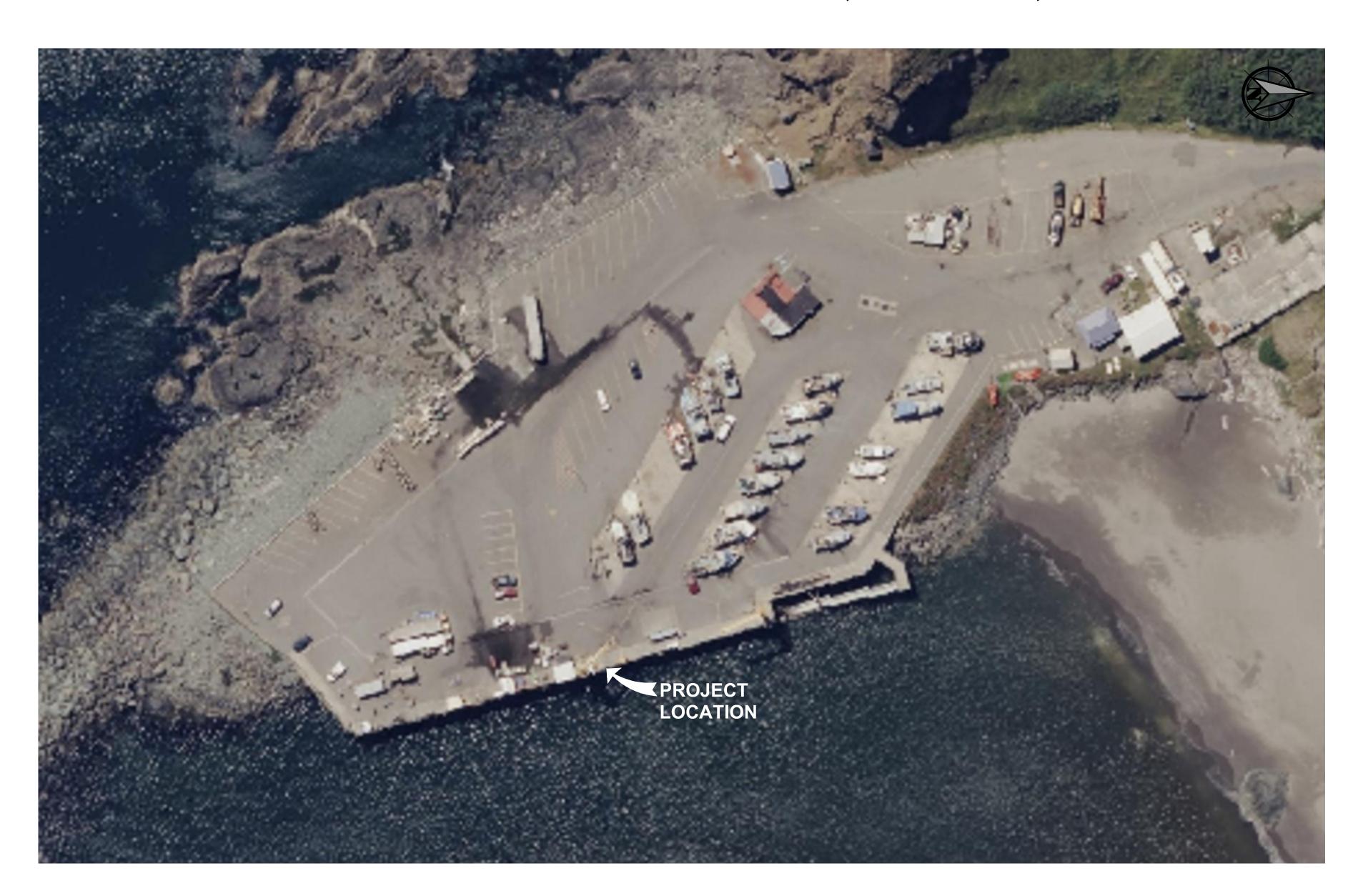
PORT OF PORT ORFORD 50 TON CRANE REPLACEMENT

300 DOCK RD, PORT ORFORD, OR 97465





VICINITY MAP

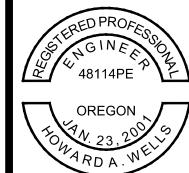
NOT TO SCALE

Sheet List Table					
Sheet Number	Sheet Title				
G-001	STRUCTURAL TITLE SHEET AND INDEX				
S-001	STRUCTURAL GENERAL NOTES AND CONSTRUCTION SEQUENCE				
S-100	GENERAL SITE PLAN				
S-200	CRANE FOUNDATION PLAN				
S-201	CRANE FOUNDATION ELEVATION				
S-202	REINFORCEMENT DETAILS (1 OF 2)				
S-203	REINFORCEMENT DETAILS (2 OF 2)				
S-204	DETAILS				
S-300	ELECTRICAL ROOM FOUNDATION PLAN AND ROOF FRAMING PLAN				
S-301	ELECTRICAL ROOM ELEVATIONS				
S-302	ELECTRICAL ROOM DETAILS				
S-303	OPERATOR BOOTH FOUNDATION PLAN AND ROOF FRAMING PLAN				
S-304	OPERATOR BOOTH ELEVATIONS				
S-305	OPERATOR BOOTH DETAILS				
E1-00	COVER SHEET				
E2-00	ELECTRICAL SITE PLANS				
E3-00	ELECTRICAL DETAILS				
E4-00	ONE LINE DIAGRAM				

ISSUED FOR BID



REPLACEMENT



SHEET ID

GENERAL NOTES

- THE GENERAL STRUCTURAL NOTES ARE INTENDED TO AUGMENT THE DRAWINGS AND SPECIFICATIONS. SEE DRAWINGS AND SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES. SHOULD CONFLICTS EXIST BETWEEN THE DRAWINGS, SPECIFICATIONS, AND GENERAL STRUCTURAL NOTES, THE STRICTEST PROVISION SHALL GOVERN.
- CONSTRUCTION MEANS AND METHODS SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR U.N.O.
- 3. THE STRUCTURE, OR STRUCTURES, DEFINED BY THESE DRAWINGS HAVE BEEN DESIGNATED AS COMPLETE STRUCTURES TO RESIST THE LOADS LISTED IN THE DESIGN SECTION OF THESE GENERAL NOTES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION LOADS AND OTHER LOADS IMPOSED ON THE PARTIALLY COMPLETED STRUCTURE(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF SHORING, BRACING, FORMWORK, ERECTION AIDS, AND OTHER NON-PERMANENT SUPPORTING ELEMENTS UTILIZED FOR CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING IN ALL DIRECTIONS UNTIL ARE PERMANENT CONNECTIONS ARE MADE.
- 4. THE CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM DRAWINGS.
- ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION 2024.
- 6. CONDUITS, JUNCTIONS AND ANY OTHER UTILITIES AND CRANE RELATED PARTS ARE SHOWN FOR REFERENCE ONLY AND ARE SCHEMATIC. CONTRACTOR SHALL COORDINATE THESE PLANS WITH THE ELECTRICAL, CRANE DRAWINGS AND OTHER UTILITY PLANS.

DESIGN

- STRUCTURAL DESIGN IS BASED ON A GEOTECHNICAL ENGINEERING REPORT BY PBS DATED JUNE, 2024 AND MANUFACTURER PROVIDED DRAWINGS.
- UNFACTORED DESIGN LOADS (EXCEPT SEISMIC) ARE PROVIDED BY CRANE MANUFACTURER, WHICH ARE AS

LOAD CASE	Fx (kips)	Fy (kips)	Fz (kips)	Mx (kip*ft)	My (kip*ft)	Mz (kip*ft)
DEAD	0	0	-107.70	0	224.22	0
LIVE	-35.52	23.60	-117.13	1248.00	5359.86	-647.58
WIND	-24.05	-30.12	0	982.40	-689.62	306.83
TEST LOAD	0	0	162.76	0	4825.13	0

- 3. PER MANUFACTURER, DYNAMIC AMPLIFICATION FACTOR OF 2 HAS BEEN USED.
- 4. SEISMIC DESIGN DATA PER GEOTECHNICAL REPORT:

PARAMETER	SHORT PERIOD	1 SECOND	
SPECTRAL ACCELERATION	S _S = 1.717 g	S ₁ = 0.629 g	
SITE CLASS	D		
SITE COEFFICIENT	F _a = 1.0	F _v = 1.5	
DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS	S _{DS} = 1.717 g	S _{D1} = 0.944 g	
PEAK GROUND ACCELERATION	PGA = 0.810 g		
SITE COEFFICIENT FOR PEAK GROUND ACCELERATION	F _{PGA} = 1.0		
EFFECTIVE PEAK GROUND ACCELERATION	A _S = 0.810 g		

ANCHOR RODS:

- . ANCHOR RODS SHALL CONFORM TO ASTM A354 GRADE BD.
- BASE PLATE AND ANCHOR PLATES SHALL CONFORM TO ASTM A36.
- THE EMBEDMENT DEPTH OF BOLT TO SHAFT CONFORMS TO THE REQUIREMENT OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION 9TH EDITION.
- 4. THE ELEVATION AND LOCATION OF ANCHOR RODS AND ANCHOR PLATE ARE CRITICAL. USE SURVEY TECHNIQUES TO VERIFY THE ELEVATION. LOCATION. AND ORIENTATION OF ANCHOR BOLT GROUPS PRIOR TO PLACEMENT OF TOP SHAFT CONCRETE.
- 5. THE LOCATIONS OF ANCHOR RODS, THE ORIENTATION OF ANCHOR ROD GROUP, AND THE FINISHED ELEVATION OF BASE PLATE ARE CRITICAL. FINISHED ELEVATION OF BASEPLATE SHALL BE FIELD VERIFIED. THE ANCHOR ROD GROUP SHALL BE ORIENTED AS SHOWN FOR CORRECT INSTALLATION OF BASEPLATE AND CRANE. CONTRACTOR TO VERIFY THIS ORIENTATION PRIOR TO PLACING SHAFT CONCRETE ABOVE CONSTRUCTION JOINT.

STRUCTURAL CONCRETE:

- ALL EXPOSED EDGES OF CONCRETE WITH AN ANGLE CHANGE GREATER THAN 50 DEGREES SHALL BE CHAMFERED 3/4" UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- CONCRETE CLEAR COVER REQUIREMENTS ARE SPECIFIED BELOW UNLESS NOTED OTHERWISE ON THE

LOCATION	SPECIFIED COVER
CAST-IN-PLACE CONCRETE EXPOSED TO EARTH OR WEATHER	2.0"
DRILLED SHAFTS	6.0"

- CONSTRUCTION JOINTS SHALL BE ROUGHENED TO AN AMPLITUDE OF 1/4" IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS UNLESS NOTED OTHERWISE.
- 4. CONCRETE USED FOR APRON REPAIR SHALL BE HPC 4500-1 1/2

STEEL REINFORCEMENT

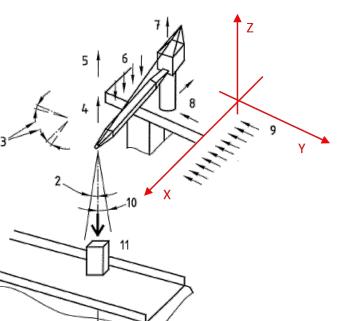
ALL NEW REINFORCING STEEL, OTHER THAN DRILLED SHAFTS REINFORCING BARS, SHALL CONFORM TO ASTM A706 GRADE 60. FOR DRILLED SHAFT REINFORCING BARS SPECIFICATIONS SEE DRILLED SHAFT NOTES.

GROUT:

SHALL BE A NONSHRINK PREPACKAGED MATERIAL CONFORMING THE REQUIREMENTS OF ASTM C1107.

CONSTRUCTION SEQUENCE:

- 1. EXISTING COMMERCIAL HOIST SHALL REMAIN IN OPERATION DURING CONSTRUCTION. EXISTING COMMERCIAL HOIST OPERATION MAY NOT BE INTERRUPTED UNTIL AT LEAST ONE NEW CRANE HAS BEEN COMMISSIONED AND IS OPERATIONAL.
- 2. LOCATE EXISTING TAIL SHEETS FOR CELLS 5 AND 9. THIS CAN BE DONE BY POTHOLING OR VISUALLY FROM WATER.
- 3. LOCATE CENTER OF DRILLED SHAFT, INSIDE CELLS AND EQUALLY SPACED FROM TAIL SHEETS ON BOTH SIDES OF CELL. THE SHAFT CENTER IS LOCATED 11'-0" FROM EXTERIOR FACE OF EXISTING CONCRETE APRON.
- 4. REMOVE PORTIONS OF EXISTING CONCRETE APRON. AS SHOWN, PROTECTING THE EXISTING LONGITUDINAL REINFORCING BARS. FIELD VERIFY ALL DIMENSIONS.
- 5. INSTALL DRILLED SHAFT WHILE PROTECTING THE REMAINDER PORTIONS OF THE EXISTING CONCRETE APRON. ALL HEAVY CONSTRUCTION EQUIPMENT AND DRILL RIG SHALL REMAIN ON INLAND SIDE OF THE PROPOSED SHAFT AT ALL TIME.
- 6. CONSTRUCT REPAIRS TO THE EXISTING APRON AS SHOWN.



- deck velocity
- offlead installation inclination (trim and heel)
- 4 hoisting velocity
- boom tip velocity snow and ice
- vertical installation accelerations horizontal installation accelerations
- wind 10 sidelead
- 11 actual hook load

ELECTRICAL ROOM AND OPERATOR BOOTH PLAN NOTES

GENERAL

- 1. THE STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL. CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THE ENTIRE SET OF CONTRACT DOCUMENTS (INCLUDING THE PROJECT SPECIFICATIONS) INTO THEIR WORK.
- 2. THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 3. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. D. ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

FOUNDATIONS

- 1. FOUNDATION SIZES ARE BASED UPON A MAXIMUM TOTAL LOAD BEARING SOIL PRESSURE AS NOTED IN DESIGN CRITERIA FOR BEARING ON NATIVE SOILS/COMPACTED FILL, AS RECOMMENDED BY THE GEOTECHNICAL REPORT.
- 2. ALL DISTURBED SOIL SHALL BE REMOVED BY HAND OPERATION FROM FOOTING EXCAVATIONS TO NEAT LINES AND REPLACED WITH ENGINEERED FILL IF
- 3. THE CONTRACTOR SHALL REVIEW ALL GEOTECHNICAL ENGINEER RECOMMENDATIONS PRIOR TO THE COMMENCEMENT OF ANY SITEWORK.
- 4. FOUNDATIONS SHALL BEAR ON COMPETENT NATIVE SOIL OR COMPACTED STRUCTURAL FILL AS PER THE GEOTECHNICAL REPORT.

CAST-IN-PLACE CONCRETE

- 1. COMPRESSIVE STRENGTH TO BE 2500 PSI AT 28 DAYS, 1" MAXIMUM AGGREGATE SIZE, AND 5% AIR CONTENT
- 2. CONFORM TO ACI 301 FOR REQUIREMENTS FOR CEMENTITIOUS MATERIALS, AGGREGATES, MIXING WATER, AND ADMIXTURES.
- 3. CONFORM TO ACI 301 FOR FORM WORK, HANDLING, PLACING CONSTRUCTION, AND CURING REQUIREMENTS.

REINFORCEMENT (ELECTRICAL BUILDING ONLY)

- 1. REINFORCING BARS TO BE ASTM A615, GRADE 60, DEFORMED BARS.
- 2. CONCRETE COVER
- CONCRETE CAST AGAINST EARTH: 3" - CONCRETE EXPOSED TO EARTH OR WEATHER: 2"
- 3. ANCHOR BOLTS TO BE ASTM F1554 GRADE 36.

REINFORCED UNIT MASONRY

- 1. CONCRETE MASONRY UNIT AND MORTAR COMPRESSIVE STRENGTH TO BE 2000 PSI.

- CONCRETE MASONRY UNITS: CONFORM TO ASTM C-90-14, TYPE-I (MOISTURE CONTROLLED), MEDIUM WEIGHT (APPROX. 115 PCF) UNITS. - MORTAR: CONFORM TO ASTM C270, TYPE S, AND IBC SECTION 2103.2.

3. PAINT EXTERIOR CMU WALL WITH MARINE GRADE EPOXY COATING, PAINT COLOR SELECTION BY OWNER.

WOOD

- 1. SAWN LUMBER TO BE DOUGLAS FIR-LARCH NO. 2.
- 2. FRAMING CONNECTORS, ACCESSORIES, AND FASTENERS AS NOTED IN PLANS AND DETAILS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE. ALTERNATIVE EQUIVALENT HARDWARE MAY BE USED WITH PRIOR APPROVAL BY EOR.
- 3. TYPICAL NAILING NOT SHOWN IN PLAN SHALL CONFORM TO FASTENING SCHEDULE PER IBC TABLE 2304.10.1.
- 4. WOOD SHEATHING PANELS SHALL HAVE APA GRADE TRADEMARK AND SHALL BE C-D INT APA WITH EXTERIOR GLUE (CDX). OSB PANELS SHALL BE EXPOSURE 1 ALL ROOF AND FLOOR SHEATHING PANELS SHALL BE INSTALLED FACE GRAIN PERPENDICULAR TO SUPPORTS AND IN A STAGGERED PATTERN UNLESS NOTED OTHERWISE PER PLAN.
- 5. ALL SAWN LUMBER SHALL BE PRESSURE TREATED MARINE GRADE PER AWPA CATEGORY UC5A
- 6. SIDING TO BE MARINE GRADE T1-11.
- 7. REFER TO IBC TABLE 2304.10.1 FOR ROUGH FRAMING NAILING THAT'S NOT SHOWN IN PLAN AND DETAILS

POST-INSTALLED ANCHORS

- 1. THE FOLLOWING ADHESIVE-TYPE ANCHORING SYSTEMS HAVE BEEN USED IN DESIGN AND SHALL BE USED FOR ANCHORAGE TO CONCRETE. AS APPLICABLE AND IN ACCORDANCE WITH CORRESPONDING CURRENT ICC EST REPORT. - HILTI "HIT-HY 200"
- HILTI "HIT-RE 500 V3"
- SIMPSON "SET-XP"
- SIMPSON "EP-HP"



9

0 QU S 0

Know what's below. Call before you dig.



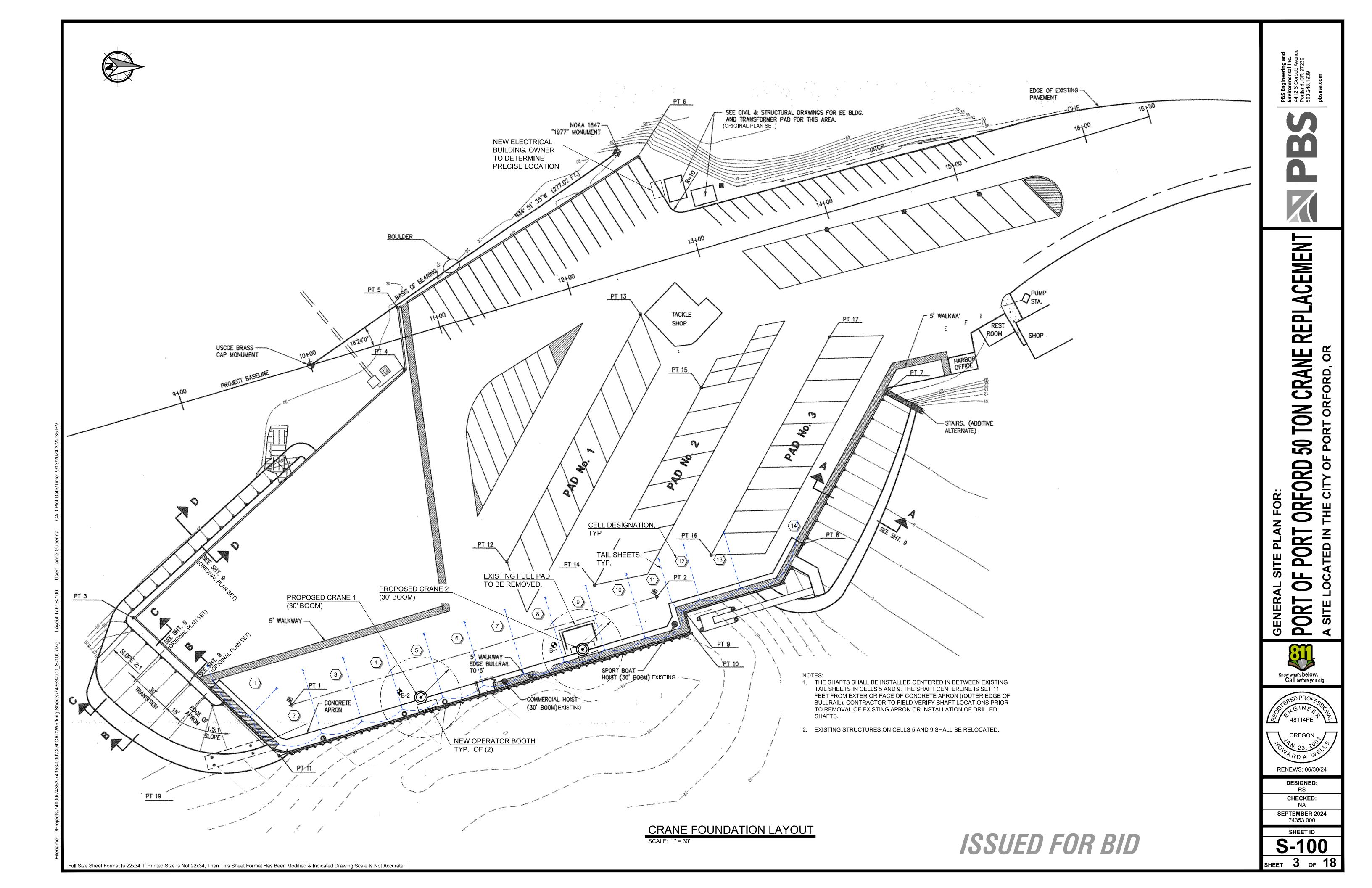
RENEWS: 06/30/24

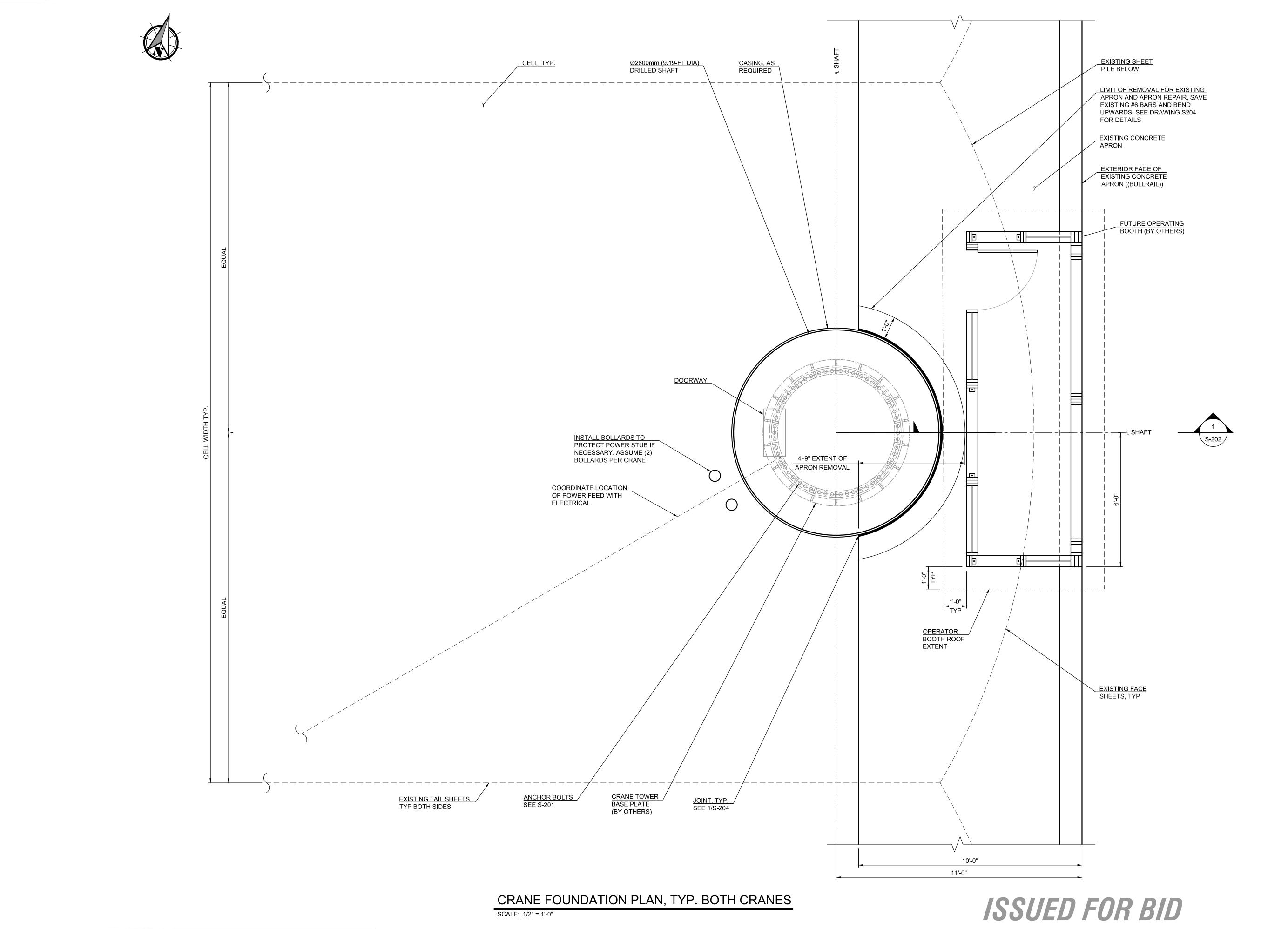
DESIGNED: RS CHECKED:

74353.000 SHEET ID

NA

SEPTEMBER 2024



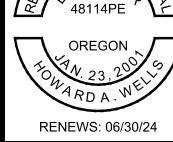




ACEMENT.

REPL, CRANE S 50 FOR ORFORD **FOUNDATION PI** 9 PORT



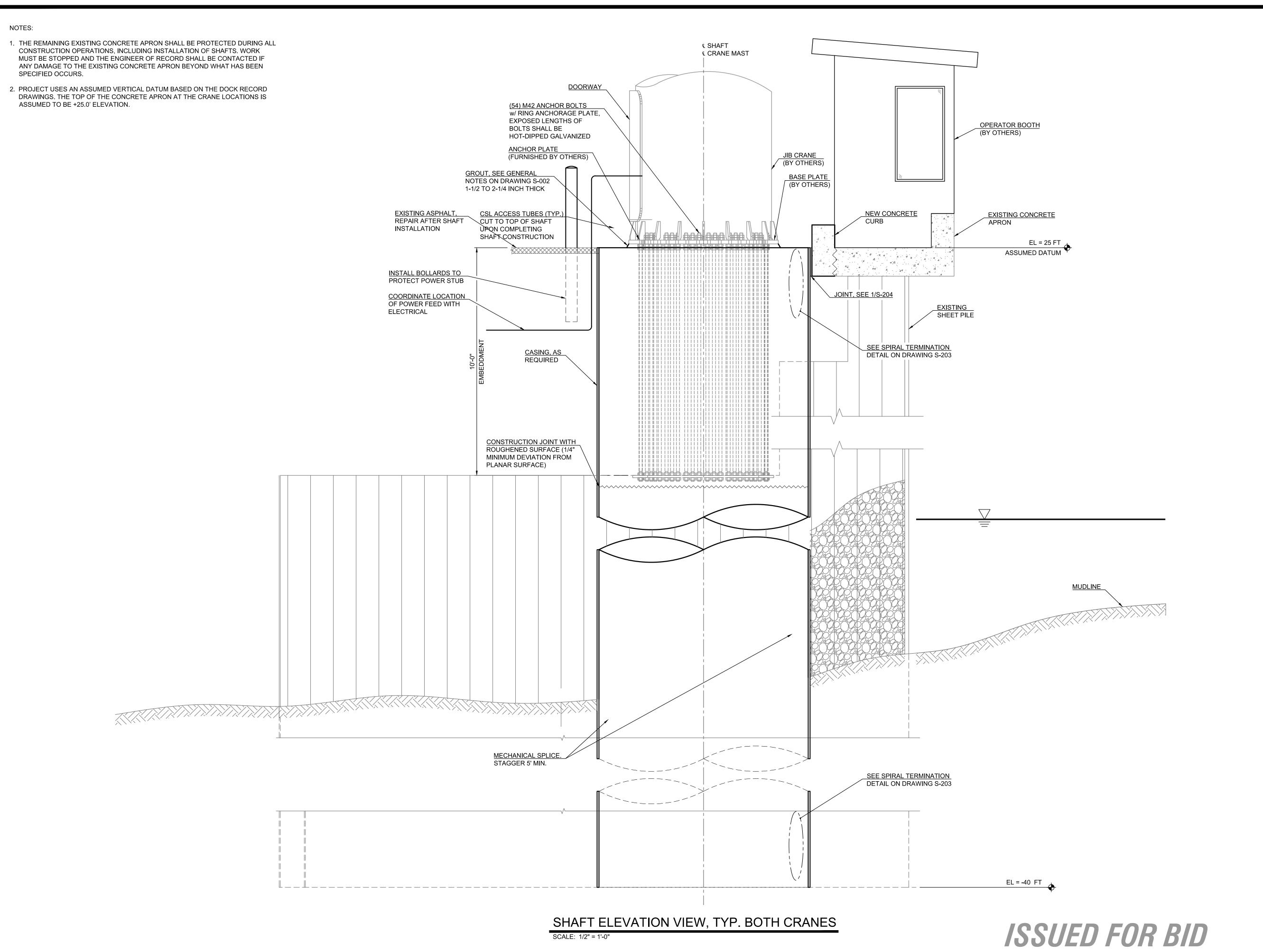


DESIGNED:

SEPTEMBER 2024 74353.000

SHEET ID **S-200**

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.



PBS Engineering a Environmental Inc. 4412 S Corbett Ave Portland, OR 97239 503.248.1939 pbsusa.com

REPLACEMENT

FOUNDATION ELEVATION FOR:

OF PORT ORFORD 50 TON CRANE REPLACEMENT OF PORT ORFORD, OR

Know what's below.
Call before you dig.





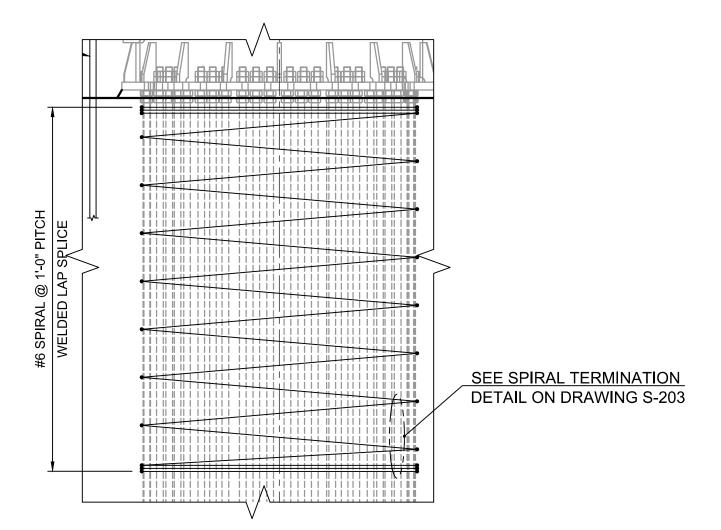
DESIGNED:

RS
CHECKED:
NA
SEPTEMBER 202
74353.000

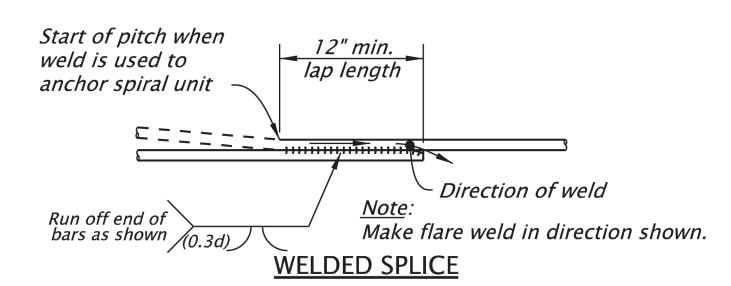
S-201

DRILLED SHAFT NOTES

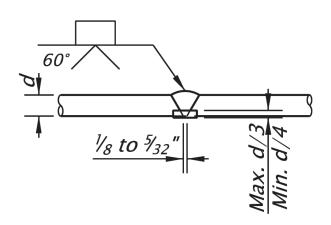
- UNLESS NOTED OTHERWISE, ALL CONCRETE WORK, DETAILING, FABRICATION, AND PLACING OF REINFORCING AND CONCRETE SHALL BE GOVERNED BY THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION 9TH EDITION.
- 2. ALL CONCRETE SHALL BE NORMAL WEIGHT CLASS 5000 3/8 DRILLED SHAFT.
- 3. SHAFT LONGITUDINAL REINFORCING STEEL SHALL CONFORM TO ASTM A706, GRADE 80.
- 4. ALL OTHER REINFORCING BARS SHALL CONFORM TO ASTM A706, GRADE 60.
- 5. TEMPORARY CASING OR DRILLING SLURRY MAY BE NEEDED TO MITIGATE POTENTIAL CAVING OR SLOUGHING SOILS. SEE THE PROJECT'S GEOTECHNICAL REPORT.
- 6. LAP SPLICE WILL NOT BE PERMITTED FOR #14 VERTICAL BARS. ALL MECHANICAL SPLICES SHALL BE BARSPLICE (WWW.BARSPLICE.COM) OR EQUAL.
- 7. ALL SPLICES IN SPIRAL REINFORCEMENT SHALL BE WELDED LAP PER DETAILS SHOWN ON SHAFT DRAWINGS. SPIRALS SHALL BE FIELD OR SHOP WELDED INDEPENDENTLY AND THEN ASEMBLED AROUND THE SHAFT VERTICAL REINFORCEMENT AFTER WELDING.
- COUPLERS IN THE VERTICAL REINFORCEMENT ARE ONLY ALLOWED WITHIN THE REGION SHOWN ON THE SHAFT REINFORCEMENT DETAIL THIS SHEET. STAGGER COUPLERS A MINIMUM OF 5'-0".
- 9. LAP SPLICE LENGTH FOR SPIRAL REINFORCEMENT SHALL BE 2'-10" MIN. WITH 130 DEGREE BEND AT EACH END.
- 10. CSL TUBES SHALL MAINTAIN A 3" CLEAR SPACING FROM VERTICAL REINFORCEMENT. IF THE CLEAR SPACING CANNOT BE MAINTAINED, THE CSL TUBE SHALL BE BUNDLED WITH THE NEAREST VERTICAL REINFORCEMENT.



ANCHOR REINFORCEMENT DETAIL, TYP. BOTH CRANES



SPIRAL SPLICE/TERMINATION DETAIL



ALTERNATE WELDED SPLICE

Weld reinforcing steel splices in accordance with ANSI/AWS D1.4 "Structural Welding Code Reinforcing Steel"

ISSUED FOR BID





EMEN <u>つ</u>

品 RANE OR 50 7 OF 0 R PORT

REINFORCEMENT 9 PORT





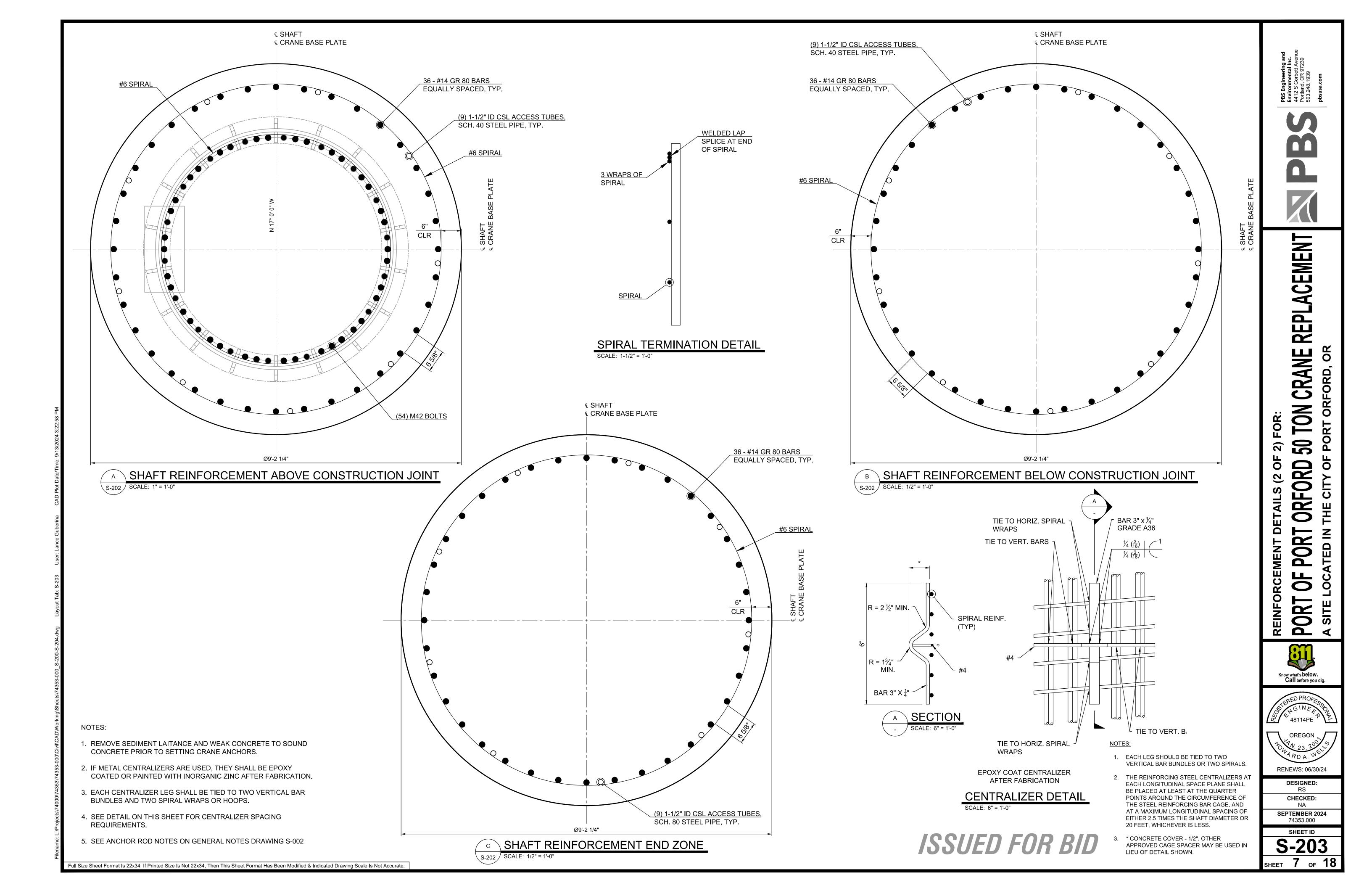
RENEWS: 06/30/24 **DESIGNED:**

CHECKED: SEPTEMBER 2024 74353.000

SHEET ID **S-202**

SHEET 6 OF 18

SCALE: 1/2" = 1'-0"



APRON REPAIR AND JOINT DETAIL

ISSUED FOR BID

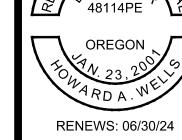
EXISTING SHEET PILE







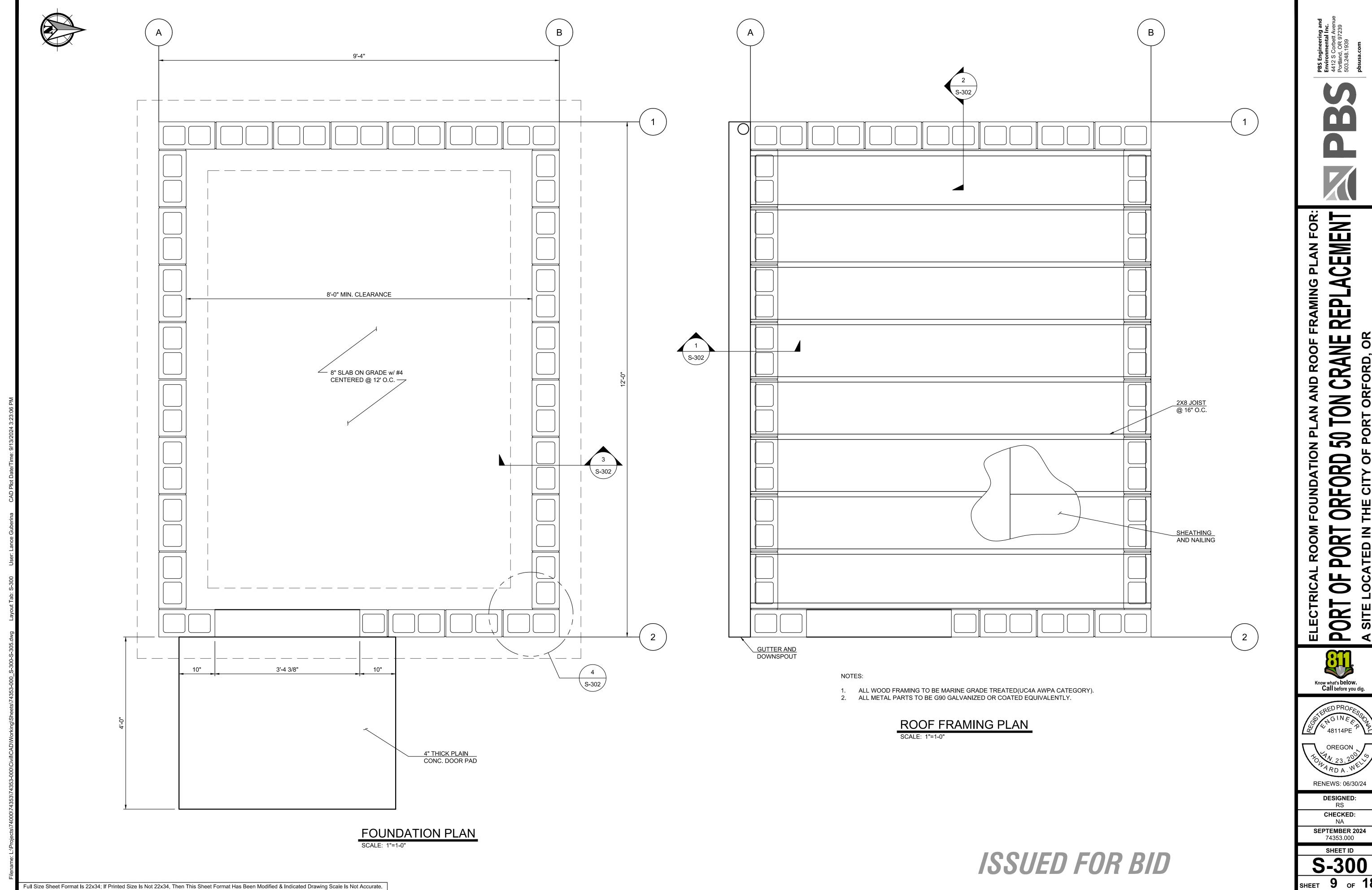
REPLACEMENT CRANE I 50 ORFORD PORT



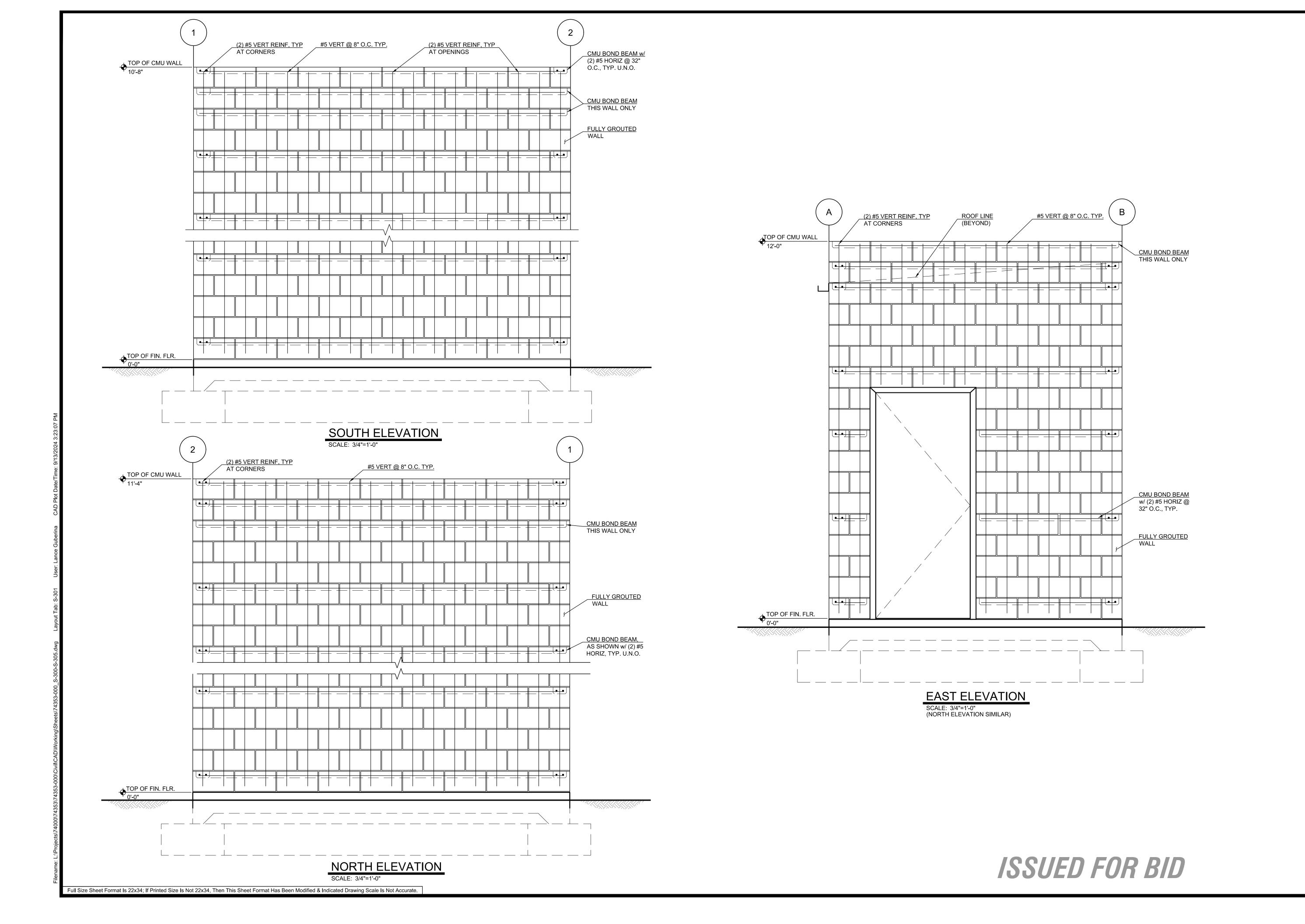
DESIGNED:

SEPTEMBER 2024 74353.000

SHEET ID **S-204**



SHEET 9 OF 18



PBS Engineering Environmental II 4412 S Corbett A Portland, OR 972 503.248.1939 pbsusa.com



ELECTRICAL ROOM ELEVATIONS FOR:

PORT OF PORT ORFORD 50 TON CRANE REPLACEMENT
A SITE LOCATED IN THE CITY OF PORT ORFORD, OR

Know what's below.
Call before you dig.



RENEWS: 06/30/24

DESIGNED:
RS

RS
CHECKED:
NA

SEPTEMBER 2024 74353.000 **SHEET ID**

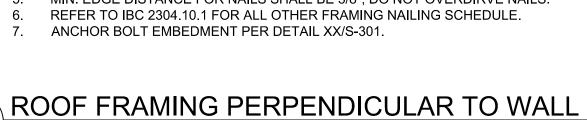
S-301
SHEET 11 OF 18

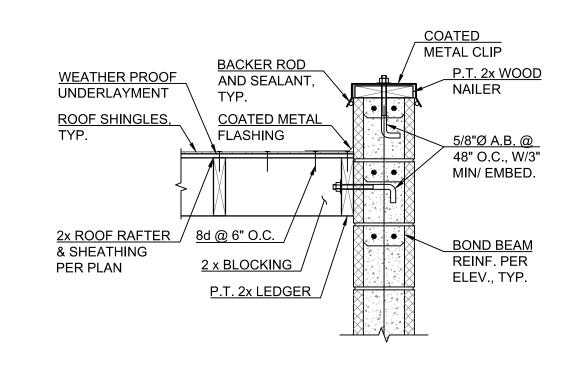
NOTES:

SCALE: 1"=1-0"

- PROVIDE 8d @ 6" O.C. EDGE NAILING AT ALL EDGES OF ALL PLYWOOD SHEETS AT SUPPORTS. PROVIDE 8d @ 12" O.C. INTERIOR FIELD NAILING AT ALL BEARING SUPPORTS. LONG DIMENSION OF PLYWOOD SHALL RUN PERPENDICULAR TO ROOF FRAMING.

- MIN. PLYWOOD SHEET SIZE 2'-0" x 4'-0" MIN. EDGE DISTANCE FOR NAILS SHALL BE 3/8", DO NOT OVERDIRVE NAILS.

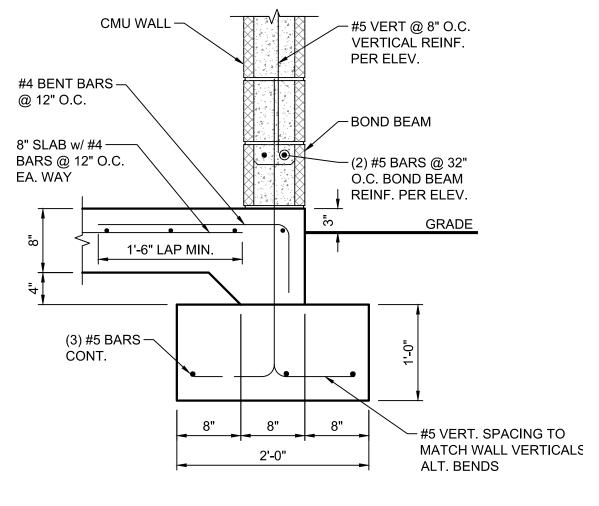




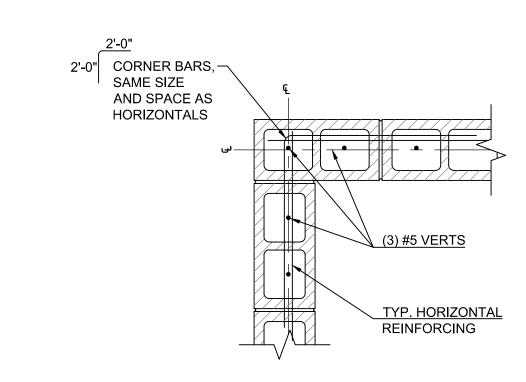
NOTES:

ANCHOR EMBEDMENT PER 5/S302

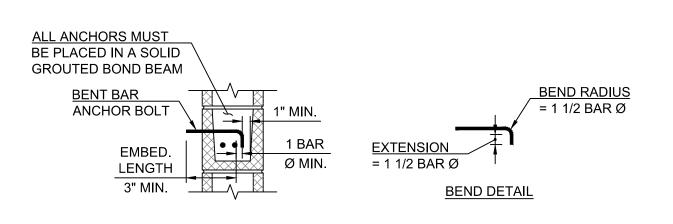














ISSUED FOR BID



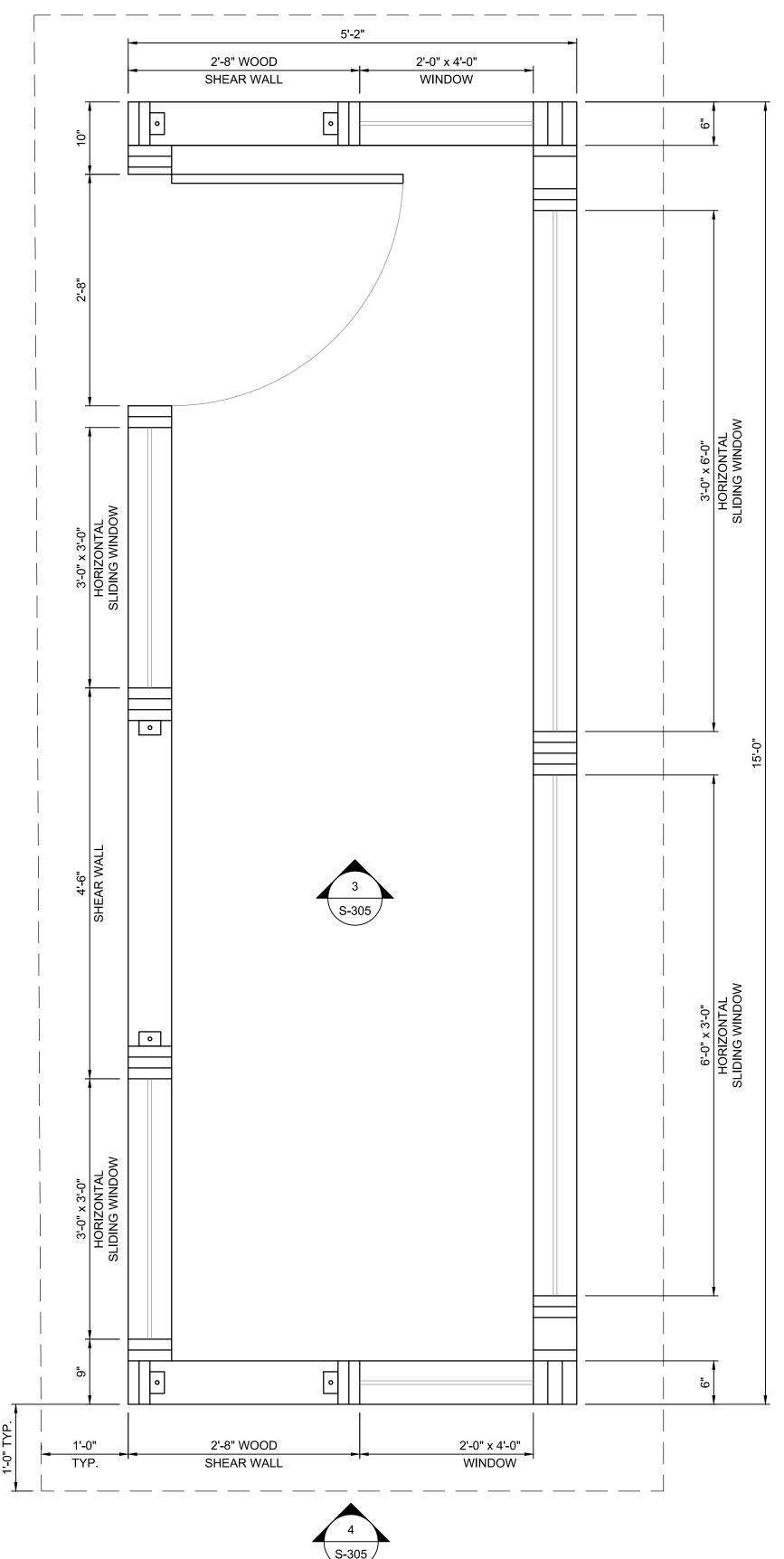
RENEWS: 06/30/24 **DESIGNED:**

RS CHECKED:

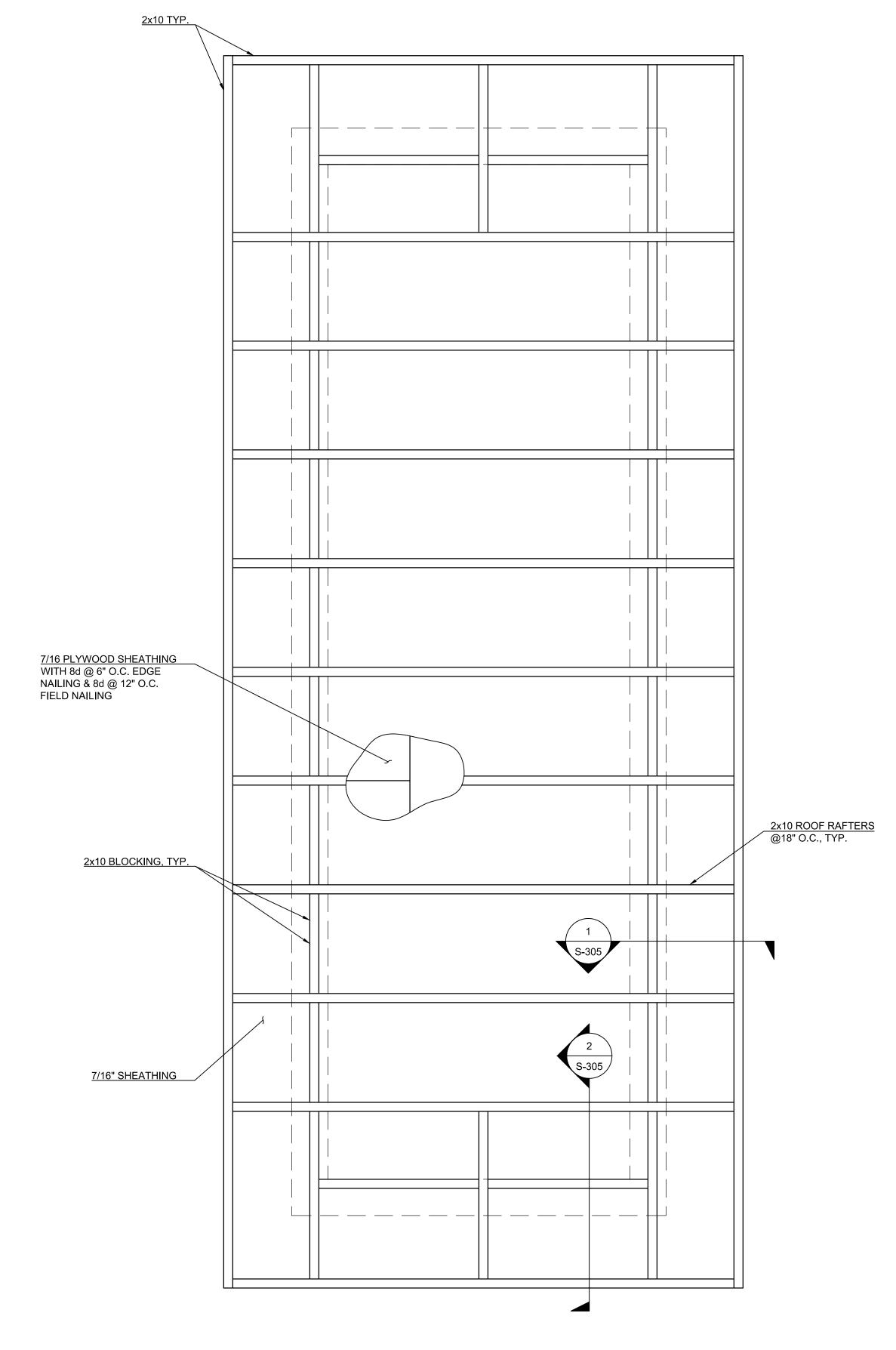
SEPTEMBER 2024 74353.000 SHEET ID

SHEET 10 OF 18





WALL FRAMING PLAN



- PROVIDE 8d @ 6" O.C. EDGE NAILING AT ALL EDGES OF ALL PLYWOOD SHEETS AT SUPPORTS.
 PROVIDE 8d @ 12" O.C. INTERIOR FIELD NAILING AT ALL BEARING SUPPORTS.
 LONG DIMENSION OF PLYWOOD SHALL RUN PERPENDICULAR TO ROOF FRAMING.
 MIN. PLYWOOD SHEET SIZE 2'-0" x 4'-0"
 MIN. EDGE DISTANCE FOR NAILS SHALL BE 3/8", DO NOT OVERDRIVE NAILS.
 REFER TO IBC 2304.10.1 FOR ALL OTHER FRAMING NAILING SCHEDULE.

ROOF FRAMING PLAN
SCALE: 1"=1-0"

ISSUED FOR BID

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.





REPL CRANE 50 ORFORD **PORT**

PORT Know what's **below. Call** before you dig.

9

RENEWS: 06/30/24

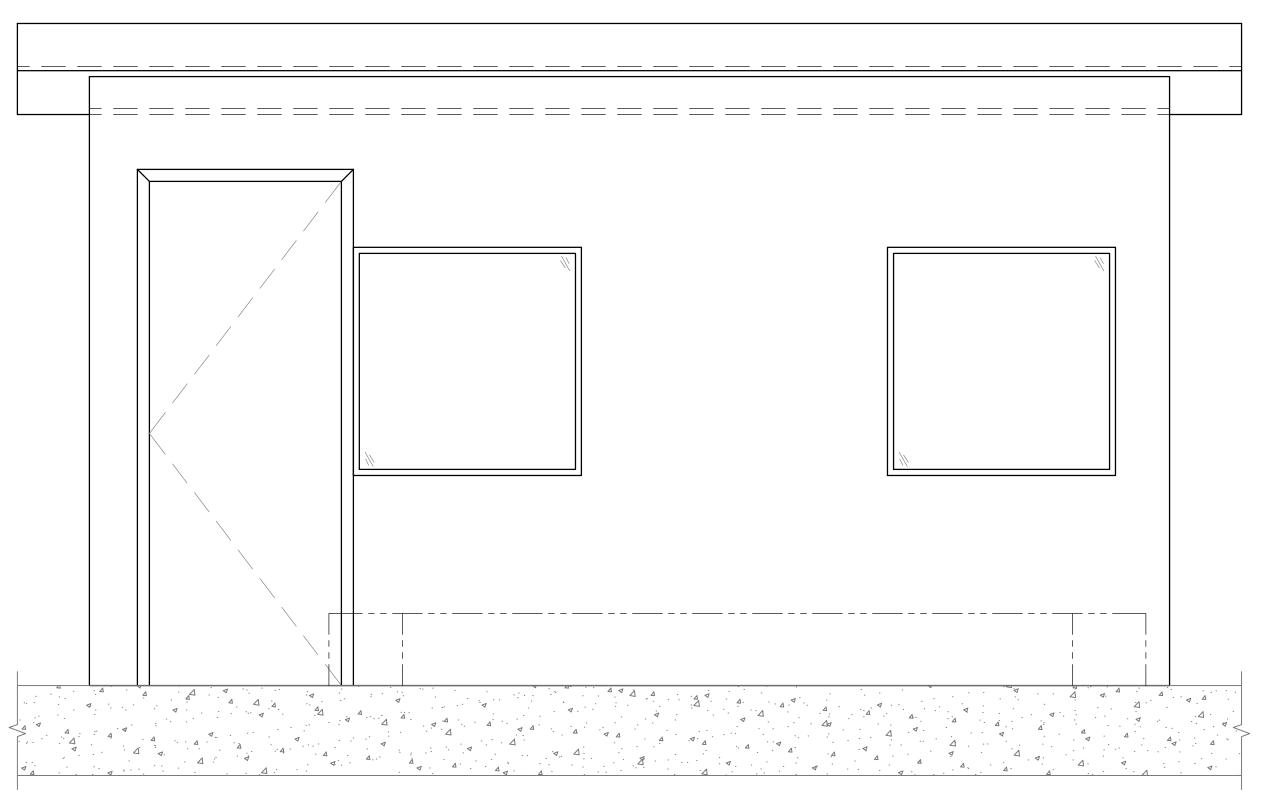
DESIGNED: RS

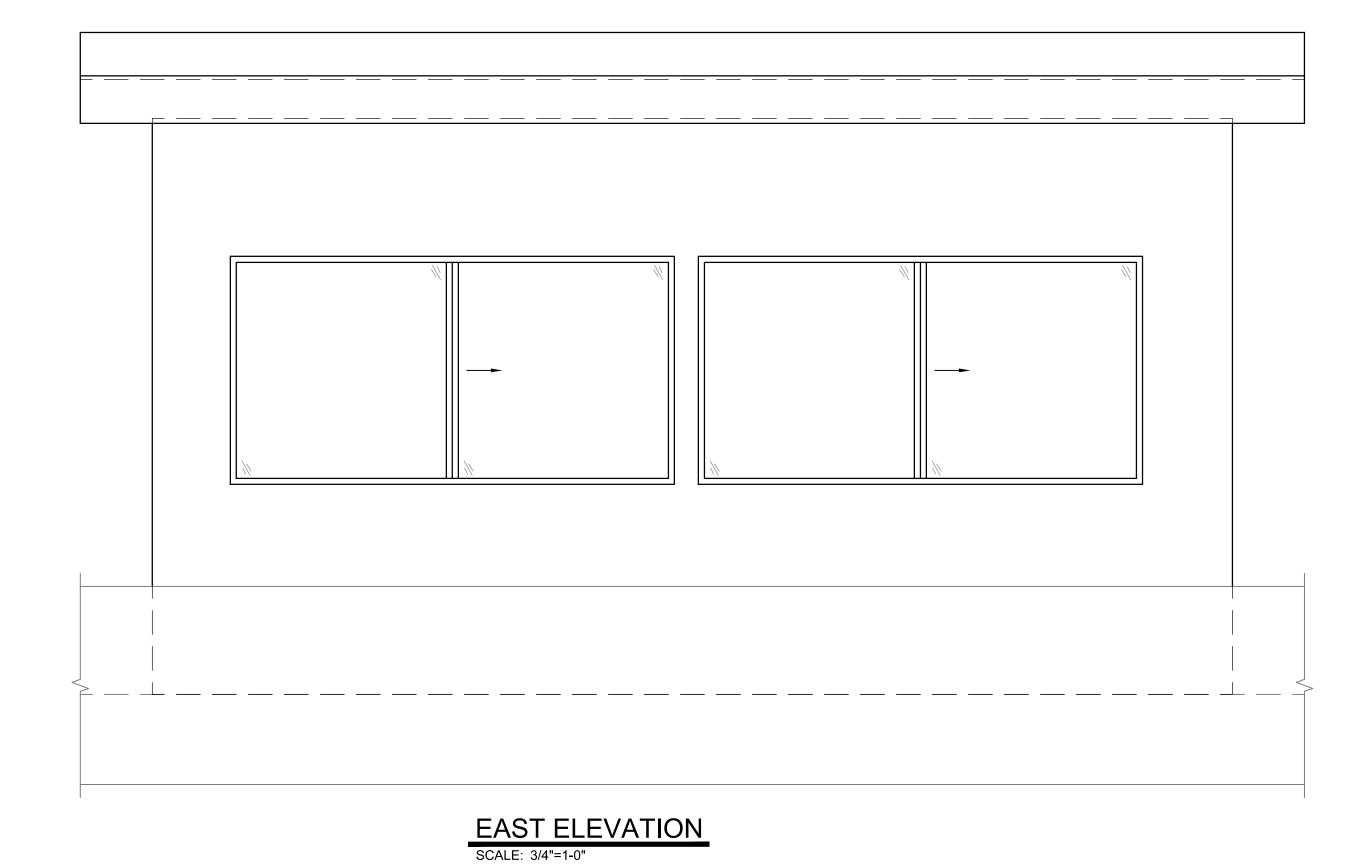
CHECKED:

SEPTEMBER 2024 74353.000

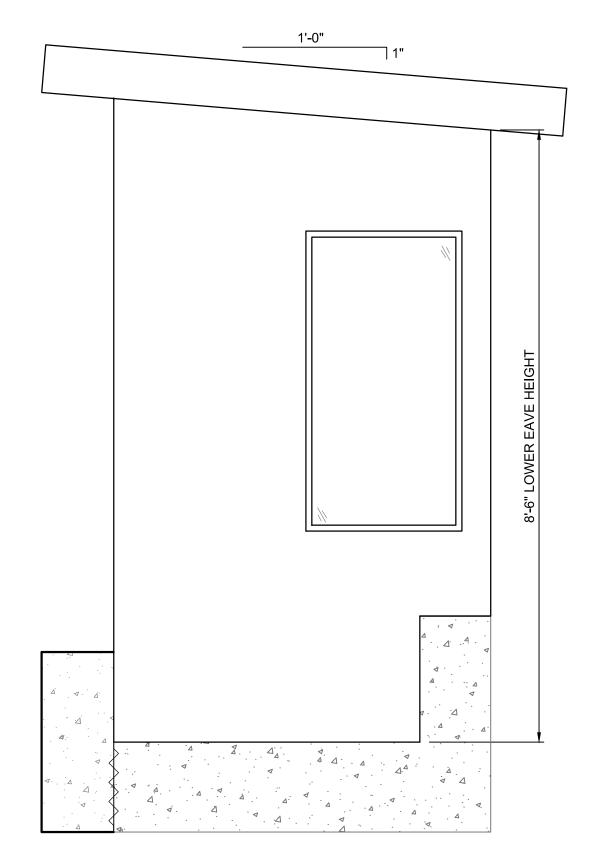
SHEET ID **S-303**

SHEET 12 OF 18





WEST ELEVATION
SCALE: 3/4"=1-0"

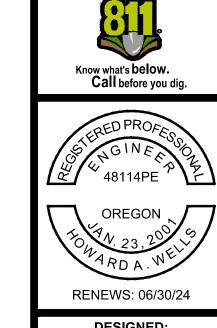


SOUTH ELEVATION NORTH ELEVATION IS MIRRORED

ISSUED FOR BID

POR' 9 PORT

ORFORD 50 TON CRANE REPLACEMENT
THE CITY OF PORT ORFORD, OR

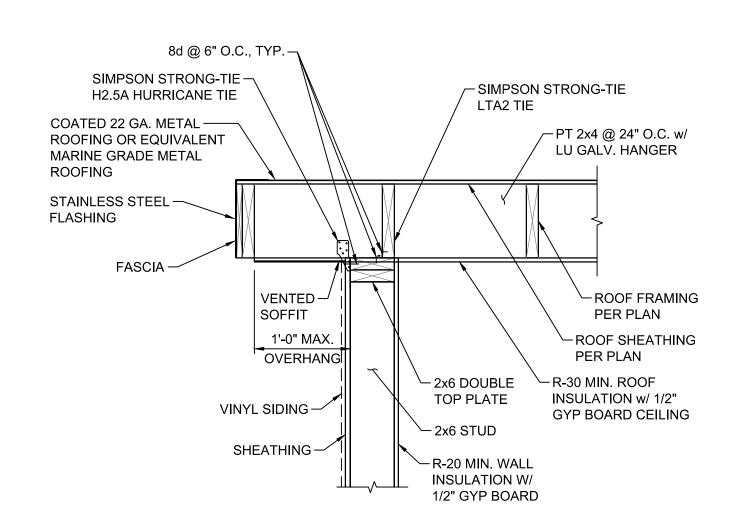


DESIGNED: RS CHECKED:

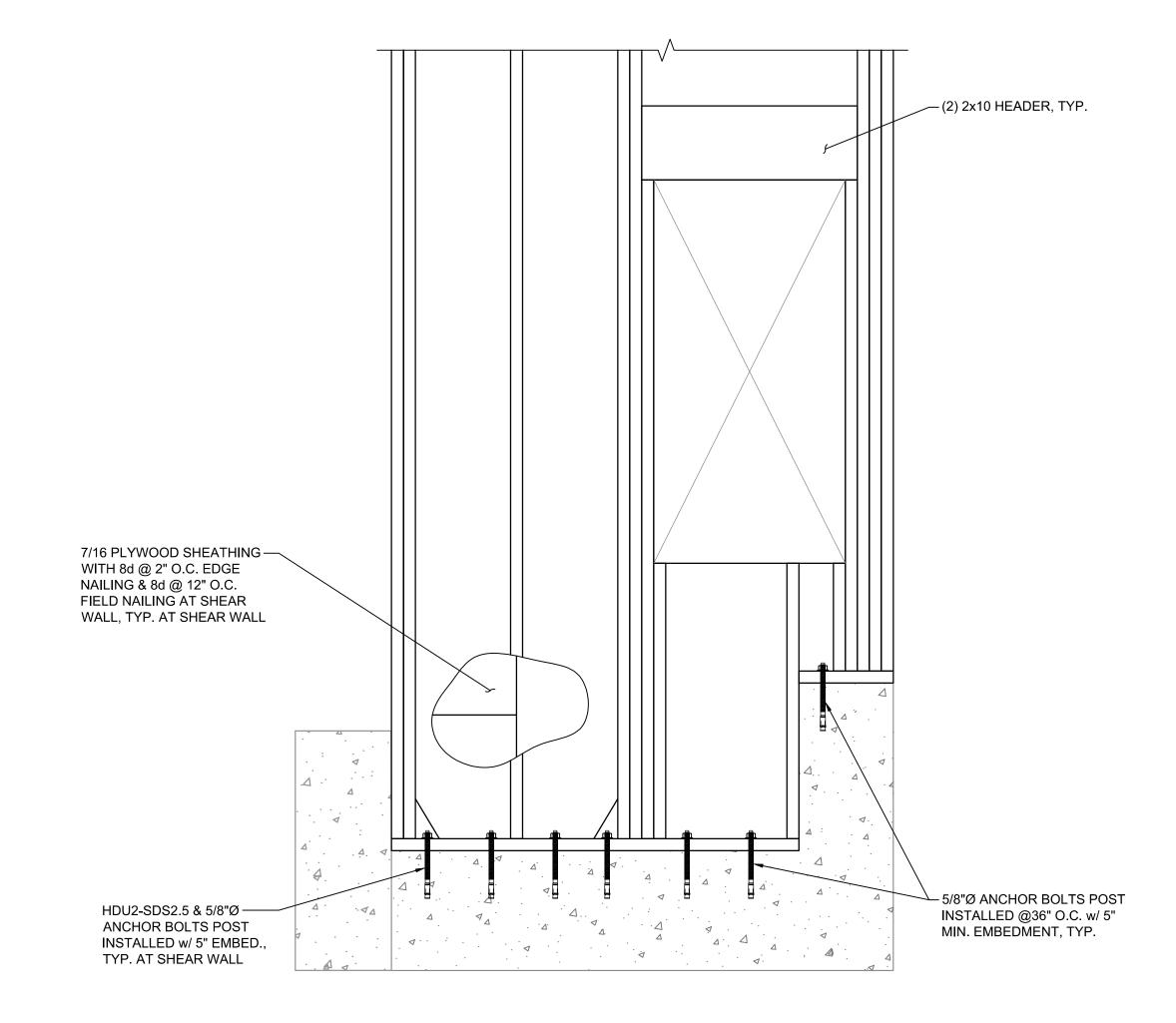
SEPTEMBER 2024 74353.000 SHEET ID

SHEET 13 OF 18



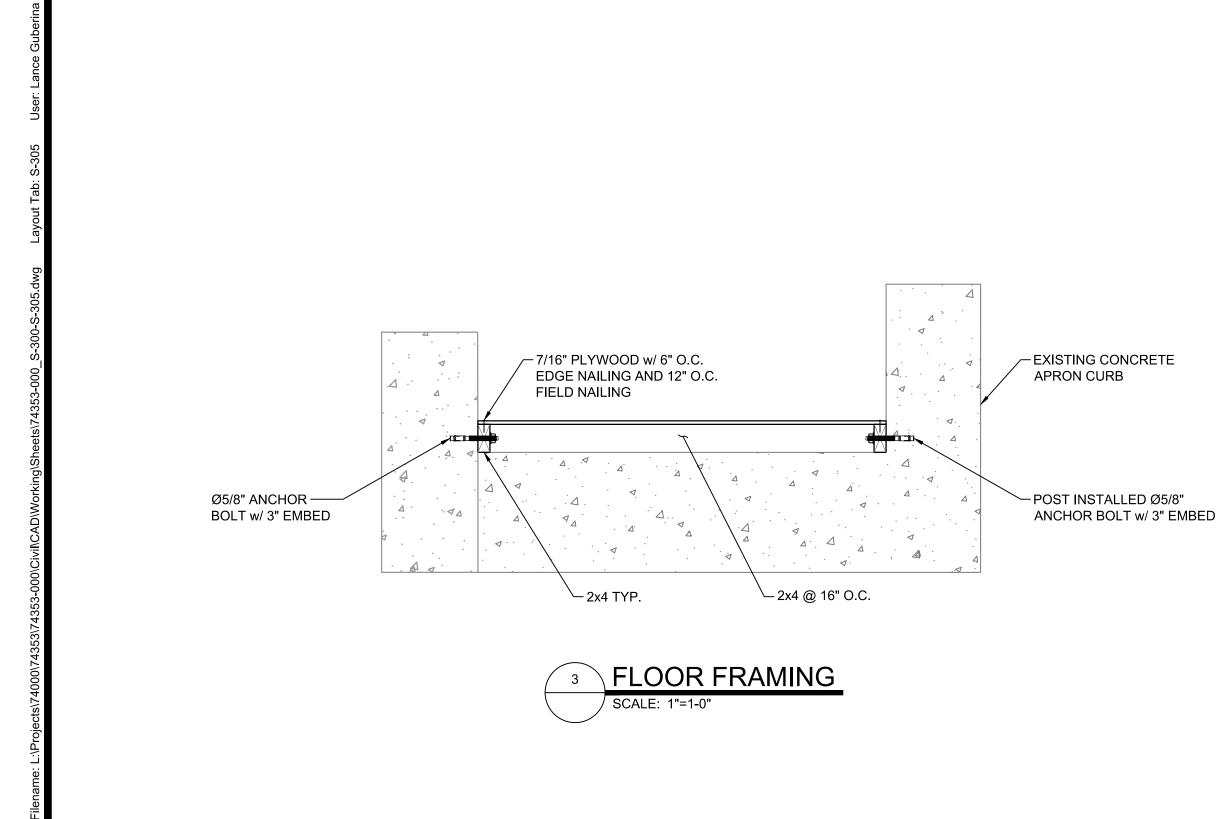


POOF FRAMING PARALLEL TO WALL SCALE: 1"=1-0"





ISSUED FOR BID





SHEET ID