SUMMARY

Introduction

The purpose of an Environmental Impact Statement (EIS) is to satisfy the requirements of the National Environmental Policy Act (NEPA),[1] which requires preparation of an EIS for any proposed project that:

- Is not categorically excluded or otherwise exempt from NEPA
- Is a major federal action (i.e., requires a permit, regulatory decision, or funding from a federal agency)
- May have a significant adverse effect on the quality of the human environment

NEPA mandates that the EIS determine, characterize, analyze, and document the project's environmental impacts, as well as specify possible mitigation of adverse impacts.

An essential element of the NEPA process is interactive public participation, whereby a Draft EIS is published and comments are solicited from the general public and interested parties (including governmental entities, regulatory agencies, and Native organizations). These comments may range from simple statements of support or opposition to complex technical discussions of such issues as project alternatives, study methods, determination and characterization of impacts, and mitigation recommendations. The Final EIS documents and responds to all comments.

The Alaska Department of Transportation and Public Facilities (DOT&PF) and the Federal Highway Administration (FHWA) issued a Draft EIS for the Juneau Access Improvements Project in June 1997. Following review and consideration of the public and agency comments received on the Draft EIS, Governor Knowles announced in 2000 that Alternative 2, the East Lynn Canal Highway with Katzehin Terminal, was the preferred alternative for the proposed project, but his administration did not actively pursue completion of the EIS. Work accelerated on the project in 2002 when Governor Murkowski directed that the EIS be completed.

Because more than three years had passed since release of the Draft EIS, the adequacy of the environmental document was reevaluated. DOT&PF determined, and FHWA concurred, that there were sufficient changes in project alternatives and potential environmental impacts to warrant preparation of a supplemental draft EIS. This Supplemental Draft EIS includes pertinent information from the 1997 Draft EIS as well as the additional material required. Following circulation of this Supplemental Draft EIS to the public and interested government agencies, and consideration of comments received on the document, DOT&PF and FHWA will prepare a Final EIS.

Proposed Action

DOT&PF proposes to improve transportation to and from Juneau within Lynn Canal. Juneau is the largest community on the North American continent not connected to the continental highway system. Because of its location and lack of highway access, all freight, vehicle, and passenger movement to and from Juneau is by air or sea. The only public surface transportation available to and from Juneau is the Alaska Marine Highway System (AMHS), a state-owned ferry system that provides transportation to many of southeast Alaska's coastal

[1] National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190, U.S. Code 4321-4347, January 1, 1970, as amended).

communities. AMHS service from Juneau connects to the continental highway system in Prince Rupert, British Columbia, and Bellingham, Washington to the south, and in Haines and Skagway to the north. The AMHS is the National Highway System link to Juneau, Haines, and Skagway.

The Juneau Access Improvements Project is included in the Statewide Transportation Improvement Program (STIP) for 2004-2006. This federally required document was approved by the FHWA and Federal Transit Administration on October 31, 2003. The project is consistent with the DOT&PF 2004 Southeast Alaska Transportation Plan (SATP). The SATP is an approved element of the Alaska Statewide Transportation Plan and was prepared in accordance with 23 United States Code (USC), Alaska Statute (AS) 44.42.050, and other related federal and state regulations.

Project Purpose and Need

The purpose of and need for the Juneau Access Improvements Project is to provide improved surface transportation to and from Juneau within the Lynn Canal corridor that will:

- Provide the capacity to meet transportation demand in the corridor
- Provide flexibility and improve opportunity to travel
- Reduce travel times between Lynn Canal communities
- Reduce state costs for transportation in the corridor
- Reduce user costs for transportation in the corridor

Chapter 1 contains detailed information on the need for the proposed Juneau Access Improvements Project.

Alternatives Evaluated in Supplemental Draft Environmental Impact Statement

Following are brief descriptions of the reasonable alternatives evaluated in the Supplemental Draft EIS. Chapter 2 includes more detailed descriptions of each alternative.

No Action Alternative

The No Action Alternative includes a continuation of mainline AMHS service in Lynn Canal as well as the operation of the fast vehicle ferry (FVF) *M/V Fairweather* between Auke Bay and Haines and Auke Bay and Skagway. The *M/V Aurora* would provide shuttle service between Haines and Skagway, beginning as early as 2005.

Alternative 2 (Preferred): East Lynn Canal Highway with Katzehin Terminal

Alternative 2 would construct a 68.5-mile-long two-lane highway from the end of Glacier Highway, at Echo Cove, around Berners Bay and along the eastern coast of Lynn Canal and Taiya Inlet to Skagway. A ferry terminal would be constructed north of the Katzehin River delta, and the *M/V Aurora* would be used for shuttle service between Katzehin and the Lutak Ferry Terminal in Haines. Mainline AMHS service would end at Auke Bay, and the Haines to Skagway shuttle service would be discontinued. The *M/V Fairweather* would no longer operate in Lynn Canal.

Alternative 2A: East Lynn Canal Highway with Berners Bay Shuttle

Alternative 2A would construct a 5.2-mile two-lane highway from the end of Glacier Highway at Echo Cove to Sawmill Cove in Berners Bay. Ferry terminals would be constructed at both Sawmill Cove and Slate Cove, and shuttle ferries would operate between the two terminals. A 52.9-mile two-lane highway would be constructed between Slate Cove and Skagway along the eastern coast of Lynn Canal and Taiya Inlet. A ferry terminal would be constructed north of the Katzehin River delta, and the *M/V Aurora* would operate between the Katzehin and the Lutak Ferry Terminals. Mainline AMHS service would end at Auke Bay, and the Haines to Skagway shuttle service would be discontinued. The M/V *Fairweather* would no longer operate in Lynn Canal.

Alternative 2B: East Lynn Canal Highway to Katzehin, Shuttles to Haines and Skagway

Alternative 2B would construct a 50.5-mile two-lane highway from the end of Glacier Highway at Echo Cove around Berners Bay and along the eastern coast of Lynn Canal to a point north of the Katzehin River delta. Shuttle ferry service to both Skagway and Haines would be provided from a new terminal at Katzehin. The Haines to Skagway shuttle service would continue to operate, with two new shuttle ferries and the *M/V Aurora* forming a three-vessel system. Mainline AMHS service would end at Auke Bay and the *M/V Fairweather* would no longer operate in Lynn Canal.

Alternative 2C: East Lynn Canal Highway with Shuttle to Haines from Skagway

Alternative 2C would construct a 68.5-mile two-lane highway from the end of Glacier Highway at Echo Cove around Berners Bay and along the eastern coast of Lynn Canal and Taiya Inlet to Skagway with the same design features as Alternative 2. The *M/V Aurora* would continue to provide service between Haines and Skagway. No ferry terminal would be constructed north of the Katzehin River delta. Mainline ferry service would end at Auke Bay, and the *M/V Fairweather* would no longer operate in Lynn Canal.

Alternative 3: West Lynn Canal Highway

Alternative 3 would extend Glacier Highway with a two-lane highway 5.2 miles from Echo Cove to Sawmill Cove. Ferry terminals would be constructed at Sawmill Cove and William Henry Bay, and shuttle ferries would operate between the two terminals. A 38.9-mile two-lane highway would be constructed from William Henry Bay to Haines with a bridge across the Chilkat River/Inlet connecting to Mud Bay Road. The *M/V Aurora* would continue to operate as a shuttle between Haines and Skagway. Mainline ferry service would end at Auke Bay, and the *M/V Fairweather* would no longer operate in Lynn Canal.

Alternative 4: Marine Alternatives

The four marine alternatives described below would construct new shuttle ferries to operate in addition to continued mainline service in Lynn Canal. All of the alternatives would include a minimum of two mainline vessel round trips per week, year-round, and continuation of the Haines/Skagway shuttle service provided by the *M/V Aurora*. The *M/V Fairweather* would no longer operate in Lynn Canal. All of these alternatives would require construction of a new double stern berth at Auke Bay.

- **Alternative 4A: FVF Shuttle Service from Auke Bay** – Alternative 4A would construct two FVFs to provide daily service from Auke Bay to Haines and to Skagway.

- **Alternative 4B: FVF Shuttle Service from Berners Bay** – Alternative 4B would extend Glacier Highway with a two-lane highway 5.2 miles from Echo Cove to Sawmill Cove where a new ferry terminal would be constructed. Two FVFs would be constructed to provide daily service from Sawmill Cove to Haines and to Skagway in the summer and from Auke Bay to Haines and to Skagway in the winter.
- **Alternative 4C: Conventional Monohull Shuttle Service from Auke Bay** – Alternative 4C would construct two conventional monohull vessels to provide daily summer service from Auke Bay to Haines and to Skagway. In winter, a single shuttle would alternate between running one day to Haines and one day to Skagway.
- **Alternative 4D: Conventional Monohull Shuttle Service from Berners Bay** – This option would extend Glacier Highway 5.2 miles with a two-lane highway from Echo Cove to Sawmill Cove where a ferry terminal would be constructed. Two conventional monohull vessels would be constructed to provide daily service from Sawmill Cove to Haines and to Skagway in the summer and alternating day service from Auke Bay to Haines and to Skagway in the winter.

Alternatives Eliminated from Further Consideration

A variety of potential alternatives for the proposed project were identified by the DOT&PF project team, resource agencies, and the public over the course of preliminary engineering studies and environmental review of the project, including the public review of the 1997 Draft EIS. The alternatives listed below were eliminated from further consideration in the Supplemental Draft EIS because they were not technically or financially feasible, they were not practical, they were similar to other alternatives carried through the environmental analysis, and/or they did not meet the purpose of and need for the proposed project.

- A new highway from the south end of Thane Road to Atlin, B.C. on an alignment through the Taku River Valley.
- A new highway from the north end of Glacier Highway to the Katzehin River delta with shuttle ferry service between Katzehin and Haines, and a new highway linking Haines and Skagway between the end of the road in Lutak Inlet and Dyea Road in Skagway.
- A new highway from the north end of Glacier Highway to Skagway with bridge at Katzehin River delta to Haines.
- A new highway from the north end of Glacier Highway to Sawmill Cove and a new highway from Katzehin to Skagway with shuttle ferry service between Sawmill Cove and Katzehin and Katzehin and Haines.
- A new highway from Echo Cove to Sawmill Cove with shuttle ferry service to Slate Cove, a new highway from Slate Cove to Katzehin, and shuttle ferries to Haines and Skagway.

Further discussion of the reasons for eliminating these alternatives from further consideration is provided in Chapter 2.

Environmental Consequences

A comparison of the environmental consequences of the alternatives carried forward in the Supplemental Draft EIS is provided below. Table S-1, provided at the end of this section, summarizes many of the beneficial and adverse impacts of these alternatives.

Transportation - Alternative 2 would accommodate the greatest travel demand of any of the alternatives considered for the proposed project. Annual ADT would be seven times higher for Alternative 2 (930 vehicles) than for the No Action Alternative (130 vehicles) in 2038. Alternative 2 would have the capacity to meet the peak demand for travel between Juneau and Skagway and the 2038 summer average demand for travel between Juneau and Haines.

Alternative 2 would provide the greatest increase in flexibility and opportunity for travel relative to the No Action Alternative. In summer, travelers to Skagway could use the highway at any time without regard for ferry schedules or reservations. In winter, the road would be closed at times because of weather conditions or avalanches. Shuttle ferries could carry northbound and southbound traffic between Haines, Skagway, and Juneau when the highway is closed.

Under Alternative 2, travelers to Haines would take a ferry from Katzehin to Haines. DOT&PF estimates there would be nine ferry trips per day to Haines in the summer and six per day during the winter. This would be a substantial increase in travel flexibility and opportunity compared to the No Action Alternative.

Alternative 2C would provide the same flexibility and opportunity for travel between Juneau and Skagway as Alternative 2. However, travelers between Juneau and Haines would be required to take a ferry between Skagway and Haines under Alternative 2C instead of Katzehin. Because of this longer ferry trip, there would be six ferry trips per day to Haines in the summer and four per day in the winter with Alternative 2C.

All of the other build alternatives would require at least one ferry link for all traffic between Juneau and Haines or Skagway. Alternative 2A would have one ferry link on trips to Skagway and two on trips to Haines. Alternative 2B would require all traffic to take a ferry to or from Katzehin. Alternative 3 would have one ferry link on trips to Haines and two on trips to Skagway. Alternatives 4A through 4D improve ferry transportation in Lynn Canal but provide less travel opportunity than any of the highway alternatives. Alternative 4C would provide the least improvement in travel flexibility and opportunity relative to the No Action Alternative (one to two more trips per week).

Travel time between the Auke Bay ferry terminal in Juneau and Skagway in the summer would be 2.1 hours with Alternatives 2 and 2C, assuming an average speed on the highway of 45 mph. Alternatives 2 and 2C would have the shortest travel time between these communities. Alternatives 2 and 2B would have the shortest travel time to Haines (2.5 hours).

As ferry links are added to alternatives, travel times would increase. For the build alternatives that include highways on the east or west side of Lynn Canal, travel times to Skagway vary from 2.1 hours for Alternatives 2 and 2C (no ferry link) up to 4.3 hours for Alternative 3 (two ferry links). Travel times for trips to Haines with these alternatives vary from 2.5 hours for Alternatives 2 and 2B to 3.4 hours for Alternative 2C. Travel times for all of the marine alternatives except Alternative 4B would be somewhat longer than travel on the *M/V Fairweather* under the No Action Alternative. Alternative 4B consists of a fast vehicle ferry traveling from Sawmill Cove in the summer, and has the same travel time as the *M/V Fairweather* in the No Action Alternative.

Alternative 2 would have the lowest maintenance and operating cost of all alternatives: approximately $4.4 million versus $10.2 million for the No Action Alternative. Alternative 2C would have roughly the same annual operating cost as Alternative 2. As ferry links are added to the alternatives, annual operating costs would increase, with all of the marine alternatives (Alternative 4A through 4D) having higher annual operating costs than the highway alternatives

and the No Action Alternative. None of the build alternatives would reduce net state cost over a 30-year period when taking into consideration construction and refurbishment costs, operating costs, and revenues. The net cost to the state of the No Action Alternative over the 30-year period would be about $61 million. Alternative 2 would have the lowest net cost to the state of all build alternatives over this 30-year period ($68 million). Alternative 4A would have the highest net cost to the state of any of the build alternatives over the 30-year period ($98 million). All of the build alternatives would carry more vehicles than the No Action Alternative. Alternatives 2 through 2C, 3, 4B, and 4D would cost the state less than the No Action Alternative on a per vehicle basis.

The overall lower net cost to the state of the No Action Alternative would be the direct result of higher out-of-pocket costs for travelers. The out-of-pocket costs for a family of four in a 19-foot vehicle would be $237 between Juneau and Skagway and $180 between Juneau and Haines under the No Action Alternaitve[2]. All of the highway alternatives considered for the project would have out-of-pocket travel costs that are less than half of the out-of-pocket costs of the No Action Alternative. Alternative 2 would have the lowest out-of-pocket cost for travelers of all project alternatives. A trip would cost $10 between Juneau and Skagway and $34 between Juneau and Haines under Alternative 2. The out-of-pocket travel costs for Alternatives 4A and 4C would be similar to the No Action Alternative, while Alternatives 4B and 4D would reduce summer out-of-pocket travel costs by roughly 30 to 40 percent relative to the No Action Alternative.

One of the best economic measures of an alternative is its net present value[3]. Net present value is the total of the user benefits minus the net costs of an alternative over and above the net cost of the No Action Alternative for a given period of time. The 2004 to 2038 net present value of Alternative 2 is approximately $115 million. Alternatives 2 and 2C provide the highest net present value of all the alternatives. Other build alternatives have much lower net present value. In fact, three of the marine alternatives would have higher total project costs than the user benefits they would provide (see Table S-1).

Socioeconomics – Improved access in Lynn Canal would facilitate the movement of goods and people through and to the northern Southeast Alaska region. This would create closer links between the economies of Juneau, Haines, Skagway, and Whitehorse.

In the near-term, improved access to Juneau is not expected to result in new major economic development in Alaska. Instead, improved access to Juneau would redistribute within the state some of the economic benefits received from one of Alaska's primary industries, the visitor industry. Independent visitors (i.e., non-cruise ship visitors) could shift their travel patterns, perhaps spending more time and money in Southeast Alaska, particularly in Juneau. Improved access would have beneficial effects on other segments of the region's economy by reducing travel costs for residents and reducing shipping costs for some industries.

Population and the overall demographics of Juneau, Haines, and Skagway would not be substantially affected by improved access. Of the three major communities in the Lynn Canal corridor, Juneau would experience the most population growth due to improved access, though that growth would not be large.

Alternative 2 is projected to cause the greatest influx of independent visitors to Lynn Canal of all the build alternatives. Therefore, it would create the largest economic benefits to the region. All of the other build alternatives would result in less independent visitor travel with a corresponding

[2] This cost is for travel on a conventional monohull ferry. Travel on a fast vehicle ferry would cost 10 percent more.

[3] See *User Benefit Analysis*, Appendix E, for more information on economic analysis of alternatives.

reduction in visitor spending. For instance, Alternative 2C would have a relatively small economical benefit to Haines. On the other hand, Alternative 3 would provide the largest economic benefit to Haines of all the build alternatives and essentially no economic benefit to Skagway. Alternatives 4A, 4B, and 4D would have a small benefit to the region economy. Because Alternative 4C is similar to the No Action Alternative in regard to travel opportunity and flexibility and out-of-pocket travel costs, it would provide no economic benefits to Lynn Canal communities.

Visual Resources – The steep topography along much of the east side of Lynn Canal results in the alignment for Alternative 2 being close to the shore at many locations. It would be visible from many points in Berners Bay, Lynn Canal, and Taiya Inlet, introducing man-made forms into the natural landscape. From the highway there would be many panoramic views of Lynn Canal with the rugged, snow-capped Chilkat Range in the background.

Alternatives 2A, 2B, and 2C would have the same visual effects as Alternative 2 where a highway is present along the east side of Lynn Canal. Alternative 2C would have essentially the same visual impacts as Alternative 2 since they both include a highway from Echo Cove to Skagway. Alternative 2A would have no visual impacts to Berners Bay north of Sawmill Cove, while Alternative 2B would have no visual impact to Taiya Inlet.

Because topography is not as steep on the west side of Lynn Canal, most views of Alternative 3 from the Canal between William Henry Bay and Haines would be masked by vegetation except where the highway crosses the Endicott River, Sullivan River, the Davidson Glacier outwash plain, and the Chilkat River/Inlet. At those locations, Alternative 3 would introduce man-made forms into the natural landscape from views in Lynn Canal, Chilkat River, Chilkat Inlet, and Haines. The ferry terminals for this alternative would also be visible from views in Berners Bay and William Henry Bay.

Alternatives 4A through 4D would primarily involve improved ferry transportation in Lynn Canal. They would have lesser visual impacts from views in Lynn Canal than the highway alternatives considered for the project. Because Alternatives 4B and 4D would extend Glacier Highway to a new Sawmill Cove ferry terminal, these alternatives would introduce man-made forms to the natural landscape of Berners Bay.

Subsistence – Alternatives 2 through 2C and Alternative 3 would provide access to areas for subsistence harvest activities that previously were accessible only by boat or aircraft. This access could increase competition for subsistence resources from recreational hunting and fishing. Alternatives 4A through 4D would not improve access in Lynn Canal enough to impact subsistence activities.

Cultural Resources – The FHWA has determined that none of the build alternatives would have an adverse effect on properties eligible for the National Register of Historic Places. Alternatives 2, 2A, and 2C would have a visual effect on the Skagway and White Pass District National Historic Landmark but this effect would be mitigated by design elements developed in coordination with the National Park Service and the City of Skagway.

Geology – The proposed alignment for Alternatives 2 and 2C crosses 61 avalanche paths (including subpaths). Alternative 2A crosses 60 avalanche paths, while Alternative 2B crosses 36 avalanche paths. Because the terrain is not as steep on the west side of Lynn Canal, the Alternative 3 alignment crosses only 17 avalanche paths. With appropriate hazard reduction and operational risk management, such as raised embankments and catchment areas, avalanche forecasting, warnings, temporary highway closures, and release of unstable snow

with explosives during highway closures, the risk of avalanche associated accidents along any of the highway alternatives would be reduced to the generally accepted standard in North America for safe operation of a highway in avalanche-prone areas.

Wetlands – Alternatives 2 and 2B would result in the loss of 93 acres of wetlands. Most of the wetlands filled for the highway alignment (86 percent) would be forested wetlands that provide hydrologic control functions, sediment retention functions, and wildlife habitat. The largest area of wetland loss, 62 acres, would occur between Slate Creek and Sherman Point north of Berners Bay. A total of 19 acres of forested wetlands, 3 acres of palustrine emergent wetlands, and 1 acre of palustrine scrub-shrub wetlands would be filled in Berners Bay.

Alternative 2C would have 3 less acres of wetlands impacted than Alternatives 2 and 2B (90 acres) because there would not be a new ferry terminal north of the Katzehin River. Alternative 2A would avoid the loss of 21 acres of wetlands in Berners Bay resulting in a total wetland impact of 71 acres.

Alternative 3 would result in the loss of 36 acres of wetlands. Approximately 90 percent of the wetlands filled for the highway alignment would be forested wetlands that provide hydrologic control functions, sediment retention functions, and wildlife habitat.

Alternatives 4A and 4C would not impact wetlands. Alternatives 4B and 4D would result in the loss of 11 acres of wetlands between Echo Cove and Sawmill Cove.

Marine and Freshwater Habitats – A total of 31 acres of intertidal and subtidal marine habitat would be filled or dredged for construction of the highway and Katzehin ferry terminal under Alternatives 2 and 2B. Alternative 2C would fill 22 acres of marine habitat. Alternative 2A would dredge or fill 35 acres of marine habitat, the largest impact of any alternative, from construction of three ferry terminals as well as a highway.

For all build alternatives, all anadromous fish streams would be crossed with bridges. Piers for the bridges over the Lace and Antler rivers (Alternatives 2, 2B, and 2C) and Katzehin rivers (Alternatives 2 through 2C) would be placed approximately 130 feet apart and would not impede fish movement in these rivers. Under Alternative 3, the Sullivan, Endicott, and Chilkat rivers would be crossed in a similar manner.

Alternative 3 would result in impacts to 12 acres of intertidal and subtidal habitat, primarily from construction of ferry terminals at Sawmill Cove and William Henry Bay. Alternatives 4A through 4D would cause disturbance to less than an acre of subtidal habitat at the existing Auke Bay ferry terminal. Alternatives 4B and 4D would also result in impacts to approximately three acres of marine habitat from construction of a ferry terminal at Sawmill Cove.

None of these impacts would be large enough to measurably affect fish and invertebrate populations in Lynn Canal. FHWA has determined that the build alternatives would not have a substantial adverse effect on Essential Fish Habitat.

Terrestrial Habitat – Alternatives 2 and 2C would result in the loss of 629 acres of terrestrial habitat. Of this total, 382 acres would be old-growth forest, 233 acres would be other forest (including a small amount of second growth), and 13 acres would be shrub (non-forest brush) and open meadow or muskeg vegetation communities. Alternative 2A would result in the loss of 534 acres of terrestrial habitat of which 294 acres would be old-growth forest, 230 acres would be other forest, and 9 acres would be shrub and open meadow or muskeg. Alternative 2B would result in the loss of 456 acres of terrestrial habitat including 314 acres of old-growth forest, 128 acres of other forest, and 13 acres of shrub and muskeg. The loss from each

vegetation type represents less than one percent of that type in the project study area. The loss of this vegetation would not adversely affect any rare or unique community types or any known rare or sensitive plant species.

Alternative 3 would result in the loss of 423 acres of terrestrial habitat including 314 acres of old-growth forest, 95 acres of other forest, and 14 acres of shrub and muskeg. The loss from each vegetation type represents less than one percent of that type in the project study area. The loss of this vegetation would not adversely affect any rare or unique community types or any known rare or sensitive plant species.

Alternatives 4A and 4C would not impact any terrestrial habitat. Alternatives 4B and 4D would result in the loss of 53 acres of old-growth forest and 2 acres of muskeg.

Wildlife – The direct loss of wetland and terrestrial habitat from the build alternatives that include a highway (Alternatives 2 through 2C, 3, 4B, and 4D) would have a small effect on wildlife because that loss would be a small (less than one percent) part of the habitat available in the project study area. However, habitat fragmentation caused by the presence of a highway, mortality from vehicle collisions, and the indirect impact of improved access by hunters and trappers resulting from Alternatives 2 through 2C and Alternative 3 would have a larger impact on wildlife, particularly terrestrial mammals.

Alternatives 2 and 2C would have the largest impacts on terrestrial wildlife. A highway on the east side of Lynn Canal would be constructed close to the coastline, resulting in a potential barrier between upland habitats and important marine fringe along the east side of Lynn Canal that would fragment habitat of animals that tend to avoid roads. Based on habitat capability modeling conducted for the 1997 Draft EIS, Alternatives 2 and 2C are projected to reduce the brown bear habitat capability in the potentially impacted areas by up to 29 percent. Alternatives 2 and 2C would also increase the potential for mortality from vehicle collisions to the small moose population in Berners Bay. Alternative 2A would not impact wildlife populations in Berners Bay from Sawmill Cove to Slate Cove. Alternative 2B would not impact wildlife populations north of Katzehin.

Alternative 3 would have similar but smaller impacts to wildlife than Alternatives 2 through 2C. For example, this alternative is projected to reduce the brown bear habitat capability in the potentially impacted areas by up to 21 percent. Alternatives 4A and 4C would have no impacts to terrestrial wildlife, while impacts from Alternatives 4B and 4D would be small because they would involve the construction of only about five miles of new road through terrestrial habitats.

Bald Eagle – The highway for Alternatives 2 and 2C would be located within 0.5 mile of 100 bald eagle nests and within 330 feet of 57 of these nests. Alternatives 2A and 2B would be in close proximity to fewer nests because the highway lengths are shorter (see Table S-1). Alternative 3 would be within 0.5 mile of 45 bald eagle nests, and within 330 feet of 25 of these nests. The highway for Alternatives 4B and 4D would be located within 0.5 mile of seven bald eagle nests between Echo Cove and Sawmill Cove, none of these nests are within 330 feet of the alignment.

Construction along the alignments of Alternatives 2 through 2C and 3 would be staged; therefore, construction would not occur along the entire alignment in any one season. In addition, not all eagle nests are actively used each year. Construction would be timed to avoid nest tree areas during the nest occupation period, and to avoid active nests during the rearing season. In specific locations, monitors may be used to allow construction during these periods if agreed to by U.S. Fish and Wildlife Service.

A highway on the east or west side of Lynn Canal would involve a persistent source of noise that may result in the relocation of individual eagle pairs to alternate nest trees within their nesting territory. Individual eagle pairs may even abandon their nesting territory and associated hunting perches altogether, especially during the summer months, when traffic volumes are predicted to peak. Because food availability has been identified as a key factor that influences breeding success, eagle pairs less sensitive to noise disturbance would likely habituate to highway operation near prime feeding areas. In addition, opportunistic bald eagle pairs from other territories may use previously abandoned nest sites along the east shoreline of Lynn Canal for breeding. As a result, a highway on either side of Lynn Canal is not likely to adversely affect the overall population of bald eagles in the Lynn Canal area.

Threatened and Endangered Species – There are two species in the project study area that are protected under the Endangered Species Act: the Steller sea lion (classified as threatened) and the humpback whale (classified as endangered). There are two principal haulouts along the proposed alignment for Alternatives 2 through 2C that are used on an annual basis by Steller sea lions: Gran Point and Met Point. Gran Point is designated a Critical Habitat Area by the National Marine Fisheries Service. Met Point is also an important haulout for this species. Highway design elements have been incorporated into Alternatives 2 through 2C that are intended to prevent motorists from leaving the highway corridor and approaching these haulouts. DOT&PF would monitor the effectiveness of these design elements after highway construction and make additional changes, if necessary, to keep people away from these haulouts. The project would include no new boat launch facilities in Lynn Canal. DOT&PF would monitor construction activities within 3,000 feet of the Gran Point and Met Point haulouts to ensure that sea lions were not disturbed. No construction would take place within 1,000 feet of the haulouts when they are being used by sea lions. Based on the above, the FHWA has determined that Alternatives 2 through 2C are not likely to adversely affect Steller sea lions.

All of the build alternatives would increase ferry traffic in one or more areas of the Lynn Canal region. This increase in traffic would not be high enough to substantially increase the risk of collisions with humpback whales with the possible exception of Alternative 2A (Alternative 2A would have 20 shuttle trips/day during the summer). Pile driving for construction of ferry terminals under Alternatives 2, 2A, 2B, 3, 4B, and 4D could disturb humpback whales in the area. Monitors would be used during pile driving to insure that this activity does not occur when humpback whales are within 330 feet of the construction area. For these reasons, the FHWA has determined that the build alternatives are not likely to adversely affect humpback whales.

Identification of the Preferred Alternative

The 1997 Draft EIS for the Juneau Access Improvements Project did not identify a preferred alternative for the State of Alaska. After the comment period ended in December 1997, DOT&PF analyzed the comments, developed a list of the substantive issues, and identified the additional information that was necessary to address the substantive comments. In late March 1999, a review team composed of FHWA and non-Southeast Region DOT&PF engineers and planners evaluated the information developed for the project and rated the alternatives based on the purpose and need elements. Alternative 2, the East Lynn Canal Highway with Katzehin Ferry Terminal, was rated the highest of all alternatives and proposals. This rating was based on the assessment that Alternative 2 would meet corridor traffic demand, provide the greatest flexibility and opportunity to travel, result in the greatest reduction in travel time, have the lowest operating cost, and result in the lowest user cost for the traveler.

In January 2000, Governor Knowles declared Alternative 2 the state's preferred alternative. At the same time, Governor Knowles stated that the alternative would not be actively pursued

during his administration and that most work on the EIS would be discontinued. In February 2000, the DOT&PF Commissioner confirmed the state's selection of Alternative 2 as the preferred alternative to FHWA, along with a plan to continue obtaining specific data that would be crucial to restarting the EIS at a later date.

In December 2002, newly elected Governor Murkowski directed DOT&PF to aggressively pursue completion of the Juneau Access Improvements Project EIS. In February 2003, the DOT&PF Commissioner, after reviewing the Draft EIS and the reevaluation that called for a Supplemental Draft EIS, stated that Alternative 2 continued to be the state's preferred alternative. After careful scrutiny of all the studies for the Supplemental Draft EIS, DOT&PF continues to prefer Alternative 2 because of its ability to best meet the purpose of and need for the proposed project.

All reasonable alternatives evaluated in the Supplemental Draft EIS are under consideration and have been developed to a comparable level of detail. The final identification of a preferred alternative will not be made until the alternatives' impacts, written comments on the Supplemental Draft EIS, and comments received at the public hearings have been fully evaluated and considered. Final selection of an alternative will be provided in the Record of Decision.

Areas of Controversy

Providing highway access to Juneau is a contentious issue in northern Southeast Alaska. In October 2000, Juneau voters were split on an advisory ballot question regarding preference for a long-range plan for surface access north from Juneau, with 5,840 choosing enhanced ferry service and 5,761 choosing a road. A September 2002 motion by the City and Borough of Juneau Assembly supporting "completion of the EIS for the identified preferred alternative for the road into Juneau …" passed by a 5 to 4 vote. In 1999 a survey conducted for the City of Skagway indicated that 49 percent of Skagway residents oppose a road while 46 percent were in favor of a road. In April 2003, the City Council of Skagway passed a resolution supporting improved ferry service and opposing a road connection by a four to one vote. In January 2003, the Haines Borough Assembly voted unanimously to request that a road to Haines (as opposed to a road to just Skagway) be included in the EIS. Telephone surveys of Haines, Skagway, and Juneau households conducted for the Supplemental Draft EIS confirm that residents are divided in their opinions on the value of highway access. Aspects of this controversy include:

- Potential reduction in AMHS service to other Alaskan coastal communities because of the loss of revenue that would result from discontinuing AMHS mainline service in Lynn Canal
- High initial construction costs of a highway in Lynn Canal
- Aesthetic and biological impacts in Berners Bay
- Impacts to the economies of Haines and Skagway
- Impacts to the perceived quality of life in Juneau, Haines, and Skagway

Issues raised by the public and agencies are outlined in Chapter 7 of the Supplemental Draft EIS.

Related Actions and Projects

In addition to the Juneau Access Improvements Project, there are two major actions being pursued by private parties in the Lynn Canal region. These actions are independent of the Juneau Access Improvements Project, but are related to the project because they could affect some of the same areas and resources. The two actions and their relationship to the Juneau Access Improvements Project are described below.

Coeur Alaska, Inc., a mining company based in Idaho, acquired the Kensington and Jualin Mines north of Berners Bay in the 1990s and received all permits required to begin construction and operations following publication of the *1997 Kensington Gold Project Final Supplemental Environmental Impact Statement* and issuance of a U.S. Forest Service (USFS) Record of Decision. Construction of the new mine has not started. In an effort to increase efficiency and reduce disturbance in the area, Coeur Alaska submitted an amended Plan of Operations, which became the basis of the current *2004 Kensington Gold Project Draft Supplemental Environmental Impact Statement.*

Several of the alternatives being considered for the Juneau Access Improvements Project would intersect an existing unpaved road that runs from the shore at Slate Cove to the Jualin Mine. This is a public road that may be upgraded as part of Coeur Alaska's proposal to build a deep water floating dock at Slate Cove with funds from the Alaska Industrial Development and Export Authority (AIDEA). Use of these funds would insure state access to the dock. If Coeur Alaska develops a ship terminal at Slate Cove with AIDEA funds, DOT&PF could use the dock in two ways: to provide interim ferry shuttle service during construction of an East Lynn Canal highway north of Slate Cove, and to provide temporary winter ferry service during extended closures of an East Lynn Canal highway for avalanche control.

Goldbelt, a local Native corporation organized under the Alaska Native Claims Settlement Act, owns land at Cascade Point, three miles north of the end of the Glacier Highway in the City and Borough of Juneau. Goldbelt has prepared a management plan for these landholdings that includes development on 10 percent of Goldbelt land at Echo Cove, including a 40-acre commercial development site at Cascade Point (road, dock development, and service station).

In 1996, Goldbelt prepared the Echo Cove Master Plan and an EIS was distributed for a proposed gravel access road from Echo Cove to Cascade Point in Berners Bay. The USFS completed a Record of Decision in 1998. Goldbelt has received easements to cross USFS land, USFS special-use permits, and a U.S. Army Corps of Engineers (USACE) 404 permit for construction of the proposed road. The alignment of this road and the highway segment for some of the Juneau Access Improvements Project alternatives between Echo Cove and Sawmill Cove would be similar. If Goldbelt's Cascade Point Road is built first, DOT&PF would use that alignment and widen the road to meet the state's highway standards. If one of the Juneau Access Improvements Project alternatives that includes this highway segment is built first, Goldbelt could use the highway with the addition of a short access road to Cascade Point.

The State of Alaska is funding construction of the Cascade Point Road as part of the Industrial Roads Program. Also known as the Roads to Resources program, these state funds are used to foster industrial development. In this case the goal is to assist Goldbelt to develop its land at Cascade Point.

Federal Actions Necessary

Depending on the build alternative selected for the Juneau Access Improvements Project, the following federal permits and approvals may be required.

- USFS special use permit for project facilities in the Tongass National Forest
- USACE Section 404 (Clean Water Act) permit for fill in wetlands and other waters of the U.S.
- USACE Section 10 permit (Rivers and Harbors Act) for dredge, fill, and structures placed below mean high water
- U.S. Coast Guard, Section 9 permits (Rivers and Harbors Act) for bridges over navigable waters

Unresolved Issues

Compensatory mitigation for impacts to wetlands and other waters of the U.S., including essential fish habitat, has been discussed with resource agencies but there has been no resolution. The Final EIS will contain futher information on compensatory mitigation for the preferred alternative. Specific details on mitigation will be finalized for the selected alternative during the permitting process.

The National Park Service (NPS) has not concurred with FHWA's determination that Alternatives 2, 2A, and 2C would not have an adverse effect on the Skagway and White Pass District National Historic Landmark (NHL) due to concerns regarding potential visual and auditory impacts. Consultation with the NPS on ways to reduce the potential impacts is ongoing.

FHWA has not made a determination on the applicability of Section 4(f) of the U.S. Department of Transportation Act (49 U.S.C. 303 and 23 U.S.C. 138) to undeveloped land that would be acquired within the Skagway and White Pass NHL for Alternatives 2, 2A, or 2C. Consultation with the NPS is ongoing and will be followed by consultation with the State Historic Preservation Officer (SHPO) after which FHWA will make the final determination.

The SHPO has concurred with FHWA's determinations of eligibility for historic properties. However, the SHPO has not concurred that the FHWA's determination that the historic width of the Daltan Trail is 20 feet. Consultation with SHPO to resolve the boundary of this historic property is ongoing.

EIS Availability

The entire Supplemental Draft EIS is available free of charge on compact disc (CD) for viewing electronically. The document is also available for viewing on the project web site at http://juneauaccess.alaska.gov. Bound versions of the document are available upon request. A bound document with a complete set of appendices is available for a $100 printing charge. Bound versions of the document are available for public review at the following locations:

Juneau Public Library 292 Marine Way Juneau, Alaska	Mendenhall Valley Public Library Mendenhall Mall Juneau, Alaska	Douglas Library 1016 3rd Street Douglas, Alaska

Haines Public Library 111 Third Avenue South Haines, Alaska	Skagway Public Library 769 State Street Skagway, Alaska	DOT&PF Southeast Region 6860 Glacier Highway Juneau, Alaska

For information on obtaining a CD or bound version of the Supplemental Draft EIS, contact Deborah Holman at DOT&PF at (907) 465-1828, or visit the project web site at http://juneauaccess.alaska.gov.

Table S-1
Summary of Estimated Beneficial and Adverse Impacts of Proposed Project Alternatives

Factors	Alternatives									
	No Action	2	2A	2B	2C	3	4A	4B	4C	4D
Cost Factors										
Initial Capital Costs ($ million)	0	$281	$294	$246	$265	$269	$124	$137	$102	$98
30-Year Life Cycle Costs[1] ($ million)	$267	$323	$380	$352	$304	$375	$495	$482	$326	$313
Annual Maintenance and Operations Costs ($millions)	$10.2	$4.4	$8.4	$9.0	$4.4	$9.2	$16.7	$15.5	$11.7	$11.3
Net Present Value[2] ($ millions)	0	$115	$46	$70	$114	$32	-$56	-$23	-$57	$3
Purpose and Need Factors										
Project Summer Capacity to Skagway (vehicles per day)	71	30,000[3]	776	636	30,000[3]	408	223	227	149	203
Project Summer Capacity to Haines (vehicles per day)	96	612	544	544	408	1,008	229	284	154	208
Summer Travel Time – Auke Bay to Skagway (hours)	3.8/9.1	2.1	2.6	3.0	2.1	4.2	4.1/9.1	3.8/9.1	6.3/9.1	5.3/9.1
Summer Travel Time – Auke Bay to Haines[4] (hours)	3.5/7.1	2.5	3.0	2.5	3.4	2.9	3.8/7.1	3.5/7.1	6.0-7.1	5.0/7.1
Number of Ferry Round Trips/Week – Auke Bay to Skagway (Summer)	7	NA	140	42	NA	42	16	16	9	16
Number of Ferry Round Trips/Week – Auke Bay to Haines (Summer)	8	63	56	56	42	84	16	30	9	16
Net State Cost Over 30-Year Analysis Period ($millions)	$61	$68	$86	$88	$68	$86	$98	$94	$78	$70
Total / Out-of-Pocket User Costs – Juneau/Skagway[5]	$237 / $237	$41 / $10	$60 / $31	$77 / $51	$41 / $10	$111 / $85	$261 / $261	$174 / $163	$237 / $237	$160 / $149
Total / Out-of-Pocket User Costs – Juneau/Haines[5]	$180 / $180	$60 / $34	$77 / $55	$60 / $34	$82 / $50	$70 / $45	$198 / $198	$124 / $113	$180 / $180	114 / $103
Employment and Population Impacts										
Juneau										
New Local Employment (2038)	0	290	200	200	220	70	45	90	0	30
Population Increase (2038)	0	435	300	300	330	100	70	140	0	45

Table S-1 (continued)
Summary of Estimated Beneficial and Adverse Impacts of Proposed Project Alternatives

Factors	Alternatives									
	No Action	2	2A	2B	2C	3	4A	4B	4C	4D
Skagway										
New Local Employment (2038)	0	60	70	55	125	0	10	15	0	0
Population Increase (2038)	0	78	90	70	160	0	10	20	0	0
Haines										
New Local Employment (2038)	0	70	45	65	0	155	15	30	0	15
Population Increase (2038)	0	105	68	98	0	230	25	50	0	25
Natural Resources Impacts										
Number Of River/Stream Crossings	0	58	49	46	58	32	0	5	0	5
Number Of Anadromous Streams Crossed	0	9	5	9	9	11	0	1	0	1
Terrestrial Habitat Losses[6] (acres)	0	629	534	456	629	423	0	55	0	55
Wetland Habitat Losses (acres)	0	92.5	71.2	92.5	90	35.5	0	11	0	11
Essential Fish Habitat Losses (acres)	0	30.7	35	30.7	21.9	12.9	0	3.2	0	3.2
Eagle Nests Within 330 Feet	0	57	54	45	57	25	0	0	0	0
Total Eagle Nests Within 0.5 Mile	0	100	97	88	100	45	0	7	0	7
Precent Reduction in Brown Bear Habitat Capability	0	29	17	26	29	21	0	4	0	4
Percent Reduction in Black Bear Habitat Capability	0	7	5	6	7	2	0	1	0	1
Percent Reduction in Marten Habitat Capability	0	38	26	32	38	30	0	7	0	7
Percent Reduction in Mountain Goat Habitat Capability	0	1	1	0.4	1	1	0	0.1	0	0.1

Notes: [1]Life-cycle costs are the construction, refurbishment, and maintenance costs for a 5-year construction period (2004 to 2008) and a 30-year operation period (2008 to 2038) discounted to 2004 dollars. See Section 4.1.5 for an explanation of life-cycle cost analysis.
[2]Net present value is the sum of the user benefits minus net incremental project costs. User benefits are the reduction in user costs which consist of travel time, AMHS fares, vehicle costs, and accident costs.
[3]Based on Transportation Research Board capacity estimate of 2,000 cars/hour for a 2-lane highway.
[4]The first number is based on travel on a shuttle ferry and the second number is the mainline ferry travel time.
[5]Total/Out-of-pocket cost for family of four traveling in 19-foot vehicle. No Action cost is on a mainline ferry, FVF would be 10 percent higher. All other costs are based on use of shuttle ferries.
[6]Includes wetlands.