

DRAWING LOCATION: P:\ENGINEERING\BUILDINGS\WP_470 FAIRBANKS\47008 ENGINE REPAIR SHOP\UTILIDOR COVER REPAIR\FBX ENGINE REPAIR SHOP UTILIDOR COVER.DWG
 DATE: 7/27/2023 4:01 PM
 SCALE: AS NOTED
 PUBLISHED CTB

DESIGN CRITERIA SCHEDULE

| CRITERIA | DESCRIPTION | VALUE | NOTES |
|----------|---------------------------------|----------|-------------------|
| CONCRETE | ALLOWABLE SOIL BEARING PRESSURE | 4000 PSI | EXISTING CONCRETE |

REFERENCES

| CATEGORY | DESCRIPTION | REFERENCE |
|----------|-----------------------------|----------------|
| SOIL | SITE PREPARATION | AKDOT 203-3.01 |
| | QUALITY | AKDOT 106-1.01 |
| CONCRETE | REINFORCING STEEL | AKDOT 709-2.01 |
| | DRILLING AND BONDING DOWELS | AKDOT 503-3.07 |
| | EPOXY FOR BONDING DOWELS | AKDOT 712-2.21 |
| | ANCHOR RODS AND BOLTS | AKDOT 712-2.20 |
| | DESIGN MIX | AKDOT 501-2.02 |
| | CONCRETE TESTING | AKDOT 501-3.03 |
| | APPLICATION TECHNIQUES | AKDOT 501-3.05 |

SCHEDULE OF CONSTRUCTION MATERIALS

| CONCRETE | 28-DAY STRENGTH | MAXIMUM WATER/CEMENT RATIO | AIR ENTRAINMENT |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------|-----------------|
| | 4000 PSI | 0.45 | 6% +/- 1% |
| AFFIX THE NEW DOWEL WITH EPOXY GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OR 12,000 PSI PER ASTM C-579 MODIFIED METHOD B. APPROVED MATERIALS ARE DAYTON SUPERIOR EPOXY GROUT J55/PRO-PROXY 2000 NS OR PRO-POXY 2000 DP OR APPROVED EQUAL. | | | |
| REINFORCING STEEL | AASHTO M 31, GRADE 60 | AKDOT 709-2.01 | |
| STUD SHEAR COMMNECTOR | ASTM A108, GRADE 1015 OR 1020, 5/8" DIAMETER, 6 3/16" LONG, 90 DEGREE ANCHOR BOLTS. | AKDOT 716-2.02 | |
| CONCRETE COVER | CAST AGAINST EARTH: 3" CAST AGAINST FORMS: 2" | AKDOT 503-3.08 | |
| PPE, MINIMUM | HIGH VISIBILITY VEST, HARDHAT, SAFETY GLASSES, SAFETY TOE WORK BOOTS | | |

NOTES:

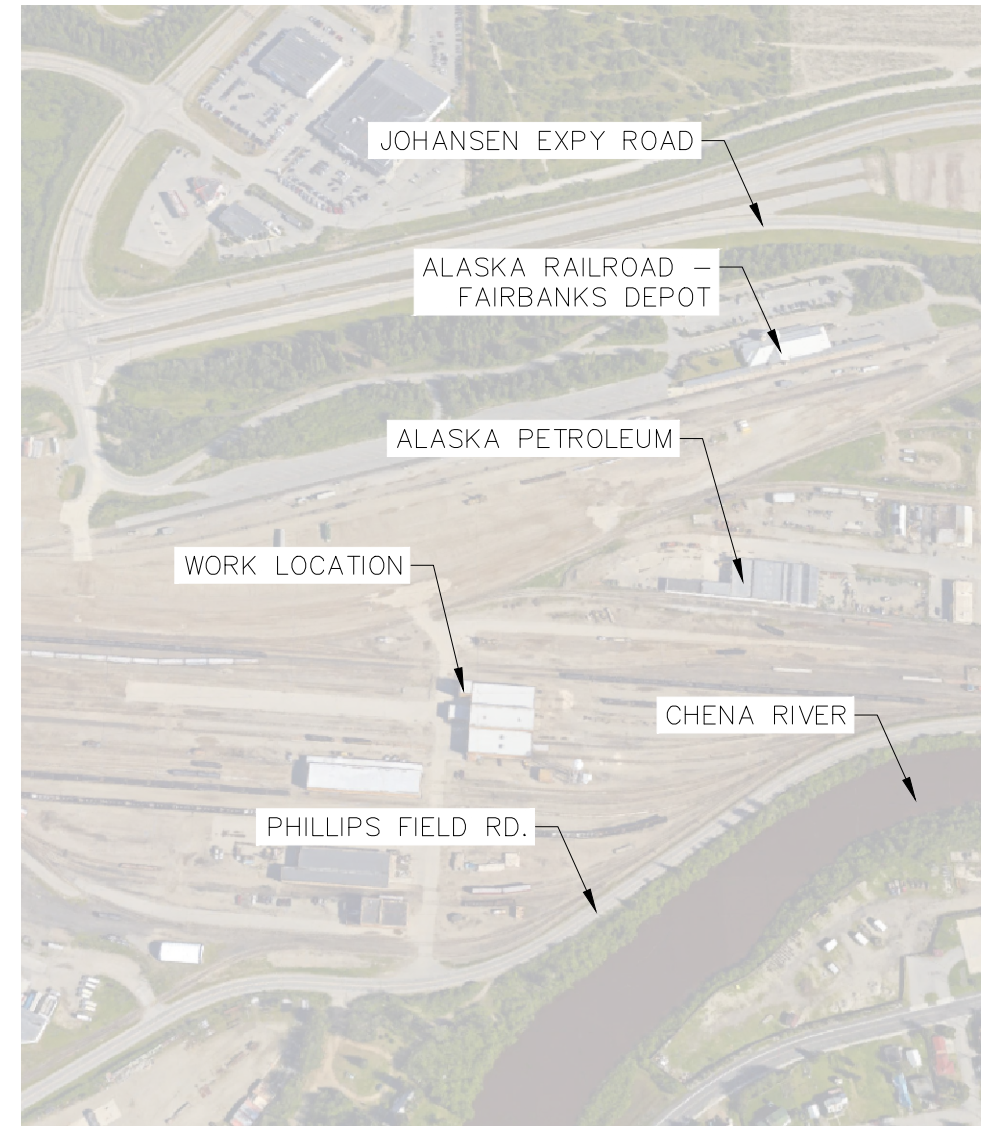
1. (N) = NEW
2. (E) = EXISTING
3. SUBMIT REINFORCEMENT STEEL SHOP DRAWINGS WITH DETAILS PER ACI 315 MANUAL OF STANDARD PRACTICE.
4. CONCRETE SHALL BE FORMED, BATCHED, PLACED AND CURED PER ASTM C-94, ACI 306R.
5. WATER REDUCING AGENT MAY BE ADDED TO CONCRETE TO INCREASE WORKABILITY. MAXIMUM SLUMP OF 6".
6. AIR USED TO CLEAN EXISTING CONCRETE MUST BE FREE FROM OIL. COMPRESSOR, IF USED, MUST BE EQUIPPED WITH FUNCTIONING AIR DRYER.
7. USE CONCRETE SAW TO CUT CONCRETE AS NEEDED.
8. DO NOT CUT OR SCORE RAIL WITH CONCRETE SAW.
9. DRAWING SCALES ARE SET BASED ON FULL SIZE 22"x34" SHEETS. PLANS PRINTED AT 11"x17" WILL BE AT 1/2 OF THE NOTED SCALE.



| | |
|--------------|-----|
| DESIGNED BY: | BSI |
| CHECKED BY: | BAO |
| DRAFTED BY: | BSI |

ALASKA RAILROAD CORPORATION
 PO BOX 107500, ANCHORAGE, AK
 99510-7500
 327 W SHIP CREEK AVE
 ANCHORAGE, AK 99501
 (907) 265-2300

KEY MAP



A/E FIRM

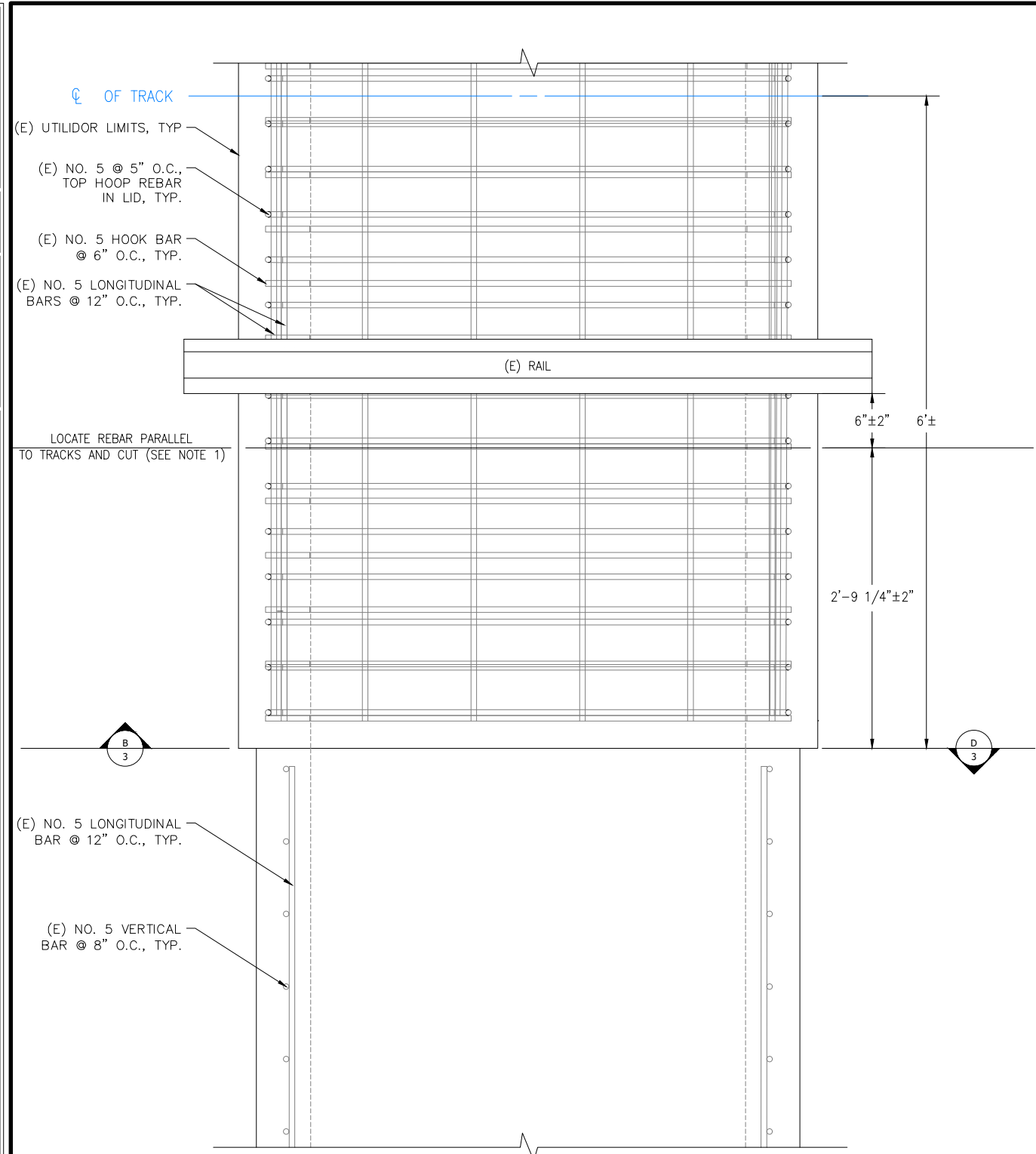
ENGINEERING DEPARTMENT
 P.O. BOX 107500
 ANCHORAGE, ALASKA 99510-7500

PROJECT: 2023 FAIRBANKS UTILIDOR COVER REPAIR
 SHEET TITLE: SPECIFICATIONS

| | |
|---------|----------|
| AFE NO. | XXXXXX |
| YEAR | 2023 |
| SHEET | 01 OF 06 |

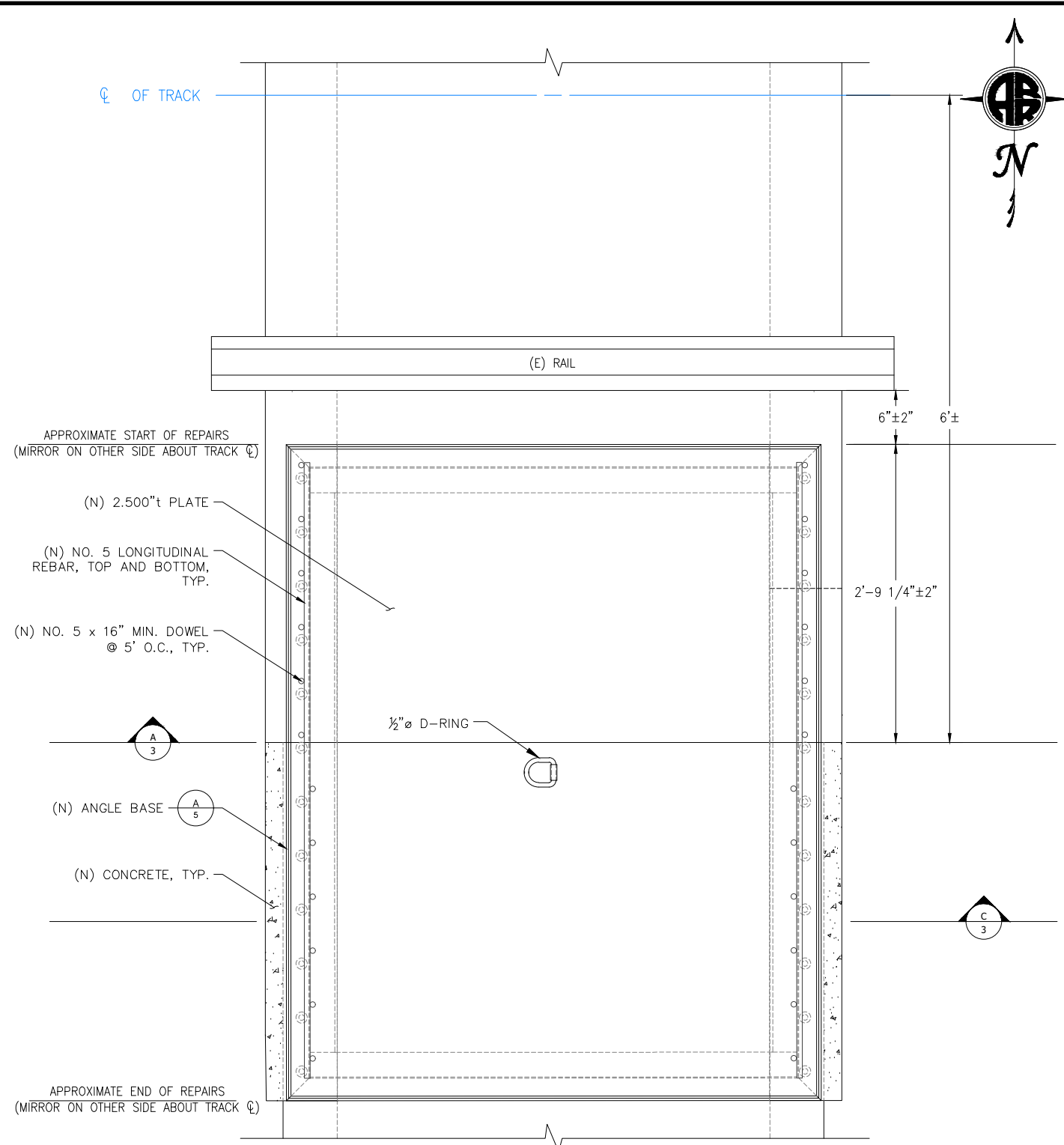
DRAWING LOCATION: P:\ENGINEERING\BUILDINGS\MP_470 FAIRBANKS\47008 ENGINE REPAIR SHOP\UTILIDOR COVER REPAIR\FBX ENGINE REPAIR SHOP UTILIDOR COVER.DWG

DATE: 7/27/2023 4:01 PM
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* NOTE: REBAR IN SECTION C-2's LID NOT SHOWN FOR CLARITY.

A
2 **EXISTING UTILIDOR**
 SCALE: 1-1/2" = 1'-0"



* NOTE: 8"x 0.750"t PLATES NOT SHOWN FOR CLARITY.

B
2 **REPAIRED UTILIDOR**
 SCALE: 1-1/2" = 1'-0"

- NOTES:**
- LOCATE REBAR AND CUT ON THE SIDE NEAREST THE RAIL TO ACHIEVE CLEAR SPACING BETWEEN EXISTING REBAR THAT IS TO REMAIN IN THE TYPE C-1 SECTION.
 - EXISTING REBAR LOCATIONS BASED ON RECORD DRAWINGS FROM 1943, DEPICTED ON SHEET 03, AND ARE APPROXIMATE.
 - REPAIRS ON THE NORTH ARE SYMMETRICAL ABOUT THE CENTERLINE OF THE TRACK.
 - LIMITS OF ASPHALTIC CONCRETE REMOVAL AND HOT MIX ASPHALT REPLACEMENT ARE SHOWN ON SHEET 6.



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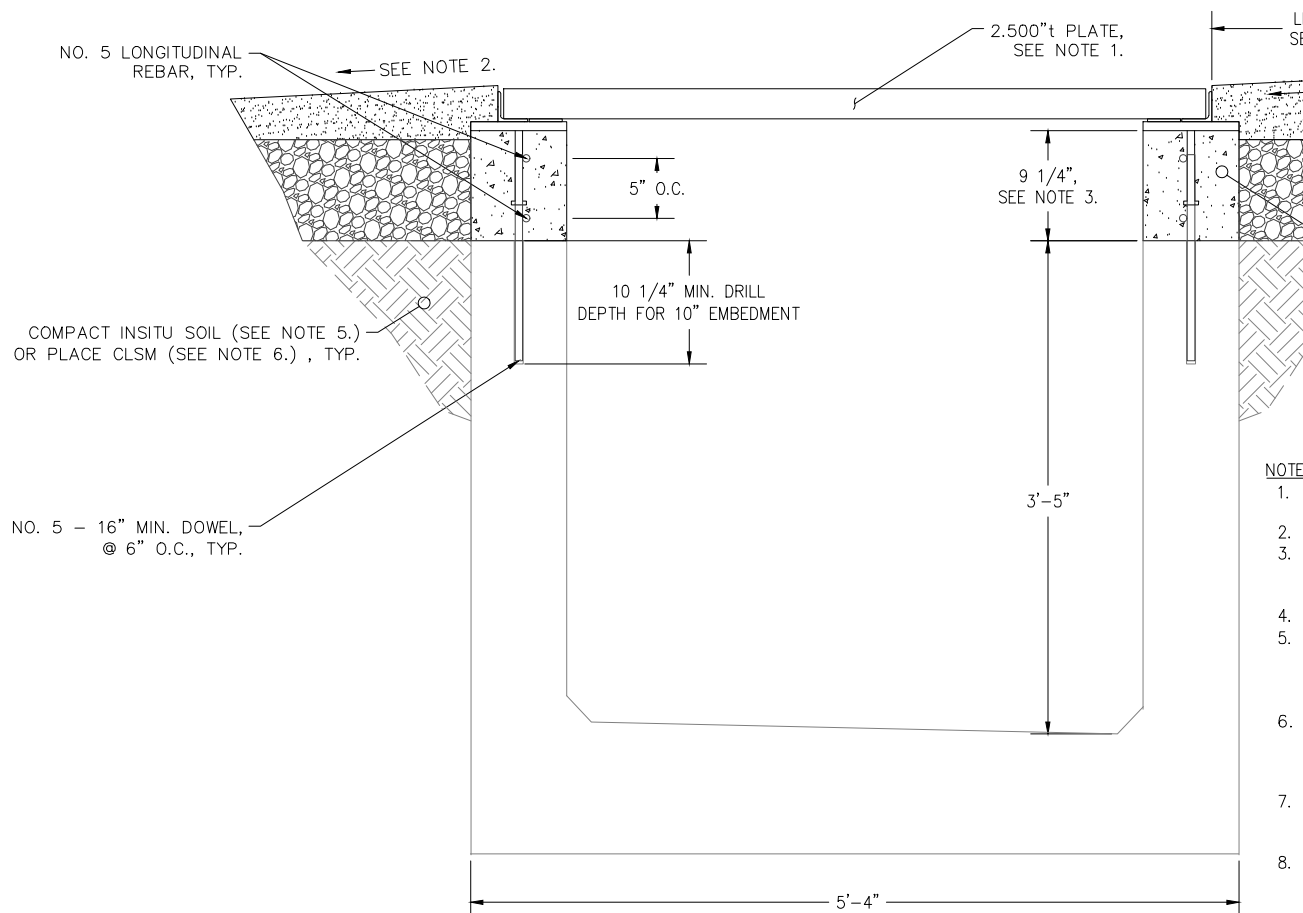
ALASKA RAILROAD CORPORATION
 PO BOX 107500, ANCHORAGE, AK 99510-7500
 327 W SHIP CREEK AVE
 ANCHORAGE, AK 99501
 (907) 265-2300

KEY MAP
 A/E FIRM

ENGINEERING DEPARTMENT
 P.O. BOX 107500
 ANCHORAGE, ALASKA 99510-7500
 PROJECT: 2023 FAIRBANKS UTILIDOR COVER REPAIR
 SHEET TITLE: GENERAL PLAN

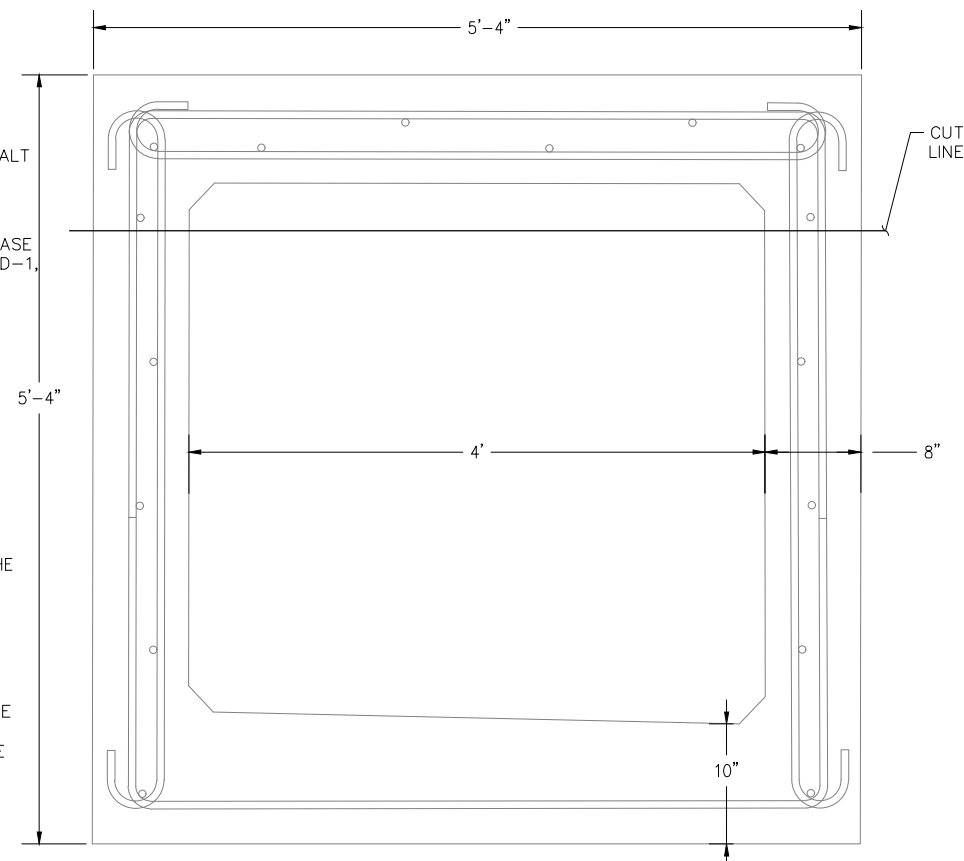
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 YEAR 2023
 SHEET 02 OF 06

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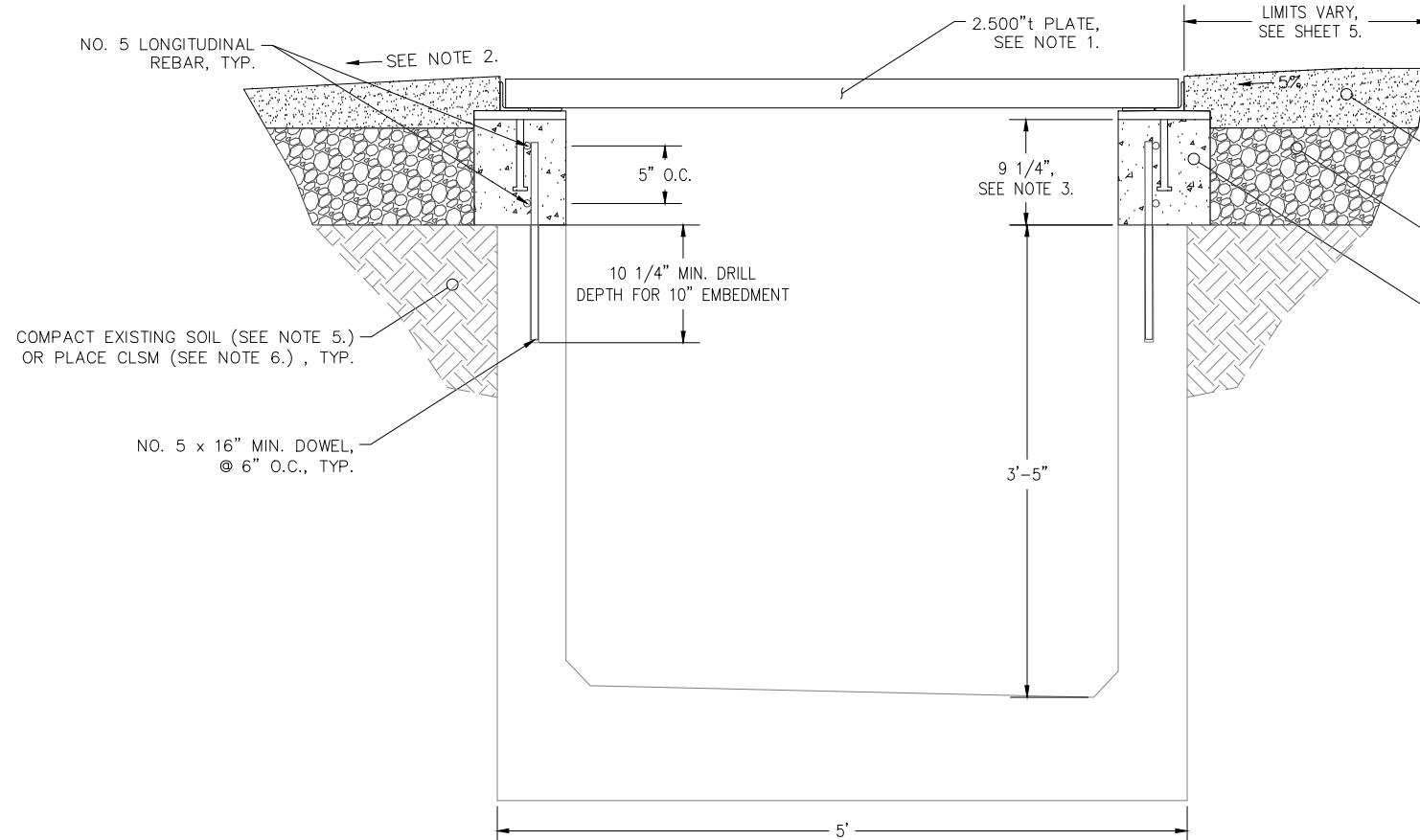


A
3
TYPE C-1, NEW SECTION FOR PLATE COVER
SCALE: 1 1/2" = 1'-0"

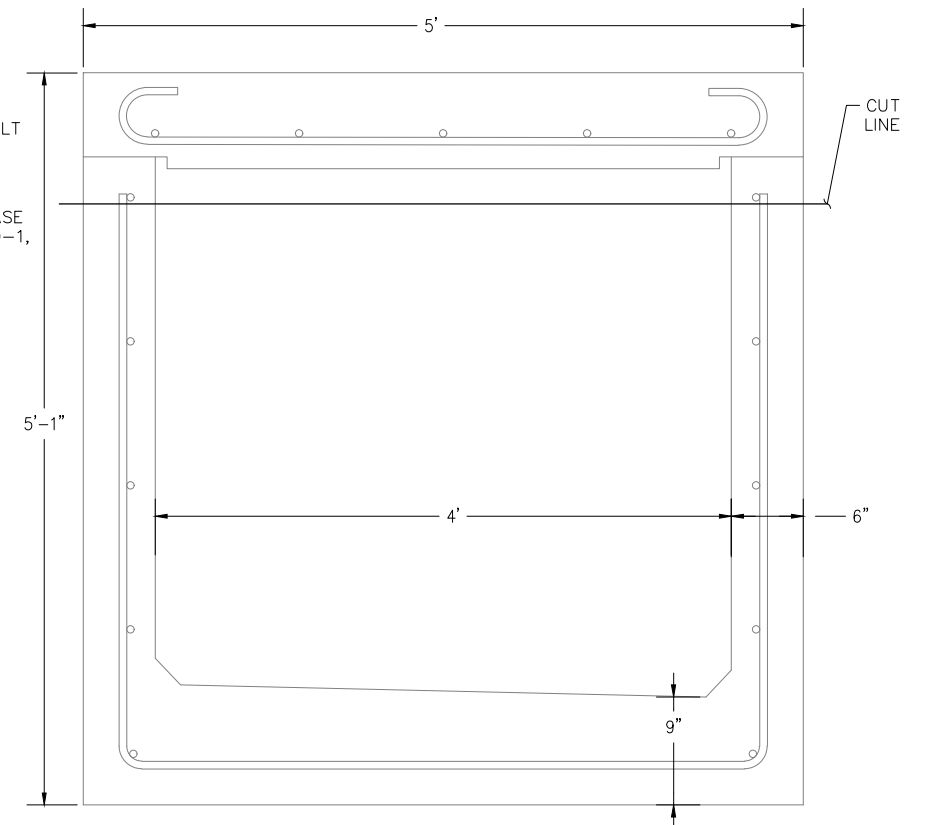
- NOTES**
1. SET 2.500"t PLATE APPROX. 1-1/2" HIGHER THAN EXISTING LID ELEV.
 2. SLOPE TO DOOR OPENING, 5.0% MAX.
 3. REMOVE APPROX. 12" OF THE EXISTING CONCRETE STRUCTURE, MEASURED FROM THE EXISTING LID ELEV. DOWN.
 4. 3.0" MIN. COMPACTED THICKNESS.
 5. IMPORT ADDITIONAL MATERIAL (NO MORE THAN 6", UNLESS SPECIFIED) IF INSITU MATERIAL CANNOT BE CLASSIFIED OR COMPACTED AS SPECIFIED.
 6. COMPACT INSITU SOIL TO 98% OF THE ITS MAXIMUM DENSITY PRIOR TO THE PLACEMENT OF ANY MATERIAL ABOVE IT.
 7. CLSM TO REACH 80% OF ITS DESIGNED COMPRESSIVE STRENGTH PRIOR TO THE PLACEMENT OF ANY MATERIAL ABOVE IT.
 8. MINIMUM COMPRESSIVE STRENGTH (f'c) OF 4,000 PSI.



B
3
TYPE C-1, FOR AREAS UNDER TRACK AND 6.0' EACH SIDE OF TRACK, EXISTING
SCALE: 1 1/2" = 1'-0"



C
3
TYPE C-2, NEW SECTION FOR PLATE COVER
SCALE: 1 1/2" = 1'-0"

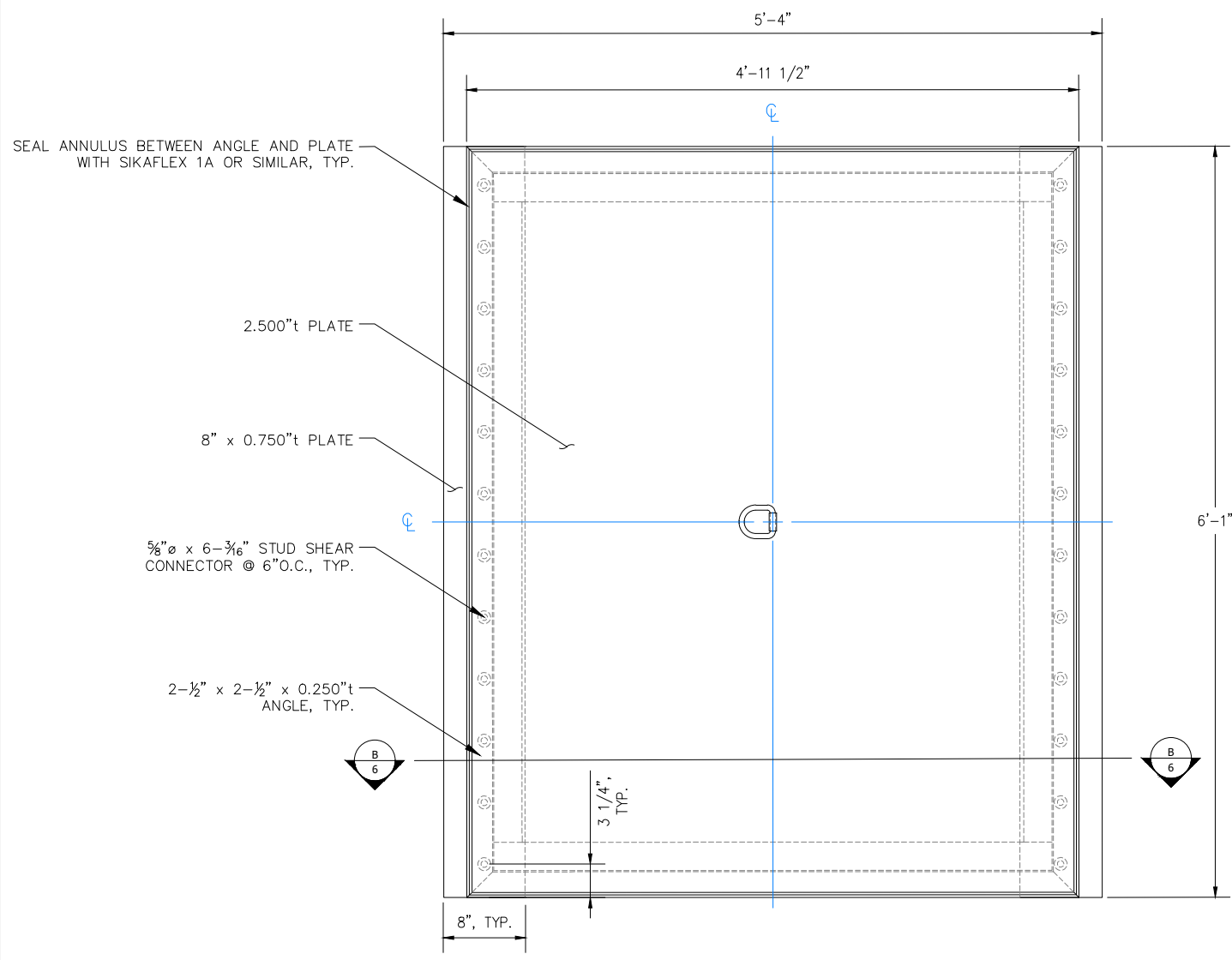


D
3
TYPE C-2, FOR AREAS NOT UNDER TRACK, EXISTING
SCALE: 1 1/2" = 1'-0"

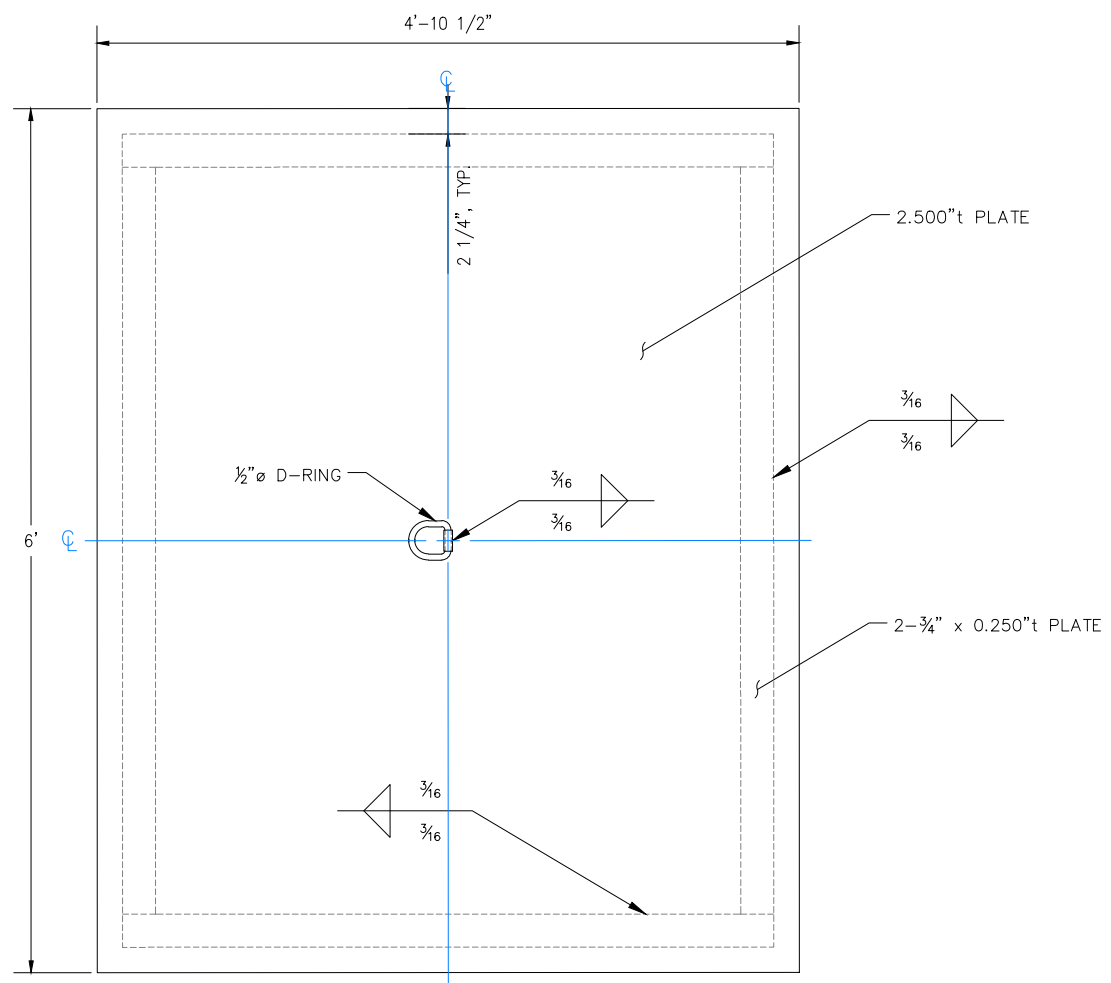
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| ALASKA RAILROAD CORPORATION PO BOX 107500, ANCHORAGE, AK 99510-7500 327 W SHIP CREEK AVE ANCHORAGE, AK 99501 (907) 265-2300 | |
| KEY MAP | |
| A/E FIRM | |
| ENGINEERING DEPARTMENT P.O. BOX 107500 ANCHORAGE, ALASKA 99510-7500 | PROJECT: 2023 FAIRBANKS UTILIDOR COVER REPAIR |
| ALASKA RAILROAD | SHEET TITLE: DEMOLITION AND IMPROVEMENT PLAN |
| AFE NO. | XXXXX |
| YEAR | 2023 |
| SHEET | 03 OF 06 |

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 DATE 8/1/2023

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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 | |
| A/E FIRM | |
| ENGINEERING DEPARTMENT P.O. BOX 107500 ANCHORAGE, ALASKA 99510-7500 | PROJECT: 2023 FAIRBANKS UTILIDOR COVER REPAIR |
| SECTION VIEWS 2 | |
| AFE NO. | XXXXXX |
| YEAR | 2023 |
| SHEET | 04 OF 06 |



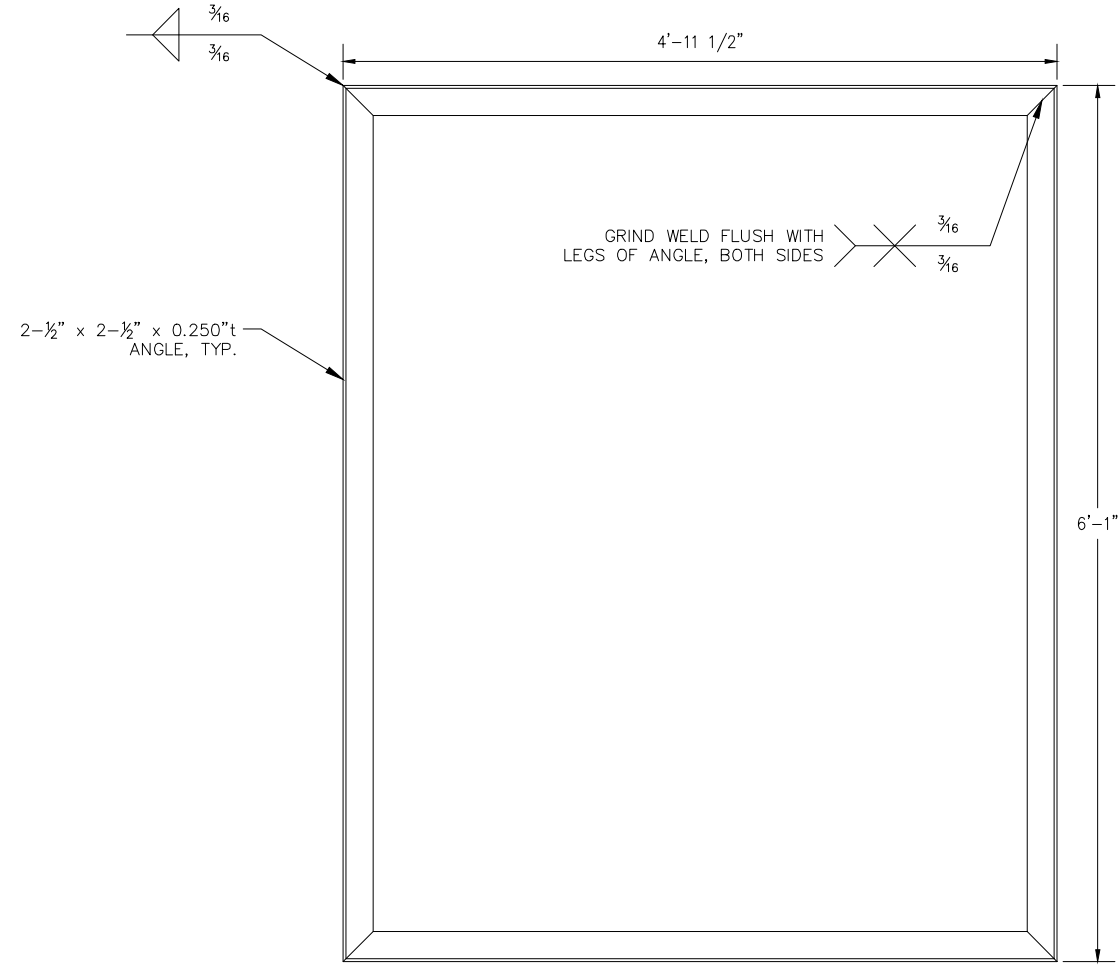
A
4 **UTILIDOR REPAIR PANEL ASSEMBLED, PLAN VIEW**
SCALE: 1 1/2" = 1'-0"



B
4 **2.500"t STEEL PLATE**
SCALE: 1 1/2" = 1'-0"

- NOTES:
1. ALL PLATE AND SHAPES ARE GRADE A36, UNLESS OTHERWISE SPECIFIED.
 2. ALL UNITS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
 3. SPLICING OF THE 2.500"t PLATE IS NOT PERMITTED.
 4. STUD SHEAR CONNECTORS SHALL CONFORM TO ASTM A108, GRADE 1015 OR 1020.
 5. USE D-RINGS WITH A MINIMUM BREAKING STRENGTH OF 12,000 LBS.

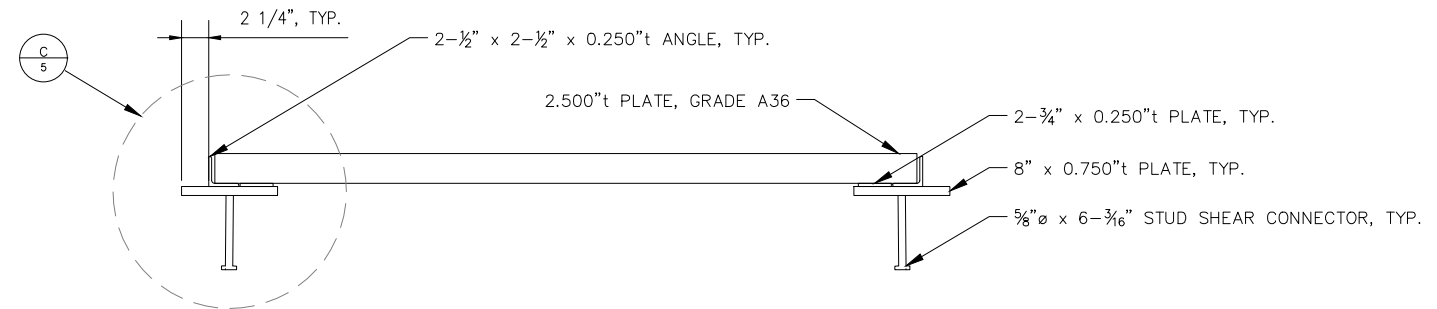
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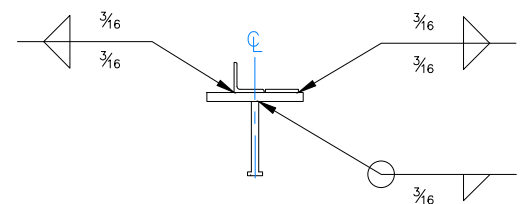
A
5 **ANGLE BASE FOR 2.500"t PLATE**
SCALE: 1 1/2" = 1'-0"

NOTES:

1. ALL PLATE AND SHAPES ARE GRADE A36 UNLESS SPECIFIED OTHERWISE.
2. ALL UNITS ARE IN INCHES UNLESS SPECIFIED OTHERWISE.
3. SPLICING OF THE 2.500"t PLATE IS NOT ALLOWED.
4. STUD SHEAR CONNECTORS SHALL CONFORM TO ASTM A108, GRADE 1015 OR 1020.



B
5 **UTILIDOR ACCESS PANEL, SECTION VIEW**
SCALE: 1 1/2" = 1'-0"



* NOTE: 2.500" PLATE NOT SHOWN FOR CLARITY.

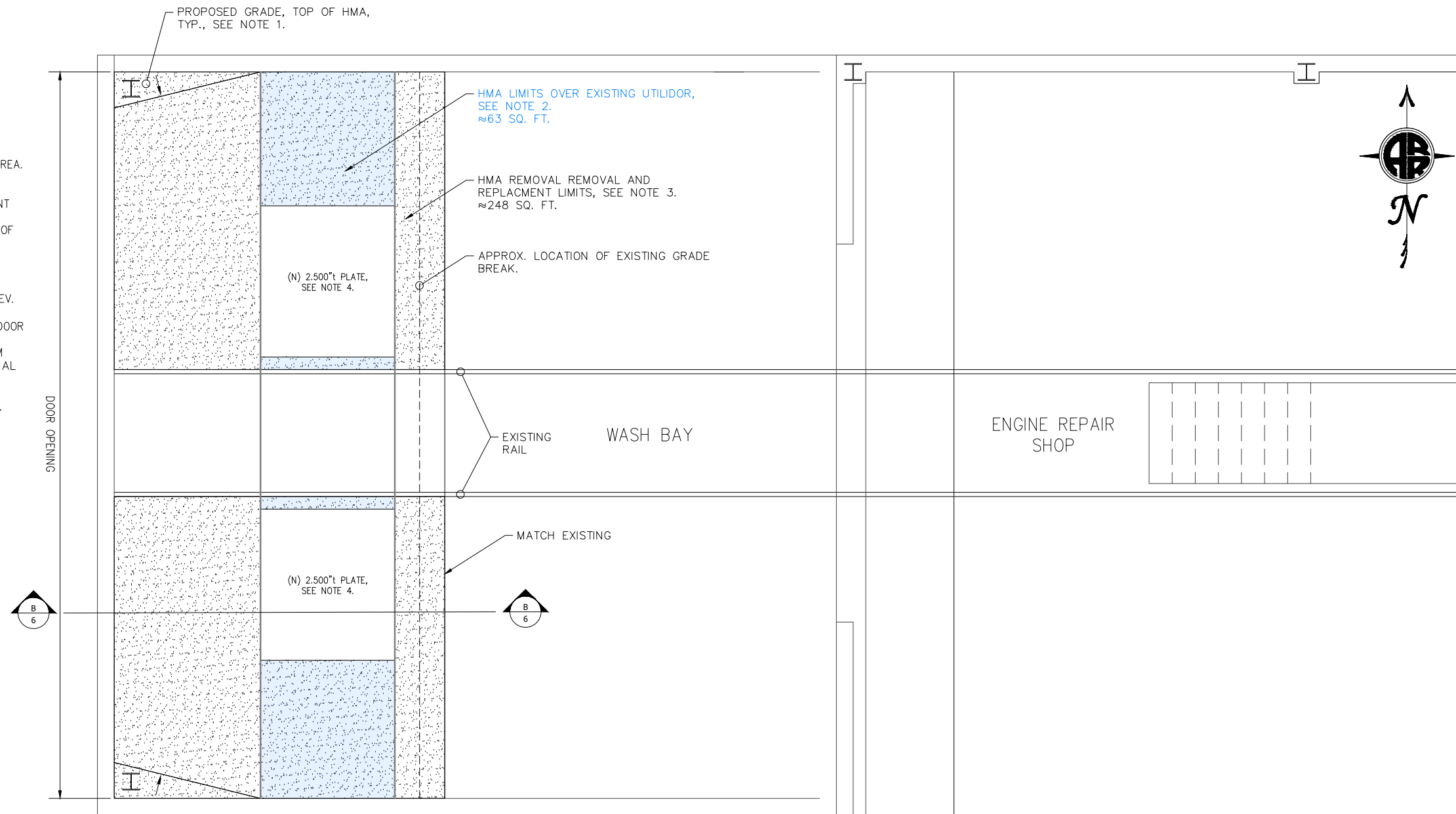
C
5 **WELDING DETAIL**
SCALE: 1 1/2" = 1'-0"

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| KEY MAP | |
| A/E FIRM | |
| ENGINEERING DEPARTMENT P.O. BOX 107500 ANCHORAGE, ALASKA 99510-7500 | PROJECT: 2023 FAIRBANKS UTILIDOR COVER REPAIR |
| ALASKA RAILROAD | SHEET TITLE: DETAILS |
| AFE NO. | XXXXXX |
| YEAR | 2023 |
| SHEET | 05 OF 06 |

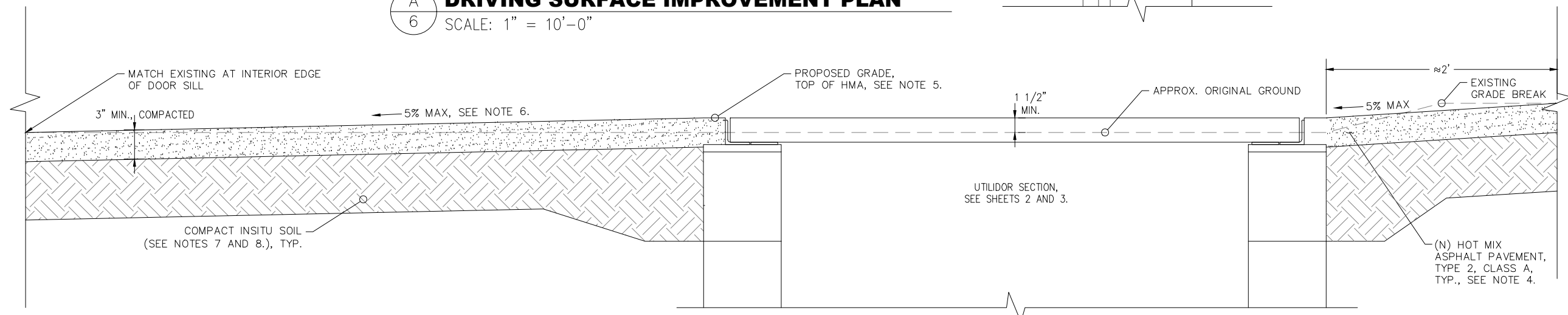
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NOTES

1. PLACE HMA AGAINST CONCRETE FOOTER TO DRAIN TOWARDS THE DOOR OPENING.
2. AREA ABOVE EXISTING UTILIDORS NOT SCHEDULED TO BE REMOVED ARE TO BE EXCLUDED FROM THE HMA REMOVAL AREA. CLEAN CONCRETE SURFACES TO BE PAVED OVER USING METHODS THAT DO NOT DAMAGE THE CONCRETE. REPAIR CONCRETE DAMAGE AS NECESSARY PRIOR TO THE PLACEMENT OF HMA.
3. AREA SHOWN IS CALCULATED BASED ON PLACEMENT LIMITS OF NEW HMA. HMA REMOVAL LIMITS ARE ≈ 185 SQ. FT.
4. NO HMA IS TO BE PLACED OVER THE 2,500⁺t PLATES, THIS AREA IS EXCLUDED FROM HMA REMOVAL AND REPLACEMENT LIMITS.
5. PLACE HMA AT, OR NO MORE THAN $\frac{1}{4}$ " ABOVE, THE TOP ELEV. OF THE 2,500⁺t PLATE.
6. SLOPE NEW HMA PAVEMENT TO THE INTERIOR SILL OF THE DOOR OPENING AT A GRADE NO GREATER THAN 5%.
7. COMPACT INSITU SOIL TO 98% OF THE ITS MAXIMUM DENSITY PRIOR TO THE PLACEMENT OF ANY MATERIAL ABOVE IT.
8. IMPORT ADDITIONAL MATERIAL (NO MORE THAN 6") IF INSITU MATERIAL CANNOT BE COMPACTED AS SPECIFIED OR CLASSIFIED.



A
6 **DRIVING SURFACE IMPROVEMENT PLAN**
SCALE: 1" = 10'-0"



B
6 **DRIVING SURFACE CROSS SECTION**
SCALE: 1" = 0'-6"

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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 | |
| A/E FIRM | |
| ALASKA RAILROAD ENGINEERING DEPARTMENT P.O. BOX 107500 ANCHORAGE, ALASKA 99510-7500 | PROJECT: 2023 FAIRBANKS UTILIDOR COVER REPAIR SHEET TITLE: DRIVING SURFACE PLAN AND SECTION |
| AFE NO. | XXXXXX |
| YEAR | 2023 |
| SHEET | 06 OF 06 |