

EI-13279



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May 24, 2007

Ms. Victoria J. Rutson
Chief, Section of Environmental Analysis
Surface Transportation Board
395 E Street, S.W.
Room 1106
Washington, D.C. 20423

Re: Finance Docket No. 34658, The Alaska Railroad Corp. -- Petition For Exemption From 49 U.S.C. §10901 To Construct and Operate a Rail Line Between North Pole, Alaska and Delta Junction

Dear Ms. Rutson:

On behalf of the Alaska Railroad Corporation (ARRC), this is to response to your October 12, 2006 request for information on rail construction and operations in connection with the above-referenced proceeding. Specifically, attached hereto please find responses to all questions except item 2(a). A response to that question will be provided separately.

Please let me know if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Kathryn Kusske Floyd".

Kathryn Kusske Floyd

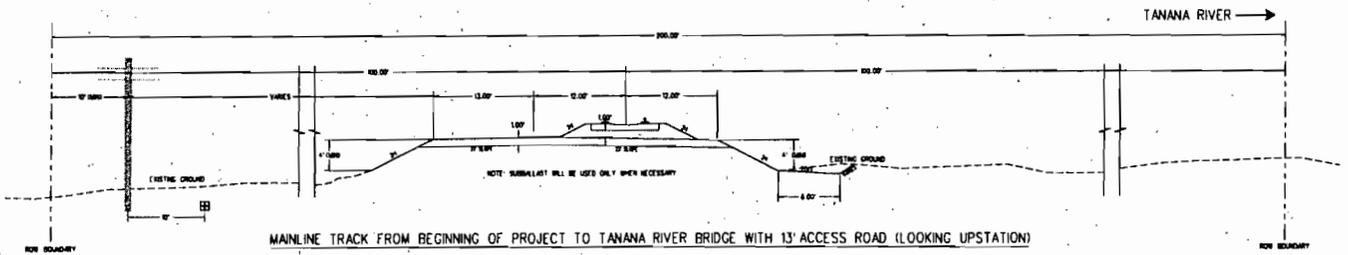
Enclosure

cc: David C. Navecky, SEA
Alan Summerville, ICF
Eileen Reilly, ARRC (w/o encl.)
Brian Lindamood, ARRC

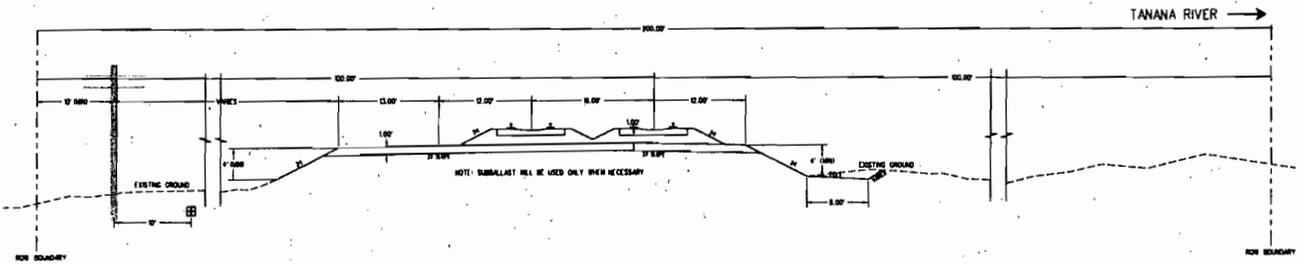
(1) Alignments

a. Provide new conceptual designs for typical right-of-way cross sections or confirm the conceptual designs presented in the appendix of the June 2005 Project Overview and Background document.

They typical sections provided hereto are based upon ARRC standards for new track construction and provide for special design and construction considerations associated with the remote nature of the project location. Specifically, the section includes a separated access road for the railroad located on the west side of the Tanana River. This is required to provide access along the long linear project with access across the Tanana provided only at the ends. The volume of construction traffic, and construction methods likely employed prevent the sole use of the railroad grade for construction access. Further, the military maintains a winter trail along a large portion of the proposed route between the Tanana Flats and Donnelly training areas which will be impacted by the project. The existing road is a winter trail only. The access road would be used by the military after its construction for year-round use in lieu of the winter trail, pending negotiations and agreements with the military.



MAINLINE TRACK FROM BEGINNING OF PROJECT TO TANANA RIVER BRIDGE WITH 13' ACCESS ROAD (LOOKING UPSTATION)



MAINLINE WITH SIDING TRACK FROM BEGINNING OF PROJECT TO TANANA RIVER BRIDGE WITH 13' ACCESS ROAD (LOOKING UPSTATION)

ALASKA RAILROAD CORPORATION OFFICE OF THE CHIEF ENGINEER <small>P.O. BOX 100000, ANCHORAGE, ALASKA 99510-0000 (907) 556-3000</small>		
NORTHERN RAIL EXTENSION		
TYPICAL CROSS SECTIONS - NORTH OF TANANA RIVER CROSSING		
DESIGNED BY: <u>SKL</u>	SCALE: <u>1"=50'</u>	DATE: <u>05/10/07</u>
DRAWN BY: <u>SKL</u>		DATE: <u>05/10/07</u>
CHECKED BY: <u>SKL</u>	DATE: <u>APR. 4, 2007</u>	
APPROVED BY:		<u>3</u> OF <u>42</u>



(2) Bridges and Culverts

b. Provide construction materials and methods for the bridges and culverts.

Conceptual bridge plans are included on the following page. These plans were developed based upon current ARRC bridge design practice, available materials, and with respect to minimizing environmental impacts and construction in remote locations. Not shown are vehicular bridges to be constructed on the west side of the Tanana. The vehicular bridges are required for construction for the movement of equipment, materials, and labor along the project site. Railroad bridges are not wide enough to accommodate large earth moving equipment (18'+), and likewise would not be usable for vehicles once track is placed on them. The vehicular bridges would have spans equal to or greater than the railroad spans, and could accommodate the military's use of the road once usage agreement is executed.

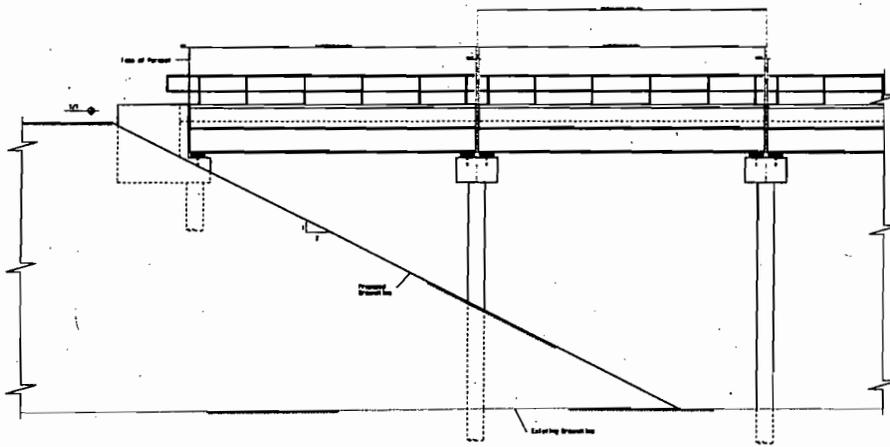
Bridge construction would start with the construction of the roadway bridges where applicable. These spans have not been designed, but would likely consist of semi-prefabricated spans placed upon driven pile piers and abutments. With the access road complete, construction of the railroad bridges would commence with driven or drilled pile or pier foundations, followed by the placement of the railroad spans.

c. Provide a conceptual design for bridges and culverts, particularly of the larger river crossings (e.g., Tanana River, Delta Creek).

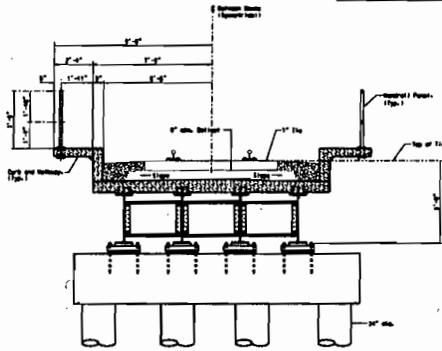
With exception of the Tanana River, bridges over the larger river crossings (Salcha, Delta Creek, Delta River, and the Little Delta river, will incorporate a combination of shorter to medium span lengths (35-foot and 70-foot spans). The Tanana River Bridge will largely incorporate 127-foot girder spans over the main body of the river, with shorter approach spans likely.

As discussed in meetings last November, the establishment of bridge lengths of these major structures is going to be a long and complicated process. We have completed the hydraulic modeling using regression equations for Delta Creek, Delta River, and Little Delta River as no gage data is available. We then tested the analysis to a 95% statistical confidence level. At this juncture, the differential between the predicted value of bridge opening versus the statistical 95% confidence level is significant. The range of bridge lengths shown in reflects this variability. The actual bridge length will be established during the final design process.

The Tanana River bridge is also shown as a range due to difference between the modeling results and what would be considered practical. It is anticipated that constricting the Tanana River based purely on hydraulic calculations will result in unreasonably high costs associated with river training and unacceptable affects on river morphology, fish passage, and bed-load deposit. The ARRC is in the process of conducting further study relevant to morphology, bed-load, and ice jam potential for this structure for final determination of proposed bridge length.



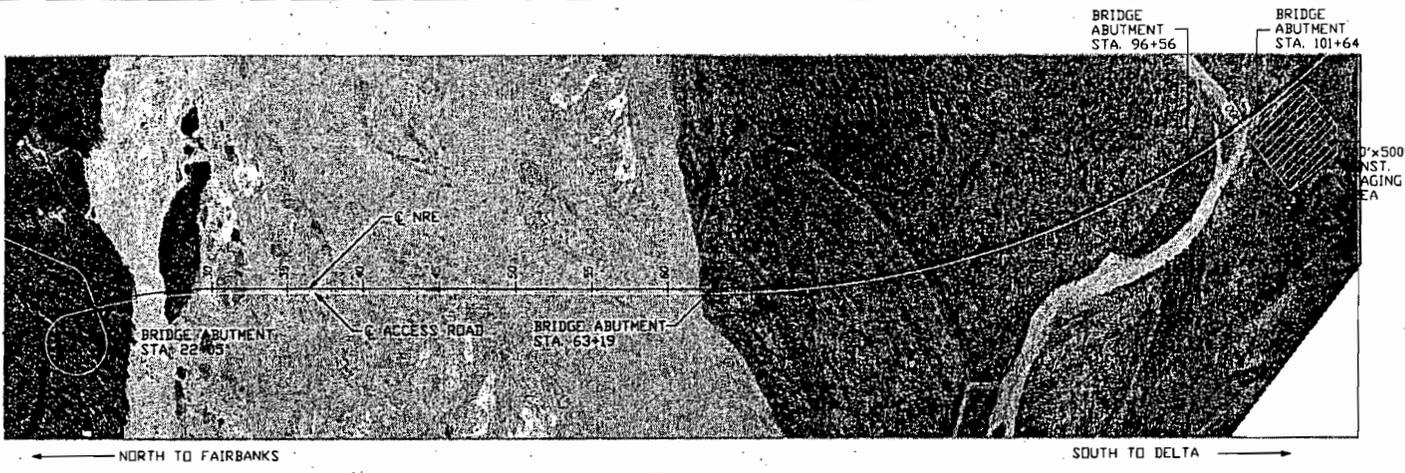
TYPICAL ELEVATION - 35 FOOT SPAN



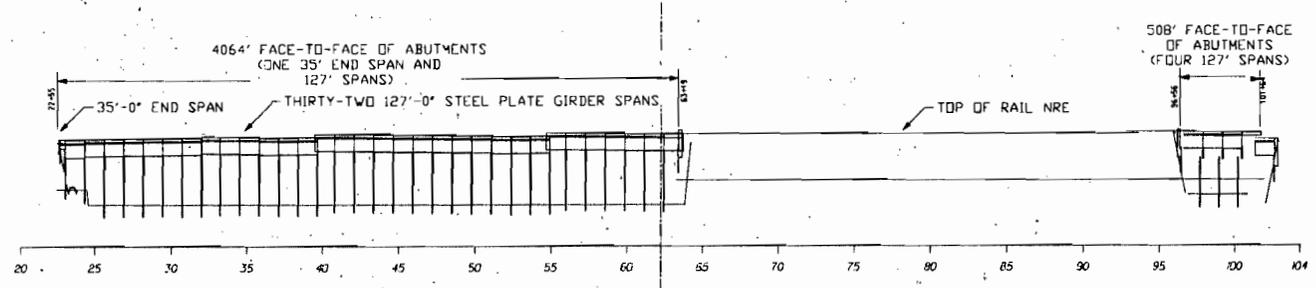
TYPICAL CROSS SECTION - 35 FOOT SPAN

 ALASKA RAILROAD CORPORATION OFFICE OF THE CHIEF ENGINEER P.O. BOX 187588 - ANCHORAGE, ALASKA 99518-7588 (907) 255-2456		
NORTHERN RAIL EXTENSION		
TYPICAL BRIDGE ELEVATION AND SECTION - SHORT SPAN		
DESIGNED BY:	DNF	SCALE: NONE
DRAWN BY:	DNF	REF. NO.:
CHECKED BY:	CDC	HEAD FILE/AVA (WG. NO.):
APPROVED BY:		DATE: APR. 4, 2007
		6 OF 42





PLAN

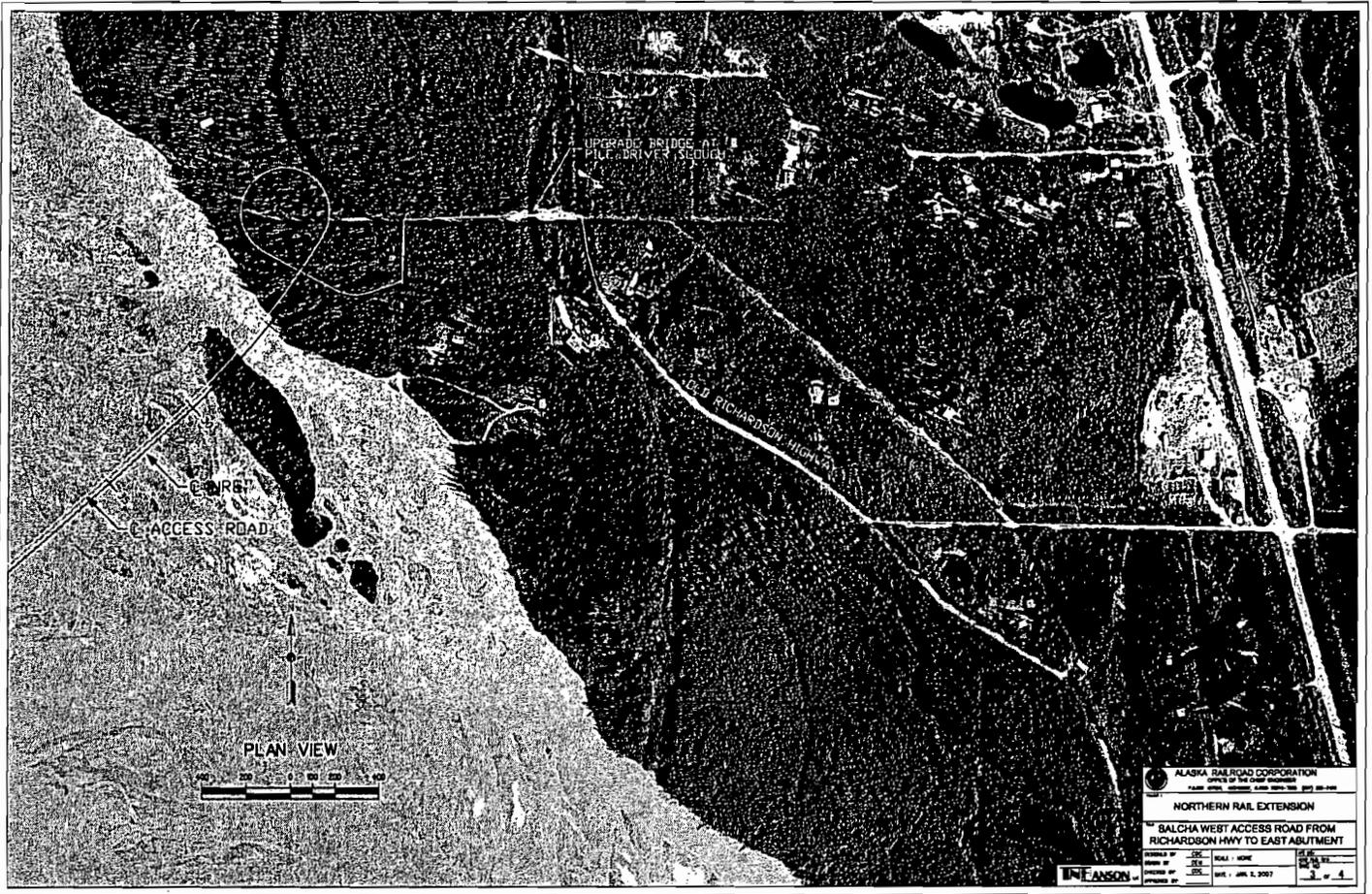


ELEVATION

- NOTES:
- VERTICAL SCALE EXAGGERATED FOR CLARITY.
 - ADJACENT HIGHWAY BRIDGE IN "ELEVATION" VIEW NOT SHOWN FOR CLARITY.
 - SEE SHEET 3 OF 4 FOR ACCESS ROAD ALIGNMENT FROM OLD RICHARDSON HIGHWAY.
 - SEE SHEET 4 OF 4 FOR BRIDGE CROSS SECTION AND DETAIL OF ROAD UNDER FIRST SPAN OF BRIDGE.

ALASKA RAILROAD CORPORATION OFFICE OF THE CHIEF ENGINEER <small>FAIRBANKS DIVISION, ALASKA RAILROAD SYSTEM, 2007 20-100</small>			
NORTHERN RAIL EXTENSION			
TANANA RIVER CROSSING (ENTIRE RIVER BED) SALCHA WEST SEGMENT			
DESIGNED BY	CCO	SCALE	NONE
DRAWN BY	DEW	CHECKED BY	DEW
INVESTIGATED BY	DEW	DATE	APR 2, 2007
APPROVED BY			





CREEK

ACCESS ROAD

UPGRADE BRIDGE AT UPGRADE BRIDGE APPROX

Hwy. 11 RICHARDSON HWY.

PLAN VIEW



ALASKA RAILROAD CORPORATION
 OFFICE OF THE CHIEF ENGINEER
 1400 10TH AVENUE, S.W. ANCHORAGE, ALASKA 99515-3000 (907) 586-5000

NORTHERN RAIL EXTENSION

SALCHA WEST ACCESS ROAD FROM RICHARDSON HWY TO EAST ABUTMENT

DESIGNED BY	DATE	SCALE	WORK	DATE
DRAWN BY	DATE			
CHECKED BY	DATE			
APPROVED BY	DATE			

LINEANSON

(3) Road Crossings

a. Identify the locations of at-grade road crossings, the owner of the roads (public or private [no need to provide private owner's name]), and the proposed warning devices.

Provided on the following page.

b. Identify planned clearances for proposed grade-separated crossings.

Roadway vehicular clearance over proposed Richardson and Alaska Highway structures will be 18'-6" minimum. Clearance over other public streets and roads will be 16'-6". Clearance over the proposed railroad by roadways will be a minimum of 23'-0".

NO	SEGMENT	MP	ROAD NAME	ROAD TYPE	OWNER	TYPE OF CROSSING	TYPE OF PROTECTION	COMMENTS
1	Eielson East	490.39	Chena Flood Road	Public?	Fairbanks North Star Borough	At Grade	Crossbucks and stop signs	
2	Eielson East	492.51	Eielson Farm Road	Public	Fairbanks North Star Borough	At Grade	Flashing lights with gates	
3	Eielson East (North)	495.24	None	Private	Private	At Grade	Crossbucks and stop signs	
4	Eielson East (North)	496.06	None	Private	Private	At Grade	Crossbucks and stop signs	Boat Access
5	Eielson East (North)	496.90	None	Private	Private	At Grade	Crossbucks and stop signs	Boat Access
6	Eielson East (South)	501.55	Stringer Road	Public	Fairbanks North Star Borough	At Grade	Flashing lights with gates	
7	Eielson East (South)	502.70	Old Richardson Hwy	Public	Fairbanks North Star Borough	At Grade	Flashing lights with gates	
8	Eielson West (South)		Old Valdez Trail	Public	Fairbanks North Star Borough	At Grade	Flashing lights with gates	
9	Salcha West	503.70	Ruger Trail	Public	Fairbanks North Star Borough	Grade Separation	None	Cross railroad underneath Tanana River bridge
10	Salcha Central		Ruger Trail	Public	Fairbanks North Star Borough	At Grade	Crossbucks and stop signs	
11	Salcha Central		Old Richardson Hwy	Public	Fairbanks North Star Borough	At Grade	Flashing lights with gates	
12	Salcha Central		Old Richardson Hwy	Public	Fairbanks North Star Borough	At Grade	Flashing lights with gates	
13	Salcha Central		Country Road	Public	Fairbanks North Star Borough	At Grade	Crossbucks and stop signs	
14	Salcha East		Richardson Hwy (AK 2)	Public	State of Alaska	Grade Separation	None	Highway over Railroad
15	Salcha East		Aicuz Ave.	Public	Fairbanks North Star Borough	At Grade	Crossbucks and stop signs	
16	Salcha East		Trans-Alaskan Pipeline	NA	Alyaska	At Grade	Crossbucks and stop signs	
17	Salcha East		None	Private	Private	At Grade	Crossbucks and stop signs	
18	Salcha East		Johnson Road	Public	Fairbanks North Star Borough	At Grade	Flashing lights with gates	
19	Salcha East		Canaday Road	Public	Fairbanks North Star Borough	At Grade	Crossbucks and stop signs	
20	Salcha East		Richardson Hwy (AK 2)	Public	State of Alaska	Grade Separation	None	Railroad over Highway
21	Salcha East		None	Private	Private	At Grade	Crossbucks and stop signs	
22	Salcha East		Country Road	Public	Fairbanks North Star Borough	At Grade	Crossbucks and stop signs	
23	Salcha East		Flag Hill Road	Public	Fairbanks North Star Borough	Grade Separation	None	Cross railroad underneath Tanana River bridge at Flag Hill
24	Donnelly West	549.16	DNR Winter Trail	Public	DNR	At Grade	Crossbucks and stop signs	
25	Donnelly Central	556.78	DNR Winter Trail	Public	DNR	At Grade	Crossbucks and stop signs	Construct new road segment to eliminate the need for two crossings
26	Donnelly East		DNR Winter Trail	Public	DNR	At Grade	Crossbucks and stop signs	Construct new road segment to eliminate the need for two crossings
27	Delta North		Old Richardson Hwy	Public	S.E. Fairbanks Borough	Grade Separation	None	Railroad over Highway
28	Delta North		Richardson Hwy (AK 2)	Public	State of Alaska	Grade Separation	None	Highway over Railroad - New connection to Tanana Loop Road
29	Delta North		Jack Warren Road	Public	S.E. Fairbanks Borough	At Grade	Flashing lights with gates	New road segment to connect Philips Road
30	Delta North		Nistler Road	Public	S.E. Fairbanks Borough	At Grade	Flashing lights with gates	New road segment to connect Delta Building Supply Road
31	Delta North		Alaska Hwy (AK 2)	Public	State of Alaska	Grade Separation	None	Highway over Railroad
32	Delta Central		Richardson Hwy (AK 2)	Public	State of Alaska	Grade Separation	None	Railroad over Highway
33	Delta Central		Nistler Road	Public	S.E. Fairbanks Borough	At Grade	Flashing lights with gates	New road segment to connect Delta Building Supply Road
34	Delta South	569.26	Richardson Hwy (AK 4)	Public	State of Alaska	Grade Separation	None	Railroad over Highway

Crossings with Milepost listed are on the ARRC Preferred Alignment

(4) Track Engineering Design

a. Confirm or update the track engineering design information presented in the Summary of Planned Freight and Passenger Operation dated October 14, 2005.

Track will be constructed with continuously welded rail upon concrete ties, and 12" of ballast. Road bed will be constructed with appropriate fill material based upon final geotechnical design, likely capped with 12" of subballast.

(5) Construction

a. Provide a timeline for construction of the rail line and a description of how the rail line and associated facilities (both for construction and operation) would be constructed. Please indicate whether the rail line would be built in simultaneous segments or sequentially starting from North Pole. Include in the construction timeline associated with ancillary facilities and use of material site locations. Also indicate the seasons in which the various construction activities would occur.

Funding will dictate if the project will be constructed 'all-at-once' or in segments. If the funding is secured in phases, the construction would start at the North Pole end of the project, and progress southeasterly towards Delta Junction. It is possible that construction of the Tanana River bridge would start prior to the construction of the grade between North Pole and the bridge location due to the long lead times associated with the bridge spans and the logistical need to complete the bridge early in the project to facilitate the construction of the south/west side of the Tanana.

In the event that full funding is available at the on-set, construction would likely progress from both ends (North Pole and Delta Junction) with an anticipated 'meet' at Little Delta River or Delta Creek. It is anticipated that work under this scenario would take place over three to four years.

In either scenario, material would be used as required to complete the work. Though work will be likely be nearly year-round, the severe winters will limit winter-time construction to clearing of land, most bridge construction, and interior work associated with facility buildings.

b. Confirm or update the information provided in the Status report dated March 28, 2006, and the Draft Facility Footprint Map, Rev 4, dated July 2006.

The following represents our estimate based upon the conceptual engineering performed to date on the ARRC's preferred route alternative.

Clearing	1500 acres
Track	491,500 track feet
Turnouts	19 each
Grade Crossings	300 track feet
Subballast	600,000 cubic yards

Road Base	380,000 cubic yards
Rip Rap	215,000 tons
Embankment	8,000,000 cubic yards
Culvert pipe	5,000 linear feet
Bridge Spans (35-foot)	215 each
Bridge Spans (127-foot)	26 each
Roadway Spans (Tanana)	25 each
Access Road Bridges	7100 linear feet
Loading Ramps (Delta Jct)	1 each
Buildings/Facilities	35,000 square feet
Passenger Platforms	1 each
Way-side equipment detectors	16 each
Communications towers	6 each
Way-side signals	87 each

(7) Access Roads

a. Identify and provide conceptual design(s) for all construction and permanent access roads to the rail line, borrow pits, quarries, construction camps, etc.

Information relative to location temporary facilities has been provided in previous submissions. Borrow pit locations will be identified upon the license of a final route alternative after sufficient design-level geotechnical investigation has been completed. The need for temporary access roads is expected to be minimal, and will be located to minimize impacts where practicable. The final location of construction related facilities including temporary access roads, borrow pits, and construction camps is not quantifiable until final design is nearly complete.

There will be a permanent, separate, and parallel access road the length of the alignment west of the Tanana River for use by the military and ARRC maintenance. Likewise, permanent access roads will be maintained from the proposed alignment to communication facilities located along the alignment. These roads have been shown for informational purposes on prior maps provided to the STB, but the final location of these roads will not be known until final design.

Finally, the only proven source of hard rock for ballast and rip-rap purposes within the project limits are Flag Hill. It is unclear the railroad location or economics will make this source financially viable. Presuming that it is not, it is assumed that ballast and Rip Rap will be brought in from existing sources located outside the project limits.

Operational Information

(1) Confirm/update operation material presented in the Summary of Planned Freight and Passenger Operation dated October 14, 2005, including:

a. The number of military, commercial freight and passenger trains per year.

No new information to report.

b. The number and length of typical cars in each type of train.

No new information to report.

c. The number and type (make/model) of locomotives (or other power units) in each type of train?

The Alaska Railroad has a variety of locomotives used in road switching service including GP-38-2's (8), GP-40-2's (15), and SD-70MAC's (24 w/additional 4 expected in 2007). Power for trains will be assigned to trains as available and appropriate. It is possible that DMU may be used for some or all future passenger operations.

(2) What are the estimated typical operating speeds at each highway-rail at grade crossing for freight service?

See grade crossing table provided above.

(3) What are the estimated typical operating speeds at each highway-rail at grade crossing for passenger service?

79-mph maximum

(4) What is the estimated travel time for passenger service? For freight service?

Travel time is estimated to be approximately 72 minutes for passenger from North Pole to Delta Junction, 96 minutes for freight.

(5) For hazardous materials safety analysis, please provide a list of materials proposed to be transported.

The military has not provided any non-training related commodity movement data for possible transport into Tanana Flats, Donnelly, or Fort Greeley. Estimated annual hazardous materials movements for Delta Junction-Whitestone farm district are as follows:

Fuel (mix of gasoline and diesel fuel)	42 cars
Propane	16 cars
Chemicals (Fertilizer, etc.)	5 cars

(6) What is the estimated number of additional employees that would be required for operation and maintenance of the proposed rail line extension and supporting facilities?

It is estimated that local employment could increase between 6-10 FTE's.

(7) Describe anticipated maintenance activities and methods for the right-of-way

Maintenance activities will be similar to other portions of the railroad to include periodic inspection, surfacing, and the replacement of track material as required. Right-of-way maintenance will include snow removal, the mowing of brush, and removal of ice-dams as required.