

SERVICE DATE – JANUARY 6, 2010

SURFACE TRANSPORTATION BOARD

DECISION

STB Finance Docket No. 34658

ALASKA RAILROAD CORPORATION—CONSTRUCTION AND OPERATION
EXEMPTION—RAIL LINE BETWEEN NORTH POLE AND
DELTA JUNCTION, AK

Decided: January 5, 2010

INTRODUCTION

This proceeding involves a request by Alaska Railroad Corporation (ARRC), a rail carrier owned by the State of Alaska, for authority to construct and operate a new 80-mile rail line, referred to as the Northern Rail Extension (NRE), in the State of Alaska. The proposed line is intended to provide reliable year-round freight and passenger service to the region south of North Pole, AK. The line will provide an alternative to Richardson Highway, which now is the sole means (other than air) to transport commercial freight in the project area. In addition, the line will allow year round access to training areas used by the United States military. Currently, these training areas can only be reached by air, or in winter months, by motor carriage when the Tanana River is frozen. The rail line also will foster the development of Alaska's economy by expanding the state-owned railroad's passenger and freight network to an area not currently served by rail.

As discussed below, the construction and operation of this line will not be without potential environmental impacts. However, the Board's Section of Environmental Analysis (SEA), working with the assistance of several state and Federal agencies, has completed a thorough environmental analysis that carefully compared potential alternatives to identify the environmentally preferred rail alternatives. SEA also has recommended extensive environmental conditions to avoid, minimize, or mitigate the potential environmental impacts. The proceeding has also included ample opportunity for public input during the environmental review process, and SEA incorporated the comments of agencies and other interested parties in making its final environmental recommendations in this case.

Because of the potential benefits of this state-owned line, we are granting ARRC's request for authority, subject to the environmental mitigation set forth in Appendix 1, and the condition that ARRC build the alternative routes and segments we are designating as environmentally preferable. The No-Action (or no-build) alternative would avoid the environmental effects of construction and operation, but would fail to extend ARRC's existing freight rail and passenger service and the benefits that are likely to result from this proposal.

COURSE OF PROCEEDINGS

By petition filed on July 6, 2007, ARRC, a Class III rail carrier incorporated in, and owned by, the State of Alaska, seeks an exemption under 49 U.S.C. 10502 from the prior approval requirements of 49 U.S.C. 10901 for authority to construct and operate the NRE, which would extend southeasterly from ARRC's existing Eielson Branch near the community of North Pole (located just south of Fairbanks) to the community of Delta Junction.

In a decision served on October 4, 2007, the Board instituted a proceeding under 49 U.S.C. 10502(b).¹ SEA conducted an environmental review of the proposed construction and alternatives. A detailed Draft Environmental Impact Statement (EIS) prepared by SEA together with eight cooperating agencies² was issued for public review and comment on December 12, 2008. SEA then prepared a Final EIS that was issued on September 18, 2009. The Final EIS considers all the comments received on the Draft EIS, reflects SEA's further independent analysis, and sets forth SEA's preferred rail alternatives and final recommended environmental mitigation measures. Following issuance of the Final EIS, SEA received letters from the United States Environmental Protection Agency (EPA) and the State of Alaska Department of Natural Resources (ADNR) raising concerns about certain aspects of the Final EIS. ARRC replied to these letters on November 3, 2009.

After considering the entire record, including both the transportation aspects of the petition and the potential environmental issues, we will grant the requested exemption, subject to the environmental mitigation measures recommended in the Final EIS, with minor changes. Our mitigation is set forth in Appendix 1 to this decision.

BACKGROUND

ARRC provides rail freight and passenger service to communities from the Gulf of Alaska, in the south, to the greater Fairbanks area, in the north. Its network extends from Seward, through Anchorage and Fairbanks, continues in a southeasterly direction through North Pole via the Eielson Branch, and ends at Eielson Air Force Base (AFB). The NRE would begin at milepost 20 of the Eielson Branch—at the east end of the Chena River Overflow Bridge—and would extend southeasterly to the southern side of Delta Junction. It would be a single-track rail line with a 200-foot-wide right-of-way (ROW) that would generally follow the Tanana River and require one crossing of the Tanana River (a dual modal bridge for rail and motor vehicle traffic),

¹ In that decision, the Board also denied ARRC's request for a conditional exemption addressing the transportation-related aspects of the proposed NRE, finding that ARRC had not demonstrated unique or compelling circumstances warranting a departure from our standard procedures.

² U.S. Department of Defense Alaskan Command, Bureau of Land Management, Federal Transit Administration, Federal Railroad Administration, U.S. Air Force 354th Fighter Wing Command from Eielson Air Force Base, U.S. Army Corps of Engineers (Corps), U.S. Coast Guard, and State of Alaska Department of Natural Resources. Further references to "SEA" in this decision include the efforts of the cooperating agencies.

and crossings of the Delta River, the Little Delta River, Delta Creek, and possibly the Salcha River. The Little Delta River and Delta Creek would have separate bridges for the track and vehicles; no vehicle access would be provided over the Salcha and Delta Rivers. In addition to the rail line and bridges, the ROW would contain sidings at several locations, a power line, a buried communications cable, and an access road for maintenance purposes. ARRC would also construct other facilities, such as communications towers, a passenger platform in Delta Junction, and temporary construction support facilities, which it would remove after construction activities end.

At present, commercial freight, other than that associated with Eielson AFB and the North Pole Refinery, generally enters and leaves the project area by truck using either the Richardson Highway (connecting Valdez on the Gulf of Alaska to Fairbanks via Alaska Route 4 and Alaska Route 2 (the Alaska Highway) which connect at Delta Junction) or the Alaska Highway (Alaska Route 2 connecting Fairbanks to points southeast via Delta Junction and Tok, AK). The agricultural community and the mineral industries receive materials that are shipped by rail to or near Fairbanks, offloaded, and then transported by truck over the Richardson Highway. Coach service for individuals traveling between Fairbanks and Delta Junction is partially funded by the City of Delta Junction and routed over the Richardson Highway, with one round trip per day Monday through Friday. The U.S. Army and U.S. Air Force also rely on the Richardson Highway for ground access to the Tanana Flats and Donnelly Training Areas on the southwestern side of the Tanana River and the west side of the Delta River, but only in winter months (typically January to early March) when ice bridges permit access. At other times of the year, there is no other way to provide access to these areas other than by air.

The primary purpose of the proposed construction, according to ARRC, is to provide reliable, year-round freight and passenger rail service to the region south of North Pole. The NRE, ARRC says, would constitute an alternative to the Richardson Highway for commercial freight and passenger service for businesses and communities on or near the rail line, including existing industries in the agricultural, mining, and petrochemical sectors in the Delta Junction region. Additionally, the NRE would provide the U.S. Army and U.S. Air Force dependable, year-round ground access to their training areas. ARRC says that passenger service would also support area tourism, providing an opportunity for tourists to travel by rail beyond the existing Fairbanks terminal to a proposed passenger facility at Delta Junction. ARRC says it will be the exclusive operator of, and will assume all common carrier obligations with respect to, the new line.

In 2005, ARRC presented potential rail alignments, which were subsequently refined and from which SEA selected alternatives for detailed environmental review in the Draft EIS.³ To

³ SEA used the information on purpose and need for the NRE provided by ARRC as the basis for its review of potential alignments, consideration of alternative alignments proposed in scoping comments, and alignments that ARRC had rejected prior to seeking Board authority. Through this review, SEA selected a set of reasonable and feasible alternatives to study in detail. Alignments (or alternative segments) that did not meet fundamental components of ARRC's purpose and need, that would lead to substantially greater adverse environmental impact, or that

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facilitate comparison, the alternatives were divided into segments based on common start, end, and intersection points. The alternatives considered in the Draft EIS included a No-Action Alternative, under which ARRC would not construct an extension of the existing rail line or a dual-modal bridge over the Tanana River. SEA did not identify preferred segments in the Draft EIS.

All of the potential rail alternatives considered in the Draft EIS had the NRE beginning with the North Common Segment, which would connect to ARRC's existing Eielson Branch just south of the Chena River Overflow Bridge. As the Draft EIS explains, the North Common Segment would run parallel to the Richardson Highway along the east side of the Tanana River for 2.7 miles in a southeast direction before connecting to one of three alternative segments (Eielson Alternative Segments 1-3) along or through the perimeter of Eielson AFB. The selected Eielson alternative segment would connect with one of two alternative segments in the Salcha area. The Salcha alternative segments would start approximately 0.3 mile northwest of the intersection of the Old Richardson Highway and Bradbury Drive and cross the Tanana River at one of two places before connecting to one of four connector segments. Salcha Alternative Segment 1 would primarily pass through, and Salcha Alternative Segment 2 would basically skirt, the Tanana Flats Training Area.

The connector segments are short pieces of rail line between 0.9 and 4.4 miles long that would connect alternative segments that do not have a common start and end point. There are a total of five connector segments, all on the west side of the Tanana River, and they would connect the selected Salcha alternative segment to one of two Central alternative segments. The Central alternative segments are 5.1 and 3.6 miles long. They primarily run through the Tanana Flats Training Area, parallel to the west bank of the Tanana River in a southeasterly direction, and would connect directly or via the fifth connector segment to one of two alternative segments in the Donnelly area. The Donnelly alternative segments would run along the western side of the Tanana River (Donnelly Alternative Segment 1 would pass through the Donnelly Training Area), cross the Little Delta River and Delta Creek, and end approximately 4 miles east of Delta Creek, where they would connect to the South Common Segment.

The South Common Segment would run roughly parallel to the Tanana River then curve southerly to parallel the Delta River near Big Delta for a distance of 10.5 miles before connecting to one of two alternative segments in the Delta Junction area. The Delta alternative segments would cross the Delta River north or south of Delta Junction (the north alternative would pass through Delta Junction), pass through a portion of the Donnelly Training Area-Fort Greely and end at the terminus of the NRE, about 1 mile east of the Delta River, adjacent to the Alaska Highway.

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featured infeasible construction or operational limitations were eliminated from detailed study as alternatives in the Draft EIS. See Final EIS at 1-4-to 1-15 (describing and providing maps of the alternatives considered); Draft EIS, Chapter 2 and Figures 2-5 to 2-11 (summarizing and comparing the potential impacts of the alternatives), and section .2.2 and Appendix D, sections 2.1-2.8 (describing alternatives eliminated from detailed environmental review).

ARRC states that part of its mission, as a state-owned rail carrier, is to foster the development of Alaska's economy. To that end, ARRC says that, as the exclusive operator of the NRE, it intends to offer common and contract service to all shippers in local communities (e.g., Salcha and Delta Junction) and in adjoining areas and anticipates running an average of one freight train of approximately 32 cars each way per day, with a total of approximately 13,000 loaded rail cars per year. ARRC says that most of the shipments will consist of military equipment, fuel, construction materials, agricultural materials, and supplies, and it claims that interest in the NRE by shippers of those commodities has been positive. Additionally, ARRC anticipates offering passenger service consisting of 4 round trips per day (2 in the morning and 2 in the evening) between Fairbanks and Delta Junction, with possible intermediate stops at locations yet to be determined.

DISCUSSION AND CONCLUSIONS

Rail Transportation Analysis.

The construction and operation of rail lines require prior Board authorization either through issuance of a certificate under 49 U.S.C. 10901 or, as requested here, by granting an exemption under 49 U.S.C. 10502 from the formal application procedures of section 10901. Section 10901(c) as amended by the ICC Termination Act of 1995, Pub. L. No. 104-88, 109 Stat. 803 (1995) (ICCTA) is a permissive licensing standard. It now directs the Board to grant rail line construction proposals "unless" we find the proposal "inconsistent with the public convenience and necessity [PC&N]." Thus, Congress made a presumption that rail construction projects are in the public interest unless shown otherwise. See Mid States Coalition for Progress v. STB, 345 F.3d 520, 552 (8th Cir. 2003) (Mid States); Class Exem. for the Construction of Connecting Track, 1 S.T.B. 75, 79 (1996).⁴

Under 49 U.S.C. 10502, we must exempt a proposed rail line construction from the detailed application procedures of 49 U.S.C. 10901 when we find that: (1) those procedures are not necessary to carry out the rail transportation policy (RTP) of 49 U.S.C. 10101; and (2) either

⁴ Congress had first relaxed the section 10901 standard in the Staggers Rail Act of 1980, Pub. L. No. 96-448, 96 Stat. 1895 (1980). Before 1980, the Interstate Commerce Commission (ICC), our predecessor, had been directed to scrutinize rail construction proposals closely to prevent excess rail capacity. The ICC was to issue a license only if it found that the PC&N "require" the construction. See former 49 U.S.C. 10901(a) (1978); see, e.g., Chesapeake & Ohio Ry. v. United States, 283 U.S. 35, 42 (1931). In the Staggers Act, Congress made it easier to obtain agency authorization for a new line by providing that the ICC need only find that the PC&N "permit," as opposed to "require" the proposed new line. See former 49 U.S.C. 10901(a) (1995); H.R. Rep. No. 1430, 96th Cong., 2d Sess. 115-16 (1980), reprinted in 1980 U.S.C.C.A.N. 4147-48. With the ICCTA, Congress completed its policy shift, directing that the Board "shall" issue construction licenses "unless" the agency finds a proposal "inconsistent" with the PC&N. See 49 U.S.C. 10901(c).

(a) the proposal is of limited scope, or (b) the full application procedures are not necessary to protect shippers from an abuse of market power.

Here, based on the information provided, we conclude that detailed scrutiny of the proposed construction and operation under 49 U.S.C. 10901 is not necessary to carry out the RTP, and that therefore the proposed construction project is appropriate for handling under the exemption process. The record here shows that the proposed NRE will provide reliable, year-round freight and passenger rail service to businesses, the military, and communities in or near the rail line, and thus will ensure the development and continuation of a sound rail transportation system with effective competition with other modes to meet the needs of the public and the national defense. See 49 U.S.C. 10101(4). Moreover, exempting the proposed construction and operation from 49 U.S.C. 10901 will reduce the need for Federal regulation, foster sound economic conditions in transportation, and reduce regulatory barriers to entry. See 49 U.S.C. 10101(2), (5), and (7). Nothing in the record indicates that the proposal would adversely affect other aspects of the RTP.

Use of the formal application procedures here is not necessary to protect shippers from an abuse of market power. Rather, the proposed NRE will provide the affected area with additional transportation options and enhanced competition. Given our finding regarding the lack of need for shipper protection, we need not determine whether the transaction is limited in scope.

In short, there is no evidence on the transportation-related aspects of this case to suggest that the proposed construction does not qualify for our exemption procedures or is otherwise improper. Given the statutory presumption favoring rail construction, and the evidence presented, the requested exemption has met the standards of section 10502.

Environmental Analysis.

In reaching our decision, we have also analyzed the environmental impacts associated with this construction proposal by fully considering the Draft and Final EIS, and the entire environmental record, including the letters submitted by EPA and ADNR after the Final EIS was issued. Based on the environmental record, we have also assessed the alternative routes that could be constructed and the environmental mitigation that could be imposed.

1. The Requirements of NEPA

The National Environmental Policy Act (NEPA), 42 U.S.C. 4321-43, requires Federal agencies to examine the environmental effects of proposed Federal actions and to inform the public concerning those effects. See Baltimore Gas & Elec. Co. v. Natural Resources Defense Council, 462 U.S. 87, 97 (1983). Under NEPA and related environmental laws, we must consider significant potential beneficial and adverse environmental impacts in deciding whether to authorize a railroad construction as proposed, deny the proposal, or grant it with conditions (including environmental mitigation conditions). The purpose of NEPA is to focus the attention of the government and the public on the likely environmental consequences of a proposed action before it is implemented, to minimize or avoid potential adverse environmental impacts. See Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 371 (1989). While NEPA prescribes

the process that must be followed, it does not mandate a particular result. See Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989) (Robertson); Mid States 345 F.3d at 533-34 (8th Cir. 2003). Thus, once the adverse environmental effects have been adequately identified and evaluated, we may conclude that other values outweigh the environmental costs. See Robertson, 490 U.S. at 350-51.

2. The Environmental Review Process

On November 1, 2005, SEA issued and published in the Federal Register at 70 FR 65976, a Notice of Intent to Prepare an Environmental Impact Statement, Draft Scope of Study, Notice of Scoping Meetings, and Request for Comments. Based on written comments, comments made at public scoping meetings, and consultations involving citizens, representatives of organizations, elected officials, and officials from Federal, state, and local agencies, SEA on April 3, 2008, issued and published in the Federal Register at 73 FR 18323, the final scope of study for the EIS.

As noted above, the Draft EIS was issued and published for public review and comment on December 12, 2008. The Draft EIS analyzed a number of environmental issue areas, including topography, geography and soils; water, biological and cultural resources; subsistence; climate and air quality; noise and vibration; energy resources; transportation; navigation; land use (including access to existing and potential trails); visual (aesthetic) resources; socio-economics; environmental justice; and cumulative effects (where planned or reasonably foreseeable projects would overlap with the NRE in terms of geographic area or time frame). It also addressed the selected potential rail alternatives and contained mitigation measures to address the potential environmental impacts of the NRE, including voluntary mitigation measures developed by ARRC in consultation with local communities and interested agencies and preliminary mitigation measures developed by SEA based on independent environmental analyses, consultations with appropriate agencies, available project information, and suggestions from stakeholders.

After publishing the Draft EIS, SEA hosted public meetings with the cooperating agencies to share information with, and gather comments from, the general public. At each meeting, SEA gave a brief presentation and then accepted oral comments from the public. SEA retained a court reporter at each meeting to record the oral comments. Written comments were also submitted at the meetings. Meetings were held in Fairbanks, North Pole, Salcha, and Delta Junction, on January 12, 13, 14, and 15, 2009, respectively. An average of 35 people signed in at each meeting.

SEA received approximately 120 written and 42 oral comments from elected officials, Federal, state, and local agencies, organizations, and citizens during the Draft EIS comment period, which closed on February 2, 2009.⁵ SEA considered all of the comments and responded

⁵ Copies of the transcripts from the public meetings on the Draft EIS are set out in Appendix A of the Final EIS. Copies of the written comments received on the Draft EIS are set out in Appendix B of the Final EIS. Copies of additional correspondence between SEA and a
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to all of the substantive comments in the Final EIS, which was issued on September 18, 2009.⁶ The Final EIS includes SEA's preferred alternatives and segments, which are also the environmentally preferred alternatives and segments, and are as follows:⁷

1. North Common Segment⁸
2. all three Eielson alternative segments (because the overall level of potential impacts would be similar, and Corps will assess potential wetlands impacts of the Eielson alternatives in its permitting process under section 404 of the Clean Water Act (CWA)).
3. Salcha Alternative Segment 1 (because less permafrost would be encountered; landslides, rockslides, and slump would be less likely; only one bridge would have to be constructed across the Tanana River, and that bridge, while large, would result in fewer potential impacts on fisheries, wetlands, vegetation, historic and prehistoric sites, noise, and existing structures).
4. Connector B and Central Alternative Segment 2 (primarily because they would result in fewer impacts to wetlands and less vegetation clearing and would involve soils with less permafrost).
5. Connector E (only required if Donnelly Segment 1 is constructed).
6. both Donnelly alternative segments (because of generally similar environmental impacts and the fact that Corps will address potential wetlands impacts during its permitting process under section 404 of the CWA).
7. South Common Segment⁹
8. Delta Alternative Segment 1 (based primarily on the lesser potential impact on private land and historic resources and the fewer at-grade crossings that would have to be constructed).

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variety of Federal, state, and local agencies are set out in Appendix C of the Final EIS.

⁶ Summaries of the comments received and SEA's responses, made using the guidelines of the Council on Environmental Quality (CEQ), see 40 CFR 1501.6, are set out in the Final EIS at 3-1 to 3-172.

⁷ SEA's preferences for alternative and connector segments are explained in the Final EIS at 1-4 to 1-15.

⁸ No alternatives to the North Common Segment were analyzed in the Final EIS. No party presented a reasonable and feasible alternative to this segment.

⁹ No alternatives to the South Common Segment were analyzed in the Final EIS. ARRC had proposed alternatives to this segment, but it subsequently determined that they were not technically feasible.

The Final EIS also includes SEA's final recommended measures to mitigate the potential environmental impacts of the NRE, including mitigation that was added or modified in response to comments on the Draft EIS.¹⁰

3. The EPA and ADNR Letters

In a letter submitted on October 9, 2009, EPA raises a number of concerns about the Final EIS, which we will address here.¹¹ EPA principally argues that the purpose and need for the rail line was not "clearly identified" in the Final EIS. EPA suggests that we should develop more information on the economic feasibility and soundness of the proposed NRE prior to issuing a final decision.

However, the Final EIS addressed the purpose and need for the rail line by stating that the NRE will allow: (1) the movement of commercial freight for business, military, and industrial users along the line, who now must transfer their incoming freight to truck near Fairbanks; (2) passenger transportation that could support tourism; and (3) dependable year-round access to the U.S. Army and U.S. Air Force training areas at Tanana Flats and Donnelly. As noted above, satisfying these needs by granting the requested exemption is consistent with 49 U.S.C. 10101(2), (4), (5), and (7), which call on the Board to "ensure the development and continuation of a sound rail transportation system . . . to meet the needs of the public and the national defense," "minimize the need for Federal regulatory control over the rail transportation system," "foster sound economic conditions in transportation . . . to ensure effective competition and coordination between rail carriers and other modes," and "reduce regulatory barriers to entry into . . . the industry." EPA's suggestion, that more information was needed on economic feasibility and soundness, ignores the statutory presumption in 49 U.S.C. 10901(c) favoring rail construction. See n.4 and related text, supra.

The CEQ rules at 40 CFR 1502.13 require only that the EIS "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives, including the proposed action." See 40 CFR 1502.13. Courts have long held that agencies conducting a NEPA review have considerable discretion to define the purpose and need for a project. See Westlands Water District v. U.S. Dept. of the Interior, 376 F.3d 853, 866-67 (9th Cir. 2004); City of Alexandria v. Slater, 198 F.3d 862, 867-69 (D.C. Cir. 1999). Here, the Final EIS at section 1.2 explains that the NRE would provide an alternative to the Richardson Highway for freight service for commercial and military users and would provide dependable year-round ground access to the Tanana Flats and Donnelly training areas. Currently, businesses and the military must transfer their incoming freight to truck near Fairbanks. In addition, the military's access to the Tanana Flats and Donnelly training areas is currently restricted to the winter months when the Tanana River is frozen because there is no bridge over the river. Thus,

¹⁰ For a summary of the mitigation measures that were modified, added, or deleted, see Final EIS at 2-1.

¹¹ EPA had raised many of the same issues during the EIS process, which SEA responded to in the Final EIS. See, e.g., Final EIS at 3-30 to 3-31.

the Final EIS shows that the proposed rail line would remedy both situations and also provide a public transportation alternative to the Richardson Highway for individuals traveling between Fairbanks and Delta Junction, where currently there is minimal public transportation. Id.

In a rail construction case, we weigh environmental concerns against transportation concerns in evaluating the public interest. Environmental impacts can lead the Board to find that a proposal is not consistent with the public convenience and necessity. But EPA has not provided credible evidence that the proposed construction of 80 miles of rail line—with SEA’s environmentally preferred alternatives and its extensive environmental mitigation recommendations—in an area now served solely by the Richardson Highway would not be in the public interest. Nor has EPA supported its request that the Board perform a cost benefit analysis to determine whether the proposed construction is economically feasible.¹²

EPA is concerned that the Final EIS identifies multiple preferred routing alternatives for the Eielson and Donnelly segments of the line. But as explained in the Final EIS at 1-5 to 1-15, it makes sense to authorize multiple preferred alternatives where alternatives have similar levels of environmental impact and where ARRC will continue to fine-tune the routing of the proposed rail line during the separate process of final design and permitting. Moreover, as EPA itself acknowledges in its comments, the CEQ regulations specifically contemplate that an agency may determine that there is more than one preferred alternative for a project. See 40 CFR 1502.14(e) and 1505.2(b) (respectively referring to an agency’s “preferred alternative or alternatives” and “alternative or alternatives which were considered to be environmentally preferable”).

EPA asserts that the Final EIS did not consider the potential designation of the Fairbanks/North Pole area as a non-attainment area for particulate matter 2.5 (PM 2.5) under the Clean Air Act (CAA). However, as EPA itself acknowledges, the non-attainment designation of that area had not been finalized at the time the Draft and Final EIS were issued.¹³ Moreover, both the Draft and Final EIS discussed designation impacts on the project. Both documents explained that the construction and operation of the proposed rail line would result in the emission of less than 100 tons of PM 2.5 per year, which is the *de minimis* conformity threshold. See Draft EIS at section 8.3.2, and Final EIS at section 3.8. Both the Draft and Final EIS also explained that where PM 2.5 emissions are below the *de minimis* threshold, the project is deemed not to interfere with the goal of attaining the PM 2.5 air quality standards. Id. Therefore, even though the non-attainment designation had not been finalized for the Fairbanks/North Pole area at the time the Draft and Final EIS were issued, the potential PM 2.5 emissions from this project were analyzed and were determined to be not significant enough to trigger regulation under the CAA.

¹² Indeed, CEQ’s NEPA regulations state that “[f]or purposes of complying with [NEPA], the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost benefit analysis and should not be when there are important qualitative considerations.” See 40 CFR 1502.23.

¹³ EPA’s Final Rule on PM 2.5 and the non-attainment designation for the Fairbanks/North Pole area was issued and published in the Federal Register on November 13, 2009 (74 FR 58688) and effective on December 14, 2009.

EPA is also concerned that certain Federal requirements, such as compliance with the Final Mitigation Rule for compensation of aquatic resources and sections 402 and 404 of the CWA, are listed as “voluntary” mitigation in the Final EIS. EPA asserts that the Federal requirements of laws such as the CWA are mandatory and states that the listing of these mandatory requirements as “voluntary” mitigation may be misleading to the reader. The Board agrees that these Federal requirements are indeed mandatory; they were listed as “voluntary” mitigation because ARRC “voluntarily” suggested that the Board impose specific mitigation requiring ARRC to comply with particular Federal requirements. In any event, ARRC is required to comply with all of the mitigation we are imposing here; the fact that a particular condition was part of ARRC’s “voluntary” mitigation does not mean that compliance is not mandatory.

EPA expresses disappointment with the format of the Final EIS. While its concerns about the format are not entirely clear, EPA notes that the Final EIS is difficult to navigate because the analysis in the Draft EIS is not reprinted or otherwise included in the Final EIS, and therefore, readers may be required to refer back to the Draft EIS for a full picture of the environmental analysis. However, CEQ regulations permit the approach used in the Final EIS: presenting a response to the comments on the Draft EIS and including only changes to the Draft EIS, rather than reprinting and circulating the entire Draft EIS in the Final EIS. See 40 CFR 1500.4(m) and 1502.9(b). In addition, to improve the accessibility of the entire EIS process, the Board has provided, and will continue to provide, a copy of the Draft EIS, either in paper or electronic format, to any party who requests it.

Finally, EPA asks the Board to explain why Corps’ comments on the Draft EIS were omitted in the Final EIS. Corps’ comments on the Draft EIS and SEA’s responses were not included in the Final EIS because Corps, one of the eight cooperating agencies collaborating during the EIS process, submitted the comments to SEA approximately 2 weeks after the public comment period closed. SEA provided its response to Corps’ comments directly to Corps. Corps’ comments and SEA’s responses are publicly-available on the Board’s website at <http://www.stb.dot.gov>. As demonstrated by its extensive written responses, SEA thoroughly considered Corps’ comments during the review of the Draft EIS and the preparation of the Final EIS. In general, where a cooperating agency timely submits formal comments on a publicly available Draft EIS during the public comment period, SEA will include those comments and its responses in the Final EIS.

ADNR in a letter submitted on October 22, 2009, focuses on the alternatives recommended in the Final EIS. It asserts that SEA’s final list of recommended alternatives is too limited. According to ADNR, two of SEA’s recommended alignment alternatives (Central Alternative Segment 2 and the South Common Segment) “would have only floodplain options.” In ADNR’s view, its preferred alternatives (Central Alternative Segment 1, Connector A, and a portion of the previously rejected “S1b alignment (milepost 29-39)”) would minimize floodplain impact and avoid spring-fed spawning and rearing habitat in the Richardson Clearwater River system.

ADNR fails to show that its preferred modifications would be reasonable and feasible alternatives for this project. Central Alternative Segment 1 and the Connector A alignment was carefully evaluated in the Final EIS, which explains that SEA's recommended alternatives (Central Alternative Segment 2 and the Connector B alignment) "would affect considerably less wetlands and other waters of the U.S. (8.1 acres) than Connector A and Central Alternative Segment 1 (107.2 acres)." See Final EIS at 1-10.¹⁴ In addition, Central Alternative Segment 2 and the Connector B alignment would result in less vegetation clearing and would affect less soil with permafrost. Id. SEA acknowledged that Central Alternative Segment 2 and the Connector B alignment would indeed traverse the 100-year floodplain, while Central Alternative Segment 1 and Connector A alignment would not. Id. But in balancing the competing environmental effects, SEA reasonably determined that Central Alternative Segment 2 and the Connector B alignment was the preferred alternative.

Regarding its second request, concerning the addition of an alternative alignment (S1b) for a portion of the South Common segment, ADNR appears to object to the South Common Segment alignment recommended in the Final EIS because it traverses the 100-year floodplain. However, based on current Federal Emergency Management Agency data, as explained in the Draft EIS, "[t]he entire footprint of South Common Segment would be outside the 100-year floodplain." See Draft EIS at 4-80. Moreover, even if the South Common Segment were to traverse the 100-year floodplain, an alternative alignment to the south/southwest of the South Common Segment, such as the initially-proposed S1b alignment, was properly rejected in 2006 for the following geotechnical and topographical reasons: (1) such an alignment would require construction of the line in a glacial outwash plain, which contains many "kettles" (small, shallow bodies of water) that should be avoided; (2) this outwash plain area also recently experienced slope failures; and (3) traversing this outwash plain would require the rail line to climb and descend an additional 200 feet in elevation, requiring a meandering, curvaceous alignment. See Final EIS at 3-55 to 3-56.¹⁵ In addition, the proposed S1b alignment would not have provided service to the Whitestone Farm District, which had requested access to rail service. Id.

ADNR suggests that the Board add a portion of the previously-rejected S1b alignment (milepost 29 to 39) as an alternative to a portion of the South Common Segment recommended in the Final EIS. ADNR asserts that this portion of the old S1b alignment would "avoid the

¹⁴ The difference in effects on wetlands between these two possible alignments was so significant that Corps indicated to SEA that Central Alternative Segment 1 and the Connector A alignment should not be considered as a possible preferred alternative.

¹⁵ The Final EIS at 3-55, refers to a previously considered alignment to the south of the South Common Segment as the "S4" alignment. However, the name of that proposed southerly alignment changed over time and appears to be substantively the same as the S1b alignment initially proposed by ARRC in 2005. In a March 18, 2009 letter, SEA requested additional explanation from ARRC for its rejection of such an alternative alignment to the South Common Segment. ARRC provided the above explanatory information in a responsive letter dated April 28, 2009. Both letters are available on the Board's website. SEA also provided this responsive information directly to ADNR, a cooperating agency, during deliberations over the content of the Final EIS.

kettles” and still allow access to the Whitestone Farm District. However, ADNR does not explain how this portion of the old S1b alignment would avoid other geotechnical and topographical problems, such as the potential slope failures and significant elevation changes, cited by ARRC in rejecting the S1b alignment as infeasible several years ago. Therefore, we will not add the portion of the S1b alignment requested by ADNR as a preferred alternative to the South Common Segment.

4. Our Conclusions on the Environmental Issues

After carefully reviewing the entire environmental record, including the EPA and ADNR comments on the Final EIS, we adopt all of SEA’s analysis and conclusions, including those not specifically discussed here. We are satisfied that SEA took the requisite “hard look” at potential environmental impacts and accurately identified and independently evaluated the potential environmental effects associated with the project.

As the Final EIS shows, there has been a careful comparison of alternatives here. We adopt SEA’s recommendations as our preferred rail alternatives because they minimize potential environmental impacts, and, where more than one alternative for a particular segment of the line is authorized, it makes sense to allow ARRC to continue fine-tuning the routing until the final engineering and permitting are completed.

Based on the environmental review, the principal environmental issues associated with ARRC’s proposal pertain to moose strikes; access to trails and waterways; anadromous fisheries (primarily salmon); and wetlands. See Draft EIS at Chapters 4, 5, 12, and 13. As the Final EIS shows, the impact on moose strikes will not be significant (moose mortality from moose-train collisions would average 40 moose a year out of a population of 2,300).¹⁶ Moreover, our mitigation (Condition Nos. 53 and 68) will reduce potential impacts by requiring ARRC to: (1) develop preferred moose habitat away from the rail line; (2) design the rail line to facilitate the ability of moose to retreat when a train passes; and (3) consult with ADNR and the Alaska Department of Fish and Game to seek additional ways to reduce the moose-train collision rate.

In response to concerns about maintaining access to areas generally west of the rail line via waterways, our mitigation (Condition Nos. 89-91) provides that adequate clearance must be provided for recreational boats, snow machines, and other vehicles on navigable and public waterways. A number of commenters on the Draft EIS focused on public access across the rail line and the potential effects of the rail line on recreational trails. They were concerned with maintaining the continuity of existing trails, providing access across the rail line for future trails, providing crossing structures that accommodate a variety of users (e.g. dog sledders, snow machiners, skiers, pedestrians, bicyclists, and ATV users), coordinating with user groups and owning agencies regarding locations of crossings and types of crossings, and providing year-round access (accommodating frozen sloughs in winter and navigable waters in the summer). In response, ARRC modified its project design to include grade-separated or at-grade crossings of all officially recognized trails. See Final EIS at 1-17. Further, where the rail line will cross

¹⁶ See Draft EIS at 5-65.

ADNR land, Alaska law gives ADNR authority to obtain additional future crossings of the rail line. Id. We are also imposing a number of conditions to maintain public access across the rail line for officially recognized and frequently used trails. See Condition Nos. 95, 99, 107, and 109-114. While some commenters requested additional trail crossings or other mitigation, the conditions we are imposing are reasonable and appropriate. As the Final EIS explains, our mitigation will provide for adequate access to trails but avoid undue disruption to ARRC's rail operations and potential safety concerns.

Natural resource agencies and other interested parties expressed concern about potential impacts to the spawning and rearing habitat of anadromous and other fish. But we are imposing extensive mitigation to minimize the impact to fisheries (e.g. the proper design of bridges and culverts and the timeframe and manner in which rail construction must be conducted). The commenters have not shown that our conditions are inadequate. Moreover, Corps' ongoing permitting process under section 404 of the CWA will ensure that the potential impact to wetlands resulting from this project are avoided, minimized, or appropriately mitigated.

In short, the construction and operation of the alternatives and connector segments we are authorizing with the conditions we are imposing will avoid, minimize, or mitigate to the extent practicable, the potential environmental impact discovered during the course of the environmental review. As the Final EIS shows, all practicable means to avoid or minimize environmental harm from the selected alternatives and connector segments have been adopted. And as discussed above, the NRE will provide reliable, year-round freight and passenger rail service to the region south of North Pole. It will be an alternative to the Richardson Highway for commercial freight and passenger service for businesses and communities on or near the rail line, including existing industries in the agricultural, mining, and petrochemical sectors in the Delta Junction region. Additionally, it will provide the U.S. Army and U.S. Air Force dependable, year-round ground access to their training areas, and its passenger rail service will support area tourism. The No-Action alternative would not satisfy ARRC's purpose and need; that is, it would fail to extend ARRC's existing freight rail and passenger service from North Pole to Delta Junction.

CONCLUSION

We find, after weighing the various transportation and environmental concerns and considering the entire record, that the petition for exemption should be granted and that ARRC may build any of our preferred alternatives and connector segments, subject to compliance with the environmental mitigation measures listed in Appendix 1 to this decision.

It is ordered:

1. Under 49 U.S.C. 10502, the Board exempts ARRC's construction and operation of the proposed NRE from the prior approval requirements of 49 U.S.C. 10901.
2. The Board adopts the environmental mitigation measures set forth in Appendix 1 to this decision, and imposes them as a condition to the exemption granted here.

3. Notice will be published in the Federal Register on January 11, 2010.
4. Petitions to reopen must be filed by February 5, 2010.
5. This decision is effective on its service date.

By the Board, Chairman Elliott, Vice Chairman Mulvey, and Commissioner Nottingham. Vice Chairman Mulvey dissented with a separate expression.

VICE CHAIRMAN MULVEY, dissenting:

I cannot vote to approve this project in light of opposition from EPA, the ADNR, and the lack of an adequate, documented purpose and need in support of the project. Through 49 U.S.C. 10901, Congress has directed the Board to generally approve new construction, unless the proposed construction is inconsistent with the public interest. But I believe that this presumption in favor of approving construction projects was targeted at private rail operators that expend mostly private funds to undertake the construction and risk of a new franchise. Here, the proponent of the construction is a railroad that has been heavily subsidized by the Federal government. Although the ARRC receives no operating subsidies, FRA has made capital grants available to it. Because Federal taxpayer dollars could be at risk through this construction project, the public convenience and necessity showing should be stronger -- not weaker -- than showings in support of privately-financed construction projects. For example, passenger traffic is touted as a rationale for this project. But there are fewer than 1,000 people residing at the Delta Junction Terminus. I am concerned that the passenger and tourism rationale for the line is speculative. Instead, ARRC should have provided more support for its argument that it needs to construct the line to carry military and industrial traffic, particularly in light of the nearby highway currently used to move such traffic.

APPENDIX 1

FINAL RECOMMENDED MITIGATION MEASURES

Topography, Geology, and Soils¹⁷

1. ARRC shall be subject to U.S. Environmental Protection Agency (EPA) and Alaska Department of Environmental Conservation (ADEC) jurisdiction under the National Pollutant Discharge Elimination System (NPDES) for stormwater discharges resulting from construction activities. The requirements commonly part of a Stormwater Pollution Prevention Plan associated with a NPDES Stormwater Construction Permit will require ARRC to perform as follows:
 - Limit ground disturbance to only the areas necessary for project-related construction activities during earthmoving activities.
 - Reuse topsoil wherever practicable and stockpile for later application during reclamation of disturbed areas.
 - Employ appropriate erosion control measures to minimize the potential for erosion of soil stockpiles until they are removed and the area is restored.
 - Restore disturbed areas as soon as practicable after construction ends along a particular stretch of rail line, the goal being the rapid and permanent reestablishment of native ground cover on disturbed areas to prevent soil erosion.
 - Revegetate the bottom and sides of drainage ditches using natural recruitment from the native seed sources in the stockpiled topsoil or a seed mix free of invasive plant species.
 - Implement temporary erosion control measures if weather or season precludes the prompt reestablishment of vegetation. (V)
2. ARRC shall design rail line and **ancillary facilities** in accordance with engineering criteria related to **permafrost**, seismic events, and other geologic hazards to comply with applicable design codes. For example, ARRC shall design the project in accordance with the latest applicable seismic codes taking into account the region's potential for earthquake activity, to mitigate potential damage to bridges and tracks. (V)
3. To minimize impacts to **permafrost areas**, ARRC shall avoid placing bridge piers or abutments that are part of this project in known areas of permafrost, when practicable.

¹⁷ A "V" after the mitigation measure indicates that it is voluntary mitigation developed by ARRC. ARRC is bound to comply with all of its voluntary mitigation and the additional mitigation we have imposed.

We have included in Appendices 2 and 3, respectively, glossaries of the terms and of the acronyms that appear in the mitigation measures. All terms that appear in **bold** in the text below can be found in the glossary in Appendix 2, and all acronyms that appear in the text below can be found in the glossary in Appendix 3.

4. ARRC shall construct the rail line and **ancillary facilities** that would occupy areas of permafrost in a manner that minimizes thaw and subsidence consistent with the reasonable requirements of the Alaska Department of Natural Resources (ADNR).

5. At sites in the floodplain used to obtain gravel or other raw materials for rail line construction, ARRC shall follow the general procedures and guidelines for material removal and site restoration, where practicable, outlined in North Slope Gravel Pit Performance Guidelines (McLean, Robert F. 1993. North Slope Gravel Pit Performance Guidelines. Alaska Department of Fish and Game (ADF&G) Habitat and Restoration Division, Technical Report No. 93-9. 37 pp + Appendices. Fairbanks, AK) or reasonable permit requirements of ADF&G, ADNR, or other appropriate authorizing agencies.

Water Resources

6. ARRC shall develop a spill prevention, control, and countermeasure plan for petroleum products or other hazardous materials, as required by applicable Federal and state regulations, prior to initiating any project-related construction activities. The plan shall: (a) specify measures to prevent discharges and contain such discharges if they occur; (b) include a requirement to conduct weekly inspections of equipment for any fuel, lube oil, hydraulic, or antifreeze leaks; and (c) provide that, if leaks are found, ARRC shall require the contractor(s) to immediately remove the equipment from service and repair or replace it. (V)

7. ARRC shall obtain Federal permits required by section 404 of the Clean Water Act (CWA) and section 10 of the Rivers and Harbors Act, from the U.S. Army Corps of Engineers (Corps) prior to initiation of project-related construction activities. ARRC shall also obtain necessary state permits and authorizations (e.g., ADF&G Fish Habitat Permit, ADNR Land Use Permit, and ADEC section 401 water quality certification). ARRC shall incorporate stipulations into construction contract specifications. (V)

8. ARRC shall implement compensatory mitigation for unavoidable impacts to wetlands as part of section 404 permit. (V)

9. ARRC shall design and construct the new rail line in such a way as to maintain natural water flow and drainage patterns to the extent practicable. This shall include placing **equalization culverts** through the embankment as necessary, preventing impoundment of water or excessive drainage, and maintaining the connectivity of floodplains and wetlands. (V)

10. ARRC shall disturb the smallest area practicable around any streams and, as soon as practicable following construction activities, revegetate disturbed areas using native vegetation. (V)

11. ARRC shall design bridges and culverts to maintain existing water patterns and flow conditions as practicable. (V)

12. For all proposed crossings of **anadromous** waters incorporating culverts, ARRC shall design said structures in accordance with the National Marine Fisheries Service (NMFS) 2008

publication, “Anadromous **Salmonid** Passage Facility Design” 2008. Anadromous Salmonid Passage Facility Design. NMFS, Northwest Region, Portland, Oregon. (V)

13. When project-related activities such as culvert and bridge construction require work in streambeds, ARRC shall conduct these activities during low-flow conditions or as otherwise permitted. (V)

14. ARRC shall place temporary stream crossings across waterways during construction to provide access for contractors, work crews, and heavy equipment. (V)

15. ARRC shall avoid **overly constricting active channels** with project-related temporary crossing structures and remove the temporary structures as soon as practicable after the crossing is no longer needed. (V)

16. As part of the NPDES Stormwater Construction Permit and Stormwater Pollution Prevention Plan, during construction ARRC shall:

- Use temporary barricades, fencing, and/or flagging to contain project-related impacts to the construction area and avoid impacts beyond the project footprint.
- Return areas disturbed, except for the rail line embankment, to their preconstruction contours to the extent practicable, and reseed or replant with native vegetation within one growing season following construction to provide permanent stabilization and minimize the potential for erosion.
- Use contaminant-free embankment and surface materials.
- Use appropriate best management practices within parallel drainage ditches that are within 1,000 feet of perennial waters to provide stormwater retention and filtration. Maintain drainage ditches as necessary (e.g., by removing accumulated sediments to maintain stormwater retention capacity and function). (V)

17. For the portions of the project within the Fairbanks North Star Borough (FNSB), ARRC shall coordinate with the local FNSB Floodplain Administrator to ensure that new project-related stream and floodplain crossings are appropriately designed. For crossings within the mapped 100-year floodplain, drainage crossing structures shall be designed to pass a 100-year flood. (V)

18. In consultation with appropriate agencies, including the U.S. Fish and Wildlife Service (USF&WS) and ADF&G, ARRC shall locate project-related **ancillary facilities** to minimize the size and degree of impacts to **sensitive habitat areas**. Off right-of-way (ROW) areas shall be restored in accordance with a reclamation plan developed in cooperation with USF&WS, ADF&G, or other appropriate agency staff.

19. For culverts and other project-related **conveyance structures** located in active braided channels, ARRC shall examine the seasonal and annual stages and extent of flooding for the **braided rivers** to determine and operate within the optimum construction window (to the extent practicable); estimate heights for and construct protective berms or dikes necessary to minimize flooding during the construction period; and minimize the effect on drainage patterns during flooding.

20. ARRC shall avoid potential ice-jam locations and **permafrost** areas, fine-grained sediments, and steep, high streambanks when locating project-related **ice bridges** and approaches, to the extent practicable. Specially adapted best management practices, or specific requirements of ADNR or other appropriate authorizing agencies, shall be applied to project-related construction activities within these types of areas.
21. Prior to the construction of the rail line, ARRC shall evaluate construction water needs in relation to streamflow rates and minimize effects of water supply withdrawals from watercourses. If ARRC intends to use groundwater as a water supply source, it shall evaluate estimated groundwater withdrawal rates in relation to annual and seasonal recharge rates and minimize effects of water withdrawal on surface water and groundwater.
22. Prior to construction, ARRC shall conduct detailed site-specific **hydraulic analyses** and modeling (e.g., as indicated in Roach, C. H. 2007. Preliminary Hydrologic and Hydraulic Study—Alaska Railroad Corporation Northern Rail Extension. Report prepared for the Alaska Railroad Corporation, Anchorage Alaska, April; and Zufelt, J. E. 2007. Effects of Ice Jamming on Water Levels near Proposed Bridge Crossing over Tanana River. Report prepared for TNH-Hanson, LLC), including examination of potential ice-jam and scour effects, for the Tanana River crossings to predict changes to flow paths, velocity profiles, and scour at high-flow discharges.
23. ARRC shall conduct site-specific analyses of seasonal variations in sediment transport mechanisms before the bridge construction work proposed for Delta Creek and the Little Delta River to minimize potential for disturbance.
24. ARRC shall design, construct, and operate the rail line and **ancillary facilities**, including bridge abutments, to maintain existing water patterns and flow conditions and provide long-term hydrologic stability by conforming to natural stream gradients and stream channel alignment and avoiding altered subsurface flow, to the extent practicable. Supporting structures (e.g., bridge piers) shall be designed to minimize **scour** and increased flow velocity, to the extent practicable.
25. ARRC shall design all permanent bridge structures and culverts to convey the 100-year flood event. ARRC shall comply with all relevant and reasonable Federal Emergency Management Agency (FEMA) guidance, regulations, and procedures in the design of project-related crossings of waterbodies and floodplains with established floodway models maintained by FEMA.
26. ARRC shall mitigate project-related unavoidable impacts to waters of the United States, including wetlands, to the extent practicable, in accordance with the reasonable requirements of section 404 of the CWA.
27. Prior to construction, ARRC shall complete jurisdictional delineations of wetlands and other surface waters that are subject to section 404 of the CWA for all **ancillary facilities** proposed outside of the right-of-way.

28. ARRC shall comply with the “Compensatory Mitigation for Losses of Aquatic Resources; Final Rule” (commonly referred to as the Final Mitigation Rule), which was published in the Federal Register (FR) on April 10, 2008, and became effective on June 9, 2008 (73 FR 19594-19705).

29. ARRC shall implement all reasonable best management practices imposed by Corps under section 404 of the CWA to minimize project-related impacts to vegetation. Standard best management practices are specified in Corps’ Alaska District’s Nationwide Permits General Best Management Practice Guide (Corps, 2007. “Nationwide Permits: General Best Management Practice.” Alaska District, Regulatory Program. Online at: <http://www.poa.usace.army.mil/reg/NWPs.htm>) and could include the following:

- Sediment and turbidity at the work site shall be contained by installing diversion or containment structures.
- Dredge spoils or unusable excavated material not used as backfill at upland disposal sites shall be disposed of in a manner that minimizes impacts to wetlands.
- Wetlands shall be revegetated as soon as possible, preferably in the same growing season, by systematically removing vegetation, storing it in a manner to retain viability, and replacing it after construction to restore the site.
- Streambanks shall be restored and revegetated using techniques such as **brush layering**, **brush matting**, and the use of **jute matting** and **coir logs** to stabilize soil and reestablish native vegetation.
- Topsoil and organic surface material, such as root mats, shall be stockpiled separately from overburden and returned to the surface of the restored site.
- Fill materials that are free from fine material shall be used.
- The load of heavy equipment shall be dispersed such that the bearing strength of the soil shall not be exceeded, either by using mats when working in wetlands or by using tracked rather than wheeled vehicles.

30. Prior to initiating project-related construction activities, ARRC shall mark stream channels and existing culvert locations before snowfall obscures their location to avoid damage to these areas.

31. During project-related design, ARRC shall align road and track crossings of water bodies perpendicular or near perpendicular thereto, where practicable, to minimize crossing length and potential bank disturbance.

32. During project-related construction, ARRC shall remove all project-related construction debris (including construction materials, soil, or woody debris) from water bodies, including wetlands, as soon as practicable during the **open-water period**, or prior to break-up for debris on top of or within ice or snow crossings.

33. During project-related construction, ARRC shall not clear **riparian vegetation** within 100 feet of fish-bearing water bodies and 50 feet of non-fish-bearing water bodies and emergent wetlands, unless approved by ADEC.

34. ARRC shall construct project-related water crossings in a manner that minimizes disturbances to streambeds, streambanks, and flow. Measures to meet these goals could include installing bridge piers during the winter and initially constructing permanent project-related crossing structures, when practicable, to avoid the need to construct both temporary and permanent crossing structures.

35. During project-related construction, ARRC shall perform all project-related travel and clearing in a manner that maintains existing surface and subsurface hydrology and water quality, to the extent practicable. Except for off-road travel approved by the land owner, project-related construction activities beyond the 200-foot wide ROW shall be supported only by ice roads, winter trails, existing or temporary roads, or air or boat service. Project-related wintertime off-road travel beyond the ROW shall be limited to areas where snow and ice depth are sufficient to protect the ground surface and vegetation. Summertime off-road travel beyond the ROW shall occur only if it can be accomplished without damaging vegetation or the ground surface, including streambanks that may be crossed.

36. ARRC shall design, construct, and use project-related winter roads to avoid degradation of water quality and to protect the roadbed from significant rutting, ground disturbance, or **thermal erosion** of **permafrost** areas. Where feasible and prudent, if the **surface organic mat** is removed or excessively reduced over **thaw-unstable permafrost** terrain, that area shall be stabilized by re-covering it with insulating material, revegetating, or installing **water-bars** as soon as practicable. Soil cuts or fills located in thaw-unstable permafrost terrain shall be avoided to the extent practicable. All cuts shall promptly be stabilized.

37. ARRC shall not mine gravel required for project-related construction within the limits of **ordinary high water** of water bodies unless otherwise authorized by ADNR Division of Mining, Land and Water. ARRC also shall consult with ADF&G and Corps prior to conducting these activities. Mine-site development and restoration within the limits of ordinary high water of water bodies shall be performed in accordance with the reasonable requirements of ADNR, ADF&G, and Corps.

38. ARRC shall abandon **geotechnical boreholes** in compliance with the reasonable requirements of ADEC pursuant to 18 Alaska Administrative Code (AC) 80.015(e), Well protection, source water protection, and well decommissioning.

39. ARRC shall follow all applicable Federal regulations and standard protocols for transporting hazardous substances and other deleterious compounds to minimize the potential for a spill occurrence near or adjacent to water bodies.

40. Prior to construction, ARRC shall consult with ADEC or other regulatory agencies to determine appropriate regulations and associated requirements for project-related tank storage facilities. At a minimum, ARRC shall place tank storage facilities as far as practicable from streams or rivers, and implement secondary containment measures (e.g., use of lined and bermed pits).

41. ARRC shall direct the operators of project-related vehicles not to drive in or cross streams other than at crossing points determined by ADEC and Corps.
42. During project-related construction, ARRC shall minimize to the extent practicable the duration and extent of activity at temporary construction facilities, such as staging areas, and provide surface treatments to minimize soil compaction (e.g., **scarify** compacted soils during reclamation to promote infiltration) and promote vegetation regrowth after the facilities are no longer needed to support construction.
43. For all project-related crossings of fish-bearing waters that incorporate bridges or culverts, ARRC shall design, construct, and maintain the **conveyance structures** in accordance with the NMFS publication, “**Anadromous Salmonid** Passage Facility Design,” *supra*, or equivalent and reasonable requirements.
44. ARRC shall ensure that all project-related culverts and bridges are sufficiently clear of debris to avoid stream-flow alteration and increased flooding. ARRC shall inspect all drainages, bridges, and culverts semi-annually (or more frequently, if seasonal flows dictate) for debris accumulation and remove and properly dispose of debris promptly.
45. During final design, ARRC shall conduct all siting, design, and development of the rail line and **ancillary facilities** according to the reasonable requirements within the jurisdiction of ADNR and ADF&G.

Biological Resources:

46. ARRC shall restrict its workers from hunting or fishing while stationed at work camps. (V)
47. ARRC shall obtain state permits and authorizations, including the ADF&G Habitat Permit. Permit stipulations shall be incorporated into the construction contract specifications. (V)
48. ARRC shall time project-related construction in **anadromous** streams to minimize adverse effects to salmon during critical life stages when practicable. ARRC shall incorporate timing windows [i.e., those time periods when salmon are least vulnerable to disturbances], as specified by ADF&G Division of Habitat, into construction contract specifications for instream work. ARRC shall design and construct stream crossings so as not to impede fish passage or impair the hydrologic functioning of the water body. (V)
49. When project-related activities, such as culvert and bridge construction, require work in streambeds, ARRC shall conduct activities, to the extent practicable, during either summer or winter low-flow conditions. (V)
50. ARRC shall implement Essential Fish Habitat (EFH) conservation measures as agreed upon with MNFS during the EFH consultation process. (V)

51. ARRC shall clear vegetation in preparation for project-related construction before or after the typical migratory bird nesting season as identified by USF&WS (typically May 1 to July 15), to the extent possible to ensure compliance with the Migratory Bird Treaty Act. If clearing is required during the nesting season, ARRC shall conduct a nest survey and consult with USF&WS, prior to clearing the vegetation, to identify additional appropriate compliance measures. (V)
52. During the bald eagle nesting season (typically March through August), ARRC and its contractor(s) shall use their best efforts to avoid bald eagle disturbance during project-related construction. Nests shall be protected in accordance with USFWS guidelines. (V)
53. Subject to consultation with ADF&G and ADNR, ARRC shall work with adjacent land managers to develop alternative preferred habitat away from the proposed rail line and, to reduce the potential for moose strikes, construct a widened embankment to allow moose to retreat when a train passes. (V)
54. Before final design of the rail line through the Fivemile Clearwater area, ARRC shall conduct a study, in consultation with relevant agencies [e.g., ADF&G], characterizing the environmental attributes of the area that are critical to the survival of **salmonids** and resident fish species. The information obtained during this study shall be used by ARRC to minimize potential impacts in the area during project-related construction. (V)
55. ARRC shall accommodate the restoration efforts underway by USF&WS for Piledriver Slough and other sloughs occurring within the Piledriver Slough drainage during project-related rail line construction and operations. Crossings shall be consistent with ongoing and planned fish habitat restoration efforts to the extent practicable.
56. Prior to construction of Salcha Alternative Segment 1, ARRC shall develop appropriate mitigation in consultation with ADF&G to prevent blockage of Piledriver and Twentythreemile Sloughs by beaver dams (as a result of reduced flushing flows caused by ARRC-proposed channel plugs). Mitigation may include monitoring conducted by ARRC at a frequency agreed to by ADF&G.
57. Prior to final design, ARRC shall consult with USF&WS, Corps, and ADF&G on the precise locations of any highly sensitive areas within the project area. Consistent with the standards of those agencies, **sensitive habitats** could include high-functioning wetland communities, fens, **late-succession forests**, and areas that have moderate to high densities of fine-grained **permafrost** soils, especially if the permafrost area is adjacent to or near a waterbody. Where practicable, ARRC shall refine the project's final design to avoid the destruction or fragmentation of highly sensitive areas (as defined by USF&WS and ADF&G), if they are encountered during project-related surveying and preconstruction activities.
58. To reduce potential collision and electrocution impacts to birds from power lines and communication towers, ARRC shall:
- Consult with USF&WS for current guidelines on tower siting, marking, and **guy lines**.

- Incorporate standard, raptor-proof designs (as outlined in “Suggested Practice for Avian Protection on Power Lines: The State of the Art in 2006.” Avian Power Line Interaction Committee. 2006. Edison Electric Institute (APLIC), and the California Energy Commission. Washington, DC, and Sacramento, CA. Online at <http://www.aplic.org/>), into the design of electrical distribution lines in areas of identified bird concerns to avoid electrocution of eagles, owls, and smaller raptors, including:
 - Using marking techniques such as **balls or flappers** to increase transmission line visibility, especially in areas where sandhill cranes and bald eagles are likely to roost, forage, or nest.
 - Maintaining a minimum 60-inch separation between **conductors** and/or **grounded hardware** and potentially using insulation materials and other applicable measures, depending on line configuration.
 - Incorporating standard raptor-proof designs (as outlined in “Avian Protection Plan Guidelines.” APLIC and USF&WS 2005. Online at <http://www.aplic.org>) into the design of the electrical distribution lines to reduce bird collisions.

59. To the extent practicable, ARRC shall minimize: project-related ground disturbance; the clearing of established vegetation; the removal of wildlife habitats and **riparian vegetation**; and the re-establishment of vegetation near the rail bed that would be attractive to moose.

60. ARRC shall implement standard best management practices to minimize impacts to vegetation during project-related forest clearing, including:

- Minimizing construction vehicle traffic in areas where excessive soil compaction and rutting would cause erosion.
- **Using low ground pressure construction** vehicles to minimize disruption to soil.

61. Prior to construction, ARRC shall consult with the U.S. Department of Defense Alaska Command (ALCOM), the Bureau of Land Management (BLM), and ADNR to develop mitigation to address the spread and control of **nonnative invasive plants (NIPs)**. The mitigation shall include developing and implementing a monitoring and control plan for NIPs during project-related rail line construction and operations. In addition to specifying that only seed mixes containing native or non-sustaining seed (such as annual rye) that are free of invasive plant species be used, this plan could include:

- Developing and implementing aggressive management programs to limit colonization by invasive plant species and eradicate any invasive species within the rail line right-of-way and support facilities
- Requiring pressure washing of the wheels, tracks, undercarriages, buckets, etc., of all equipment at staging areas before they are allowed into the construction area and before they would be allowed to cross the Tanana River and the Delta River
- Implementing procedures to prevent, control, and monitor any NIPs that might germinate as a result of a spill of grain or animal feeds (e.g., hay, pellets) during rail line operations
- Minimizing contact with roadside sources of weed seed that could be transported to other areas
- Using only certified weed-free straw and mulch for erosion control
- Ensuring that adequate topsoil depth (minimum 4 inches) and textures are in place and promptly reseeding or revegetating using only plant species native to interior Alaska

- Using only seed meeting certified standards pursuant to 11 AC-34.075, Prohibited Acts

62. ARRC shall undertake any project-related restoration/revegetation on or adjacent to BLM-managed lands in consultation with BLM.

63. ARRC shall comply with reasonable requirements of Title 16 of Alaska Statutes (AS), Fish and Game, pertaining to fish habitat. ADF&G could impose the measures for all project-related activities below the **ordinary high water mark** in specified **anadromous** water bodies and in fish-bearing waters that could block fish passage. These measures could include the following:

- All ice crossings shall be drilled before equipment crossing to determine the ice thickness.
- Alteration of river, stream, or lake banks or beds, except for approved permanent crossings, shall be prohibited.
- The operation of equipment, excluding boats, in open-water areas of rivers and streams shall be prohibited. Exceptions for water withdrawal shall be permitted on a site-specific basis.
- Ice or snow bridges and approach ramps constructed at river, slough, or stream crossings shall be substantially free of extraneous materials (e.g., soil, rock, wood, or vegetation) and shall be removed or breached before spring breakup.
- Bridges are the preferred **watercourse** crossings in fish spawning and important rearing habitats. In areas where culverts are used, they shall be designed, installed, and maintained to provide for efficient passage of fish, and ARRC shall monitor culverts semi-annually (or more frequently, as seasonal flows dictate) to ensure that they adequately provide for fish passage in fish-bearing waters.

64. Unless otherwise approved by ADF&G, ARRC shall not detonate explosives within, beneath, or in proximity to fish-bearing waters which would result in **overpressures** exceeding 2.7 pounds per square inch unless the water body, including its **substrate**, is frozen solid. Peak particle velocity stemming from explosive detonation shall not exceed 0.5 inch per second during the **early stages of egg incubation**.

65. ARRC shall comply with the reasonable requirements of AS-16.05.841, Fishway Required, and AS-16.05.871, Protection of Fish and Game, regarding project-related winter **ice bridge** crossings and summer ford crossings of all **anadromous** and **resident fish streams**. If necessary, natural ice thickness could be augmented (through removing snow, adding ice or water, or other techniques) if site-specific conditions, including water depth, are sufficient to protect fish habitat and maintain fish passage.

66. ARRC shall not narrow an **anadromous** water body between its **ordinary high water marks**, unless authorized in writing by ADF&G prior to construction, to enable ADF&G to apply reasonable design criteria or requirements.

67. Project-related water withdrawal from fish-bearing waters shall be subject to prior written approval by ADNR Division of Mining, Land and Water and ADF&G Division of Habitat and shall reserve adequate flow to support indigenous aquatic life. In implementing this project,

ARRC shall not block a **watercourse** to the passage of fish. To the extent practicable, ARRC also shall design each water intake directly accessible by fish to prevent the intake, impingement, or entrapment of fish.

68. ARRC, in consultation with ADF&G and ADNR, shall evaluate, implement, and monitor various aspects of project-related rail design, maintenance, and operations to document moose mortality from collisions with trains, and to develop a strategy to reduce the moose-train collision mortality rate. The strategy could include:

- Maintaining vegetation along the ROW in primary (e.g., grasses/**sedges**) or late (e.g., old-growth spruce) **successional stages**. If vegetation is allowed to progress to the secondary successional stage (e.g., shrubs), maintaining it at the shortest possible height, not to exceed 0.5 meter, encouraging shrubs of non-preferred moose browse species (e.g., alder, dwarf birch), and minimizing re-growth of willow, paper birch, and aspen.
- Mowing vegetation in late summer before energy stores are transferred to the roots.
- Plowing snow back from the track to the outer edge of the trackside clearing in winter to allow moose easy access away from the tracks when a train approaches.
- Not seeding grasses after approximately July 15, because fresh green growth has been noted to attract moose to ROWs during early fall, potentially resulting in higher rates of moose/train collisions.
- Developing a plan in conjunction with ADF&G to catalog all moose strikes (not just confirmed or suspected deaths) in a timely manner that includes, but is not necessarily limited to: precise location (latitude and longitude); date and time; sex and age of moose; weather and other environmental conditions at the time and location of strike; and characteristics associated with the particular train, such as horn use, speed, and track characteristics.
- Designing, constructing, and operating all aspects of the rail line to minimize significant alteration of moose and other wildlife movement and migration patterns.

69. ARRC shall use appropriate and efficient methods to properly handle, store, and dispose of human food, garbage, and waste. ARRC shall secure and dispose of food and garbage during project-related construction and operations to prevent bears from gaining access to such materials.

70. ARRC shall prepare and implement a **bear interaction plan** to minimize conflicts between bears and humans. In consultation with ADF&G, ARRC shall develop appropriate educational programs and **camp layout** and management plans when project-related construction and operations plans are being prepared.

71. ARRC shall not conduct project-related construction and land clearing activities within 0.5 mile of known occupied grizzly and black bear dens, unless appropriate alternative mitigation measures are approved by ADF&G. ARRC shall obtain a list of known den sites from ADF&G Division of Wildlife Conservation prior to commencement of any project-related activities and shall report occupied dens encountered.

72. ARRC shall prohibit workers from harassing wildlife, including winter or calving moose and bears within known occupied dens during project-related construction and operations. ARRC shall instruct workers not to feed wildlife.

73. ARRC shall coordinate with ALCOM and BLM regarding fire suppression to minimize potential fires caused by project-related construction and operations.

Cultural Resources

74. ARRC shall develop protocols to inform and prepare construction supervisors of the importance of protecting archaeological resources, graves, and other cultural resources and how to recognize and treat the resources. (V)

75. ARRC shall comply with the Programmatic Agreement developed through the section 106 process under the National Historic Preservation Act (see Appendix 4 for a copy of the executed Programmatic Agreement).

Subsistence

76. To the extent practicable, ARRC shall schedule project-related construction activities that may temporarily block access to trails and waterways to occur during times of their limited use or when alternative routes are most available.

Climate and Air Quality

77. To minimize fugitive dust emissions created during project-related construction activities, ARRC shall implement appropriate fugitive dust suppression controls, such as spraying water or other established measures. ARRC shall also operate water trucks on haul roads as necessary to reduce dust. (V)

78. To limit project-related construction emissions, ARRC shall work with its contractor(s) to ensure that construction equipment is properly maintained and that required pollution-control devices are in working condition. (V)

Noise and Vibration

79. ARRC shall work with its construction contractor(s) to minimize, to the extent practicable, construction-related noise disturbances near residential areas. Construction and maintenance vehicles shall be in good working order with properly functioning mufflers to control noise. (V)

80. ARRC shall consult with affected communities regarding its planned construction schedule to minimize, to the extent practicable, project-related construction noise and vibration disturbances in residential areas during evenings and weekends.

81. Prior to initiating construction activities related to the proposed rail line, ARRC shall establish a Community Liaison to consult with affected communities, landowners, and agencies. Among other responsibilities, the Community Liaison if requested shall assist communities or other entities with the process of establishing **quiet zones**.

Transportation

82. ARRC shall establish a Diagnostic Team comprising ARRC staff, community members, representatives of the Alaska Department of Transportation and Public Facilities and other entities regarding project-related roadway/rail line crossings in consultation with Federal Railroad Administration safety officials. This process shall result in appropriate safety measures for every roadway/rail line crossing. (V)

83. ARRC shall coordinate with Federal, state, and local emergency management officials in the project area. ARRC shall provide, upon request, applicable hazardous-materials training and/or project-related information to enhance readiness. ARRC shall incorporate the new rail line into its existing emergency response process and shall update its Oil Spill Contingency Plan to include the new rail line. (V)

84. During construction of project-related tracks across existing roads, ARRC shall notify road users of temporary road closings and other construction-related activities. ARRC shall provide for detours and associated signage, as appropriate, or maintain at least one open lane of traffic at all times to allow for the quick passage of emergency and other vehicles. ARRC shall display signs providing the name, address, and telephone number of a contact person onsite to assist the public in obtaining immediate responses to questions and concerns about project activities. (V)

85. To the extent practicable, ARRC shall confine all project-related construction traffic to project-specific roads within the ROW or established public roads. Where traffic cannot be confined to these roads, ARRC shall make necessary arrangements with landowners to gain access. ARRC shall remove and restore upon completion of project-related construction any temporary access roads constructed outside the ROW unless otherwise agreed to with landowners. (V)

86. ARRC shall coordinate with ALCOM and BLM personnel, as appropriate, regarding project-related activities occurring within military base and training areas. (V)

87. ARRC shall consult with appropriate state and local transportation agencies to determine the final design and other details of project-related grade crossings and warning devices. (V)

88. For each of the public grade crossings on the new rail line, ARRC shall provide permanent signs prominently displaying both a toll-free telephone number and a unique grade crossing identification number in compliance with Federal Highway Administration regulations (23 CFR Part 655). ARRC's personnel shall answer the toll-free number 24 hours a day. (V)

Navigation

89. ARRC shall obtain a section 9 Bridge Permit from USCG for construction of bridges over navigable rivers (e.g., Tanana River, Little Delta River, Delta River, and Delta Creek). Permit stipulations shall be incorporated into the construction contract specifications. (V)
90. In coordination with USCG, ARRC shall provide adequate clearances for the navigation of recreational boats on navigable rivers. (V)
91. In coordination with ADNR, ARRC shall ensure that project-related bridges and culverts placed on navigable or public waters, as determined by ADNR, are designed and installed to accommodate:
- Navigation by recreational boat users in a manner that shall not impede existing uses, to the extent practicable, and
 - Public access and use of the **statutory easements** as established by the reasonable requirements of AS-38.05.127, Access to Navigable or Public Water.

Land Use

92. Prior to initiation of construction activities related to this project, and for 1 year following start-up of operations on the new rail line, ARRC shall: provide a Community Liaison to consult with affected communities, businesses, and agencies; develop cooperative solutions to local concerns; be available for public meetings; and conduct periodic public outreach. ARRC shall provide the name and telephone number of the Community Liaison to mayors and other appropriate local officials in each community through which the new rail line passes. (V)
93. ARRC shall continue its ongoing community outreach efforts by maintaining a web site about the project throughout the construction period of the rail line. (V)
94. In the event any property damage is caused by project-related construction activities, ARRC shall work with each affected landowners to appropriately redress the damage. (V)
95. ARRC shall address concerns about fragmentation of neighborhoods and farm properties as a result of this project by maintaining the connectivity of major roadways and working with local residents on specific ROW acquisition issues. (V)
96. ARRC shall work with affected businesses or farms to appropriately address project-related construction activity issues affecting any business or farm. (V)
97. To the extent practicable, ARRC shall ensure that business entrances and exits are not obstructed by project-related construction activities, except as required to move equipment. (V)
98. ARRC shall consider fencing on a case-by-case basis for agricultural areas affected by this project. (V)

99. Depending on the routing alternative(s) that are constructed during the construction of crossings over navigable rivers, some short-term temporary restrictions of watercraft traffic could occur for safety purposes. In that event, ARRC shall install warning devices to notify boaters of project-related bridge construction activities. ARRC also shall display signs providing the name, address, and telephone number of a contact person onsite to help waterway users obtain immediate responses to questions and concerns about project activities. (V)

100. ARRC shall make reasonable efforts to minimize disruptions to utilities by scheduling project-related construction work and outages to low-use periods. ARRC shall notify residents and other utility customers in advance of project-related construction activities requiring temporary service interruptions. (V)

101. As part of the NPDES Stormwater Construction Permit and Stormwater Pollution Prevention Plan, ARRC shall:

- Restore land used for temporary staging areas during project-related construction to natural conditions if occurring on undeveloped ADNR land or to its former uses if occurring on military or private land.
- Restore public land areas directly disturbed by project-related construction equipment and not owned by ARRC (such as temporary access roads, haul roads, and crane pads) to their original condition, as reasonable and practicable, upon completion of construction.
- In business and industrial areas, store project-related equipment and materials in established storage areas or on ARRC's property. ARRC shall prohibit parking of equipment or vehicles, or storage of materials along driveways or in parking lots, unless agreed to by the property owner.
- Prohibit project-related construction vehicles, equipment, and workers from accessing work areas by crossing business or agricultural areas, including parking areas or driveways, without advance notice to/permission from the owner. (V)

102. ARRC shall make reasonable efforts to identify all utilities that are within or cross the ROW that are reasonably expected to be materially affected by the project-related construction. ARRC shall consult with utility owners during design and construction so that utilities are protected during project-related construction activities. ARRC shall notify the owner of each such utility identified prior to project-related construction activities and shall coordinate with the owner to minimize damage to the utility. (V)

103. ARRC shall require contractor(s) to dispose of waste generated during project-related construction activities in accordance with applicable and reasonable Federal, state, and local regulations. (V)

104. In accordance with its Oil Spill Contingency Plan and Emergency Response Plan, ARRC shall make the required notifications to the appropriate Federal and state environmental agencies in the event of a reportable hazardous materials release. ARRC shall work with the appropriate agencies, such as ADEC, EPA, and USF&WS, to respond to and remediate such releases. (V)

105. Before project-related operations start, ARRC shall provide information such as emergency contact numbers, access points, plans for operations and the location(s) of emergency

equipment so local, state, and Federal agencies may incorporate this information into local response plans as may be needed. (V)

106. At least one month before initiating construction activities in the area, ARRC shall provide the information described below regarding project-related construction of the new rail line and any additional information, as appropriate, to fire departments within the project area, FEMA, FNSB Emergency Operations Department, and the Delta Greely Local Emergency Planning Committee:

- The schedule for construction throughout the project area, including the sequence of construction of public grade crossings and the approximate schedule for these activities at each crossing;
- A telephone number for ARRC's contact, who shall be available to answer questions or attend meetings for the purpose of informing emergency-service providers about the project-related construction and operations.
- Revisions to this information, including changes in construction schedule, as appropriate. (V)

107. Prior to construction, ARRC shall consult with ADNR and other appropriate agencies and user groups to develop a plan to ensure that construction activities occur during the most appropriate timeframe to limit potential impacts on recreation activities. The final plan shall comply with all reasonable requirements and conditions as determined by ADNR pursuant to AS-42.40.460, Extension of the Alaska Railroad. ARRC also shall comply with the following measures:

- The plan shall be developed prior to completion of final engineering plans following consultation with ADNR, ADF&G, other appropriate government agencies, and user groups to determine the location of all established and recognized state trails, including informal, legal trails on state land, and the pattern of recreation activities (time and location of most frequented recreation areas).
- The plan shall designate temporary access points if main access routes must be obstructed during project-related construction and include an agreed-upon number and location of access points as determined during consultation with applicable agencies.

108. ARRC shall consult with Corps, ADNR Division of Mining, Land and Water, and ADF&G regarding project-related construction and operation activities and the proposed Moose Creek grade separation between the existing ARRC main line and the Richardson Highway.

109. If Eielson Alternative Segment 3 is built following Corps' section 404 process, ARRC shall consult with Eielson AFB and other agencies as appropriate to determine appropriate measures to mitigate impacts based on final design of the segment to existing and planned uses of the Eielson AFB Outdoor Recreation Area and adjoining AFB property between Richardson Highway and Piledriver Slough. ARRC shall implement the resulting specific mitigation measures, which could include, but are not limited to: constructing alternative access roads to existing campsites; creating grade-separated crossings (negating the necessity of using locomotive horns for at-grade crossings); expanding parking areas; and moving of campsite locations outside the affected area.

110. ARRC shall consult with the appropriate management agencies, including ADNR and ADF&G, to ensure that project-related bridges and culverts are designed, constructed, and maintained to accommodate travel by winter modes of transportation (e.g., snow machine and dogsled) on streams and rivers used for recreational access, as determined under mitigation measure 91. At a minimum, these travel accommodations shall be made for project-related crossings of Piledriver Slough, the Little Salcha River, the Fivemile Clearwater River, and the Richardson Clearwater River, all of which are commonly used for winter transportation.

111. ARRC shall consult with resource management agencies, including FNSB, ADNR, ADF&G, and BLM, and with appropriate trail user groups as to the provision, access, and design of crossings for trail easements that intersect with the new rail line. Consultation shall include concerns related to general **dispersed-use** access, informal public trails on state land, **blazed section lines**, and long stretches of rail line without designated public crossings.

112. In collaboration with appropriate agencies, including ADNR, ADF&G, and BLM, ARRC shall provide crossings for the following trails: the trail to the Blair Lakes Area; Silver Fox Lodge Trail; ADNR Winter Trail (ARRC has included two crossings of this trail as part of the Proposed Action); Koole Lake Trail; Donnelly-Washburn Trail; ADNR Forestry Winter Road; and Rainbow Lake Trail. Providing crossings could include the elimination of multiple crossings by relocating the trail.

113. In collaboration with appropriate resource management agencies, including FNSB Department of Parks and Recreation, ADNR, and ADF&G, ARRC shall provide the following:

- Five crossings of the Twentythreemile Slough Dog Mushing Trails if Eielson Alternative Segment 1 is authorized by USACE and is built; and
- Five crossings of the Twentythreemile Slough Dog Mushing Trails if Eielson Alternative Segment 2 is authorized by USACE and is built.
- If the rail line would cross any “Important Trails in the Planning Area” (as listed in the Tanana Basin Area Plan, ADNR, updated 1991) on non-Federal lands, ARRC shall consult with the applicable landowner(s) to identify additional potential trail crossings, and report the results of those consultations to the Board prior to finalizing engineering design plans for the affected sections of the rail line.

114. Prior to initiating project-related construction, ARRC shall consult with appropriate agencies and user groups (which could include FNSB Department of Parks and Recreation, ADNR, ADF&G, BLM, Eielson AFB, Fort Greely, Fort Wainwright, and the Salcha Dog Mushers Association) to determine a construction period that would least disturb recreation activities associated with waterways and the trail system.

115. When project-related construction takes place on state and private land, ARRC shall consult with ADNR Division of Forestry to salvage or dispose of commercial and personal use timber within the ROW in accordance with the Forest Practices Act and the Tanana Valley State Forest Management Plan objectives. Timber salvage and disposal shall comply with AS-41.17.082, Control of Infestations and Disease.

116. When performing project-related construction activities anywhere on military lands, ARRC shall coordinate with the Fort Wainwright contaminant specialists as to suspected, known or newly discovered contamination sites on military lands, if any.

117. ARRC shall coordinate with BLM, ALCOM, and the U.S. Air Force 354th Fighter Wing Command (354th FWC) from Eielson AFB during the ROW approval process, and the ROW instruments issued by them shall include stipulations to ensure that military use is not adversely affected by project-related construction and operations.

118. If unanticipated sources of hazardous or regulated materials are encountered during project-related construction activities (such as along the Haines Fairbanks Pipeline ROW in the Delta Junction area), ARRC shall immediately notify ADEC and stop all work in the area until a corrective action plan is approved. Handling, treatment, and disposal of any hazardous materials shall be in full compliance with all Federal, state, and local requirements.

119. ARRC shall conduct project related ROW acquisitions in conformance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. 4601 *et seq.*), regulations promulgated pursuant to that statute (49 CFR Part 24), and all reasonable terms and conditions of AS-34.60.010-150, Relocation Assistance and Real Property Acquisition Practices.

Visual Resources

120. To minimize the visual impact of the cleared ROW for this project, ARRC shall:

- Locate permanent structures, such as maintenance facilities, (excluding safety-related devices) associated with the rail line as far from road crossings as practicable to avoid attracting visual attention.
- Minimize clearings at road crossings, which could be accomplished by leaving a few larger trees and some smaller trees and shrubs untouched, to reduce visual contrast and mimic natural clearings in the landscape, where consistent with crossing safety.
- Plant native trees and bushes densely around the base of land-based bridge supports to break up the uniform lines, colors, and smooth textures of the bridge supports when appropriate given maintenance, access, safety considerations, and natural vegetation patterns. Plant species that are preferred by moose as browse should be avoided to the extent practicable.

121. Where practicable to reduce visual impact in areas of high visibility (such as residential areas) without increasing the project footprint, ARRC shall:

- Plant native vegetation along the ROW to reduce the contrast with line, color, and texture. Avoid to the extent practicable planting species that are preferred by moose as browse.
- Shape slopes in areas with hill cuts to reflect the natural landscape, where practicable, and plant with native materials to provide an amorphous and irregular form and rough texture.
- Dispose of excess material in a suitable fill location and not cast on downhill slopes.

APPENDIX 2

Glossary of Mitigation Terms

Anadromous – anadromous fish reproduce in freshwater, and the offspring migrate to the ocean to grow and mature, and return to freshwater to reproduce.

Ancillary facilities – facilities that are part of the proposed action and that would be constructed to support rail activities such as communications towers, a passenger facility, and sidings and are necessary for operation of the rail line.

Balls or flappers – Brightly colored balls are attached to transmission lines to provide greater visibility. Flappers are used to deter birds and other wildlife from landing on transmission lines.

Bear interaction plan – a plan to minimize the interaction between humans and bears; often details garbage management.

Blazed section lines – section lines marked (usually using paint on trees) by a surveyor.

Braided river – a river consisting of a network of small channels separated by small, often temporary, islands.

Brush layering – a revegetation technique that combines layers of dormant (living woody plants that are not actively growing) or rooted cuttings with soil to revegetate and stabilize streambanks and slopes; branches are placed to provide reinforcement to the soil.

Brush matting – a revegetation technique that provides a protective vegetative covering (in the form of a brush mat of dormant branches that will root and grow) to a slope.

Camp layout – the configuration for temporary housing facilities.

Coir logs – interwoven coconut fibers that are bound together with biodegradable netting and provide temporary physical protection to a site while vegetation becomes established; often used to secure the base or toe of a slope in low velocity areas.

Conductors – part of a transmission line through which electricity passes.

Conveyance structure – a structure to convey water, e.g. a pipe, culvert, or bridge.

Dispersed-use access – a management concept that encourages use over an entire area, rather than concentrated in a particular area.

Early stages of egg incubation – could occur any time between spring and late fall depending on the fish species and location.

Equalization culvert – a culvert placed under the rail bed to allow for water flow at a location other than a waterbody.

Geotechnical borehole – a narrow shaft drilled into the ground to obtain information on the physical properties of the rock and soil below the ground surface.

Grounded hardware – hardware used on or in conjunction with transmission lines that is connected to the ground so as to prevent an electrical short.

Guy line – a rope or cable used to provide support and stability to a structure.

Hydraulic analyses – in this context, analysis that would examine the potential change in river flow characteristics, including river water elevation, related to bridge characteristics, including bridge opening width and elevation.

Ice bridges – frozen structures formed over river or lake surfaces to facilitate vehicular and other modes of human access.

Jute matting – an organic geotextile that forms a mulch that suppresses weed growth and increases moisture retention in the soil to promote revegetation.

Late-succession forests – a forest that includes mostly mature and old-growth trees.

Low ground pressure construction vehicles - construction equipment that is either lighter-weight than normal, or has a higher surface area to distribute its weight, either by using tracks instead of tires or larger or a greater number of tires.

Nonnative invasive plants – plants that are not native to an area, have few or no natural predators and, therefore, proliferate easily in an area which adversely affects the ecology of the areas they invade, often resulting in the loss of native plant life due to overwhelming competitive pressures.

Open water period – period of time during which a waterbody is not frozen.

Ordinary high water mark – the point on a streambank at which surface water is so continuous that the streambank is marked by erosion, absence of woody terrestrial vegetation, or predominance of aquatic vegetation.

Overly constricting active channels – excessive narrowing of stream channels through which water current flows (as distinct from channels that currently do not convey water).

Overpressures – a pressure shock wave, usually resulting from the detonation of an explosive, which measures over and above normal air or water pressure.

Permafrost – permanently frozen ground; a thermal condition of soil or bedrock in which the ground exists at a temperature below freezing for a number of years.

Quiet zone – an area in which locomotive warning horns are not sounded at at-grade highway-rail crossings. The Federal Railroad Administration has primary authority over quiet zones which can be established pursuant to the process in 49 CFR Parts 222 and 229, Use of Locomotive Horns at Highway-Rail Grade Crossings, Final Rule.

Resident fish streams – streams that support fish that do not migrate and remain year-round.

Riparian vegetation – Generally describes vegetative communities located on the banks of natural waterbodies such as rivers, lakes, and tidewater areas.

Salmonid – belonging to the family Salmonidae, which includes the salmon, trout, and whitefish.

Scarify – to break up or loosen surface soil, generally to facilitate revegetation.

Scour – erosion of streambed material, resulting in temporary or permanent lowering of streambed elevation or the location of the stream channel.

Sedges – a family of flowering plants that resemble grasses or rushes, often associated with wetlands or areas with poor soils.

Sensitive habitat areas – areas containing or supporting organisms that are rare or valuable; these areas are often designated by a governmental entity.

Statutory easements – an agreement, either temporary or permanent, that allows access to a piece of property for a specific use.

Subsidence – the motion of a surface of land shifting downward to form a depression.

Substrate – in this context, the surface material at the bottom of a waterbody.

Successional stages – a natural progression of plant inhabitation of bare ground, often occurring in different stages; i.e., initially annuals and perennials, then small woody plants, then trees.

Surface organic mat – a dense clump of vegetative matter, usually found floating on the surface of a waterbody.

Thaw-unstable permafrost – Permafrost in poorly drained, fine grained soils, especially silts and clays that contain more ice than water; unstable because thawing can result in loss of strength, excessive settlement, and soil containing so much moisture that it flows.

Thermal erosion – the erosion of ice-bearing permafrost through warming.

Velocity profiles – the variation of water velocity within a vertical distance from the stream bed to the water surface.

Water-bar – an erosion control structure, such as a log or timber installed across a trail; used to intercept flowing water and divert it into a stable drainage way or vegetated area.

Watercourse – a natural or artificial channel through which water flows.

APPENDIX 3**Glossary of Acronyms and Abbreviations**

AC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
ADNR	Alaska Department of Natural Resources
AFB	air force base
ALCOM	U.S. Department of Defense Alaska Command
APLIC	Avian Protection on Power Lines
ARRC	Alaska Railroad Corporation
AS	Alaska Statutes
BLM	Bureau of Land Management
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FNSB	Fairbanks North Star Borough
FR	Federal Register
NIPs	Nonnative invasive plants
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRE	Northern Rail Extension

ROW	right-of-way
RTP	rail transportation policy
SEA	Section of Environmental Analysis
USCG	U.S. Coast Guard
USF&WS	U.S. Fish and Wildlife Service
354 th FWC	U.S. Air Force 354 th Fighter Wing Command

APPENDIX 4

PROGRAMMATIC AGREEMENT

AMONG

**SURFACE TRANSPORTATION BOARD,
ADVISORY COUNCIL ON HISTORIC PRESERVATION,
FEDERAL RAILROAD ADMINISTRATION,
U.S. BUREAU OF LAND MANAGEMENT, ALASKA STATE OFFICE,
U.S. ARMY GARRISON FORT WAINWRIGHT, ALASKA, AND
ALASKA STATE HISTORIC PRESERVATION OFFICER**

REGARDING

**THE ALASKA RAILROAD CORPORATION, NORTHERN RAIL EXTENSION
BETWEEN NORTH POLE AND DELTA JUNCTION, ALASKA**

STB Finance Docket No. 34658

WHEREAS, the Surface Transportation Board (STB)¹⁸, the lead Federal agency, has received an application for the construction and operation of a rail line from the Alaska Railroad Corporation (ARRC or applicant), to extend its existing system between North Pole and Delta Junction, Alaska (Undertaking); and,

WHEREAS, the STB has determined that the proposed project is an Undertaking subject to Section 106 of the National Historic Preservation Act (Section 106), 16 U.S.C. §470(f), which may have an effect upon properties included in or eligible for inclusion in the National Register of Historic Places (NRHP), i.e., “historic properties” as defined at 36 CFR 800.16 (l)(1), the full extent of which will not be known until after execution of this Agreement; and,

WHEREAS, the STB is in consultation with the Advisory Council on Historic Preservation (ACHP); Federal Railroad Administration (FRA); United States Department of the Interior - Bureau of Land Management, Alaska State Office (BLM); U.S. Army Garrison Fort Wainwright, Alaska (USAG FWA); and the Alaska State Historic Preservation Officer (SHPO), pursuant to Section 800.14(b) of the regulations (36 CFR Part 800) implementing Section 106; and,

WHEREAS, the STB, ACHP, FRA, BLM, USAG FWA, and SHPO, are Signatories pursuant to 36 CFR 800.6(c)(1) and have authority to execute, amend or terminate this Programmatic Agreement (Agreement); and,

¹⁸ The Surface Transportation Board (STB) was created with the passage of the ICC Termination Act of 1995 (Pub. L No. 104-88). The STB, an independent agency administratively housed within the U.S. Department of Transportation, is responsible for administering rail, pipeline, and certain adjudicatory functions involving motor and water carriers. These responsibilities are similar to those duties formerly administered by the Interstate Commerce Commission. The STB is the lead agency under the National Environmental Policy Act (NEPA) for the Northern Rail Extension Project.

WHEREAS, the FRA is a Signatory because it has provided grant funding to ARRC for preliminary engineering and environmental analysis for the Undertaking and could provide future grant funding; and,

WHEREAS, the BLM is a Signatory because it is a land holder and has authority to issue a linear right-of-way grant for the Undertaking to pass through those Federally managed lands; and,

WHEREAS, the USAG FWA is a Signatory because the Undertaking would pass through Fort Wainwright controlled lands, and would require permission from the USAG FWA for construction; and,

WHEREAS, the U.S. Department of Defense, Alaskan Command (ALCOM); U.S. Air Force, 354th Fighter Wing, Eielson Air Force Base (AFB, 354th Fighter Wing); and ARRC are Invited Signatories pursuant to 36 CFR 800.6(c)(2) and have the same authority to amend or terminate this Agreement as Signatories. The refusal of any party invited to become a signatory to this Agreement does not invalidate the Agreement; and,

WHEREAS, the ALCOM is an Invited Signatory because any alternative segment of the Undertaking located on military training areas would require ALCOM service component concurrence; and,

WHEREAS, the 354th Fighter Wing is an Invited Signatory because the Undertaking would pass through Eielson AFB, and would require permission from Eielson AFB for construction; and,

WHEREAS, the State of Alaska's Department of Natural Resources (ADNR) is a Concurring Party pursuant to 36 CFR 800.6(c)(3) because they are a major land holder in the study area and would need to grant right-of-ways associated with the Undertaking. The refusal of any party invited to concur with this Agreement does not invalidate the Agreement; and,

WHEREAS, the STB has consulted with and continues to consult with the Indian Tribes and Alaska native corporations (Tribes) listed in Attachment A.3 of this Agreement who may attach a religious and/or cultural significance to properties that may be affected by the Undertaking and these Tribes have been invited to participate in this Agreement as Concurring Parties; and,

WHEREAS, the STB, in consultation with SHPO, has established the Undertaking's Area of Potential Effects (APE), as defined at 36 CFR 800.16(d), as the area potentially disturbed by the actual railbed (100 feet on either side of the track centerline) plus an expanded area of 328 feet (100 meters) on either side of the rail centerline to accommodate the proposed mainline track, any ancillary support facilities and the potential indirect impacts that could result from construction and operation of the rail line; and,

WHEREAS, the STB, as lead Federal agency, in conjunction with the FRA, BLM, U.S. Army Corps Of Engineers, Alaska District (USACE), ALCOM, 354th Fighter Wing, ADNR, and U.S. Coast Guard, Seventeenth Coast Guard District (USCG) (i.e., cooperating agencies) has prepared an Environmental Impact Statement (EIS) in accordance with the requirements of the National Environmental Policy Act (NEPA) to address the potential impacts of the Undertaking on a variety of human and natural resources; and,

WHEREAS, the STB, in consultation with the Signatories and Invited Signatories, developed an Identification Plan (ID Plan) for inventory of potentially-eligible historic properties prior to

construction, and has conducted potentially-eligible historic properties inventories for a range of alternatives, which were subsequently narrowed down for inclusion in the EIS; and,

WHEREAS, the STB has made a reasonable and good faith effort to identify and evaluate historic properties within the APE for the purposes of comparing impacts in the EIS; and,

WHEREAS, the STB has made determinations of eligibility for the National Register of Historic Places (NRHP) for certain historic properties within the APE; and,

WHEREAS, the applicable requirements of the NHPA, the American Indian Religious Freedom Act, 42 U.S.C. 1996 et. seq. (AIRFA), and the Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001 et. seq. and 43 CFR 10 (NAGPRA), have been considered in the development of the ID plan and this Agreement does not waive the responsibilities of the Signatories and Invited Signatories under these acts and regulations; and,

WHEREAS, the STB has deferred, until after the STB licenses an alternative, the final identification, evaluation, assessment of effect and consideration of alternatives to avoid, minimize, or mitigate effects to historic properties that may be affected by this Undertaking, and the Signatories have agreed to develop this Agreement in accordance with 36 CFR 800.14(b)(1)(ii) to provide for the phased identification of historic properties and evaluate effects to historic properties caused by construction of the Undertaking that cannot be fully assessed at this time; and,

WHEREAS, the STB may use an independent third party contractor, working under its supervision, direction and control, and at ARRC's expense, to assist in meeting the STB's responsibilities defined in the Stipulations below; and,

NOW, THEREFORE, the Signatories and Invited Signatories to this Agreement consent that the proposed Undertaking shall be implemented in accordance with the following stipulations in order to consider the effect of the Undertaking on historic properties.

STIPULATIONS

The STB shall ensure that the following measures are carried out:

I. Administrative Considerations:

- A. The Signatories shall attach this Agreement or the measures (stipulations) called for in this Agreement to any Record(s) of Decision (ROD), approved permit(s), or other condition(s) issued for this Undertaking so that this Agreement and its requirements become legally enforceable and binding on those actions.
- B. This Agreement and all of its requirements shall be binding on ARRC, as the current applicant for STB authorization, and on its heirs, successors, and assignees.
- C. Because of both singular and overlapping legal authorities and purviews among the Signatories regarding individual Undertaking components or activities, any or all of these agencies may be responsible to carry out the terms of this Agreement for a given Undertaking component or activity. This is described in Attachment B, Agency Consultation and Coordination Plan (ACCP). That agency or agencies that has/have purview over a given Undertaking component or activity is referred to in this Agreement as the "responsible agency(ies)," hereinafter. To promote

coordination among the agencies and to expedite the conduct of tasks pursuant to this Agreement, the responsible agency(ies) can make informal arrangements among themselves regarding the implementation of this Agreement so long as the substance of this Agreement is followed. If an agency that is party to this Agreement is designated as the lead for a specific task under the terms of the Agreement, all parties to this Agreement shall be notified by STB of this arrangement. However, if there is more than one agency with purview over a given Undertaking component or activity, all involved agencies shall cooperate and keep each other aware of the substance, progress, and any problems with implementing this Agreement for that Undertaking component or activity and remain involved to prevent and resolve problems. For certain larger Undertaking components and activities, it may be advisable for all involved agencies to carry out the terms of this Agreement jointly. The responsible agency(ies) shall have purview over a given Undertaking component or activity and specific associated tasks under the terms of this Agreement based on land ownership, as follows:

1. STB and FRA on Eielson AFB and state and private lands, and
 2. BLM, USAG FWA, STB and FRA on lands controlled by USAG FWA, including the Donnelly Training Area and the Tanana Flats Training Area.
- D. No later than 60 days after issuance of any STB Final Decision granting ARRC the authority to construct and operate the Undertaking, STB and the SHPO shall consult and finalize the ACCP, Attachment B. The ACCP outlines how the agencies shall coordinate with each other in carrying out the terms of this Agreement. The ACCP includes a list of anticipated Undertaking components and activities and which agency will be the “responsible agency(ies)” for each. The ACCP may be amended as needed by these parties. Finalizing of the ACCP may begin prior to any STB decision to license an alternative.
- E. The Signatories shall enforce the terms of this Agreement, approvals, and other conditions that incorporate this Agreement and its terms. Each shall notify the others if any of them becomes aware of an instance of possible non-compliance with the terms and conditions of this Agreement or permit or conditions as they relate to this Agreement. In such case, the “responsible agency(ies)” shall ensure compliance consistent with its/their legal authorities and consult with the other agencies, as needed.
- F. Consultation shall be an ongoing process throughout the construction phase of the Undertaking. The parties to this Agreement may consult at any time in writing, including e-mail, or telephone. Formal contacts and reviews will be established in the ACCP and Plan for Tribal Consultation in Stipulation III.

II. Applicability of this Agreement and Area of Potential Effects:

- A. This Agreement shall apply to the Undertaking licensed by STB and all components of it, including the APE, actions specified in the EIS, permits and other approvals so long as they are within the jurisdiction of the responsible agency(ies).
- B. STB will provide final determinations of eligibility for the National Register and findings of effect to the SHPO for concurrence for only those sites that are identified within the APE for the alternative licensed by STB, if any. Any future refinements to an APE in conjunction with this Undertaking shall be made in consultation with the SHPO, consistent with 36 CFR 800.4.
- C. STB shall ensure that all work carried out pursuant to this Agreement will be done by or under the direct supervision of historic preservation professionals who meet the appropriate Secretary of the Interior's Professional Qualifications Standards (36 CFR 61 Appendix A).

III. Tribal Consultation:

STB initiated consultation with the Tribes listed in Attachment A.3 of this Agreement regarding the Section 106 process, in conjunction with the preparation of the EIS. Consultation will continue as the terms of this Agreement are carried out. No later than 60 days after issuance of any STB Final Decision granting ARRC the authority to construct and operate the Undertaking, and prior to the initiation of construction, STB, in consultation with the SHPO and Tribes, shall develop a Plan for Tribal Consultation (PTC) that outlines procedures for agencies to consult with tribal organizations in carrying out the terms of this Agreement. STB shall submit this PTC to the Tribes and provide them an opportunity to comment and decide if the terms are acceptable. The PTC shall describe when and how Tribes shall be consulted, the contact names and information for each organization (Attachment A.3), procedures for review of treatment plans (as appropriate), and other matters. A draft of the PTC is included as Attachment C to this Agreement and the PTC may be amended as needed. The procedures in the PTC will be integrated into the ACCP and the agencies' implementation of this Agreement as necessary. All Federal agencies who endorse the Agreement will be provided with a copy of the PTC and agree to implement its terms.

IV. Identification of Historic Properties and Assessment of Effects:

- A. Additional identification and evaluation efforts for historic properties affected by the alternative licensed by the STB will be required as follows:
 - 1. Any areas of surface/subsurface disturbance related to this Undertaking and within the jurisdiction of STB authority, including rail alignments as well as ancillary facilities, staging areas, and borrow areas, which are outside the area surveyed in 2006-2007.
 - 2. Portions of any alternative or alignment for which ARRC has received authority from STB to construct and operate that were not surveyed during the 2006-2007 investigations, such as portions of the Salchaket Village that were not surveyed due to the presence of private property and native allotments,

and historic farming landscapes.

3. Previously identified sites within the surveyed APE, and along the alignments that may receive authorization from STB to construct and operate, which require additional evaluation to establish boundaries and/or to assess the effects of the Undertaking.
- B. Additional identification and evaluation efforts shall follow the administrative and consultation procedures established in the ACCP and PTC, as described in Stipulations I.D., III, and IV.C. through IV.F. Additional identification and evaluation shall conform with Federal and state guidelines for fieldwork in Alaska, be compatible with previous investigations for this Undertaking, follow the *Site Location Model and Survey Strategy for Cultural Resources in the Alaska Railroad Northern Rail Extension Project Area* (ID Plan) approved by SHPO on September 5, 2006, (Attachment D) and may include a phased approach to testing and evaluation. Based on consultation between STB and SHPO on April 5 and May 9, 2006, the ground survey was defined as the minimum level of effort to meet Level II (Evaluation Phase) survey requirements by the SHPO (i.e., gathering sufficient data for a determination of eligibility to the National Register but no determination of site boundaries). The ID Plan has been superseded by procedures in Stipulation IV. E. in regards to determination of level of effort. Additional archaeological survey work will follow the ID Plan's model in terms of determining the method of survey to be employed in various areas of the APE.
 - C. Should any non-archaeological properties be identified in the APE for the alternative licensed by the STB, the STB shall ensure that a historian or architectural historian who meets the Secretary of the Interior's Professional Qualifications Standards shall consult with SHPO and ARRC to establish the level of effort necessary to determine whether that property meets National Register criteria. Following consultation and agreement upon the level of effort, STB shall make a reasonable and good faith effort to carry out the evaluation, and, prior to the initiation of construction of the Undertaking, shall submit that determination to SHPO for review and concurrence, and shall distribute copies of the determination to all parties to this Agreement. The consultation, review, and concurrence for non-archaeological properties shall be coordinated with the reports submitted for the relevant segment(s) of the alternative licensed by the STB that are prepared for archaeological sites in accordance with Stipulations IV.D. through IV.H.
 - D. The responsible agency(ies) identified in Stipulation I.C. shall evaluate properties identified in the APE according to the survey method (aerial or pedestrian) described in the ID Plan already developed and prepare a Cultural Resources Survey Report (CRSR) for each segment(s) of the alternative licensed by STB, if any. The CRSR will describe each located property, and the property's known content and context. The CRSR will also indicate which archaeological sites present in the Project APE can be evaluated at the Phase I survey level as not eligible for the National Register, and present a justification for these evaluations. Properties evaluated as not eligible at the Phase I level will not require further testing and evaluation. The CRSR shall also identify areas of sensitivity where

monitoring shall occur during construction, even though no historic properties have been identified in those areas. The CRSR shall include a summary of all previous CRSRs prepared for this Undertaking, make recommendations for the sequence and schedule for preparing additional CRSRs, and provide Section 106 review status of the remainder of segments in the selected alternative.

- E. Additionally, for each segment(s) of the alternative licensed by STB that contains identified properties, if any, for which eligibility cannot be determined at the Phase I level, a Level II Testing and Evaluation Plan (TEP) shall be prepared. The TEP document may be combined with the CRSR. The TEP shall include the initial survey results and the proposed scope of archaeological testing efforts to establish the boundaries of historic properties located through archaeological survey per the ID Plan. The TEP will also describe for each located resource or type of resource procedures for site testing and evaluation for eligibility to the National Register. Usually, these testing procedures will follow standard archaeological practices, for example, shovel probe grids, excavation units, trenching. Testing will focus on assessing the extent, depth, artifact content, features, and integrity of each archaeological resource. The CRSR/TEP shall be distributed to all parties to this Agreement, and the comments of those parties, including SHPO and Indian Tribes, shall be taken into consideration before detailed evaluation testing takes place. SHPO concurrence will be required for the Phase II TEP and for sites evaluated as not eligible at the Phase I level; if SHPO does not concur with a finding the site is not eligible, an additional TEP document will be prepared for these resources.
- F. After the TEP is carried out, the responsible agency(ies) identified in Stipulation I.C. shall prepare a Phase II Testing and Evaluation Report (TER) for each segment(s) that includes the results of testing and evaluation of archaeological sites that would be directly affected by construction of the alternative licensed by STB. The responsible agency(ies) shall distribute the TER(s) to SHPO and all consulting parties to this Agreement, who shall have a 30-day review and comment period. Comments shall address the adequacy of the Evaluation Phase assessments and provide their recommendations for determination of eligibility based on National Register criteria (36 CFR 60.4). Based on the comments received, the responsible agency(ies) may revise the TER(s) or may conduct additional Evaluation Phase surveys or testing or both. Any revised Final TER shall be submitted by the responsible agency(ies) to SHPO and all consulting parties to this Agreement for a second 15-day review. If any reviewing party has an objection to the Final TER(s), they shall notify the responsible agency(ies) within 15 days of receiving the reports for review or the Final TER(s) shall be considered complete.
- G. If after full review by the Invited Signatories, Tribes, and SHPO, no historic properties were identified within the APE for a specific segment, and the results of the TER for that segment have been accepted by all reviewing parties, then construction of the proposed project in this segment may be allowed by STB upon concurrence by SHPO with a finding of no historic properties affected for that segment.

- H. If the studies result in the identification of properties that are eligible for the National Register, the responsible agency(ies) shall assess adverse effects in accordance with 36 CFR 800.5 and distribute a Finding of Effect Report for each segment(s) where historic properties were identified within the APE. The Finding of Effect Report(s) shall describe the assessment of potential adverse effects to historic properties that would result from the construction or operation of the project, and identify mitigation measures that would eliminate or minimize effects to be incorporated into the design and construction documents of the Undertaking. The responsible agency(ies) shall distribute the Finding of Effect Report(s) to SHPO and all consulting parties to this Agreement, who shall have a 30-day review and comment period. STB, as lead agency, shall ensure that comments are responded to prior to finalizing the Finding of Effect Report(s) for submission to SHPO for final review and concurrence. The SHPO shall have an additional 30 days for review and concurrence with the findings in the Finding of Effect Report(s).
 - I. Consistent with 36 C.F.R. § 800.4(d)(1), STB may determine that there are historic properties within the APE, but that the Undertaking will have no effect on them. If after full review by the consulting parties to this Agreement, no historic properties would be affected within the APE for a specific segment, and the results of the Finding of Effect Report for that segment have been accepted by all reviewing parties, then construction of the proposed project in this segment may be allowed by STB upon concurrence by SHPO with a finding of no historic properties affected for that segment.
- V. *Treatment of Historic Properties:*
- A. Any design changes, modifications, and refinements of the Undertaking shall endeavor to avoid impacts to historic properties.
 - B. For historic properties that cannot be avoided by the Undertaking and when STB has made an adverse effect finding, ARRC shall develop treatment plans to minimize or mitigate the effects. Treatment plans shall be developed in consultation with STB, SHPO, the responsible agency(ies), and Tribes that may attach religious and/or cultural significance to the identified property. During the preparation of treatment plans, STB shall circulate Draft Treatment Plan(s) to these parties, who will have 30 days to review and provide comments. STB shall consider the comments of these parties received within 30 days and incorporate comments received in the development of Final Treatment Plan(s). The Final Treatment Plan(s) shall be distributed to all parties who participated in their development for a final 30-day review and consultation period. Treatment plan(s) are considered final when STB receives concurrence of the SHPO and any Tribes who participated in the development of the treatment plan(s). Under 43 CFR 7.7(a) "Protection of Archaeological Resources," tribes that consider any sites on public lands within the APE as having sacred or cultural importance have 30 days within which to comment on the treatment plans.
 - 1. Most historic properties identified through the 2006 and 2007 surveys are archaeological sites. For historic properties that are archaeological in nature

and significant for their research data potential (criterion D), the treatment measures may follow standard mitigation through data recovery. Treatment plans for data recovery shall include, at a minimum, a research design with provisions for data recovery and recordation, analysis, reporting, and curation of resulting collection and records, and shall be consistent with the *Secretary of Interior's Standards and Guidelines* (48 FR 44734-44737). Treatment plans must be consistent with easement and permit requirements of other agencies, when applicable. To the extent possible, treatment plans should group related sites or areas, so that the treatment of related historic properties can be considered in context, and to minimize the burden of review and approval by agencies.

2. A number of the historic properties identified during the 2006 and 2007 surveys were sites relating to the historic period, or were significant for values other than their potential research value (e.g., eligible under criteria A, B, or C), including those related to the Salchaket Village site. Treatment plans for such properties, if warranted, shall specify approaches for treatment or mitigation of the property in accordance with the principles, standards, and guidelines appropriate to the property's significance. This may include, but not be limited to, use of such approaches as relocating a historic property, re-landscaping to minimize indirect effects, public interpretation, ethnographic recordation, oral history, archival research, or modification of the Undertaking to minimize adverse effects. Methods of recordation and documentation described in the treatment plan shall conform to the *Secretary of the Interior's Standards for Architectural and Engineering Documentation* (48 FR 44730-44734) or other standards specified by SHPO.
- C. In lieu of standard mitigation approaches described above, treatment plans may adopt other alternative approaches to avoid, minimize or mitigate effects to historic properties, including, but not limited to, assisting in the development of tribal historic preservation plans, developing detailed historic contexts for the region, developing educational materials, purchasing properties containing historic resources, or developing historic property management plans.
- D. Disputes or objections to treatment plans shall be resolved in accordance with stipulation XII below.

VI. Monitoring:

- A. If stipulated as part of a treatment plan, when the probability to uncover unidentified archaeological or historic materials is determined likely by the consulting archaeologist or SHPO, ARRC shall ensure that an archaeologist meeting the Secretary of the Interior's Standards and Guidelines (*36 CFR § 61, Appendix A, hereafter Standards and Guidelines*) is present to monitor specific ground-disturbing activities.

- B. The results of monitoring shall be included in a report to STB and SHPO and made available to all parties to this Agreement. This report shall be developed, within 3 months of fieldwork and be acceptable to both the “responsible agency(ies)” and the SHPO.
- C. If sites are discovered during monitoring, ARRC shall follow the procedures outlined in Stipulation IX of this Agreement.
- D. If human remains are discovered during monitoring, ARRC shall follow the procedures outlined in Stipulation X and the Plan of Action (Attachment A).

VII. Curation:

- A. ARRC shall ensure that all artifacts, faunal remains, samples, records and field notes, and related materials collected during activities covered by this Agreement are deposited in the University of Alaska Museum of the North in Fairbanks, or another repository or institution approved by the SHPO. The curatorial facility shall meet requirements found in 36 CFR Part 79, *Curation of Federally Owned and Administered Archaeological Collections*.
- B. Curation arrangements between ARRC, or their cultural resources consultant, and an approved institution must be part of any treatment plan.
- C. ARRC shall incur all reasonable costs charged by the approved institution for curation of materials collected in conjunction with recovery actions under this Agreement. “Reasonable costs” shall be determined by the curatorial facility and approved by SHPO, and be consistent with professionally acceptable curatorial standards.
- D. Consistent with 36 CFR Part 79, collections shall be packaged in archival quality materials and in a manner appropriate to the material type. Collection preparation and packaging shall be acceptable to SHPO, and receiving institution and/or Tribe, and consultation in advance is recommended.

- E. Materials collected in conjunction with recovery actions under this Agreement will remain the property of the landowner unless a gift or purchase agreement is negotiated.

VIII. Annual Meeting and Reports:

A. Annual Meeting

Annual Meeting: STB shall hold a meeting of the Signatories and Invited Signatories, as well as the Concurring Parties if they so wish, within one year of any STB final decision granting ARRC the authority to construct and operate the Undertaking, and each year by that same date, thereafter, to discuss the previous year's activities, and activities scheduled for the upcoming year. The meeting shall be held in Anchorage at the Alaska Office of History and Archaeology, or at another location by consensus of the Signatories and Invited Signatories. The parties may participate by telephone if they so desire, and minutes of the meetings will be distributed as soon as possible afterwards.

B. Additional Meetings

If any party deems a meeting necessary in addition to the annual meeting described above their request shall be considered in consultation with the other parties.

C. Annual Report

ARRC or their designated consultant shall prepare an annual report on the progress of implementation of the stipulations of this Agreement, and shall distribute it to all parties to this Agreement at least 45 days prior to the Annual Meeting.

The annual report shall include the following:

1. A description of the tasks accomplished during the preceding year and anticipated upcoming efforts for identification, evaluation, mitigation, and protection of historic properties. This can include descriptions of sites, artifacts encountered, or other archaeological or historic materials encountered, including representative photographs and illustrations;
2. A description of the progress of the Undertaking and any known or expected changes to the Undertaking; and
3. An evaluation of the effectiveness of this Agreement and whether any amendments or changes are needed based on deficiencies or project modifications.

D. Additional Reporting

Implementation of this Agreement shall include administrative reporting on progress as well as the preparation of technical reports on resource investigations. The reporting shall use the following procedures unless modifications to this reporting structure are agreed to by the Signatories and Invited Signatories and reflected in the ACCP.

1. Progress reports. Progress reports shall be submitted quarterly by ARRC to STB for the duration of the construction portion of the Undertaking following execution of this Agreement. Progress reports may be in letter format and shall describe fieldwork activities for historic properties as well as relevant construction progress that was initiated, underway, or completed for the most recent performance period, and identify steps to be initiated, continued, or completed in the next quarter. These reports may be combined with other STB reporting requirements.
2. Progress summaries. Progress summaries shall be submitted by STB to the Signatories and Invited Signatories every six months for the duration of the construction portion of the Project. The first progress summary shall be distributed six months following execution of this Agreement, with subsequent summaries following each six months thereafter until the construction portion of the Undertaking is completed. The progress summaries shall identify steps initiated, underway, or completed for the most recent performance period and identify steps to be initiated, continued, or completed in the next six-month period.
3. Preliminary field reports. Preliminary reports on the progress of historic property fieldwork shall be prepared by ARRC that demonstrate the completion of test and evaluation, data recovery, or other procedures, investigations and site treatments approved in the treatment plans. The use of preliminary field reports is designed to facilitate a phased approach to resource evaluation and mitigation, as provided for in 36 CFR 800, and to facilitate reasonable construction planning and progress. Preliminary field reports may be included in, but do not take the place of, the CRSRs prepared in Stipulation IV.D. and TER(s) prepared in Stipulation IV.F.
4. Technical reports. Technical reports describing the results of background research, fieldwork activities, and laboratory analyses shall be prepared according to the standards and permit guidelines appropriate to the resource, including final report standards for archaeological excavation. The extent of report distribution as well as procedures for review of draft and final technical reports shall be in accordance with Stipulations IV, V and VI. ARRC shall issue final technical reports no later than two years from the completion of fieldwork activities and, in consultation with the SHPO, shall prepare sufficient copies for dissemination to all parties to this Agreement, appropriate public libraries, educational institutions, and other repositories.

IX. Procedures for Inadvertent or Unanticipated Discoveries:

- A. Upon the inadvertent discovery of a potential historic property in any activity's APE, all work in the vicinity shall immediately cease and ARRC shall protect the discovery site against further disturbance.
- B. Upon the inadvertent discovery of human remains, sacred objects, or mortuary objects in any activity's APE, all work in the vicinity shall immediately cease and a plan of action for the treatment of human remains (Attachment A) shall be implemented. ARRC shall ensure that any and all human remains, sacred objects, and objects of cultural patrimony discovered as a result of activities related to the Undertaking will be treated with dignity and respect.
- C. Upon the unanticipated discovery of historic properties during construction that are not human remains, the Unanticipated Discoveries Plan shall be followed (Attachment A.2).

X. Treatment of Human Remains:

It is the intent of this Undertaking to avoid the disturbance or removal of any human remains. No activity will knowingly disturb human graves or human remains. If human remains, sacred objects, or mortuary objects are inadvertently discovered during the course of construction or operation, all activities in the vicinity shall immediately cease and the Plan of Action (POA) for the treatment of human remains (Attachment A) shall be implemented. STB and ARRC shall ensure that any and all human remains, sacred objects, and objects of cultural patrimony discovered as a result of the Undertaking shall at all times be treated with dignity and respect. Notification and consultation with tribes shall be conducted in accordance with the PTC described above in Stipulation III.

XI. Training:

- A. On an annual basis, ARRC shall ensure that on-site supervisory-level employees and contractors are trained in procedures for identifying and reporting historic properties that may potentially be discovered during the course of their work. The training shall be developed with sensitivity to concerns of tribes and offer the opportunity for a tribal representative to meet in person with employees and contractors if a tribe so requests. Minimally, the training shall include guidelines for identification of historic properties, and notification procedures when archaeological materials, human remains, and historic period sites are discovered.
- B. ARRC shall also ensure that its supervisory-level contractors and employees are advised against the illegal collection of historic and prehistoric materials, including human remains, and are familiarized with the scope of applicable laws and regulations.
- C. Prior to the implementation of training, the curriculum shall be reviewed and approved by STB, SHPO, and Tribes.
- D. Training shall be conducted by an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards(36 CFR Part 61). However, ARRC's supervisory level employees and contractors may attend the above training and convey the information to staff unable to attend.

- E. On an annual basis and included in the annual report prepared under Stipulation VIII.C, ARRC shall supply to STB and SHPO a list of employees and contractors who attended the annual training, and procedures through which the information was conveyed to employees and contractors who did not attend.

XII. Dispute Resolution:

Should any party to this Agreement object within 30 days of any treatment plan or report provided for review or actions proposed pursuant to this Agreement, STB and the SHPO shall consult with the objecting party to resolve the objection.

- A. If STB and/or SHPO determine that the objection cannot be resolved, STB shall forward all documentation relevant to the dispute to the ACHP. Within 30 days after receipt of all pertinent documentation, the ACHP will either:
 - (1) Provide STB with recommendations, which the agency will take into account in reaching a final decision regarding the dispute; or
 - (2) Notify STB that it will comment pursuant to 36 CFR 800.7, and proceed to comment. Any ACHP comment provided in response to such a request shall be taken into account by STB with reference to the subject of the dispute. STB will provide a copy of its written response to ACHP comments or final decision on any dispute to all parties to the Agreement before proceeding.
 - (3) Any recommendation or comment provided by the ACHP shall be understood to pertain to the subject of the dispute; STB's responsibility to carry out all actions under this Agreement that are not the subjects of the dispute shall remain the same.
- B. At any time during implementation of the measures stipulated in this Agreement, should an objection to any such measure or its manner of implementation be raised by a member of the public, STB shall take the objection into account and consult as needed with the objecting party, SHPO, or the ACHP to resolve the objection.

XIII. Amendments:

- A. Any Signatory or Invited Signatory to this Agreement may make a request to STB, as lead agency, that the other Signatories consider amending it, whereupon the parties shall consult to consider the amendment(s). Amendments will be executed in the same manner as the original Agreement. Concurring Parties may suggest proposed amendments to the Signatories and Invited Signatories, who shall consult to consider them.
- B. A Federal agency that is not a Signatory may use this Agreement to satisfy its Section 106 responsibilities for this Undertaking and the selected alternative by notifying the Signatories in writing that it agrees to the terms of this Agreement. An amendment need not be executed to add the Federal agency requesting to use this Agreement, and to grant it all the rights and responsibilities stated therein.

XIV. Termination:

Any Signatory or Invited Signatory to this Agreement may terminate it by providing thirty (30) days notice to the other parties explaining the reasons for the termination. The Signatory or Invited Signatory shall consult during this period to seek Agreement on amendments or other actions that will avoid termination. In the event of termination, STB will comply with 36 CFR 800.1 through 800.7 on remaining Undertaking components, activities, or outstanding issues.

XV. Duration:

This Agreement shall become effective upon execution by STB, FRA, BLM, USAG FWA, ACHP, and SHPO, and shall remain in effect for a term of five years from its date of execution, at which point the Agreement may be renewed.

XVI. Execution and Implementation:

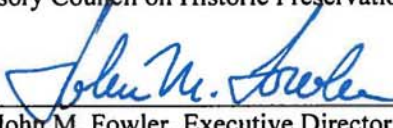
Execution and implementation of this Agreement evidences that STB, FRA, BLM, and USAG FWA have satisfied responsibilities under Section 106 of the National Historic Preservation Act pursuant to 36 CFR 800.

**PROGRAMMATIC AGREEMENT
AMONG
SURFACE TRANSPORTATION BOARD,
ADVISORY COUNCIL ON HISTORIC PRESERVATION,
FEDERAL RAILROAD ADMINISTRATION,
U.S. BUREAU OF LAND MANAGEMENT, ALASKA STATE OFFICE,
U.S. ARMY GARRISON FORT WAINWRIGHT, ALASKA, AND
ALASKA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE ALASKA RAILROAD CORPORATION, NORTHERN RAIL EXTENSION
BETWEEN NORTH POLE AND DELTA JUNCTION, ALASKA**

STB Finance Docket No. 34658

SIGNATORIES

Advisory Council on Historic Preservation

By: 

John M. Fowler, Executive Director

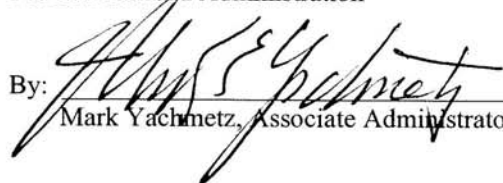
Date: 

**PROGRAMMATIC AGREEMENT
AMONG
SURFACE TRANSPORTATION BOARD,
ADVISORY COUNCIL ON HISTORIC PRESERVATION,
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U.S. BUREAU OF LAND MANAGEMENT, ALASKA STATE OFFICE,
U.S. ARMY GARRISON FORT WAINWRIGHT, ALASKA, AND
ALASKA STATE HISTORIC PRESERVATION OFFICER
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THE ALASKA RAILROAD CORPORATION, NORTHERN RAIL EXTENSION
BETWEEN NORTH POLE AND DELTA JUNCTION, ALASKA**

STB Finance Docket No. 34658

SIGNATORIES

Federal Railroad Administration

By:  Date: 12/2/09
Mark Yachmetz, Associate Administrator for Railroad Development

**PROGRAMMATIC AGREEMENT
AMONG
SURFACE TRANSPORTATION BOARD,
ADVISORY COUNCIL ON HISTORIC PRESERVATION,
FEDERAL RAILROAD ADMINISTRATION,
U.S. BUREAU OF LAND MANAGEMENT, ALASKA STATE OFFICE,
U.S. ARMY GARRISON FORT WAINWRIGHT, ALASKA, AND
ALASKA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE ALASKA RAILROAD CORPORATION, NORTHERN RAIL EXTENSION
BETWEEN NORTH POLE AND DELTA JUNCTION, ALASKA**

STB Finance Docket No. 34658

SIGNATORIES

U.S. Army Garrison Fort Wainwright, Alaska

By: 
Col. Timothy Jones, Garrison Commander

Date: 27 Nov 09

PROGRAMMATIC AGREEMENT

AMONG

**SURFACE TRANSPORTATION BOARD,
ADVISORY COUNCIL ON HISTORIC PRESERVATION,
FEDERAL RAILROAD ADMINISTRATION,
U.S. BUREAU OF LAND MANAGEMENT, ALASKA STATE OFFICE,
U.S. ARMY GARRISON FORT WAINWRIGHT, ALASKA, AND
ALASKA STATE HISTORIC PRESERVATION OFFICER**

REGARDING

**THE ALASKA RAILROAD CORPORATION, NORTHERN RAIL EXTENSION
BETWEEN NORTH POLE AND DELTA JUNCTION, ALASKA**

STB Finance Docket No. 34658

INVITED SIGNATORIES

B. INVITED SIGNATORIES

Federal Agencies

U.S. Department of Defense, Alaska Command

By: _____ Date: _____
Dana T. Atkins, Lieutenant General, USAF, Commander

PROGRAMMATIC AGREEMENT

AMONG

**SURFACE TRANSPORTATION BOARD,
ADVISORY COUNCIL ON HISTORIC PRESERVATION,
FEDERAL RAILROAD ADMINISTRATION,
U.S. BUREAU OF LAND MANAGEMENT, ALASKA STATE OFFICE,
U.S. ARMY GARRISON FORT WAINWRIGHT, ALASKA, AND
ALASKA STATE HISTORIC PRESERVATION OFFICER**

REGARDING

**THE ALASKA RAILROAD CORPORATION, NORTHERN RAIL EXTENSION
BETWEEN NORTH POLE AND DELTA JUNCTION, ALASKA**

STB Finance Docket No. 34658

INVITED SIGNATORIES

U.S. Air Force 354th Fighter Wing, Eielson Air Force Base

By: _____ Date: _____
Michael J. Jordan, Colonel, USAF 354th Fighter Wing, Commander

PROGRAMMATIC AGREEMENT

AMONG

**SURFACE TRANSPORTATION BOARD,
ADVISORY COUNCIL ON HISTORIC PRESERVATION,
FEDERAL RAILROAD ADMINISTRATION,
U.S. BUREAU OF LAND MANAGEMENT, ALASKA STATE OFFICE,
U.S. ARMY GARRISON FORT WAINWRIGHT, ALASKA, AND
ALASKA STATE HISTORIC PRESERVATION OFFICER**

REGARDING

**THE ALASKA RAILROAD CORPORATION, NORTHERN RAIL EXTENSION
BETWEEN NORTH POLE AND DELTA JUNCTION, ALASKA**

STB Finance Docket No. 34658

INVITED SIGNATORIES

Applicant

Alaska Railroad Corporation

By: _____
Patrick K. Gamble, President

Date: _____

PROGRAMMATIC AGREEMENT

AMONG
SURFACE TRANSPORTATION BOARD,
ADVISORY COUNCIL ON HISTORIC PRESERVATION,
FEDERAL RAILROAD ADMINISTRATION,
U.S. BUREAU OF LAND MANAGEMENT, ALASKA STATE OFFICE,
U.S. ARMY GARRISON FORT WAINWRIGHT, ALASKA, AND
ALASKA STATE HISTORIC PRESERVATION OFFICER

REGARDING

THE ALASKA RAILROAD CORPORATION, NORTHERN RAIL EXTENSION
BETWEEN NORTH POLE AND DELTA JUNCTION, ALASKA

STB Finance Docket No. 34658

CONCURRING PARTIES

C. CONCURRING PARTIES

Agencies

State of Alaska, Department of Natural Resources

By: _____ Date: _____
Director, Division of Mining, Land, and Water

Tribes

Healy Lake Village

By: _____ Date: _____
JoAnn Polston, Chief

Village of Dot Lake

By: _____ Date: _____
Charles Miller, Vice-President

Northway Village

By: _____ Date: _____
Gerald Albert, Chief

Native Village of Tetlin

PROGRAMMATIC AGREEMENT

AMONG
SURFACE TRANSPORTATION BOARD,
ADVISORY COUNCIL ON HISTORIC PRESERVATION,
FEDERAL RAILROAD ADMINISTRATION,
U.S. BUREAU OF LAND MANAGEMENT, ALASKA STATE OFFICE,
U.S. ARMY GARRISON FORT WAINWRIGHT, ALASKA, AND
ALASKA STATE HISTORIC PRESERVATION OFFICER

REGARDING

THE ALASKA RAILROAD CORPORATION, NORTHERN RAIL EXTENSION
BETWEEN NORTH POLE AND DELTA JUNCTION, ALASKA

STB Finance Docket No. 34658

CONCURRING PARTIES

By: _____ Date: _____
Donald Adams, President

Native Village of Tanacross

By: _____ Date: _____
Roy Denny, President

Native Village of Eagle

By: _____ Date: _____
Joyce Roberts, Chief

Nenana Native Association

By: _____ Date: _____
William Lord, First Chief

Native Village of Minto

By: _____ Date: _____
Darrell Frank, Chief

PROGRAMMATIC AGREEMENT

AMONG
SURFACE TRANSPORTATION BOARD,
ADVISORY COUNCIL ON HISTORIC PRESERVATION,
FEDERAL RAILROAD ADMINISTRATION,
U.S. BUREAU OF LAND MANAGEMENT, ALASKA STATE OFFICE,
U.S. ARMY GARRISON FORT WAINWRIGHT, ALASKA, AND
ALASKA STATE HISTORIC PRESERVATION OFFICER

REGARDING

THE ALASKA RAILROAD CORPORATION, NORTHERN RAIL EXTENSION
BETWEEN NORTH POLE AND DELTA JUNCTION, ALASKA

STB Finance Docket No. 34658

CONCURRING PARTIES

Alaska Native Organizations

Tanana Chiefs Conference

By: _____ Date: _____
Robert Sattler, Senior Archaeologist/Environmental Quality Analyst

Doyon, Ltd.

By: _____ Date: _____
Gary Lee, Lands/GIS Technician

Upper Tanana Inter-Tribal Coalition

By: _____ Date: _____
(Name, Title)

Tok Native Association

By: _____ Date: _____
JoAnn Lohnes, President

Glossary of Terms/Acronyms

Adverse Effect: When an undertaking may alter, directly or indirectly, the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

Area of Potential Effects: The Area of Potential Effects (APE) means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking. Determination of the APE may take into account the professional standards, guidance, and research of both the historic properties and railroad design professions.

Borrow Area(s): An excavated area where material has been or will be dug for use as fill at another location.

Consulting Parties: Consulting parties include SHPO, Indian tribes, representatives of local governments, applicants for Federal assistance, permits, licenses and other approvals, and certain individuals and organizations with a demonstrated interest in the undertaking.

Cultural Resource: any tangible or observable evidence of past human activity, regardless of significance, found in direct association with a geographic location, including tangible properties possessing intangible traditional cultural values.

Curation: The preservation of material remains that are excavated or removed during a survey, excavation, or other study of a prehistoric or historic resource, and associated records that are prepared or assembled in connection with the survey, excavation or other study.

Days: Calendar days.

Eligible for the National Register of Historic Places: The term eligible for the National Register includes both properties formally determined as such in accordance with regulations of the Secretary of the Interior and all other properties that meet the National Register criteria.

Federal Agency(s): Any Federal entity with a statutory obligation to fulfill the requirements of Section 106 who has jurisdiction over an undertaking and takes legal and financial responsibility for Section 106 compliance in accordance with Subpart B 36 CFR 800. The Federal Agency(s) has approval authority for the undertaking and can commit the Federal agency to take appropriate action for a specific undertaking as a result of Section 106 compliance.

Historic Property: Any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian Tribe and that meet the National Register criteria.

Human Remains: The physical remains of a human body.

ID Plan: Identification Plan Entitled *Site Location Model and Survey Strategy for Cultural Resources in the Alaska Railroad Northern Rail Extension Project Area* and approved by SHPO on September 5, 2006.

Indian Tribe: As presently defined in 36 CFR 800.16(m), an Indian Tribe, band, nation, or other organized group or community, including a Federally-recognized Native Village, Regional Corporation or Village Corporation, as those terms are defined in Section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. 1602) which is recognized as eligible for the special programs and serviced provided by the United States to Indians because of their status as Indians.

Keeper of the National Register: The Keeper is the individual who has been delegated the authority by the National Park Service (NPS) to list properties and determine their eligibility for the National Register. The Keeper may further delegate this authority as he or she deems appropriate.

NAGPRA: Native American Graves Protection and Repatriation Act (25 U.S.C. 3001 et. seq.).

National Register: The National Register means the National Register of Historic Places maintained by the Secretary of the Interior.

National Register Criteria: National Register criteria means the criteria established by the Secretary of the Interior for use in evaluating the eligibility of properties for the National Register (36 CFR 60). The National Register of Historic Places criteria are listed below:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship and feeling and:

- a. that are associated with the events that have made a significant contribution to the broad patterns of our history; or
- b. that are associated with the lives of persons significant in our past; or
- c. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d. that yielded, or may be likely to yield, information on prehistory or history.

Criteria considerations: ordinarily cemeteries, birthplaces, or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations, commemorative in nature; and properties that have achieved their significance within the past 50 years shall not be considered eligible for the National Register of Historic Places (36 CFR 60.4).

NRHP: National Register of Historic Places.

PA: Programmatic Agreement.

SHPO: State Historic Preservation Officer.

Site: Site definition is different for each state but is generally defined by Willey and Phillips (1958:18), as any reasonably definable spatial unit that contains features or is fairly continuously covered with artifacts that are indicative of an occupation 50 years or older. A site may be defined as "a spatial cluster of cultural features, or items, or both" (Binford 1972:46). These definitions apply to both prehistoric and historic sites. Archaeological context may be defined by

the inclusion of any of the following: soil staining, associated fire-cracked rock, ceramics, features, or a concentration of materials within a reasonably defined spatial boundary.

STB: Surface Transportation Board.

Traditional Cultural Properties: A Traditional Cultural Property can be defined generally as an object, site, landscape feature, or other form of feature that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that communities' history, and (b) are important in maintaining the continuing cultural identity of the community. For additional information, reference Parker and King 1995.

Treatment Plan: A proposal for the mitigation of effects upon any historic property that a project would affect. It can include data recovery, documentation, restoration or other measures.

Undertaking: An undertaking is a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; those requiring a Federal permit; license or approval; and those subject to state or local regulation pursuant to a delegation or approval by a Federal agency. For this Agreement, the Undertaking refers to STB's review of an application for the construction and operation of a rail line by the ARRC, extending its existing system between North Pole and Delta Junction, Alaska

Attachment A

Plan of Action for the Treatment of Unanticipated Discovery of Human Remains, Graves and Historic Properties

A.1. Human Remains and Graves

As set forth in Native American Graves Protection and Repatriation Act (NAGPRA) regulations (43 CFR 10), a specific plan of action is required in the event that human remains are uncovered on Federal lands during survey or construction of the Alaska Railroad Corporation (ARRC) proposed Northern Rail Extension (i.e., Undertaking). NAGPRA does not apply to the portions of the Undertaking on state land. The following steps must be taken if human remains, or suspected human remains, are discovered on Federal lands:

1. Should human burials be encountered, work will be stopped at once in the locality and STB, SHPO and the Alaska State Troopers (AST) shall be contacted immediately. See below for contact numbers.
2. If the human remains appear recent in the judgment of the archaeologists, STB shall defer to the opinion of the AST and Alaska State Medical Examiner (Alaska SME) for a determination of whether the remains are of a forensic nature and /or subject to criminal investigation.
3. If the racial identity of the human remains is in question, a physical anthropologist experienced in the analysis of human remains shall examine them. The physical anthropologist shall document, analyze, and photograph the remains so that an independent assessment of racial identity can be made. The physical anthropologist shall be afforded no more than 30 days time to conduct his or her analysis.
4. If the human remains are on Federal land and determined to be of Native American origin, STB will follow NAGPRA regulations and procedures set forth in 43 CFR 10. If the human remains are not Native American, and a determination has been made by the AST and Alaska SME that a death investigation is not warranted, then STB in consultation with the Alaska SME, will attempt to identify, locate and inform descendants of the deceased.
5. If the human remains are to be moved, then STB shall obtain any required permits from the Alaska State Bureau of Vital Statistics, and reinter the remains in a designated area.
6. The ARRC Project Manager should contact the following people or agencies within 24 hours of uncovering the remains.

- (a) **State Historic Preservation Officer (SHPO):**
Judith Bittner
Alaska Department of Natural Resources
Office of History and Archaeology
550 West 7th Avenue
Anchorage, AK 99501-3561
Phone: (907) 269-8721; Fax: (907) 269-8908
- (b) **Federal agency official in charge:**
Victoria Rutson
Chief, Section of Environmental Analysis
Surface Transportation Board
395 E Street SW
Washington, DC 20423
Phone: (202) 245-0295; Fax: (202) 245-0454
- (c) The appropriate land managing agency contact for the relevant parcel.
For lands under the control of Fort Wainwright:
Lisa Graham, Cultural Resources Manager, Fort Wainwright
Directorate of Public Works
Attn: IMPC-FWA-RMD (CR Manager)
1060 Gaffney Road, #4650
Fort Wainwright, AK 99703-4500
Phone: (907) 361-3002; Fax: (907) 361-9867

For lands associated with Eielson Air Force Base
Malcolm H. Nason, YC-02, DAF
Chief, Asset Management
354 CES/CEA
2310 Central Avenue Suite 100
Eielson AFB, Alaska 99702-2225
Phone: (907) 377-4342; Fax: (907) 377-3367.
- (d) The responsible Native representative for the area of discovery.
Gary Lee
Doyon Ltd.
1 Doyon Place, Suite 300
Fairbanks, AK 99701
Phone: (907) 459-2037; Fax: (907) 459-2062

Robert Sattler
Tanana Chiefs Conference, Inc.
122 1st Avenue, Suite 600
Fairbanks, AK 99701
Phone: (907) 452-8251, ext. 3343; Fax: (907) 459-3936

and

- (e) Alaska State Troopers
Communications Center Manager
Phone: (907) 451-5100; Fax: (907) 451-5165

Notification should include available information regarding the nature and extent of the remains and an accurate and precise location including GPS coordinates.

NAGPRA dictates that work in the immediate vicinity of the remains cannot proceed until 30 days after the reply from the Federal agency in charge or appropriate Native group that the documents regarding the finding were received, unless a written and binding agreement is issued from the Federal agency in charge and the affiliated Native American group(s) (NAGPRA 25 U.S.C. 3002 Sec 3(d)).

The remains will then be assessed and treated based on the guidance of the Federal agency in charge and the appropriate Native group as defined by NAGPRA.

Other contacts (not necessarily within the first 24 hours)

Alaska State Medical Examiner's Office:

Dr. Katherine Raven, Chief Medical Examiner
Phone: (907) 334-2200; Fax: (907) 334-2216
e-mail: Stanton.kessler@alaska.gov

Kenneth Cramer, Death Investigator
Phone: (907) 334-2200; Fax: (907) 334-2216
e-mail: Kenneth.Cramer@alaska.gov

Alaska Bureau of Vital Statistics

Phillip Mitchell, Chief
Phone: (907) 465-8643; Fax: (907) 465-3618
e-mail: Phillip.Mitchell@alaska.gov

Janet Shea
Phone: (907) 465-8608; Fax: (907) 465-4689
e-mail: Janet L Shea janet.brown@alaska.gov

A.2 Plan for Unanticipated Discoveries

Historic properties may be encountered above ground and below ground during work on the Undertaking, and might include historic and prehistoric materials as well as Traditional Cultural Properties. In the event that cultural materials are discovered, this plan shall be followed, and implemented in compliance with both NAGPRA and the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. § 470) as well as implementing regulations (36 CFR 800).

If archaeological or historic materials are encountered the following series of steps must be followed:

- (1) Stop all work in the immediate vicinity of any historic properties or suspected cultural resources.
- (2) Mark the area in which the resources are located, as well as a minimum buffer area with a radius of 20 meters surrounding them. This buffer area may be larger if there is the possibility of more resources in the area or in the case of slopes or cut banks where ongoing work may impact the site. Make sure that all cultural materials are protected from possible impacts while contacting the appropriate parties¹⁹.
- (3) ARRC's Project Manager should contact the people or agencies in the previous list at A.1(6)(a) through (e) within 24 hours of discovering the resources.

Notification of unanticipated discoveries should include available information regarding the nature and extent of the historic properties and an accurate and precise location including GPS coordinates.

The discovery shall be investigated by a professional meeting the appropriate qualification standards, such as a consulting archaeologist, no longer than seventy-two (72) hours from discovery. STB, SHPO, ARRC and land managing agency (as appropriate) shall consult, by telephone or other means, on the nature of the discovery and whether any additional investigation is warranted. STB shall contact the appropriate Tribal representative if necessary. A decision shall be provided to ARRC within five (5) working days. If the parties agree that the discovery is not significant, verbal authorization to proceed may be given by the SHPO, and SHPO shall provide written confirmation to the parties within five (5) working days. A report of the investigation shall be provided by the investigator, following the guidelines for Monitoring described in Stipulation VI. If additional investigation is agreed to, the guidelines for Additional Investigations described in Stipulation IV.B. shall be followed, unless modified evaluation and reporting are agreed to.

¹⁹ Options for protecting the cultural resources include: covering with a tarp or other protection from the elements; shoring up cut banks or trench walls so that no further exposure occurs; making sure that no water will collect on or around the site.

A.3 List of contacts for Alaska Native representatives

Eight Federally Recognized Tribal Governments have been in consultation with STB for this Undertaking:

1. Village of Dot Lake
2. Native Village of Eagle
3. Healy Lake Village
4. Northway Village
5. Native Village of Tanacross
6. Native Village of Tetlin
7. Native Village of Minto
8. Nenana Native Association

Following is a list of their representatives:

Village of Dot Lake

Common Name: Dot Lake
Vice-President, Charles Miller
Village of Dot Lake
P.O. Box 2279
Dot Lake, Alaska 99737-2279
Voice: (907)-882-2695; Fax: (907)-882-5558

Healy Lake Village

Common Name: Healy Lake
Chief JoAnn Polston
PO Box 73158
Fairbanks, Alaska 99707
Voice: (907)-876-5018; Fax: (907)-876-5013

Native Village of Minto

Common Name: Minto
Chief, Darrell Frank
Native Village of Minto
P.O. Box 26
Minto, Alaska 99758
Voice: (907)-798-7112; Fax: (907)-798-7627

Nenana Native Association

Common Name: Nenana
First Chief, William Lord
Nenana Native Association
P.O. Box 369
Nenana, Alaska 99760-0356
Voice: (907)-832-5461; Fax: (907)-832-1077

Northway Village

Common Name: Northway
Chief, Gerald Albert
Northway Village
P.O. Box 516
Northway, Alaska 99764-0516
Chief, Lorraine Titus
Northway Village
P.O. Box 516
Northway, Alaska 99764-0516
Voice: (907)-778-2311; Fax: (907)-778-2220

Native Village of Tanacross

Common Name: Tanacross
President, Roy Denny
Native Village of Tanacross
P.O. Box 76009
Tanacross, Alaska 99776-6009
Voice: (907)-883-4496; Fax: (907)-883-4497

Native Village of Tetlin

Common Name: Tetlin
President, Donald Adams
Native Village of Tetlin
P.O. Box 797
Tok, Alaska 99780-0797
Voice: (907)-324-2130; Fax: (907)-324-2131

Native Village of Eagle

Common Name: Eagle Village
Chief, Joyce Roberts
Native Village of Eagle
P.O. Box 19
Eagle, Alaska 99738
907-547-2271

The *Upper Tanana Inter-Tribal Coalition* consists of six of the eight Federally recognized Tribal Governments as follows:

Tribe: Village of Dot Lake
ANSCA Corporation: Dot Lake Native Corporation
Phone: 907-882-2695

Tribe: Native Village of Eagle
ANSCA Corporation: Hungwitchin Corporation
Phone: 907-547-2271

Tribe: Healy Lake Village
ANSCA Corporation: Mendas Chaag Native Corporation
Phone: 907-876-5055, 907-876-5018

Tribe: Northway Village
ANSCA Corporation: Northway Natives Incorporated
Phone: 907-778-2311

Tribe: Native Village of Tanacross
ANSCA Corporation: Tanacross Incorporated
Phone: 907-883-5024

Tribe: Native Village of Tetlin
ANSCA Corporation: Tetlin Native Corporation
Phone: 907-324-2130

Attachment B

Agency Consultation and Coordination Plan

Consultation procedures and timing are included in the body of the Agreement, however this attachment provides additional detail. Table B.1 indicates which of the Signatories or Invited Signatories have responsibilities for individual Undertaking components or activities on each segment. Figures B.1 through B.7 illustrate the geographic purview of each responsible agency. Figure B.8 provides a procedural flow chart for the Agreement.

Table B.1: Alternative Segments, Responsible Agencies, and Cultural Resources in Proximity to Main Track Alternative Segments

Segment	Federal Agencies or Federally-Recognized Tribes/Tribal Groups/Alaska Native Corporations	State Agency(ies)	Identified Cultural Resources within the APE	Identified Cultural Resources within 1,312 feet of APE***
North Common	STB, 354 th Fighter Wing, BLM, ACHP, FRA	ADNR SHPO		
Eielson 1	STB, 354 th Fighter Wing, ACHP, FRA	ADNR SHPO		FAI-071*
Eielson 2 or Eielson 3	STB, 354 th Fighter Wing, ACHP, FRA	SHPO ADNR		
Salcha 1	BLM, ALCOM, USAG FWA, STB, ACHP, FRA	ADNR SHPO		FAI-1607
Salcha 2	Upper Tanana Inter-Tribal Coalition BLM, ALCOM, USAG FWA, STB, ACHP, FRA	ADNR SHPO	2(FAI-1751, XBD-293**)	5(FAI-156*, XBD-027, XBD-067, XBD-294**, XBD-296)
Central Alternative 1 or Central Alternative 2	BLM, ALCOM, USAG FWA, STB, ACHP, FRA	ADNR SHPO		
Donnelly 1	BLM, ALCOM, USAG FWA, STB, ACHP, FRA	ADNR SHPO	8(XBD-335-336, 338-343)	17(XBD-188*, 189*, 297-309, 312, 337)
Donnelly 2	STB, ACHP, FRA	ADNR SHPO	4(XBD-291, 313, 320-321)	11 (XBD-287-289, 314-319, 325-326)
South Common	STB, ACHP, FRA	ADNR SHPO		1 (XBD-322)
Delta 1	STB, ALCOM, USAG FWA, ACHP, FRA	ADNR SHPO		1 (XBD-091*)
Delta 2	STB, ALCOM, USAG FWA, ACHP, FRA	ADNR SHPO	1 (XBD-281)	1 (XBD-282, XBD-129)

*Sites have not undergone final determinations of eligibility for listing on the National Register.
**Sites related to Salchaket Village require more data for a determination of eligibility for listing on the National Register, and would likely be eligible.
*** It was assumed in the EIS that historic properties up to 1,312 feet (400 meters) from the APE would not likely be affected by the right-of-way, but could be affected by the final design of ancillary features and their access roads.

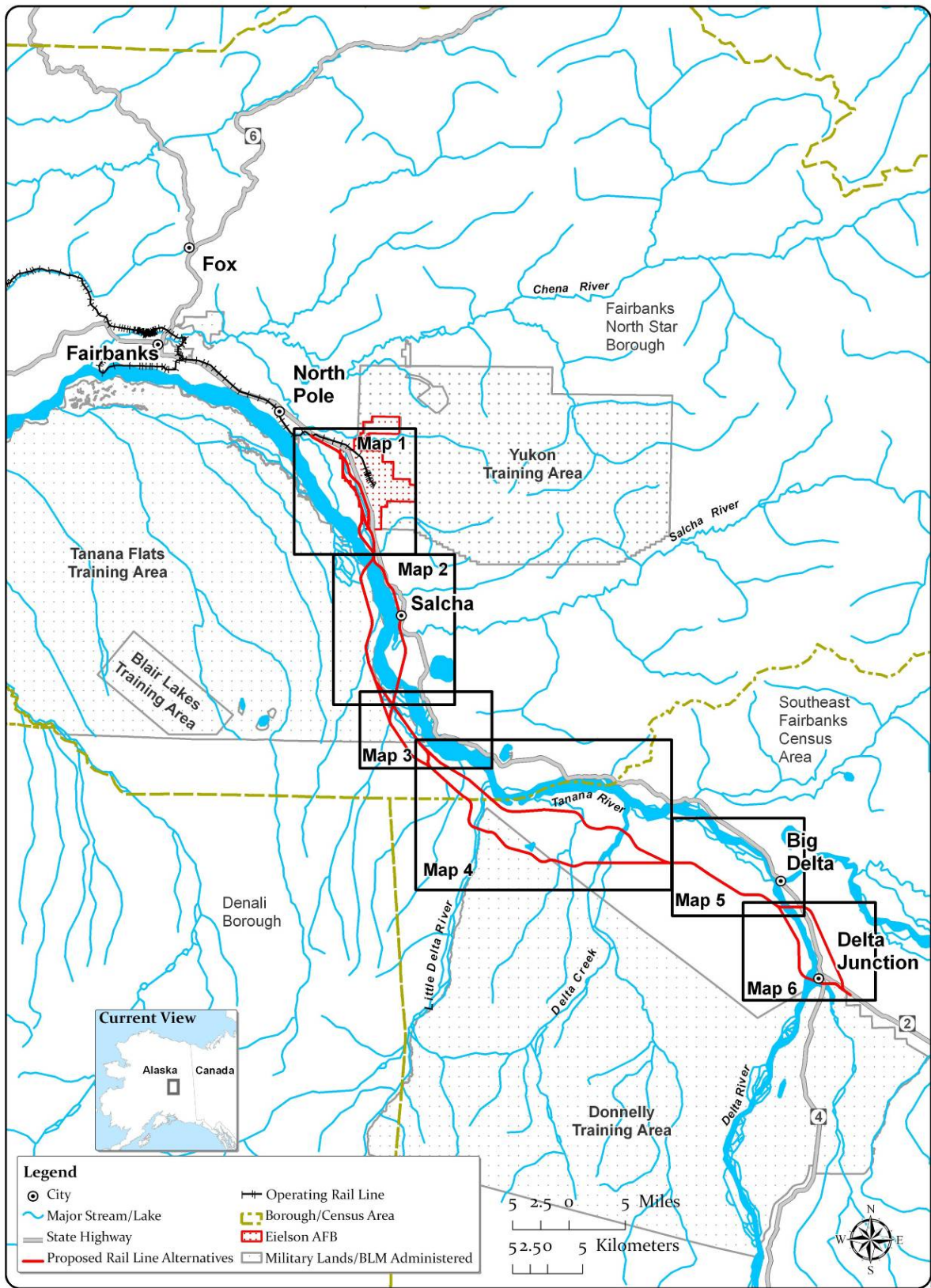


Figure B.1 – Map Key for Areas along the Proposed Northern Rail Extension

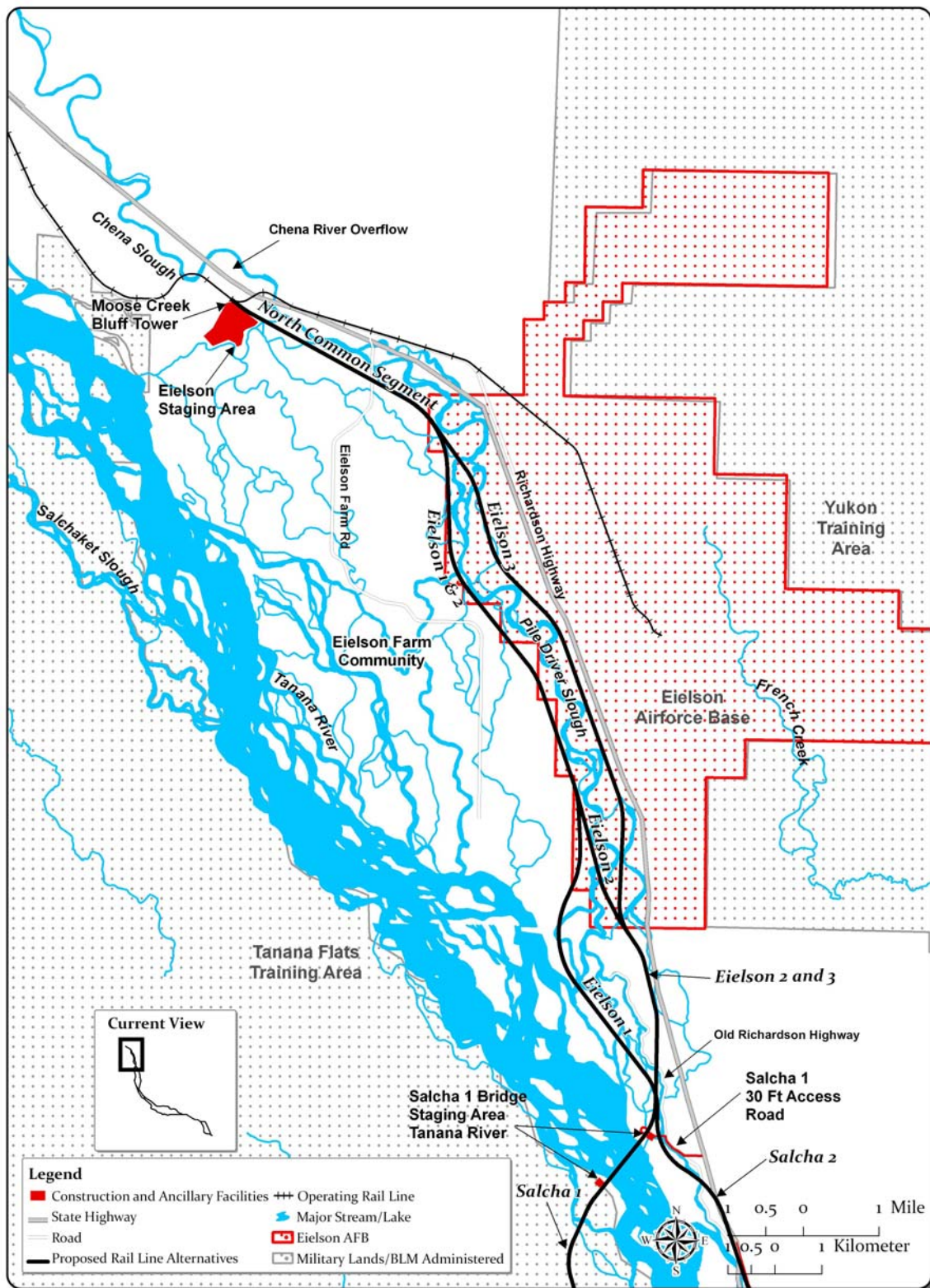


Figure B.2 – North Common Segment and Eielson Alternative Segments within Map Area 1

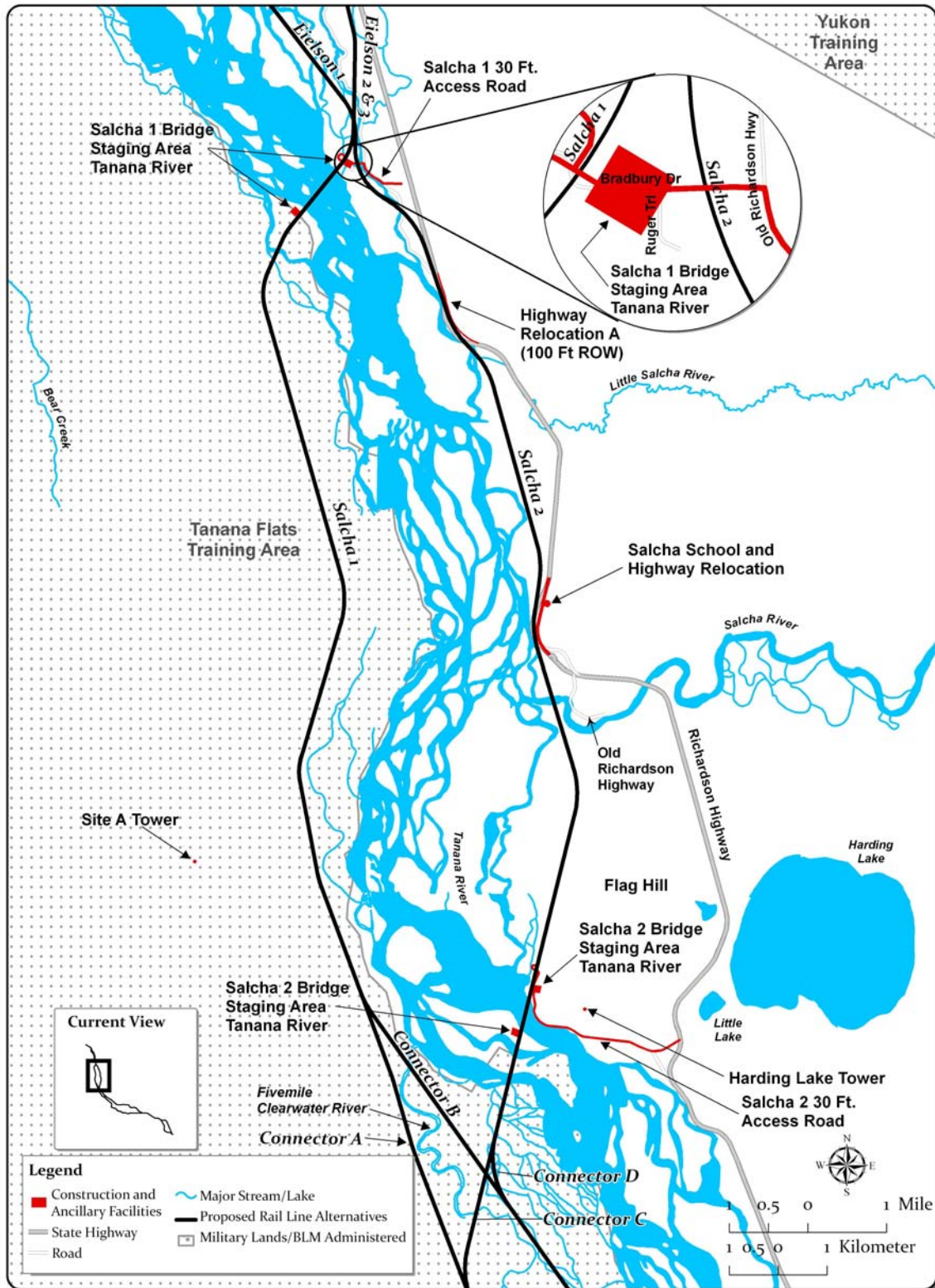


Figure B.3 – Salcha Alternative Segments within Map Area 2

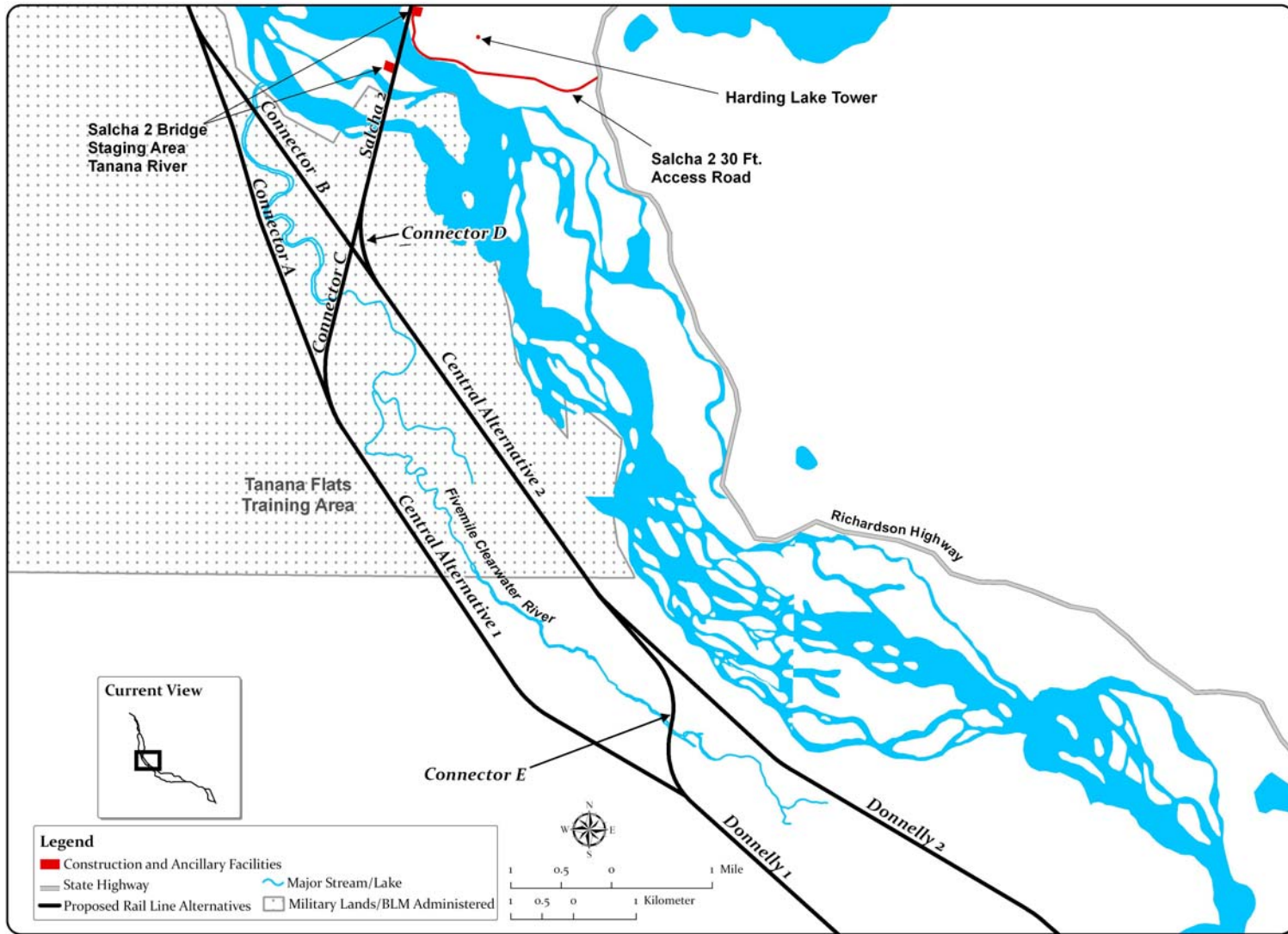


Figure B.4 – Central Alternative Segments and Adjoining Alternative Segments within Map Area 3

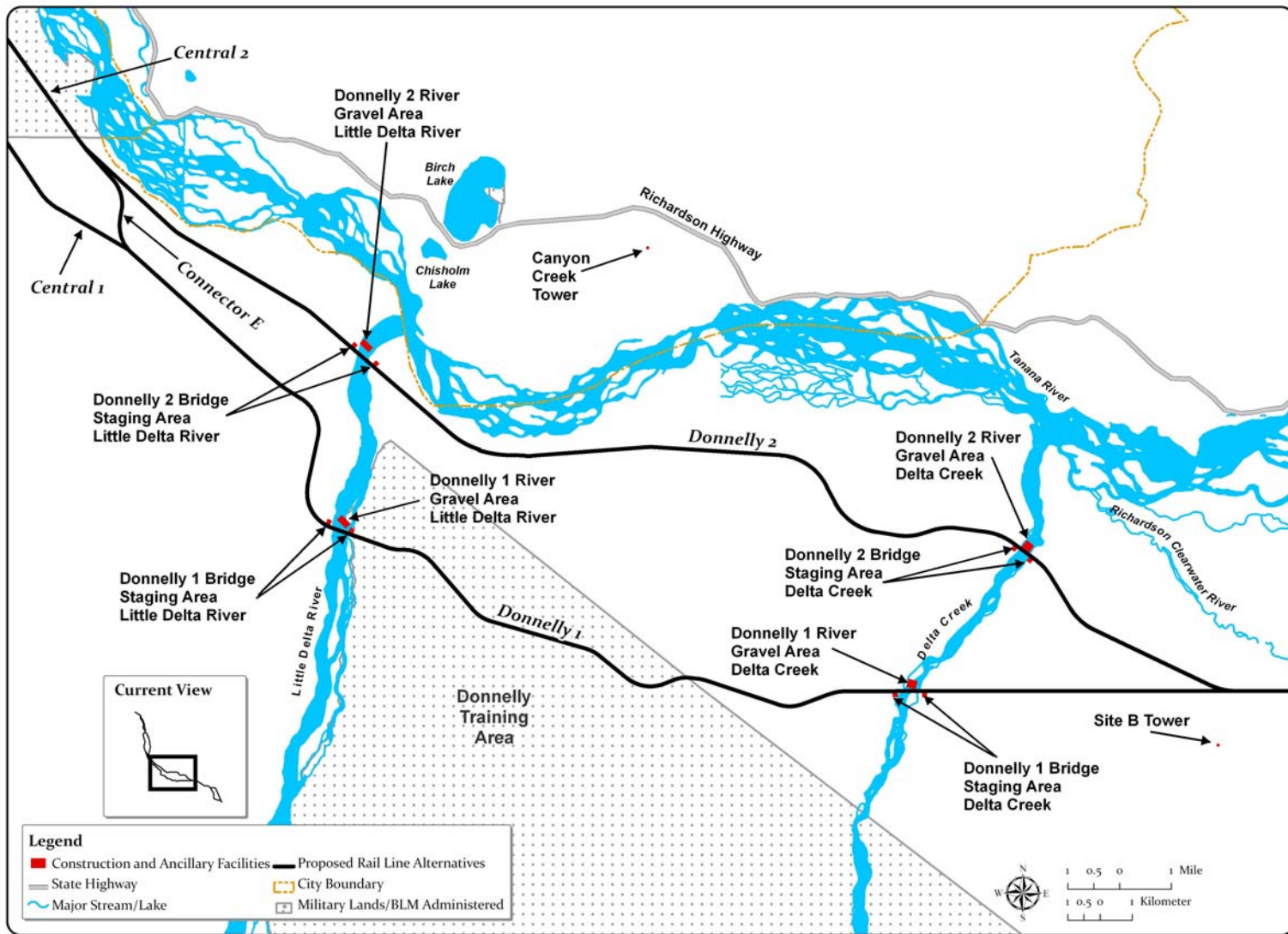


Figure B.5 – Donnelly Alternative Segments within Map Area 4

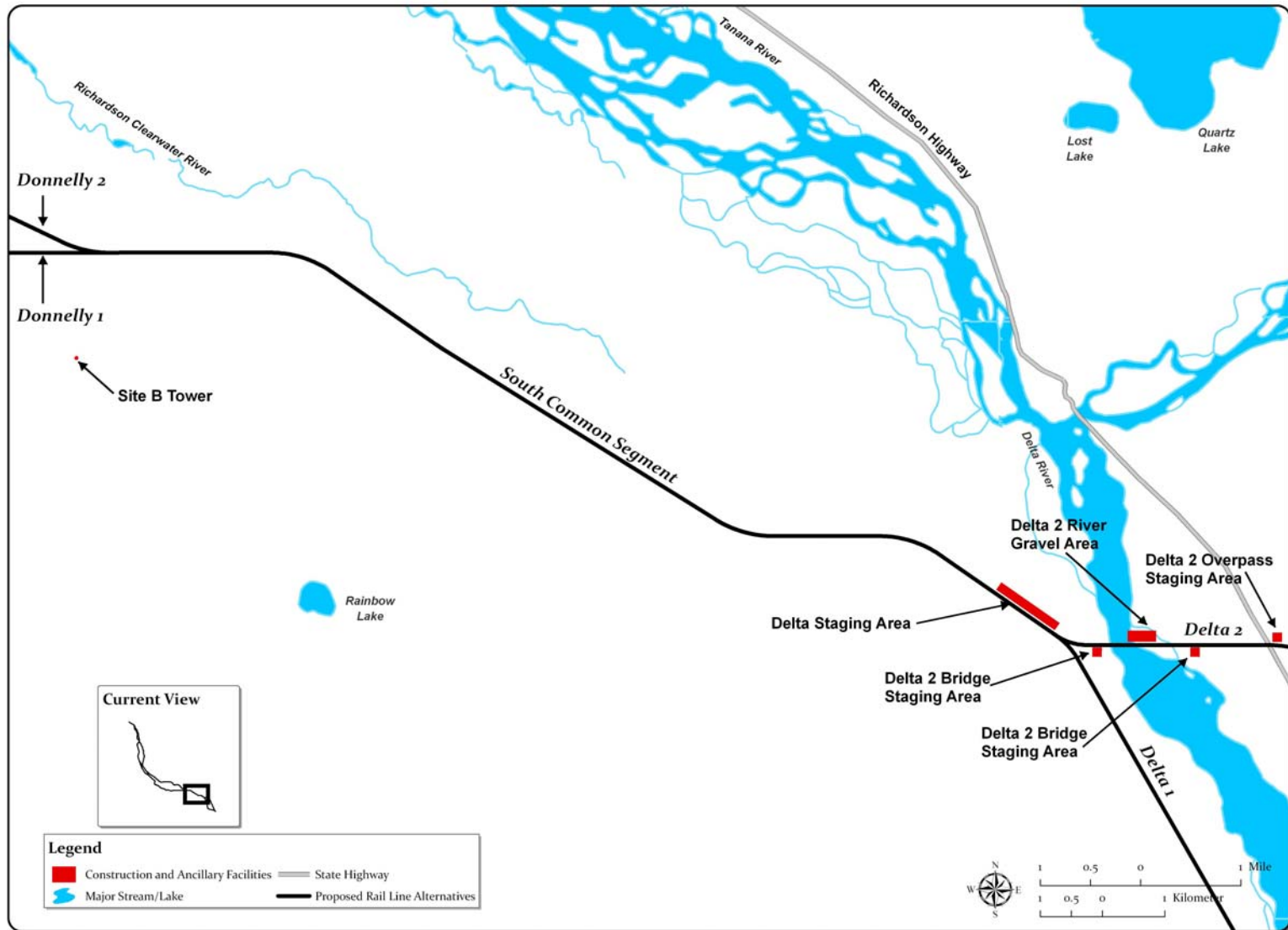


Figure B.6 – South Common Segment and Alternative Segments within Map Area 5

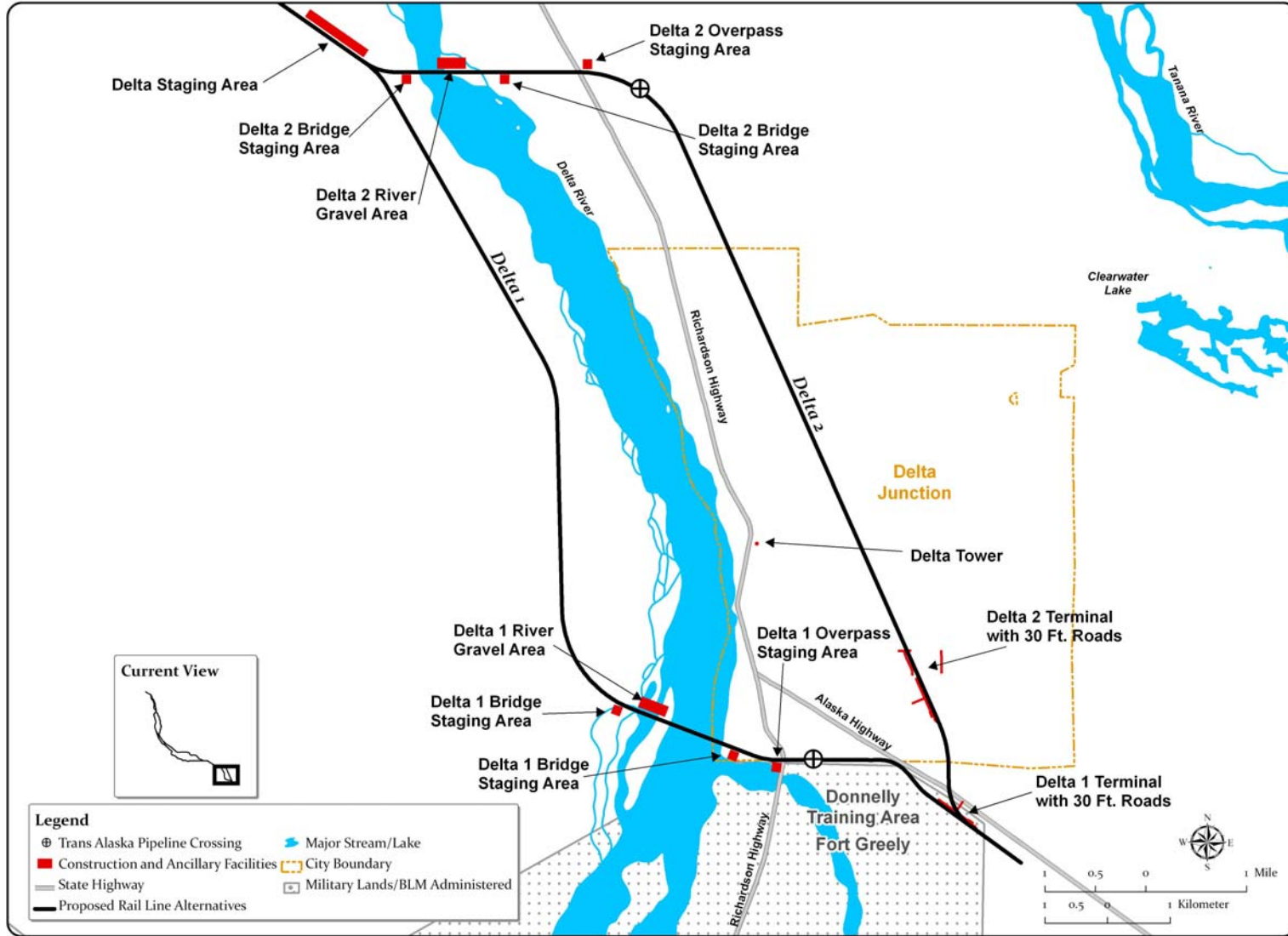
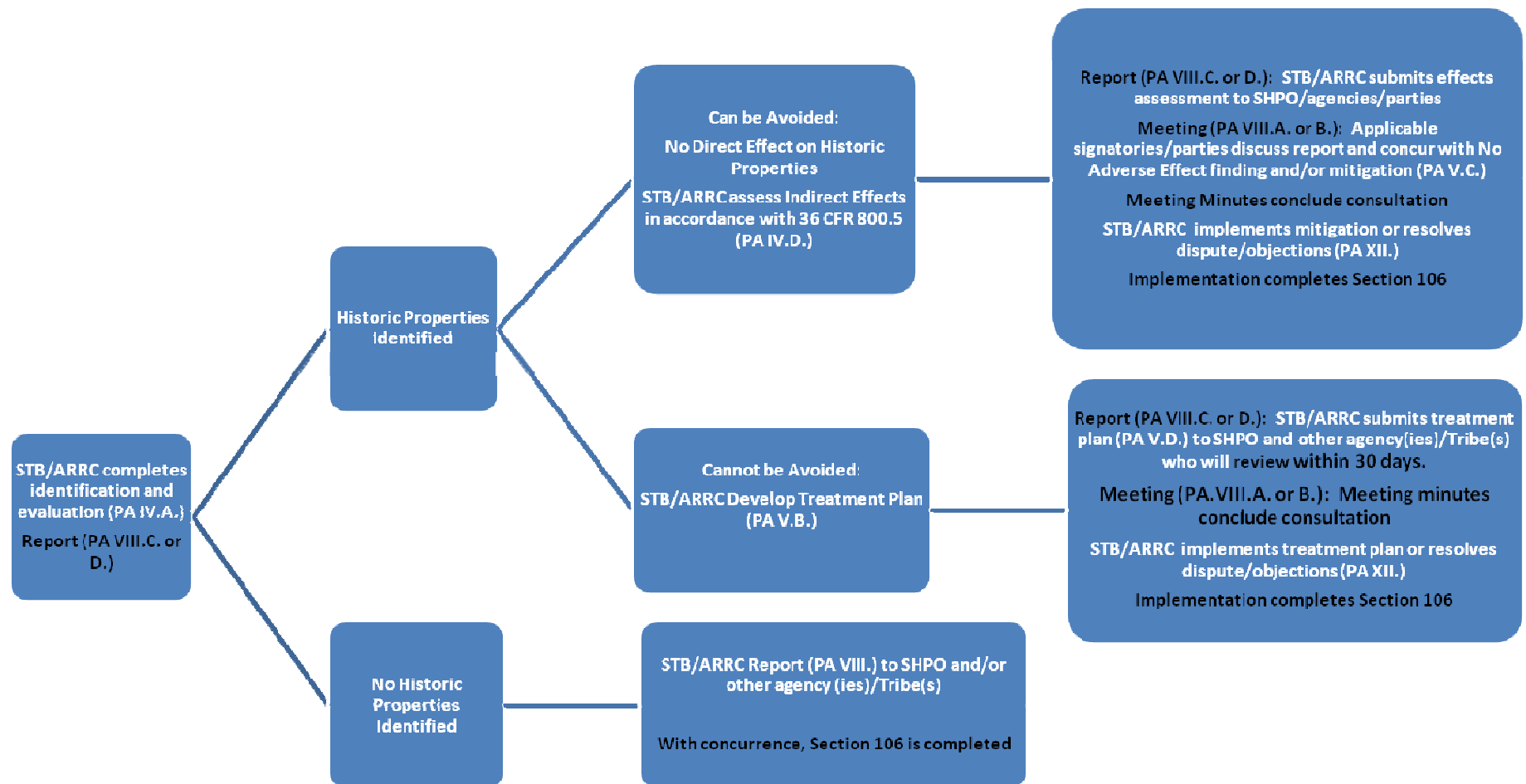


Figure B.7 – Delta Alternative Segments within Map Area 6

Figure B.8 Programmatic Agreement Procedural Flow Chart



Agency Involvement and Contact List

Federal Agencies

STB—Surface Transportation Board. *Role:* Federal Lead Agency reviewing application for the Undertaking.

Contact: David Navecky
Section of Environmental Analysis
Surface Transportation Board
Washington, D.C. 20403
Phone: (202) 245-0294. Fax: (202) 565-9000.
E-mail: David.Navecky@stb.dot.gov

ACHP—Advisory Council on Historic Preservation. *Role:* Consultation pursuant to Section 106 of the National Historic Preservation Act (NHPA).

Contact: Blythe Semmer
Program Analyst, Office of Federal Agency Programs
Federal Permitting, Licensing and Assistance Section
Advisory Council on Historic Preservation
1100 Pennsylvania Avenue NW, Suite 809
Washington, D.C. 20004
Phone: (202) 606-8552. Fax: (202) 606-8647.
E-mail: bsemmer@achp.gov

FRA—Federal Railroad Administration. *Role:* FRA is providing grant funding to ARRC for preliminary engineering and environmental analysis for the proposed Undertaking.

Contact: John Winkle
Amtrak and Penn Station Grants, Office of Railroad Development
Federal Railroad Administration
1200 New Jersey Ave SE, MS-20
Washington, D.C. 20590
Phone: (202)493-6067. Fax: (202)493-6330.
Email: john.winkle@dot.gov

BLM—U.S. Department of the Interior--Bureau of Land Management, Alaska State Office. *Role:* Federal land holder with authority to issue a linear ROW grant for the proposed Undertaking to pass through Federally-managed lands.

Contact: Tim Hammond
Central Yukon Field Office
U.S. Department of the Interior Bureau of Land Management,
1150 University Avenue
Fairbanks, Alaska 99709
Phone: (907) 474-2210. Fax: (907) 786-7652.
E-mail: tim_hammond@ak.blm.gov

ALCOM—U.S. Department of Defense, Alaskan Command. *Role:* Any alternative segment of the Undertaking located on military training areas would require ALCOM service component concurrence.

Contact: Lt. Col. Marc Hoffmeister
Chief, ALCOM/J42, Engineering Division
US Department of Defense Alaska Command
10471 20th Street, Suite 301
Elmendorf Air Force Base, Alaska, 99506-2100
Phone: (907) 552-3683.
E-mail: marc.hoffmeister@elmendorf.af.mil

USAG FWA—U.S. Army Garrison Fort Wainwright. *Role:* The proposed Undertaking would pass through Fort Wainwright controlled lands, including the Donnelly Training Area and the Tanana Flats Training Area, and would require permission from the USAG FWA for construction.

Contact: Garrison Commander
U.S. Army Garrison Fort Wainwright
Attn: IMPC-FWA-RMD
1060 Gaffney Road, #4650
Fort Wainwright, AK 99703-4650

With a copy to:

Lisa Graham, Cultural Resources Manager, Fort Wainwright
Directorate of Public Works
Attn: IMPC-FWA-RMD (CR Manager)
1060 Gaffney Road, #4650
Fort Wainwright, AK 99703-4500
Phone: (907) 361-3002. Fax: (907) 361-9867
E-mail: Lisa.Graham2@us.army.mil

354th Fighter Wing—U.S. Air Force, 354th Fighter Wing, Eielson Air Force Base. *Role:* The proposed Undertaking would pass through Eielson AFB, requiring permission from the 354th Fighter Wing for construction.

Contact: Malcolm H. Nason, YC-02, DAF
Chief, Asset Management
354 CES/CEA
2310 Central Avenue Suite 100
Eielson AFB, Alaska 99702-2225
Phone: (907) 377-4342. Fax: (907) 377-3367.
E-mail: Malcolm.nason@eielson.af.mil

Tribes (See Attachment A.3)

Upper Tanana Inter-Tribal Coalition. *Role:* Consultation pursuant to Section 106 of the NHPA.

Contact: See Agreement Attachment A.3.

State Agencies

SHPO—Alaska State Historic Preservation Officer. *Role:* Consultation pursuant to Section 106 of the NHPA.

Contact: Judith Bittner
Alaska Department of Natural Resources
Office of History and Archaeology
550 West 7th Ave, Suite 1310
Anchorage, AK 99501-3565
(907) 269-8721. Fax: (907) 269-8908.
E-mail: judy.bittner@alaska.gov

ADNR—Alaska Department of Natural Resources. *Role:* ADNR is a major land holder and would need to grant ROWs associated with the proposed Undertaking.

Contact: Don Perrin
Alaska Department of Natural Resources
Office of Project Management and Permitting
550 West 7th Avenue, Suite 705
Anchorage, AK 99501-3568
Phone: (907) 269-7476. Fax: (907) 269-8913.
E-mail: donald.perrin@alaska.gov

Applicant

ARRC—Alaska Railroad Corporation. *Role:* Applicant to construct and operate a rail line extending its existing system between North Pole and Delta Junction, Alaska (Undertaking).

Contact: Kathryn Kusske Floyd
Mayer Brown LLP
1909 K Street, N.W.
Washington, D.C. 20006-1101
Phone: (202) 263-3223. Fax: (202) 2630-5223.
E-mail: kkusskefloyd@mayerbrown.com

Attachment C

Plan for Tribal Consultation

Introduction

Executive Order (EO) 13175 (65 FR 218), Consultation and Coordination with Indian Tribal Governments (November 6, 2000) directs Federal agencies to establish regular and meaningful consultation and collaboration with officials of Federally recognized Tribal Governments (Tribes) in the development of Federal policies or decisions that have Tribal implications. The Environmental Impact Statement (EIS) for Alaska Railroad Corporation's (ARRC) Proposed Northern Rail Extension Project will culminate in a Final Decision (i.e., Record of Decision) by the Surface Transportation Board (STB) and, as appropriate, subsequent permit decisions by other Federal agencies that constitute Federal decisions subject to the provisions of EO 13175.

The proposed ARRC Northern Rail Extension Project has the potential to directly affect the environment, resources and rights of Indian Tribes and Alaska native corporations located in Interior Alaska in the vicinity of the Tanana River. Potential effects to Tribal lands, rights, resources, religious or cultural sites and subsistence activities need to be identified, evaluated and discussed with Tribal Governments in order to comply with EO 13175, Section 106 of the National Historic Preservation Act of 1966 (see also 36 CFR Part 800, August 5, 2001) and other Federal regulations and policies

Completed Consultation: STB initiated consultation with the Tribes listed in Attachment A.3 of this Agreement regarding the Section 106 process during the early scoping stages of the preparation of the EIS. The Government to Government Consultation and Coordination Plan prepared for this Undertaking on April 10, 2006, identifies the Tribes who were notified by letter of the scoping process for the EIS, and Attachment A.3. of this Agreement lists the eight Tribes who have remained in consultation with STB after the scoping process. Copies of the Project's Draft EIS and Final EIS have been sent to all of these Tribes for review. Both documents contain the draft Agreement as an appendix. The STB also consulted with the Tanana Chiefs Conference and this consultation included several meetings and distribution of the Draft and Final Scopes of Study and Draft and Final EISs.

Continuing Consultation: STB consultation with the Tribes will remain open throughout the duration of the Project and as the terms of this Agreement are carried out. If further research or analysis results in the identification of other Tribes with interests or cultural ties to the Project, they will also be added to the list of consulting Tribes. Consultation methods will vary depending on the requests from the Tribes. Consultation types may vary from letters, phone calls, on-site meetings and various levels of documentation for review, to jointly developing site specific treatment plans and/or agreement documents. Consultation may also vary according to the type of resource involved, the periods when the various tribes are known to have occupied the project vicinity, and which alternative is ultimately licensed by the STB.

Objectives of Consultation and Coordination

Consultation and coordination is the process of seeking, discussing, and considering the views of Tribes. Two-way communication that works toward consensus and reflects the concerns of the affected Tribes is the primary objective for the STB's consultation and coordination plan. Tribal sovereignty, culture, traditional values and customs will be respected during the consultation process.

The STB, U.S. Coast Guard and U.S. Department of Interior, Bureau of Land Management, Federal Railroad Administration, and Federal Transit Administration do not have specific guidance documents for consultation and coordination with Tribal Governments. Established guidance documents from the U.S. Department of Defense, U.S. Army Corps of Engineers - Alaska District, U.S. Environmental Protection Agency - Region 10, and State of Alaska were considered in development and implementation of the consultation and coordination plan for the Northern Rail Extension Project EIS. Specific objectives for consultation include:

1. Engage all potentially affected Tribes early in the EIS process to identify issues that should be researched and analyzed in the EIS.
2. Maintain open and active communications with Tribes throughout the EIS process to identify places of traditional religious or cultural importance and potential effects to Tribal lands, rights, resources or subsistence activities in the vicinity of the proposed project.
3. Report to the Tribes in a credible and understandable manner on issues and concerns raised during the scoping process.
4. Respond to issues raised by the Tribes during scoping and on the Draft EIS.
5. Respond to issues raised by the Tribes on the Final EIS.

Implementation Plan

Providing Tribes with the opportunity to participate in the public scoping process is not the same as government-to-government consultation and coordination. STB gave Tribal Governments an opportunity to consult at the start of the project and gave opportunities to consult prior to decision making. STB shall ensure that additional coordination will take place as determined necessary or desirable by the Signatories and Tribes.

Completed Actions: STB has completed the following sequence of actions:

1. Contacted each Tribal entity (as listed in Attachment A.3) by telephone to confirm the name, title and address of current leadership.
2. Transmitted a Tribal Consultation Initiation letter and Consultation Questionnaire to each Tribal entity describing the EIS and government-to-government consultation and coordination process, describing the proposed project and soliciting Tribal input on potential effects of the proposed project on Tribal lands, rights, resources, religious or cultural sites and subsistence activities. The consultation questionnaire offered several options for Tribal consultation.
 - a. Face-to-face meetings with the Signatories at a Tribal facility,
 - b. Scheduled teleconferences with the Signatories,
 - c. No further involvement in government-to-government consultation during the EIS process, or

- d. Continued receipt of project information by mail and participation through the public involvement process.
3. Conducted initial meetings or teleconferences with interested Tribes and developed an agreement and process for continued consultation and coordination throughout EIS development.
4. Documented the government-to-government coordination with each Tribe that has occurred thus far and included it in the Draft, Final EIS and Administrative Record.

Future Actions: STB plans the following actions to facilitate carrying out the terms of this Agreement:

1. STB shall send all Tribes this Agreement and their ideas and preferences will be solicited concerning all parts of this Agreement that are Tribal-related. The Tribes will be able to send comments via mail, email, or phone.
2. As appropriate, STB shall solicit Tribal review of all identification efforts, assessments of effect, and treatment plans via mail, email, or phone in accordance with Stipulations IV and V. of this Agreement and the list of contacts identified in Attachment A.3. of this Agreement.
3. STB shall notify the Tribes of meetings being held and reports being prepared in accordance with Stipulations VIII A. and B. and VIII D. of this Agreement

Native Allotments within Salchaket Village

In 1906, the Alaska Native Allotment Act authorized the Secretary of the Interior to allot individual Alaska Natives (Native) a homestead of up to 160 acres. The Department of the Interior's (Interior) Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) are responsible for granting rights-of-way and handling disputes between allottees and holders of rights-of-way. If Native Allotments are located within Salchaket Village, and STB licenses an alternative that may directly affect those allotments, STB shall notify BLM and BIA of the decision and provide detailed maps of the proposed railroad right-of-way to ensure that the allottees are properly notified, treated with respect, and their lawful rights observed as prescribed in 25 CFR Part 169.

Attachment D

Identification Plan

Additional identification and evaluation shall conform with Federal and state guidelines for fieldwork in Alaska, be compatible with previous investigations for this Undertaking, and follow the *Site Location Model and Survey Strategy for Cultural Resources in the Alaska Railroad Northern Rail Extension Project Area* (ID Plan) approved by SHPO on September 5, 2006, and which is incorporated herein by reference. Section 5.0-Survey Strategy and Section 6.0-Summary of the ID Plan are included on the following pages for reference. Copies of the entire ID Plan will be sent to all parties to the Agreement and additional copies are available on request from the STB.

Acronyms used in Attachment D

APE	Area of Potential Effects
CFR	Code of Federal Regulations
GIS	Graphical Information System
GPS	Global Positioning Satellite
ICF	ICF International
NLUR	Northern Land Use Research
SHPO	Alaska State Historic Preservation Officer
STB	Surface Transportation Board
UAM	University of Alaska Museum
USGS	United States Geological Survey

Works Cited

Ben A. Potter, Ph.D., R.P.A. *Site Location Model and Survey Strategy for Cultural Resources in the Alaska Railroad Northern Rail Extension Project Area*. Fairbanks, AK: Northern Land Use Research, Inc., 2005.

5.0 SURVEY STRATEGY

This section details NLUR survey strategies and field methods for the 2006 Rail Extension surveys. Site location strategies are briefly presented in Section 5.1. Field survey methods are provided in Section 5.2. Curation issues are discussed in Section 5.3. Specific information on proposed survey zones derived from application of this model is provided in Section 5.4.

5.1 Site Location Strategies

5.1.1 Buried Prehistoric Sites

High and moderate potential areas, defined as areas with values of ≥ 7 (see above) will be surveyed by pedestrian transects (Type B survey, see below). On-ground survey includes visual inspection and subsurface exploration tests. Hand-excavated test pits will be used to explore proposed site locations and to record general stratigraphy of the locale. Cut-bank exposures will also be explored for artifacts and local stratigraphy. Other subsurface “windows” will be examined, such as tree-throws, deflation blowouts, landslides, etc. These sites are expected to be in localized areas, constrained by vegetation, slope, aspect, drainage, and other factors. Subsurface sites are expected to be closely related to the high-moderate probability areas demarcated by the geomorphic variables, as surface geology and landform are important to this site category. In low potential areas, defined as areas with values of < 7 (see above), localized areas with potential for subsurface prehistoric sites will be identified and ground survey will be conducted (Type A survey, see below).

5.1.2 Surficial Prehistoric, Historic, and Recent Sites

High and moderate potential areas will be surveyed by pedestrian transects. On-ground survey includes extensive visual inspection, including numerous closely spaced transects on high probability landforms. Discretionary hand-excavated test pits will be conducted to document the presence of any subsurface materials. In low potential areas, local areas with surface site potential will be identified and ground survey will be conducted. Helicopter survey has been found to be effective in locating historic/recent sites with substantial above ground remains in most areas except closed canopy forest environments.

5.2 Field Survey Methods

Systematic and uniform note taking will be employed by crew leaders and supervisors during the survey. Data on how the surveys progressed and how sites were located will be important in evaluating the utility of the model. In addition to the standard NLUR site form, the following data will be recorded in the field for each site in order to refine the site location model in post-field analyses: (1) viewshed, (2) relative elevation, (3) microtopography, and (4) vegetation. Each field crew will have 1:63,360 scale USGS topographic maps with the following data in addition to topography and hydrography:

- 2 km square grid with coordinates (every 10k labeled on the margin),
- high-moderate probability areas, and
- known sites.

Descriptions of ground survey and helicopter-supported survey are provided below. Ground survey is here defined as the minimum level of survey to meet Level II (Evaluation Phase) survey requirements by the SHPO (i.e., gathering sufficient data for a determination of eligibility to the National Register of Historic Places). For both survey types, a preliminary literature review of the archaeology, ethnography, history, map analyses, and aerial photo analyses will have been conducted prior to field survey. The estimated parameters assume that the Rail Extension centerline is locatable by flagging or GPS to an accuracy of ± 5 m. If it is not, additional time will be necessary to facilitate instrument-guided survey. The utility of demarcating these survey types is that 100% visual surface coverage will remain constant, while subsurface intensity will be flexible depending upon the survey zone and the nature of the environment.

One hundred percent of the proposed rail alignments will be surveyed using aerial or ground techniques (Sections 5 and 6). The effective survey coverage for the ground survey will consist of the overall survey zones except:

- bodies of water, such as streams, rivers and lakes;
- hazardous conditions, such as areas of dangerous slopes, presence of dangerous wildlife, munitions, or hazardous waste; and
- areas that can be more thoroughly examined from helicopter, such as impassable vegetation (e.g., muskeg bogs, excessive dangerous downed trees).

Field personnel will document areas that fall within the last two categories, identifying their extent on maps and/or aerial photographs, with GPS coordinates, and recording the specific rationale for their classification.

The survey width used for the 2006 survey unless further direction is provided by SHPO, is assumed to be 200 feet (72 m). This zone is considered the minimal Area of Potential

Effect (APE; 36 CFR 800), and is exclusive of ancillary facilities that require survey such as access roads, material sites, etc.

5.2.1 Type A Helicopter-Supported Survey (Low Probability Zones)

Type A survey consists of low-altitude, low-speed helicopter overflights of the survey zone. About 304.7 km (72%) of the proposed alignments will be Type A (see Table 10). Typically, two archaeologists will be positioned inside on each side of the helicopter visually inspecting the survey zone. One archaeologist navigates by GPS/map, directs the survey, and visually inspects the alignment centerline. Photography and GPS location of locally high potential areas or anomalies is critical in this survey type. When high potential locales are identified from the air, landings will be made and surface survey and discretionary subsurface sampling will be conducted. Archaeologists will have 1:63,360 USGS maps of the route and GIS archaeological sensitivity maps (high resolution versions of the model). Located sites are inspected, described, located using GPS coordinates; and an NLUR Site Survey form is completed. This survey type is useful for lower site location probability areas and areas where sites will probably have obvious surface indications (buildings, trails, etc.).

5.2.2 Type B Ground Survey (High-Moderate Probability Zones)

About 119.7 km (28%) of the proposed alignments will be Type B survey, the “standard” NLUR pedestrian survey. This type typically consists of pedestrian reconnaissance by a group of 8 archaeologists in parallel transects positioned 15 meters apart depending upon terrain and vegetation. The crew chief navigates with the aid of GPS/maps, and walks the proposed alignment centerline with the crew on either side. Subsurface testing is limited to discretionary tests in all high and moderate probability areas, and representative soil probes may be used to test for subsurface remains in some areas. Archaeologists will have 1:63,360 USGS maps of the route, aerial photos, and GIS archaeological sensitivity maps (high resolution versions of the model). Located sites are inspected and described, testing is conducted, and an NLUR Site Survey form is completed. This survey type is useful for moderate-high probability areas and areas where a substantial number of sites will have obvious surface indications (see above).

5.3 Curation

A formal curatorial agreement will need to be developed in collaboration with the University of Alaska Museum (UAM) in Fairbanks. This will be developed once the size, extent, and complexity of 2006 collections are known. As the only fully accredited American Association of Museums repository in the state with a scientific repository function, the UAM is now and has been the de facto repository for all archaeological collections made on federal and state lands in Alaska. Curatorial arrangements will be negotiated on a case by case basis with individual landowners and allotment holders, and for all cultural resources encountered on private lands. Curatorial fees are dependant on the nature of the collections recovered, and are negotiated with the Curator of Archaeology at the UAM.

5.4 Ground Survey Zones

Based on previous research (Section 3), the site location model (Section 4), and 2006 survey strategies (see above), we delineated the survey zones listed below. Each zone consists of between 0.7 and 18.1 linear km of the APE designated as high probability areas and slated for ground survey. A summary of ground survey zone length is provided in Table 10. The locations of these proposed ground survey zones relative to the site location model is provided in Figure 28. Table 11 shows both ground and helicopter supported survey coverage for each section of the proposed alignments. This table may be useful in comparing the ground survey zones with labeled alignment sections and other planning material relating to this project. Note that some ground survey zones extend over two or more proposed alignment sections, and only ground survey zones are labeled. During field operations, helicopter survey areas will also be labeled (A1, A2, etc.).

Table 10. Ground survey zones (Type B Surveys).

<i>Type B Survey Zone</i>	<i>Length (km)</i>	<i>Type B Survey Zone</i>	<i>Length (km)</i>
1	3.2	11	17.2
2	15	12	3.7
3	0.7	13	5.6
4	2.4	14	2.8
5	9.9	15	18.1
6	1.8	16	11.4
7	4.4	17	7.5
8	3.6	18	1.2
9	5.2	19	5.1
10	0.9		

Table 11. Alignment sections and survey coverage (all lengths in km).

<i>Identification</i>	<i>Total Length</i>	<i>Ground Survey Zones</i>	<i>Ground Survey Length</i>	<i>Percent Ground Survey</i>	<i>Percent Air Survey</i>
N1a	30.5	1, 3	3.9	13	87
N1b	4.9	-	-	0	100
N1c	16.9	-	-	0	100
N2a	25.1	2	15.0	60	40
N2b	22.3	6, 7	6.2	28	72
N3	53.6	4, 5	12.3	23	77
N5	14.6	-	-	0	100
S1a	28.6	9, part of 11	5.2	18	82
S1b	63.9	11, 13, 15	40.9	64	36
S1c	10.9	17	7.5	69	31
S2a	27.9	10, 12	4.6	16	84
S2b	66.2	14, 16	14.2	21	79
Blair Lakes Spur	35.9	18, 19	6.3	18	82
Crossovers (n=2)	10.2	8	3.6	35	65
Flag Hill	5.0	Part of 5	-	0	100
Salcha Crossing	8.0	-	-	0	100
TOTAL	424.4	-	119.7	28	72

6.0 SUMMARY

The purpose of this document has been to provide the Alaska State Historic Preservation Office (SHPO) and other regulatory agencies with the data and information necessary to permit a cultural resource survey by ICF and NLUR on behalf of STB. A site location model was developed and assessed, and GIS was used to produce archaeological potential or sensitivity maps for the entire project area. The GIS model is then linked to the survey strategies (Survey Types A and B) that will be used during the 2006 fieldwork.

To date, only a few large archaeological surveys in Alaska have been systematically based on predictive modeling (e.g., Greiser et al. 1985; Mason et al. 1994; Potter et al. 2002). Because of the size and nature of the present project, use of a predictive model and implementation of a derivative survey strategy is required. The site location model is a graphic representation indicating the relative likelihood of discovering cultural resources within defined areas within the project boundaries. The survey strategy is the field implementation of the research design. The model presumes that there differential probability areas for cultural resource site location potential within survey zones, and that it is possible to specify appropriate fieldwork techniques within each defined survey area.

Type A (helicopter-supported) surveys (304.7 km, 72% of total linear area) will be utilized for low probability areas, and Type B (ground) surveys (119.7 km, 28%) will be utilized for high-moderate probability areas.

Verification measures for the model have been built in by the use of alternative field survey strategies. Since all of the route will be surveyed to some level, a more refined model can be constructed on the basis of the data gathered in the course of the 2006 fieldwork. We expect that the distribution of sites located in 2006 will remain consistent with the database from which the model was derived.