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SEA

SERVICE DATE – APRIL 3, 2008

SURFACE TRANSPORTATION BOARD

NOTICE

STB Finance Docket No. 34658

ALASKA RAILROAD CORPORATION—PETITION FOR EXEMPTION—TO  
CONSTRUCT AND OPERATE A RAIL LINE BETWEEN NORTH POLE, ALASKA AND  
DELTA JUNCTION IN ALASKA

Decided: April 3, 2008

**AGENCIES: Lead:** Surface Transportation Board. **Cooperating:** U.S. Army Corps of Engineers, Alaska District; U.S. Coast Guard, Seventeenth Coast Guard District; Bureau of Land Management, Alaska State Office; Alaskan Command; 354<sup>th</sup> Fighter Wing Command, Eielson Air Force Base; Federal Transit Administration, Region 10; Federal Railroad Administration; Alaska Department of Natural Resources.

**ACTION:** Notice of Availability of Final Scope of Study for the Environmental Impact Statement (EIS)

**SUMMARY:** On July 6, 2007, the Alaska Railroad Corporation (ARRC) filed a petition with the Surface Transportation Board (Board) pursuant to 49 U.S.C. 10502 for authority to construct and operate a new rail line from the vicinity of North Pole to Delta Junction, Alaska. The project would involve the construction and operation of approximately 80 miles of new main line track. Figure 1 shows ARRC's existing track and the proposed rail line extension from North Pole to Delta Junction (All figures are available for viewing on the Board's website at [www.stb.dot.gov](http://www.stb.dot.gov) by going to "Environmental Matters," then selecting "Key Cases" in the dropdown; and then when the next page appears, clicking "Alaska Railroad – Northern Rail Extension). Because the construction and operation of this project has the potential to result in significant environmental impacts, the Board's Section on Environmental Analysis (SEA) has determined that the preparation of an Environmental Impact Statement (EIS) is appropriate.

To help determine the scope of the EIS, and as required by the Board's regulations at 49 CFR 1105.10(a)(2), SEA published in the *Federal Register* and mailed to the public on November 1, 2005, the Notice of Availability of Draft Scope of Study for the EIS, Notice of Scoping Meetings, and Request for Comments. SEA also prepared and distributed to the public a fact sheet that introduced ARRC's Northern Rail Extension, announced SEA's intent to prepare an EIS, requested comments, and gave notice of three public scoping meetings to over 400 citizens, elected officials, Federal, state, and local agencies, tribal organizations, and other potentially interested organizations received this information. SEA held three public scoping meetings in North Pole, Delta Junction, and Anchorage, Alaska on December 6, 7, and 8, 2005, respectively.

The scoping comment period concluded January 13, 2006. The U.S. Army Corps of Engineers, Alaska District (USACE); U.S. Coast Guard, Seventeenth Coast Guard District (USCG); Bureau of Land Management, Alaska State Office (BLM); U.S. Department of Defense, Alaskan Command (ALCOM); U.S. Department of Defense, 354<sup>th</sup> Fighter Wing, Eielson Air Force Base (354<sup>th</sup>); Federal Transit Administration, Region 10 (FTA); Federal Railroad Administration (FRA); and Alaska Department of Natural Resources (ADNR) requested and were granted cooperating agency status in preparation of the EIS. After review and consideration of all comments received, this notice sets forth the final scope of the EIS. The final scope reflects any changes to the draft scope as a result of the comments, summarizes and addresses the principal environmental concerns raised by the comments, and briefly discusses pertinent issues concerning this project that further clarify the final scope.

**FOR FURTHER INFORMATION CONTACT:**

David Navecky, Section of Environmental Analysis, Surface Transportation Board, 395 E Street, SW, Washington, DC 20423-0001, 202-245-0294, or call SEA's toll-free number for the project at 1-800-359-5142. Assistance for the hearing impaired is available through the Federal Information Relay Service (FIRS) at 1-800-877-8339. The website for the Surface Transportation Board is [www.stb.dot.gov](http://www.stb.dot.gov).

Christy Everett, Regulatory Branch, Fairbanks Field Office, U.S. Army Corps of Engineers – Alaska District, 2175 University Avenue, Suite 201E, Fairbanks, AK 99709-4777, 907-474-2166.

James Helfinstine, Commander, Seventeenth Coast Guard District, P.O. Box 25517, Juneau, AK 99802-5517, 907-463-2268.

Gary Foreman, Bureau of Land Management, Fairbanks District Office, 1150 University Avenue, Fairbanks, AK 99709, 907-474-2339.

Chris Pike, Lieutenant Colonel, USAF, ALCOM/J4, 10471 20<sup>th</sup> Street, Elmendorf AFB, AK 99506-2100, 907-552-7013.

Jeff Putnam, P.E., Deputy Base Civil Engineer, 354 CES/CEVP, 2310 Central Avenue, Suite 100, Eielson AFB, AK 99702-2299, 907-377-5213.

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## SUPPLEMENTARY INFORMATION

**Background:** ARRC operates and maintains a 29-mile long branch, referred to as the Eielson Branch, that runs from ARRC's railyard facilities in Fairbanks and then south and east through the community of North Pole, Alaska to Eielson Air Force Base. The proposed action, referred to as the Northern Rail Extension, would involve the construction and operation of a new rail line from a point on the existing Eielson Branch in the vicinity of North Pole to Delta Junction, Alaska, a distance of approximately 80 miles. Figure 1 shows ARRC's existing track and the proposed rail line extension from North Pole to Delta Junction. The purpose of the project is to develop a safe and reliable all-weather rail connection to support anticipated freight and passenger needs between Fairbanks and Delta Junction.

Major elements of the project would include:

- Approximately 80 miles of new railroad track;
- Crossings of the Tanana River, Little Delta River, Delta Creek, Delta River, and depending on the selected alternative, the Salcha River and Little Salcha River (along with many other small stream crossings);
- Rock revetments and/or levees in and along the Tanana River to direct river flow under the proposed Tanana River bridge;
- Grade-separated crossings of the Richardson and Alaska highways depending on the selected alternative;
- Pipeline and utility crossings, including at least one crossing of the Trans-Alaska Pipeline System (TAPS);
- Sidings and facilities for passenger, freight, and maintenance operations; and
- Ancillary railroad support facilities including, but not limited to: communications towers and facilities, power lines, signals, and access roads.

ARRC plans to support both commercial and passenger rail service needs with the proposed project. Anticipated commercial freight includes agricultural goods, mining products, and petrochemicals. The proposed project could also provide improved access to the military training areas on the west side of the Tanana River.

**Environmental Review Process:** The Board is the lead agency, pursuant to 40 CFR 1501.5. SEA is responsible for ensuring that the Board complies with the National Environmental Policy Act (NEPA), 42 U.S.C. 4321-4335, and related environmental statutes, and for completing the environmental review process. The NEPA review process is intended to assist SEA, the cooperating agencies and the public in identifying and assessing the potential environmental consequences of a proposed action and the reasonable alternative before a decision is made.

ICF International is serving as an independent third-party contractor to assist SEA in the environmental review process. SEA is directing and supervising the preparation of the EIS. The USACE, FTA, USCG, BLM, 354<sup>th</sup>, FRA, ALCOM, and ADNR are cooperating agencies, pursuant to 40 CFR 1501.6.

The Federal agency actions considered in this EIS will include decisions, permits, approvals and funding related to the proposed action. The Board will decide whether or not to grant authority to ARRC to construct and operate the rail line pursuant to 49 U.S.C. 10901 and 10502. The USACE will decide whether or not to issue permits pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1251-1376, as amended) and/or Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). The USCG will decide whether or not to issue authority to construct bridges over navigable waters of the United States pursuant to the Department of Transportation Act of 1966 (49 U.S.C. 1651-1659). The BLM will decide whether or not to issue a right-of-way grant for BLM-administered lands under Title V of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1737). ALCOM will decide whether or not to concur with alignments on military lands including the Tanana Flats and Donnelly training areas. The 354<sup>th</sup> will decide whether or not to concur with alignments on or in proximity to Eielson AFB, which is home to the 354<sup>th</sup> Fighter Wing. FTA may provide funding for portions of the project's construction and/or operation. FRA is currently administering grant funding to ARRC for preliminary engineering and environmental analysis of the Northern Rail Extension. The EIS should include all of the information necessary for the decisions by the Board and the cooperating agencies.

SEA and the cooperating agencies are preparing a Draft EIS (DEIS) for the proposed action. The DEIS will address those environmental issues and concerns identified during the scoping process and detailed in this final scope. It will also discuss a reasonable range of alternatives to the proposed action, including a no-action alternative, and recommend environmental mitigation measures, as appropriate.

The DEIS will be made available upon its completion for public review and comment. A Final EIS (FEIS) will then be prepared reflecting further analysis by SEA and the cooperating agencies and the public and agency comments on the DEIS. In reaching their decisions on this case, the Board and the cooperating agencies will take into account the full environmental record, including the DEIS, the FEIS, and all public and agency comments received.

**Proposed Action and Alternatives:** The NEPA regulations require Federal agencies to consider a reasonable range of feasible alternatives to the proposed action. The President's Council on Environmental Quality (CEQ), which oversees the implementation of NEPA, has stated in *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations* that "[R]easonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense...." In this EIS, SEA and the cooperating agencies are considering a full range of alternatives that meet the purpose and need of the project, as well as the no-action alternative. Some alternatives have been dismissed from further analysis because they have been determined to be infeasible or because SEA and the cooperating agencies consider them to be environmentally inferior to other alternatives under consideration. The EIS will include a brief discussion of the reasons for eliminating certain alternatives from detailed analysis. The reasonable and feasible alternatives included for detailed analysis and alternatives dismissed from detailed analysis are discussed in more detail below.

## **A. Alternatives**

The Proposed Action and Alternatives include common segments, alternative segments, and connector segments. Common segments are portions of the rail line with a single route option. Alternative segments provide multiple route options. Connector segments are short pieces of a rail alignment that connect alternative segments. There are two common segments—north and south common segments—with a combined length of 13.1 miles. Between these common segments are five sets of alternative segments with two or three segments each. Figure 2 shows the proposed routes, and divides the project into six areas. The six areas are shown in more detail in Figures 3 – 8.

ARRC filed its preferred alternative with the Board on July 6, 2007. All common segments are part of the preferred alternative identified by ARRC. Alternative segments and connector segments that were filed as ARRC's preference are identified in the sections below.

### **North Common Segment**

The North Common Segment starts at the east end of the Chena River Overflow Bridge off of the Eielson Branch and extends 2.7 miles southeast to meet the Eielson Alternative Segments. The segment runs roughly parallel to the Richardson Highway, crosses the Eielson Farm Road, and is on the east side of the Tanana River (see Figure 3).

### **Eielson Alternative Segments**

SEA is considering three alternative segments through the Eielson area that start about one half mile southeast of the Eielson Farm Road. Each alternative segment has at least one shared segment section. The alternative segments pass between the fence line of Eielson Air Force Base on the east and the Eielson Farm Community on the west. They connect with the Salcha Alternative Segments (see Figure 3).

**Eielson Alternative Segment 1** takes the most westerly route, closer to the farm community and farthest from the Richardson Highway. The segment crosses through some farm community property while staying to the west along Piledriver Slough. The segment crosses a few roads before hugging the Tanana River for approximately the last 3 miles of the alternative segment. This alternative segment is 10.3 miles long.

**Eielson Alternative Segment 2** follows the same route as the Eielson Alternative Segment 1 for approximately 5.7 miles, at which point Eielson Alternative Segment 2 bears more to the southeast, crosses Piledriver Slough, and follows a route closer to the Richardson Highway. The last 2.2 miles of Eielson Alternative Segment 2 share the same route as Eielson Alternative Segment 3. This alternative segment is 10.0 miles long.

**Eielson Alternative Segment 3** takes the most easterly route, remaining closer to the Richardson Highway and located largely within Eielson Air Force Base property, but outside the base fence line. The segment would cross Piledriver Slough approximately one half mile into its route and then stay east of the slough for approximately 4.2 miles before crossing Twentythreemile Slough, a tributary of Piledriver Slough. This alternative segment is 10.1 miles long. This is ARRC's preferred alternative segment.

## **Salcha Alternative Segments**

SEA is considering two alternative segments for the Salcha section, each starting approximately 0.3 mile northwest of the intersection of the Old Richardson Highway and Bradbury Drive. The segments cross the Tanana River at different places and meet four connector segments (see Figure 4).

**Salcha Alternative Segment 1** crosses the Tanana River just west of the intersection of the Bradbury Drive and Ruger Trail. After crossing the river, the alternative segment runs through the Tanana Flats Training Area on the west side of the river. The segment is 11.8 miles long and would require a dual-modal bridge ranging from 2,400 to 3,500 feet in length to cross the Tanana River. This is ARRC's preferred alternative segment.

**Salcha Alternative Segment 2** remains on the east side of the Tanana River for most of its 13.8-mile route. For approximately the first 9 miles, the route parallels the Tanana River and Richardson Highway. The river then curves west while the route maintains a southerly direction. In approximately the last 3 miles, the segment crosses the river at Flag Hill, where it connects with one of the Central Alternative Segments. The Tanana River crossing would require a dual-modal bridge span ranging from 1,300 to 2,800 feet in length. This alternative segment would require relocation of portions of the Richardson Highway and Salcha Elementary School. Approximately two miles of the highway would need to be relocated further into the river bluff and the rail line would assume the location of the highway by the river. In addition to the Tanana River main channel crossing, the alternative segment would cross some Tanana River side channels, the Little Salcha River, and the Salcha River.

## **Connector Segments**

The connector segments are short pieces of rail alignment between 0.9 and 4.4 miles long that connect alternative segments that do not have a common start and end points. There are five connector segments on the west side of the Tanana River that connect the Central Alternative Segments to the Salcha and Donnelly alternative segments (see Figure 5). Connector Segments B and E are part of the ARRC's preferred route.

## **Central Alternative Segments**

SEA is considering two alternative segments between the Salcha and Donnelly alternative segments. Both Central Alternative Segments run parallel to the west bank of the Tanana River in a southeasterly direction (see Figure 5).

**Central Alternative Segment 1** connects to the Salcha Alternative Segments via Connector Segment A from Salcha Alternative Segment 1 or Connector Segment C from Salcha Alternative Segment 2 and is further from the Tanana River than Central Alternative Segment 2. The alternative segment is 5.1 miles long and out of the Tanana River floodplain. Central Alternative Segment 1 does not connect to Donnelly Alternative Segment 2 due to terrain considerations.

**The Central Alternative Segment 2** connects to the Salcha Alternative Segments via Connector Segment B from Salcha Alternative Segment 1 or Connector Segment D from Salcha Alternative Segment 2. The alternative segment is within the floodplain of the Tanana River and has several clearwater stream crossings. The Central Alternative Segment is 3.6 miles long and

is the Applicant's preferred alternative. The alternative segment connects directly to Donnelly Alternative Segment 2 and to Donnelly Alternative Segment 1 via Connector Segment E.

### **Donnelly Alternative Segments**

SEA is considering two alternative segments for the Donnelly area (see Figure 6). Both run on the southwestern side of the Tanana River and end approximately 4 miles east of Delta Creek, where they meet the South Common Segment. The alternative segments both cross Delta Creek and the Little Delta River but run through distinct terrains with different elevation profiles.

**Donnelly Alternative Segment 1** takes the southern route, farther from the Tanana River and through the northeastern corner of the Donnelly Training Area. This segment is 25.8 miles long and crosses steep grades. The route would cross the Delta Creek paleochannel, an ancient water channel that appears to no longer be active but could become active during periods of high flow. This is ARRC's preferred alternative segment.

**Donnelly Alternative Segment 2** runs closer to the Tanana River than Donnelly Alternative Segment 1. This segment is 26.2 miles long and crosses milder grades than Donnelly Alternative Segment 1, but faces more difficult geotechnical considerations than the other Donnelly alternative.

### **South Common Segment**

This segment would connect the two Donnelly Alternative Segments to the Delta Alternative Segments described below. The segment begins approximately four miles east of Delta Creek and runs roughly parallel to the Tanana River until the river curves southerly, just north of Delta Junction. The segment is 10.5 miles long (see Figure 7).

### **Delta Alternative Segments**

SEA is considering two alternative segments for the Delta area. Each of these segments crosses the Delta River: one north and one south of Delta Junction. The alternative segments meet at the end of the alignment about 3 miles west of the Tanana River, adjacent to the Alaska Highway (see Figure 8).

## **B. Alternatives Excluded from Detailed Analysis**

Based on the process described under Proposed Action and Alternatives, ARRC developed the initial sets of alignments and provided them to SEA for consideration as alternatives. Since 2005, ARRC presented SEA with several versions of the alignments. Examples of these versions are shown in Figures 9 and 10. The latest alignment versions and the Applicant's preferred alignments were identified to SEA in two key sources; ARRC's Preferred Route Alternative Report published in March 2007 and ARRC's filing of its preferred route with the Board on July 6, 2007. SEA identified alignments and segments proposed to be carried forward for more detailed study, and others proposed to be eliminated from further consideration. The Proposed Action and Alternatives Section describes the alternative segments that have been retained by SEA for detailed analysis. The following discussion describes several alignments and alternatives for segments that were initially considered but eliminated from detailed study in the Salcha, Donnelly, and Delta segments of the alignment. For each of the

alternatives that were eliminated, a brief discussion of the alternative and the reasons for elimination is provided.

## **Eielson Area Alignments**

### **Alignments Proposed by ARRC**

During SEA's EIS scoping comment period, ARRC initially presented three alignments (formerly called N1, N2, and N3) that crossed the Eielson Farm Community. Members of that community strongly opposed the N1 and N2 alignments, which were closer to the Tanana River, because of private property impacts (see Figure 11).

The N1 alignment, as initially proposed by ARRC in November 2005, crossed the Tanana River from the Eielson Farm Community into the Tanana Flats Training Area. The alignment then continued south through the training area on the western side of the Tanana River. During scoping, ALCOM expressed concern about the amount of encroachment this alignment would have on the training area. Other comments raised strong concerns about the alignment passing through a prime moose calving area. After the scoping comment period, ARRC developed two other feasible and reasonable alignments, now Eielson Alternative Segments 1 and 2, and dropped the N1 alignment through Tanana Flats Training Area.

Because there were few design differences through the Eielson Farm Community among the Eielson alignments proposed by ARRC in 2005, ARRC dropped the first half of the N1 and N2 alignments, the two alignments with greater private property intrusion. ARRC instead retained one (formerly called N3 and Eielson West) of the three alignments presented in November 2005 and after the scoping comment period offered a new alignment (formerly called Eielson East) located to the east of the Eielson Farm Community, closer to the Eielson Air Force Base fenced boundary. In the interim between the end of the scoping comment period and ARRC's Preferred Route Alternative Report, ARRC developed a crossover alignment between Eielson East and West.

SEA agreed with dropping the N1 and N2 alignments through the Eielson Farm Community and decided to retain the Eielson East and West alignments, renamed as Eielson 1 and 2, including the crossover alignment, for detailed analysis in this EIS as the Eielson Alternative Segments.

### **Alignments Proposed in Scoping Comments**

In response to scoping comments that were received by SEA and posted on the Board's website, ARRC considered alignments that crossed the Tanana River shortly before or after the Chena River overflow; therefore bypassing the Eielson Farm Community. These alignments, however, would create further intrusion into the Tanana Flats Training Area and also affect important moose habitat. Therefore, ARRC did not propose these alignments to SEA in ARRC Preferred Route Alternative Report in March 2007.

Comments also recommended an alignment that crossed the Richardson Highway at Milepost 0. The recommended alignment would either continue through Eielson Air Force Base using an existing track or go around the Air Force Base to the east. According to ARRC, during its the initial corridor analysis, ARRC considered using the additional section of the existing Eielson Brach line, but determined that using the line was not reasonable or practicable because

of the current grade crossing of the Richardson Highway and topography. Because of security and operational concerns, ARRC anticipated that the 354<sup>th</sup> Fighter Wing would consider use of the existing track through Eielson Air Force Base for through-movement of trains as highly undesirable. Land use and other conditions around the east side of Eielson Air Force Base are unfavorable for an alignment due to potential private property impacts, concerns over existing land use, and steep topography. For these reasons, ARRC determined that alignments east of the Richardson Highway from the start of the project at Milepost 0 to the south end of the Air Force Base runway are not practicable or feasible.

Comments also recommended an alignment through Eielson Air Force Base along the east side of the Richardson Highway. Such an alignment would avoid Piledriver Slough and private property in the Eielson Farm Community. ARRC reviewed the feasibility of alignments in this area. Based on information obtained from the military, ARRC determined that alignments east of the highway in proximity to the Air Force Base were infeasible due to encroachment on the operating and runway/taxi areas.

## **Salcha Area Alignments**

### **Alignments Proposed by ARRC**

Before SEA's EIS scoping period began, ARRC proposed four alignments through the Salcha area including two on the western side of the Tanana River south of ARRC's proposed Salcha Crossing. These alignments paralleled each other until merging in the Flag Hill area. One alignment (formerly called the N5 and subsequently the Salcha West alignment) closely followed the bank of the Tanana River; therefore, intruding less into the Tanana Flats Training Area than the N1 alignment while having potentially higher impacts on fish habitat and higher construction costs. The second alignment (formerly called N1) encroached more on military property, but avoided the Tanana River bank and some of the fishery concerns. Because of the greater potential conflict with military use, ARRC retained the route closer to the Tanana River for further examination and dropped alignment N1. The alignment closer to the Tanana River was retained by SEA for detailed analysis and is now called the Salcha Alternative Segment 1 (see Figure 12).

Two alignments were also proposed by ARRC on the east side of the Tanana River. One Salcha area alignment (formerly known as the N3 and subsequently the Salcha East alignment), retained in ARRC's March 2007 Preferred Route Alternative Report, traveled east of the Richardson Highway and south of the Eielson Air Force Base. Although the alignment met the purpose and need, this alignment was not retained by SEA as an alternative for detailed analysis because it would affect a significantly greater wetland acreage than the two Salcha Alternative Segments that are being retained for detailed study. The N3 or Salcha East alignment would affect a total of approximately 304 acres of wetlands, compared to 103 acres for the Salcha Central alignment, and 53 acres for the Salcha West alignment. This segment would also more directly affect cultural resources such as remains of the historic Salchaket Village. SEA retained the other alignment (formerly known as the N2 and subsequently the Salcha Central alignment) on the east side of the Tanana River for detailed analysis, and is now called Salcha Alternative Segment 2.

## **Alignments Proposed in Scoping Comments**

The east bank of the Tanana River, particularly through Salcha, remains transient and unstable as the river continues to migrate east. The Richardson Highway, along Salcha Bluff, is located on a narrow shelf between the steep bluff and the main channel of the Tanana River. In response to scoping comments, ARRC considered an alignment that would cross the eastern-most main channel to a pair of islands. This alignment would continue south of the bluff and traverse the islands before crossing back to the east bank of the Tanana River. However, after further examination of the river hydraulics, the stability of the islands in this area, and long-term serviceability, ARRC proposed to drop this alignment. SEA did not retain this alignment as an alternative in the DEIS.

### **Richardson Highway**

Comments received during SEA's EIS scoping period recommended a rail alternative that paralleled the Richardson Highway all the way to Delta Junction. ARRC, upon request from SEA, considered an alignment following the Richardson Highway, but determined such an alignment was not reasonable or feasible. The hilly topography on the east side of the Tanana River is considerably less favorable for rail line construction south of Flag Hill. There are also a large number of private land holdings along the highway, requiring potentially significant mitigation for continued vehicle access and potentially causing large impacts to private property. SEA did not retain this alignment as an alternative in the DEIS.

### **Blair Lakes Spur**

Before the start of scoping in 2005, ARRC proposed a spur to the Blair Lakes Range and/or other facilities to support military operations including sidings, off-load facilities, and end-of-track facilities. However, the spur would only be constructed if requested by the military. At this time, the spur has not been requested and the military has indicated to SEA that such a spur may interfere with training activities at the Blair Lakes Range. Therefore, the Blair Lakes Spur will not be analyzed in the DEIS (see Figure 10).

### **Tanana Area Alignments**

All Tanana area alignments have been retained for detailed analysis in the DEIS. These alignments have been renamed as the Central Alternative Segments (see Figure 13).

### **Donnelly Area Alignments**

During SEA's scoping process, ARRC presented two alignments to SEA through the Donnelly area. One alignment (formerly named S2/Donnelly East alignment) hugged the west side of the Tanana River while the second alignment (formerly named S1/Donnelly Central alignment) followed the Tanana River initially before heading further south and west near the Little Delta River (see Figures 14 and 15). In response to comments from agencies, ARRC shifted an early version of S2/Donnelly East further inland from the Tanana River due to fish habitat concerns. In ARRC's March 2007 Preferred Route Alternative Report both of these alignments were retained, but ARRC included a third alignment called the Donnelly West alignment, which was developed by ARRC after the scoping period.

Although ARRC had shifted the alignment to minimize potential impacts, SEA decided to not retain the Donnelly East alignment for detailed analysis in the DEIS. In addition to

affecting a substantial amount of wetlands (approximately 363 acres), it would create adverse impacts through the displacement of summer homes and vacation cabins that the other two alignments avoid. The Donnelly East alignment would also cross sensitive wildlife habitat contained in clear backwater channels and springs that serve as prime spawning and rearing habitat for salmon. ARRC has also indicated that this alignment would traverse steep hills with potential icing problems as well as areas that exhibit groundwater upwelling and quicksand-type conditions. SEA retained Donnelly Alternative Segments 1 and 2 for detailed analysis in this DEIS.

### **Delta Area Alignments**

During scoping, ARRC presented two alignments (formerly named S1 and S2 and Delta Central and South, respectively) in the Delta Junction area that crossed the Delta River from the Donnelly alignments and continued to the rail terminus on the south side of Delta Junction (see Figure 16). In the interim between scoping and the March 2007 Preferred Route Alternative Analysis Report, ARRC developed a third alignment (formerly named the S5/Delta North alignment) that crossed the Delta River north of Delta Junction and continued south along the east side of the Richardson Highway to the rail terminus.

SEA decided not to retain the Delta Central alignment for detailed analysis because it would involve greater adverse impacts to residential and commercial property in Delta Junction than the other alignments. In addition, the Delta Central alignment would involve adverse impacts to a larger amount of wetlands (approximately 83 acres) than the two alternative segments being retained for detailed analysis (36 acres for the Delta North Segment and 58 acres for the Delta South segment). SEA retained Delta Alternative Segments 1 and 2 for detailed analysis in the DEIS.

### **Alignment Along the Alaska Range**

In their October 2006 review of the range of reasonable alternatives, USACE recommended that the EIS include analysis of an alternative along the foothills of the Alaska Range to the military training areas on the west side of the Tanana River and that the EIS evaluate transportation alternatives other than rail. SEA eliminated further analysis of these recommended alternatives because they did not meet one of the purposes of the proposed Northern Rail Extension; specifically to provide passenger train service between Fairbanks and Delta Junction and to provide common carrier rail service to Delta Junction.

### **Public Participation**

As part of the environmental review process to date, SEA has conducted broad public outreach activities to inform the public about the Proposed Action and to facilitate public participation. SEA consulted with and will continue to consult with Federal, state, and local agencies, affected communities, and all interested parties to gather and disseminate information about the proposal. SEA and the cooperating agencies have also developed and implemented a Government-to-Government Consultation and Coordination Plan to seek, discuss, and consider the views of Federally recognized Tribal Governments regarding the Proposed Action and Alternatives.

## Response to Comments

SEA and the cooperating agencies reviewed and considered the comments received on the draft scope (26 comments with approximately 180 signatures) in preparation of this final scope of the EIS. The final scope reflects any changes to the draft scope as a result of comments. Other changes in the final scope were made for clarification or as a result of additional analysis. Additions and modifications reflected in the final scope include:

- Analysis of impacts on fisheries and fish habitat. Federal and state agencies provided comments on the potential impacts on fish and fish habitat. As a point of clarification, the EIS will consider all project effects on fish resources including: impacts from road placement, grade cuts and fills, changes in permafrost levels, types and locations of crossings and the accommodation of ice formation. The EIS will also evaluate impacts to aquatic resources in terms of aerial acreage or linear extent to be affected and the functions these resources perform.
- Analysis of impacts on birds. Comments stated concerns about the potential impacts on birds. As a point of clarification, the analysis in the EIS will consider the locations of raptor nests near proposed alignments. These nests were identified from surveys over three nesting seasons. The EIS will address the bird species generally present in the project area.
- Analysis of impacts on moose. Comments stated that moose strikes by trains are among the greatest wildlife concerns. To clarify, the EIS will address moose habitat, calving and concentration areas and travel corridors, and proposed protocols for monitoring and reporting moose strikes. The EIS will consider data from observations conducted during the winters of 2005/2006 and 2006/2007, and will identify potential mitigation measures, as appropriate.
- Analysis of wildlife and habitat. Comments recommend that the EIS consider the impacts of the proposed project on other wildlife such as bison and high quality plant communities such as freshwater fens and open-water oxbows. Federal agencies also requested that the EIS consider impacts from the spread of invasive species and the disruption of aquatic habitat by the placement of the rail line. The EIS will consider these impacts.
- Analysis of water resources. Comments requested that the EIS evaluate the potential project interactions between permafrost and surface water and groundwater and the effects of the project on rivers and ice formation. Other comments listed concerns regarding the potential project impacts on floodplains. Comments requested that the EIS include a discussion of best management practices applied to minimize impacts of the Proposed Action on water resources. The EIS will contain a floodplain analysis and will evaluate the potential impacts to surface water and ground water.
- Analysis of navigation. Comments requested that the EIS identify existing navigable waterways within the project area and analyze the potential impacts on navigability

resulting from each alternative; describe the permitting requirements for the various alternatives with regards to navigation; and propose mitigation measures to minimize or eliminate potential impacts to navigation, as appropriate. The EIS will address navigation, as requested.

- Analysis of rail safety. Comments stated concerns over rail and highway safety such as hazardous materials transport and at-grade crossings. The EIS will examine the potential safety impacts that could result from the proposed action.
- Analysis of recreation and access. Comments requested that the EIS address the potential impacts on recreation areas, access to these areas, and safety. Analysis of these issues will be included in the EIS.
- Effects from expanded use of military training areas. Comments requested that the EIS evaluate the impacts of expanded use of the Tanana Flats and Donnelly training areas. Consultations with the military regarding future training plans indicate that the Proposed Action would not increase or shift training activities in these areas in the foreseeable future. Therefore, the project area for most analyses regarding the training areas will be limited to the rail line and immediate vicinity.
- Analysis of an Alaska-Canada rail link and Alaska-Canada natural gas pipeline as reasonably foreseeable future actions. Although the Alaska-Canada rail link has been proposed in the past, there are no formalized plans to construct, operate or fund a railroad to Canada. Therefore, SEA and the cooperating agencies do not consider this reasonably foreseeable. However, if an Alaska-Canada rail link becomes reasonably foreseeable during the process of preparing the EIS, SEA and the cooperating agencies will include it in the analysis of impacts. The State has accepted a proposal from TransCanada Pipeline Corporation to construct a natural gas pipeline along the TAPS, pending approval by the legislature and a public review period. SEA will monitor the State review process and whether TransCanada files an application with the Federal Energy Regulatory Commission before determining that it is reasonably foreseeable.

Under CEQ's guidelines, the analysis of environmental effects resulting from a proposed action requires the separation of actions and effects that are reasonably foreseeable as opposed to results that are remote and speculative. Typically, the Board analyzes potential rail operations for a period of three to five years into the future depending on an applicant's projections. Projects for rail operations beyond these time frames are generally not reasonably foreseeable. Beyond three to five years, for example, fluctuations in the economy and demand for infrastructure projects become speculative. The time frame for the analysis of potential effects of other projects or actions will likely vary by resource area depending on the availability of reliable information and the current and predicted health of the resource.

- Analysis of alternatives that do not meet the ARRC's stated purpose and need. Under NEPA, an applicant's goals are important in defining the range of feasible alternatives. NEPA does not require discussion of an alternative that is not reasonably related to the

proposal considered by the agencies. Here, the proposed project is intended to provide freight and passenger rail service from Fairbanks to the region south of North Pole, Alaska. Comments were received suggesting that the EIS evaluate transportation alternatives such as improvements to the Richardson Highway, as an alternative to rail construction. This alternative, while it may improve transportation access to Delta Junction, does not advance the applicant's goals of expanding reliable rail service in interior Alaska, and therefore will not be evaluated as a separate alternative in the EIS.

- Analysis of ARRC's proposed Eielson Branch Realignment Project (now the Fort Wainwright Realignment Project) and the Northern Rail Extension under one NEPA document. The comment stated that the projects are connected and suggested that one NEPA document could more efficiently analyze both projects. However, the Eielson Branch realignment would be constructed regardless of whether the Northern Rail Extension is built and the NEPA process for the realignment is on a different schedule. Therefore, both projects are best analyzed separately.

## **Environmental Impact Analysis**

### **Proposed New Construction**

Analysis in the EIS will address the proposed activities associated with construction and operation of new rail facilities and their potential environmental impacts, as appropriate.

### **Impact Categories**

The EIS will analyze potential direct and indirect impacts from construction and operation of new rail facilities on the human and natural environment for each alternative, or in the case of the no-action, the potential direct and indirect impacts of these activities not occurring. Impact areas addressed will include the categories of land use, biological resources, water resources including wetlands and other waters of the US, navigation, geology and soils, air quality, noise, energy resources, socioeconomics as they relate to physical changes in the environment, safety, highway-rail grade crossing delay, cultural and historic resources, subsistence, recreation, aesthetics, and environmental justice. The EIS will include a discussion of each of these categories as they currently exist in the project area and will address the potential direct and indirect impacts of each alternative on each category as described below:

#### **1. Safety**

The EIS will:

- a. Describe existing road/rail grade crossing safety and analyze the potential for an increase in accidents related to the new rail operations, as appropriate.
- b. Describe existing rail operations and analyze the potential for increased probability of train accidents, as appropriate.
- c. Evaluate the potential for disruption and delays to the movement of emergency vehicles due to new rail line construction and operation for each alternative.

- d. Propose mitigative measures to minimize or eliminate potential project impacts to safety, as appropriate.

## 2. Land Use

The EIS will:

- a. Evaluate potential impacts of each alternative on existing land use patterns within the project area and identify those land uses that would be potentially impacted by new rail line construction.
- b. Analyze the potential impacts associated with each alternative to land uses identified within the project area. Such potential impacts may include incompatibility with existing land uses and conversion of land to railroad uses.
- c. Propose mitigative measures to minimize or eliminate potential impacts to land use, as appropriate.

## 3. Recreation (as part of the land use discussion and a separate Section 4(f) to meet the requirements of the Federal Railroad Administration and Federal Transit Administration)

The EIS will:

- a. Evaluate existing conditions and the potential impacts of the alternatives, including the various new rail line construction alignments and their operation, on recreational opportunities in the project area.
- b. Propose mitigative measures to minimize or eliminate potential project impacts on recreational opportunities, as appropriate.
- c. Identify resources including parks, wildlife refuges, and sites eligible for the National Register of Historic Places and evaluate unavoidable impacts to them for the 4(f) evaluation, in accordance with Section 4(f) of the Department of Transportation Act of 1966, as amended.

## 4. Biological Resources

The EIS will:

- a. Evaluate the existing biological resources within the project area, including vegetative communities, wildlife and fisheries, wetlands, and Federal and state threatened or endangered species and the potential impacts to these resources resulting from each alternative.
- b. Describe any wildlife sanctuaries, refuges, national or state parks, forests, or grasslands and evaluate the potential impacts to these resources resulting from each alternative.
- c. Propose mitigative measures to avoid, minimize, or compensate for potential impacts to biological resources, as appropriate.

## 5. Water Resources

The EIS will:

- a. Describe the existing surface water and groundwater resources within the project

- area, including lakes, rivers, streams, stock ponds, wetlands, and floodplains and analyze the potential impacts on these resources resulting from each alternative.
- b. Describe the permitting requirements for the various alternatives with regard to wetlands, stream and river crossings, water quality, floodplains, and erosion control.
  - c. Propose mitigative measures to avoid, minimize, or compensate for potential project impacts to water resources, as appropriate.

## 6. Navigation

The EIS will:

- a. Identify existing navigable waterways within the project area and analyze the potential impacts on navigability resulting from each alternative.
- b. Describe the permitting requirements for the various alternatives with regards to navigation.
- c. Propose mitigative measures to minimize or eliminate potential impacts to navigation, as appropriate.

## 7. Geology and Soils

The EIS will:

- a. Describe the geology, soils, permafrost and seismic conditions found within the project area, including unique or problematic geologic formations or soils, prime farmland, prime and unique soils, and hydric soils and analyze the potential impacts on these resources resulting from the various alternatives for construction and operation of a new rail line.
- b. Evaluate potential measures employed to avoid or construct through unique or problematic geologic formations, soils, or permafrost.
- c. Propose mitigative measures to minimize or eliminate potential project impacts to geology and soils, as appropriate.

## 8. Air Quality

The EIS will:

- a. Evaluate air emissions from rail operations, if the alternative would affect a Class I or non-attainment or maintenance area as designated under the Clean Air Act.
- b. Describe the potential air quality impacts resulting from new rail line construction activities.
- c. Propose mitigative measures to minimize or eliminate potential project impacts to air quality, as appropriate.

## 9. Noise and Vibration

The EIS will:

- a. Describe the potential noise and vibration impacts during new rail line construction.

- b. Describe the potential noise and vibration impacts of rail line operations over new and existing rail lines.
- c. Propose mitigative measures to minimize or eliminate potential project impacts to sensitive noise receptors, as appropriate.

10. Energy Resources

The EIS will:

- a. Describe and evaluate the potential impact of the new rail line on the distribution of energy resources in the project area for each alternative, including petroleum and gas pipelines and overhead electric transmission lines.
- b. Propose mitigative measures to minimize or eliminate potential project impacts to energy resources, as appropriate.

11. Socioeconomics

The EIS will:

- a. Analyze the effects of a potential influx of construction workers and the potential increase in demand for local services interrelated with natural or physical environmental effects.
- b. Propose mitigative measures to minimize or eliminate potential project adverse impacts to social and economic resources, as appropriate.

12. Transportation Systems

The EIS will:

- a. Evaluate the potential impacts of each alternative, including new rail line construction and operation, on the existing transportation network in the project area, including vehicular delays at grade crossings.
- b. Propose mitigative measures to minimize or eliminate potential project impacts to transportation systems, as appropriate.

13. Cultural and Historic Resources

The EIS will:

- a. Analyze the potential impacts to historic structures or districts previously recorded and determined potentially eligible, eligible, or listed on the National Register of Historic Places within or immediately adjacent to the right-of-way for the proposed rail alignments.
- b. Evaluate the potential impacts of each alternative to archaeological sites previously recorded and either listed as unevaluated or determined potentially eligible, eligible, or listed on the National Register of Historic Places within the right-of-way for the alternative rail alignments and the no-action alternative.
- c. Analyze the potential impacts to historic structures or districts or archaeological sites identified by ground survey and determined potentially eligible, eligible, or listed on the National Register of Historic Places within or immediately adjacent

- d. Evaluate the potential general impacts to paleontological resources in the project area due to project construction, if necessary and required.
- e. Propose mitigative measures to minimize or eliminate potential project impacts to cultural and historic resources, as appropriate.

14. Subsistence

The EIS will:

- a. Analyze the potential impacts of the alternatives, including the alternate alignments for new rail line construction and operation, on subsistence activities in the project area.
- b. Propose mitigative measures to minimize or eliminate potential project impacts on subsistence activities, as appropriate.

15. Aesthetics

The EIS will:

- a. Evaluate the potential impacts of each alternative, including construction and operation of the rail lines, on visual resources and other aesthetic values within the project area.
- b. Propose mitigative measures to minimize or eliminate potential project impacts on aesthetics, as appropriate.

16. Environmental Justice

The EIS will:

- a. Evaluate the potential impacts of each alternative, including construction and operation of the rail lines, on local and regional minority populations and low-income populations.
- b. Propose mitigative measures to minimize or eliminate potential project impacts on environmental justice issues, as appropriate.

**Cumulative Impacts**

The EIS will analyze cumulative impacts for the alternatives for the proposed construction and operation of new rail facilities on the human and natural environment, or in the case of the no-action, of the lack of these activities. SEA will analyze the potential additive effects of the Proposed Action and Alternatives to the effects on applicable resources of relevant past, present, and reasonably foreseeable projects or actions in the area of the proposed action. SEA will determine appropriate time and geographic boundaries for applicable resource-specific analyses in order to focus the cumulative impacts analysis on truly meaningful effects. Resources addressed may include the categories of land use, biological resources, water resources including wetlands and other waters of the U.S., navigation, geology and soils, air quality, noise, energy resources, socioeconomics as they relate to physical changes in the environment, rail safety, transportation systems, cultural and historic resources, subsistence,

recreation, aesthetics, and environmental justice. The EIS will review all relevant past, concurrent, and reasonably foreseeable actions that could result in collectively significant impacts to each of the categories of impacts listed above, and to any other categories of impacts that may be addressed as a result of comments received during the scoping process or the DEIS comment period.

By the Board, Victoria Rutson, Chief, Section of Environmental Analysis.

Anne K. Quinlan  
Acting Secretary