



**ALASKA RAILROAD CORPORATION
ENGINEERING SERVICES**

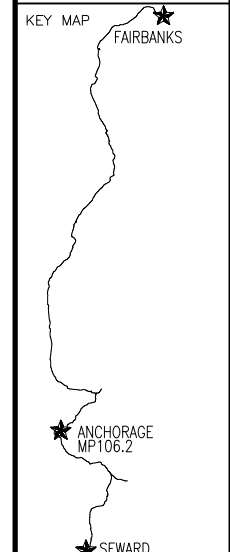
P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500

BRIDGE 106.2 O'MALLEY ROAD OVERPASS EAST HANDRAIL REPAIR

October 25

DESIGNED BY:	ARRC
CHECKED BY:	ARRC
DRAFTED BY:	MCG

ALASKA RAILROAD CORPORATION
PO BOX 107500, ANCHORAGE, AK
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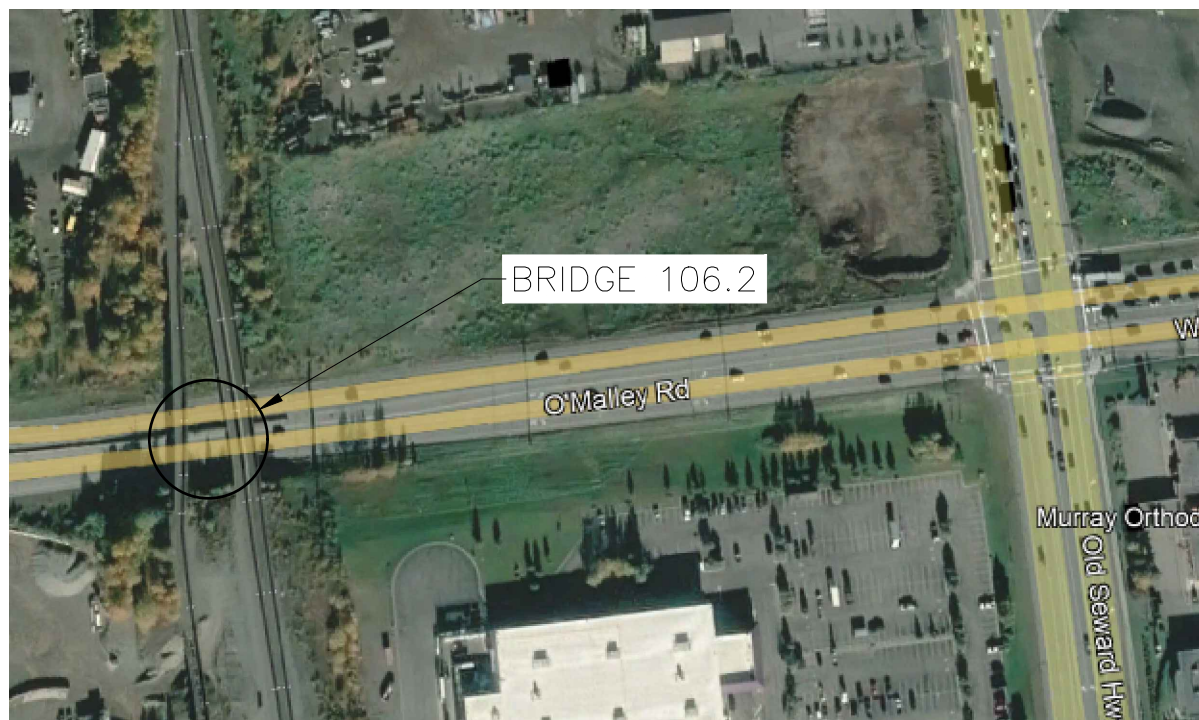
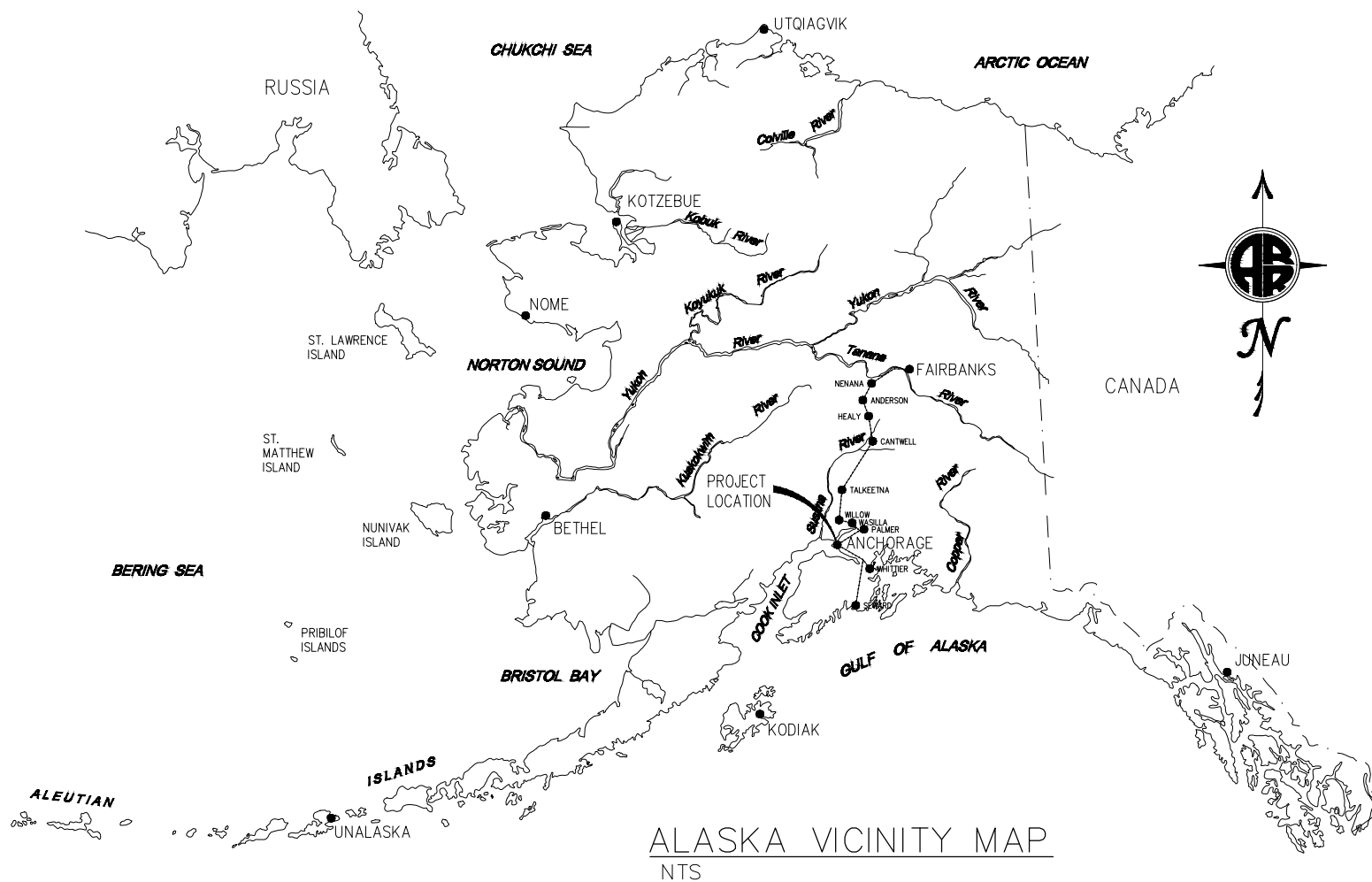
ENGINEERING DEPARTMENT
P.O. BOX 107500
ANCHORAGE, ALASKA 99510-7500

PROJECT: BR 106.2 EAST HANDRAIL REPAIR
SHEET TITLE: TITLE SHEET AND WORK LOCATION

AFE NO.	11472
YEAR	2025
SHEET	1 OF 5

DATE: 5/8/2026 2:38 PM
TIME: 2:38 PM
SCALE: AS NOTED
PUBLISHED CTB

DRAWING LOCATION: P:\ENGINEERING\BRIDGES\BR 106.17 O'MALLEY ROAD HANDRAIL REPAIR_2025.DWG



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DRAWING LOCATION: P:\ENGINEERING\BRIDGES\BR 106.17 O'MALLEY ROAD\HANDRAIL\HANDRAIL REPAIR_2025.DWG
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1. REFERENCE DOCUMENTS

- A. AREMA 2018
- B. AWS D1.1
- C. AISC 14TH EDITION
- D. CHAIN LINK FENCE MANUFACTURERS INSTITUTE, WIND LOAD GUIDE (WLG-2445)
- E. CHAIN LINK FENCE MANUFACTURERS INSTITUTE, PRODUCT MANUAL (CLF-PM0610)

2. MATERIAL SPECIFICATION:

- A. HANDRAIL ASSEMBLIES
 - 1. HSS ASTM A500, GRADE B
- B. FENCING
 - 1. FABRIC ASTM A392
 - 2. TENSION WIRE ASTM A824
 - 3. FITTINGS ASTM F626

3. COATINGS:

- A. HANDRAIL ASSEMBLIES
 - 1. HOT DIPPED GALVANIZED PER ASTM A123.
OR
 - 2. SPRAY METALLIZED WITH ZINC OR ALUMINUM PER SSC 708-2.01. PREPARE SURFACE TO WHITE METAL FINISH, SSPC-SP5/NACE NO. 1, WITH 2.5 MIL ANGULAR PROFILE, MINIMUM DRY COATING THICKNESS OF 8 MILS IS REQUIRED.
- B. FENCING
 - 1. ALL FENCING MATERIALS SHALL BE GALVANIZED WITH ZINC COATING NO LESS THAN 1.20Z/FT².
- C. ALL FIELD WELDS AT GALVANIZED CONNECTIONS SHALL BE COATED WITH A ZINC-BASED SOLDER (HOT STICK).
- D. ALL DAMAGED COATINGS SHALL BE REPAIRED WITH ZINC-BASE SOLDER (HOT STICK) THEN COLD GALVANIZING SPRAY.

4. FABRICATION:

- 1. ALL WELDERS SHALL BE QUALIFIED FOR THE WELDING PROCEDURES PER AWS D1.1.
- 2. ALL WELD ELECTRODES SHALL HAVE A MINIMUM TENSILE STRENGTH OF 70,000 PSI.
- 3. ALL WELDS SHALL BE 100% VISUALLY INSPECTED.

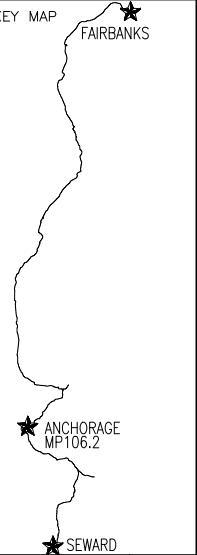
5. HANDRAIL AND FENCE INSTALLATION:

- A. GENERAL: REMOVE FENCE FABRIC, SET ASIDE. CUT ALL POSTS FLUSH WITH TOP OF INTERMEDIATE RAIL. LOCATE AND DRILL BOLT HOLES. INSTALL FABRICATED HANDRAIL SECTIONS AND REINSTALL FENCE FABRIC AS DETAILED IN PLAN SET. HOT STICK AND TOP COAT DAMAGED REGIONS OF COATINGS. EXISTING DAMAGED FENCE TO BE PROPERLY DISPOSED OF BY CONTRACTOR.
- B. ALL WELDING SURFACES SHALL BE PREPARED PER SSPC-SP11, POWER-TOOL CLEANING TO BARE METAL.
- C. ALL WELDERS SHALL BE QUALIFIED FOR THE WELD PROCEDURE PER AWS D1.1.
- D. ALL WELD ELECTRODES SHALL BE COMPATIBLE WITH THE BASE METAL AND A MINIMUM TENSILE STRENGTH OF 70,000PSI.
- E. ALL FIELD WELDS NOT CALLED OUT IN PLAN SET ON EXISTING BRIDGE STRUCTURES ARE PROHIBITED UNLESS APPROVED BY ENGINEER..
- F. FIELD WELD TESTING:
 - 1. ALL WELD TESTING PROCEDURES SHALL BE IN ACCORDANCE WITH AWS D1.1.
 - 2. ALL WELDS UNLESS OTHERWISE NOTED SHALL BE 100% VISUALLY INSPECTED AND AT LEAST 25% MAGNETIC PARTICLE TESTED.
- E. REMOVAL OF UNACCEPTABLE WELD OR BASE METAL SHALL BE DONE BY MECHANICAL MEANS OR MECHANICALLY CONTROLLED METHODS.

SUMMARY OF ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	QUANTITY
BOLTS WITH HARDWARE, AS DETAILED ON PG.3	EA.	122
HANDRAIL A-R, AS DETAILED ON PG.4	EA.	1
HANDRAIL B, AS DETAILED ON PG.4	EA.	1
HANDRAIL E, AS DETAILED ON PG.4	EA.	1
POST JOINT SUB-ASSEMBLY, AS DETAILED ON PG.5	EA.	59
END JOINT SUB-ASSEMBLY, AS DETAILED ON PG.5	EA.	2
CHAINLINK FENCE FABRIC AND FITTINGS, AS DETAILED ON S3	LOT	1

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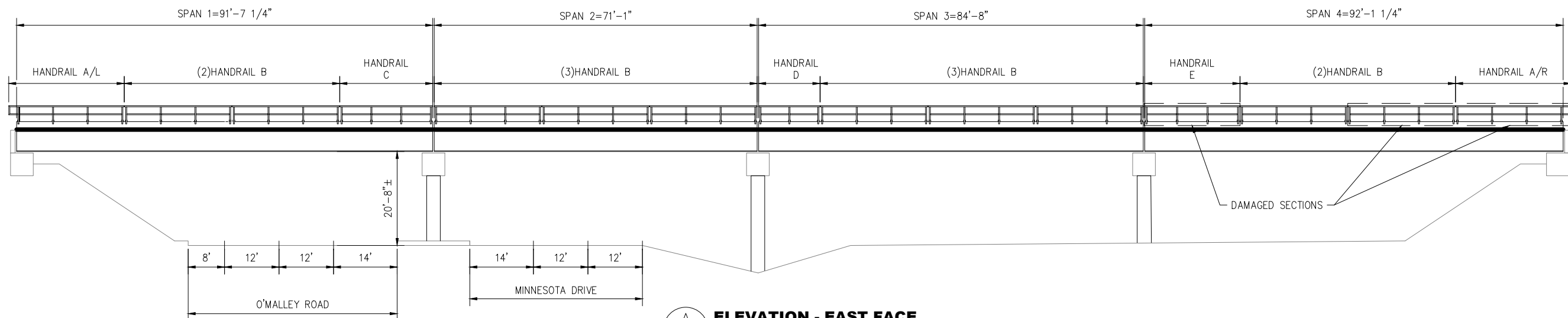
ENGINEERING DEPARTMENT
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 ANCHORAGE, ALASKA 99510-7500

PROJECT: BR 106.2 EAST HANDRAIL REPAIR

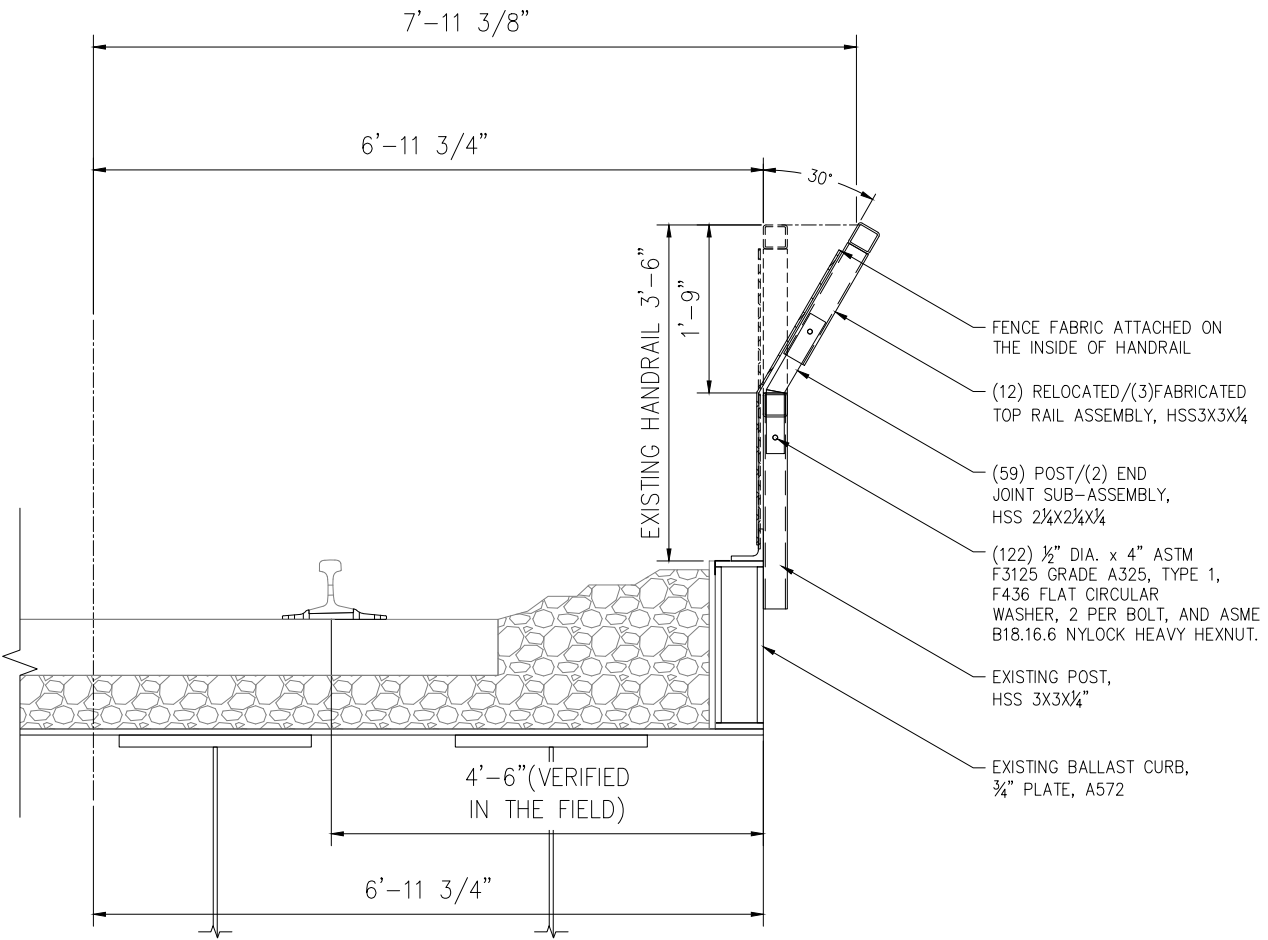
SHEET TITLE: GENERAL NOTES AND SUMMARY OF ESTIMATED QUANTITIES

AFE NO.	11472
YEAR	2025
SHEET	2 OF 5

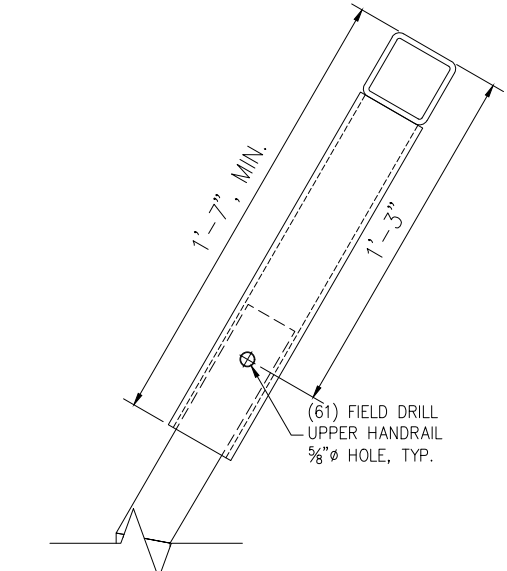
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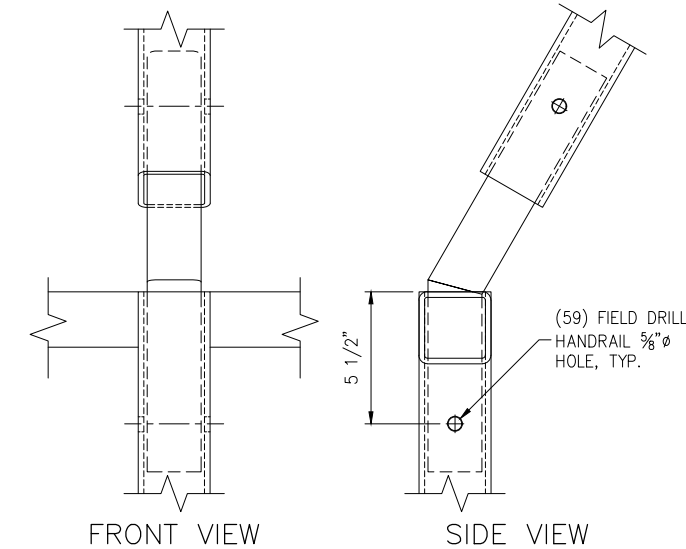
A ELEVATION - EAST FACE
 SCALE: 1" = 12'-6"



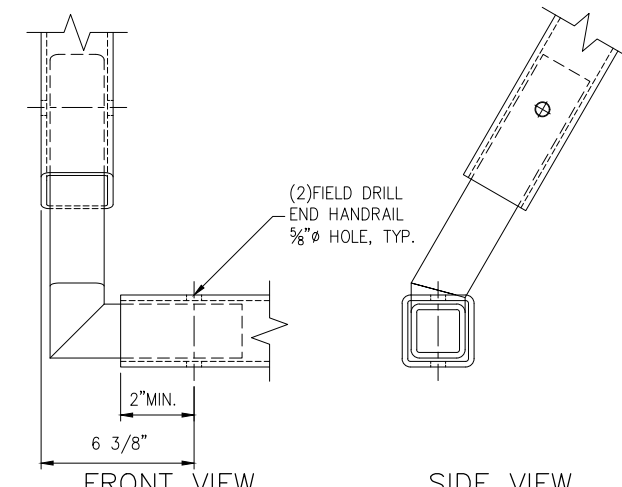
B TYPICAL X-SECTION
 SCALE: 1" = 1'-0"



C TYP. TOP RAIL TO JOINT DETAIL
 SCALE: 3" = 1'-0"



D POST TO JOINT BOLT DETAIL
 SCALE: 3" = 1'-0"



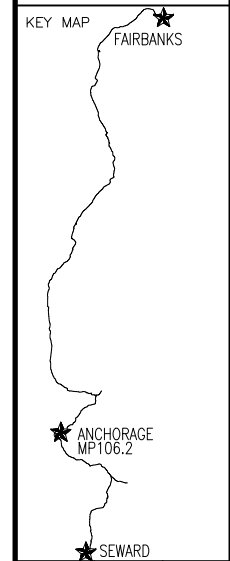
E END JOINT BOLT DETAIL
 SCALE: 3" = 1'-0"

NOTES

- TIGHTEN BOLTS USING TURN-OF-NUT METHOD.
- 1/2" Ø x 4" ASTM F3125 GRADE A325, TYPE 1 BOLTS.
- HARDENED STEEL WASHERS (2 PER BOLT): ASTM F436.
- ASME B18.16.6 HEAVY HEX NYLOCK NUTS.

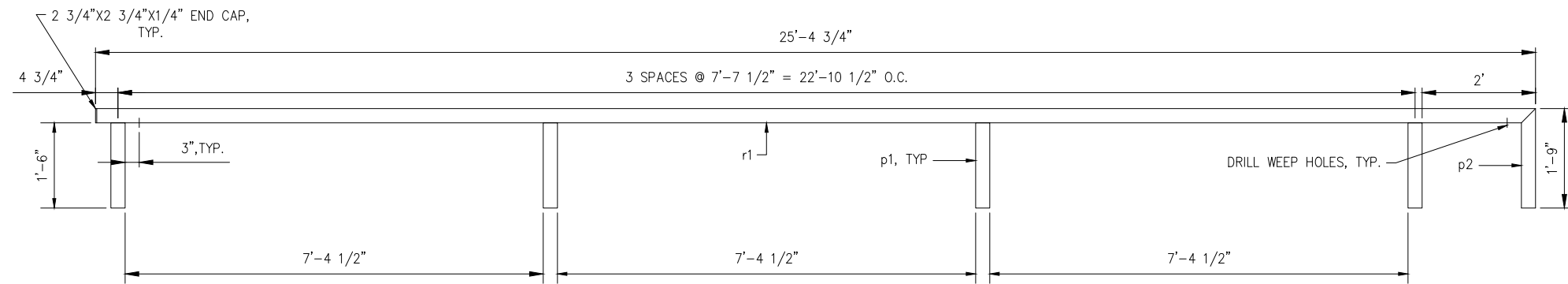
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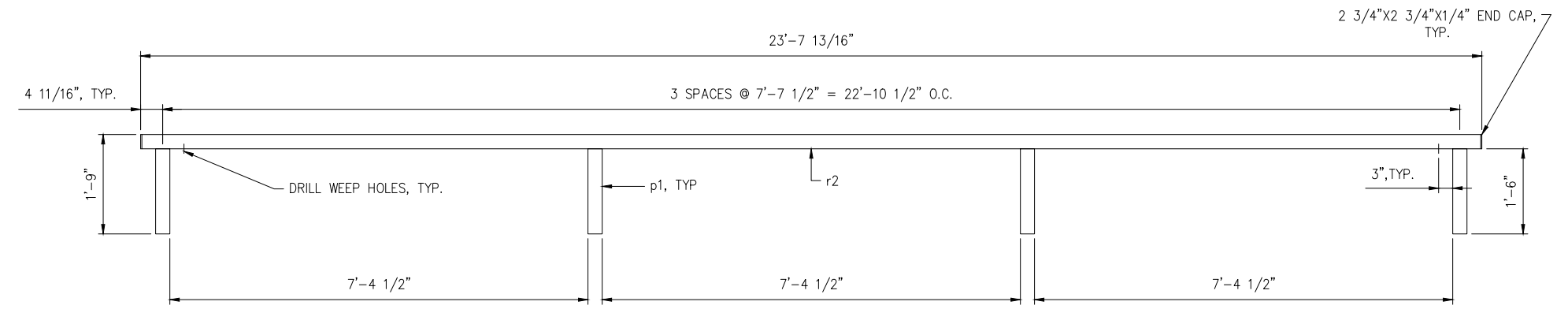


ENGINEERING DEPARTMENT	PROJECT:	BR 106.2 EAST HANDRAIL REPAIR	SHEET TITLE:	BRIDGE LAYOUT AND PROPOSED HANDRAIL
P.O. BOX 107500 ANCHORAGE, ALASKA 99510-7500	AFE NO.	11472	YEAR	2025
	SHEET	3	OF	5

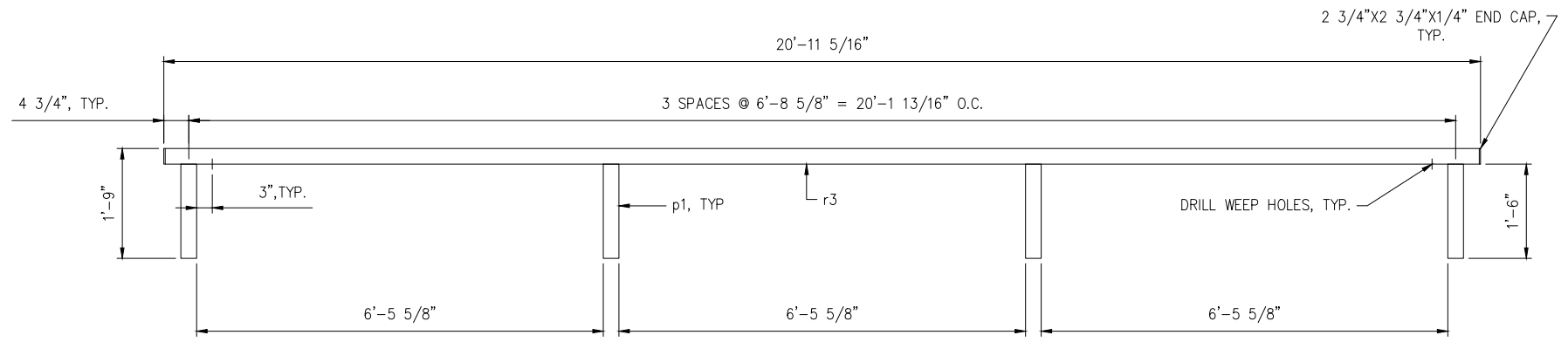
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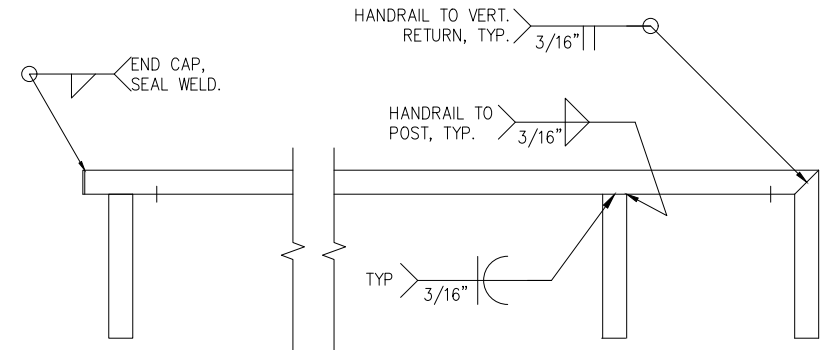
(1) HANDRAIL A/R
 SCALE: 3/4" = 1'-0"
 ASSEMBLED WEIGHT= 300LBS



(1) HANDRAIL B
 SCALE: 3/4" = 1'-0"
 ASSEMBLED WEIGHT= 270LBS



(1) HANDRAIL E
 SCALE: 3/4" = 1'-0"
 ASSEMBLED WEIGHT= 250LBS



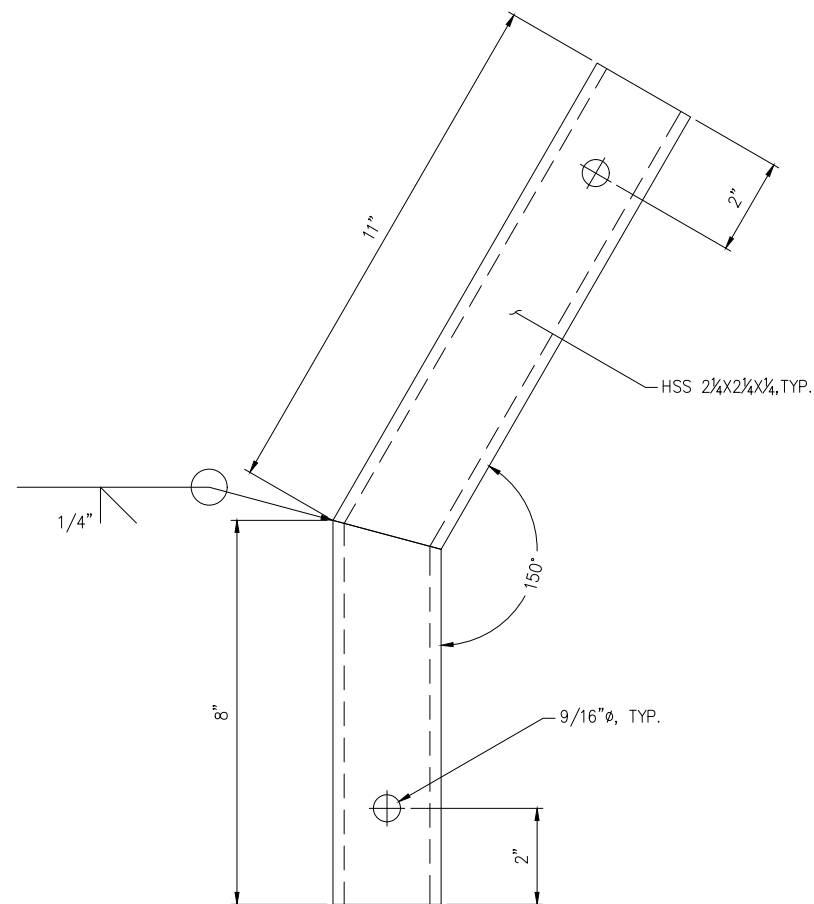
HANDRAIL WELDING DETAIL
 SCALE: 1" = 1'-0"

NOTES
 1. 5/8"Ø FIELD DRILLED HOLES MAY BE SHOP DRILLED ON FABRICATED SEGMENTS.

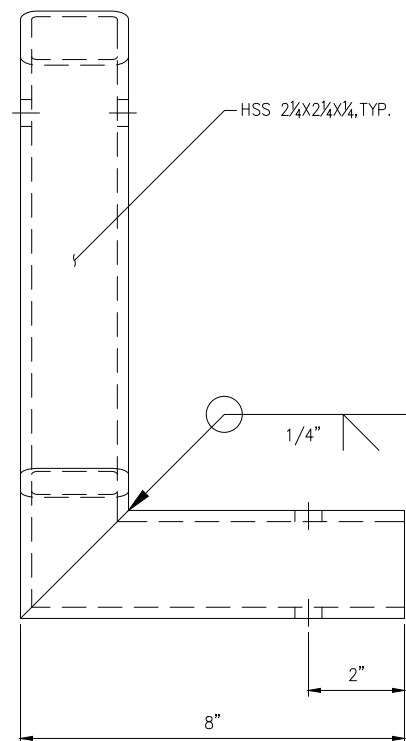
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ALASKA RAILROAD CORPORATION PO BOX 107500, ANCHORAGE, AK 99510-7500 327 W SHIP CREEK AVE ANCHORAGE, AK 99501 (907) 265-2300	
KEY MAP 	
ENGINEERING DEPARTMENT P.O. BOX 107500 ANCHORAGE, ALASKA 99510-7500	PROJECT: BR 106.2 EAST HANDRAIL REPAIR SHEET TITLE: HANDRAIL DETAILS
AFE NO.	11472
YEAR	2025
SHEET	4 OF 5

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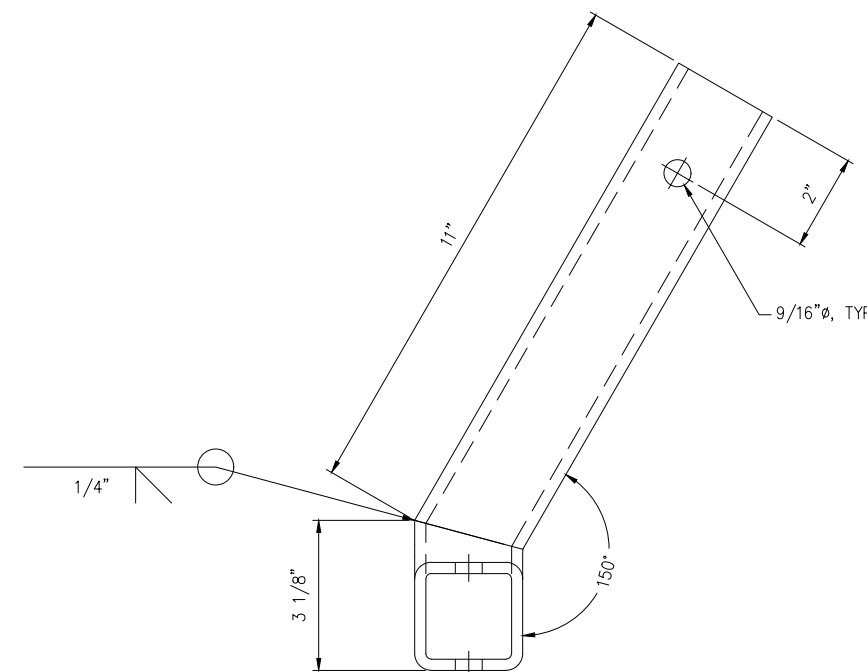
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ALASKA RAILROAD CORPORATION PO BOX 107500, ANCHORAGE, AK 99510-7500 327 W SHIP CREEK AVE ANCHORAGE, AK 99501 (907) 265-2300	
KEY MAP	
ENGINEERING DEPARTMENT	P.O. BOX 107500 ANCHORAGE, ALASKA 99510-7500
PROJECT:	BR 106.2 EAST HANDRAIL REPAIR
SHEET TITLE:	JOINT AND CHAINLINK FENCE DETAILS
AFE NO.	11472
YEAR	2025
SHEET	5 OF 5



A (59) POST TO JOINT SUB-ASSEMBLY
 SCALE: 6" = 1'-0"

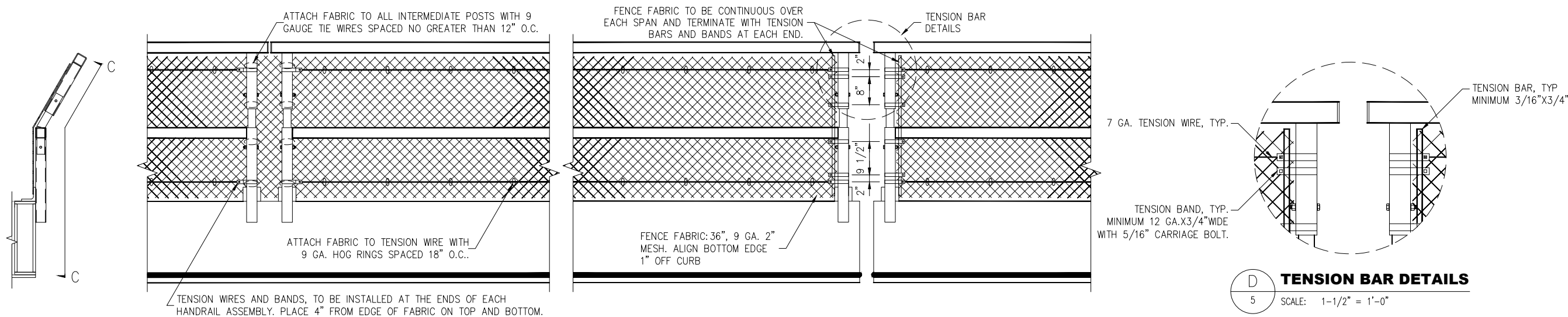


FRONT VIEW



SIDE VIEW

B END JOINT SUB-ASSEMBLY
 SCALE: 6" = 1'-0"
 MAKE (1) AS SHOWN, LH
 MAKE (1) OPPOSITE, RH



C-C CHAINLINK FENCE DETAILS
 SCALE: 3/4" = 1'-0"

D TENSION BAR DETAILS
 SCALE: 1-1/2" = 1'-0"