

## **3.9 Historic and Archaeological Preservation**

### **3.9.1 Affected Environment**

#### **3.9.1.1 Section 106 and Section 4(f) Background**

The assessment of impacts to historic properties must follow Section 106 of the National Historic Preservation Act (NHPA; 36 CFR § 800). Coordination of the NHPA with the National Environmental Policy Act is outlined in 36 CFR 800.8, which states that “Agency officials should ensure that preparation of an...EIS and record of decision includes...identification of historic properties, assessment of effects upon them, and consultation leading to resolution of adverse effects.” An “historic property” is any cultural resource that has been listed in or may be eligible for listing in the National Register of Historic Places (NRHP), as defined in the NHPA (36 CFR § 800.16[1]). “Historic properties” include prehistoric and historic archaeological sites and traditional cultural properties.

In addition, the project must comply with Section 4(f) of the U.S Department of Transportation (USDOT) Act. This law provides an additional layer of protection for cultural resources on or eligible for listing in the NRHP (and for archaeological properties identified for preservation in place), prohibiting use of such properties for transportation projects unless there is no feasible and prudent avoidance alternative. Evaluation under Section 4(f) is required for any such historic property. Certain parks, wildlife and waterfowl refuges, and recreation areas also are afforded protection under Section 4(f). For this project, the Federal Highway Administration (FHWA) has determined that Section 4(f) protection applies to all of the historic properties listed in the following sections and to park, recreation, and Kenai National Wildlife Refuge (KNWR) properties as indicated in Table 3.8-1 in Section 3.8, Parks and Recreation Resources. To avoid repetition, this chapter provides background and summarizes effects to historic properties in one place, but Chapter 4 provides the greatest detail on effects. This chapter provides cross references to the appropriate subsections in Chapter 4, which are incorporated here by reference. Cumulative effects are addressed in Section 3.27.7.8.

As part of the Section 106 process, FHWA, in consultation with the State Historic Preservation Officer (SHPO), Tribal governments and organizations, and agencies, has determined that the Area of Potential Effect (APE) for the project consists of an indirect APE and direct APE, as shown on Map 3.9-1. The direct APE includes the area in which all aspects of construction, staging, access, and management may occur that could have a direct impact on identified historic properties. This area includes the right-of-way of the four build alternatives, proposed staging, earth materials disposal sites, and borrow sites. For the most part, the right-of-way is 300 feet wide, although in some areas it expands to 500 feet wide or more, to fully encompass proposed cut and fill limits. The indirect APE has been delineated to identify potential secondary effects to historic properties (such as impacts to setting, association, or feeling) as a result of the proposed alternatives. The indirect APE is thus broader in scope than the direct APE. Because the Sqilantnu Archaeological District is so large and encompasses most of the project area, the indirect APE has been defined for this project as the archaeological district boundary and, outside the district, the proposed right-of-way of each alternative.

### **3.9.1.2 Overview: Prehistory and History**

The project area has a rich and varied history, with continued human use from prehistoric times to the present. The earliest site identified to date in the region is at Beluga Point, along Turnagain Arm (ca. 8,000 BP [Before Present]) located south of Anchorage, and to the north of the project area. Although there is a gap following early Holocene occupation, the Kenai Peninsula was later inhabited by Pacific Eskimos, who may have been related to coastal groups of Cook Inlet, as well as having ties to the Norton culture of the Bristol Bay region (CRC 2010). House depressions along the Russian River have documented this presence dating from 1,750 to 1,850 years ago (CRC 2010). Eskimos in the upper Cook Inlet and on the Kenai Peninsula were later displaced by Dena'ina people, who appear in the archaeological record around 1,000 years ago (CRC 2010). Ethnographic and oral history accounts from Dena'ina people confirm the ancestral use of the Kenai Mountains and river area, and its cultural importance (CRC 2010).

In the Kenai region, during the winter the Dena'ina lived in rectangular, semi-subterranean dwellings made of split logs, with roofs of moss, dirt, and sod (CRC 2010). These main houses had one or more sleeping rooms, with attached bath houses. Summer dwellings were smaller, tent-like structures of lashed-together poles covered with skins and bark, which also served as smoke houses. Summer communal bath houses were also constructed (CRC 2010). The Dena'ina constructed temporary semispherical lodges out of bent alder and spruce roots, covered with skins and bark; sometimes these were built in round shapes in the mountains for sweat bathing. Food caches were constructed both as small houses on posts with log ladders, and as underground pits lined with moss, grass, and birch bark. Salmon was the principal food of the Dena'ina, and they traveled up the Kenai River to hunt and fish (CRC 2010).

Historic-era exploration of the Kenai River area first occurred in 1848 and 1850 when a Russian mining engineer, Petr Doroshin, prospected around Kenai and Skilak lakes. However, Doroshin's meager discoveries and the difficulty of transporting mining supplies to the area squelched any further Russian interest in mining in the area (CRC 2010). American trappers began exploiting the region following the sale of Alaska to the United States, but permanent interest in the area did not occur until American miners began looking for gold. Prospecting along the Kenai River in the 1870s recovered little gold; however, Joseph M. Cooper stayed in the area long enough to prospect and establish a trading post at the site of present day Cooper Landing (CRC 2010). By the 1890s, mining efforts increased, and limited finds of gold led to a rush, which led to the towns of Sunrise and Hope being established, as well as mines at the northern shore of Turnagain Arm near Girdwood (CRC 2010). The later Klondike discovery of gold initially lured prospectors away from the Kenai Peninsula, but many returned after facing difficulties accessing the Klondike.

Later prospecting led to established mines, including the Kenai Mining Company in 1905. Later mining led to the establishment of the Kenai Dredging Company in 1911. The first permanent non-Dena'ina residents settled around this time, building cabins associated with mining claims on Kenai Lake and the Kenai River. The first homestead applications occurred in 1915, and homesite platting followed in 1918 (CRC 2010). By 1920 the area between Quartz Creek and the Russian River was home to 25 people, and the area south of the Kenai Lake outlet became known as "the Landing" or "Cooper's Landing" (CRC 2010). Early transportation routes and plans were developed in the 1920s, with plans to build 22 miles of road from Moose Pass to the Russian River (CRC 2010); however, construction was delayed until the 1930s. Dog sled trails were built by the Forest Service, U.S. Department of Agriculture (Forest Service) from Moose

Pass to Cooper Landing, with truck routes following, and eventually a year-round maintained road was established in 1941 (DOT&PF 1982, CRC 2010). With the arrival of modern highways in the 1940s and 1950s, roadhouses were built to accommodate travelers, as well as gas stations, lodges, and ferry operations. The Post Office and school, which originally opened in the 1920s, were opened and closed intermittently based on demand (CRC 2010).

Although mining activity slowed with the start of World War I, mining work continued into the 1930s (CRC 2010). Mining efforts, however, virtually stopped during World War II, but began again in the 1950s. With additional regulations for water and waste treatment, additional costs accrued to the mining operations, and many small commercial mining operations went out of business (CRC 2010). Mining claims were reinitiated in the 1970s and 1980s.

Additional homesteads and homesites were made available by the Forest Service in the 1930s and 1940s, but with only “summer residence” permits granted. By 1950, the Sterling Highway was a “modern highway,” providing increased access to travelers along the Kenai Peninsula (CRC 2010). Homestead sites and businesses continued to increase with demand throughout the latter half of the twentieth century.

The project area is widely recognized for its cultural heritage, including both Alaska Native prehistory and historic Russian and American prospecting. The Sterling Highway is a designated State Scenic Byway in part for its cultural features, and the entire area is encompassed within the Kenai Mountains–Turnagain Arm National Heritage Area, designated by Congress (see Section 3.2.1.7 of Land Use Plans and Policies). These designations do not add further protections for cultural resources, but recognize the important cultural backdrop of this area.

### **3.9.1.3 Cultural Resources Inventory**

Efforts to identify historic properties in the project area have included historical research, reconnaissance and intensive surveys, site testing, and excavation. Investigations in the general project area have included work by the U.S. Bureau of Indian Affairs, State of Alaska Office of History and Archaeology (OHA), U.S. Fish and Wildlife Service (USFWS), the Forest Service, and Cultural Resource Consultants (CRC, a consultant working on the current Sterling Highway Milepost [MP] 45–60 Project).

Alaska Heritage Resource Survey (AHRs) data are maintained statewide by the SHPO at OHA, and each historic property or potential historic property has a unique AHRs site number. Research typically begins with the AHRs data. Subsequent site surveys, site testing, excavation, and consultation may reveal new sites or cultural properties, or may result in altered boundaries of known sites or districts, or the establishment of new AHRs sites. The work for this project has resulted in extensive new findings, expansion of the Sqiłantnu Archaeological District boundaries, identification of two areas treated as Traditional Cultural Properties (TCPs), and new information about known archaeological and historic properties. All information is ultimately held at OHA. AHRs numbers are used consistently in technical correspondence among the consulting parties but are not used in this document to maintain readability.

The first archaeological surveys of proposed realignments of the Sterling Highway were conducted in 1978 and 1979 by archaeologists from the OHA. During the 1980s, there were several surveys related to proposed highway realignments, including yearly surveys and/or excavations by OHA between 1985 and 1989. More recently, Charles Holmes of OHA surveyed and tested sites along the Juneau Creek Alternative in 2000, and Douglas Reger (consultant to

the Alaska Department of Transportation and Public Facilities [DOT&PF]) surveyed the Cooper Creek and G South alternatives in 2002 and 2003, respectively. Past consultations between the SHPO and DOT&PF on the eligibility of identified sites and project effects took place between March 1992 and October 1995.

An additional survey along the Juneau Creek Alternative at the Juneau Creek crossing was completed between July and August 2005, to include areas that could be affected by potential shifts in bridge alignments due to design requirements. Field verification of previously recorded sites also was completed in 2005. Surveying and mapping were completed in 2009 to address the more recently proposed Juneau Creek Variant Alternative, and an additional field survey in 2014 was completed to address a modified segment of the G South alignment. A comprehensive archaeological survey report documenting surveys completed for the proposed project's current Environmental Impact Statement (EIS) phase is available, but is intended for limited distribution because it contains confidential information protected by law.

The historic properties identified in the project APE and determined eligible for listing in the NRHP are listed below. See Map 3.9-1, and Maps 4-1, 4-6, 4-7, 4-8, and 4-12 in Chapter 4. Note that some historic properties and districts are not shown on the maps to help protect sensitive sites.

- **Sqilantnu Archaeological District.** According to SHPO's official AHRS records, the Sqilantnu Archaeological District comprises 64 contributing archaeological sites representing late prehistoric to early historic Dena'ina occupation, and the district boundaries encompass virtually the entire project area downstream of the Kenai Lake outlet and up to approximately 1,000 feet elevation on both sides of the Kenai River Valley. There are hundreds of other sites that may ultimately be determined to contribute, and for this project all known sites are assumed to contribute. Contributing historic properties include collections of Dena'ina cache pits or house depressions. There are thought to be thousands of individual cultural features within the sites that make up the archaeological district. The district and its contributing historic properties have been determined eligible for listing in the NRHP under Criterion A (association with events that have made a significant contribution to broad patterns of history) and Criterion D (information potential). The Sqilantnu Russian River Confluence Site and the New Village Site, also listed in the next two bullets below as separate historic properties, are treated as contributing to the Sqilantnu Archaeological District for purposes of this project. Several contributing Sqilantnu sites are used for cultural interpretation activities by the Kenaitze Indian Tribe, including the K'Beq Footprints Heritage Site. The Russian River Land Act of 2002 conveyed the "archaeological estate" of some 500 acres of the Sqilantnu Archaeological District within the KNWR boundary to Cook Inlet Region, Incorporated (CIRI), the regional Native corporation, and assigned ownership of recovered artifacts throughout the district to CIRI.
- **Sqilantnu Russian River Confluence Site.** The Sqilantnu Russian River Confluence Site is a large area encompassing the confluence of the Kenai and Russian rivers and lands nearby. The site holds an integral relationship with the beliefs and practices of the Kenaitze, and FHWA in consultation with CIRI and the Kenaitze Indian Tribe, has found it eligible as a TCP. The SHPO has requested that further documentation be provided on TCP status but suggested that the site be treated as a TCP for the purposes of this EIS and Section 4(f) evaluation. Similarly, FHWA has determined it contributes to the larger Sqilantnu Archeological District, but SHPO has requested further information before

concurrency; nonetheless the site is treated as contributing. Individual sites contained within the greater Confluence Site are significant for the association they continue to hold with Kenaitze cultural beliefs, practices, education, and history. The site also is recognized by the Kenaitze for its location as a meeting point for many cultures, from pre-history through today. As such, the entire area, including the existing Sterling Highway, the Russian River Ferry, and other modern and non-Native elements, are considered part of the site. In 2002, the Russian River Land Act recognized the “abundant archaeological resources of significance to the Native people of the Cook Inlet Region, the Kenaitze Indian Tribe, and the citizens of the United States” of the lands near the confluence of the Kenai and Russian rivers. The act resulted in two federal land parcels transferring to CIRI—Tract A (north of the literal Russian River confluence) and Tract B (east of Schooner Bend Bridge)—because of the cultural significance of these areas, including the area’s archaeological sites. Portions of Tract A, in particular, have been defined by the Kenaitze Indian Tribe as sacred and spiritual. These tracts have been identified in the agreement ratified by the Russian River Land Act as the site of future development of a visitors interpretation center (joint with the Forest Service and USFWS, overlooking the river confluence), Sqilantnu Archaeological Research Center, administrative offices, lodging and restaurant for the public, housing for staff, public trails, and other potential development. FHWA has found the property eligible for the NRHP under Criteria A and D; SHPO has concurred regarding Criterion D and seeks further documentation regarding Criterion A.

- **New Village Site.** The New Village Site is the location of the last traditional Kenaitze village in the Sqilantnu District and upper Kenai River area. Its residents moved downstream in 1905, when the last occupants moved to Kenai. Within the site boundary are surface depressions that have been interpreted as important features. Historic mining features also have been recorded in the area. New Village is also important to the Kenaitze as the location where the Susten Camp (a Kenaitze cultural education and youth camp) first began, with collaborative excavations of archaeological resources by Kenaitze elders, youth, and the Forest Service. The Susten Camp’s role at the site is an important link, providing continuity between the past and present, passing cultural heritage on to future generations. As with the Confluence Site, FHWA has determined it is eligible for the NRHP as a TCP. The SHPO requested further documentation that further documentation be provided on TCP status but suggested that the site be treated as a TCP for the purposes of this EIS and Section 4(f) evaluation. FHWA has found the property eligible for the NRHP under Criteria A and D; SHPO has concurred regarding Criterion D and seeks further documentation regarding Criterion A. Similarly, FHWA has determined New Village contributes to the larger Sqilantnu Archeological District, but SHPO has requested further information before concurrency; it is treated as contributing for purposes of this project.
- **Kenai Mining and Milling Company Historic District.** The historic district encompasses lands near Cooper Creek and the Kenai River, including several historic mining features.
- **Charles G. Hubbard Mining Claims Historic District.** The historic district encompasses several historic mining claims along a reach of the Kenai River, including several physical features.

- **Stetson Creek Trail.** The historic trail provided access up Cooper Creek and Stetson Creek during the area’s historic mining era and provides access to mining claims today. It is also used recreationally.
- **Bean Creek Trail.** The Bean Creek Trail is the southern end of an historic 1880s mining-era trail from Cooper Landing to Hope. Most of the trail from Cooper Landing to Hope is now known as the Resurrection Pass National Recreation Trail. However, where the Forest Service re-routed the Resurrection Pass Trail to the west side of Juneau Creek, the Bean Creek Trail follows the historic route on the east side. The Bean Creek Trail is functional and continues to be used recreationally. The Forest Service has re-routed the last half-mile of the Bean Creek Trail to allow for better public access via Slaughter Ridge Road; the historic route heading south is within private property.
- **Gwin’s Lodge.** The lodge, located near MP 52, is an historic Alaska roadhouse dating from the early days of the Sterling Highway. The building (but not the surrounding land) is considered historic property.
- **Broadview Guard Station.** The Broadview Guard Station is an historic Chugach National Forest property used in the past as a fire lookout, overlooking Kenai Lake. It is located near MP 46 overlooking Kenai Lake. The building (but not the surrounding land) is considered historic property.

Consulting parties (see next subsection) have agreed that additional identification and investigation of individual historic properties will be implemented, particularly for subsurface sites associated with the Sqilantnu Archaeological District, once an alternative has been selected for construction. That is, while the current identification efforts have been sufficient for the EIS, more identification and treatment efforts are proposed once an alternative has been selected in the Record of Decision.

#### **3.9.1.4 Agency and Tribal Coordination**

DOT&PF and FHWA have conducted Section 106 consultation with the SHPO, the Kenaitze Indian Tribe, the Salamatof Tribal Council, Cook Inlet Tribal Council, Kenaitze Native Association, CIRI, USFWS, the Forest Service, and the Cooper Landing Historic Society. DOT&PF and FHWA also have consulted with the Russian River Land Act Memorandum of Understanding (MOU) Group, comprised of the Kenaitze Indian Tribe, CIRI, USFWS, and the Forest Service. See more in Chapter 5.

### **3.9.2 Environmental Consequences**

As stated in Section 3.9.1.1, to avoid repetition, the most detailed discussion of impacts to historic properties from the build alternatives appears in Chapter 4, Section 4(f) Evaluation. That discussion is incorporated here by reference. The summary in this section provides an overview, with cross-references to specific sub-sections in Chapter 4. Cumulative effects are addressed in Section 3.27.7.8.

### **3.9.2.1 No Build Alternative**

#### **Direct and Indirect Impacts**

Several historic properties are located within the existing highway right-of-way, and under the No Build Alternative, routine scheduled maintenance (such as brush clearing, bridge replacement, and other minor modernization projects) could disturb, excavate, or bury historic properties adjacent to or under the existing highway. The following historic properties could be adversely affected because the existing highway right-of-way overlaps them:

- Kenai Mining and Milling Historic District
- Charles G. Hubbard Mining Claims Historic District
- Sqilantnu Archaeological District
- Sqilantnu Russian River Confluence Site

Each of these broader areas contains known individual sites within them that may provide important information about the prehistory and history of the area and may contain previously unknown sites. Any routine maintenance, repair, or minor modernization effort would be subject to provisions of the National Historic Preservation Act, Archeological Resource Protection Act, and the Native American Graves Protection and Repatriation Act, but such operations and maintenance or minor modernization efforts would not be part of this project, its Programmatic Agreement, or its associated Discovery Plan. Larger projects, such as bridge replacement, would be likely to include a separate FHWA National Environmental Policy Act document and Section 106 consultation process before work would begin. Any DOT&PF contract would require work to stop and consultation with SHPO, tribal entities, and affected land management agencies to occur if cultural resources were discovered. Proper custody and curation of items discovered would be addressed at that time.

### **3.9.2.2 Issues Applicable to the Build Alternatives**

The impact analysis for historic properties is based on the definition of adverse effect found in 36 CFR § 800.5, Assessment of Adverse Effects, which states:

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

Historic properties (i.e., sites determined eligible for listing in the NRHP) include prehistoric and historic cultural resources that are either individually eligible or are contributing elements to larger historic or archaeological districts, or both. Section 4(f) protection applies to virtually any historic property found eligible for listing in the NRHP, as stated in Section 3.9.1.1, above. See Chapter 4, Section 4(f) Evaluation, for more details on these properties. Adverse effects to historic properties may occur through direct and indirect impacts to a site and/or district that would diminish the qualities that cause a property to be eligible for NRHP listing. A Programmatic Agreement that has been developed among consulting parties defines the approach DOT&PF is taking and will take during construction of any build alternative to assess impacts during construction, mitigate effects, and otherwise meet requirements set forth in Section 106 of the NHPA.

Preliminary design of project alternatives includes earthwork estimates for removing existing soil (cut) and depositing material (fill) to be consistent with roadway design criteria and current highway standards. Cut-and-fill limits for each alternative were compared to cultural and historic site boundary locations in the project area; where cut-and-fill limits intersect, encompass, or are adjacent to existing site boundaries, a determination of adverse effect was made for the particular site under that alternative. Fill placement or excavation activity would disturb existing site conditions, compromising the integrity of eligible cultural sites. In addition, because of the density and large number of known archaeological sites within parts of the Sqilantnu Archaeological District, it is likely that new sites or features could be discovered during construction.

Excavation and fill placement under all build alternatives would directly impact sites included in the Sqilantnu Archaeological District and Russian River Confluence Site. These historic properties have been determined eligible for listing in the NRHP based on their association with important patterns of Alaska history. Excavation and fill placement would adversely affect the sites' integrity as features contributing to their association with broader historic patterns. However, damage or changes to contributing elements within the district and Confluence Site would not affect eligibility of the district, because the location itself is important for its history and association with the Dena'ina and other peoples. The location and association are as important as the physical features. In addition, the Confluence Site and district as a whole encompass many known features that would not be affected at all.

An assessment of potential visual impacts to character defining features of historic properties located in the direct APE for each alternative is included in a *Recommendations of Effect to Historic Properties* document (HDR 2010d). Visual assessments were not completed at archaeological resources, as the value of these sites lies primarily in their information potential and association, and not their overall above-ground setting. However, one historic property was identified as a place of extra cultural significance, in part due to setting and visual association, and was evaluated for potential visual impacts. This site was later identified, through consultation with the Kenaitze and Russian River Lands Act MOU Group, as contributing to the Sqilantnu Russian River Confluence Site. Notes on visual effects are addressed for each alternative in the subsections below. See Section 3.27, Cumulative Impacts, for additional discussion on this topic.

A comprehensive cultural resources survey report prepared for this project documents surveys completed for the proposed project's current EIS (CRC 2010). Due to the sensitive nature of cultural site information, this report is confidential and not available for public distribution.

The subsections below briefly summarize the impacts of each alternative. Impacts to historic properties would occur during construction and would result in permanent loss of the site or the information contained within an archaeological site. Therefore, direct impacts and construction impacts are considered the same. Historic properties are further protected under Section 4(f) law and therefore are also addressed in Chapter 4, Section 4(f) Evaluation. In Chapter 4, Table 4.8-13 provides a summary overview of impacts discussed for each alternative below.

### **Construction Impacts**

Any impacts to archaeological sites and historic properties occurring during construction would be considered direct impacts and are discussed above in Section 3.9.2.2.

## **Mitigation**

FHWA, in consultation with SHPO, Tribal governments and organizations, the Russian River Land Act MOU Group, land managing agencies, and other Section 106 consulting parties, has developed a Programmatic Agreement to address the project's adverse effects to identified historic properties and any inadvertent discovery of previously unknown historic properties, in accordance with Section 106 of the NHPA. The Federal Advisory Council on Historic Preservation has participated with other consulting parties in formation of the Programmatic Agreement. The agreement document addressing adverse effects has been prepared for the preferred alternative (Juneau Creek Alternative), but FHWA and DOT&PF have determined that the types of mitigation proposed would apply equally to any of the alternatives; the differences would be only in which specific sites or features would be affected (as further noted in the sections below) and the locations of some mitigation measures, such as interpretive signs.

Further detail about the Programmatic Agreement can be found especially in Section 4.6.1.3, and also in 4.6.5, 4.6.6, and 4.6.9 through 4.6.12. The Programmatic Agreement is published in Appendix K.

In brief, the Programmatic Agreement includes:

- Refinement of final design to ensure the project avoids and/or minimizes impacts to historic properties.
- Archaeological monitoring of the construction process by both qualified archaeologists and observers from the Kenaitze Indian Tribe and CIRI, including regular reporting.
- A Data Recovery/Historic Properties Treatment Plan for select locations, with data to be recovered prior to start of construction in those locations.
- A professional publication compiling past and current research on the Sqilantnu District/Confluence Site.
- A public education booklet on Sqilantnu District archeological features and area historic features, intended for a general audience.
- A formal written nomination of the Sqilantnu Archaeological District for the National Register of Historic Places, to be submitted to the Forest Service, USFWS, and tribal entities.
- For affected historic trails, documentation of the impacted historic route with Global Positioning System devices, photographs, and field notes. Also, DOT&PF would ensure public access and use during construction; ensure trail re-routing for permanent public access and use where needed; and provide an interpretive display at the trailhead with an historic mining theme, in consultation with the managing agency and other consulting parties.
- Interpretive signs within the Sqilantnu Archaeological District; location and content to be determined in consultation with CIRI, Kenaitze Indian Tribe, and the appropriate land management agency.
- Compilation and preservation of existing Kenaitze oral histories into digital format.

A few items specific to each alternative are discussed below for each alternative under Mitigation subheadings.

DOT&PF estimated the costs of the mitigation for each alternative. This was based, for example, on the known number of sites that would be affected, market rates for archaeological monitoring, and professional estimates for compiling and publishing research and education documents. The cost estimates are meant for use in a fair comparison among the alternatives and to indicate to the public and agencies DOT&PF and FHWA's commitment to mitigation; however, the final costs may vary.

FHWA commits to completing the additional documentation requested by SHPO to support a determination of eligibility for the Sqilantnu Russian River Confluence and New Village sites. Site descriptions in Section 3.9.1.3 describe this request.

### **3.9.2.3 Cooper Creek Alternative**

#### **Direct and Indirect Impacts**

The following would be adversely affected by the proposed Cooper Creek Alternative:

- The **Kenai Mining and Milling Company Historic District**, where the highway embankment would cut into and bury contributing district features. (See Section 4.2.1 for definitions of NRHP criteria, Section 4.2.16 for more details on this historic property, and Section 4.5.2.8 for impacts to the historic property associated with the Cooper Creek Alternative.)
- The **Stetson Creek Trail**, where the highway cut and embankment would cut into, cover, and affect approximately 1,250 linear feet of historic trail. (See Section 4.2.14 for more details on this historic property and Section 4.5.2.2 for impacts to the historic property associated with the Cooper Creek Alternative.)
- The **Charles G. Hubbard Mining Claims Historic District**, where the widened highway would cut into and affect the location of mining features that have been identified as contributing to the district. (See Section 4.2.15 for more details on this historic property and Section 4.5.2.7 for impacts to the historic property associated with the Cooper Creek Alternative.)
- The **Sqilantnu Archaeological District**, where the widened highway would cut into or intersect and affect 28 contributing district prehistoric sites, plus the Confluence Site. (See Section 4.2.11 for more details on this historic property and Section 4.5.2.5 for impacts to the historic property associated with the Cooper Creek Alternative.)
- The **Confluence Site**, where the widened highway and expected slightly higher average vehicle speeds would alter the existing feeling and association within the Confluence Site and visually alter the landscape in an incremental way. However, the highway is considered part of the Confluence Site as the modern mechanism for bringing cultures together in the river confluence area. The widened highway would affect several archaeological sites that contribute to the site, a subset of the same sites listed above for the larger Sqilantnu District. (See Section 4.2.12 for more details on this historic property and Section 4.5.2.6 for impacts to the historic property associated with the Cooper Creek Alternative.)

In considering potential visual impacts, the Cooper Creek Alternative is considered consistent with the active character of the existing corridor through the project area, which already experiences highway traffic and views that include a road. The Cooper Creek Alternative thus would not introduce new visual impacts in the APE that would affect historic properties. The segment built on a new alignment, including the proposed Cooper Creek Bridge, is inconsistent with the surrounding natural setting; however, views of the alignment would be obscured by terrain and existing dense forest vegetation from Broadview Guard Station, Bean Creek Trail, and Gwin's Lodge. A small portion of the highway that climbs westward from the Cooper Landing Bridge may be visible across the valley from some parts of Bean Creek Trail but would occur in an area of Cooper Landing that already is developed and would not substantially alter the character of the trail. Therefore, there are no identified visual effects to historic properties under the Cooper Creek Alternative.

**Section 4(f) Considerations.** The Cooper Creek Alternative, like all the build alternatives, would reconstruct the existing highway near the Broadview Guard Station. It also would reconstruct the existing highway adjacent to Gwin's Lodge. In both cases, there would be no use of the property on which these historic buildings sit, and no use of the historic structures themselves. FHWA has determined through the Section 106 process that there would be no adverse effect to these buildings; under Section 4(f), proximity impacts would not be so severe that the activities, features, or attributes of the historic properties would be substantially impaired. Therefore, these properties are not addressed in Chapter 4, Section 4(f) Evaluation.

### **Construction Impacts**

Any impacts to historic properties occurring during construction would be considered direct impacts and are discussed above.

### **Mitigation**

Mitigation plans have been developed to address adverse effects under an agreement document, as discussed above in Section 3.9.2.2. Specific to the Cooper Creek Alternative:

- Access would be maintained to the K'beq Heritage Site during summer while construction was ongoing, and interpretive material would be temporarily moved during construction to Russian River Campground if construction noise was found to make interpretation difficult.
- As recreation mitigation for effects to the Stetson Creek Trail, the trail would be altered/rerouted and given a new pullout trailhead. It would remain a useable route. The historic trail mitigation measures noted in Section 3.9.2.2 would be implemented for this trail, including an interpretive sign near the pullout/trailhead to be built as part of this alternative. See Section 4.6 for further discussion.
- For the two affected mining-era historic districts, documentation of impacted historic features would be undertaken, with site surveys that include the depth of the site as well as horizontal (plan view) mapping, and with photographs and field notes.
- Mitigation measures identified in the Programmatic Agreement to address impacts to cultural resources under this alternative are estimated at \$4.2 million, which is included in the total project cost (see Section 3.5.2.2).

Historic properties are protected under Section 4(f) of the USDOT Act as well as under Section 106 of the NHPA. DOT&PF and FHWA therefore have also considered potential mitigation measures for Section 4(f) purposes, as described in Section 4.6.

### **3.9.2.4 G South Alternative**

#### **Direct and Indirect Impacts**

The following historic properties would be adversely affected by the proposed G South Alternative:

- The **Bean Creek Trail**, where the highway embankment would cross the trail, effectively truncating it and burying it. (See Section 4.2.5 for more details on this historic property and Section 4.5.3.2 for impacts to the historic property associated with the G South Alternative.)
- The **Charles G. Hubbard Mining Claims Historic District**, where the widened highway would affect mining features that have been identified as contributing to the historic district. (See Section 4.2.15 for more details on this historic property and Section 4.5.3.6 for impacts to the historic property associated with the G South Alternative.)
- The **Sqilantnu Archaeological District**, where the widened highway would affect 26 contributing district prehistoric sites, plus the Confluence Site. (See Section 4.2.11 for more details on this historic property and Section 4.5.3.4 for impacts to the historic property associated with the G South Alternative.)
- The **Confluence Site**, where the widened highway and expected higher average vehicle speeds would somewhat alter the existing feeling and association within the Confluence Site and visually alter the landscape in an incremental way. However, the highway is considered part of the site as the modern mechanism for bringing cultures together in the river confluence area. The widened highway would affect several archaeological sites that contribute to the Confluence Site, a subset of the same archaeological sites listed above for the larger Sqilantnu District. (See Section 4.2.12 for more details on this historic property and Section 4.5.3.5 for impacts to the historic property associated with the G South Alternative.)

In considering potential visual impacts, the G South Alternative is considered consistent with the active character of the existing corridor through the project area, which already experiences adjacent highway traffic. This would include the area considered to be the cultural center of the Confluence Site, where the highway may be visible but would be on its existing alignment. However, the segment built on a new alignment and bridge over Juneau Creek associated with the G South Alternative, along with the new bridge over the Kenai River, are inconsistent with the current character, as they occur in relatively undisturbed areas north and west of the Cooper Landing community. The segment built on a new alignment would introduce a new highway corridor with visible bridge crossings in the project area that may otherwise be devoid of similar features. However, most views of this new corridor would be obscured by existing dense forest vegetation and topography from Broadview Guard Station and Gwin's Lodge. No visual effects to Broadview Guard Station or Gwin's Lodge have been identified under the G South Alternative.

The alternative would cross the historic and non-historic segments of the Bean Creek Trail near its terminus; the historic portion that would be affected is only lightly used. However, the project

would alter the visual character and setting of the trail at this location, introducing a major highway. This would be part of the impact noted in the bullet list above. As indicated above, see Chapter 4, Section 4(f), for detail.

**Section 4(f) Considerations.** The G South Alternative, like all the build alternatives, would reconstruct the existing highway near the Broadview Guard Station. It also would reconstruct the existing highway near New Village Site and Gwin’s Lodge. In all three cases, the alternative has been designed to avoid impacts, and there would be no effect or use of the property on which these historic properties sit, and no use of the historic properties themselves. FHWA has determined through the Section 106 process that there would be no adverse effect to any of these three properties; and under Section 4(f), proximity impacts would not be so severe that the activities, features, or attributes of the historic structures or the New Village Site would be substantially impaired. Therefore these properties are not addressed in Chapter 4, Section 4(f) Evaluation.

### **Construction Impacts**

Any impacts to archaeological sites and historic properties occurring during construction would be considered direct impacts and are discussed above.

### **Mitigation**

Mitigation plans have been developed to address adverse effects as discussed above in Section 3.9.2.2. Specific to the G South Alternative:

- Access would be maintained to the K’beq Heritage Site during summer while construction was ongoing, and interpretive material would be temporarily moved during construction to Russian River Campground if construction noise was found to make interpretation difficult.
- As recreation mitigation for effects to the Bean Creek Trail, the trail would be connected under the highway, with a new trailhead built north of the highway. The historic trail mitigation measures noted in Section 3.9.2.2 would be implemented for this trail, including an interpretive sign at the trailhead parking lot. For further discussion, see Section 4.6.5.
- For the affected mining-era historic district, documentation of impacted historic features would be undertaken, with site surveys that include the depth of the site as well as horizontal (plan view) mapping, and with photographs and field notes.
- Mitigation measures identified in the Programmatic Agreement to address impacts to cultural resources under this alternative are estimated at \$4 million, which is included in the total project cost (see Section 3.5.2.2).

Historic properties are protected under Section 4(f) of the USDOT Act as well as under Section 106 of the NHPA. DOT&PF and FHWA therefore have also considered potential mitigation measures for Section 4(f) purposes, as described in Section 4.6.

### **3.9.2.5 Juneau Creek Alternative**

#### **Direct and Indirect Impacts**

The following historic properties would be adversely affected by the proposed Juneau Creek Alternative (preferred alternative):

- The **Bean Creek Trail**, where the highway embankment would cross the historic trail, effectively truncating it and burying it. (See Section 4.2.5 for more details on this historic property and Section 4.5.4.3 for impacts to the historic property associated with the Juneau Creek Alternative.)
- The **Sqilantnu Archaeological District**, where the highway would affect nine contributing district prehistoric sites, plus the Confluence Site. (See Section 4.2.11 for more details on this historic property and Section 4.5.4.6 for impacts to the historic property associated with the Juneau Creek Alternative.)
- The **Confluence Site**, where the new highway would pass through the undeveloped northern edge of the site and would affect several archaeological sites that contribute to the site, a subset of the same archaeological sites listed above for the larger Sqilantnu District. Within the Confluence Site, the alignment would run along the northern edge of CIRI Tract A, a parcel selected for its cultural importance and proposed as a site for a visitor interpretive center, but it would not directly use land from Tract A. (See Section 4.2.12 for more details on this historic property and Section 4.5.4.7 for impacts to the historic property associated with the Juneau Creek Alternative.)

In considering potential visual impacts, the Juneau Creek Alternative would introduce a new highway corridor with a visible new bridge in a portion of the project area otherwise devoid of similar features. However, most views of the Juneau Creek Alternative would be obscured by existing dense forest vegetation from Broadview Guard Station and Gwin's Lodge, which are located primarily in or near the existing highway corridor in the project area. No visual effects to Gwin's Lodge or Broadview Guard Station have been identified under the Juneau Creek Alternative.

As noted in the bullet list above, the alternative would cross Bean Creek Trail and would result in rerouting it. The visual character of the historic alignment would be changed by the introduction of a highway. Further discussion of impacts to this trail appears in Chapter 4, Section 4(f). The Juneau Creek Alternative would pass through the Confluence Site on a new alignment and would somewhat alter the setting and visual environment, but it would be visually screened by vegetation and topography from areas considered to be the cultural center of the Confluence Site. Views from this area to the Russian River confluence area would be unchanged in terms of the existing highway. Fewer vehicles would be seen moving through the area, as 70 percent of traffic would be expected to use the new highway.

**Section 4(f) Considerations.** The Juneau Creek Alternative, like all the build alternatives, would reconstruct the existing highway near the Broadview Guard Station. There would be no use of the property on which the historic building sits, and no use of the historic structure itself. FHWA has determined through the Section 106 process that there would be no adverse effect to the building and has determined under Section 4(f) that proximity impacts would not be so severe that the activities, features, or attributes of the historic structures would be substantially impaired. Therefore, this property is not addressed in Chapter 4, Section 4(f) Evaluation.

### **Construction Impacts**

Any impacts to archaeological sites and historic properties occurring during construction would be considered direct impacts and are discussed above.

## **Mitigation**

Mitigation plans have been developed to address adverse effects as discussed above in Section 3.9.2.2. Specific to the Juneau Creek Alternative:

- As recreation mitigation for effects to the Bean Creek Trail, the trail would be rerouted under the highway and would remain a useable route (see detail in Section 4.6.5). The historic trail mitigation measures noted in Section 3.9.2.2 would be implemented for this trail, including placing an interpretive sign near the pullout/trailhead to be built as part of this alternative just east of Juneau Creek Bridge.
- Mitigation measures identified in the Programmatic Agreement to address impacts to cultural resources under this alternative are estimated at \$3.2 million, which is included in the total project cost (see Section 3.5.2.2).

Historic properties are protected under Section 4(f) of the USDOT Act as well as under Section 106 of the NHPA. DOT&PF and FHWA therefore have considered potential mitigation measures for Section 4(f) purposes, as described in Section 4.6.

### **3.9.2.6 Juneau Creek Variant Alternative**

#### **Direct and Indirect Impacts**

Following are the identified historic properties eligible for listing in the NRHP that would be adversely affected by the proposed Juneau Creek Variant Alternative:

- The **Bean Creek Trail**, where the highway embankment would cross the trail. (See Section 4.2.5 for more details on this historic property and Section 4.5.4.3 for impacts to the historic property associated with the Juneau Creek Variant Alternative.)
- The **Sqilantnu Archaeological District**, where the highway would affect 20 contributing district prehistoric sites, plus the Confluence Site. (See Section 4.2.11 for more details on this historic property and Section 4.5.4.6 for impacts to the historic property associated with the Juneau Creek Variant Alternative.)
- The **Confluence Site**, where the new highway would pass through an important portion of the site and would affect several archaeological sites that contribute to the Confluence Site, a subset of the same archaeological sites listed above for the larger Sqilantnu District. Also included is CIRI Tract A, a parcel selected for its cultural importance and proposed as a site for a visitor interpretive center, which this alternative would bisect. Using a portion of Tract A would reduce the acreage useable for cultural activities or development and would impact CIRI's development plans. (See Section 4.2.12 for more details on this historic property and Section 4.5.4.7 for impacts to the historic property associated with the Juneau Creek Variant Alternative.)

In considering potential visual impacts, the Juneau Creek Variant Alternative would introduce a new highway corridor with a visible bridge crossing in the project area that otherwise is devoid of similar features, similar to the Juneau Creek Alternative. Most views of the Juneau Creek Variant Alternative would be obscured by existing dense forest vegetation from Gwin's Lodge and Broadview Guard Station, which are located in or near the exiting highway corridor in the project area. However, the area considered to be the cultural center of the Confluence Site would be affected under this alternative, and the visual changes associated with the new highway would

alter the setting, feeling, and association of this area, used on occasion by the Kenaitze Indian Tribe. The site is considered sacred to the Tribe and is central to the Confluence Site and Sqilantnu District. As noted in the bullet list above, the alternative would cross Bean Creek Trail and would result in rerouting it. The mostly natural visual character of the historic alignment would change by the introduction of a highway. As indicated more specifically in the bullet list, further discussion of impacts to this trail appears in Chapter 4, Section 4(f).

**Section 4(f) Considerations.** The Juneau Creek Variant Alternative, like all the build alternatives, would reconstruct the existing highway near the Broadview Guard Station. There would be no use of the land on which the historic property sits, and no use of the historic property itself. FHWA has determined through the Section 106 process that there would be no adverse effect to the building and has determined under Section 4(f) that proximity impacts would not be so severe that the activities, features, or attributes of the historic properties would be substantially impaired. Therefore, this property is not addressed in Chapter 4, Section 4(f) Evaluation.

### **Construction Impacts**

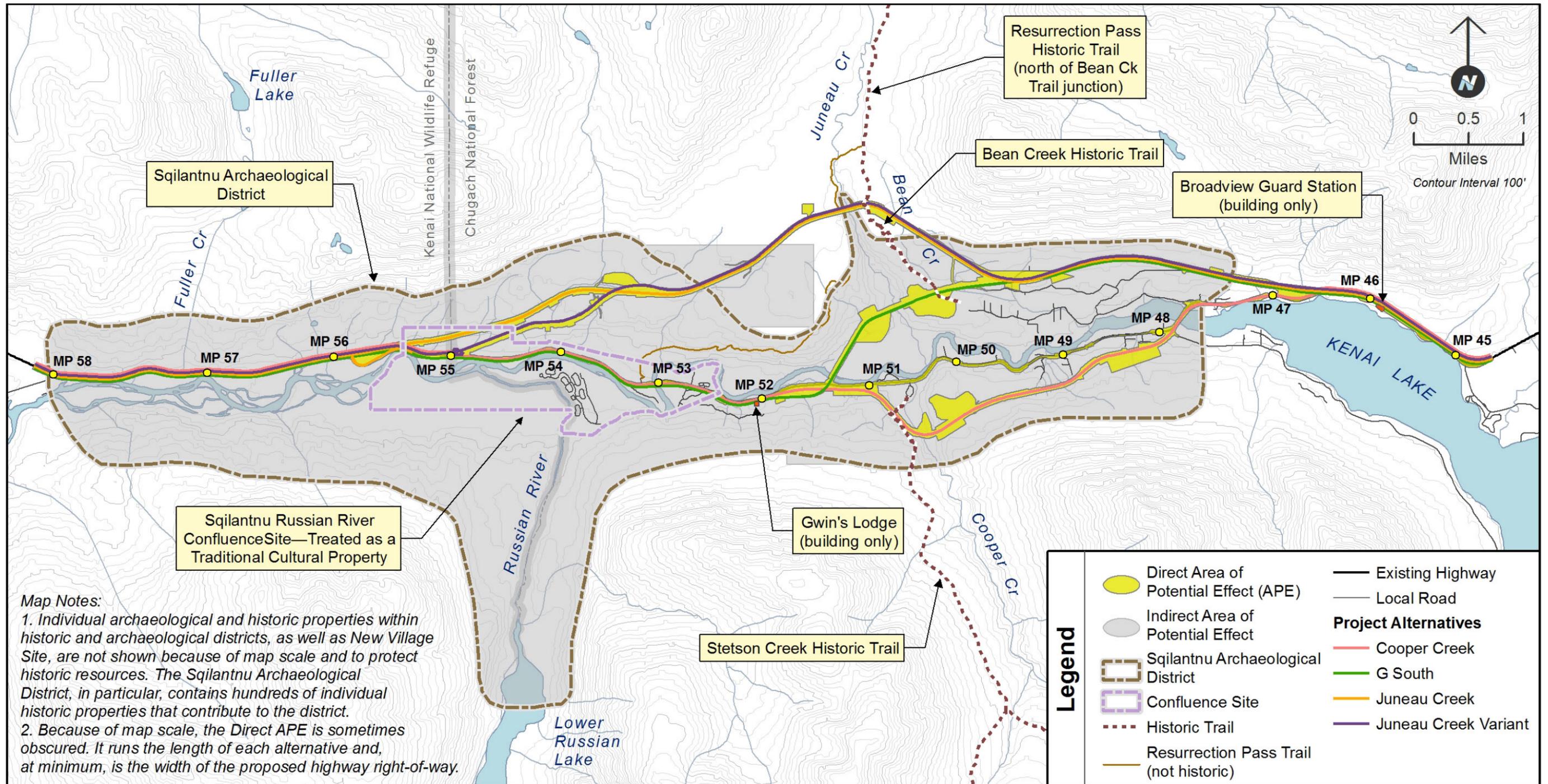
Any impacts to archaeological sites and historic properties occurring during construction would be considered direct impacts and are discussed above.

### **Mitigation**

Mitigation plans have been developed to address adverse effects as discussed above in Section 3.9.2.2. Specific to the Juneau Creek Variant Alternative:

- As recreation mitigation for effects to the Bean Creek Trail, the trail would be rerouted under the highway and would remain a useable route (see detail in Section 4.6.5). The historic trail mitigation measures noted in Section 3.9.2.2 would be implemented for this trail, including placing an interpretive sign near the pullout/trailhead to be built as part of this alternative just east of Juneau Creek Bridge.
- Mitigation measures identified in the Programmatic Agreement to address impacts to cultural resources under this alternative are estimated at \$4 million, which is included in the total project cost (see Section 3.5.2.2). Consulting parties, including the Forest Service, CIRI, and the Kenaitze Indian Tribe, have stated that the impacts of this alternative on the Confluence Site cannot be mitigated. It appears the central area of cultural importance, represented by CIRI Tract A, cannot be fully mitigated because there is no replacement property that overlooks the confluence of the Russian and Kenai rivers and no monetary or other compensation that would reasonably reduce impacts to the setting, feeling, and association of the Kenaitze Indian Tribe to this area. However, the same mitigation measures offered for other alternatives, such as preparing a formal nomination of the Sqilantnu Archaeological District to the National Register of Historic Places and completing data recovery at select archaeological sites that would be impacted, are offered for this alternative as well. This is not meant to imply that the dollar amount listed above or the list of measures in Section 3.9.2.2 would reduce cultural impacts to zero. These mitigation measures address certain impacts but not the central impact of bisecting Tract A and placing the highway within an area of particular cultural importance.

Historic properties are protected under Section 4(f) of the USDOT Act as well as under Section 106 of the NHPA. DOT&PF and FHWA therefore have considered potential mitigation measures for Section 4(f) purposes, as described in Section 4.6.



Map 3.9-1. Historic properties and Areas of Potential Effect in the project area

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