeck	12-09-05 Phone	Property Impacts	What will the impacts be on houses or property as the road is straightened and widened? What will be the impacts to the existing buildings in the ROW?	See response 80 above.
83	Lisa Doehl	04-16-13 Email	Property Impacts	I understand from Ms. Boyce that you need to contact landowners about the proposed realignment of the Haines Highway and conducting an appraisal. Angelo Benedetti is one of these landowners. He shares ownership with the estate of Mr. Richard Boyce to Lots 1 and 2 of section 14 and Lot 1 of section 23 of Township 30 South, Range 58 East, Copper River Meridian.	Comment acknowledged.
84		02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Property Impacts	What is your plan for communication with property owners in the area of the bridge relocation?	DOT&PF has contacted land owners during scoping and continues to contact them.
85		03-04-09 Public Meeting	Property Impacts	Is DOT&PF looking into ROW encroachments?	ROW encroachments are discussed in Section 4.4.
86		03-04-09 Public Meeting	Property Impacts	Many properties are surveyed from the highway centerline. Will surveys need to be redone? Will DOT&PF pay for new surveys?	Properties along the project corridor will be surveyed so that impacts can be resolved.
87		03-04-09 Public Meeting	Property Impacts	How will property be acquired?	ROW acquisition follows federal procedures as described in Section 4.3.
Utilities					
88	Richard Chapell (ADF&G)	03-03-09 IDT Meeting	Utilities	Will the underground utilities be moved as there would be fewer disturbance if they were brought above ground?	See utilities discussion in Section 4.5.
89	Chilkat Bald Eagle Preserve Advisory Council Member	12-06-05 AK Chilkat Bald Eagle Preserve Meeting	Utilities	What will happen to the existing pipeline that carries the utilities if the new bridge is built?	Utilities in the Haines-Fairbanks Pipeline Chilkat River Crossing have already been abandoned. Utilities currently cross the river on the existing bridge. Utilities would be relocated to cross the river on the new bridge.
Recreation					
90	Kathleen Menke	12-6-05 Comment Form	Recreation	This is a "scenic" highway - important for salmon fishing/subsistence/sport.	See recreation discussion in Section 4.6.
91	Roy Josephson, Division of Forestry	12-06-05 AK Chilkat Bald Eagle Preserve Meeting	Recreation	Maintaining existing access points to the river is very important.	See recreation discussion in Section 4.6.
Subsistence					
92	Chilkat Indian Village	12-09-05 Letter	River	Maintain access to subsistence areas at MP [4] and [14].	See subsistence discussion in Section 4.8.
93	Kathleen Menke	12-6-05 Comment Form	Subsistence Issues	This is a "scenic" highway - important for salmon fishing/subsistence/sport.	See subsistence discussion in Section 4.8.
94	Klukwan Elder	12-07-05 Tribal Consultation Meeting	Subsistence Issues	Impacts at [MPs 7-8 and MPs 20-21] should be avoided due to fishing grounds.	See subsistence discussion in Section 4.8.
95	Tribal Member	12-07-05 Tribal Consultation Meeting	Subsistence Issues	There is subsistence and sport fishing area at [MP 13]; humpies are in the river at approximately [MP 17].	See subsistence discussion in Section 4.8.
96	Resident	03-04-09 Comment Form	Subsistence Issues	This project has the potential to disrupt subsistence fishing holes. How will you respect salmon habitat and wetlands? How will you not have a negative impact?	See subsistence discussion in Section 4.8.
97	Resident	03-04-09 Comment Form	Subsistence Issues	This project has the potential to disrupt salmon spawning habitat	See subsistence discussion in Section 4.8.
Cultural Resources					
98	Chilkat Indian Village	12-09-05 Letter	Archeology	Should have an archeologist present while excavating the area.	See cultural resource discussion in Section 4.10.
99	Tribal Member	12-07-05 Tribal Consultation Meeting	Archeology	Traditional and cultural properties need to be identified before too far along in the design process.	See response 67 above. FHWA and DOT&PF have consulted with tribal entities on cultural properties.
100		03-04-09 Public Meeting	Cultural Resources	Who is the contact for the cultural resource report?	Please contact DOT&PF's environmental analyst.
101	Jerrie Clarke, Director Sheldon Museum	11-07-12 Informal meeting with DOT&PF	Cultural Resources	Ms. Clarke said the Sheldon Museum would be pleased to take Gate Valve 4 if DOT&PF had to remove it as part of the project.	Please coordinate with DOT&PF's environmental analyst.
Hazardous Waste					
102	Chiska Derr - NMFS	03-03-09 IDT Meeting	Utilities	Has anyone looked at how toxic the utility corridor was?	See discussion of Phase I Environmental Site Assessment in Section 4.19.
103	Randy Ericksen - ADF&G	12-05-05 Meeting	Contamination	There was an oil tanker that went off the road around MP 17-18 approximately 10 years ago. There have been reports of some contaminated subsurface soil in that area.	See discussion of potential contaminated sites in Section 4.19.

Table 7.4-1 (cont): Summary of Public and Agency Issues Raised

Comment No.	Comment Source	Date/Communication	Issue/Impact	Comment or Question	Response/Resolution
Aquatic Resources					
104	Randy Vigil - USACE	12-06-05 Letter	Aquatic Resources	Provide the USACE with a functional assessment of the aquatic resources affected by the improvement for both pre-project and post-project conditions.	Acknowledged.
Aquatic Resources/Wetlands					
105	Bruce Halstead - USFWS	12-22-05 Letter	Wetlands	Recommend designing the road approaches to wetlands so surface runoff is diverted before entering the wetlands.	See Section 4.14.
106	Richard Enriquez – USFWS	12-05-05 Meeting	Wetlands	There was a question of which bridge alignment the 19 acres of wetland impacts came from.	The 19-acre estimate was based on the preliminary alignment in 2005. See Section 4.14 for updated wetland information.
107	Randy Vigil – USACE	12-06-05 Letter	Wetlands	Requested a copy of the Wetland Delineation.	See Appendix H.
108	Bruce Halstead - USFWS	12-22-05 Letter	Wetlands	The wetlands impacted by the project are characterized by moving water and dominated by grasses, sedges, alder, and willow. Key ecological processes, including the transport of water and nutrients and the dispersal of organisms, could be directly and indirectly altered through wetland fill.	Acknowledged.
109	Chiska Derr - NMFS	03-03-09 IDT Meeting	Wetlands	What types of guidelines do the new Alaska Regulatory Guidance Letter that the USACE just put out regarding mitigation for lost functions and values of waters and wetlands?	See wetland discussion in Section 4.14.
110	Randy Vigil - USACE	03-03-09 IDT Meeting	Wetlands	Permit applications will have to explain how the mitigation proposed will make up for the impacts to the wetland and river functions and values that will be filled by the roadway improvements.	Acknowledged. See mitigation discussion in Section 4.14.3.
111	Randy Vigil –USACE	03-03-09 IDT Meeting	Wetlands	USACE would like to see all information on the alternatives analysis as it relates to the 404(b)1 analysis requirements to first avoid and minimize wetland impacts in the project design, and then compensate for unavoidable wetlands impacts.	See wetland discussion in Section 4.14.
112	Neil Stichert - USFWS	03-03-09 IDT Meeting	Wetlands	Will the red hatched areas on Sheet 3 of the plan view become wetlands?	See the wetland mitigation discussion in Section 4.14 and the EFH assessment in Section 4.15 and Appendix F.
113	Debra Schnabel	09-02-05 Letter	Wetlands	Due to a State error many years ago, there are wetlands on our property and we request it is corrected in the current project by adding back the culverts that were removed by the State.	This issue is outside the scope of this project.
Aquatic Resources/Streams					
114	Randy Ericksen – ADF&G	12-05-05 Meeting	Streams	The bridge realignment is an issue because it would impact salmon spawning, rearing, milling and migration.	Effects on fish habitat are discussed in Section 4.15 and Appendix F.
115	Jackie Timothy – DNR OHMP	12-14-05 Letter	Streams	Confusion according to Scoping Letter wording of whether or not there is impact in the Chilkat River State Critical Area. Requests clarification that if there is impact, to contact ADF&G.	The project would not affect the Chilkat River State Critical Area.
116	Jackie Timothy – DNR OHMP	12-14-05 Letter	Streams	Fish Habitat permits will be required for the Chilkat River fill and approximately 30 stream crossings where anadromous or resident fish presence is observed, including fish streams discovered by Inter-Fluve and OHMP during additional stream and habitat inventories. (DOT&PF scoping documents only estimate 11 fish culverts will be replaced. This is OHMP's estimate based on the DOT&PF scoping documents, the Preliminary S&HI, and the catalog. The discrepancy will need to be discussed and reconciled in the field.)	Fish habitat permits will be prepared for each phase during final design.
117	Jackie Timothy – DNR OHMP	12-14-05 Letter	Streams	OHMP biologists are interested in helping trap and identify fish and will nominate any anadromous fish streams to the catalog.	The project team coordinated with OHMP during the Habitat Assessment fieldwork.
118	Jackie Timothy – DNR OHMP	12-14-05 Letter	Streams	The following information should be added to the Stream and Habitat Inventory: there is a fall chum and coho spawning area in the Chilkat River near 14- mile; salmon spawning at bank station 1238 to 1240+75 should include the species and time of year; king salmon rearing takes place on sheets 30 and 31 and should be identified.	See revised Stream & Habitat Inventory included in Appendix F.
119	Jackie Timothy – DNR OHMP	12-14-05 Letter	Streams	The salmon spawning areas in the Chilkat River should be detailed. It would be helpful to biologists if updated versions of the S&HI included all streams adjacent to, but outside the actual work area, so best management practices can be prescribed to minimize impacts to fish habitat.	See response above.

Table 7.4-1 (cont): Summary of Public and Agency Issues Raised

Comment No.	Comment Source	Date/Communication	Issue/Impact	Comment or Question	Response/Resolution
120	Jackie Timothy – DNR OHMP	12-14-05 Letter	Streams	Recommend DOT&PF address how vacated portions of the road will be managed, as this will affect decisions regarding fish passage and fish habitat replacement and enhancement.	Final disposition of abandoned sections of roadway would be determined based on the need for continued access to private properties and/or utilities in the Haines-Fairbanks Pipeline corridor as well as negotiations with adjacent landowners.
121	Jackie Timothy – DNR OHMP	12-14-05 Letter	Streams	If DOT&PF demonstrates no negative impacts to fish habitat, there will be no need to mitigate outside of what can be done within the scope of work to improve the road.	Acknowledged.
122	Linda Shaw- NMFS	12-05-05 Meeting	Streams	Question as to how the hooligan spawning areas were determined.	Contractor observation and consultation with local knowledgeable individuals.
123	Linda Shaw- NMFS	12-05-05 Meeting	Streams	NMFS would be interested in knowing the elevation of the vegetation line.	The ordinary high water line will be identified on permit applications during final design.
124	Robert Mecum - NMFS	12-07-05 Letter	Streams	Concern that devegetation of banks of the river and streams will lead to loss of habitat values.	Effects on fish habitat are discussed in Section 4.15 and Appendix F.
125	Robert Mecum - NMFS	12-07-05 Letter	Streams	Recommend minimizing fill to the river and wetlands.	Acknowledged.
126	Robert Mecum - NMFS	12-07-05 Letter	Streams	Recommend avoidance of introducing aquatic invasive species.	Acknowledged.
127	Randy Vigil –USACE	12-05-05 Meeting 12-06-05 Letter	Streams	The Corps would like to see avoidance of river impacts to the extent possible. There is concern about the scouring of the river and how it would impact other areas of the river upstream and downstream. Project may not comply with Executive Order 11988 (to avoid floodplains when there is a practicable alternative available).	Compliance with the executive order is addressed in Section 4.13.
128	Randy Vigil –USACE	12-05-05 Meeting	Streams	What is the extent of the tidal influence along the Chilkat River?	DOT&PF has determined that the tidal range does not extend as far up the Chilkat River as the beginning of the project.
129	Randy Vigil –USACE	12-05-05 Meeting	Streams	Does the existing bridge pose a habitat problem that would be solved with the new bridge?	There is a habitat change at the bridge, but that it might not be caused by the bridge.
130	Bruce Halstead - USFWS	12-22-05 Letter	Streams	Nineteen fish-bearing streams cross or are immediately adjacent to the Haines Highway. These streams have been catalogued as anadromous by the DNR. Recommend that surveys of anadromous and resident fish habitat be continued.	Additional surveys were conducted. See Appendix F.
131	Bruce Halstead - USFWS	12-22-05 Letter	Streams	Recommend employing sediment control techniques to minimize entry of sediments into fish-bearing streams.	See Table 6.1-1.
132	Bruce Halstead - USFWS	12-22-05 Letter	Streams	Recommend consultation with DNR and ADF&G for appropriate timing windows, culvert locations, and to determine proper culvert size.	This will be done as part of the permitting process.
133	Eric Holle, Lynn Canal Conservation	12-14-05 Comment Form	Culverts	Replacement of culverts during the project has the potential to improve spawning opportunities for anadromous fish.	Acknowledged.
134	Eric Holle, Lynn Canal Conservation	12-14-05 Comment Form	Culverts	Use larger culverts than those designed for 50-year floods.	DOT&PF routinely designs culverts for a capacity to carry the 50-year flood, based on the guidance in the Alaska Highway Drainage Manual. At times, DOT&PF places oversized pipes, if needed to provide fish or debris passage, or for safety considerations.
135	Kathleen Menke	12-6-05 Comment Form	Culverts	Support improved attention to culverts in flood-prone drainage areas.	Acknowledged.
136	Linda Shaw - NMFS Richard Enriquez - USFWS	12-05-05 Meeting	Streams	Will DOT&PF consider using better quality culverts that will last longer? Suggested using culverts with structures inside them to provide for improved fish habitat.	DOT&PF will follow the Memorandum of Agreement on culverts (between DOT&PF and ADF&G) to design for fish passage on those culverts that are located in fish streams.
137	Robert Mecum - NMFS	12-07-05 Letter	Streams	Recommend providing adequate fish passage.	See response above.
138	Linda Shaw - NMFS Robert Mecum - NMFS	12-05-05 Meeting 12-07-05 Letter	Streams	Concern that road maintenance chemicals and sediments will reach the streams due to increased impervious surface.	An additional 8 feet of width would be paved. Wider shoulders and clear zones will provide some additional area for percolation within the road prism.
139	Richard Enriquez - USFWS	12-05-05 Meeting	Streams	There are beaver activities along the road, which have been observed to block culverts. Suggestion that the culverts need to be engineered to make them less desirable to the beavers.	Acknowledged.

Table 7.4-1 (cont): Summary of Public and Agency Issues Raised

Comment No.	Comment Source	Date/Communication	Issue/Impact	Comment or Question	Response/Resolution
Floodplains/Flooding					
140	Gary Hess, Upper Lynn Canal Fish and Game Advisory Council	12-06-05 AK Chilkat Bald Eagle Preserve Meeting	MP 8	There has been debris at MP 8 that looked like it flowed over the road from the river.	We have not found evidence of river flooding overtopping the highway during the period of record, since about 1980. There are areas where debris flows from the mountainside overtop the road. This occurs when mountainside flows are blocked by sediment and debris accumulations at culvert inlets, resulting in the flow going over the road and flooding the roadway.
141	Les Katzeek, Klukwan, Inc.	12-06-05 AK Chilkat Bald Eagle Preserve Meeting	Road Grade	Would like to know if there are plans to raise the grade of the road due to flooding of the Chilkat River.	See response 107 above.
Wildlife/Fish Habitat					
142	Todd Buxton, Northern Southeast Regional Aquaculture Association	09-26-05 Phone	Fish Habitat	The road reconstruction should not impact the spawning channel near the Wells Bridge.	Effects on fish habitat are discussed in Section 4.15 and Appendix F.
143	Tribal Member	12-07-05 Tribal Consultation Meeting	Fish Habitat	Avoid installation of big boulders along the riverbanks and widening into the river because this is detrimental to fish habitat.	See response 141.
144	Tribal Member	12-07-05 Tribal Consultation Meeting			
145	Scott Ramsey	3-04-09 Comment Form	Fish Habitat	In particular, moving the road into the river where vital salmon exists is risky at best.	See response 141.
146	Robert Mecum - NMFS	12-07-05 Letter	Fish Habitat	All five species of Pacific salmon utilize the Chilkat River (and its tributaries) adjacent to this project for various life functions.	Acknowledged.
147	Neil Stichert - USFWS	02-16-12 EFH Meeting	Fish Habitat	The EFH report should provide in tabulated form the locations and justification for all river fill locations.	See EFH report in Appendix F.
148	Chiska Derr - NMFS	02-16-12 EFH Meeting	Fish Habitat	Is widening into the river simply to increase speed?	The project is proposed to improve safety as well –this requires straightening curves and widening shoulders.
149	Neil Stichert - USFWS	02-16-12 EFH Meeting	Fish Habitat	Why is the 12,213 linear feet of bank erosion shown as a proposed conservation measure?	See discussion of how certain rip rap can provide fish habitat in Section 4.15 and Appendix F.
150	Neil Stichert - USFWS	02-16-12 EFH Meeting	Fish Habitat	Has the culvert replacement table changed? Has DOT&PF changed its commitment to using the Tier 1 and Tier 2 design approach to culverts.	There have not been many changes. DOT&PF is following the Tier 1/Tier 2 approach to culvert designs.
151	Neil Stichert - USFWS	02-16-12 EFH Meeting	Fish Habitat	What non-Chilkat River impacts will happen along the corridor?	See effects on wetlands and streams in Sections 4.14 and 4.15.
Wildlife/Eagles					
152	Eric Holle, Lynn Canal Conservation	12-14-05 Comment Form	Wildlife	Consider eagle roosting trees as well as nesting trees in areas where trees will be cut.	See discussion in Section 4.2.
153	Les Katzeek, Klukwan, Inc.	12-06-05 AK Chilkat Bald Eagle Preserve Meeting	Wildlife	How will the realignment affect eagle and fish habitat.	See response 113.
154	Mike Jacobson, USFWS	12-06-05 AK Chilkat Bald Eagle Preserve Meeting	Wildlife	Some of the nests identified in the past might not be there anymore, and similarly there might be new nests that were not accounted for.	DOT&PF and USFWS have completed additional surveys to update data.
155	Randy Bachman - ADF&G	12-06-05 AK Chilkat Bald Eagle Preserve Meeting	Wildlife	There is a tree close to Segment 9 that has an eagle nest in it.	See discussion in Section 4.2.
156	Bruce Halstead - USFWS	12-22-05 Letter	Wildlife	Bald eagles nest in many locations along the proposed roadway project. Recommend contacting the Migratory Bird Management to discuss bald eagle management recommendations and coordinate aerial surveys to obtain nesting information.	DOT&PF and USFWS have conducted new surveys that would be used for permit applications.
157	Bruce Halstead - USFWS	12-22-05 Letter	Wildlife	Recommend protection of wetlands, fish habitat, and provide fish passage.	See Sections 4.14 and 4.15.
158	Richard Enriquez - USFWS	12-05-05 Meeting	Wildlife	There would be requirements in order to minimize impacts and disturbance to eagles from blasting.	See Section 4.2.
159	Richard Enriquez - USFWS	12-05-05 Meeting	Wildlife	Question as to whether overhead power lines could be buried, to avoid electrocution to the eagles.	Overhead power lines only go to Southeast Road Builders (about MP 5) and are not in the Preserve.
160	Richard Enriquez - USFWS	03-03-09 IDT Meeting	Wildlife	Richard stated he had a concern about using eagle nest data from 2006, and suggested that DOT&PF obtain updated data.	Updated survey data has been acquired and would be used for permitting applications.

Table 7.4-1 (cont): Summary of Public and Agency Issues Raised

Comment No.	Comment Source	Date/Communication	Issue/Impact	Comment or Question	Response/Resolution
161		02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Wildlife	Where is the eagle nest survey information and the mitigation plan?	See Section 4.2.
162	Mario Benassi, Haines School District	02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Wildlife	Showed a student-made video expressing concerns about increased vehicle speeds and potential effects on bald eagles.	The proposed speed limit on the road would not change. See Section 4.2 for information on potential effects to bald eagles.
163		02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Wildlife	The discussion has been about increasing vehicle speed and improving human safety, but this is the Bald Eagle Advisory Council, so shouldn't we be talking about improving bald eagle safety? Is there a way to reduce speeds in this critical habitat area?	The area designated as critical habitat is adjacent to the highway at MP 19 slide area. The alignment of the road was moved uphill so it does not impact the critical habitat area. Speed limits may be reduced by permit for specific events, such as the Bald Eagle Festival.
164		03-04-09 Public Meeting	Wildlife	Miles 18 to 21 have critical habitat with eagle roosting trees on both sides of the road. What do you plan to do in these areas.	The project was designed to minimize impacts on roosting trees. See Section 4.2.
165		03-04-09 Public Meeting	Wildlife	The #1 reason for eagle fatalities is getting hit by cars.	Effects to bald eagles are documented in Section 4.2.
Wildlife/Other					
166	Tim Shields (Takshanuk Watershed Council)	12-06-05 Public Scoping Meeting	Wildlife	There are western toads breeding in a pond located at the proposed realignment on the far side of the Chilkat River crossing.	The bridge crossing location alternative cited here was not selected.
Vegetation					
167		02-21-13 AK Chilkat Bald Eagle Preserve Meeting	Plants	What does it mean when there is a tree flagged along the highway?	Orange flagging on trees along the highway are survey control points. This does not mean that the tree is going to be cut down.
168		03-04-09 Public Meeting	Plants	Will you have to cut trees in some areas?	Some trees would be removed for the project and to improve sight distance.
169	Margaret Piggott	12-06-05 Comment Form	Plants	At 9 Mile there are rare orchids/fairy slippers growing. Please preserve them.	Fairy slipper orchids tend to prefer moist, cool, wooded areas. The proposed road alignment in this area is shifted toward the river, avoided the wooded hillside.
Mitigation					
170	Neil Stichert - USFWS	03-03-09 IDT Meeting	Mitigation	Has guard rail been looked at to avoid encroachment into the river?	Guardrail has been incorporated into the project as discussed in Section 4.15.
171	Kate Kanouse - ADF&G	03-03-09 IDT Meeting	Mitigation	What about the width of the channel?	The existing channel was used as a reference for the widths in some areas.
172	Neil Stichert - USFWS	03-03-09 IDT Meeting	Mitigation	Neil noted that some of the streams are being moved to get them out of the way of the roadway and so they should not be counted as mitigation as they have to be moved anyway.	The mitigation plan will be written in such a way that it is clear which stream mitigation is being done to simply move it out of the way of the project, versus proposed mitigation that is solely intended to improve the habitat, and thus should provide some credits to offset wetland fill impacts.
173	Neil Stichert - USFWS	03-03-09 IDT Meeting	Mitigation	Neil noted that vegetated riprap was addressed in the proposal and has not seen it used much. How will it be constructed?	There is an example at Gold Creek where pockets of soil and burlap were used to make the vegetation and through aggressive maintenance, it now functions with riparian habitat.
174	Mark Allen	03-04-09 Comment Form	Mitigation	Egress of major transportation to the Chilkat Valley Bio system should be accomplished in entirety once (or as seldom as is possible) so as to have to do mitigation work efficiently.	Acknowledged.
175		03-04-09 Public Meeting	Mitigation	What is the conceptual mitigation plan that was mentioned?	The conceptual mitigation plan is included in Appendix F.
176	Neil Stichert - USFWS	02-16-12 EFH Meeting	Mitigation	Some proposed enhancement sites are no longer in the plan. Why?	Two sites were outside DOT&PF ROW and conservation easements could not be obtained from the property owners.
177	Neil Stichert - USFWS	02-16-12 EFH Meeting	Mitigation	Why can't DOT&PF purchase areas for enhancement and conservation easements?	DOT&PF purchases lands needed for required project elements. Acquisitions must reserve the right to construct transportation facilities.
178	Chiska Derr - NMFS	02-16-12 EFH Meeting	Mitigation	There are concerns about accounting for impacts in one segment when mitigation is in another segment at some undetermined time in the future.	Each segment permitted for construction would have mitigation requirements associated with it. The proposed mitigation elements discussed are only a part of the overall expected mitigation requirements.
179	Neil Stichert - USFWS	02-16-12 EFH Meeting	Mitigation	There is illegally placed fill at MP 10 that could be removed as part of mitigation.	Acknowledged.
180	Scott Frickey - USFWS	02-16-12 EFH Meeting	Mitigation	There is a new USFWS policy for permit applications that involve multiple nests. The agency would like to see on-site mitigation, such as revegetation of road beds, enhancement of fish habitat, relinquishment of ROW, or bringing aerial utility lines up to new standards.	Acknowledged.

Table 7.4-1 (cont): Summary of Public and Agency Issues Raised

Comment No.	Comment Source	Date/Communication	Issue/Impact	Comment or Question	Response/Resolution
Construction Impacts					
181	Tribal Member	12-07-05 Tribal Consultation Meeting	Construction	The staging areas, material sites, and disposal sites need to be identified early in the process. Equipment servicing locations need to be lined so that spills do not reach the river.	Contractors would be required to use permitted material sites. Pollution prevention at the staging areas will have to be addressed in the contractor's <i>Stormwater Pollution Prevention Plan</i> and <i>Hazardous Materials Control Plan</i> .
182	Karen M. Hess	4-22-13 Email	Construction	My husband and I own a jet boat tour company ... We have 3 buses that will be going daily up and down the highway. ...I am concerned that our buses will be held up during construction. We work with the cruise ships that come to Haines ... It is imperative that our buses maintain a regular schedule to accommodate the cruise ship guests. We can certainly be delayed by 10 minutes because we can usually shave that time somewhere in the schedule but we cannot go over that amount of time. We work with the ships that go to Skagway and get those guests off of a fast ferry that must also maintain a regular schedule.	Construction would occur in stages, likely beginning with MP 3.5 to MP 12. Construction effects are proposed to be mitigated through coordination with operations such as the one you describe. Coordination will be required as part of the construction contract specifications.
183	NMFS - Linda Shaw	12-05-05 Meeting	Construction	Would like to know as soon as possible if any mining will occur in the river. Concerned over impacts of gravel mining in the river or its tributaries.	Mining the Chilkat River for gravel is not anticipated. Permitted material sites would be used by contractors.
	USACE - Randy Vigil	12-05-05 Meeting			
	NMFS - Robert Mecum	12-07-05 Letter			
Design/Environmental Review Processes					
184	Neil Stichert - USFWS	03-03-09 IDT Meeting	Process: Design Review	Neil noted that if possible, a plans-in-hand, on-site review would be beneficial in the summer.	Noted.
185	Jackie Timothy - DNR OHMP	12-05-05 Meeting 12-14-05 Letter	Process: IDT Team	Doesn't think an IDT is necessary for a project of this scale; concern about the time commitment.	An IDT was formed as discussed in Section 7.3.4.
186	Todd Buxton, Northern Southeast Regional Aquaculture Association	09-26-05 Phone	Process: IDT Team	Would like to participate on the Inter-Disciplinary Team (IDT).	See response 184.
	Robert Venables, Haines Borough Manager	12-06-05 Public Scoping Meeting			
	Tim Shields, Takshanuk Watershed Council	09-06-05 Public Scoping Meeting			
187		03-04-13 Public Meeting	Process: Public Review	The last two meetings were in December when people are not in town or have trouble getting into town for meetings. Maybe meetings could be held in spring or summer.	Meetings have been held at various times throughout the years and information is always available on the project website.
188	Sherrie Myers	02-20-13 Email	Process: Public Review	None of the important documents upon which I might base substantive comments are available for review on the website – all of the links indicate the documents are pending review. When will these be available?	The supporting documents are in final review and will be put on DOT&PF's website later this year. When the FHWA approves the draft Ea for public distribution there will be another public review period and public meeting in Haines. You will have another opportunity to comment at that time.
189	Eric Holle, Lynn Canal Conservation	12-14-05 Comment Form	Process: NEPA Review Level	This project is too large for an EA; a full Environmental Impact Statement (EIS) should be required.	FHWA determines the class of document to be prepared after scoping is completed.

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