

MP 25.7, Trail River Bridge Replacement, Project Description

Alaska Railroad (ARRC) proposes to reconstruct its existing bridge over Trail River at approximately 60.4352 N, 149.3725 W, approximately four miles south of Moose Pass, Alaska (Figure 1). The bridge was originally built ca. 1920 and reconstructed at least once since then. The existing bridge has suffered deterioration and loss of integrity due to high flow events over the years. ARRC investigations have found that the abutments have rotated and pinched the bridge span. In addition, the existing bridge was not designed to meet ARRC's increased line capacity of 286,000 lbs.

Existing Facility

The existing bridge is a thru-plate girder, open-deck bridge, approximately 360 feet long. It sits on 25 bents with five piles each. In addition, older timber bents remain at or below the waterline from previous railroad bridges. The existing bridge's low chord elevation is 473.06 feet. For survey reference, the OHW for Trail River is estimated to be 469.5 feet, and the modeled 100-year flood event elevation is 474.9 feet.

Proposed Facility

The proposed bridge is 360 feet in length, resting on 13 bents, with a low chord elevation of 474.93 feet. The abutments will have a sheet pile bulkhead configuration.

Proposed Construction Method

ARRC proposes to reconstruct the existing bridge on the ARRC mainline track once high-season passenger and freight activity tapers off (Figure 2). ARRC does not currently intend to construct or place any temporary work bridge, temporary piles or bents, or temporary work pads to facilitate this construction.

ARRC and their construction contractor will also remove the bents from the existing bridge. If bents cannot be removed completely, they will be cut off approximately at grade with the Trail River substrate below OHW. In addition, older remnant bents from a former bridge will also be removed in the same manner.

Environmental and Regulatory Considerations

The bridge spans Trail River, a Water of the U.S. (WOUS) subject to US Army Corps of Engineers (USACE) jurisdiction. Trail River is listed as an anadromous (salmon-bearing) waterway (AWC Code 244-30-10010-2225), and as such is subject to Alaska Department of Fish & Game's (ADFG) authority. In addition, the bed and banks of the waterway are state land under state law, and therefore subject to Alaska Department of Natural Resources (ADNR) authority. This waterway is located within the Kenai Peninsula Borough (KPB) and has been mapped for flood zones by the Federal Emergency Management Agency. It is not listed as a navigable waterway by US Coast Guard (USCG) and is therefore not subject to USCG approval for bridges over navigable waterways. Finally, Trail River is part of the Kenai River Watershed, and is subject to the Kenai River Center's (KRC) purview as a permitting clearinghouse for that watershed.

To satisfy the USACE regulatory requirements, the work is proposed to occur under Nationwide Permit 3, Maintenance of Existing Facilities. ARRC and its Contractor will not disturb any more than the minimum area necessary, with respect to the ordinary high water (OHW), to complete the proposed bridge reconstruction. No temporary fill will be placed in WOUS. Permanent fill within the watershed will involve 230 cubic yards of riprap on the embankment on the north side of Trail River and adjacent to Trail Lake.

To satisfy the KPB, a Multi-Agency Permit is included for submittal to the KRC. This permit application is expected to be conveyed to ADFG, AK State Parks, and KPB Floodplains administrators.

To satisfy ADFG regulations, a Title 16 Fish Habitat Permit is included as part of this effort under the KRC permit application.

To satisfy ADNR, no vehicular access will occur within the bed or banks of the waterway. Work will be conducted from the existing track and adjacent uplands. No Temporary Land Use Permit is anticipated with ADNR at this time.

Mitigation

As part of the construction process, ARRC proposes to provide mitigation for potential impacts to Trail River by removing the current bents and support structure for the existing bridge. In addition, the proposed bridge will use approximately half the number of bents as the existing structure, therefore there will be fewer in-water obstacles and a reduced footprint below OHW.

Finally, ARRC proposes to remove bents at or below OHW that are remnants of a former bridge. There are approximately 165 older bents (55 bents, with 3 piles expected per bent) from a former rail bridge that are currently located in the waterway. ARRC proposes to remove these, or if complete removal is not possible to cut them off at the base, approximately level with the substrate of Trail River.

Multi-Agency Permit Packet



This Packet Contains:

- River Center Multi-Agency Permit Application
- Site Plan Instructions & Checklist with Examples and Drawing Paper

Notes:

Please answer all questions completely. If a question does not pertain to your activity, write "N/A".

▶ This application will be distributed to multiple agencies including the Kenai Peninsula Borough, Alaska Department of Fish & Game, Alaska State Parks, U.S. Army Corps of Engineers, and the U.S. Fish & Wildlife Service. Individual agencies may contact you about your application. In some cases, additional information or applications may be required. You are responsible for obtaining other required permits for your activity.

▶ Project drawings and descriptions are an important part of your application. Please draw carefully and be sure to include the information outlined in the Site Plan Instructions & Check List. Site plan examples and paper are provided.

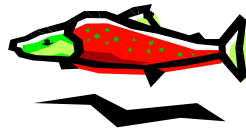
▶ Complete applications can take 30 days or longer to process. Be sure to plan your projects accordingly.

▶ For complete instructions on completing this application, visit our web site at www.kenairivercenter.org/application

RETURN COMPLETED PERMIT APPLICATIONS TO:

RIVER CENTER
514 FUNNY RIVER ROAD
SOLDOTNA, AK 99669
(907) 714-2460
(907) 260-5992 FAX
Email: KenaiRivCenter@kpb.us
Website: <https://www.kpb.us/river-center>

Multi-Agency Permit Application



Please answer all questions completely.

Applicant Information:

Name: Alaska Railroad Corporation

Owner? Yes No

Mailing Address:

(permits will be mailed to this address)

327 W. Ship Creek Avenue
Anchorage, AK 99501

Phone (Home/Work): (907) 265-4733

Cell Phone: (907) 265-4733

Fax:

E-Mail: BrongaR@akrr.com

Agent Information:

Name:

Mailing Address:

Phone (Home/Work):

Cell Phone:

Fax:

E-Mail:

Project Location:

Please complete all information including the legal description of the property or site location. This information can be found on your tax bill or by visiting the KPB Assessing Department website at www.borough.kenai.ak.us/assessingdept/default.htm.

Waterbody Name: Trail River

River Mile: Right or Left bank (looking downstream)

Subdivision: Lot: Block:

Township: 13 Range: 01 W Section: 04 N

KPB Parcel Number: Physical Address: 60.4352 N, 149.3725 W

Directions to the site: From Seward, drive north on Seward Highway approximately 24.7 miles. Existing ARRC bridge is located at Trail River outlet from Trail Lake.

Please Complete the Following:

1) This activity is a: new project modification, addition, repair, or replacement to an existing project

2) What is the purpose of this project? ARRC proposes to reconstruct its existing bridge over Trail River.

See attached Project Description.

Multi-Agency Permit Application – Page 2

3) Provide a detailed description of your entire project and all related activities. Attach additional pages if needed.

Please be sure that your description contains all of the following:

- The location and dimensions of all existing and proposed development, including buildings, roads/driveways, pathways, building pads, accessory structures, and fill, as well as the location of any water bodies.
- The type(s) and amount(s) of fill material to be used for the project. Include the location/source of the fill material.
- The measurements of all new development, including platforms, walkways, structures, and bank restoration techniques. Please include measurements from water bodies and lot lines.
- The area and volume of material to be dredged and the location of the disposal site.
- A description of the waterbody, including wetlands to be filled. Include the types and volumes of each type of fill material.
- A description of construction methods and types of equipment to be used.
- If you are withdrawing water from a waterbody, a description of water use including location, methods of withdrawal, rate of withdrawal, and the total quantity of water required.
- If fuel storage is required for your project, indicate the location, quantities, and types of fuel.
- If vegetation or trees must be cleared as a result of your project, indicate the location, amount, and type of vegetation to be cleared.
- The type(s) and amount(s) of material that will be excavated for the project. Include the location the excavated material will be placed.

See attached Project Description.

4) Proposed project start date: Fall 2022 Proposed project end date: Summer 2023

Estimated number of actual construction days: 90

5) If this project is within the limits of an incorporated city, please indicate city: _____

6) Is the project located within 50 feet of ordinary high water (OHW) or mean high water (MHW) of a stream or waterbody? Yes No Not sure where OHW or MHW line is

Multi-Agency Permit Application – Page 3

7) Does any portion of the project cantilever or extend **over** the OHW or MHW of the stream or waterbody?
 Yes No Not sure where OHW or MHW line is

8a) Does any portion of the project extend **below** the OHW or MHW of the stream or waterbody?
 Yes No Not sure where OHW or MHW line is

8b) Will a structure (e.g., culvert, bridge support, dike) be placed below OHW, MHW, or High Tide Line (HTL) of the waterbody?
 Yes No

9) Will material be extracted or dredged from

Floodplain of a river, lake, or ocean

Tidal or non-tidal waters

If you checked one of the above boxes, what type of material? _____
What amount of material? _____
Where will the material be deposited? _____

10) Will material (including spoils, debris or overburden) be deposited in a

Mapped floodplain or velocity zone of a river, lake or ocean

Tidal or non-tidal waters

If you checked one of the above boxes, is the fill temporary or permanent ?
If temporary, how long will it be in place? _____
What type of material is it? Riprap Amount? 230 cubic yards

Identify the location(s) of any deposited material on the attached top-view site plan drawing.

11) What is the surface area (in acres) that would be filled, excavated, or dredged of any waters, including areas below the HTL or MHW of tidal waters, below the OHW of non-tidal waters and/or wetlands adjacent to tidal or non-tidal waters? 0.05 acres

12a) List all motorized equipment to be used in this project, including access route to site and any stream or waterbody crossings:

No motorized vehicles will be used within the bed or banks of Trail River. Construction will occur from the existing track. See attached Project Description.

12b) How long will motorized equipment be used **below** OHW, MHW, or the HTL? _____

13) Are there any threatened or endangered species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work? Yes No If yes, list all species:

Multi-Agency Permit Application – Page 4

14) Are there any historic properties that may be affected by the proposed work? Yes No If yes, state which property or properties may be affected and/or attach a vicinity map including the location of the historic property or properties.

15) Is any portion of the work already complete? Yes No If yes, describe the completed work:
ARRC has an existing bridge at this location, which has deteriorated due to age and environmental stresses.

16) Will utility systems, including water, electric, gas, etc. be developed? Yes No If yes, describe:

Application Checklist

- Are pages 1 through 4 completely filled out? If a question does not pertain to your activity, write ‘N/A’
- Did you include a detailed project description?
- Did you complete the Top View & Elevation/Side View drawings? Be sure to review the instructions for site plans and make sure all relevant information is included.
- Did you include your permit fee (if applicable)? If your project is within State Park Boundaries or cantilevers over a State Park (which includes the Kenai River) a \$100 fee is required at the time of application. Make checks payable to ‘State of Alaska.’ If you are not certain if a fee is required, contact State Parks at the River Center at (907) 714-2470.
- Did you sign your application? If you have designated an agent to work the agencies on your behalf, they must also sign the application.

Application is hereby made for a permit or permits to authorize the work described in this application form. I certify the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

X  7/7/2022
Signature of Applicant Date

If you designated an agent, both the applicant and agent must sign this application.

X _____
Signature of Agent Date

Site Plan Instructions & Checklist



Directions:

PLEASE INCLUDE ALL OF THE FOLLOWING INFORMATION. IF THIS INFORMATION IS NOT PROVIDED, YOUR APPLICATION MAY BE RETURNED TO YOU.

- Print your name, date of drawing, the number of the sheet and total number of sheets in the set (e.g. Sheet 1 of 2), as well as the KPB Parcel No. on all pages.
- Indicate the scale of your drawing and show a North arrow. The scale need not be the same for every drawing.
- Submit one original set of drawings on 8 ½ x 11 paper. Provide as much detail as you can; however, please submit the fewest number of sheets necessary to adequately show the proposed activity. Please include photos of the project site if available.
- The **TOP VIEW** drawing should show your project in relation to:
 - the distance from ordinary (or mean) high water of the stream;
 - property lines and any adjacent streets by name;
 - any nearby structures, such as houses, outbuildings, fences, etc.;
 - any easements and/or location of any nearby utilities;
 - the location of any material to be deposited in a river, floodplain or wetland.
- The **ELEVATION OR SIDE VIEW** drawing should show your project in relation to:
 - elevations above ground level
 - In non-tidal areas, show the Ordinary High Water Line.
 - In tidally influenced areas show the High Tide Line and Mean High Water Mark at the project site.
 - Show the distance from the above water lines
- Be sure to include all dimensions, types, and quantities of materials used on the project.
- All structures and other objects on your site plan should be clearly defined as either existing structures or proposed structures.

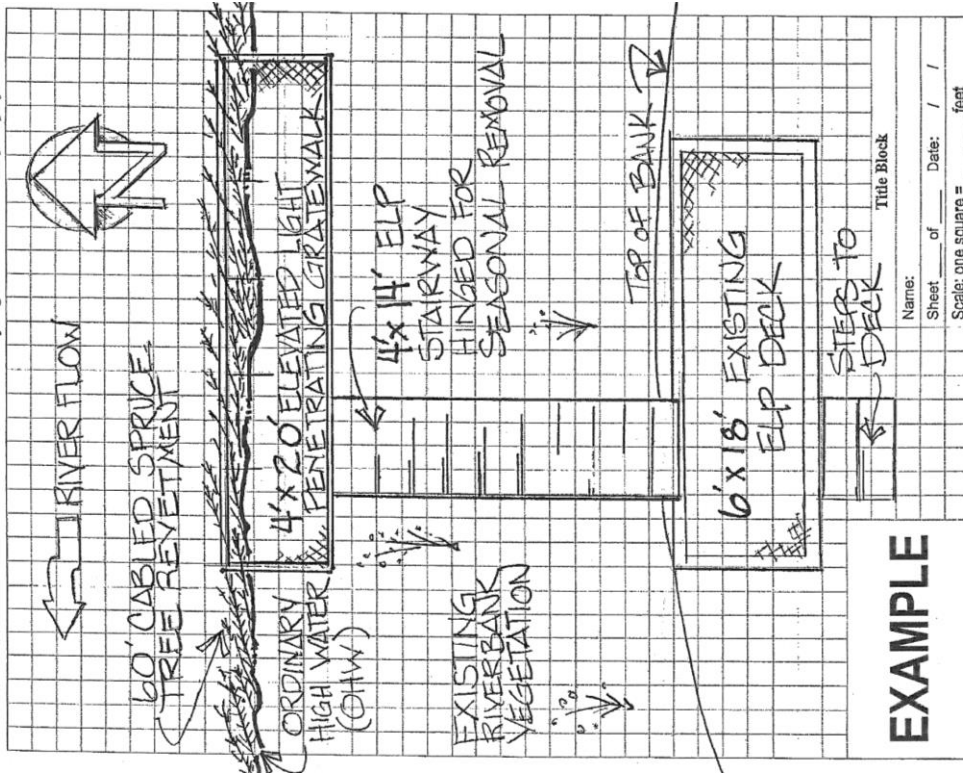
PLEASE SEE EXAMPLES

Site Plan Examples



PROJECT PLAN: TOP VIEW

Please note all dimensions and the location of Ordinary High Water in relation to your project.

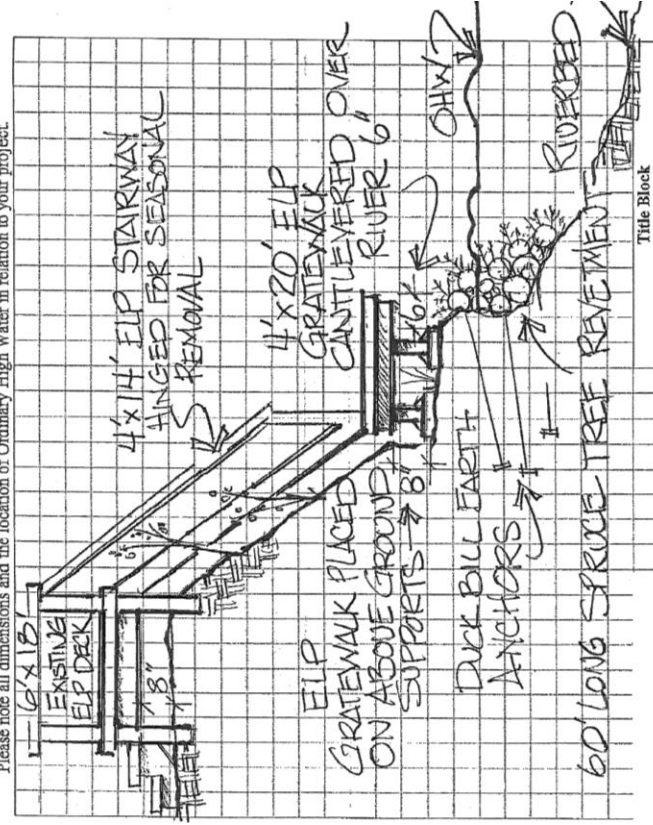


EXAMPLE

Title Block
Name: _____
Sheet _____ of _____ Date: ____ / ____ / ____
Scale: one square = _____ feet

PROJECT PLAN: ELEVATION or SIDE VIEW

Please note all dimensions and the location of Ordinary High Water in relation to your project.



EXAMPLE

Title Block
Name: _____
Sheet _____ of _____ Date: ____ / ____ / ____
Scale: one square = _____ feet

Additional Comments or Descriptions:

- 1) 4' x 14' ELP stairway built with aluminum frame and aluminum bar grating. Structure will be supported at top by galvanized driven pipe (part of existing ELP gratewalk) and at bottom by ELP gratewalk, and hinged at both midpoint and top for seasonal removal.
- 2) 4' x 20' ELP gratewalk built with aluminum frame and aluminum bar grating. Structure will be supported on adjustable, footed legs and entire structure will be seasonally removed. Gratewalk will cantilever 6' over OHW.
- 3) 60' of cabled spruce tree revetment will be installed.

For additional site plan examples, please visit www.kenairivercenter.org/application

Alaska Railroad Corporation
327 W. Ship Creek Avenue
Anchorage, AK 99501

U.S. Army Corps of Engineers-Alaska District
Kenai Regulatory Field Office
Attn: Benjamin Soiseth
44669 Sterling Highway, Suite B
Soldotna, Alaska 99669-7915

Subject: Replacement of ARRC Bridge over Trail River under Nationwide Permit 3

Dear Mr. Soiseth:

The Alaska Railroad Corporation (ARRC) is proposing to replace its existing bridge over Trail River at track Mile Post (MP) 25.7, approximately four miles south of the town of Moose Pass, Alaska (Figure 1). The coordinates of the proposed bridge replacement are 60.4352 N, 149.3725 W.

The proposed bridge replacement will involve demolition of the existing mainline track and replacement with new track on alignment (Figure 2). The existing facility is 360 feet long, and rests on 25 bents with five piles each. The proposed bridge will be 360 feet long, resting on 13 bents (Figure 3). During the construction process, ARRC proposes to remove all bents from the existing bridge. If the bents cannot be pulled, they will be cut to the mudline of Trail River.

In addition, ARRC proposes to remove old remnant timber bents from a former timber trestle bridge. There are approximately 55 degraded timber bents from a former structure; each of these will be pulled or otherwise cut to mudline.

ARRC proposes to conduct this work under the auspices of Nationwide Permit (NWP) 3, Maintenance. ARRC will abide by all requirements of NWP 3. If you have any questions or comments, please feel free to contact me at (907) 265-4733 or you may contact our agent, Patrick Whitesell with Michael Baker International, at (907) 273-1603.

Sincerely,

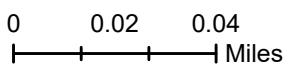
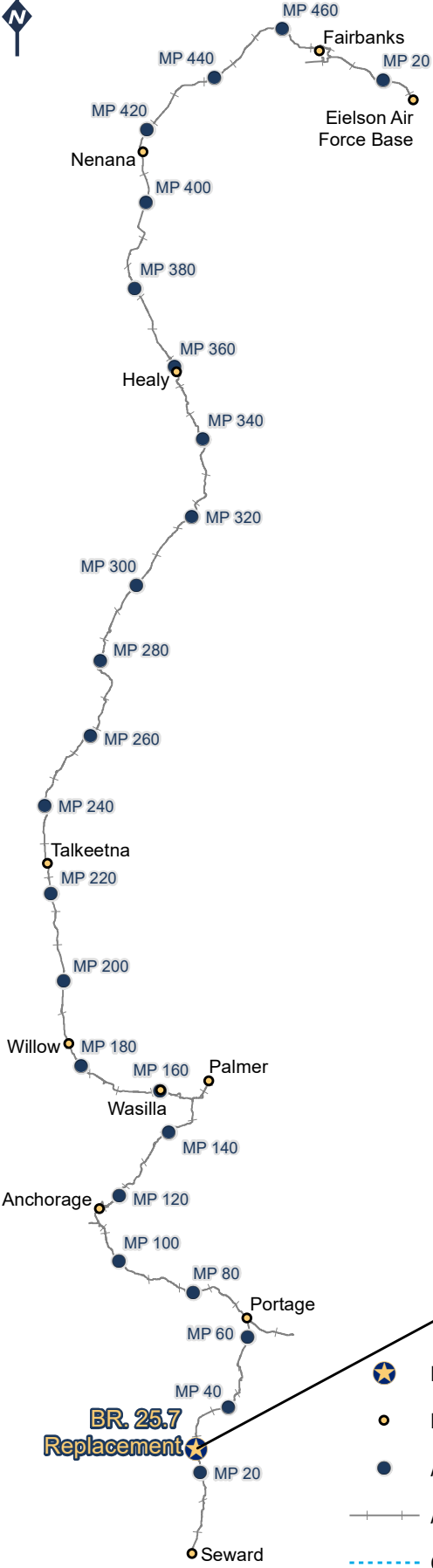
Riley Bronga

Attachments:

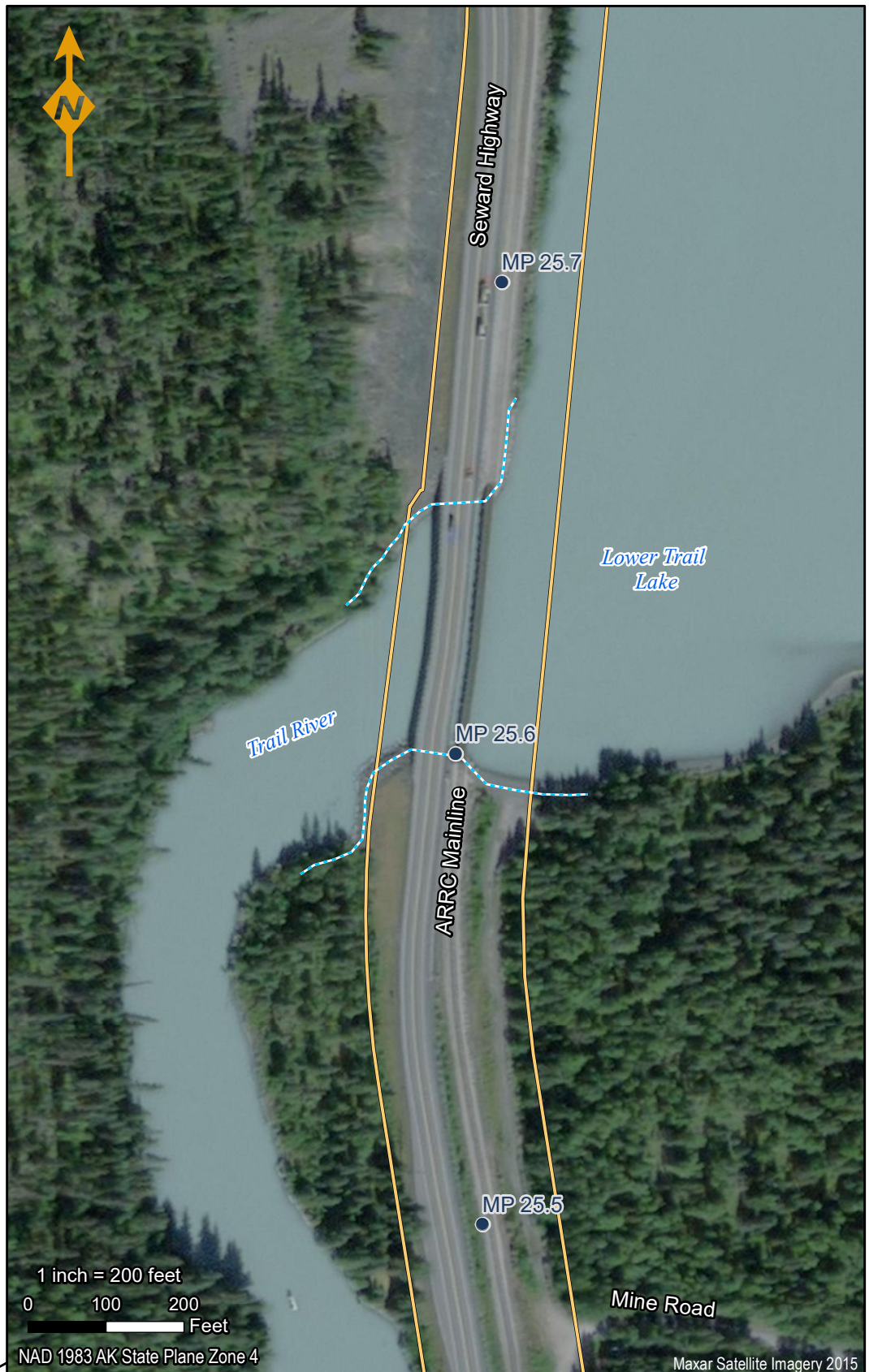
Project Description
Figures 1-3

CC:

ALASKA RAILROAD



- Project Location
- Place Name
- ARRC Milepost
- ARRC Centerline
- Ordinary High Water
- ARRC Property Boundary



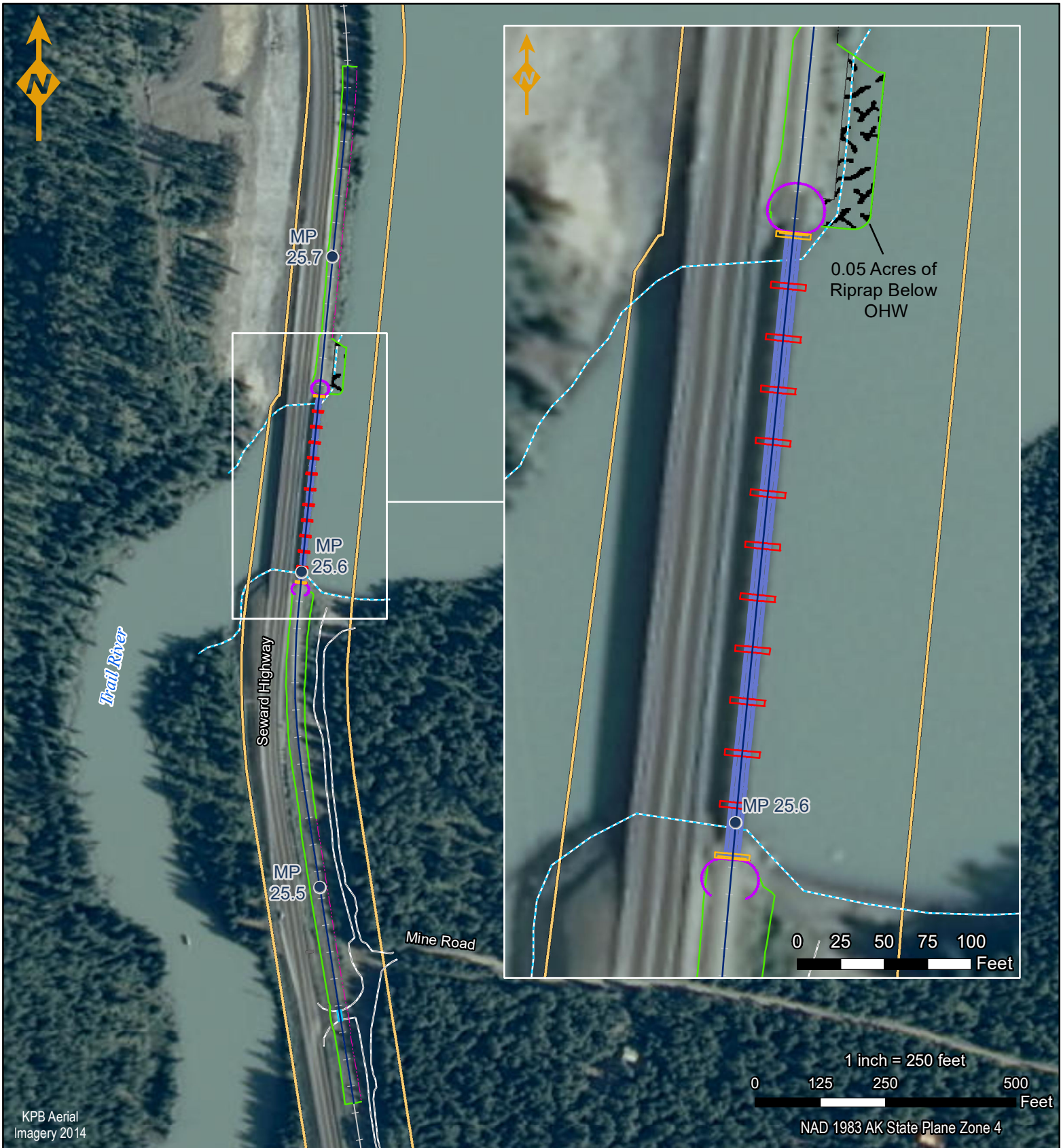
Alaska Railroad Corporation
327 W. Ship Creek Avenue
Anchorage, AK 99501

Alaska Railroad Corporation Milepost 25.7 Bridge Replacement

Location
Lower Trail Lake/Trail River
Trail River Watershed (HUC 1902030210)
SEC 13, T4N, R1W, SM
60.43571°, -149.3723°

Prepared by:
Michael Baker
INTERNATIONAL

Figure 1
Project Vicinity
7/20/2020



KPB Aerial Imagery 2014

●	ARRC Milepost	Proposed	—	Grade Fill
—	ARRC Mainline	—	Grade Cut	
- - - -	Ordinary High Water	—	Culvert	
- - - -	Access Road	—	Road Crossing	
□	ARRC Property Boundary	—	Riprap	
		—	Bridge	
		—	Bulkhead	
		—	Bent	
		—	Sheet Pile	
		—	Centerline	



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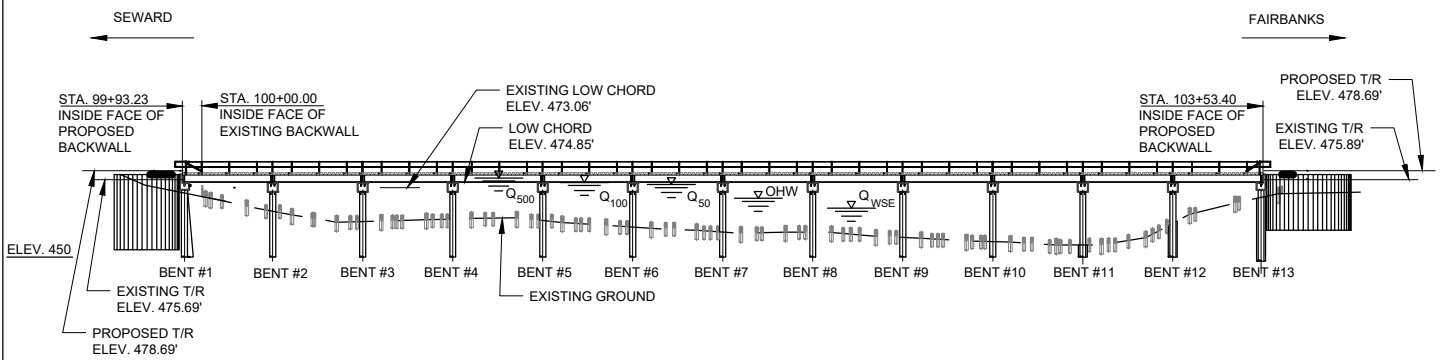
Prepared by:

Michael Baker

INTERNATIONAL

Figure 2
Plan View

7/27/2020



WATER SURFACE ELEVATION

$Q_{WSE} = 466.2$ (4/17/19)
OHW = 469.5
$Q_{50} = 474.1$
$Q_{100} = 474.9$
$Q_{500} = 476.3$



Alaska Railroad Corporation
 327 W. Ship Creek Avenue
 Anchorage, AK 99501

**Alaska Railroad Corporation
 Milepost 25.7 Bridge Replacement
 Location**

Trail River Watershed (HUC
 1902030210)
 SEC 13, T4N, R1W, SM
 60.43571°, -149.3723°

Prepared by:

Michael Baker
INTERNATIONAL

Figure 3

6/16/2020