

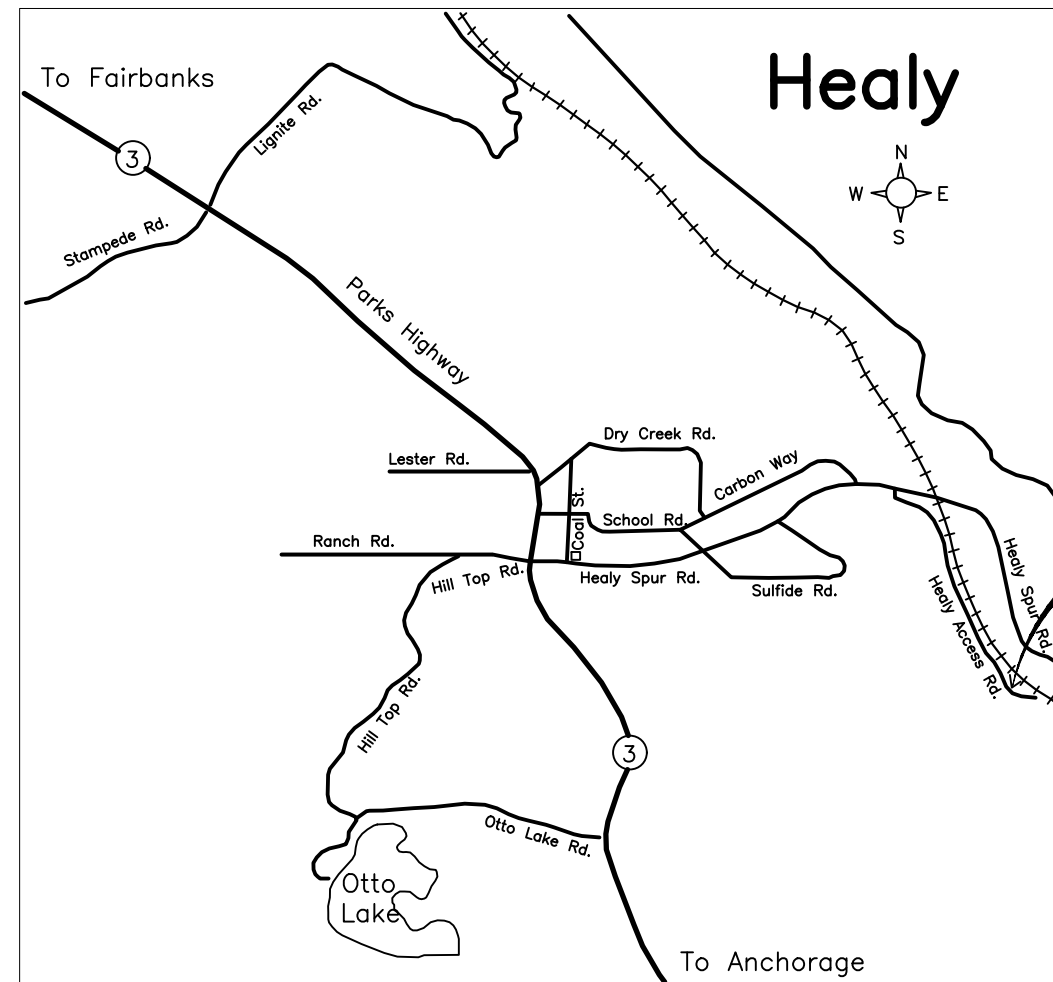


ALASKA RAILROAD CORPORATION

ENGINEERING SERVICES


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

HEALY EQUIPMENT BUILDING FOUNDATION HEALY, AK



VICINITY MAP

PROJECT LOCATION

 ALASKA RAILROAD CORPORATION ENGINEERING SERVICES P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500	
PROJECT: HEALY EQUIPMENT BUILDING	
TITLE: FOUNDATION SITE	
DESIGNED BY: <u>BSI</u> DRAWN BY: <u>BSI</u> CHECKED BY: <u>CDR</u> APPROVED BY: <u>PEF</u>	SCALE : AS NOTED DATE : APRIL 2022
AFE NO.: ACAD FILE: DWG NO. 1 OF 7	

REV.	DATE	BY	REVISION

FOUNDATION DESIGN CRITERIA SCHEDULE			
CRITERIA	DESCRIPTION	VALUE	NOTES
FOUNDATION	ALLOWABLE SOIL BEARING PRESSURE	4000 PSF	EXISTING CONCRETE SLAB
SPECIAL INSPECTIONS			
THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO INSPECT THE CONSTRUCTION FOR THE FOLLOWING WORK ITEMS			
CATEGORY	DESCRIPTION	INFECTION REFERENCE	FREQUENCY OF INSPECTION
SOIL	SITE PREPARATION	IBC 1704.7	PERIODIC
	FILL PLACEMENT	IBC 1704.7	PERIODIC
	EVALUATION OF IN PLACE DENSITY	IBC 1704.7	PERIODIC
CONCRETE	REINFORCING STEEL	IBC TABLE 1704.7, ITEM 1	PERIODIC
	ANCHOR RODS AND BOLTS	IBC TABLE 1704.7, ITEM 3	CONTINUOUS
	VERIFY DESIGN MIX	IBC TABLE 1704.7, ITEM 4	PERIODIC
	CONCRETE TESTING	IBC TABLE 1704.7, ITEM 5	CYLINDER SLUMP, AIR & TEMP
	APPLICATION TECHNIQUES	IBC TABLE 1704.7, ITEM 6	CONTINUOUS
	CURING TEMPERATURE AND TECHNIQUES	IBC TABLE 1704.7, ITEM 7	PERIODIC
	FORMWORK SHAPE AND LOCATION	IBC TABLE 1704.7, ITEM 11	PERIODIC
	POST INSTALLED ANCHORS	INSPECTION OF DRILLED HOLES FOR SIZE & CLEANLINESS, EDGE DISTANCE ADHESIVE INJECTION AND ANCHOR ROD PLACEMENT IN ACCORDANCE WITH MANUFACTURING INSTRUCTIONS.	CONTINUOUS

SCHEDULE OF CONSTRUCTION MATERIALS			
CONCRETE	28-DAY STRENGTH	MAXIMUM WATER/CEMENT RATIO	AIR ENTRAINMENT
	4000 P.S.I.	0.45	6% ± 1%
REINFORCING STEEL	ASTM A615, GRADE 60		
PRE INSTALLED ANCHOR BOLTS	ASTM F1554, HOT DIPPED GALVANIZED, 5/8" DIAMETER, 10" LONG, 90 DEGREE ANCHOR BOLTS.		
POST INSTALLED ANCHOR BOLTS	ASTM F1554, HOT DIPPED GALVANIZED, 5/8" DIAMETER, THREADED ANCHOR RODS. ANCHOR ROD HAVING 7 INCHES EMBEDMENT AND EDGE DISTANCE AS SHOWN. DRILLED HOLE DIAMETER : 3/4". ITW REHEAD A7+ OR HILTI HIT-HY 200 ADHESIVE.		
CONCRETE COVER	FOOTINGS CAST AGAINST EARTH" 3" FOOTINGS CAST AGAINST FORMS: 2" WALLS: 2", EXCEPT WHERE NOTED		
PERSONAL PROTECTIVE EQUIPMENT, MINIMUM	HIGH VISIBILITY VEST, HARDHAT, SAFETY GLASSES, SAFETY TOE WORK BOOTS		

NOTES:

- SUBMIT REINFORCING STEEL SHOP DRAWINGS WITH DETAILS PER ACI 315 MANUAL OF STANDARD PRACTICE.
- CONCRETE SHALL BE FORMED, BATCHED, PLACED AND CURED PER ASTM C-94, ACI 306R.
- WATER REDUCING AGENT MAY BE ADDED TO CONCRETE TO INCREASE WORKABILITY. MAXIMUM SLUMP OF 6".
- SUPPORT BARS ON GRADE USING PLASTIC CHAIRS.
- AIR USED TO CLEAN HOLES FOR POST INSTALLED ANCHORS MUST BE FREE FROM OIL. COMPRESSOR, IF USED, MUST BE EQUIPPED WITH FUNCTIONING AIR DRYER.
- TOP OF STEM WALL FOUNDATION ELEVATION TO BE WITHIN 1/4" OF LEVEL AND 1/4" OF SQUARE UNLESS STRICTER TOLERANCES ARE REQUIRED BY STEEL MASTER BUILDINGS.
- ENGINEER OF RECORD TO PERFORM STRUCTURAL OBSERVATIONS AS DEFINED IN SECTION 1702 OF IBC AT SIGNIFICANT STAGES OF CONSTRUCTION AND UPON COMPLETION.
- REMOVE SNAP-TIE CONES AND DRY PACK VOIDS WITH MORTAR. PRIOR TO PLACING MORTAR, COAT VOIDS WITH A THIN LAYER OF CEMENT GROUT BONDING AGENT. THE MIX FOR THE BONDING GROUT IS CEMENT AND FINE SAND IN A RATIO OF 1 TO 1 WITH A CONSISTENCY LIKE THICK CREAM. THE DRY PACK MORTAR IS PUT IN PLACE BEFORE THE BONDING GROUT HAS DRIED UP. DRY PACK MORTAR CONTAINS (BY DRY VOLUME OR WEIGHT) ONE PART CEMENT, 2 1/2 PARTS SAND, AND ENOUGH WATER TO PRODUCE A MORTAR THAT WILL JUST STICK TOGETHER WHILE BEING MOLDED INTO A BALL WITH THE HAND. THE BALL SHOULD NEITHER SLUMP WHEN PLACED ON A FLAT SURFACE, NOR CRUMBLE DUE TO LACK OF MOISTURE. PLACE DRY PACK MORTAR IMMEDIATELY AFTER MIXING. COMPACT MORTAR IN THE VOID HOLE WITH BY STRIKING A HARDWOOD DOWEL OF THE HOLE TO ENSURE MAXIMUM COMPACTION. OVERFILL THE HOLE SLIGHTLY, THEN PLACE A PIECE OF HARDWOOD AGAINST THE MORTAR AND STRIKE THE WOOD SEVERAL TIMES WITH A HAMMER.
- MEASURE AND CUT AN EXACT LENGTH OF WATERSTOP. SPLICES ARE NOT PERMITTED. USING A BRUSH, APPLY A UNIFORM ADHESIVE TO THE CONCRETE SURFACE ALONG THE LINE OF PLACEMENT. APPLY A UNIFORM COAT OF ADHESIVE TO THE WATERSTOP. GAPS IN THE GLUE ARE NOT PERMITTED. CONCRETE PLACEMENT BE 12 HOURS. VISUALLY OBSERVE THE WATERSTOP TO ENSURE PROPER PLACEMENT AND ALIGNMENT. APPROVED MATERIALS ARE:
ADEKA CORPORATION; MC-2010M.
ADEKA CORPORATION; KM-3030M.
ADEKA CORPORATION; P201.
ADEKA CORPORATION; KC SERIES.
- APPROVED ADHESIVES ARE 3M-2141 AS MANUFACTURED BY THE 3M COMPANY, OR ADEKA CORPORATION H-1000 ULTRA BOND, OR APPROVED EQUAL.
- USE EPOXY GROUT FOR KEYWAY WITH 12,000 PSI MINIMUM COMPRESSIVE STRENGTH PER ASTM C-579 MODIFIED METHOD B. APPROVED MATERIAL ARE DAYTON SUPERIOR EPOXY GROUT J55/PRO-PROXY 2000 NS OR PRO-PROXY 2000 DP OR APPROVED EQUAL.

WATERSTOP MINIMUM PERFORMANCE REQUIREMENT:

PROPERTY	ASTM STANDARD	RESULTS
TENSILE STRENGTH (MPa)	D412	0.98
ELONGATION	D412	550
HARDNESS (Hs)	D2240	30 DUROMETER TYPE A

TIME PERIOD TO MAXIMUM ELONGATION IS 35 DAYS.

LAP LENGTH SCHEDULE	
BAR SIZE	LAP LENGTH
#5	2'-0"
#4	2'-0"

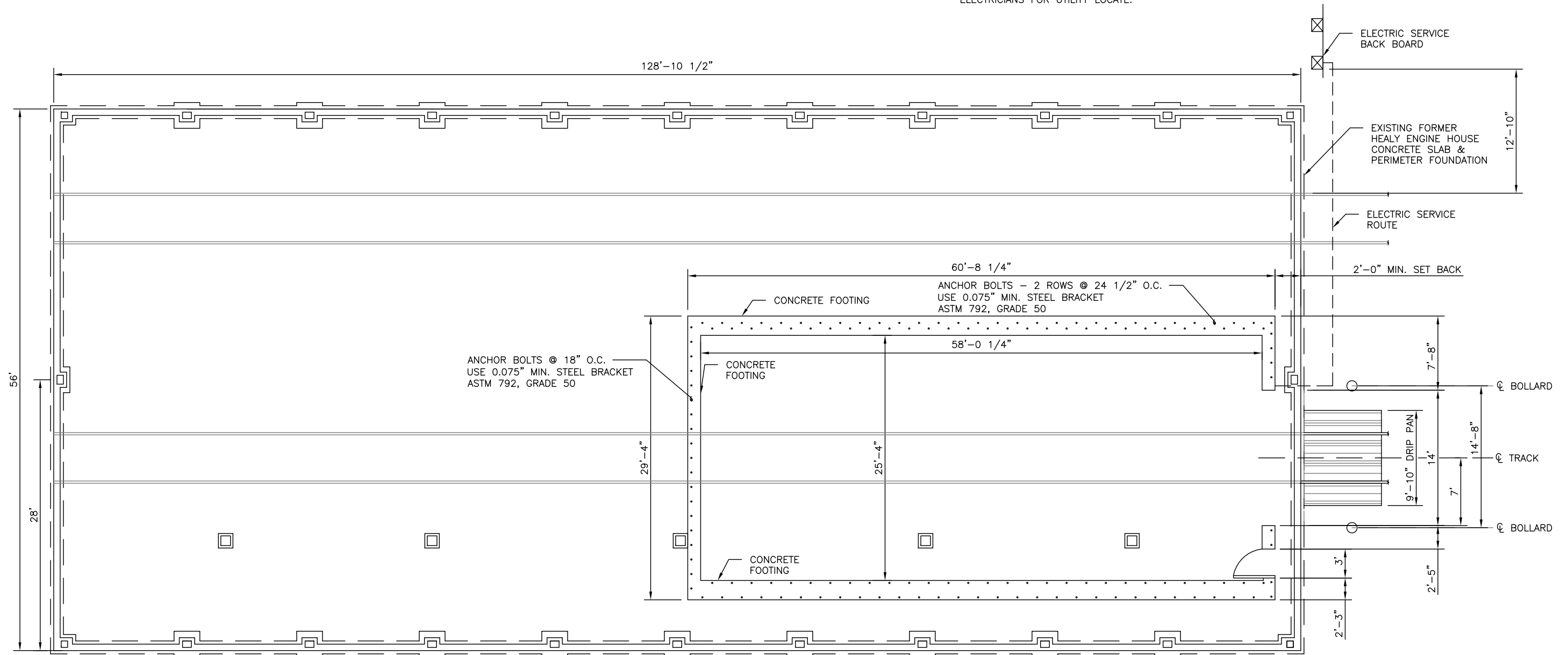


ALASKA RAILROAD CORPORATION ENGINEERING SERVICES P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500		
PROJECT: HEALY EQUIPMENT BUILDING		
TITLE: FOUNDATION SPECIFICATIONS		
DESIGNED BY: BSI	SCALE : AS NOTED	AFE NO.:
DRAWN BY: BSI		ACAD FILE:
CHECKED BY: CDR	DATE : APRIL 2022	DWG NO.
APPROVED BY: PEF		2 OF 7

REV.	DATE	BY	REVISION

NOTE:

CONTRACTOR TO COORDINATE WITH ALASKA RAILROAD ELECTRICIANS FOR UTILITY LOCATE.



GENERAL PLAN
SCALE: 3/32" = 1'-0"

NOTE:

1. FILL CRACKS IN EXISTING CONCRETE TRAVERSING UNDER NEW CONCRETE FOOTING WITH SIKADOR 32 OR APPROVED EQUAL. CRACKS TO BE FILLED WILL BE IDENTIFIED DURING ON-SITE INSPECTION WITH CONTRACTOR & OWNER'S REPRESENTATIVE.



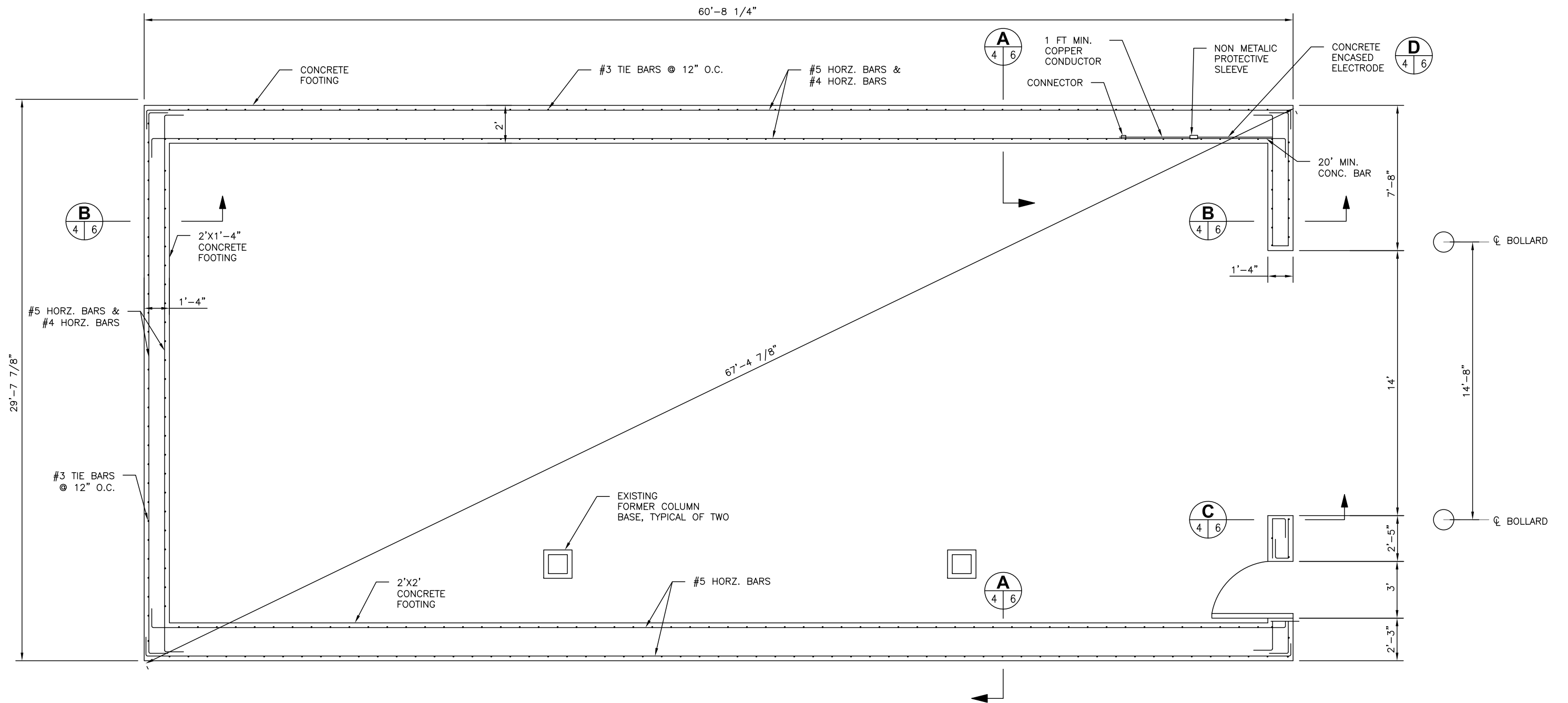
ALASKA RAILROAD CORPORATION
ENGINEERING SERVICES
P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500

PROJECT: **HEALY EQUIPMENT BUILDING**

TITLE: **FOUNDATION GENERAL PLAN**


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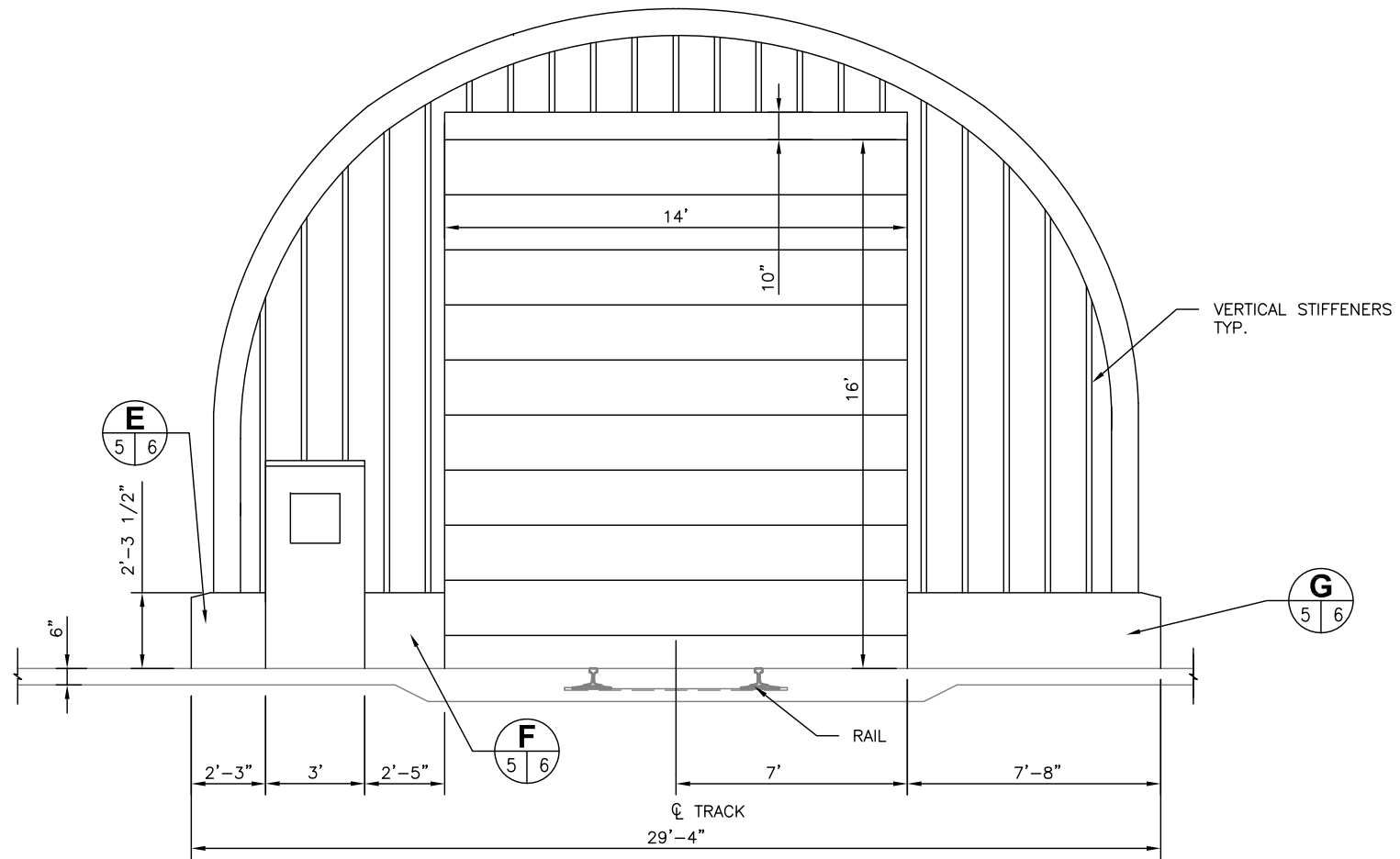


PLAN DETAILS
SCALE: 3/16" = 1'-0"

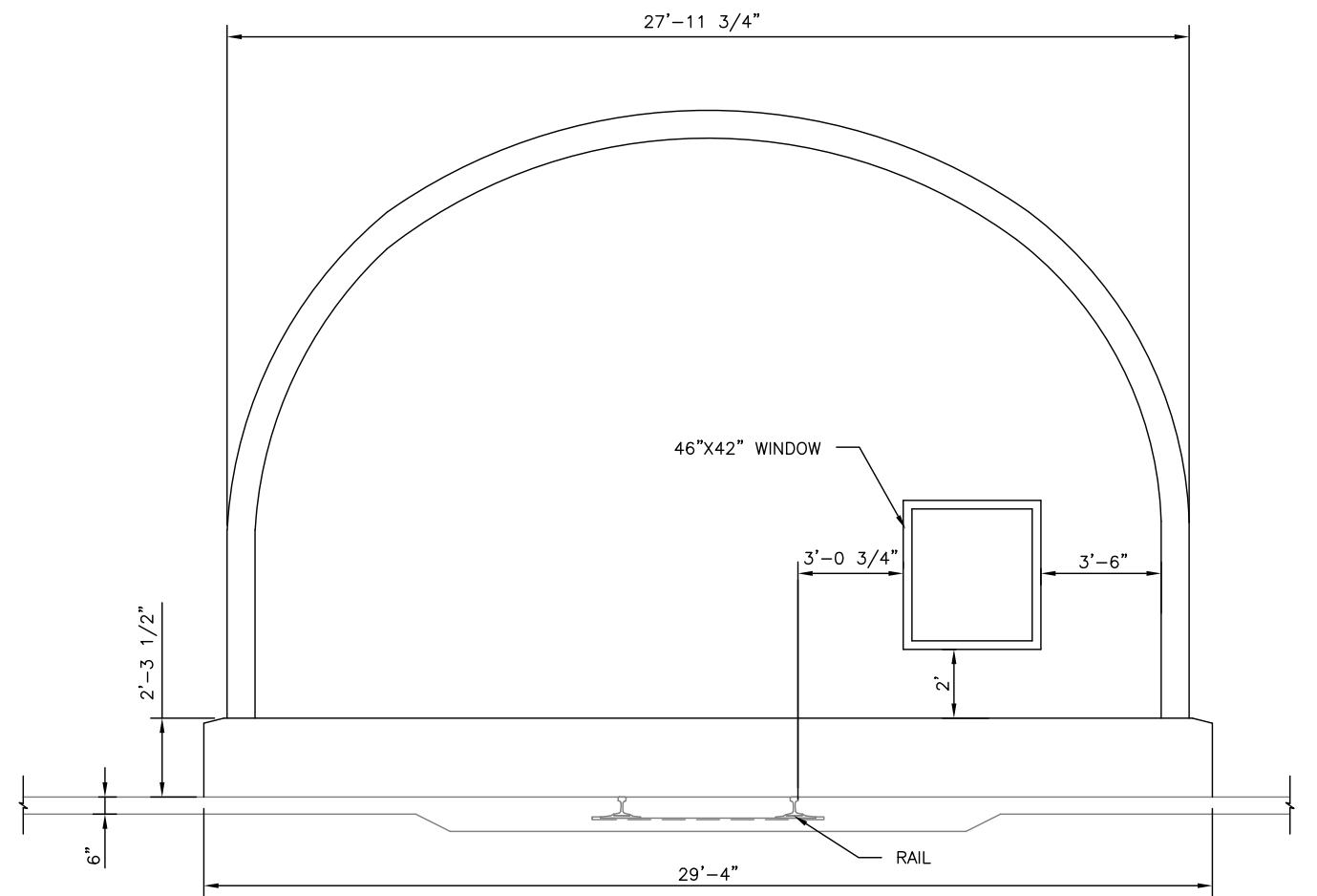


 ALASKA RAILROAD CORPORATION ENGINEERING SERVICES P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500		
PROJECT: HEALY EQUIPMENT BUILDING		
TITLE: FOUNDATION STEM WALL PLAN		
DESIGNED BY: BSI	SCALE: AS NOTED	AFE NO.:
DRAWN BY: BSI	DATE: APRIL 2022	ACAD FILE:
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FRONT ELEVATION PLAN
SCALE: 3/16" = 1'-0"



REAR ELEVATION PLAN
SCALE: 3/16" = 1'-0"



ALASKA RAILROAD CORPORATION
ENGINEERING SERVICES
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PROJECT: **HEALY EQUIPMENT BUILDING**

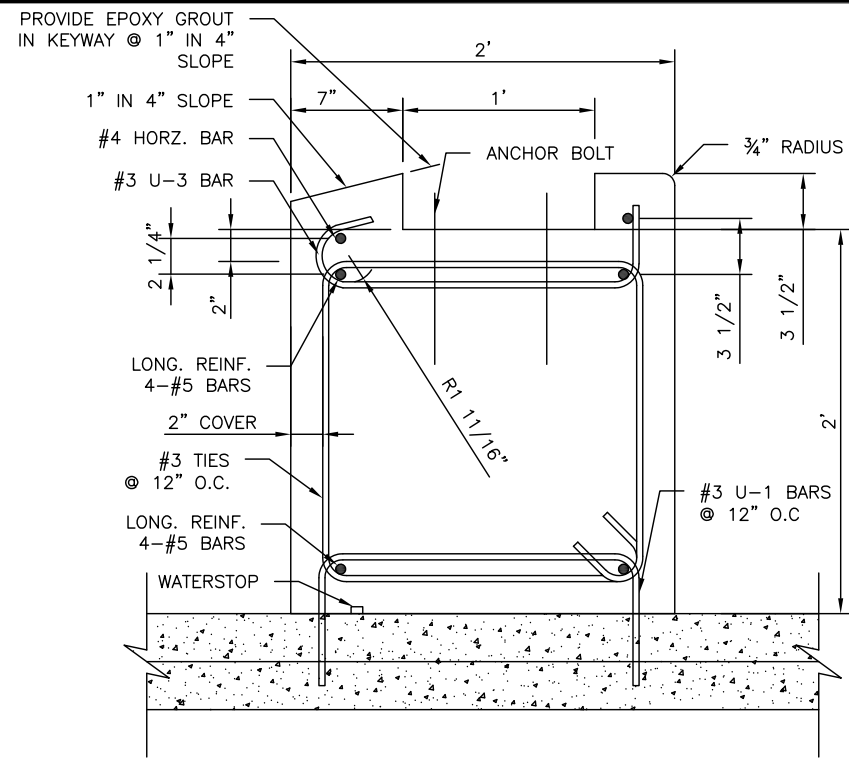
TITLE: **FOUNDATION FRONT & REAR ELEV. PLANS**

DESIGNED BY: BSI
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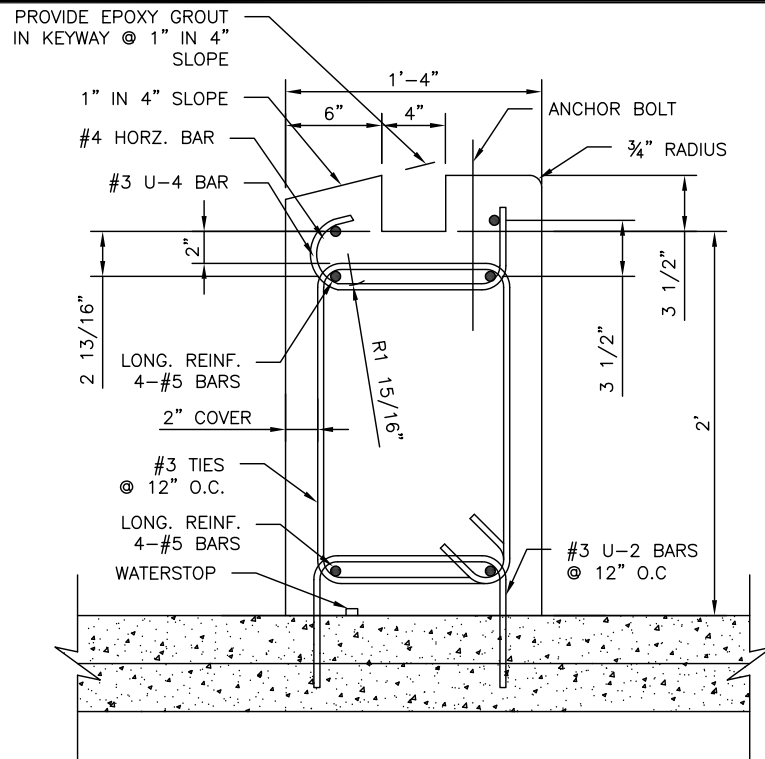
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DWG NO. **5** OF **7**

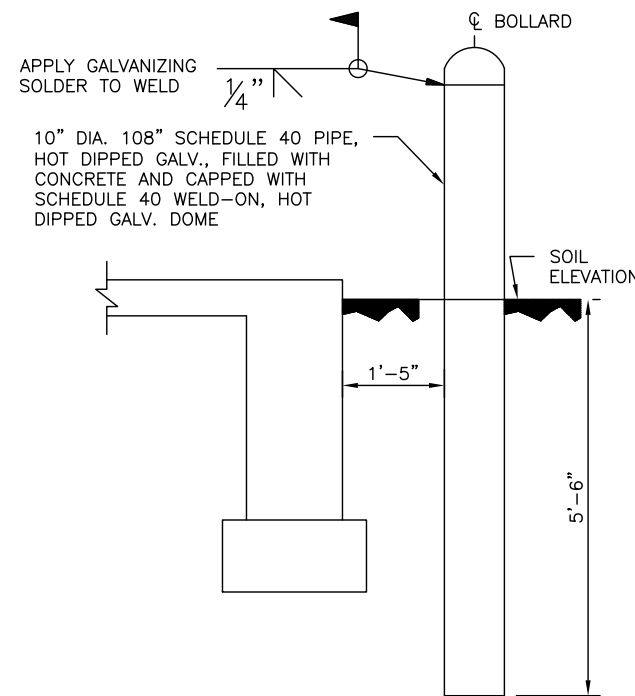
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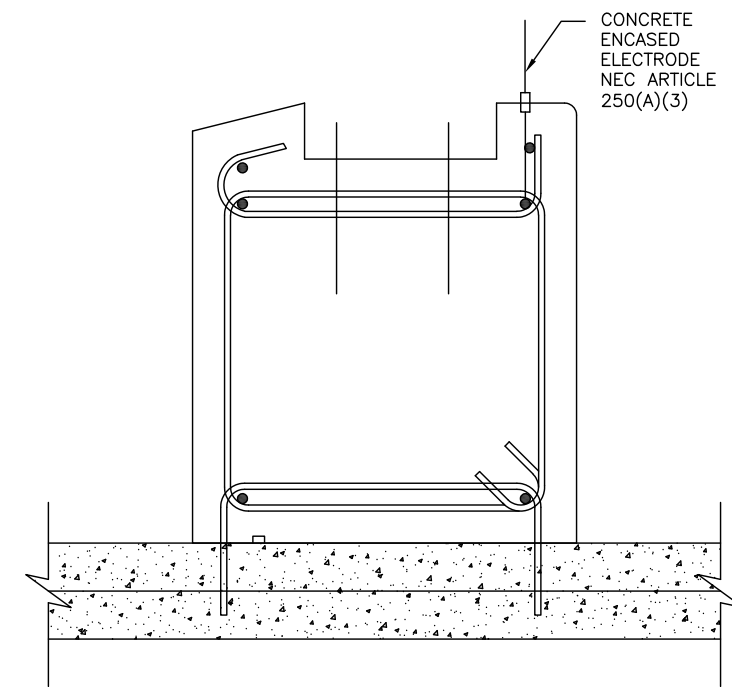
A STEM WALL SECTION DETAIL
SCALE: 1" = 1'-0"



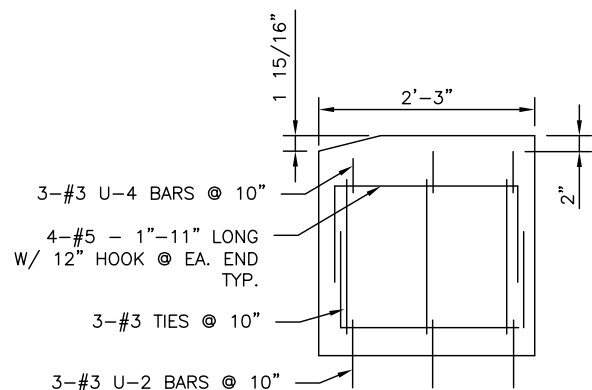
B ENDWALL SECTION DETAIL
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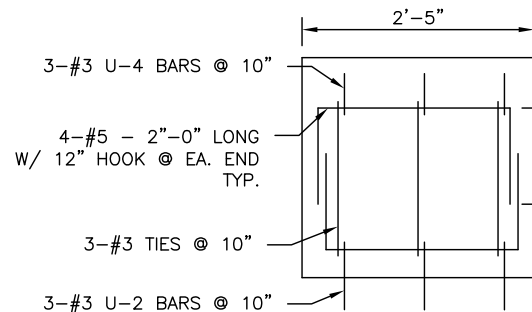
C BOLLARDS
SCALE: 3/8" = 1'-0"



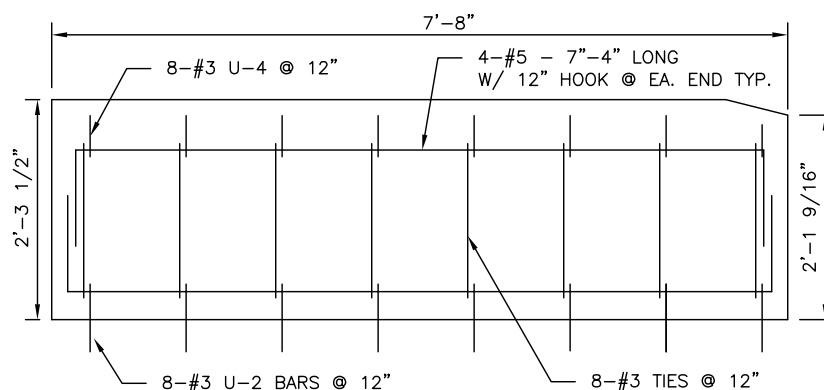
D ENCASED ELECTRODE DETAIL
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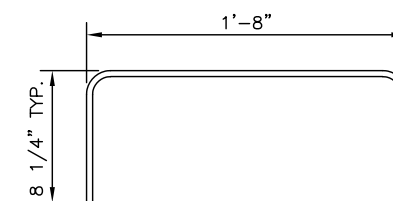
E FRONT ELEVATION
SCALE: 1/2" = 1'-0"



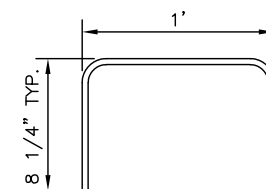
F FRONT ELEVATION
SCALE: 1/2" = 1'-0"



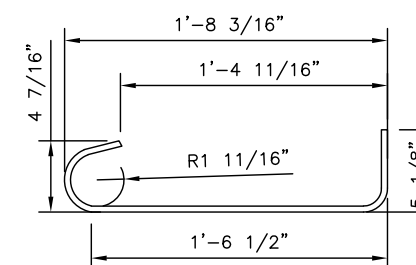
G FRONT ELEVATION
SCALE: 1/2" = 1'-0"



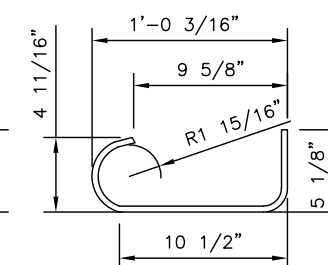
STEAM WALL U-1 BAR
SCALE: 1" = 1'-0"



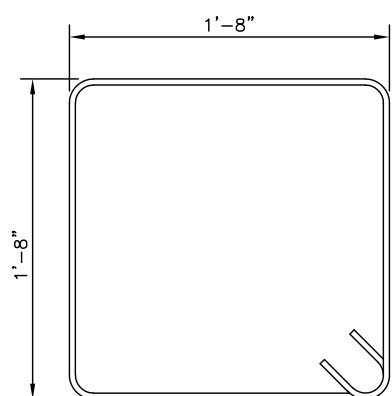
ENDWALL U-2 BAR
SCALE: 1" = 1'-0"



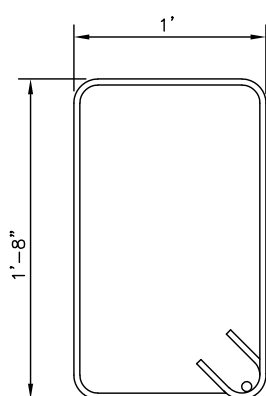
STEAM WALL U-3 BAR
SCALE: 1" = 1'-0"



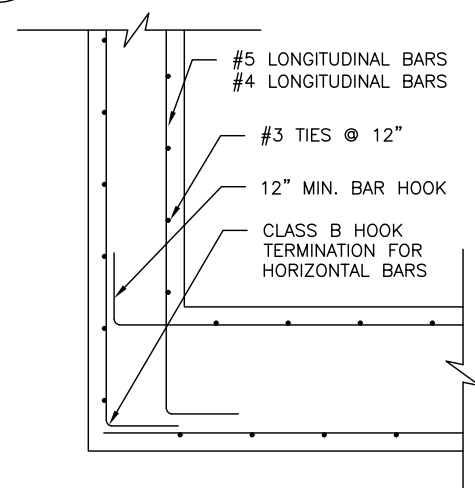
STEAM WALL U-4 BAR
SCALE: 1" = 1'-0"



STEAM WALL TIE
SCALE: 1" = 1'-0"



ENDWALL TIE
SCALE: 1" = 1'-0"

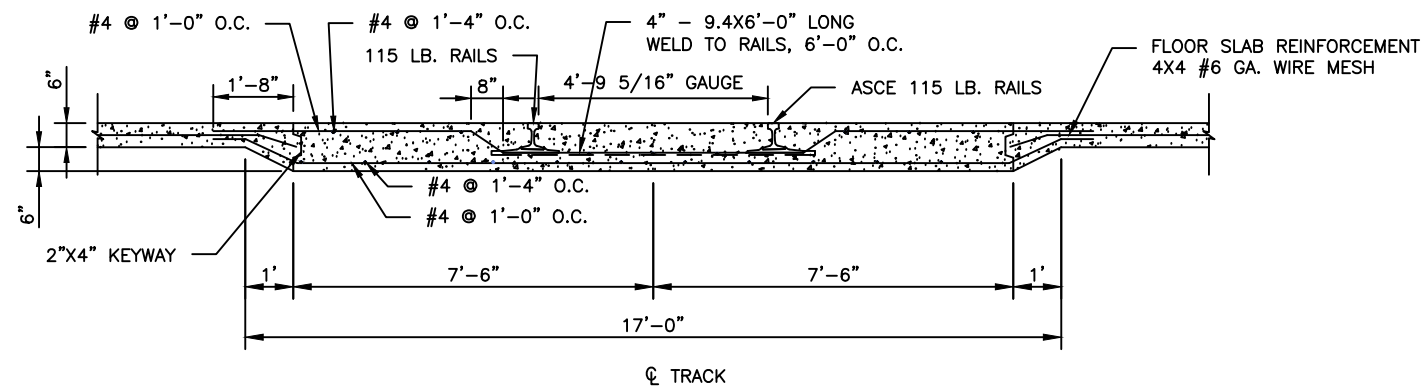


CORNER SECTION VIEW
SCALE: 3/8" = 1'-0"

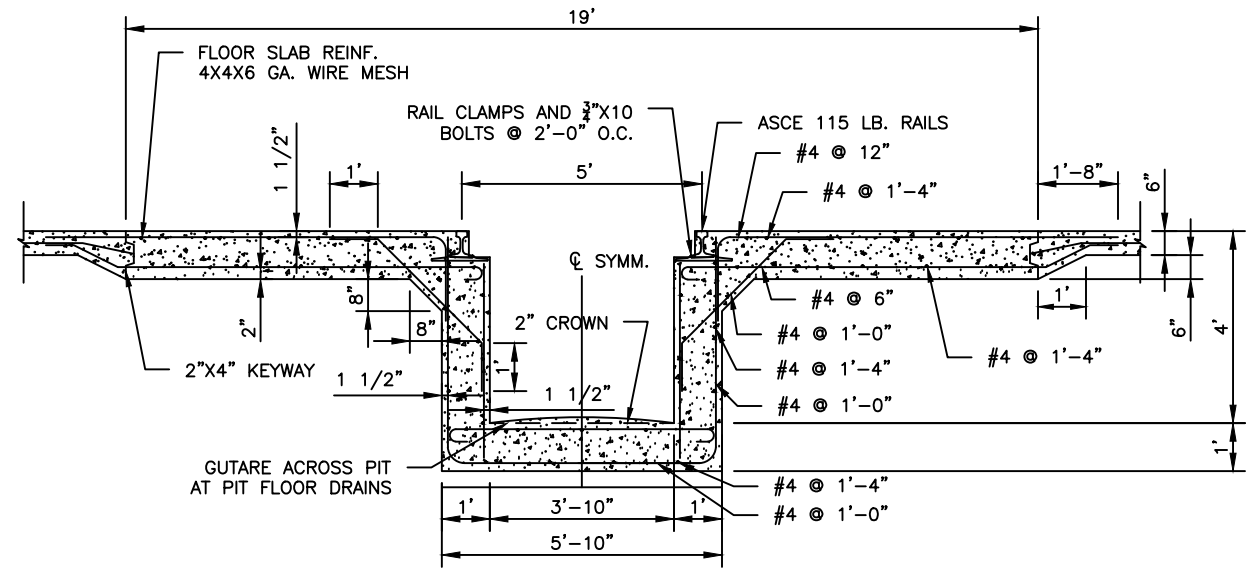


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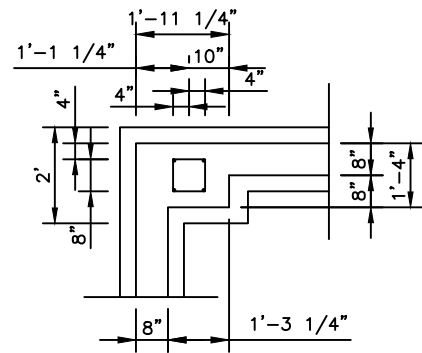
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<p>PROJECT: HEALY EQUIPMENT BUILDING</p>		
<p>TITLE: FOUNDATION PROPOSED SECTION DETAILS</p>		
DESIGNED BY: BSI	SCALE: AS NOTED	AFE NO.:
DRAWN BY: BSI	DATE: APRIL 2022	ACAD FILE:
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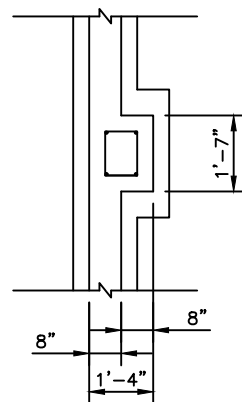
SECTION THRU TRACK
SCALE: 1/4" = 1'-0"



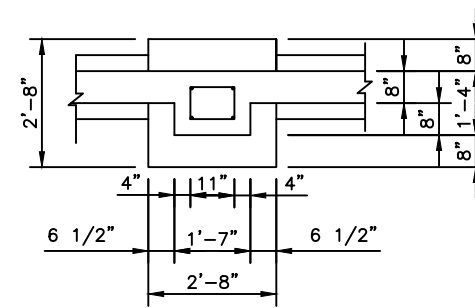
SECTION THRU PIT
SCALE: 1/4" = 1'-0"




CORNER SECTION PLAN
SCALE: 1/4" = 1'-0"



SHORT WALL PILASTER SECTION PLAN
SCALE: 1/4" = 1'-0"



LONG WALL PILASTER SECTION PLAN
SCALE: 1/4" = 1'-0"

 ALASKA RAILROAD CORPORATION ENGINEERING SERVICES P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500		
TITLE: FOUNDATION EXISTING DETAILS (FOR REFERENCE)		
DESIGNED BY: BSI	SCALE: AS NOTED	AFE NO.:
DRAWN BY: BSI	DATE: APRIL 2022	ACAD FILE:
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