



THE STATE  
of **ALASKA**  
GOVERNOR MIKE DUNLEAVY

## Department of Fish and Game

HABITAT SECTION  
Southcentral Regional Office

333 Raspberry Road  
Anchorage, Alaska  
Main: 907.267.2342  
Fax: 907.267.2499

### **FISH HABITAT PERMIT FH23-II-0033**

**ISSUED:** April 27, 2023  
**EXPIRES:** Life of Project

Alaska Railroad Corporation  
Attn: Brian Lindamood  
P.O. Box 107500  
Anchorage, AK 99510

**RE:** Bridge Replacement  
Bird Creek (Water Body No. 247-60-10280)  
Section 9, T 10 N, R 1 W, SM  
Location: 60.972872 N, 149.467238 W

Dear Brian Lindamood:

Pursuant to the Anadromous Fish Act at AS 16.05.871 (b), the Alaska Department of Fish and Game (ADF&G) Habitat Section has reviewed your proposal to replace the existing railroad bridge over Bird Creek.

#### **Project Description**

The Alaska Railroad Corporation (ARRC) proposes to replace the existing railroad bridge near the tidally influenced mouth of Bird Creek at ARRC Milepost 86.6. Some project components extend below mean high water (MHW), but the work will be conducted in-the-dry during low tidal cycles. No in-water work or stream diversions are proposed.

The existing span will be replaced by a steel girder span. The existing concrete piers will be transformed into abutments by encasing the existing steel piles with controlled low-strength material (CLSM) and installing new, precast concrete back walls. The existing timber approach spans will be removed. The void under the existing timber spans will be filled with CLSM, compacted backfill, and riprap.

Existing riprap and fill material adjacent to the existing piers will be temporarily removed and stockpiled for reuse. Exposed portions of remnant creosote piles that may interfere with proposed

activities will be removed from below MHW (Figure 1). The piles will be cut at ground surface and hauled off site.

Staging areas will be developed above the high tide line (Figure 2). The new span will be assembled adjacent to the existing bridge and supported near the ends by temporary work piers with temporary steel pipe piles driven below MHW on both sides of and under the existing bridge (Figure 3). A total of 20, 24-inch temporary steel pipe piles will be installed to support the temporary piers.

After the new span is assembled, the old spans will be removed, the abutments will be modified, and the new span will be set in place. The temporary work piers and pipe piles will be removed in their entirety. Riprap will be placed adjacent to and around the abutments for scour protection. You estimate that about 275 cubic yards of existing riprap and other material will be excavated from below MHW and about 400 cubic yards of riprap will be subsequently placed below MHW during construction (Figures 3 and 4). The site will be restored to pre-construction conditions with modifications noted above.

### **Anadromous Fish Act**

Water Body No. 247-60-10280 has been specified as being important for the spawning, rearing, or migration of anadromous fishes pursuant to AS 16.05.871(a). The water body provides habitat for chum, coho, Chinook, and pink salmon.

In accordance with AS 16.05.871(d), your project is approved subject to the project description, the following stipulations, and the permit terms.

1. The structure shall be designed, installed, and maintained to accommodate the efficient passage and movement of fish, both upstream and downstream, for the life of the project.
2. All bank cuts, slopes, fills, and other exposed earthwork arising from bridge installation or maintenance shall be stabilized to prevent erosion which may occur during and after installation.
3. Piles shall be driven using a vibratory hammer to the extent practicable. An impact hammer can be used for proofing.
4. Equipment with fuel, oil, or hydraulic fluid leaks shall not be operated below mean high water of Bird Creek.
5. The structure shall not be treated with any preservative containing creosote or pentachlorophenol. If preservatives are used, only pressure treated applications shall be employed. Preservatives shall not be painted on, sprayed, or otherwise applied by surface application.

### **Permit Terms**

This letter constitutes a permit issued under the authority of AS 16.05.871 and must be retained on site during project activities. Please be advised that this determination applies only to activities regulated by the Habitat Section; other agencies also may have jurisdiction under their respective authorities. This determination does not relieve you of your responsibility to secure other permits; state, federal, or local. You are still required to comply with all other applicable laws.

You are responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project. For any activity that significantly deviates from the approved plan, you shall notify the Habitat Section and obtain written approval in the form of a permit amendment before beginning the activity. Any action that increases the project's overall scope or that negates, alters, or minimizes the intent or effectiveness of any provision contained in this permit will be deemed a significant deviation from the approved plan. The final determination as to the significance of any deviation and the need for a permit amendment is the responsibility of the Habitat Section. Therefore, we recommend you consult the Habitat Section immediately before considering any deviation from the approved plan.

You shall give an authorized representative of the state free and unobstructed access to the permit site, at safe and reasonable times, for the purpose of inspecting or monitoring compliance with any provision of this permit. You shall furnish whatever assistance and information the authorized representative reasonably requires for monitoring and inspection purposes.

In addition to the penalties provided by law, this permit may be terminated or revoked for failure to comply with its provisions or failure to comply with applicable statutes and regulations. You shall mitigate any adverse effect upon fish or wildlife, their habitats, or any restriction or interference with public use that the commissioner determines was a direct result of your failure to comply with this permit or any applicable law.

You shall indemnify, save harmless, and defend the department, its agents, and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or your performance under this permit. However, this provision has no effect if, and only if, the sole proximate cause of the injury is the department's negligence.

You may appeal this permit decision relating to AS 16.05.871 in accordance with the provisions of AS 44.62.330-630.

Please direct questions about this permit to Habitat Biologist Josh Brekken at (907) 267-2113 or [josh.brekken@alaska.gov](mailto:josh.brekken@alaska.gov).

Sincerely,  
Doug Vincent-Lang  
Commissioner



By Ron Benkert  
Southcentral Regional Supervisor

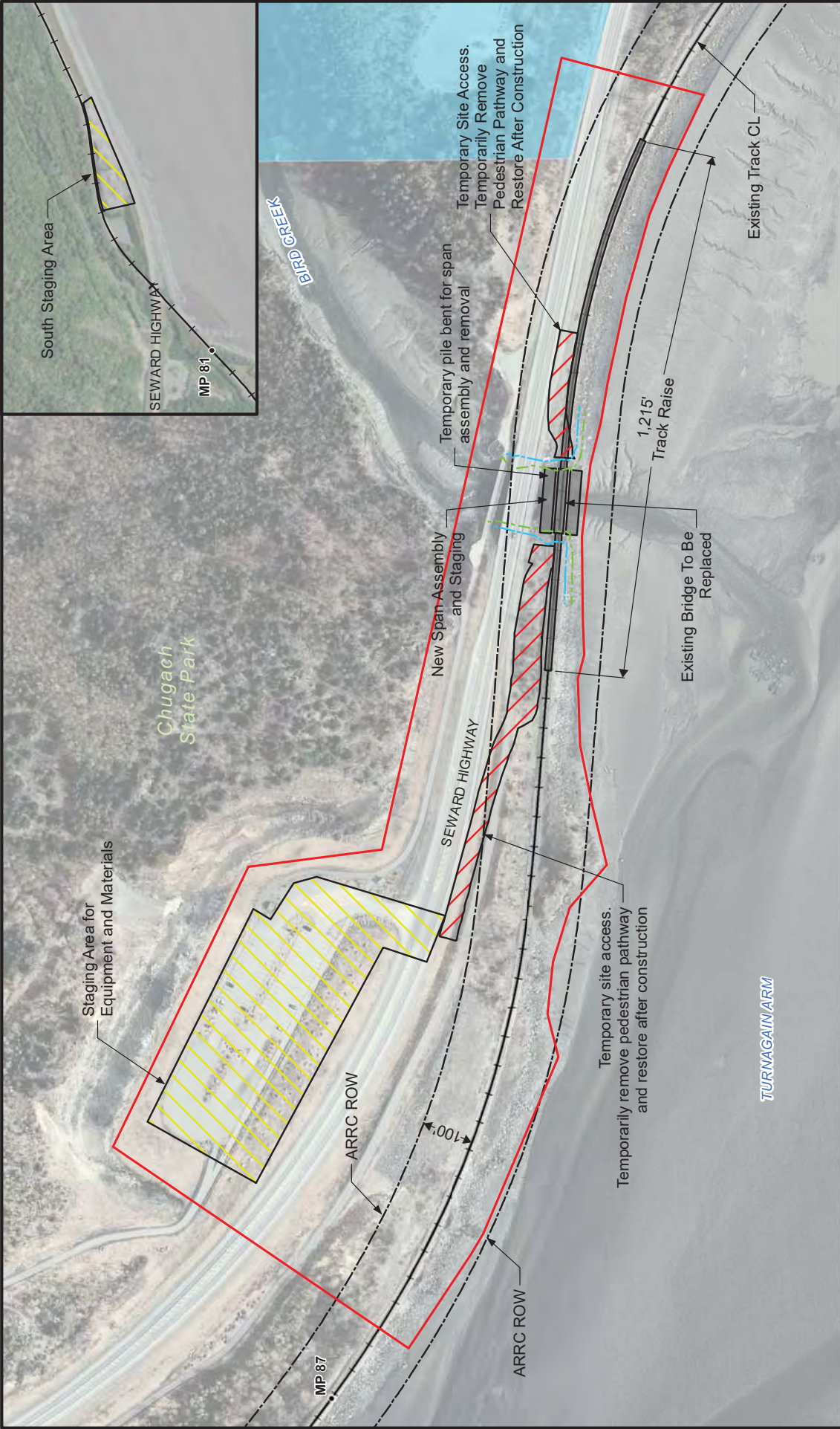
Enclosures: Figures 1-3 and Sheet 4

Email cc:

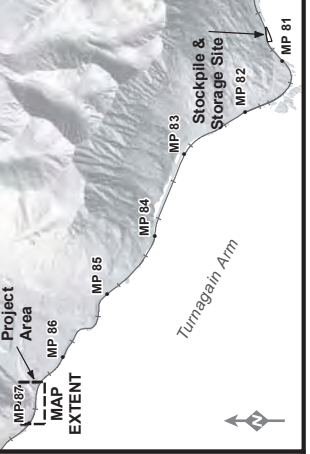
- A. Ott, ADF&G
- B. Blain, ADF&G
- C. Larson, ADNR DMLW
- J. Rypkema, ADEC
- USACE, Regulatory
- DPS/AWT, Anchorage
- N. Havelock, ARRC



Figure 1: Creosote-treated piles circled in red.



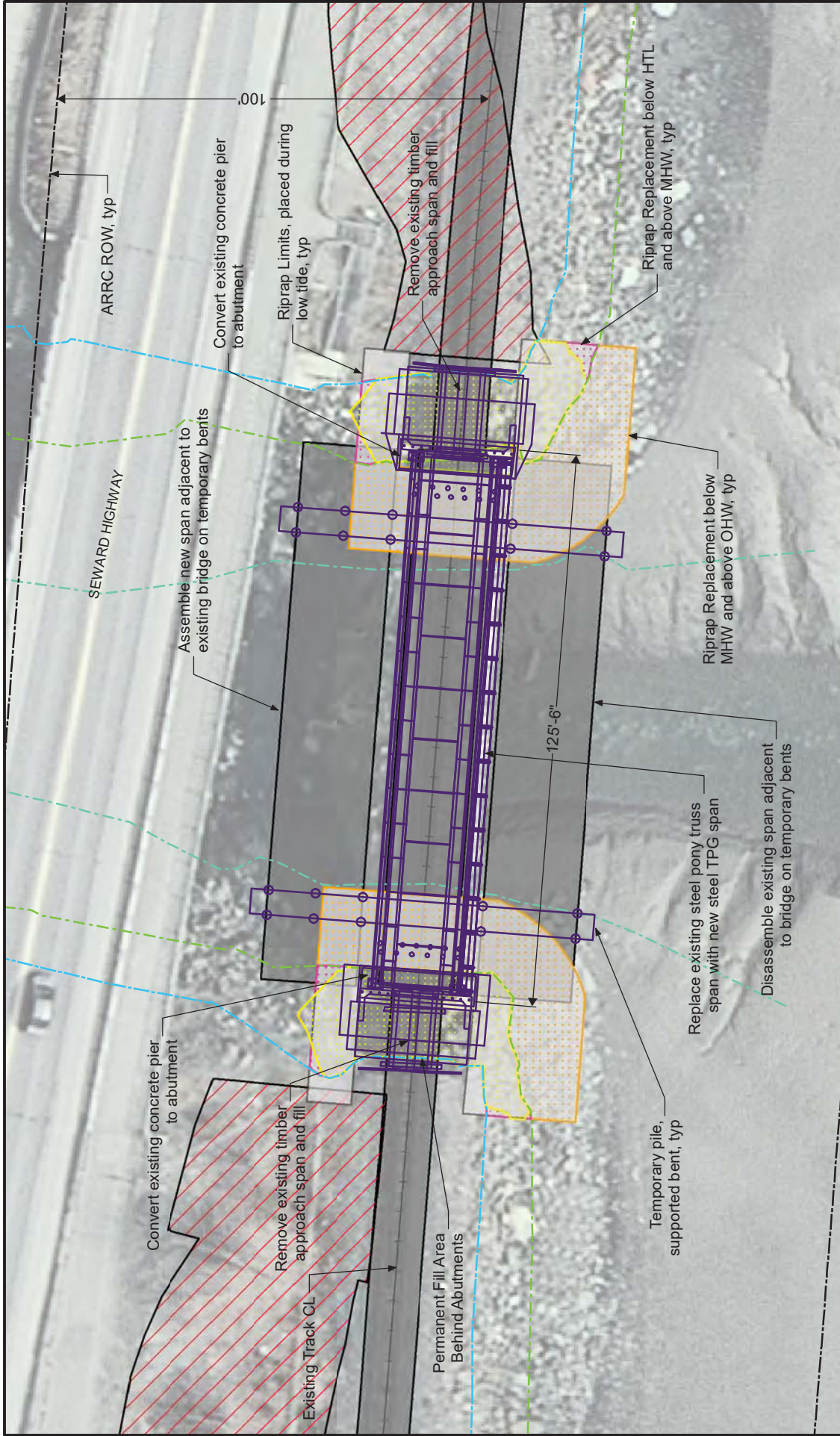
APPLICANT: Alaska Railroad Corporation  
 PERMIT NO: TBD  
 WATERWAY: Bird Creek  
 LOCATION: Section 9, T10N, R1W, Seward Meridian  
 FIGURE 2 OF 4  
 DATE: February 15, 2023



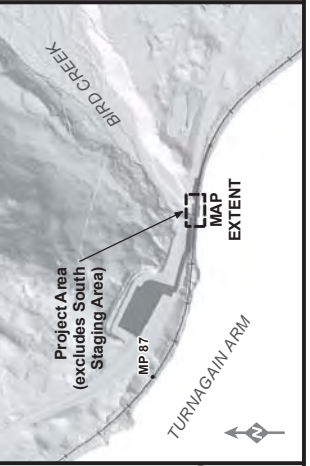
- Alaska Railroad Mileposts
- Alaska Railroad Main Line
- Area of Potential Effects
- Alaska Railroad ROW
- ▨ Staging Area
- ▨ Site Access Area and Clearing/Grubbing
- ▨ Work Area
- Temporary Pile Bent
- MHW (elev. 20')
- HTL (elev. 27.8')
- MOA Property

Alaska Railroad Corporation  
 Bridge 86.6 Replacement  
 Aerial Site Plan  
 Lat: 60.9728°N, Long: 149.4672°W

0 130 260 Feet  
 HORIZONTAL DATUM:  
 NAD 83 AK State Plane Zone 4  
 Imagery: MOA 2015



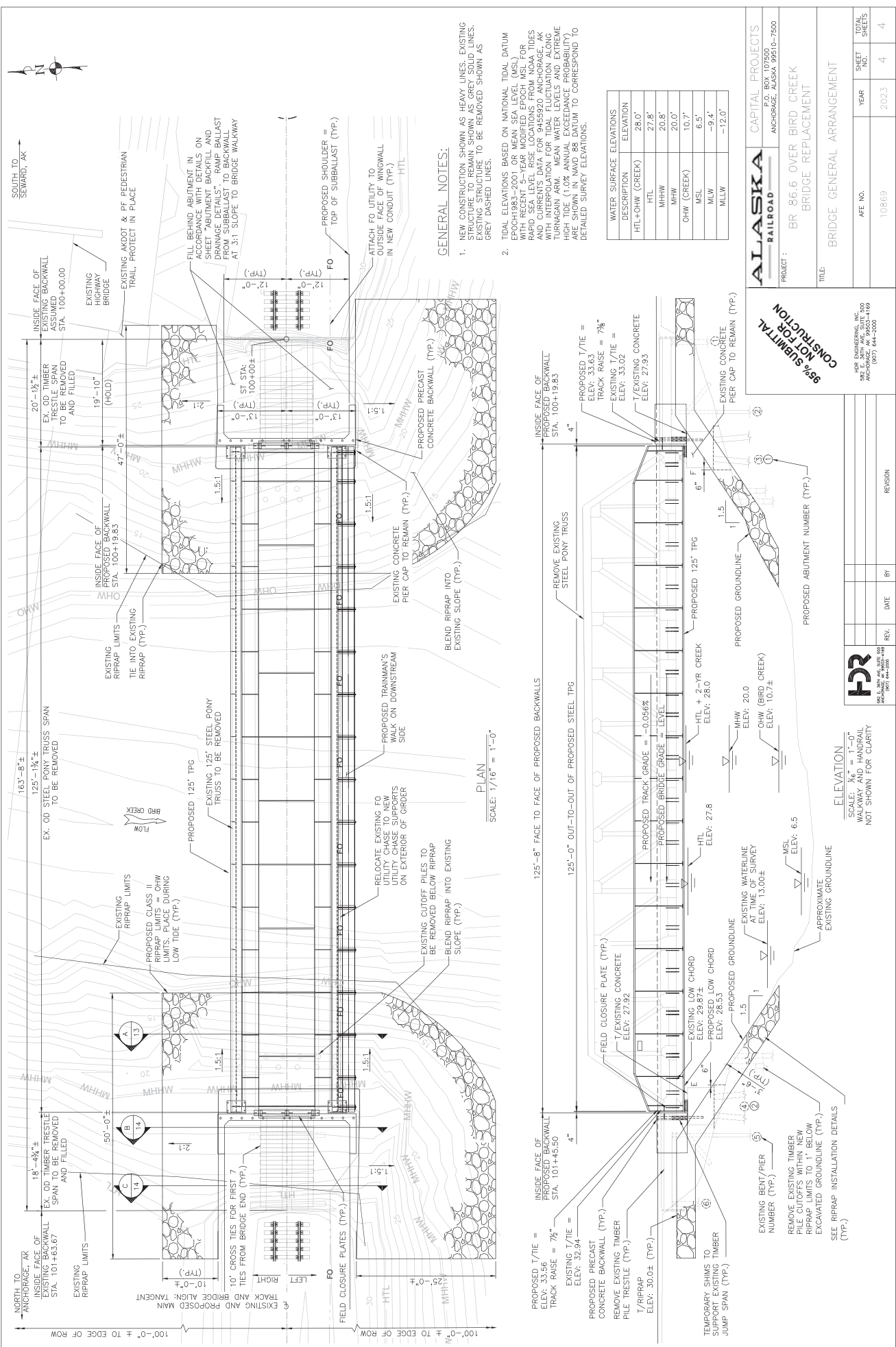
APPLICANT: Alaska Railroad Corporation  
 PERMIT NO: TBD  
 WATERWAY: Bird Creek  
 LOCATION: Section 9, T10N, R1W, Seward Meridian  
 FIGURE 3 OF 4  
 DATE: February 16, 2023



Proposed Bridge Design	OHW Bird Creek (approx. elev. 10.7')
Alaska Railroad Main Line	Permanent Impact between HTL and MHW (165 CY / 0.05 ac)
Alaska Railroad ROW	Permanent Impact below MHW (13 CY / <math><0.01\text{ ac}</math>)
Site Access Area and Clearing/Grubbing	Riprap Replacement between HTL and MHW (18 CY / <math><0.01\text{ ac}</math>)
Work Area	Riprap Replacement below MHW (396 CY / 0.07 ac)
Riprap Limits	
HTL (elev. 27.8')	
MHW (elev. 20')	

Alaska Railroad Corporation  
 Bridge 86.6 Replacement  
 Plan View Map  
 Lat: 60.9728°N, Long: 149.4672°W

0 10 20 Feet  
 HORIZONTAL DATUM:  
 NAD 83 AK State Plane Zone 4  
 Imagery: MOA 2015



100'-0" ± TO EDGE OF ROW  
 100'-0" ± TO EDGE OF ROW  
 SOUTH TO SEWARD, AK

18'-4 1/2" ±  
 INSIDE FACE OF EXISTING BACKWALL STA. 101+63.67 TO BE REMOVED AND FILLED  
 EXISTING RIPRAP LIMITS

50'-0" ±  
 EX. OD STEEL PONY TRUSS SPAN TO BE REMOVED  
 EX. OD STEEL PONY TRUSS SPAN TO BE REMOVED

20'-1 1/2" ±  
 INSIDE FACE OF EXISTING BACKWALL STA. 100+00.00 TO BE REMOVED AND FILLED  
 EXISTING RIPRAP LIMITS

19'-10" (HOLD)  
 EXISTING RIPRAP LIMITS  
 TIE INTO EXISTING RIPRAP (TYP.)

13'-0" (TYP.)  
 PROPOSED SHOULDER = TOP OF SUBBALLAST (TYP.)

12'-0" (TYP.)  
 ATTACH FO UTILITY TO OUTSIDE FACE OF WINGWALL IN NEW CONDUIT (TYP.)

12'-0" (TYP.)  
 FILL BEHIND ABUTMENT IN ACCORDANCE WITH DETAILS ON SHEET BRIDGE ABUTMENT AND BACKWALL SHEET. RIPRAP MUST BE PLACED FROM SUBBALLAST TO BACKWALL AT 3:1 SLOPE TO BRIDGE WALKWAY

10' CROSS TIES FOR FIRST 7 TIES FROM BRIDGE END (TYP.)  
 EXISTING AND PROPOSED MAIN TRACK AND BRIDGE ALIGN. TANGENT

100'-0" ± TO EDGE OF ROW  
 100'-0" ± TO EDGE OF ROW

FIELD CLOSURE PLATES (TYP.)  
 HTL  
 MHHW  
 MHW  
 OHW

PROPOSED TIE = 78" TRACK RISE = 7 1/2" ELEV. 33.56  
 EXISTING TIE = 78" TRACK RISE = 7 1/2" ELEV. 32.94  
 PROPOSED PRECAST CONCRETE BACKWALL (TYP.)  
 REMOVE EXISTING TIMBER PILE TRESTLE (TYP.)  
 T/RRIPRAP ELEV. 30.0 ± (TYP.)  
 TEMPORARY SHIMS TO SUPPORT EXISTING TIMBER JUMP SPAN (TYP.)  
 FIELD CLOSURE PLATE (TYP.)  
 T/EXISTING CONCRETE ELEV. 27.92  
 EXISTING LOW CHORD ELEV. 29.87  
 PROPOSED LOW CHORD ELEV. 28.53  
 PROPOSED GROUNDLINE  
 EXISTING WATERLINE AT TIME OF SURVEY ELEV. 13.00 ±  
 MHW ELEV. 20.0  
 OHW (BIRD CREEK) ELEV. 10.7 ±  
 HTL ELEV. 27.8  
 HTL + 2-YR CREEK ELEV. 28.0  
 PROPOSED 125' TPG  
 PROPOSED GROUNDLINE  
 EXISTING CONCRETE PER CAP TO REMAIN (TYP.)  
 PROPOSED ABUTMENT NUMBER (TYP.)  
 REMOVE EXISTING TIMBER RIPRAP LIMITS TO 1' BELOW EXCAVATED GROUNDLINE (TYP.)  
 SEE RIPRAP INSTALLATION DETAILS (TYP.)  
 APPROXIMATE EXISTING GROUNDLINE  
 MSL ELEV. 6.5  
 ELEVATION  
 SCALE: 3/4" = 1'-0"  
 WALKWAY AND HANDRAIL NOT SHOWN FOR CLARITY

PLAN  
 SCALE: 1/16" = 1'-0"

GENERAL NOTES:  
 1. NEW CONSTRUCTION SHOWN AS HEAVY LINES. EXISTING STRUCTURE TO BE REMOVED SHOWN AS GREY DASHED LINES.  
 2. TIDAL ELEVATIONS BASED ON NATIONAL TIDAL DATUM (NTD) FOR THE YEAR 1988. TIDAL ELEVATIONS WITH RECENT 9-YEAR MODIFIED EPOCH MSL FOR RAPID SEA LEVEL RISE LOCATIONS FROM NOAA TIDES AND CURRENTS DATA FOR 9458920 ANCHORAGE, AK AND 9458920 ANCHORAGE, AK. TIDAL ELEVATIONS FOR TURNIGAN AREA NEAR WATER LEVELS AND EXTREME HIGH TIDE (1.0% ANNUAL EXCEEDANCE PROBABILITY) ARE SHOWN IN NAVD 88 DATUM TO CORRESPOND TO DETAILED SURVEY ELEVATIONS.

WATER SURFACE ELEVATIONS	DESCRIPTION	ELEVATION
HTL	HTL-KOHV (CREEK)	28.0'
MHHW	MHHW	27.8'
MHW	MHW	20.0'
OHV (CREEK)	OHV (CREEK)	10.7'
MSL	MSL	6.5'
MLW	MLW	-9.4'
MLLW	MLLW	-12.0'

ALASKA RAILROAD  
 CAPITAL PROJECTS  
 BR 86.6 OVER BIRD CREEK  
 BRIDGE REPLACEMENT  
 BRIDGE GENERAL ARRANGEMENT

ARE NO.	YEAR	SHEET NO.	TOTAL SHEETS
108669	2023	4	4

100' UNIVERSITY BL.  
 482 E. 54TH AVE. SUITE 500  
 ANCHORAGE, AK 99503-1489  
 (907) 844-2000

95% SUBMITTAL  
 CONSTRUCTION