Juneau Access Improvements Project
Draft Supplemental Environmental Impact Statement

Prepared by:

Alaska Department of Transportation
& Public Facilities
6860 Glacier Highway
Juneau, Alaska 99801-7999

Federal Project Number: STP-000S(131)
State Project Number: 71100

Prepared for:

Federal Highway Administration, Alaska Division
709 West 9th Street, Room 851
Juneau, AK 99802

September 2014

FHWA will issue a single Final Environmental Impact Statement and Record of Decision document pursuant to Pub. L. 112-141, 126 Stat. 405, Section 1319(b) unless FHWA determines statutory criteria or practicability considerations preclude issuance of the combined document pursuant to Section 1319.

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

Factors	Alternative							
	No Action	1B	2B	3	4A	4B	4C	4D
Cost Factors								
Initial Construction Costs ($million)	$0	$0	$574	$516	$228	$287	$63	$90
Total Project Life Costs[1] ($millions)	$669	$1,030	$1,093	$1,125	$1,556	$1,605	$861	$905
Annual Maintenance and Operations Costs ($millions)	$15.4	$23.8	$20.4	$21.7	$33.7	$32.0	$20.0	$20.8
Net Present Value ($millions) relative to No Action Alternative	-	-$151	-$309	-$340	-$217	-$215	-$73	-$26
Purpose and Need Factors								
Forecasted Summer Demand to/from Skagway (vehicles per day)	55	90	615	380	120	195	75	180
Forecasted Summer Demand to/from Haines (vehicles per day)	85	100	730	680	150	235	95	220
Projected Summer Capacity to/from Skagway (vehicles per day)	61	201	636	456	149	237	131	237
Projected Summer Capacity to/from Haines (vehicles per day)	93	129	848	816	162	250	144	250
Summer Travel Time – Auke Bay to Skagway[2] (hours)	7.6	6.8	3.4	5.5NB/ 5.2SB	4.0	3.7	6.3	5.2
Summer Travel Time – Auke Bay to Haines[2] (hours)	5.9	5.9	3.0	3.0	3.8	3.5	5.9	4.8
Number of Ferry Round trips/Week – Auke Bay to Skagway (summer)	8	9[3]	42	42	16	16	9	16
Number of Ferry Round trips/Week – Auke Bay to Haines (summer)	8	8	56	84	16	16	9	16
State's Net Project Life Cost - ($millions)[4]	$301	$573	$494	$475	$770	$662	$446	$294
State's Net Cost Per Vehicle (dollars)	$210	$321	$52	$62	$333	$195	$277	$92
Total/Out-of-Pocket User Costs (one way) – Juneau-Skagway[5]	$286/ $286	$223/ $223	$101/ $67	$142/ $108	$286	$204/ $190	$286	$204/ $190
Total/Out-of-Pocket User Costs (one way) – Juneau-Haines[5]	$218/ $216	$174/ $173	$82/ $47	$91/ $59	$218/ $216	$148/ $132	$218/ $216	$148/ $132
Traffic-related Employment and Population Impacts								
Juneau								
New Local Employment (2020)	0	5	130	105	20	40	0	35
Population Increase (2020)	0	8	195	158	30	60	0	53
Skagway								
New Local Employment (2020)	0	5	85	50	15	30	5	25
Population Increase (2020)	0	8	128	75	23	45	8	38

Factors	Alternative							
	No Action	1B	2B	3	4A	4B	4C	4D
Haines								
New Local Employment (2020)	0	0	60	15	10	20	0	20
Population Increase (2020)	0	0	90	23	15	30	0	30
Natural Resources Impacts								
Number of Anadromous Streams Crossed	0	0	10	11	0	1	0	1
Old-growth Forest Habitat Losses (acres)	0	0	412	308	0	38	0	38
Wetland Habitat Losses (acres)	0	0	61	26	0	2	0	2
Intertidal/Subtidal Area Losses (acres)	0	0	32	12	<1	3	<1	3
Essential Fish Habitat Impacted (acres)	0	0	37	12	<1	2	<1	2
Eagle Nests Within 660 Feet	0	0	99	48	0	7	0	7
Total Eagle Nests within 0.5 mile	0	0	136	63	0	30	0	30

[1] The total project life cost is the summation of all capital and annual operating costs over the lifetime of the project minus any residual value left at the end of 36 years.

[2] Travel time for Day Boat ACF or FVF or *M/V Malaspina* as a shuttle. In all alternatives except 2B and 3, the mainline ferry would have a travel time of 9.1 hours between Auke Bay and Skagway and 7.2 hours between Auke Bay and Haines.

[3] An additional six trips per week could be made by taking the Day Boat ACF between Auke Bay and Haines and transferring ferries.

[4] This represents the total project life cost less the federal contribution and State revenue.

[5] First number is total user cost and second number is out-of- pocket cost. Total cost is based on fares plus $0.64 per mile for vehicular travel (AAA, 2012). Out-of-pocket cost based on fares and gasoline consumption.

Table 4-23:
Thirty-Six-Year Total Project Life Costs for the No Action Alternative and Alternative 2B, 2015-2050 (2013 Dollars)

Alternative	Total Funds			State Funds			
	Capital Costs ($million)[1]	Operating Costs ($million)	Total Project Costs ($million)	Total Cost ($million)	Total Revenue ($million)[2]	Net Cost ($million)	Cost/Vehicle (dollars)
1—No Action	$104	$566	$670	$575	$274	$301	$210
2B	$379	$714	$1,093	$851	$357	$494	$52

[1]Residual value subtracted.
[2]Includes both fares paid to AMHS and gas tax receipts.

Table 4-23 indicates that the net cost to the State of Alternative 2B during the analysis period would be about $193 million more than the No Action Alternative. This is because both the capital and operating costs for Alternative 2B would be greater than those associated with the No Action Alternative. Alternative 2B would carry more vehicles than the No Action Alternative and, therefore, Alternative 2B would cost the State less than the No Action Alternative on a per vehicle basis.

✳ Alternative 2B would have an annual operating cost of approximately $20.3 million versus $15.4 million for the No Action Alternative.

The total cost[23] of travel between Juneau and Skagway or Haines for a family of four in a vehicle 19 feet long is listed in Table 4-24 for the No Action Alternative and Alternative 2B. This table also lists the out-of-pocket cost[24] of travel between Juneau and Skagway or Haines for the same family. As indicated in the table, Alternative 2B would reduce the total travel cost by nearly two thirds of the cost to travel on a mainline vessel under the No Action Alternative. The savings to the traveler would be greater when compared to travel on a Day Boat ACF. The out-of-pocket cost (fuel and fares) to/from Haines would be approximately 80 percent less for Alternative 2B than for the No Action Alternative. To and from Skagway, the out-of-pocket cost is approximately 77 percent less. The cost of taking the Haines-Skagway shuttle ferry would be the same under Alternative 2B as under the No Action Alternative, which is expected to be considerably lower than the existing cost of $157.50 to encourage use once additional capacity exists (see Section 4.2A.2.4).

Table 4-24:
Juneau to/from Haines and Skagway Total and Out-of-Pocket User Cost for a Family of Four in a 19-Foot Vehicle (Standard Size Pickup) for the No Action Alternative and Alternative 2B

Alternative	Haines User Cost[1]	Skagway User Cost[1]
1—No Action	$218/$216	$286/$286
2B	$82/$47	$101/$67

[1]The first number is total user cost and the second number is out-of-pocket cost.
Total cost is based on fares plus $0.64 per mile for vehicular travel (AAA, 2012).
Out-of-pocket cost is based on fares and gasoline consumption.

[23] Total user costs are out-of-pocket costs and vehicle maintenance, ownership, and accident costs based on highway miles traveled.
[24] Out-of-pocket costs are a combination of estimated fares and gasoline on highway segments. Fares for the No Action Alternative are actual 2013 fares charged.

Table 2-9:
Travel Times for Alternative 2B

Route	Travel Time (hours)
Auke Bay-Haines	3.0
Auke Bay-Skagway	3.4

Note: For consistency, the travel times for each alternative starts at Auke Bay.

Travel Frequency – Under Alternative 2B, flexibility and opportunity for travel would be a function of the frequency of Day Boat ACF service to and from the Katzehin Ferry Terminal. During the summer, the ferries to/from Katzehin would operate approximately 15 hours per day. During the winter, the ferry to/from Haines would operate approximately 11 hours per day, and the ferry to/from Skagway would operate about 10 hours a day. The Haines-Skagway shuttle would not operate; travelers going between Haines and Skagway would travel to Katzehin and transfer ferries. Winter travel would be periodically limited by road closures for avalanche control; however, one or more ferries would be available to transport vehicles and passengers in Lynn Canal on days when the highway was closed. Trip frequency for Alternative 2B is provided in Table 2-10.

Table 2-10:
Travel Frequency for Alternative 2B

Route	Round Trips per Day	Round Trips per Week
Auke Bay-Haines		
Summer	8	56
Winter	6	42
Auke Bay-Skagway		
Summer	6	42
Winter	4	28

Cost – Total final design and construction costs for Alternative 2B would be approximately $574 million, including $523 million for highway design and construction, approximately $22 million for vessel acquisition, approximately $20 million for the Katzehin Ferry Terminal improvements, and approximately $9 million for the Skagway Ferry Terminal improvements. Annual M&O costs are estimated to be approximately $20.4 million: $2.8 million for the highway (including avalanche control costs) and $17.6 million for the shuttle ferry operations. The estimated total project life cost is $1.1 billion. The out-of-pocket user cost for Alternative 2B for a one-way trip would be $47 between Juneau and Haines and $67 between Juneau and Skagway. The State cost per vehicle would be $52.

Alignment – The Alternative 2B road alignment is a refinement of the 2006 Final EIS alignment and was designed to further reduce impacts to wetland habitats and to avoid and/or minimize impacts to bald eagle nest trees. It also reflects design changes based on additional geotechnical survey information. Alternative 2B would begin at Echo Cove and would involve widening Glacier Highway to Cascade Point (see Section 1.2.3). From there, the highway would generally parallel the shoreline to a point north of the Katzehin River, where a ferry terminal would be built. The route would generally be set back from the shoreline except at a few locations where topography would allow the highway to be located well inland. In some locations, topography

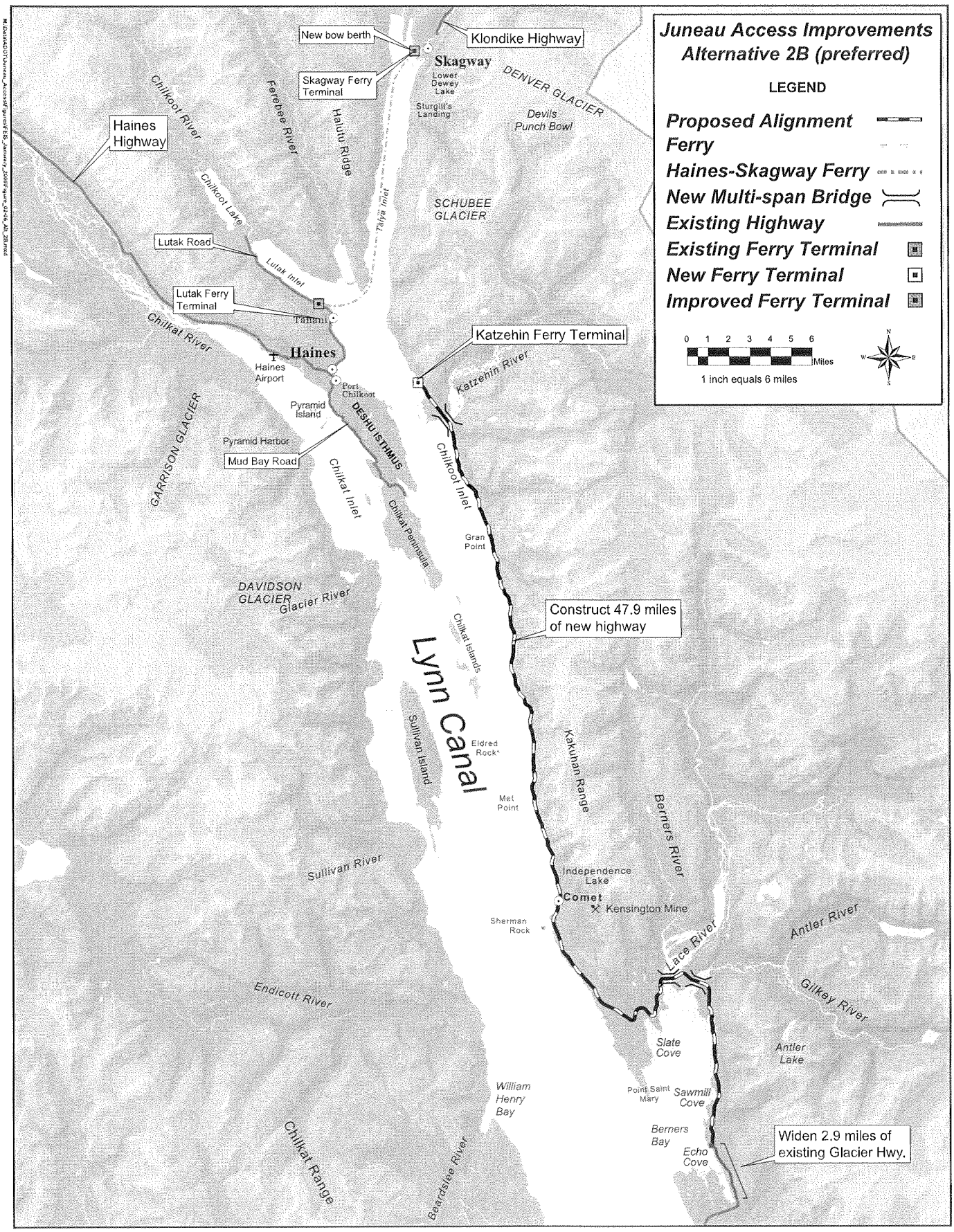

Figure 2-7a
Alternative 2B: East Lynn Canal Highway to Katzehin Ferry Terminal with Shuttles to Haines & Skagway