

**Maine Maritime Academy  
Castine, Maine**

**Pier Upgrades and Waterfront Improvements Project  
March 22, 2024  
ADDENDUM NO. 6**

Prospective bidders and all concerned are hereby advised of the following changes/modifications in the Maine Maritime Academy Waterfront Campus Pier Upgrades and Waterfront Improvements Issued-for-Bidding Drawings and Project Manual dated January 26, 2024 and are hereby requested to change their copies accordingly.

Addendum No. 6 consists of 11 pages of Response to Questions, 19 re-issued IFB Drawing Sheets, and 3 pages of re-issued Specifications Sections for a total of 33 pages. Addendum No 6 addresses some of the bidder questions received. Subsequent addendum will address the outstanding bidder questions and revisions to the IFB Drawing Set and the IFB Project Manual.

Submit written questions during the bid phase via email to Jake Jacobs with cc to Cheryl Coviello.

[Jake.Jacobs@collierseng.com](mailto:Jake.Jacobs@collierseng.com)

[Cheryl.Coviello@gza.com](mailto:Cheryl.Coviello@gza.com)

Make the following changes to the Bidding Documents, Project Manual and Specifications:

**REVISION TO ADDENDA**

Responses to questions on previous addenda.

1. Addendum 1, Response 19: Below mentioned sheet for pile cap details but they are blank, on Addendum #1 mentioned "it will be issued on upcoming addendum" but so far not received details in up to addendum #5 files. Please provide update drawings.

**RESPONSE TO IFB DRAWINGS**

19. These drawings do not have anything printed on them and are not printed with "PAGE INTENTIONALLY LEFT BLANK" – are they intended to have info or be blank? S-130, S-131, S-132, S-140, S-143, S-144, S-145, S-146, S-147, S148, S-151, S-152, S-153, S-156, S-159, S-160, S-162

**Response 19:** The indicated IFB drawing sheets will be issued in subsequent addenda. See IFB Drawing Sheet G-002 Drawing Sheet Index for other asterisked sheets to be issued via addendum.

ADDENDUM NO. 1  
Page-5

**Response 1:** See Addendum 5 and this addendum for issued drawings. Additional drawings will be issued next week.

2. Addendum 2, Revision to Addendum 1: Pipe pile fabrication, splicing, coating, and delivery are critical path and long-lead-time construction activities. If the contractor is not permitted to order piles prior to submittal and approval of bedrock probing results, significant time will be lost on an already ambitious project schedule. Citing this condition as an example of linear construction activities and schedule feasibility, we request that the phase 1 construction completion date be extended by 1 year to August 31st, 2026.

Response 2: The completion date for Phase 1 is influenced by the NSMV delivery date and interim berthing provisions. Bids shall be based on the 31 August 2025 completion date for Phase 1.

3. Addendum 2, Bid Deadline: Please offer a 2-week bid extension.

Response 3: The bid deadline is extended to **2:00 p.m. on April 16, 2023**. MMA does not anticipate any additional bid extension.

In Specification Section 00 11 13 Notice to Contractors, Item 1, first paragraph, REVISE the bid deadline to **2:00 p.m. on April 16, 2023**

4. Addendum 2, Bidder Questions Deadline: A previous request was made to extend the bid due date 2-weeks. Please extend the question deadline 2-weeks as well.

Response 4: The deadline for questions is extended to **5:00 p.m. on April 4, 2023**. MMA does not anticipate any additional extension.

In Specification Section 00 11 13 Notice to Contractors, Item 1, first paragraph, REVISE the deadline for questions to **5:00 p.m. on April 4, 2023**

5. Addendum 4, Response 7: The response to Question #7 in Addendum 4 called for the piles to be coated to 10' below mudline. There are areas indicated in the borings where there may not be sufficient overburden to achieve this. Please advise.

Response 5: If bedrock is encountered shallower than 10 feet below mudline, the pile shall be coated to the pile tip.

6. Addendum 4 Question 11: Concrete deliveries will be needed outside of the 0600 to 0900 hours allowable because of limitations on concrete truck availability, site logistics and placement sizes. Will concrete placements be considered special deliveries and be granted additional time with advanced coordination between the contractor and MMA?

Response 6: Any truck deliveries outside of the 0600 to 0900 window shall be considered special deliveries for which the Contractor shall coordinate with MMA/MMA's Owners Representative per Addendum 4, Response 11.

7. Addendum #4 Question 11: Normal site deliveries between hours of 0600 and 0900 should be achievable, except for:
  - a. cast-in-place concrete placements. Please confirm that the contractor may deliver concrete to the jobsite without restriction from 0600 to 1700 without restriction.

- b. Phase 3 sitework. Please confirm that the contractor may delivery materials to the jobsite for phase 3 sitework from 0600 to 1700 without restriction.

Response 7: See Response 6.

8. Addendum 4, Drawing S-116: The deck plank information table on S-116 revised in addendum 4 lists 74 each type A planks. Counting the planks shown in plan view it appears there are only 70 type A planks. Please advise which is correct.

Response 8: REVISE the quantity of Plank Type A to 70

10" DECK PLANK SCHEDULE			
PLANK TYPE*	LENGTH 'A' (FT)	WIDTH 'B' (FT)	QUANTITY
A	12'-2"	8'-1 1/2"	<del>74</del> 70

9. Addendum #4, drawing S122 & S127 call out "concrete infill" adjacent to the mechanical trenches. Is this infill precast or CIP.

Response 9: Cast-in-place concrete after the trench is in-place.

10. Addendum 4 Drawing S-127: Revised sheet S-127 depicts a construction joint just below the top of the rock anchor on the south edge beam, but not the north edge beam. Revised sheets S-121 and S-122 have a construction joint at a similar location on the north edge beam. Will a construction joint be allowed on the north edge beam for pile cap 5A (sheet S-127)?

Response 10: Yes, this construction joint has been incorporated into all of the cast-in-place concrete elements in the T-head of the pier. Construction joints shall be detailed on the contractor's shop drawings.

11. Addendum 4, Drawing S-132: The pile details released in a previous amendment show an 8' concrete plug at the top of all pier piles. Is there a criterion that the material used below the concrete plug must meet, or can drill spoils be used?

Response 11: Per IFB Specification Section 31 62 23.13 Steel Pipe Piles, Paragraph 3.6, the bottom of the pipe piles shall have a concrete plug installed prior to rock anchor installation.  
Drill spoils may be placed inside the pipe piles, below the concrete plug at the top of the pile.

### **RESPONSE TO GENERAL QUESTIONS**

12. General: It appears currently that the contractor will have approximately fifteen months to complete phase 1 of the project. Within this phase the contractor will have to complete the installation over 200 drilled piles with restrictions on the proximity in which concrete can be placed next to drilling operations. Due to limited footprint within this phase, concrete and precast operations will have to lag behind pile installation significantly to allow for the necessary equipment to gain access to work areas. Due to the limited work area, and restrictions on the proximity of

concrete placements to pile installation, we respectfully request that additional time is granted to complete phase 1 work.

Response 12: The completion date for Phase 1 is influenced by the NSMV delivery date and interim berthing provisions. Bids shall be based on the 31 August 2025 completion date for Phase 1.

13. Will the engineer waive the requirement for rebar drawings to be stamped by a professional engineer?

Response 13: Reinforcing steel shop drawing for precast concrete elements shall be stamped by a licensed Professional Engineer in the State of Maine, as required by IFB Specification Section 03 40 00 Precast Marine Concrete, Paragraph 1.3.1 Design Requirements for design and detailing required for transport, handling and erections tresses and for additional temporary loads imposed during construction.

Reinforcing steel shop drawings for cast-in-place concrete elements do not require a stamp from a registered Professional Engineer. Revise IFB Specification Section 03 31 30 Marine Concrete, Paragraph 1.5.A.3.a. as follows:

DELETE the last sentence.

- |  |
|--|
| <p>3. Cast-in-Place Concrete Shop Drawings</p> <p>a. Steel Reinforcement Shop Drawings: Provide drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement. Indicate proposed methods for splicing reinforcing. Provide drawings that detail splice procedure. Include location and details of utility conduit penetrations. <del>The submittal shall be stamped by a registered Professional Engineer in the State of Maine.</del></p> |
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#### **RESPONSE TO IFB DRAWINGS QUESTIONS**

14. IFB C-201: The proposed 3" HDPE insulated forcemain pipe is indicated to be heat traced. The heat trace for this piping does not appear on the heat trace schedule on drawing M-801. Please advise.

Response 14: The heat trace is not needed on the direct buried pipe. See attached re-issued Drawing C-2-2 for modifications to the vertical alignment of the sewer forcemain.

15. IFB Drawing C-201: 3" Water force main is noted as a pre-insulated pipe with heat trace. How will this heat trace be controlled? Where will it be controlled from? What is the operating voltage? Will a redundant heat trace circuit be required?

Response 15: See Response 14 (above).

16. IFB Drawing C-701 calls out for 2" of 12.5MM surface pavement on top of 3" of 19.0MM base pavement. However, the asphaltic paving spec 32 12 16 lists roadway paving at 1.5" of 9.5MM on top of 2.5" of 19.0MM. Please indicate which is correct.

Response 16: 2" of 12.5 MM over 3" of 19 MM is correct. See revised IFB Specification Section 32 12 16 Asphaltic Paving. Changes are highlighted in yellow.

17. IFB S-133 and IFB S167: Show rock anchor centralizers in the 24" pile. However, these centralizers can't be practically installed since a temporary casing must be used for installation.

Question

- Will a light lock off load (~5 kips) at the top of pile to remove slack be a suitable solution? A lock off is not currently depicted. This could be included as part of design submittal.

Response 17: The intent of the centralizers is to center the drill hole in the middle of the pipe. Contractors means and methods shall demonstrate rock anchors are centered in the middle of the pipe at the time of installation.

18. IFB S-172: Floating Dock Pile, states concrete filled pile but no grout plug is shown.  
IFB S-167: Dolphin Pile, the 24" pile is drawn with a "neat cement grout plug" and filled with concrete to cut off.  
IFB S-133: Pier Pile, is drawn with a "cement grout plug" and only shows the concrete fill above MHW +4.7.  
Steel Pipe Pile part 2.2 A states the pile plugs must meet the Marine Concrete Spec.

Questions:

- Please confirm the concrete is shown correctly on S-133, if so will the pile need to be dewatered?

Response 18-A: Confirmed. Concrete shown on sheet S-133 is shown correctly on sheet S-133, refer to addendum 5 drawing S-132 for limits of concrete. Piles shown on sheet S-133 will not need to be dewatered.

- Will "neat cement grout plug" be installed or concrete meeting the Steel Pipe Pile Spec 2.2A?

Response 18-B: Section 31 62 23.13 paragraph 2.2.A will be revised as part of a future addendum.

- Will a "neat cement grout plug" be required for the S-133 Pier pile?

Response 18-C: Pier piles with rock anchors will require rock anchor grout to extend above the bottom of piles at the time of placement of the rock anchor grout. Sheet S-133 will be revised as part of a future addendum.

- Will a grout plug be required for the Floating dock Pile?

Response 18-D: Grout plugs will not be necessary for floating dock piles. As indicated in Section 31 62 23.13 paragraph 3.7.1 the drilled rock socket diameter shall not exceed 1" greater than the pipe diameter.

19. IFB Drawing M-204: Note 10 on Sheet M-204 states to provide HDPE to Polypropylene flange for the sanitary and domestic cold water within the mechanical trench transition structure. Does the water

and sewer pipe change from HDPE to PVC on the new pier? If so, I do not see a PVC pipe mentioned in the specifications. Please advise.

Response 19: The water and sewer line will be polypropylene in the pier trench as covered in IFB Specification Section 23 21 13 Basic Piping Materials and Methods. The transition at the start of the pier is to switch from the UG pipe to the trench pipe material.

20. IFB E-201: the (2) 5" conduits coming from the new CMP primary metering cabinet meet up with 2 existing conduits. Are the 2 existing conduits 5"?

Response 20: Yes, the existing conduits are noted as 5". Contractor shall field verify all existing conditions.

21. IFB E-201 / E-501: Sheet E-201 Numbered Electrical Notes #7 requires a 3'x4' enclosed disconnect switch for the secondary breakers in stainless steel NEMA 3R Enclosure. This disconnect and its configuration does not appear to be indicated on E-501. Please incorporate the disconnect switch on E-501 and provide additional details for amperage rating and fusing if required.

Response 21: See the attached re-issued IFB Drawing E-201.

22. IFB E-202: Numbered note designations appear on the partial site plan at the heat trace connection and at the IT room on the third floor in Rogers hall. However, the drawing does not include numbered notes. Please advise.

Response 22: See the re-issued drawing provided in Addendum #3.

23. IFB E-203: Pier ductbank sections call for (1) 1" conduit for relay control wires and refers to E-501 for feeder and relay conductor information. Relay conductor information cannot be located on E-501. Please provide required wiring information.

Response 23: 1" Conduit will be utilized to provide low-voltage power to the shore power outlet heaters. Specifically in the 450V shore power unit, there will be additional low-voltage power needed for indication lights and control cabling required for shunt tripping each individual receptacle (3 in total) with the upstream associated breaker.

24. IFB E-501: the conduit or wire sizes are not indicated from MDP 4120 to the transformers of panels P211 and P212, the conduit and wire sizes are not listed from the transformers to the panels either. On print E-204 on the electrical power of ship utility building drawing they are not listed either. Can you provide conduit and wire sizes?

Response 24: See the attached re-issued IFB Drawing E-501.

25. IFB E-501: the town sewer pump station service does not indicate conduit or wire sizes. On print E-201 it says the conduit will be a 3" but does not indicate a wire size. Can you provide a wire size for the town sewer pump station?

Response 25: See the attached re-issued IFB Drawing E-501.

26. IFB E-501: the note that points to the pad mount transformers says that pad mounted transformers and all conduits and cabling owned by MMA. The CMP handbook on P. 47 section 902 indicates it is the companies responsibility to furnish and install (at the customers expense) the primary cable in conduit furnished by the customer. Can you better explain the amount of cables and conduit that will need to be included in the bid price?

Response 26: For consistency and clarity of bids, contractor shall assume the cost of providing all the conduit and cabling as indicated on E-501.

27. IFB E-501: there is a enclosure listed for secondary breakers after the UT-1 transformer, on print E-201 numbered note 7 indicates a 3'x4' enclosed disconnect switch for the secondary breakers in stainless steel NEMA 3R enclosure. After going through Sections 26 05 33.16 Boxes for Electrical Systems, 26 24 16 Panelboards, 26 28 16.16 Enclosed Switches, and 26 43 00 Surge Protection Devices in the specs, more information is needed to provide the desired product. Can you provide more information on the secondary breakers?

Response 27: See the attached re-issued IFB Drawing E-201.

28. IFB E-703: Pier trench Detail 2 indicates that conduit #11 is a 1" conduit for NSMV Data. It doesn't appear that NSMV data conduit continues in Peir ductbank section 8 on E-703. Please indicate missing conduit routing.

Response 28: It does not feed that section of the pier. From the Utility Trench it runs to the plan left side of the pier to feed NSMV Tele/Data connection box.

29. IFB E-703: Pier trench Detail 2, conduit #11 does not indicate what data cabling is required. Please advise.

Response 29: See the attached re-issued IFB Drawing E-203.

30. IFB E-801: in the Marine Pedestal schedule it lists P-19 as an Admiral Power Surface Pedestal. On print E-203 note 8 it indicates that an Eaton Super Yacht Power Pedestal will be provided. Can you clarify which pedestal is desired?

Response 30: Marine Pedestal P-19 is intended to be used for larger vessels. Disregard the Pedestal type in Note 8 on Sheet E-203. Pedestal P-19 as indicated in the schedule on Sheet E-803 is correct.

#### **RESPONSE TO IFB PROJECT MANUAL QUESTIONS**

31. IFB Specification Section 26 05 33.13: section 2.01(K)(1) (a) Corrosive Location Above Ground it indicates that stainless steel conduits will be required in corrosive environments, (a) indicates that marine environments are considered corrosive. Can you clarify if stainless steel conduit will be required in the pier areas?

Response 31: Stainless steel conduits are listed in this section as an option among others. As indicated on the notes on the drawings, conduit stub ups from the pier's concrete topping are RMC. Conduits run in the utility trench beneath the pier are intended to be RTRC (Fiberglass).

32. IFB Specification Section 26 05 43: Underground Ducts and Raceways For Electrical Systems under section 2.05(G) (1) and (2) it asks for stanchions and arms to be provided. Will they be the responsibility of the Utility or of the bidder to provide?

Response 32: Bidder is responsible for the underground distribution system and the outfitting of the manholes with the cable racking.

33. IFB Specification Section 26 05 43: Underground Ducts and Raceways For Electrical Systems under section 3.06 (D) it states to ensure that 15 kV MV-105 EPR shielded cable (consisting of 3-500kcmil phase conductors and a 4/0, 600v XHHW ground cable). We could not find on the prints where 500kcmils cable sizes for 15kV. Can you clarify?

Response 33: Revise to #4/0 MV-105 15kV cable with a #2 600V ground, as well as 500kcmil low voltage cabling for all the largest pulling conditions.

34. IFB Specification Section 26 27 26.43: Shore Power Outlet Assemblies section 2.1(D) (2)(c) asks to design per MIL-C-24368/2. It seems that the indicated unit has 2 receptacles that come standard. On print E-701 on the 480V shore Power Connection drawing it shows that there are (3) receptacles. Should we go with the standard or customize the unit?

Response 34: The "/2" in "MIL-C-24368/2" refers to the receptacle. "MIL-C-24368/1" would refer to the accompanying plug that mates to the receptacle. The 450V shore power outlet will have three (3) "MIL-C-24368/2" receptacles.

35. IFB Specification Section 31 62 23.13-12: We have questions about the grout plug in the 24" pile in addition to those asked in question 27 in addenda 1. We are trying to understand the purpose of the grout plug so it can be installed at the best time to perform its purpose. The sequence on sheet S-167 is omitted on S-133 but also detailed in Steel Pile 31 62 23.13 - 12; 3.6A. This states the plug must be placed before rock anchor installation. Please note all rock anchors are in 24" pile that are already rock socketed.

Question: Would it be acceptable for rock anchored piles to have plugs installed at the same time as the rock anchors by simply overfill the rock anchor drill hole with grout to create the plug?

Response 35: Neat Cement grout plugs are only required for dolphin piles with rock anchors that have a 6" rock socket. Grout plugs shall be installed prior to drilling of rock anchors at these locations. Drawings S-133, S-167 and Section 31 62 23.13 will be revised as part of a future addendum.

36. IFB Specification Section 31 68 13-5,1.8F: Describes 2 sacrificial test anchors within 45 days of the production anchors.



IFB Specification Section 31 68 13-9,3,1D: further describes minimum instrumentation for the test anchors will be minimum 6 strain gauges.

Questions:

- This is an unusual requirement for rock anchors, but common for micropile so perhaps the language was inserted by mistake? These are lightly loaded anchors and since all the production rock anchors are load tested, is it possible for these requirements be removed?

Response 36-A: These requirements will remain as outlined in Section 31 68 13 paragraph 3.2. Rock anchors will be installed in the upland area, the intent of the sacrificial rock anchors will be to verify the bond stress between grout and rock, installation of vertical anchors shall be acceptable and are not required to be installed within a pipe.

- If required, it is not typical to use strain gauge instrumentation for rock anchors, could this requirement be waived?

Response 36-B: Strain gauges will be required for sacrificial test anchors.

- If required, is there a specific location that the test anchors are to be installed? Perhaps in a vertical pile beside the battered pile to be anchored?

Response 36-C: See above response.

37. IFB Specification Section 31 68 13: Generally describes a Contractor designed rock anchor scope. 1.2A 2 lists the design loads for each type of rock anchor. 1.9C described the corrosion protection system for each type of rock anchor. Sheet S-167 covers the Dolphins and specifies grade 150 anchors sizes in a range from 1.25 to 1.75 diameter.

Sheet S-133 covers the Piers and lists 1.75 inch anchors only

Question:

- Please confirm the Pier Rock anchors must be 1.75 inch grade 150

Response 37-A: Confirmed. All rock anchor sizes, including those on the mooring dolphins shall be 1.75-inch grade 150

- Will the rock anchor designer be required to design the rock anchor plate? The same 10x10x1.75 plate is shown for a range of design loads on S-133 and S-167.

Response 37-B: Rock anchor designer will not be required to design the rock anchor plate

- Please confirm the Pier Rock anchors must be epoxy coated and also have corrugated grout sheath to meet Class 1.

Response 37-C: Pier rock anchors shall be epoxy coated and have a grouted sheath to meet Class I requirements within the bonded zone

- Please confirm the corrugated grout sheath for Class 1 Anchors can be omitted above the bond length (PTI Fig 5.2b – Class 1 protection Alternate section A-A)

Response 37-D: Grout is not required outside of the PVC sheath within the unbonded zone.

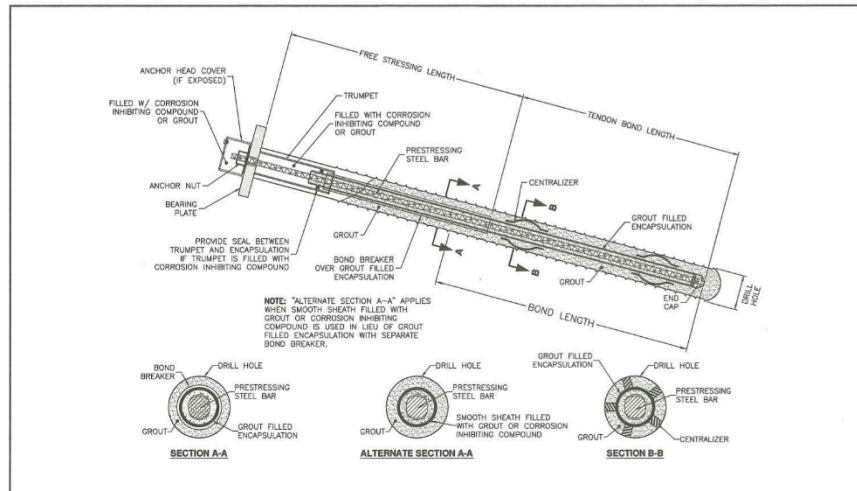


Fig. 5.2b—Class 1 protection: encapsulated bar anchor.

38. IFB Specification Section 31 68 13: Rock Anchors 31 68 13-9 F5 Describes pressure grouting which is common for soil anchors, however, rock anchor are typically gravity grouted.

Question

- Will gravity grouting be allowed if it can be demonstrated to provide suitable adhesion / capacity in the rock?

Response 38-A: Gravity grouting will be acceptable provided means and methods are verified during sacrificial testing.

- If global pressure grouting can't achieve 50 psi will the hole need to be grouted and redrilled until it can meet this requirement?

Response 38-B: See response above.

- Will an inflatable packer be required to isolate the grout pressure to avoid blow out of the 24" pile grout plug. Without the packer it seems like blow out could happen with the casing seated in the top of the plug. If the grout plug blows out, who is responsible to re-install a plug?

Response 38-C: See response above.

39. IFB Specification Section 31 68 13-11 B2: lists ASTM D1143. Please clarify how this might apply to the rock anchor testing.

Response 39: Reference will be omitted from Section 31 68 13-11 as part of future addendum

**LIST OF REVISED IFB DRAWINGS**

**REPLACE** the following IFB Drawing Sheets with the attached. A general description is provided for MEP revisions. See each re-issued drawing sheet for revisions.

1. G-002 Drawing Sheet Index
2. C-202 Grading & Utility Plan B
3. S-113 Pier Layout Plan R2
4. S-118 South Edge Beam Elevations & Sections
5. S-135 Precast Pier Pile Cap Details -TYPE 1
6. S-136 Precast Pier Pile Cap Details -TYPE 1A
7. S-137 Precast Pier Pile Cap Details -TYPE 2
8. S-138 Precast Pier Pile Cap Details -TYPE 3
9. S-139 Precast Pier Pile Cap Details -TYPE 5
10. S-140 Cast-in-Place Pier pile Cap Details -TYPE 4A-4B
11. S-143 Pier Pile Cap Details - TYPE 2A-2D
12. S-144 Pier Pile Cap Details - TYPE 2B-2C
13. S-145 South Edge Beam Details
14. S-149 Pile Cap and Beam Details - 1
15. S-150 Pile Cap and Beam Details -2
16. E-201 Electrical Site Plan A
17. E-203 Electrical Site Plan B
18. E-501 Electrical One-Line Drawing
19. E-801 Electrical Schedule.

SECTION 32 12 16

ASPHALTIC PAVING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Asphaltic concrete paving.

1.2 RELATED SECTIONS

- A. Section 31 23 23 - Backfill.

1.3 REFERENCES

- A. Maine Department of Transportation Standard Specifications Highways and Bridges, current edition.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with Maine Department of Transportation Standard Specification - Highway and Bridges.
- B. Mixing Plant: Conform to State of Maine Department of Transportation Standards.
- C. Obtain materials from same source throughout.

1.5 REGULATORY REQUIREMENTS

- A. Conform to applicable standards for paving work on public property.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Do not place asphalt when base surface temperature is less than 40 degrees F, or surface is wet or frozen.
- B. Apply bituminous prime and tack coats only when the ambient temperature in the shade is at least 50°F for 12 hours immediately prior to application.
- C. Do not apply when the base surface is wet or contains an excess of moisture which would prevent uniform distribution and the required penetration.

PART 2 - PRODUCTS

2.1 AGGREGATE SUBBASE

- A. As specified in Section 31 23 23 - Backfill.

2.2 BITUMINOUS CONCRETE BASE COURSE

- A. MDOT Specification, Section 702 and 703.
- B. 19.0 mm Binder.

2.3 BITUMINOUS TACK COAT

A. MDOT Specification, Section 702.

B. Type AE-90, Emulsified Asphalt, Mixing.

#### 2.4 BITUMINOUS CONCRETE SURFACE COURSE

A. MDOT Specification, Sections 702 and 703.

B. 12.5 mm.

#### 2.5 DRIVES AND OVERLAYS

A. MDOT Specification, Section 702 and 703.

B. 12.5 mm Fine.

#### 2.6 TEMPORARY PATCHING

A. Hot or cold, at Contractor's option.

#### 2.7 ACCESSORIES

A. Tack Coat: Homogeneous, medium curing, liquid asphalt, in accordance with State of Maine Specifications.

### PART 3 - EXECUTION

#### 3.1 AGGREGATE SUBBASE

A. As specified in Section 31 23 23 - Backfill.

#### 3.2 BITUMINOUS CONCRETE BASE COURSE

A. MDOT Specification, Section 403.

#### 3.3 BITUMINOUS TACK COAT

A. Apply emulsified asphalt tack coat between all lifts, to curbing, gutters, manholes, pavement, etc. to promote adequate bond.

B. Apply at a rate of 0.05 to 0.15 gallons/square yard; excess coating and/or fat spots will not be permitted.

#### 3.4 BITUMINOUS CONCRETE SURFACE COURSE

A. MDOT Specification, Section 403.

#### 3.5 SIDEWALKS, DRIVES, AND SHIM

A. MDOT Specification, Section 608.

#### 3.6 COMPACTION

A. Bituminous compaction shall take place at as high a temperature as possible without the mix bulging excessively in front of the rolls. For most dense graded mixes this is between 260° F and 285° F. At no time shall the pavement be allowed to fall below 175° F without compaction. Table 1, at the end of this Section, illustrates recommended laydown temperatures for various mix thickness giving 15 minutes until 175° F mat temperature is reached.

- B. Pavement compacted at temperatures below 175° may be removed if specified by the Engineer.

3.7 TOLERANCES

- A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
- B. Scheduled Compacted Thickness: Within 1/4 inch.
- C. Variation from True Elevation: Within 1/2 inch.

3.8 FIELD QUALITY CONTROL

- A. Field testing will be performed under provisions of Section 01 40 00.

3.9 PROTECTION

- A. Immediately after placement, protect pavement from mechanical injury for 3 days.

3.10 SCHEDULES

- A. Driveways and Driveway Aprons: 2" of 12.5mm HMA
- B. Roadway: Base Course: 3" of 19.0mm HMA  
 Surface Course: 2" of 12.5mm HMA.
- C. Trench Paving: Leave not more than 300 linear feet of trench unpaved at any time.
- D. Conform to MDOT requirements for minimum laydown temperature and cessation requirements.

TABLE 1  
 CESSATION REQUIREMENTS  
 Recommended Minimum Laydown Temperature

<u>Base Temp.</u>	<u>1/2"</u>	<u>3/4"</u>	<u>1"</u>	<u>1 1/2"</u>	<u>2"</u>	<u>3" and Greater</u>
20 - 32	---	---	---	---	---	285 <sup>1</sup>
+32 - 40	---	---	---	305	295	280
+40 - 50	---	---	310	300	285	275
+50 - 60	---	310	300	295	280	270
+60 - 70	310	300	290	285	275	265
+70 - 80	300	290	285	280	270	265
+80 - 90	290	280	275	270	265	260
+90	280	275	270	265	260	255
Rolling Time, Minutes	4	6	8	12	15	15

<sup>1</sup> Increase by 15° when placement is on base or subbase containing frozen moisture.

END OF SECTION



DRAWING SHEET INDEX			
SHEET NO.	DRAWING NO.	DRAWING TITLE	Revision/Date
GENERAL			
1	G-001	COVER SHEET	
2	G-002	DRAWING SHEET INDEX	REV. 4 ADD #6 3/22/2024
3	G-003	DESIGN CRITERIA	
4	G-004	NOTES - 1	
5	G-005	NOTES - 2	
6	G-100	EXISTING CONDITIONS PLAN	
7	G-101	OVERALL WORK PLAN	
8	G-102	PHASING PLAN	
GEOTECHNICAL			
9	B-101	SUBSURFACE EXPLORATION PLAN	
10	B-102	SUBSURFACE PROFILE A-A'	
11	B-103	SUBSURFACE PROFILE B-B'	
12	B-104	SUBSURFACE PROFILE C-C'	
13	B-105	SUBSURFACE PROFILE D-D'	
14	B-106	SUBSURFACE PROFILE E-E'	
15	B-107	SUBSURFACE PROFILE F-F'	
16	B-201	BORING LOGS - 1	
17	B-202	BORING LOGS - 2	
18	B-203	BORING LOGS - 3	
19	B-204	BORING LOGS - 4	
20	B-205	BORING LOGS - 5	
21	B-206	BORING LOGS - 6	
CIVIL			
22	C-001	SITE NOTES, SYMBOLS AND ABBREVIATIONS	REV. 2 ADD #4 3/8/2024
23	C-101	DREDGE PLAN	
24	C-201	GRADING & UTILITY PLAN A	
25	C-202	GRADING & UTILITY PLAN B	REV. 1 ADD #3 3/1/2024
26	C-301	EROSION AND SEDIMENTATION CONTROL PLAN	
27	C-302	DREDGE SECTIONS	
28	C-701	SITE CONSTRUCTION DETAILS	
29	C-702	SITE CONSTRUCTION DETAILS	REV. 1 ADD #3 3/1/2024

DRAWING SHEET INDEX			
SHEET NO.	DRAWING NO.	DRAWING TITLE	Revision/Date
STRUCTURAL			
30	S-101	EXISTING WATERFRONT STRUCTURES PLAN	
31	S-102	WATERFRONT STRUCTURES DEMOLITION AND REMOVAL PLAN	REV. 1 ADD #3 3/1/2024
32	S-103	EXISTING PIER SECTIONS	
33	S-104	WATERFRONT STRUCTURES LAYOUT PLAN	REV. 1 ADD #3 3/1/2024
34	S-105	WEST BULKHEAD AND RETAINING WALL PLAN - 1	REV. 1 ADD #3 3/1/2024
35	S-106	WEST BULKHEAD AND RETAINING WALL PLAN - 2	REV. 1 ADD #3 3/1/2024
36	S-107	WEST BULKHEAD AND RETAINING WALL SECTIONS - 1	REV. 1 ADD #3 3/1/2024
37	S-108	WEST BULKHEAD AND RETAINING WALL SECTIONS - 2	REV. 1 ADD #3 3/1/2024
38	S-109	WEST BULKHEAD AND RETAINING WALL DETAILS - 1	REV. 1 ADD #3 3/1/2024
39	S-110	WEST BULKHEAD AND RETAINING WALL DETAILS - 2	
40	S-111	WEST BULKHEAD AND RETAINING WALL DETAILS - 3	
41	S-112	EAST BULKHEAD REPAIR SECTION	
42	S-113	PIER LAYOUT PLAN	REV. 1 ADD #6 3/22/2024
43	S-114	PIER PILE PLAN	REV. 1 ADD #3 3/1/2024
44	S-115	PIER FRAMING PLAN	REV. 1 ADD #3 3/1/2024
45	S-116	PIER PRE-CAST PLANK PLAN	REV. 2 ADD #5 3/15/2024
46	S-117	PIER DECK GRADING PLAN	REV. 1 ADD #3 3/1/2024
47	S-118	SOUTH EDGE BEAM ELEVATION AND SECTIONS	REV. 1 ADD #6 3/22/2024
48	S-119	NORTH EDGE BEAM ELEVATION AND SECTIONS	
49	S-120	PIER SECTIONS - 1 SECTION A - TYPE 1 CAP	REV. 2 ADD #4 3/8/2024
50	S-121	PIER SECTIONS - 2 SECTION B - TYPE 2 CAP	REV. 2 ADD #4 3/8/2024
51	S-122	PIER SECTIONS - 3 SECTION C - TYPE 3 CAP	REV. 2 ADD #4 3/8/2024
52	S-123	PIER SECTIONS - 4 SECTION D - TYPE 4A CAP	REV. 1 ADD #5 3/15/2024
53	S-124	PIER SECTIONS - 5 SECTION E - TYPE 4B CAP	REV. 1 ADD #5 3/15/2024
54	S-125	PIER SECTIONS - 6 SECTION F - TYPE 5 CAP	
55	S-126	PIER SECTIONS - 7 SECTION G - TYPE 4A/4B @ E. TRENCH	REV. 2 ADD #4 3/8/2024
56	S-127	PIER SECTIONS - 8 SECTION H - TYPE 5A CAP	REV. 2 ADD #4 3/8/2024
57	S-128	PIER SECTIONS - 9 SECTION I - TYPE 5B CAP	REV. 2 ADD #4 3/8/2024
58	S-129	PIER SECTIONS - 10 SECTION J - TYPE 5A/5B @ M. TRENCH	
59	S-130 *	PIER SECTIONS - 11 SECTION K - PIER STEM TO T-HEAD	
60	S-131 *	PIER SECTIONS - 12 SECTION X (SPARE SHEET)	
61	S-132 *	PIER PILE DETAILS	REV. 2 ADD #5 3/15/2024
62	S-133	PIER PILE AND ROCK ANCHOR DETAILS	
63	S-134	PIER PILE TABLE	
64	S-135	PRECAST PILE CAP DETAILS - TYPE 1	REV. 1 ADD #6 3/22/2024
65	S-136	PRECAST PILE CAP DETAILS - TYPE 1A	REV. 1 ADD #6 3/22/2024
66	S-137	PRECAST PILE CAP DETAILS - TYPE 2	REV. 1 ADD #6 3/22/2024
67	S-138	PRECAST PILE CAP DETAILS - TYPE 3	REV. 1 ADD #6 3/22/2024
68	S-139	PRECAST PILE CAP DETAILS - TYPE 5	REV. 1 ADD #6 3/22/2024
69	S-140 *	C.I.P. PILE CAP DETAILS - TYPE 4A/4B	REV. 1 ADD #6 3/22/2024
70	S-141 *	C.I.P. PILE CAP DETAILS - TYPE 5A	
71	S-142	C.I.P. PILE CAP DETAILS - TYPE 5B	
72	S-143 *	C.I.P. PILE CAP DETAILS - TYPE 2A/2D	REV. 1 ADD #5 3/15/2024
73	S-144 *	C.I.P. PILE CAP DETAILS - TYPE 5B/2C	
74	S-145 *	SOUTH EDGE BEAM DETAILS	REV. 1 ADD #6 3/22/2024
75	S-146 *	NORTH EDGE BEAM DETAILS	
76	S-147 *	EDGE BEAM DETAILS - 1	
77	S-148 *	EDGE BEAM DETAILS - 2	
78	S-149	PIER PILE CAP AND BEAM DETAILS - 1	REV. 1 ADD #6 3/22/2024
79	S-150	PIER PILE CAP AND BEAM DETAILS - 2	REV. 1 ADD #6 3/22/2024
80	S-151 *	PIER PILE CAP AND BEAM DETAILS - 3	
81	S-152 *	PIER PILE CAP AND BEAM DETAILS - 4	
82	S-153 *	DECK PLANK DETAILS	REV. 1 ADD #5 3/15/2024
83	S-154	PRE-CAST UTILITY TRENCH DETAILS	REV. 2 ADD #4 3/8/2024
84	S-155	MOORING & BREASTING PLATFORMS REPAIRS AND MODIFICATIONS - 1	
85	S-156 *	MOORING & BREASTING PLATFORMS REPAIRS AND MODIFICATIONS - 2	
86	S-157	MISCELLANEOUS DETAILS - 1	
87	S-158	MISCELLANEOUS DETAILS - 2	
88	S-159 *	MISCELLANEOUS DETAILS - 3	
89	S-160 *	BROW PLAN, SECTIONS, AND DETAILS	REV. 1 ADD #5 3/15/2024
90	S-161	FENDER SYSTEM SECTIONS AND DETAILS	
91	S-162 *	TIMBER FENDER SYSTEM PILES AND DETAILS	
92	S-163	MOORING DOLPHINS LAYOUT PLAN	
93	S-164	MOORING DOLPHIN REINFORCING PLAN	
94	S-165	MOORING DOLPHIN SECTIONS - 1	
95	S-166	MOORING DOLPHIN SECTIONS - 2	
96	S-167	MOORING DOLPHIN PILE AND ROCK ANCHOR DETAILS	
97	S-168	MOORING DOLPHIN DETAILS	
98	S-169	FLOATING DOCK REPAIRS AND MODIFICATIONS	
99	S-170	EAST FLOATING DOCKS - PLAN	
100	S-171	WEST FLOATING DOCKS - PLAN	
101	S-172	FLOATING DOCKS SECTIONS AND DETAILS - 1	
102	S-173	FLOATING DOCKS SECTIONS AND DETAILS - 2	
103	S-174	GANGWAYS AND CATWALK SECTIONS	
104	S-175	GANGWAYS AND CATWALK DETAILS	
105	S-176	FLOATING BREAKWATER PLAN, SECTION AND DETAILS	
106	S-177	TRAVEL LIFT RUNWAY PIERS REPAIRS	

DRAWING SHEET INDEX			
SHEET NO.	DRAWING NO.	DRAWING TITLE	Revision/Date
MECHANICAL			
107	M-001	MECHANICAL NOTES, SYMBOLS, AND ABBREVIATIONS	
108	M-101	BOILER PLANT - DEMOLITION	
109	M-200	MECHANICAL SITE PLAN - NEW WORK	REV. 1 ADD #3 3/1/2024
110	M-201	BOILER PLANT - NEW WORK	
111	M-202	STEAM VAULT - NEW WORK	
112	M-203	STEAM VAULT - NEW WORK - STRUCTURAL	
113	M-204	MECHANICAL TRENCH PLAN - NEW WORK	
114	M-205	MECHANICAL PIER PART PLAN - NEW WORK	
115	M-301	MECHANICAL TRENCH PROFILES - NEW WORK	REV. 1 ADD #3 3/1/2024
116	M-302	MECHANICAL SECTIONS - NEW WORK	REV. 1 ADD #3 3/1/2024
117	M-401	STEAM P&ID - DEMOLITION	
118	M-501	STEAM P&ID - NEW WORK	REV. 1 ADD #3 3/1/2024
119	M-701	MECHANICAL DETAILS	
120	M-702	MECHANICAL DETAILS	
121	M-703	MECHANICAL DETAILS	
122	M-704	MECHANICAL DETAILS	REV. 1 ADD #3 3/1/2024
123	M-801	MECHANICAL SCHEDULES	REV. 1 ADD #3 3/1/2024
ELECTRICAL			
124	E-001	ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS	
125	E-101	ELECTRICAL DEMO - SITE AND PIER PLAN	
126	E-102	ELECTRICAL - ANDREWS HALL - DEMO	
127	E-201	ELECTRICAL SITE PART PLAN A	REV. 1 ADD #3 3/1/2024
128	E-202	ELECTRICAL SITE PART PLAN B	REV. 1 ADD #3 3/1/2024
129	E-203	ELECTRICAL PIER PART PLAN A	REV. 1 ADD #3 3/1/2024
130	E-204	ELECTRICAL OF SHIP UTILITY BUILDING	
131	E-205	ELECTRICAL - ANDREWS HALL - NEW WORK	
132	E-301	ELECTRICAL BUTTERFLY DIAGRAMS	REV. 1 ADD #3 3/1/2024
133	E-401	ELECTRICAL ONE-LINE EXISTING AND DEMO	
134	E-501	ELECTRICAL ONE-LINE DIAGRAMS	REV. 1 ADD #3 3/1/2024
135	E-701	ELECTRICAL DETAILS	
136	E-702	ELECTRICAL DETAILS	REV. 1 ADD #3 3/1/2024
137	E-703	ELECTRICAL DETAILS	
138	E-801	ELECTRICAL SCHEDULES	REV. 1 ADD #3 3/1/2024
ARCHITECTURAL			
139	A-001	SHIP UTILITY STRUCTURAL & ARCHITECTURAL NOTES, SPECIFICATIONS, SYMBOLS AND ABBREVIATIONS	
140	A-101	SHIP UTILITY FLOOR PLAN	
141	A-201	SHIP UTILITY EXTERIOR ELEVATIONS	
142	A-501	SHIP UTILITY SECTIONS & DETAILS	

4	ADDENDUM #6	DDF	3/22/2024
3	ADDENDUM #5	DDF	3/15/2024
2	ADDENDUM #4	DDF	3/8/2024
1	ADDENDUM #3	DDF	3/1/2024
NO.	ISSUE/DESCRIPTION	BY	DATE

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MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
PIER UPGRADES AND WATERFRONT IMPROVEMENTS  
CASTINE, MAINE

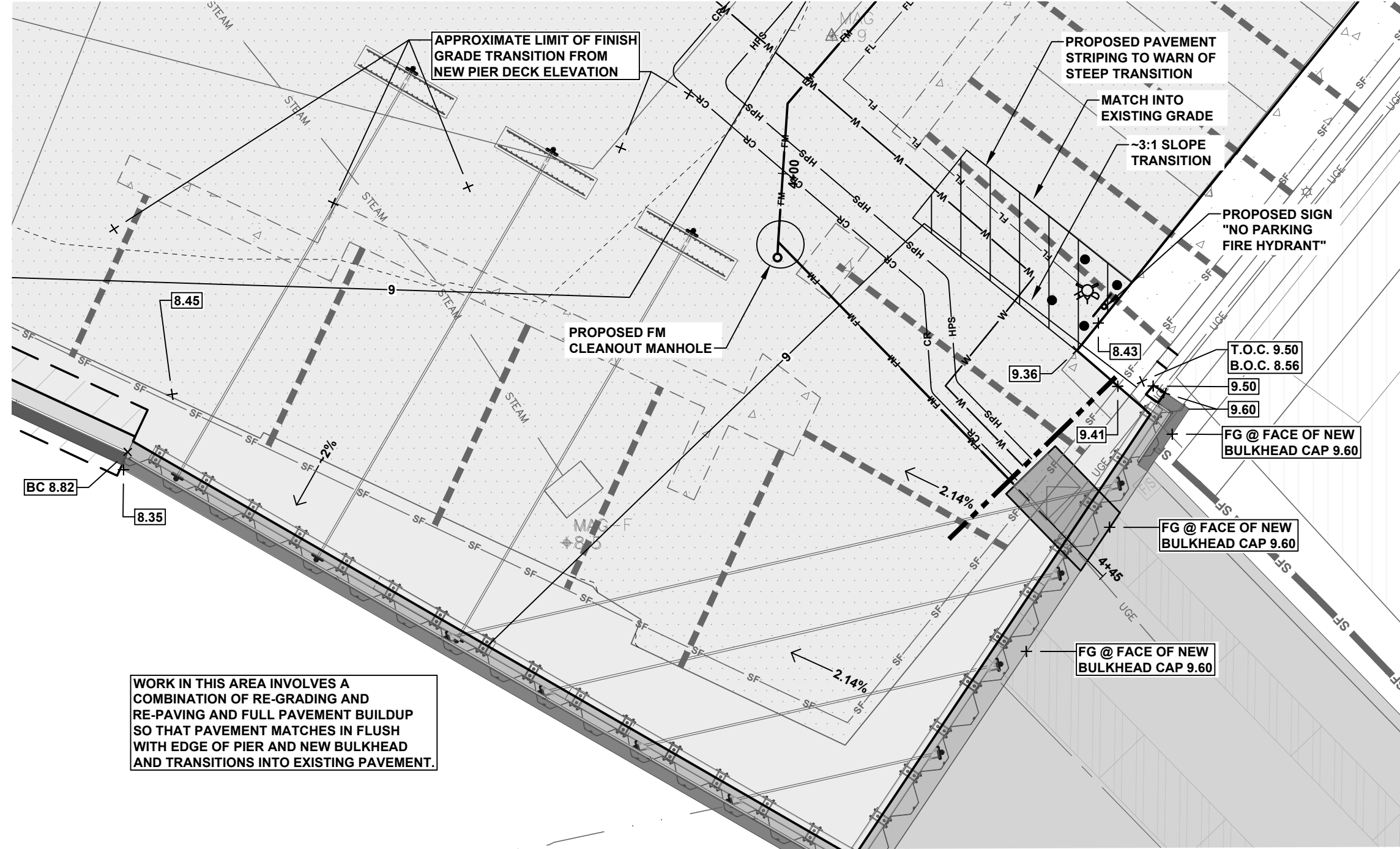
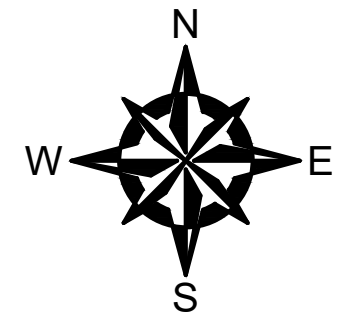
DRAWING SHEET INDEX

PREPARED BY:	GZA GeoEnvironmental, Inc. www.gza.com		PREPARED FOR:	MAINE MARITIME ACADEMY CASTINE, ME	
PROJ MGR:	RKC	REVIEWED BY:	CWC	CHECKED BY:	DDF
DESIGNED BY:		DRAWN BY:	MEA	SCALE:	
DATE:	OCTOBER 2024	PROJECT NO.	35109.00	REVISION NO.	

I.F.B.  
NOT FOR CONSTRUCTION  
JANUARY 26, 2024

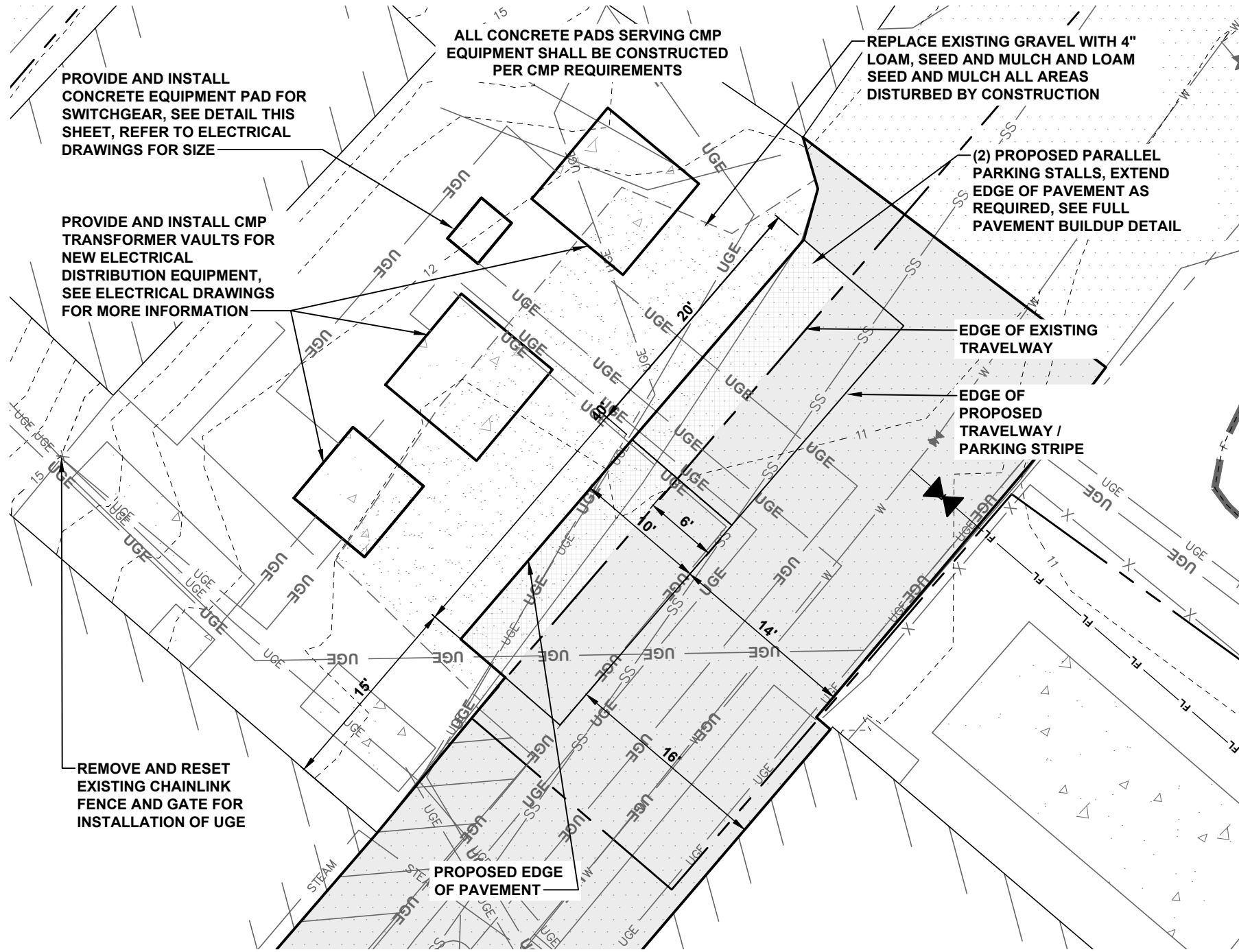
**G-002**  
SHEET NO. 2 OF 142





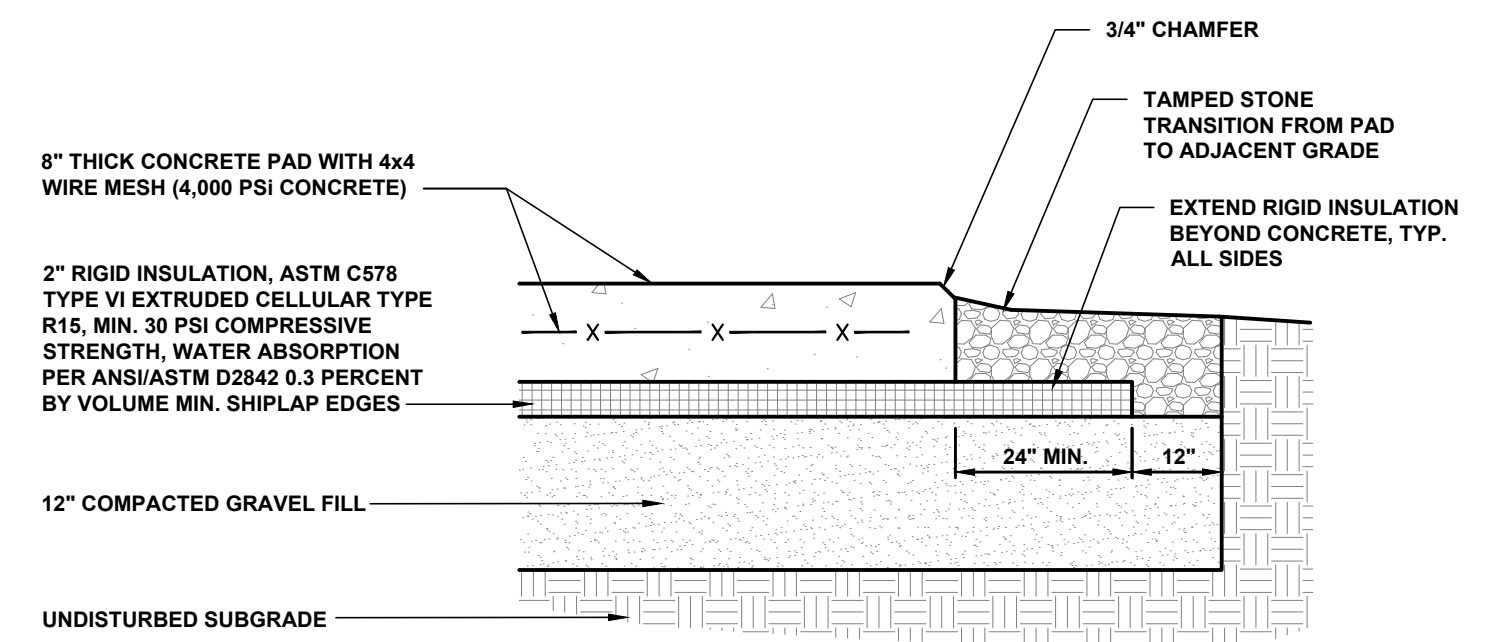
ENLARGED PLAN VIEW

SCALE: 1" = 10'



ENLARGED PLAN VIEW

SCALE: 1" = 10'

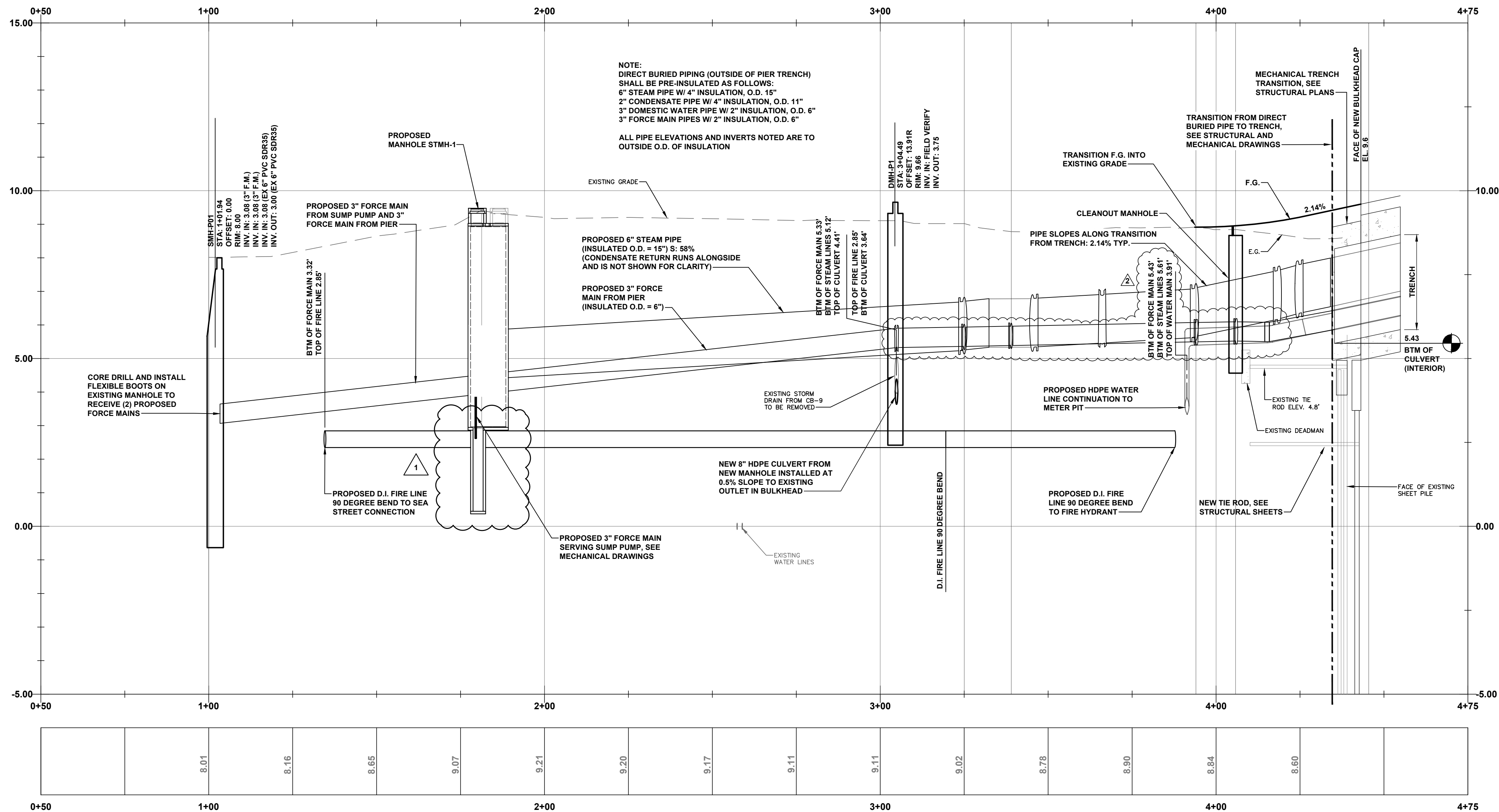


NOTE:

1. TEST CYLINDERS ARE TO BE TAKEN FROM EACH TRUCKLOAD OF CONCRETE AND TESTED AT 28 DAYS.
2. FINISHED GRADE SURROUNDING PAD SHALL BE PREPARED SUCH THAT WATER SHEDS AWAY FROM PAD.

CONCRETE EQUIPMENT PAD SECTION

N.T.S.



UTILITIES PROFILE

SCALE: H: 1" = 20' / V: 1" = 2'



2	ADDENDUM #6	JHW	3-22-24
1	ADDENDUM #4	JHW	3-8-24
NO.	ISSUE/DESCRIPTION	BY	DATE

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MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
PIER UPGRADES AND WATERFRONT IMPROVEMENTS  
CASTINE, MAINE

GRADING & UTILITY PLAN B

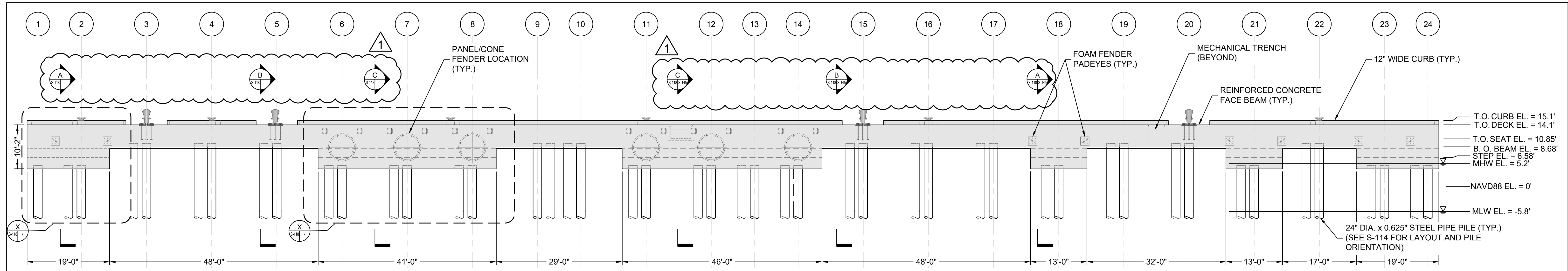
PREPARED BY:	GZA Geotechnical, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	MAINE MARITIME ACADEMY CASTINE, ME
PROJ MGR:	JHW	REVIEWED BY:	JHW
DESIGNED BY:	SLR/JHW	CHECKED BY:	JHW
DATE:	SEPTEMBER 2023	SCALE:	VARIABLES
		PROJECT NO.:	35109.00
		REVISION NO.:	1
		DRAWING	<b>C-202</b>
			SHEET NO. 25 OF 142

I.F.B.  
**NOT FOR CONSTRUCTION**  
JANUARY 19, 2024

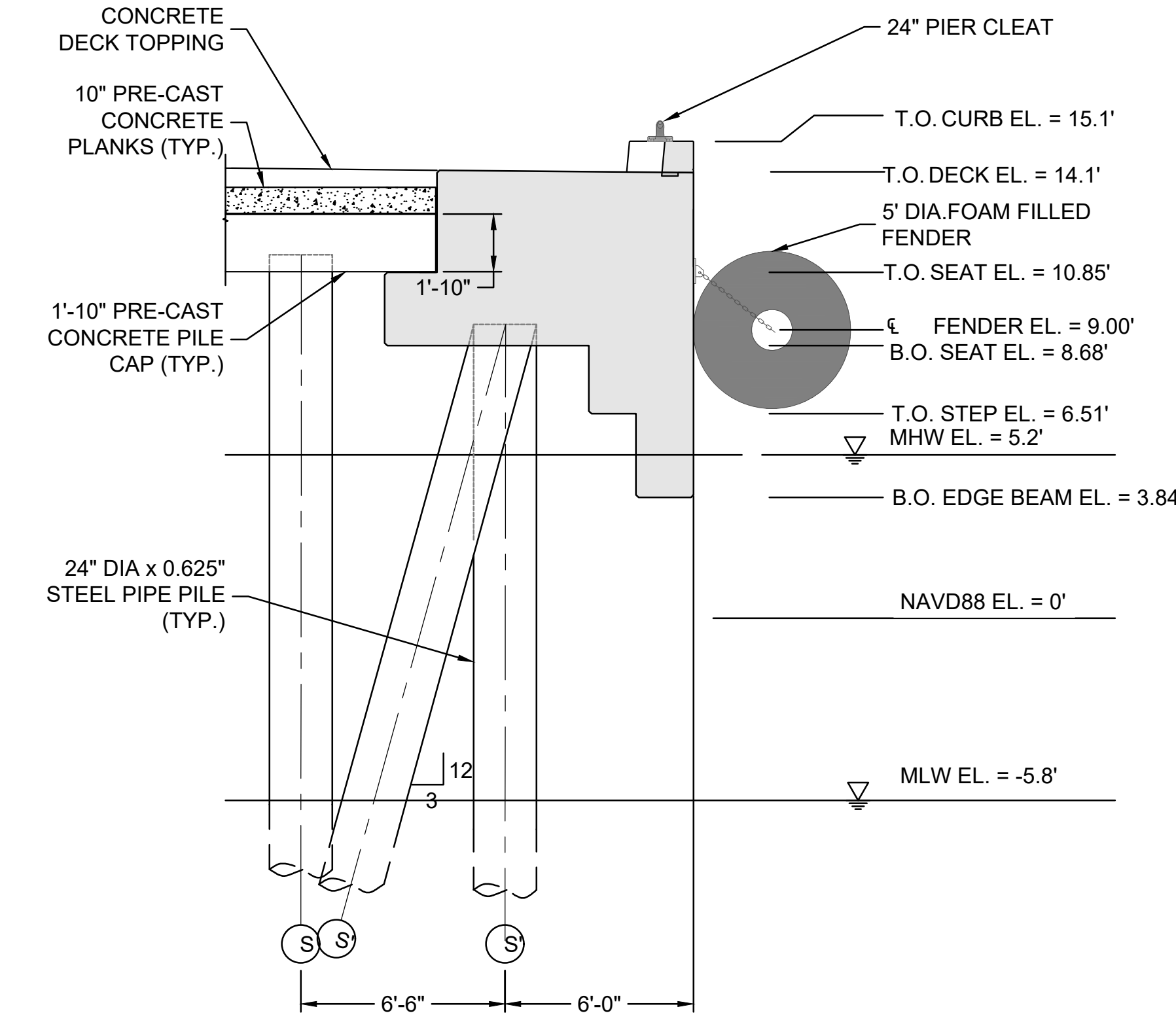




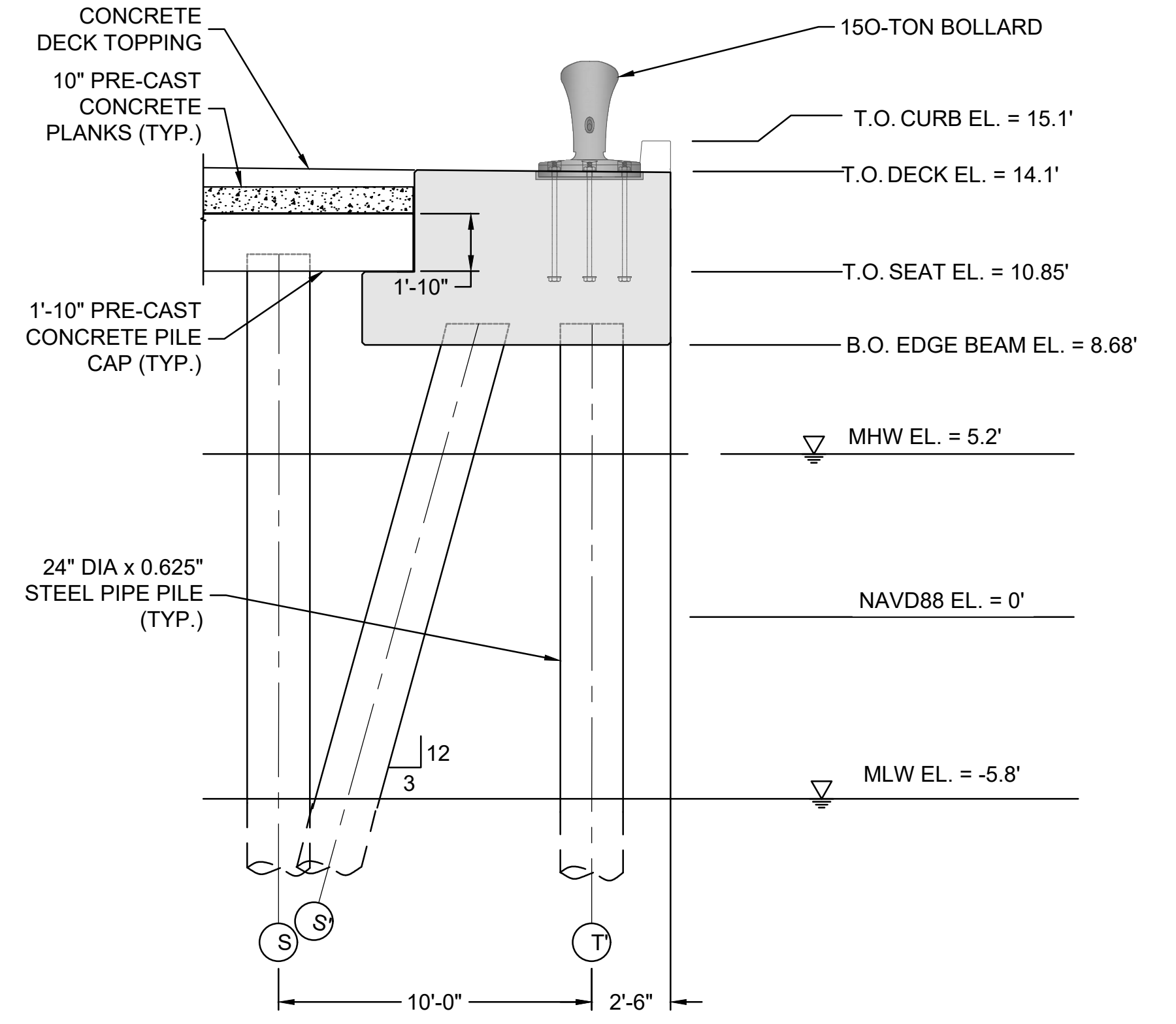




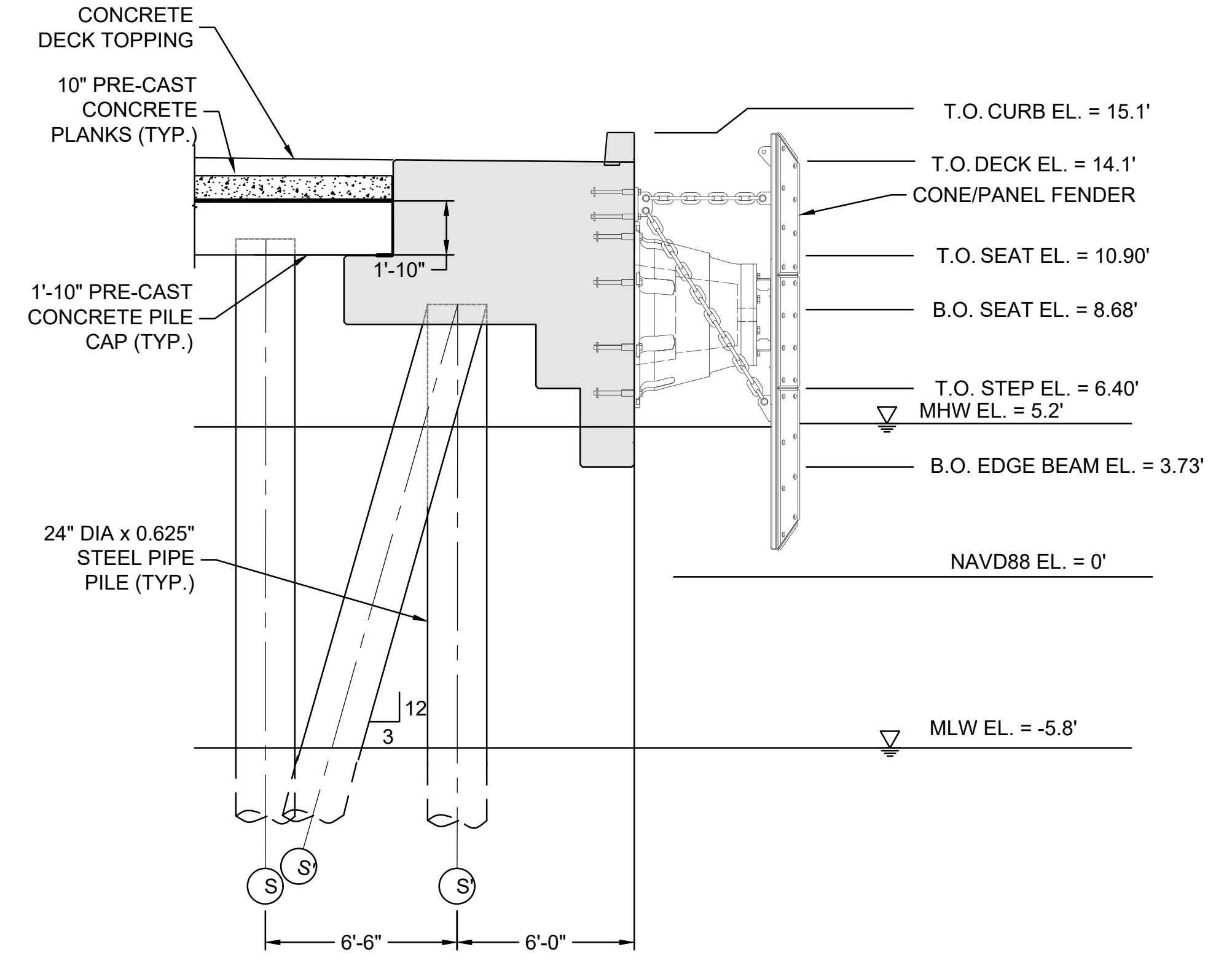
**SOUTH EDGE BEAM**  
3/32" = 1'-0"



**SECTION - SOUTH EDGE BEAM @ FOAM FENDER**  
1/4" = 1'-0"



**SECTION - SOUTH EDGE BEAM @ BOLLARD**  
1/4" = 1'-0"



**SECTION - SOUTH EDGE BEAM @ CONE/PANEL FENDER**  
1/4" = 1'-0"

**I.F.B.**  
NOT FOR CONSTRUCTION  
JANUARY 26, 2024

NO.	ADDENDUM #6 ISSUE/DESCRIPTION	DDF BY	3/22/2024 DATE
1			

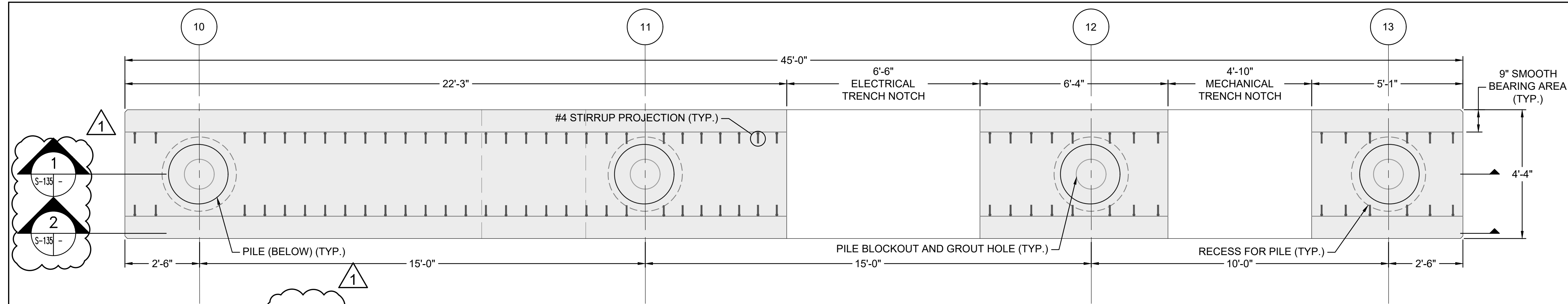
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MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
PIER UPGRADES AND WATERFRONT IMPROVEMENTS  
CASTINE, MAINE

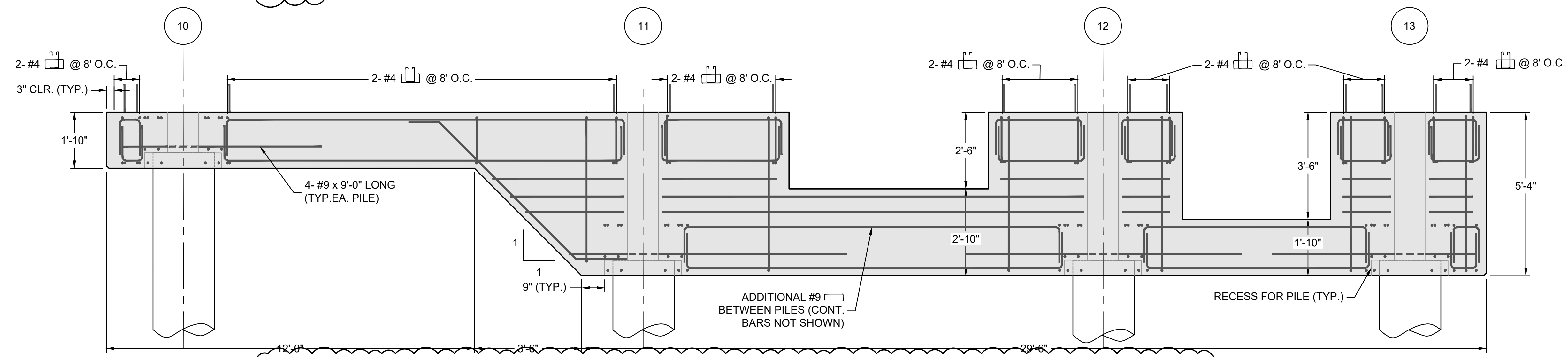
**SOUTH EDGE BEAM  
ELEVATION AND SECTIONS**

PREPARED BY: <b>GZA</b> GeoEnvironmental, Inc. www.gza.com	PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME
PROJ MGR: RKC DESIGNED BY: MAR DATE: JANUARY 2024	REVIEWED BY: BDW DRAWN BY: BDW PROJECT NO. 03.0035109.00 REVISION NO.
CHECKED BY:	DRAWING SCALE: <b>S-118</b> SHEET NO. 47 OF 142

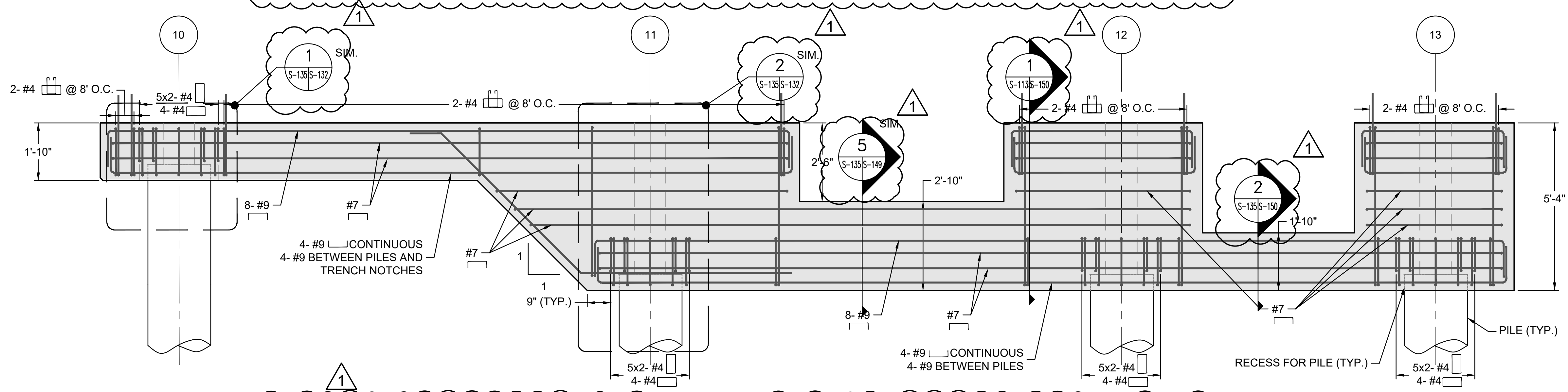
© 2024 - GZA GeoEnvironmental, Inc. WATERFRONT IMPROVEMENTS\_ADD\_2024-02-29.DWG: S-118 SOUTH EDGE BEAM March 22, 2024 MICHAEL AUBIN



**1 CONCRETE PILE CAP TYPE 1 REINFORCEMENT PLAN**  
 S-135 - 1/2" = 1'-0"



**1 CONCRETE PILE CAP TYPE 1 REINFORCEMENT SECTION**  
 S-135 - 1/2" = 1'-0"  
 NOTE: TYPE 1A REINFORCEMENT SIMILAR, SEE S-136 FOR PLAN



**2 CONCRETE PILE CAP TYPE 1 REINFORCEMENT SECTION**  
 S-135 - 1/2" = 1'-0"  
 NOTE: TYPE 1A REINFORCEMENT SIMILAR, SEE S-136 FOR PLAN

**PILE CAP NOTES:**

- ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 3" CLEAR COVER. ALL CONCRETE NOT EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 1.5" CLEAR COVER.

**I.F.B.**  
 NOT FOR CONSTRUCTION  
 JANUARY 26, 2024

ADDENDUM #6		DDF	3/22/2024
NO.	ISSUE/DESCRIPTION	BY	DATE

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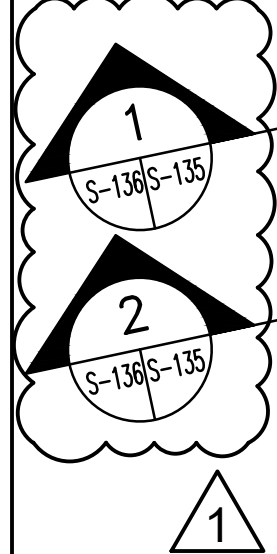
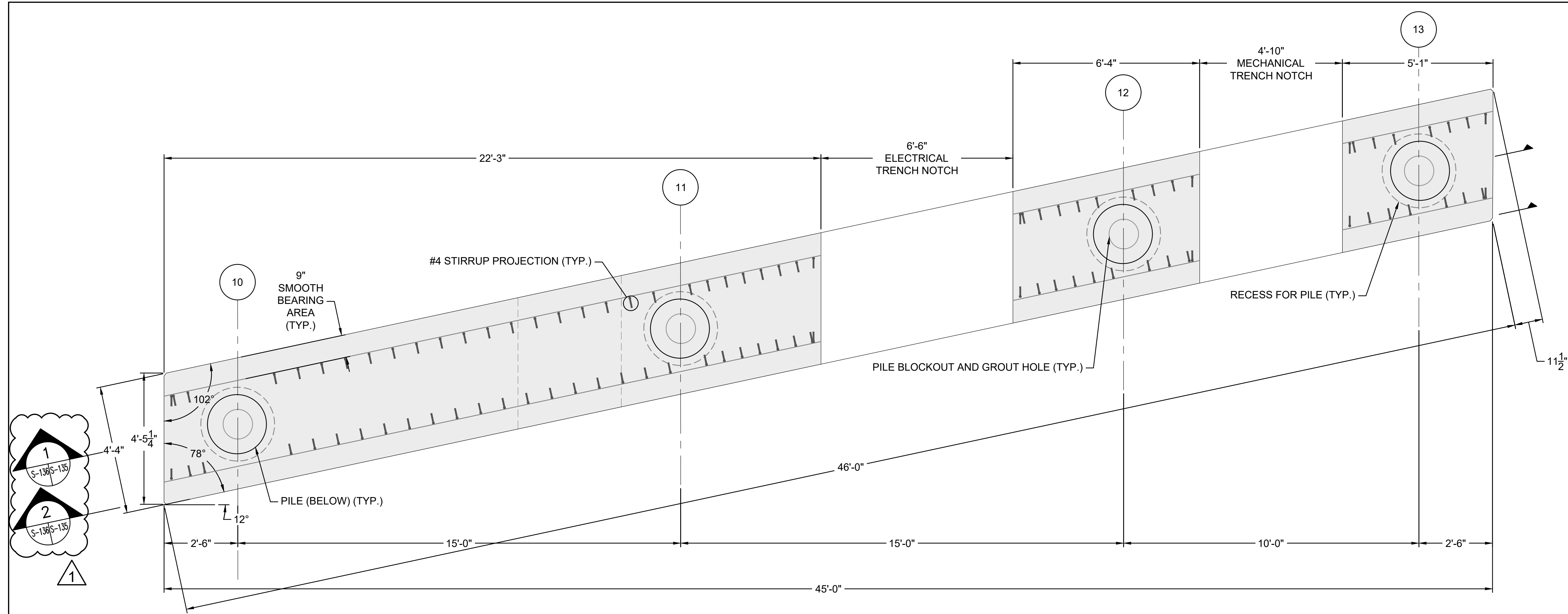
MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
 PIER UPGRADES AND WATERFRONT IMPROVEMENTS  
 CASTINE, MAINE

PRECAST PIER PILE CAP DETAILS - TYPE 1

PREPARED BY: <b>GZA</b> GeoEnvironmental, Inc. www.gza.com	PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME
PROJ MGR: RKC DESIGNED BY: MAR DATE: JANUARY 2024	REVIEWED BY: BDW DRAWN BY: BDW PROJECT NO. 03.0035109.00 REVISION NO.
<b>DRAWING</b>	
<b>S-135</b>	
SHEET NO. 64 OF 142	

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**1**  
 CONCRETE PILE CAP TYPE 1A REINFORCEMENT PLAN  
 1/2" = 1'-0"

NOTE:  
 SEE S-135 FOR ADDITIONAL DETAIL

PILE CAP NOTES:  
 1. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 3" CLEAR COVER. ALL CONCRETE NOT EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 1.5" CLEAR COVER.

**I.F.B.**  
 NOT FOR CONSTRUCTION  
 JANUARY 26, 2024

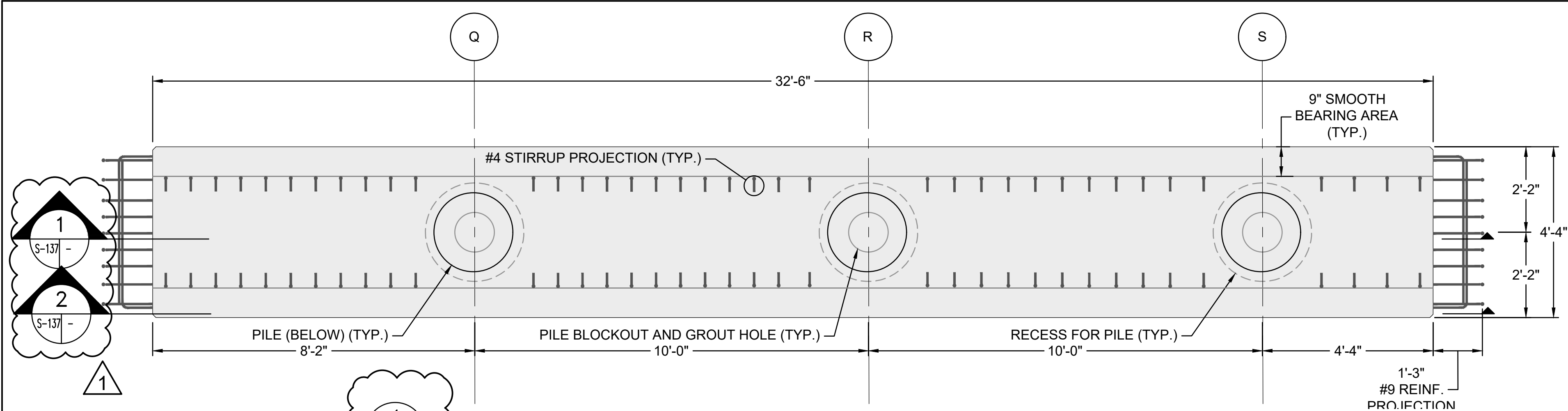
ADDENDUM #6		DDF	3/22/2024
NO.	ISSUE/DESCRIPTION	BY	DATE

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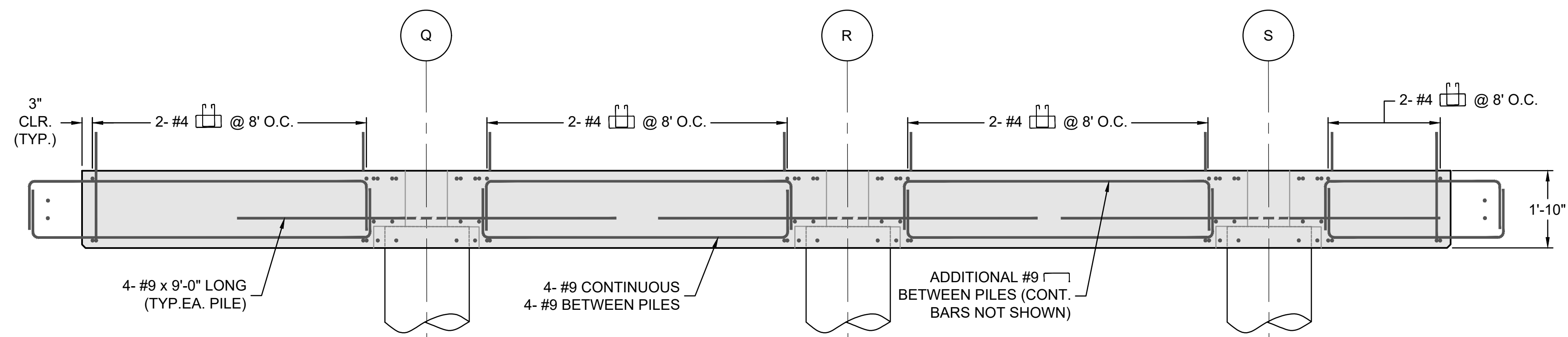
MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
 PIER UPGRADES AND WATERFRONT IMPROVEMENTS  
 CASTINE, MAINE

PRECAST PIER PILE CAP DETAILS - TYPE 1A

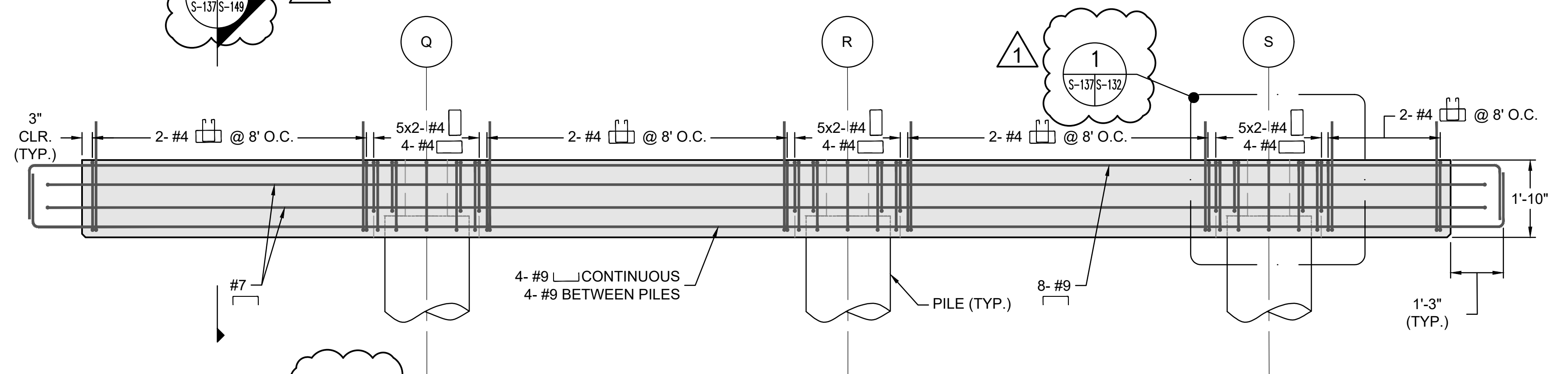
PREPARED BY: <b>GZA</b> GeoEnvironmental, Inc. www.gza.com	PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME		
PROJ MGR: RKC	REVIEWED BY:	CHECKED BY:	DRAWING
DESIGNED BY: MAR	DRAWN BY: BDW	SCALE:	<b>S-136</b>
DATE: JANUARY 2024	PROJECT NO. 03.0035109.00	REVISION NO.	SHEET NO. 65 OF 142



1 CONCRETE PILE CAP TYPE 2 REINFORCEMENT PLAN  
 S-115/S-137 1/2" = 1'-0"



1 CONCRETE PILE CAP TYPE 2 REINFORCEMENT SECTION  
 S-137 1/2" = 1'-0"



2 CONCRETE PILE CAP TYPE 2 REINFORCEMENT SECTION  
 S-137 1/2" = 1'-0"

PILE CAP NOTES:  
 1. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 3" CLEAR COVER. ALL CONCRETE NOT EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 1.5" CLEAR COVER.

I.F.B.  
 NOT FOR CONSTRUCTION  
 JANUARY 26, 2024

NO.	ADDENDUM #6 ISSUE/DESCRIPTION	DDF BY	3/22/2024 DATE
1			

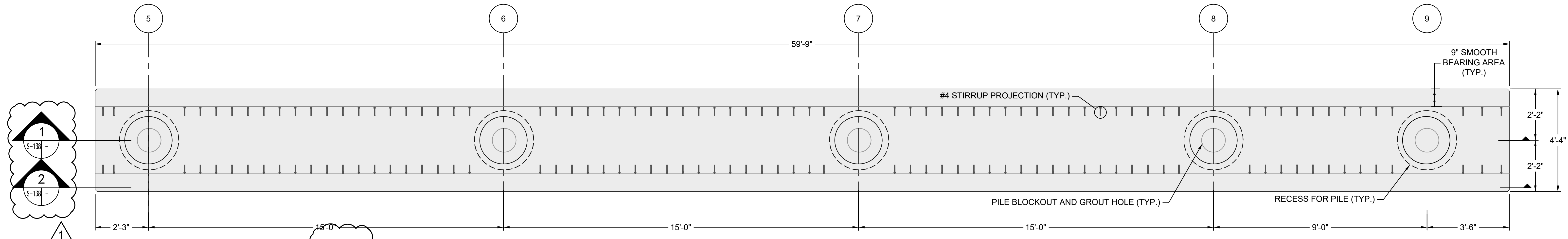
UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEDENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
 PIER UPGRADES AND WATERFRONT IMPROVEMENTS  
 CASTINE, MAINE

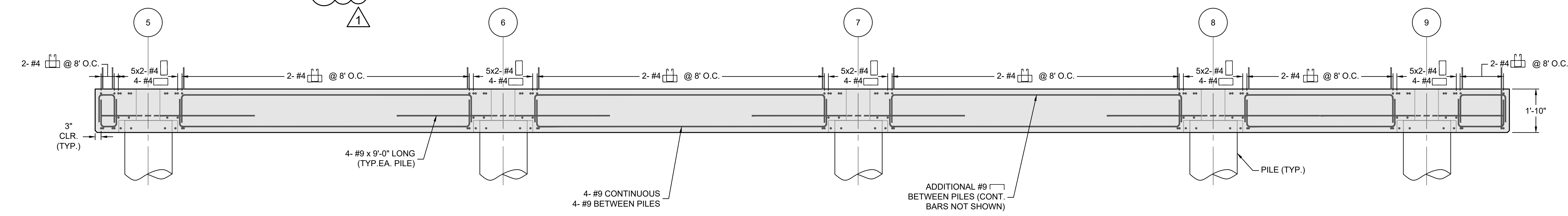
PRECAST PIER PILE CAP DETAILS - TYPE 2

PREPARED BY: GZA GeoEnvironmental, Inc. www.gza.com	PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME		
PROJ MGR: RKC	REVIEWED BY:	CHECKED BY:	DRAWING
DESIGNED BY: MAR	DRAWN BY: BDW	SCALE:	S-137
DATE: JANUARY 2024	PROJECT NO. 03.0035109.00	REVISION NO.	SHEET NO. 66 OF 142

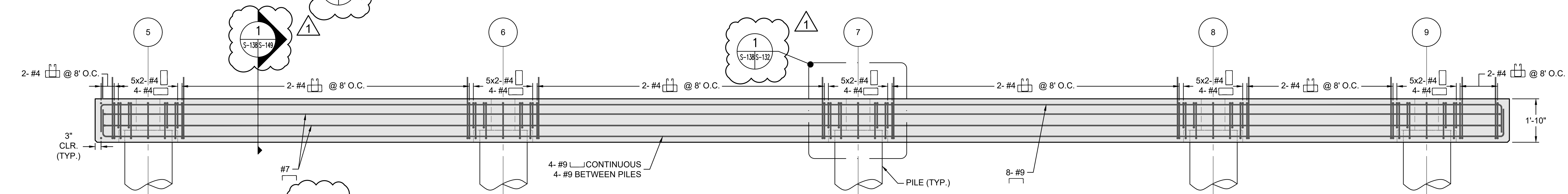
© 2024 - GZA GeoEnvironmental, Inc. WATERFRONT IMPROVEMENTS\_ADD\_2024-02-29.DWG S-137 (TYPE 2) March 22, 2024 MICHAEL ARBEN



1 CONCRETE PILE CAP TYPE 3 REINFORCEMENT PLAN



1 CONCRETE PILE CAP TYPE 3 REINFORCEMENT SECTION



2 CONCRETE PILE CAP TYPE 3 REINFORCEMENT SECTION

PILE CAP NOTES:

- ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 3" CLEAR COVER. ALL CONCRETE NOT EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 1.5" CLEAR COVER.

I.F.B.  
NOT FOR CONSTRUCTION  
JANUARY 26, 2024

ADDENDUM #6		DDF	3/22/2024
NO.	ISSUE/DESCRIPTION	BY	DATE
1			

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MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
PIER UPGRADES AND WATERFRONT IMPROVEMENTS  
CASTINE, MAINE

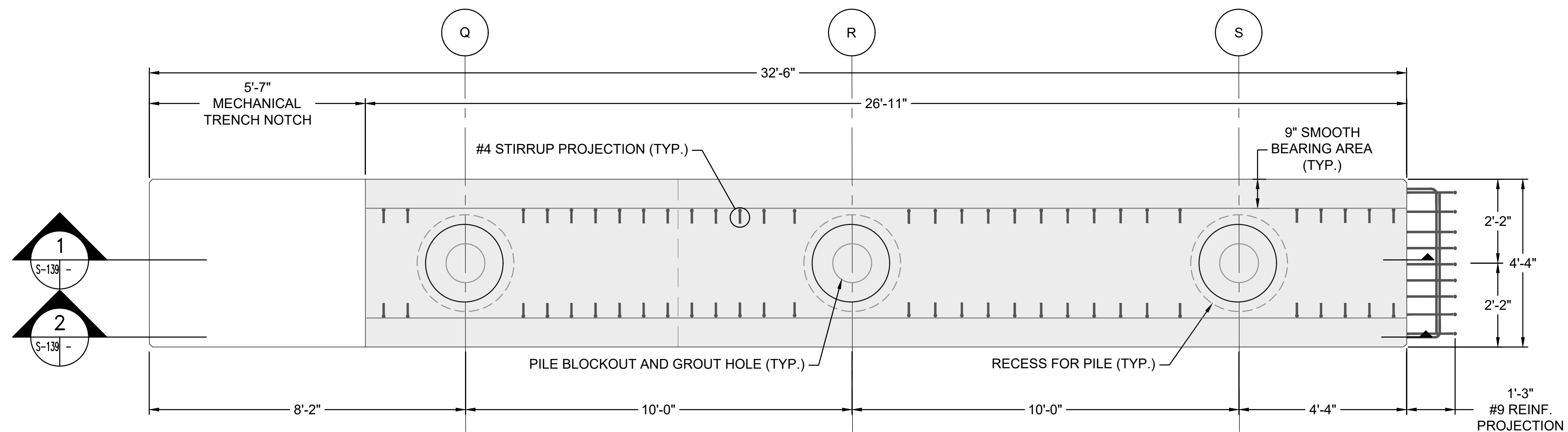
PRECAST PIER PILE CAP DETAILS - TYPE 3

PREPARED BY: GZA GeoEnvironmental, Inc. www.gza.com	PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME
PROJ MGR: RKC DESIGNED BY: MAR	REVIEWED BY: BDW DRAWN BY: BDW
DATE: JANUARY 2024	SCALE: REVISION NO.
03.0035109.00	

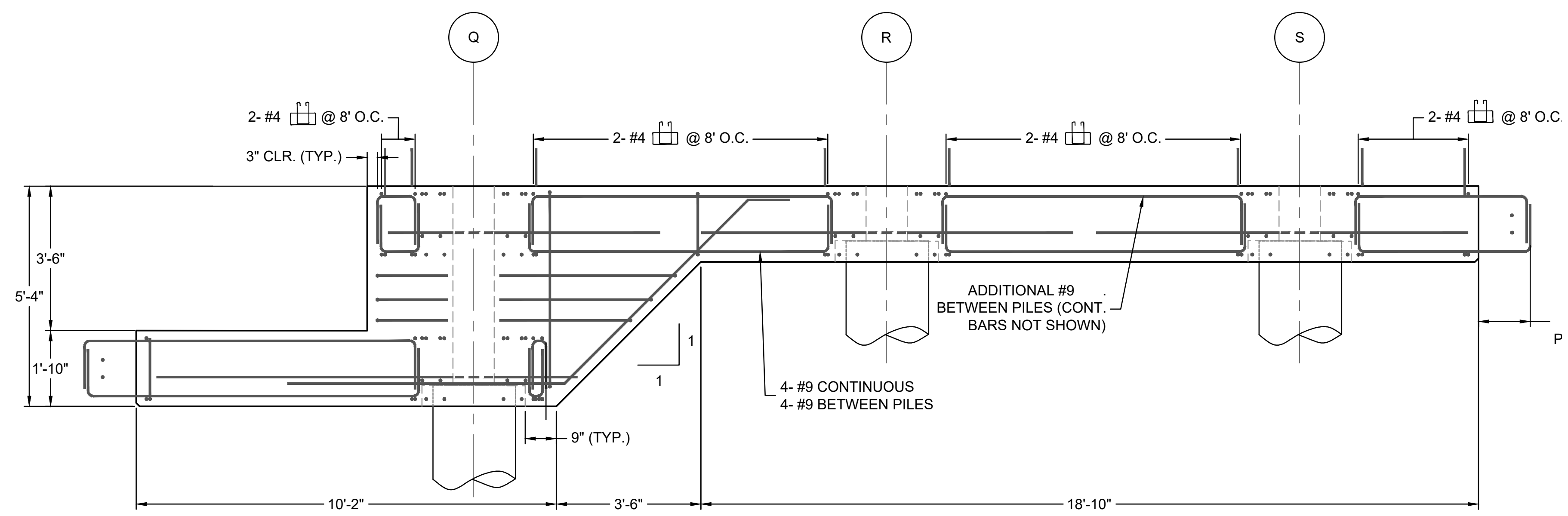
**S-138**  
SHEET NO. 67 OF 142

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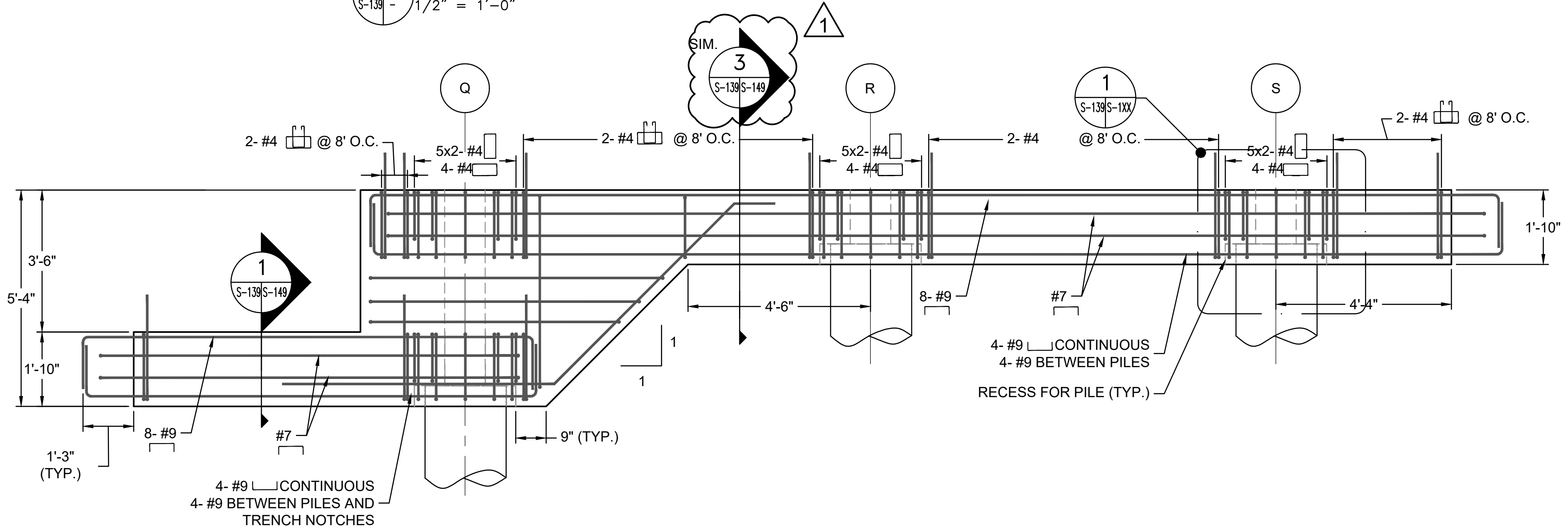




1 CONCRETE PILE CAP TYPE 5 REINFORCEMENT PLAN  
 S-115/S-139 1/2" = 1'-0"



1 CONCRETE PILE CAP TYPE 5 REINFORCEMENT SECTION  
 S-139 1/2" = 1'-0"



2 CONCRETE PILE CAP TYPE 5 REINFORCEMENT SECTION  
 S-139 1/2" = 1'-0"

PILE CAP NOTES:  
 1. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 3" CLEAR COVER. ALL CONCRETE NOT EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 1.5" CLEAR COVER.

I.F.B.  
 NOT FOR CONSTRUCTION  
 JANUARY 26, 2024

ADDENDUM #6		DOF	3/22/2024
NO.	ISSUE/DESCRIPTION	BY	DATE

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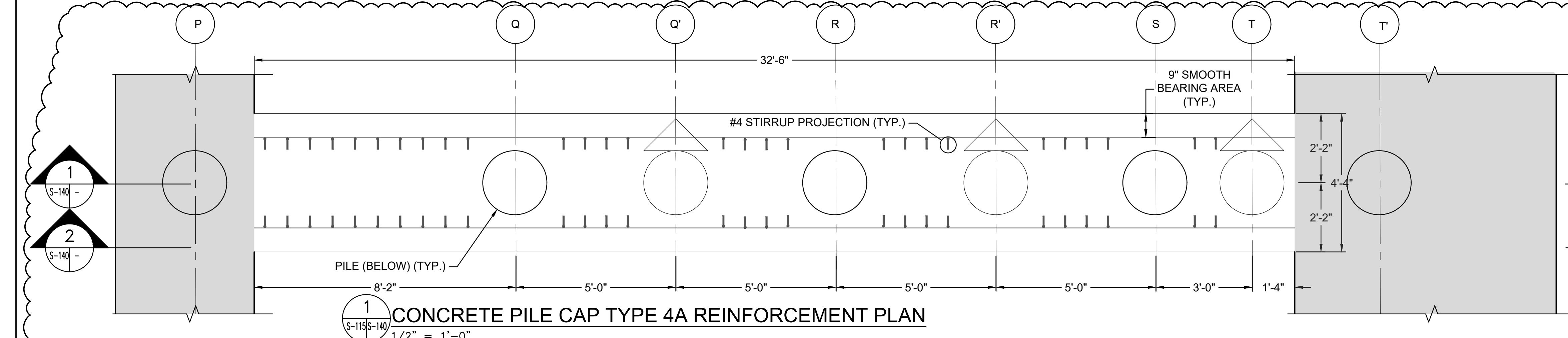
MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
 PIER UPGRADES AND WATERFRONT IMPROVEMENTS  
 CASTINE, MAINE

PRECAST PIER PILE CAP DETAILS - TYPE 5

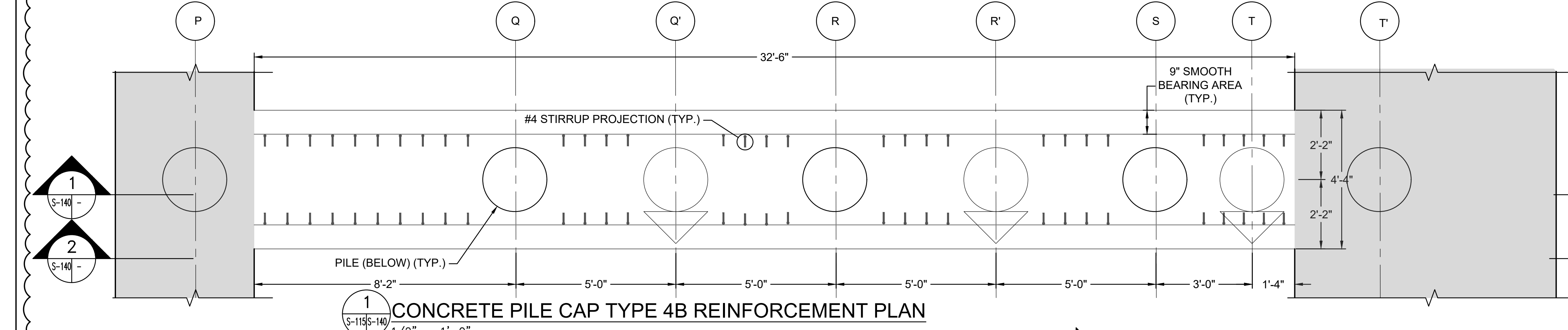
PREPARED BY: GZA GeoEnvironmental, Inc. www.gza.com	PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME
PROJ MGR: RKC DESIGNED BY: MAR	REVIEWED BY: BDW DRAWN BY: BDW
DATE: JANUARY 2024	CHECKED BY: [ ] SCALE: [ ] REVISION NO. [ ]

**S-139**  
 SHEET NO. 68 OF 142

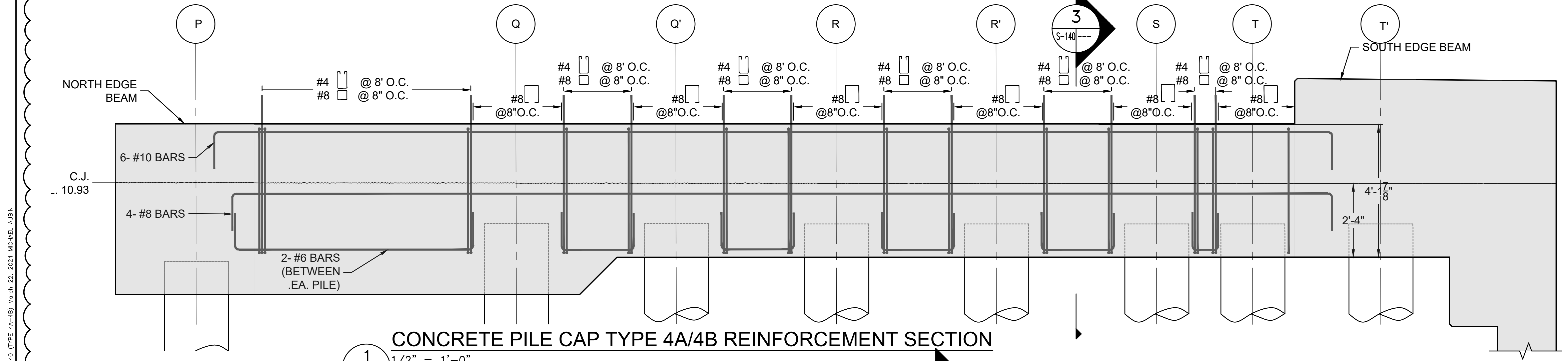
© 2024 GZA GeoEnvironmental, Inc. WATERFRONT IMPROVEMENTS\_ADD\_2024-02-29.DWG: S-139 (TYPE 5) March 19, 2024 MICHAEL AUBIN  
 GZA is a U.S. EQUAL OPPORTUNITY AND AFFIRMATIVE ACTION EMPLOYER.



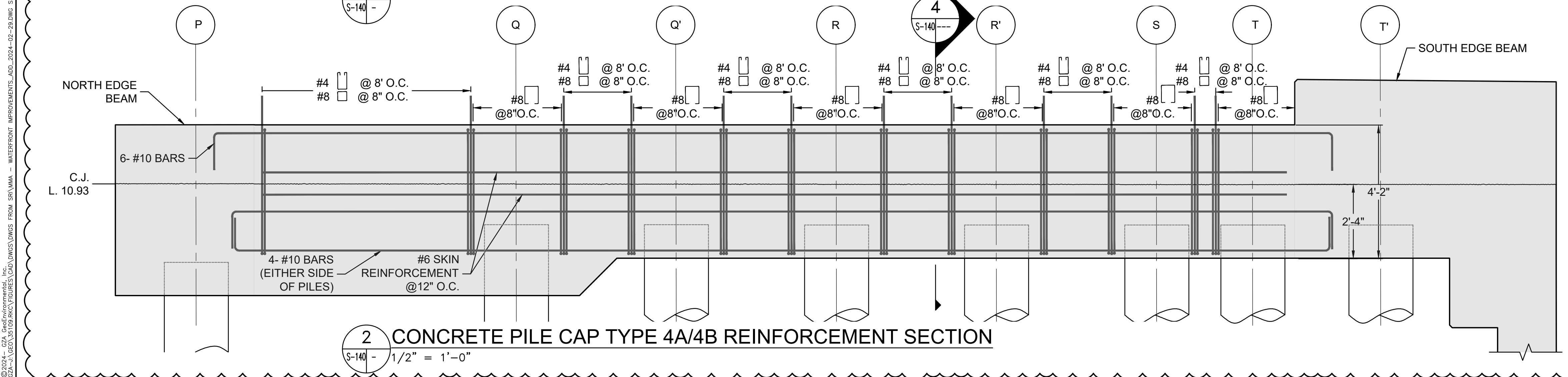
1 CONCRETE PILE CAP TYPE 4A REINFORCEMENT PLAN  
S-115/S-140 1/2" = 1'-0"



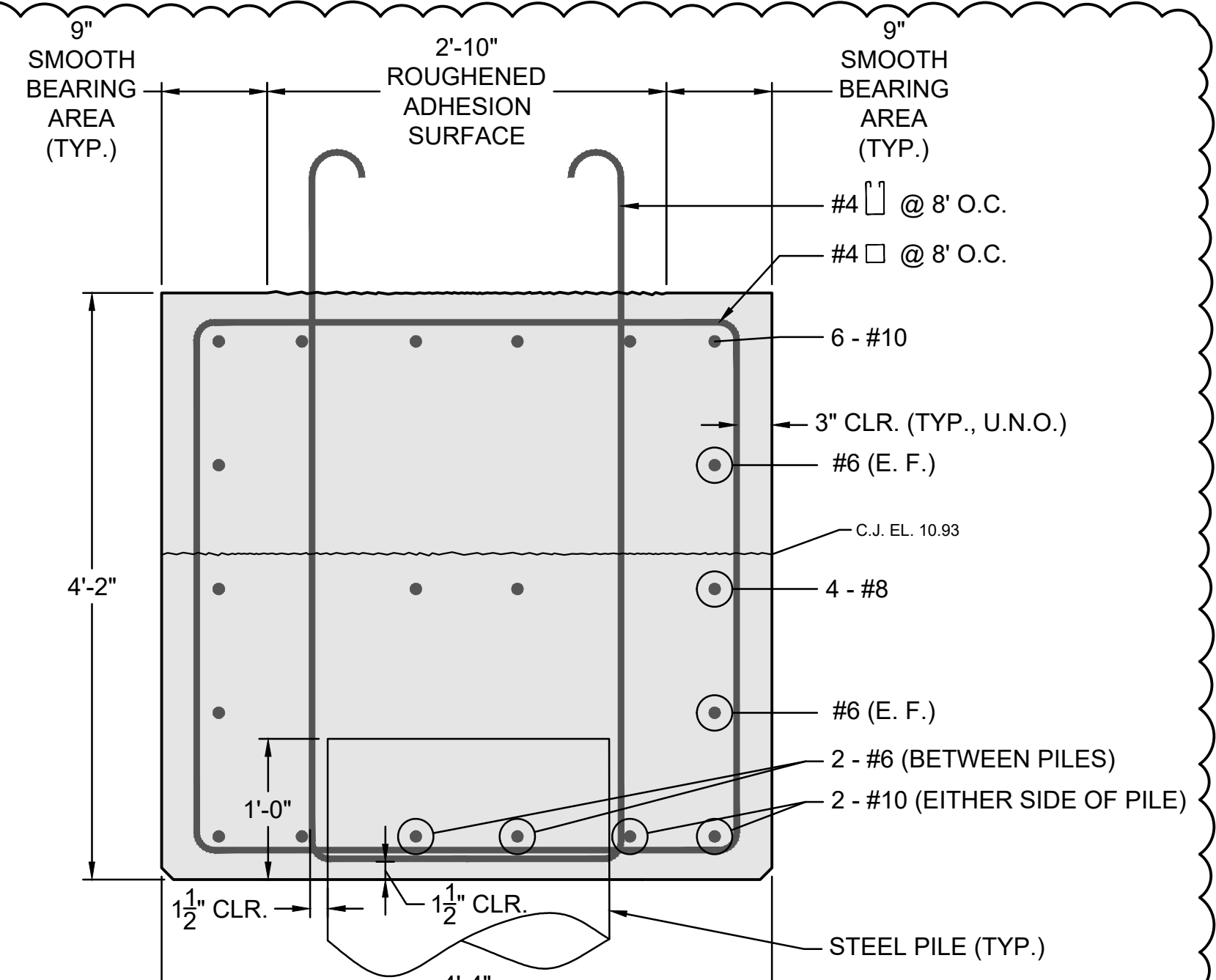
1 CONCRETE PILE CAP TYPE 4B REINFORCEMENT PLAN  
S-115/S-140 1/2" = 1'-0"



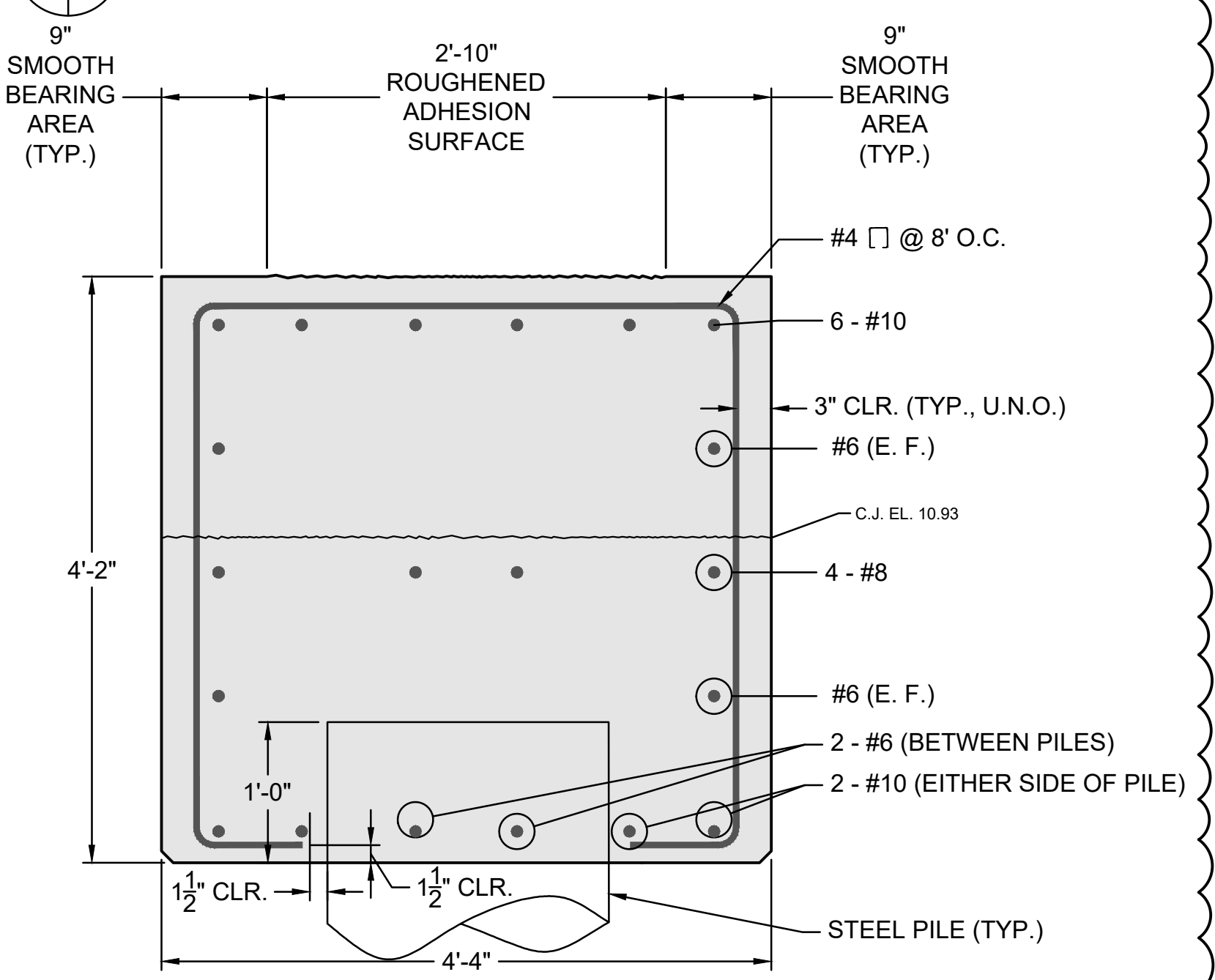
1 CONCRETE PILE CAP TYPE 4A/4B REINFORCEMENT SECTION  
S-140 1/2" = 1'-0"



2 CONCRETE PILE CAP TYPE 4A/4B REINFORCEMENT SECTION  
S-140 1/2" = 1'-0"



3 CONCRETE PILE CAP TYPE 4A/4B SECTION  
S-140 1/2" = 1'-0"



4 CONCRETE PILE CAP TYPE 4A/4B SECTION  
S-140 1/2" = 1'-0"

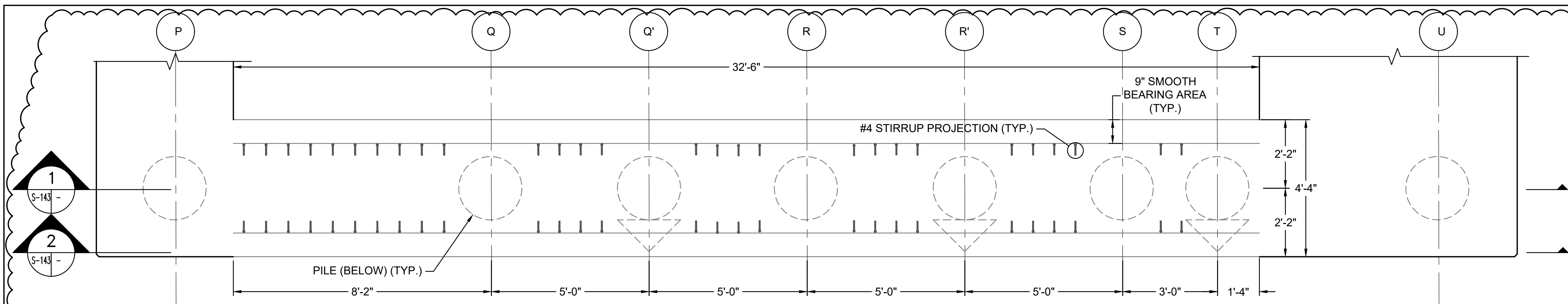
- PILE CAP NOTES:
- ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 3" CLEAR COVER. ALL CONCRETE NOT EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 1.5' CLEAR COVER.

I.F.B.  
NOT FOR CONSTRUCTION  
JANUARY 26, 2024

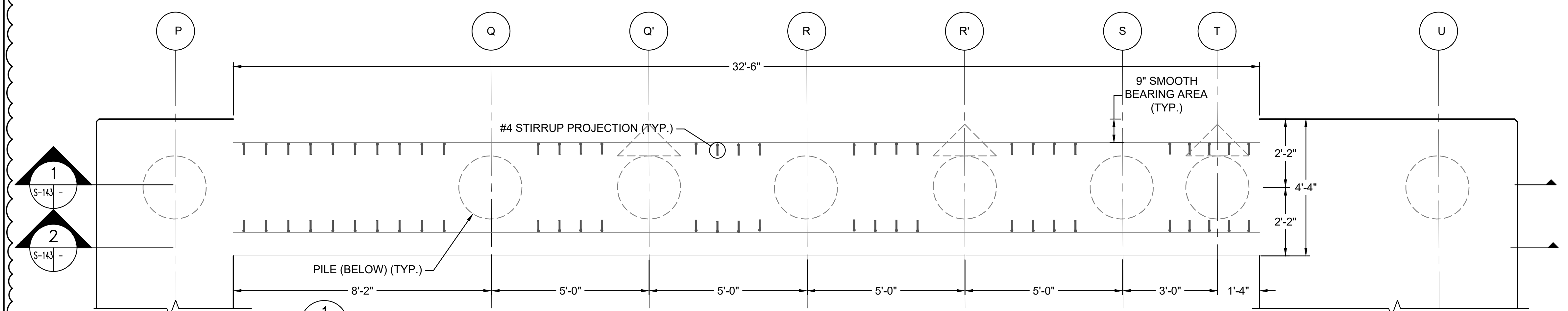
ADDENDUM #6		DDF	3/22/2024
NO.	ISSUE/DESCRIPTION	BY	DATE
UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOTECHNICAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.			
MAINE MARITIME ACADEMY WATERFRONT CAMPUS PIER UPGRADES AND WATERFRONT IMPROVEMENTS CASTINE, MAINE			
CAST-IN-PLACE PIER PILE CAP DETAILS - TYPE 4A/4B			
PREPARED BY: GZA GeoEnvironmental, Inc. www.gza.com		PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME	
PROJ MGR: RKC	DESIGNED BY: MAR	REVIEWED BY: BDW	CHECKED BY: S-140
DATE: JANUARY 2024	PROJECT NO: 03.0035109.00	SCALE: REVISION NO.	<b>S-140</b> SHEET NO. 69 OF 142

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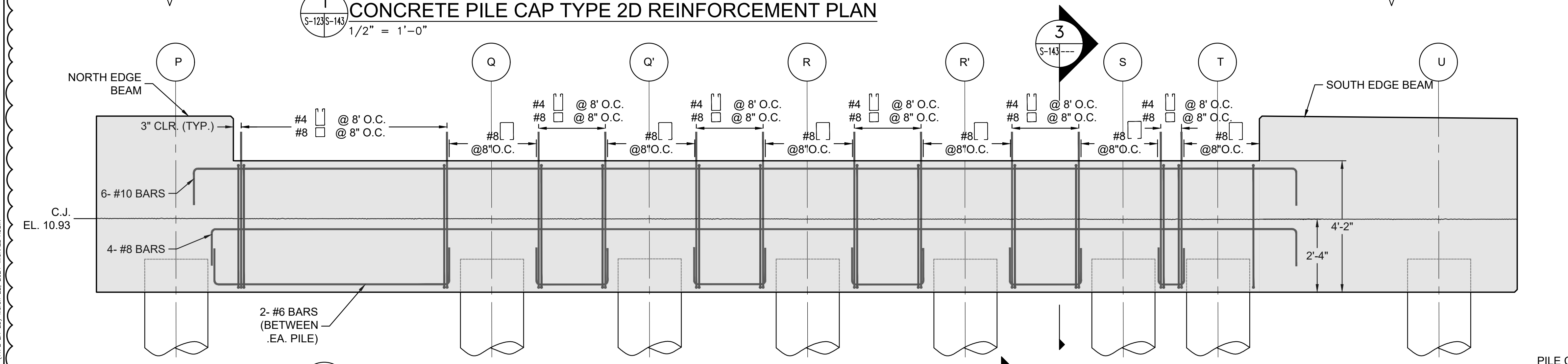




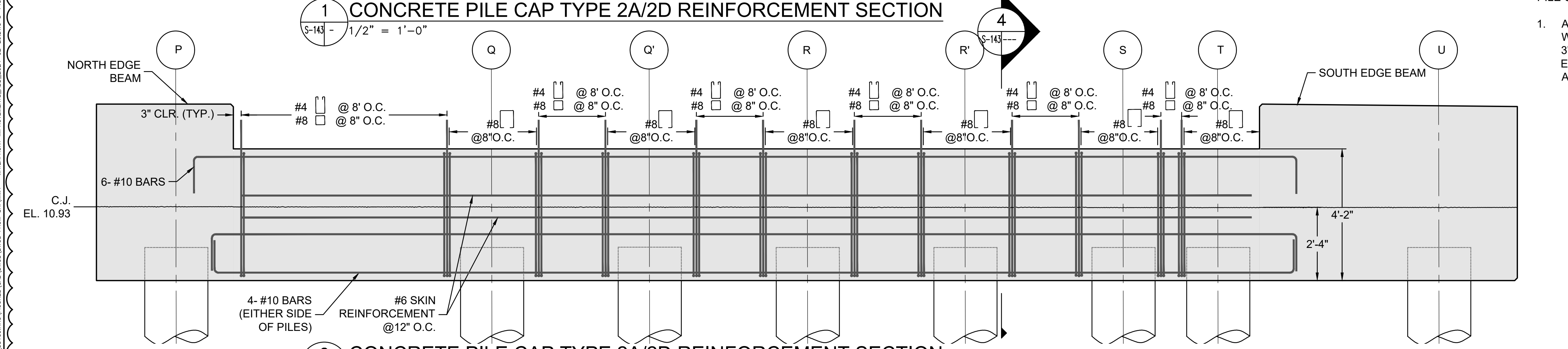
**1 CONCRETE PILE CAP TYPE 2A REINFORCEMENT PLAN**  
 S-123/S-143 1/2" = 1'-0"



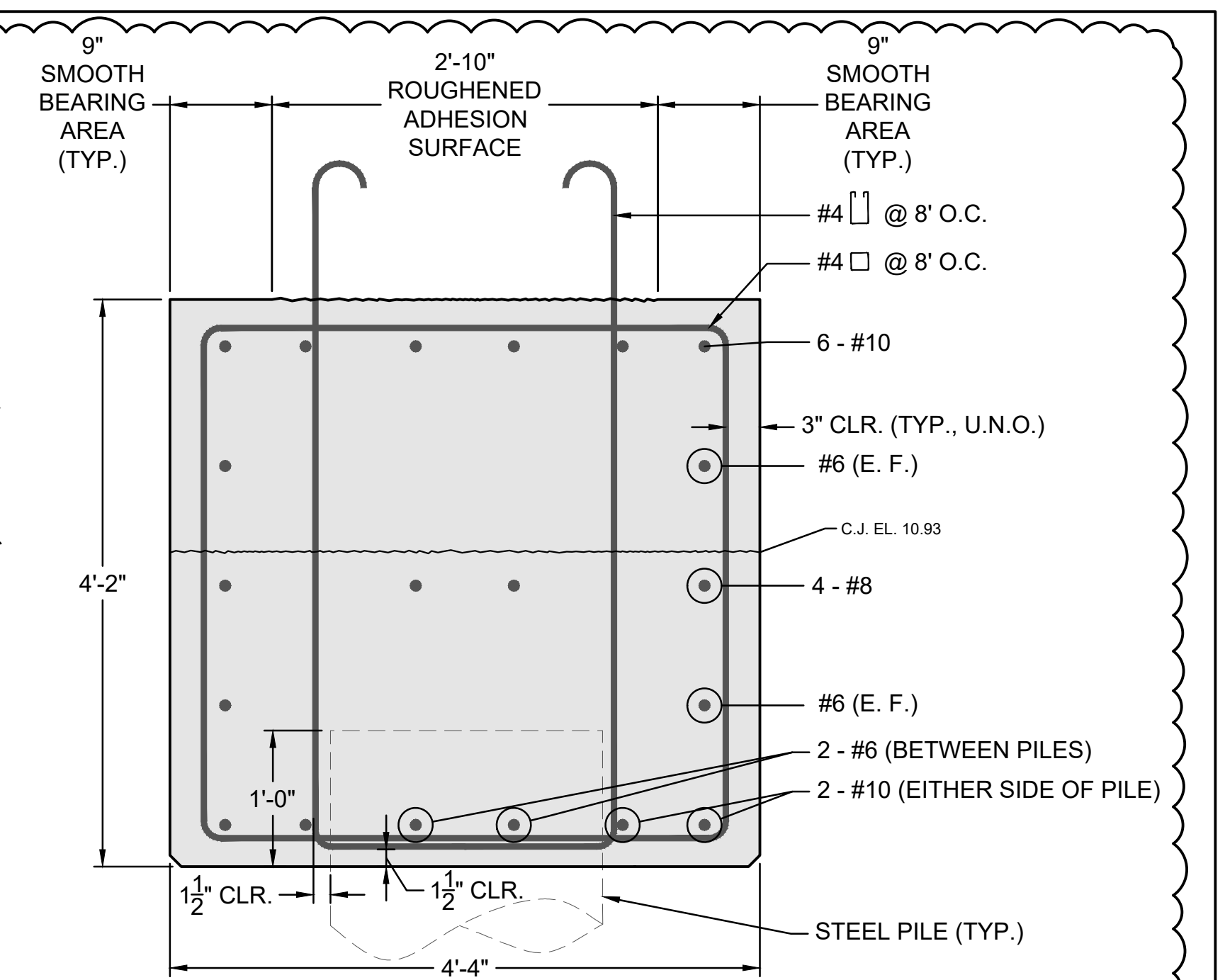
**1 CONCRETE PILE CAP TYPE 2D REINFORCEMENT PLAN**  
 S-123/S-143 1/2" = 1'-0"



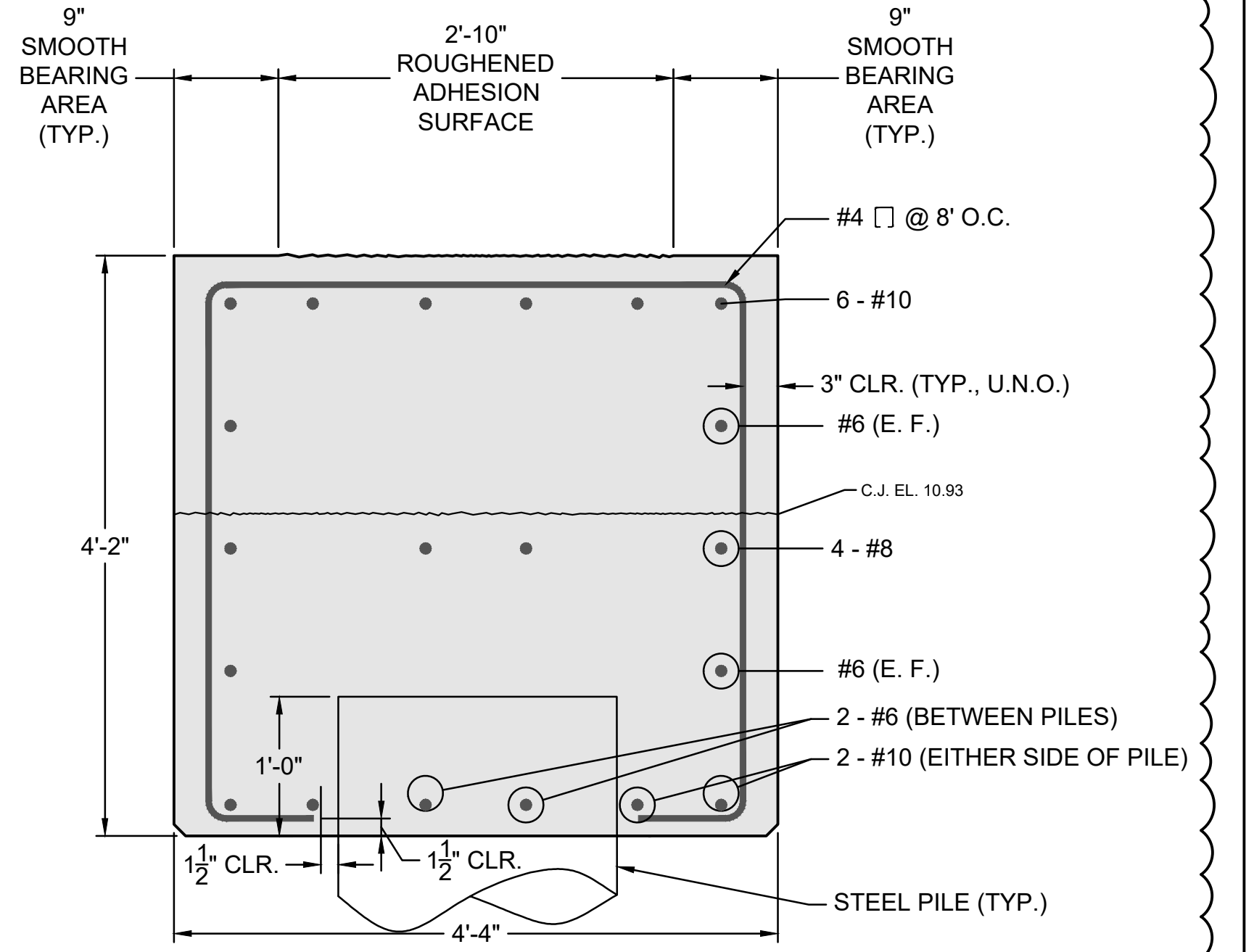
**1 CONCRETE PILE CAP TYPE 2A/2D REINFORCEMENT SECTION**  
 S-143 - 1/2" = 1'-0"



**2 CONCRETE PILE CAP TYPE 2A/2D REINFORCEMENT SECTION**  
 S-143 - 1/2" = 1'-0"



**3 CONCRETE PILE CAP TYPE 2A/2D SECTION**  
 S-143 - 1/2" = 1'-0"



**4 CONCRETE PILE CAP TYPE 2A/2D SECTION**  
 S-143 - 1/2" = 1'-0"

- PILE CAP NOTES:**
- ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 3" CLEAR COVER. ALL CONCRETE NOT EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 1.5" CLEAR COVER.

**I.F.B.**  
 NOT FOR CONSTRUCTION  
 JANUARY 26, 2024

NO.	ISSUE/DESCRIPTION	BY	DATE
2	ADDENDUM #6	DDF	3/22/2024
1	ADDENDUM #5	DDF	3/15/2024

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MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
 PIER UPGRADES AND WATERFRONT IMPROVEMENTS  
 CASTINE, MAINE

PIER PILE CAP DETAILS - TYPE 2A & 2D

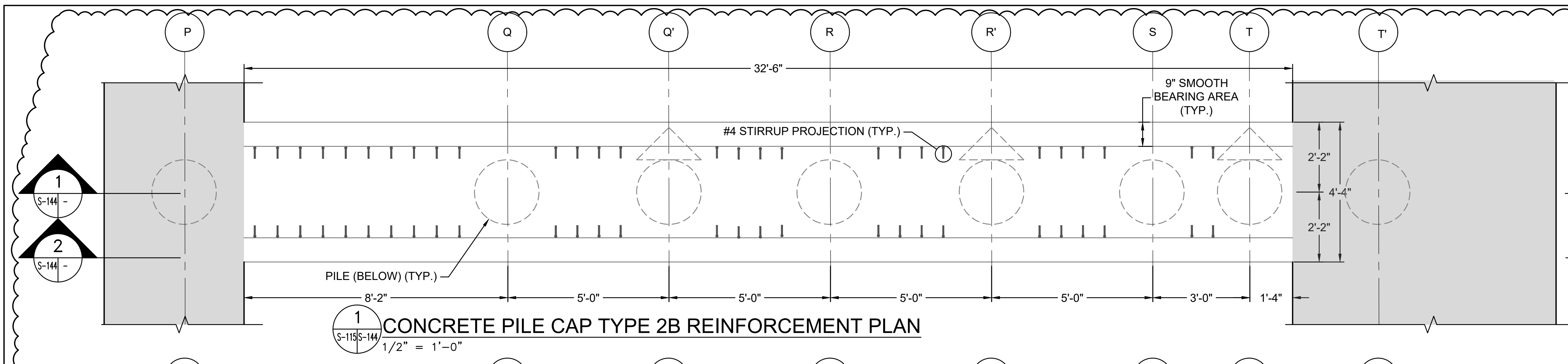
PREPARED BY: **GZA** GeoEnvironmental, Inc. www.gza.com  
 PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME

PROJ MGR: RKC REVIEWED BY: [ ]  
 DESIGNED BY: MAR DRAWN BY: BDW  
 DATE: JANUARY 2024 PROJECT NO. 03.0035109.00 REVISION NO. [ ]

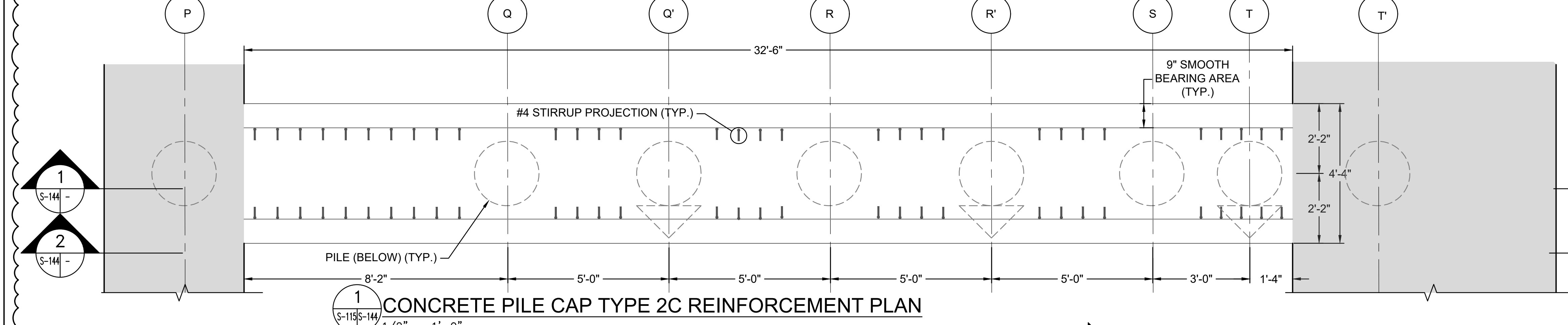
**DRAWING**  
**S-143**  
 SHEET NO. 72 OF 142

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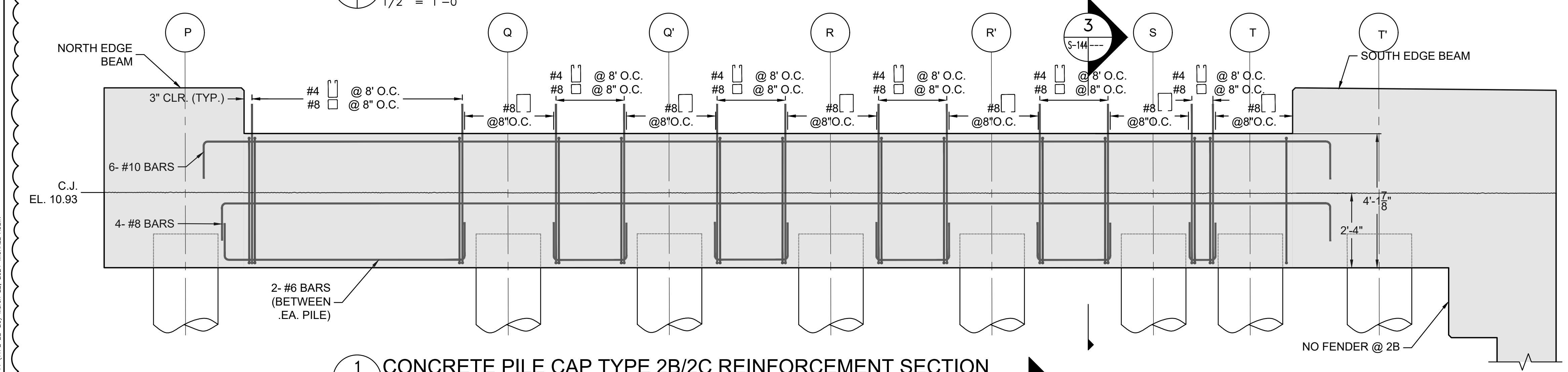




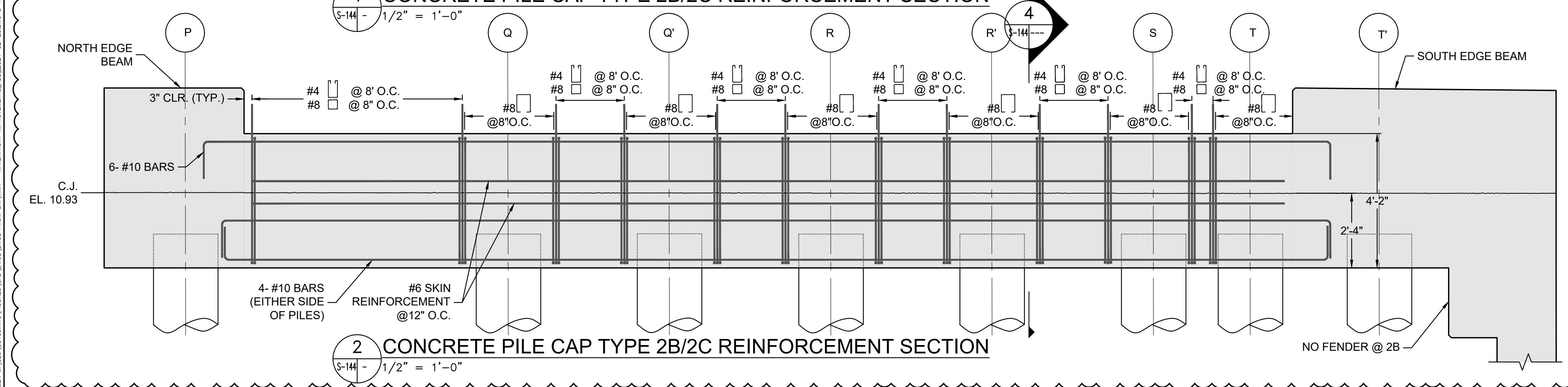
1 CONCRETE PILE CAP TYPE 2B REINFORCEMENT PLAN  
1/2" = 1'-0"



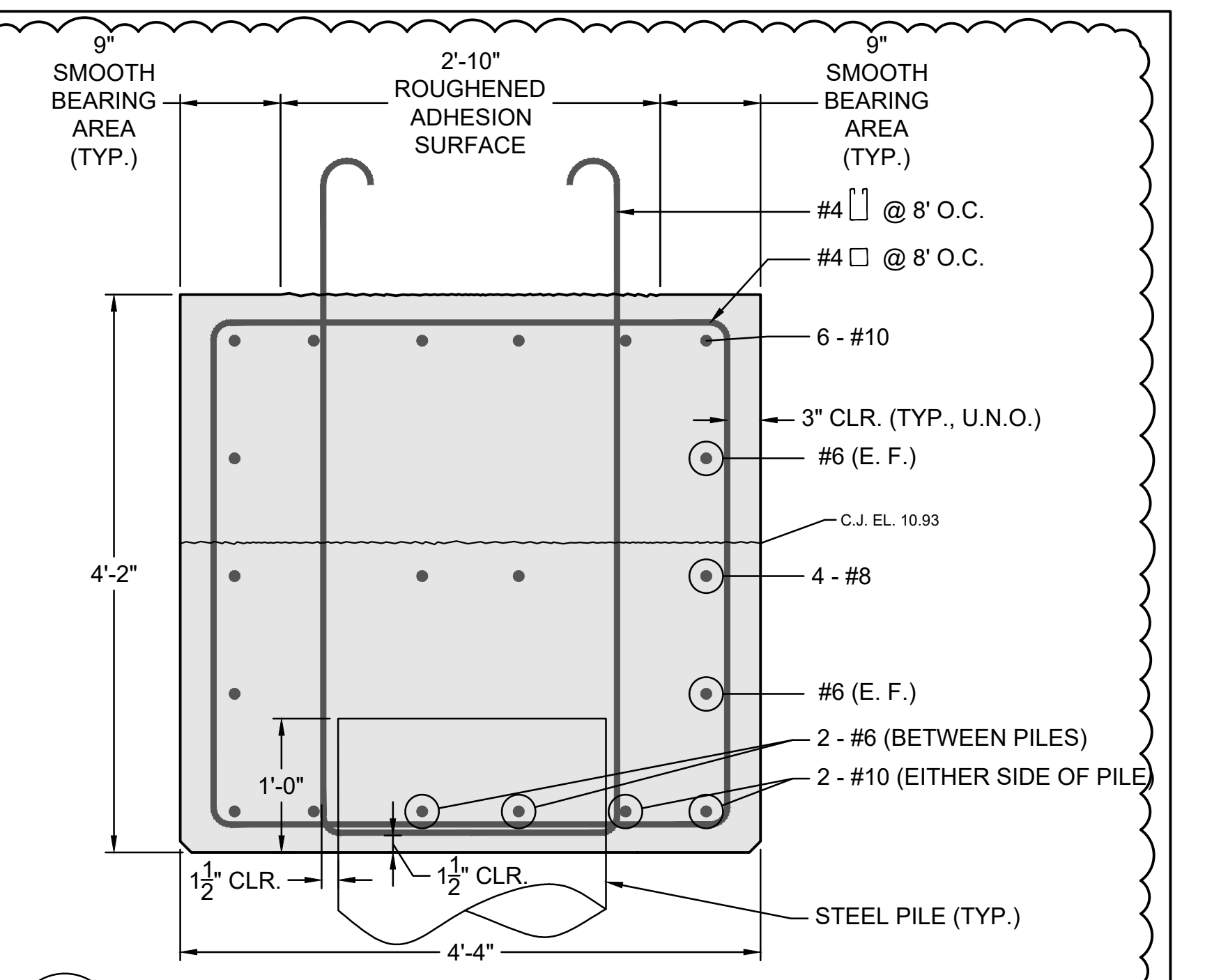
1 CONCRETE PILE CAP TYPE 2C REINFORCEMENT PLAN  
1/2" = 1'-0"



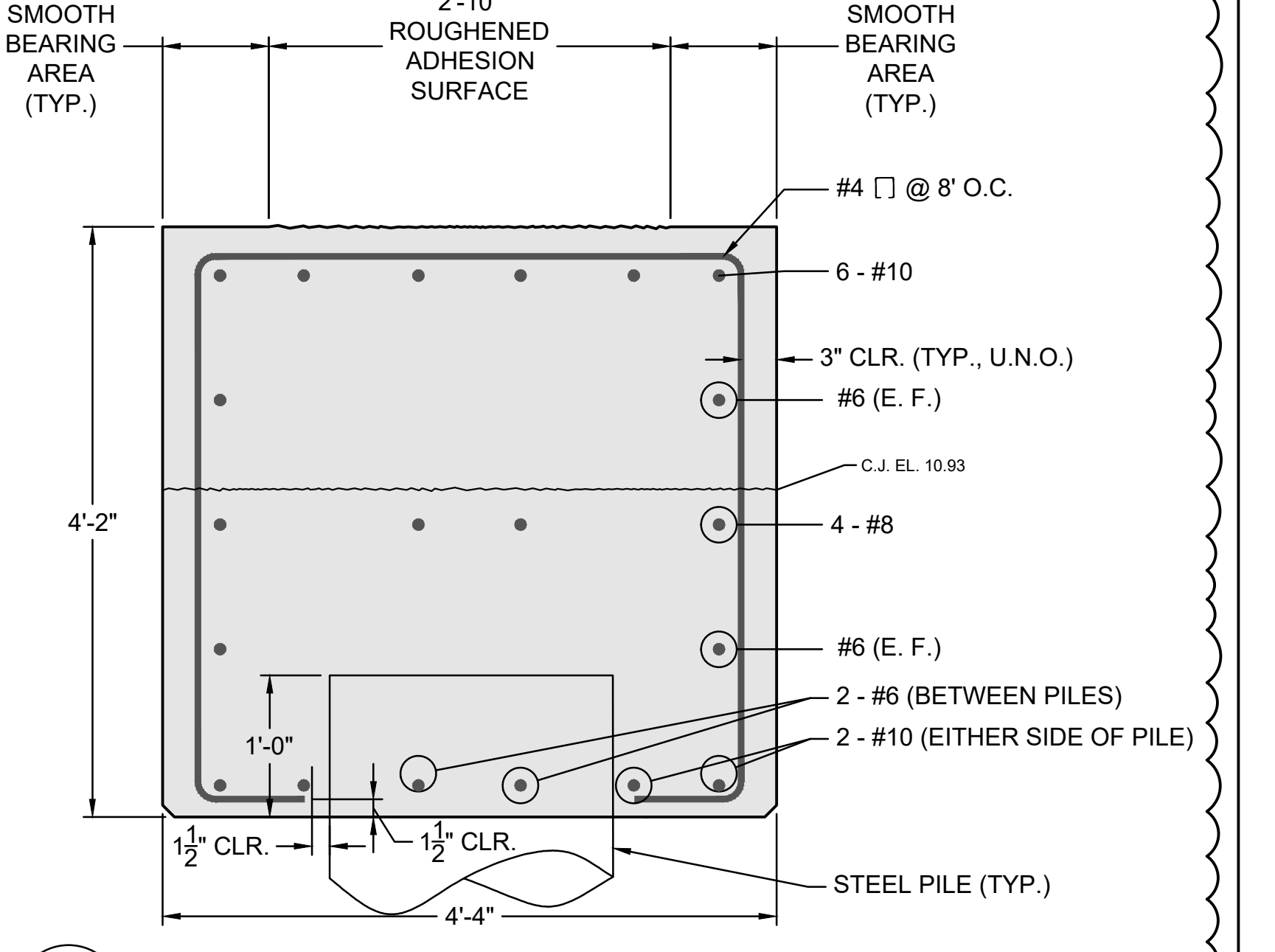
1 CONCRETE PILE CAP TYPE 2B/2C REINFORCEMENT SECTION  
1/2" = 1'-0"



2 CONCRETE PILE CAP TYPE 2B/2C REINFORCEMENT SECTION  
1/2" = 1'-0"



3 CONCRETE PILE CAP TYPE 2A/2D SECTION  
1/2" = 1'-0"



4 CONCRETE PILE CAP TYPE 2A/2D SECTION  
1/2" = 1'-0"

- PILE CAP NOTES:
- ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 3" CLEAR COVER. ALL CONCRETE NOT EXPOSED TO WEATHER SHALL HAVE A MINIMUM OF 1.5" CLEAR COVER.

**I.F.B.**  
NOT FOR CONSTRUCTION  
JANUARY 26, 2024

ADDENDUM #6		DDF	3/22/2024
NO.	ISSUE/DESCRIPTION	BY	DATE
1			

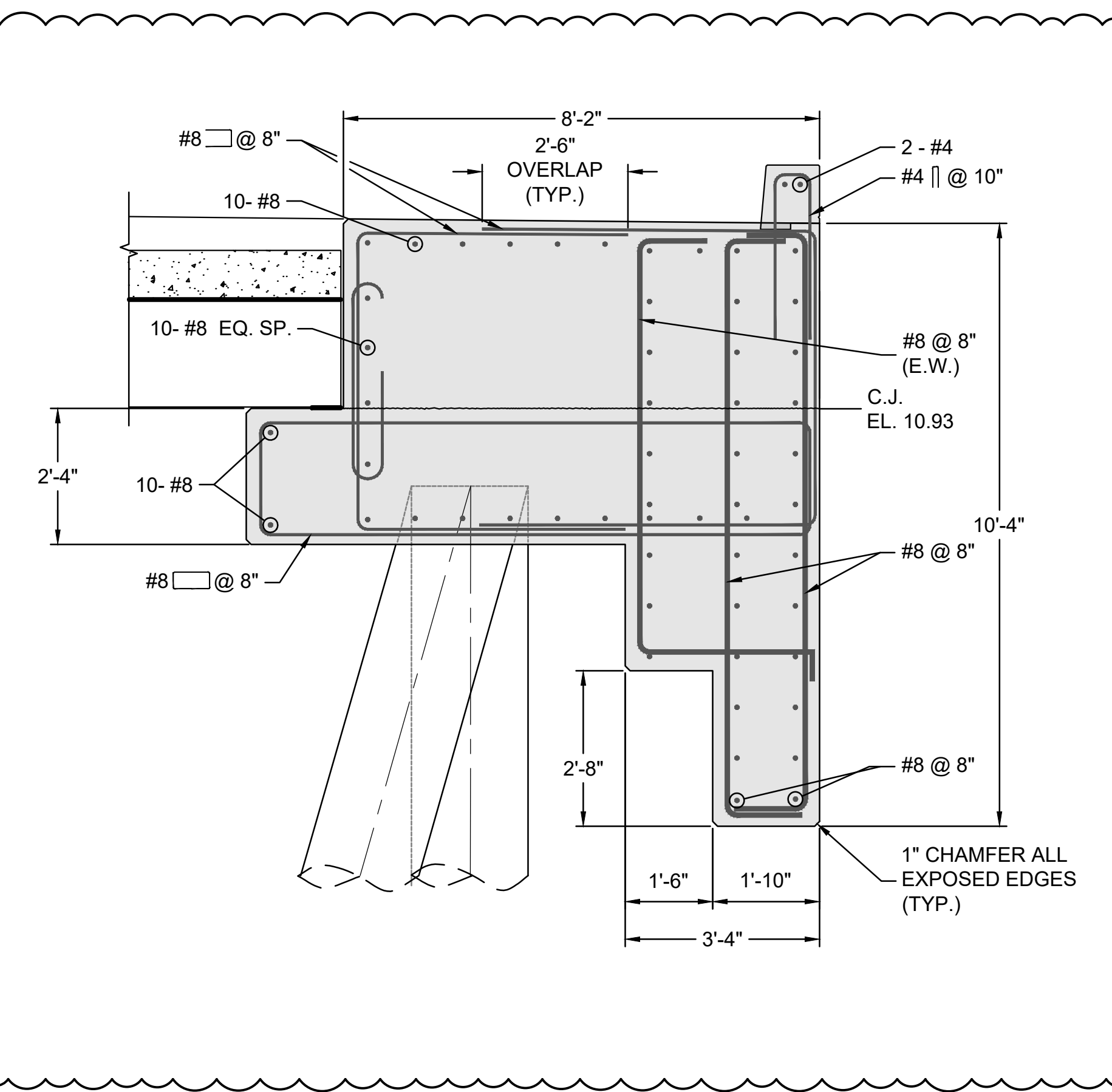
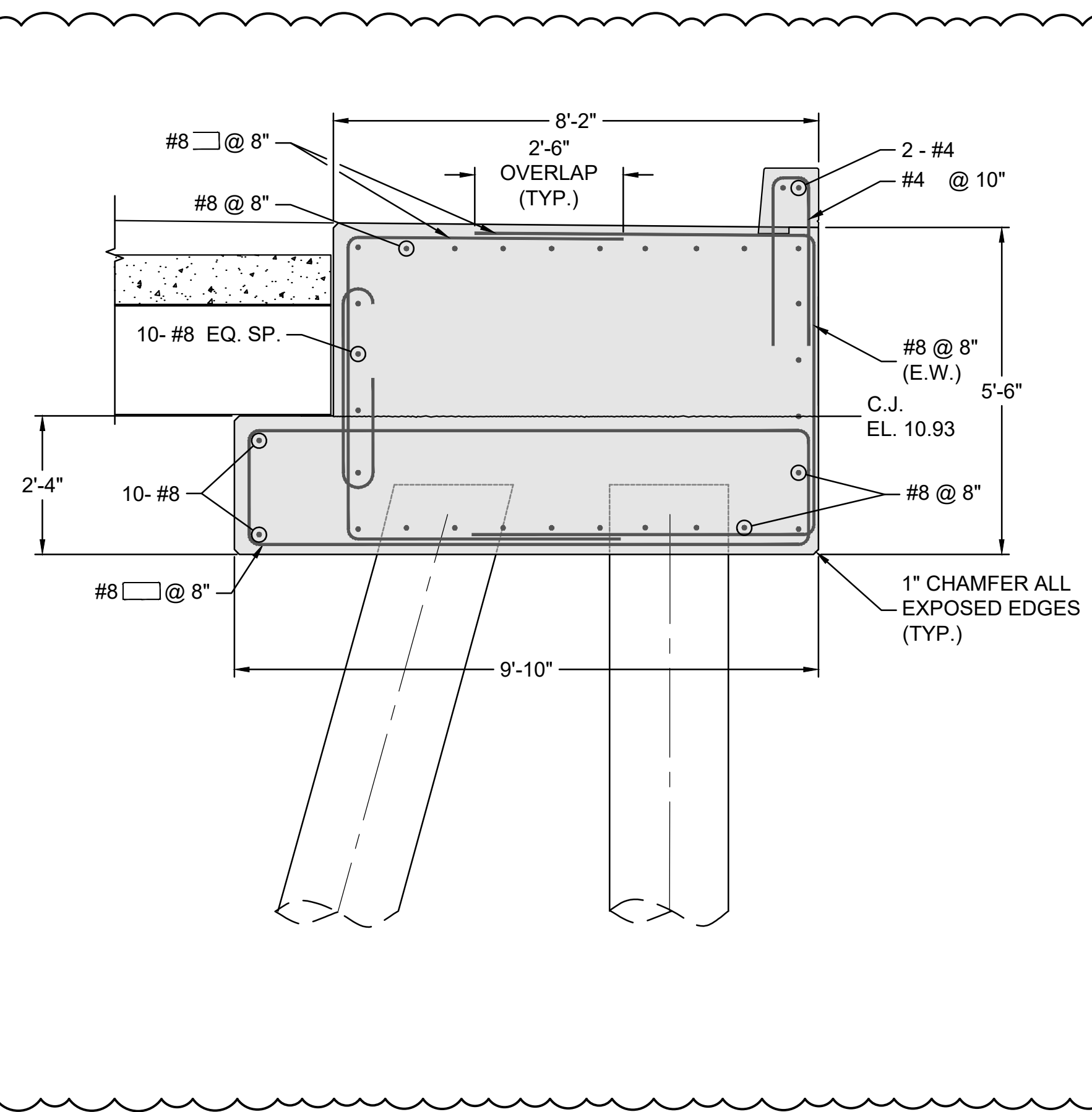
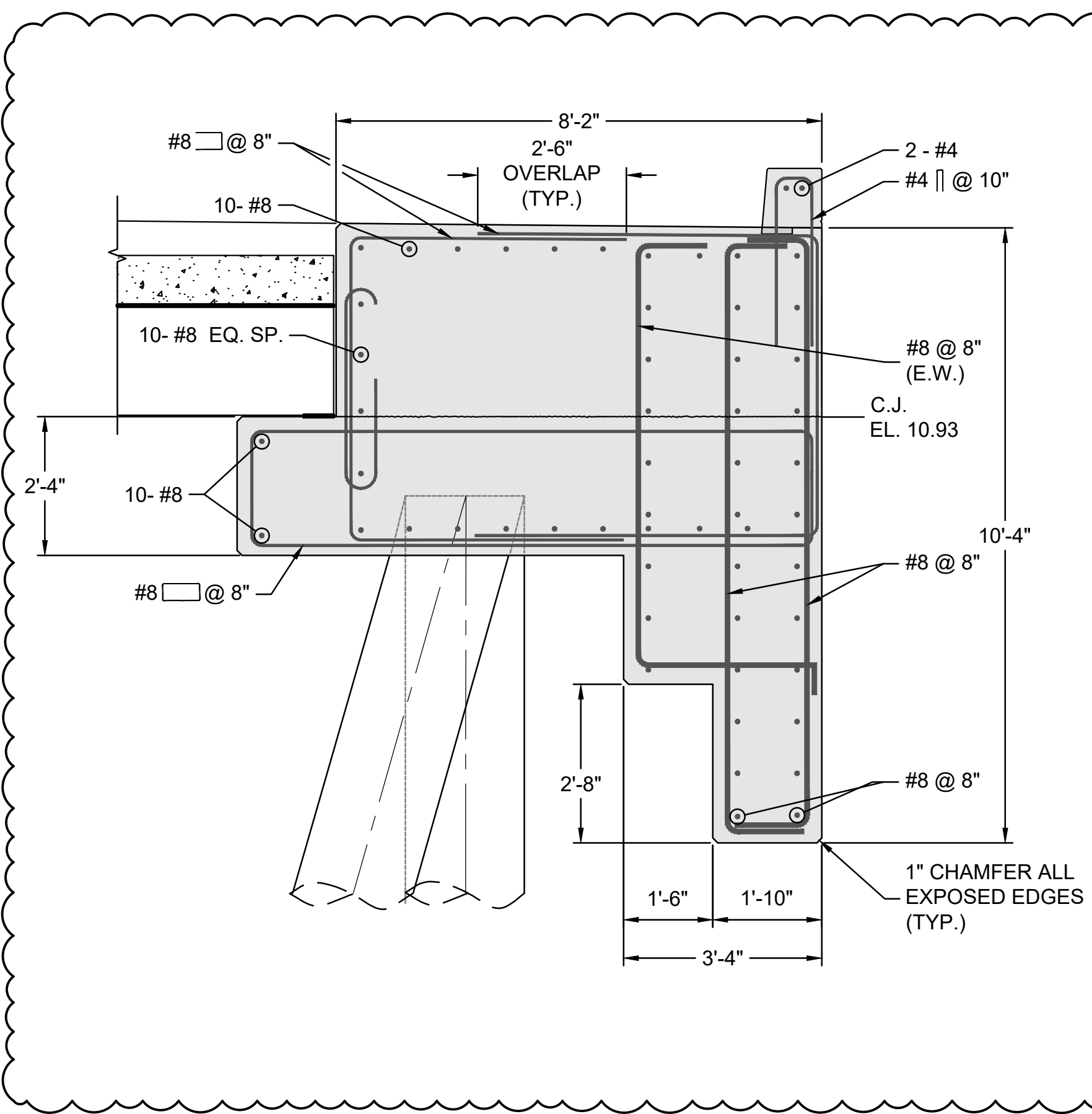
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MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
PIER UPGRADES AND WATERFRONT IMPROVEMENTS  
CASTINE, MAINE

PIER PILE CAP DETAILS - TYPE 2B & 2C

PREPARED BY: <b>GZA</b> GZA GeoEnvironmental, Inc. www.gza.com	PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME
PROJ MGR: RKC DESIGNED BY: MAR DATE: JANUARY 2024	REVIEWED BY: BDW DRAWN BY: BDW PROJECT NO. 03.0035109.00 REVISION NO.
DRAWING SCALE: REVISION NO.	
<b>S-144</b> SHEET NO. 73 OF 142	

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**A** SECTION - SOUTH EDGE BEAM REINFORCEMENT  
 S-119/S-145 1/2" = 1'-0"

**B** SECTION - SOUTH EDGE BEAM REINFORCEMENT  
 S-119/S-145 1/2" = 1'-0"

**C** SECTION - SOUTH EDGE BEAM REINFORCEMENT  
 S-119/S-145 1/2" = 1'-0"

1

**I.F.B.**  
 NOT FOR CONSTRUCTION  
 JANUARY 26, 2024

NO.	ISSUE/DESCRIPTION	BY	DATE
1	<b>ADDENDUM #6</b>	DDF	3/22/2024

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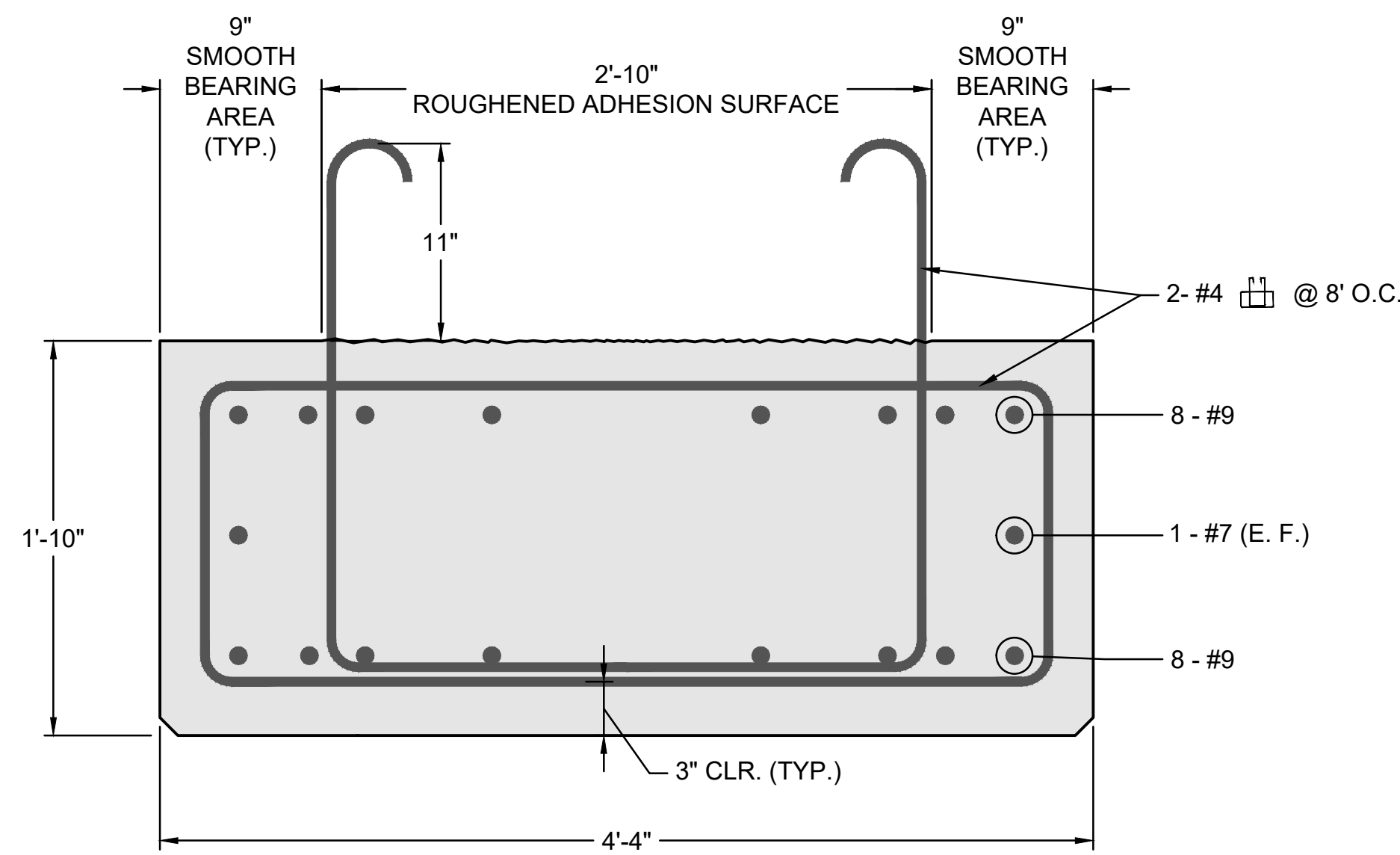
**MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
 PIER UPGRADES AND WATERFRONT IMPROVEMENTS  
 CASTINE, MAINE**

**SOUTH EDGE BEAM DETAILS**

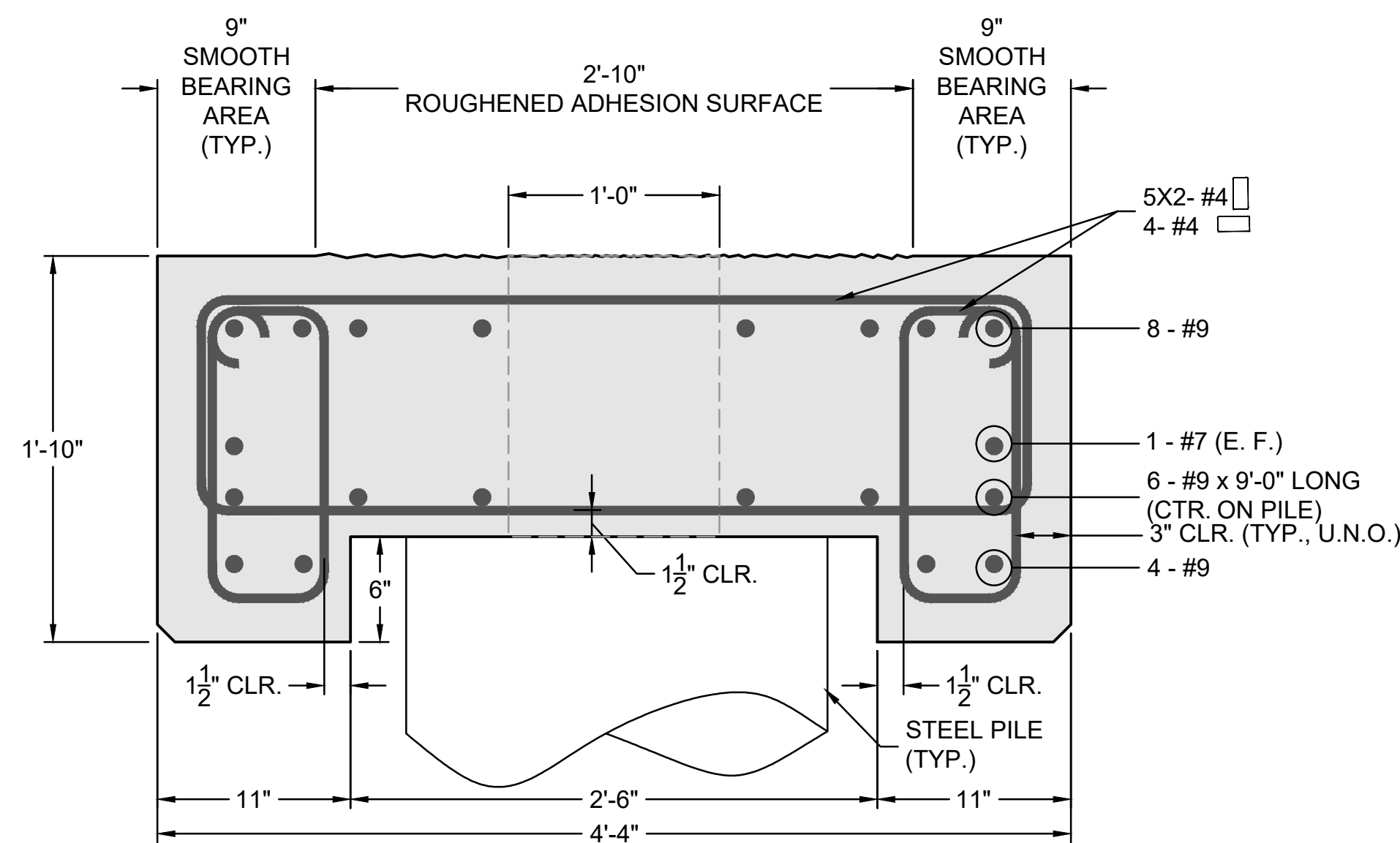
PREPARED BY: <b>GZA</b> GeoEnvironmental, Inc. www.gza.com	PREPARED FOR: <b>MAINE MARITIME ACADEMY          CASTINE, ME</b>		
PROJ MGR: RKC DESIGNED BY: MAR DATE: JANUARY 2024	REVIEWED BY: DRAWN BY: BDW PROJECT NO. 03.0035109.00	CHECKED BY: SCALE: REVISION NO.	<b>DRAWING</b> <b>S-145</b> SHEET NO. 74 OF 142

© 2024 - GZA GeoEnvironmental, Inc. WATERFRONT IMPROVEMENTS\_ADD\_2024-02-29.DWG S-145 DTLS SOUTH EDGE BEAM March 22, 2024 MICHAEL ALBURN

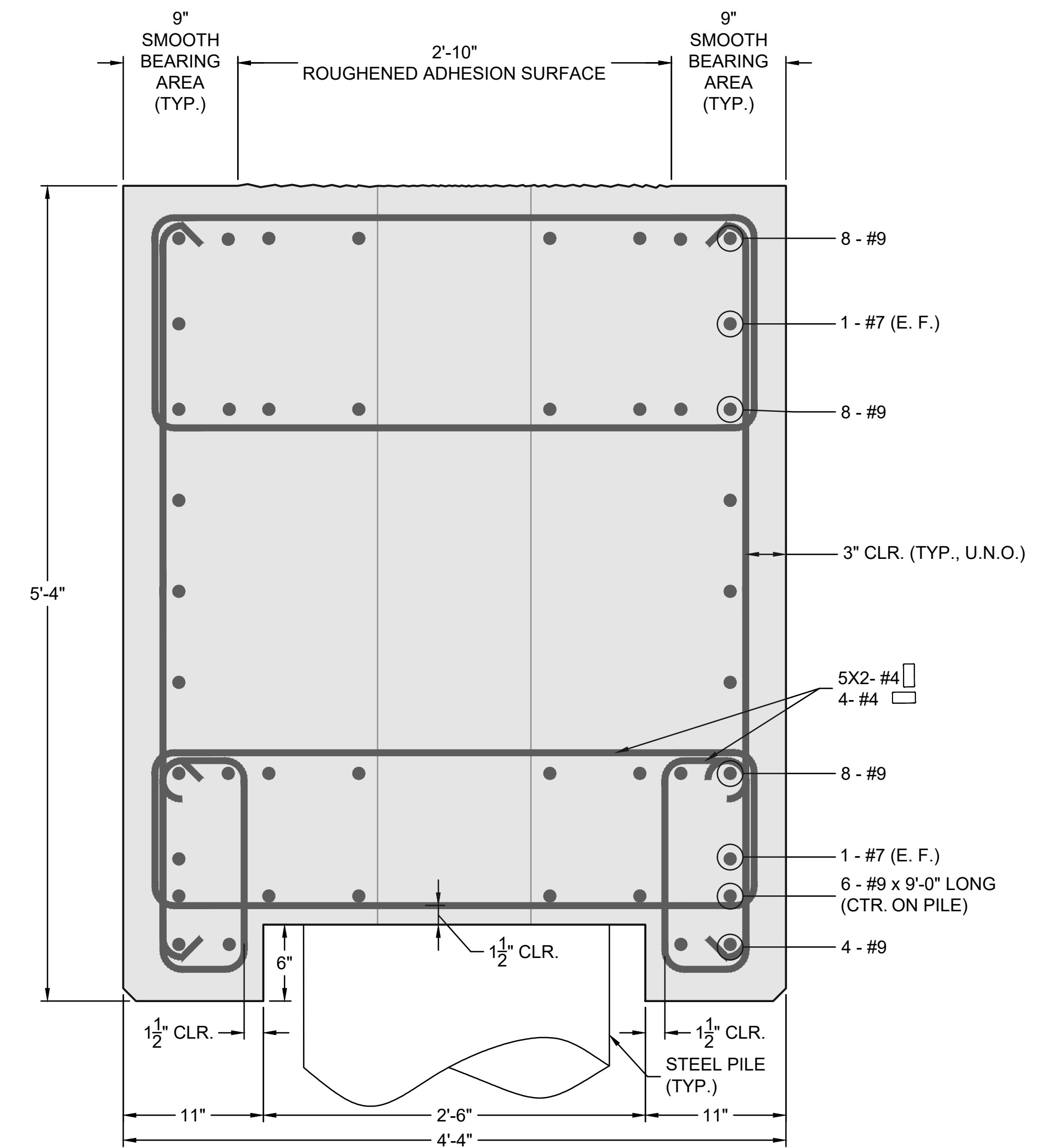




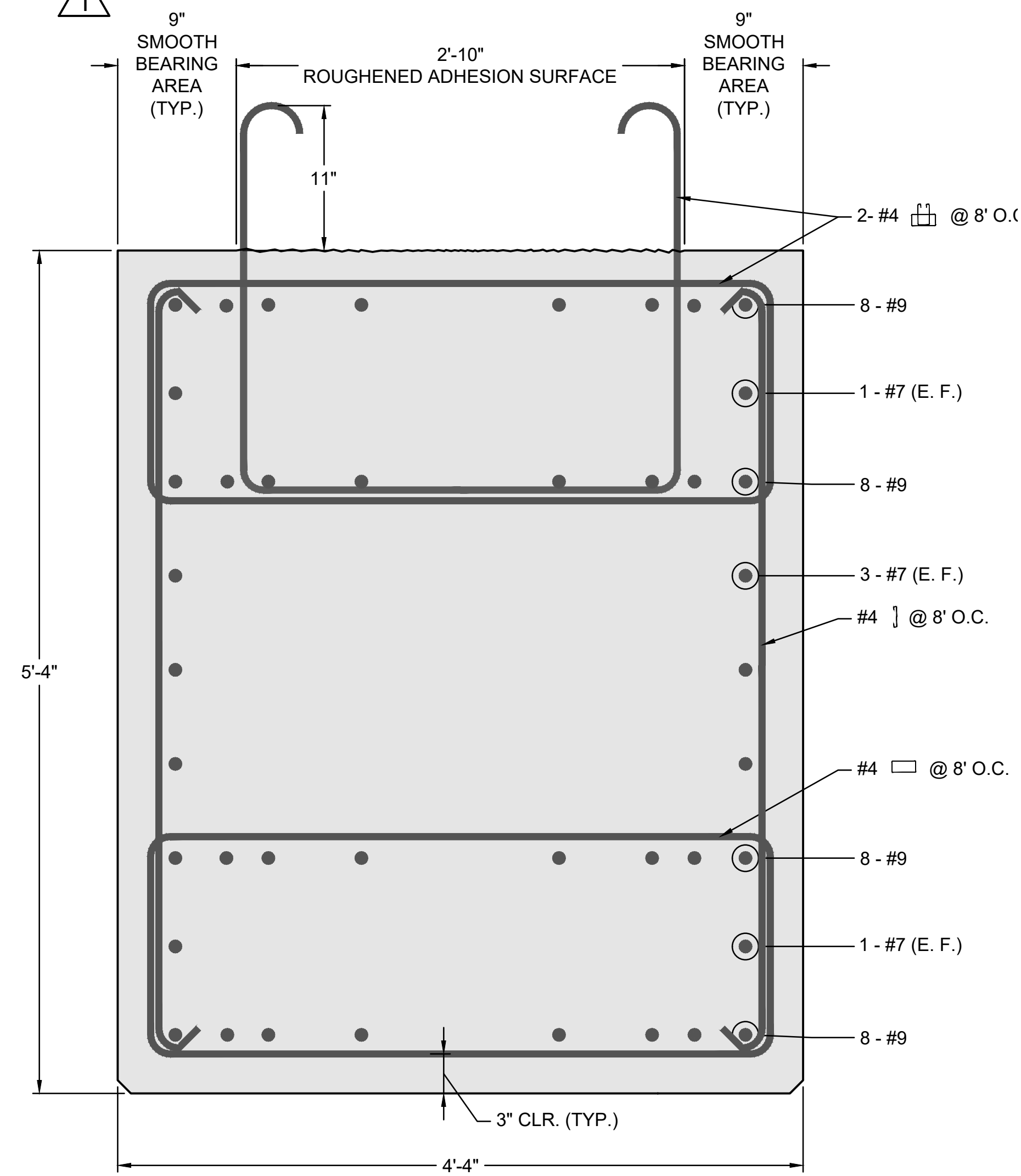
**1** SECTION: CONCRETE PILE CAP REINFORCEMENT  
 (TYPE: 1, 1A, 2, 2A, 2B, 2C, 2D, 3, 5, 6)  
 SCALE: 1 1/2" = 1'-0"



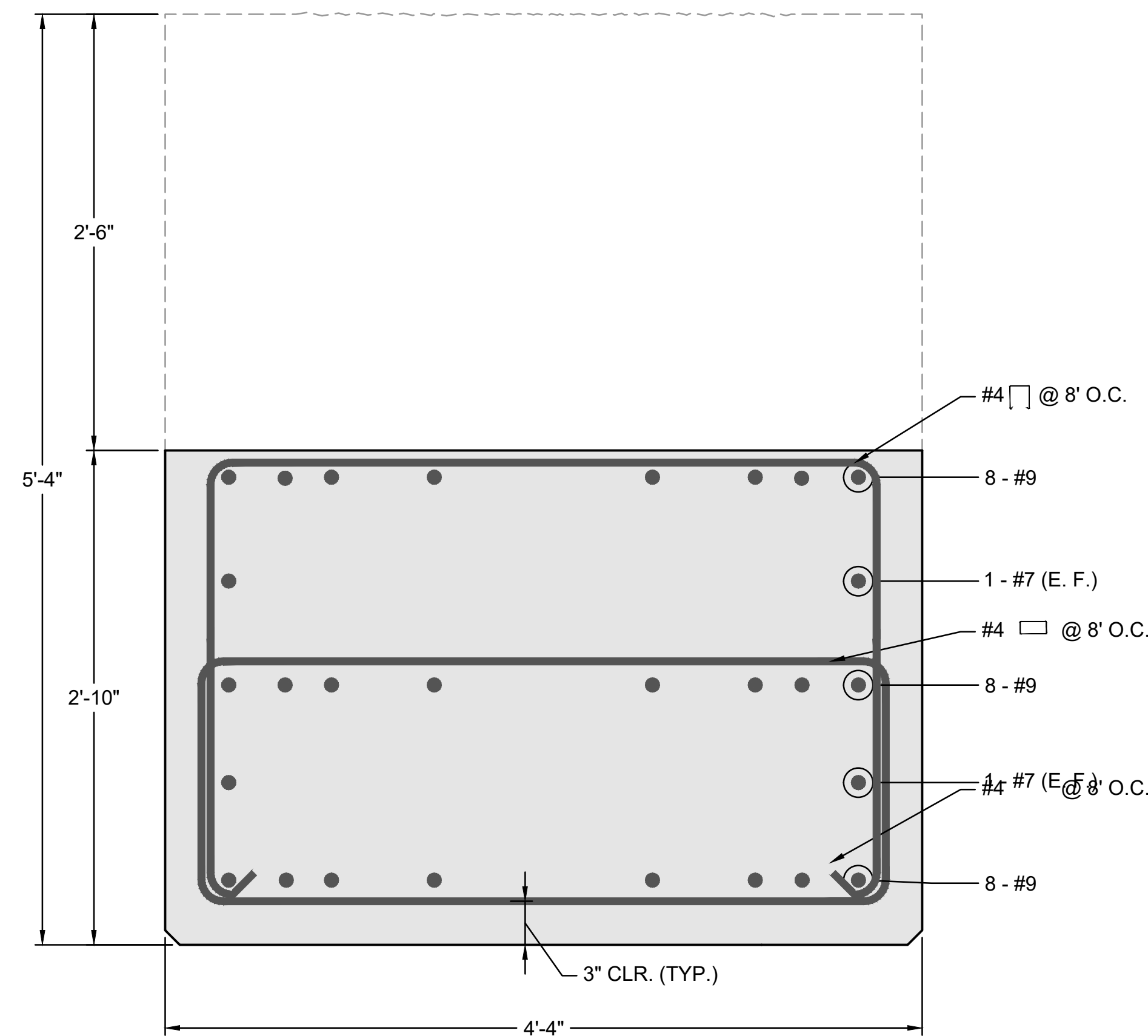
**2** SECTION: CONCRETE PILE CAP REINFORCEMENT AT PILE  
 (TYPE: 1, 1A, 2, 2A, 2B, 2C, 2D, 3, 5, 6)  
 SCALE: 1 1/2" = 1'-0"



**3** SECTION: CONCRETE PILE CAP REINFORCEMENT AT PILE  
 (TYPE: 1, 1A, 5, 6)  
 SCALE: 1 1/2" = 1'-0"



**4** SECTION: CONCRETE PILE CAP REINFORCEMENT  
 (TYPE: 1, 1A, 5, 6)  
 SCALE: 1 1/2" = 1'-0"



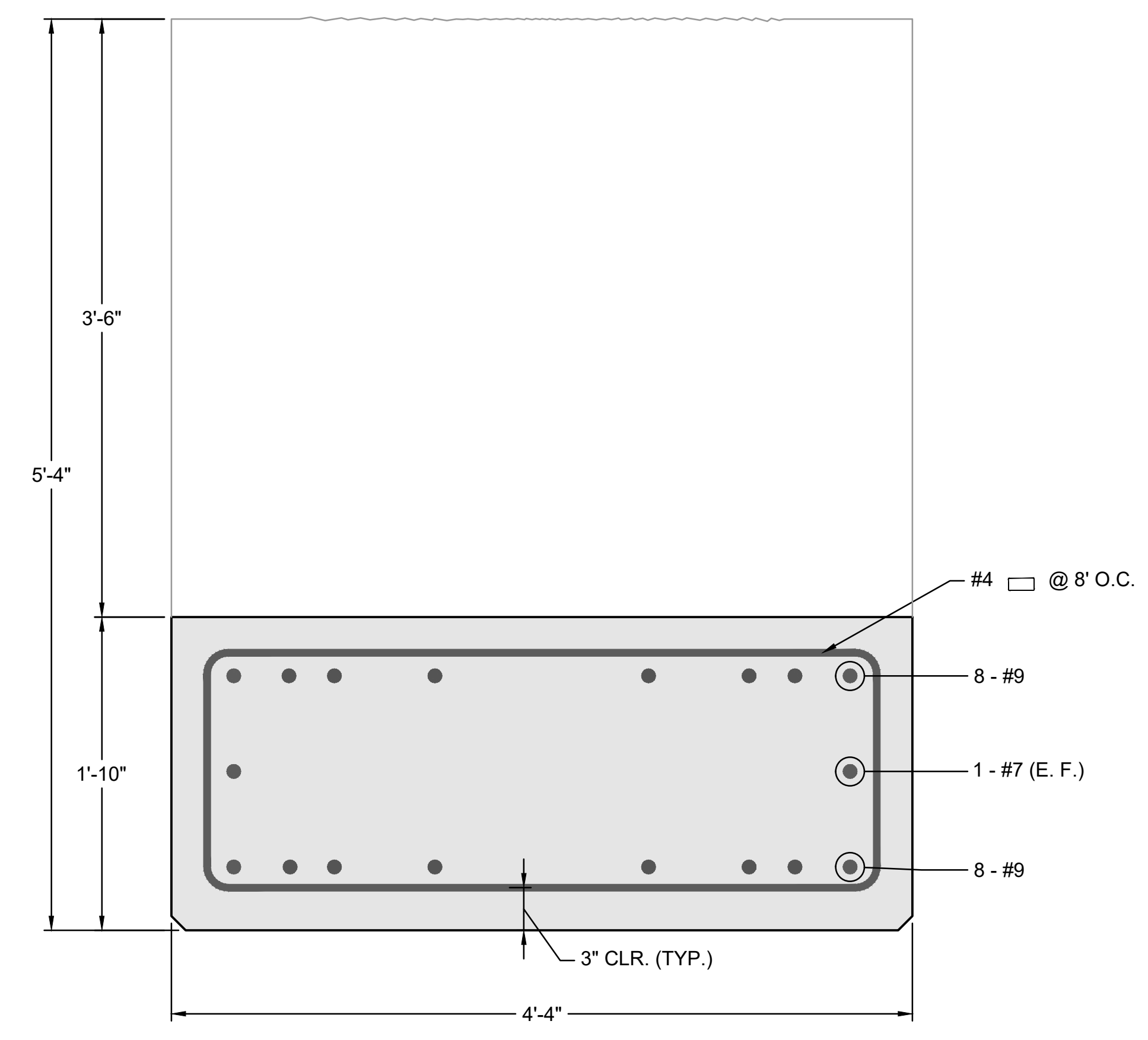
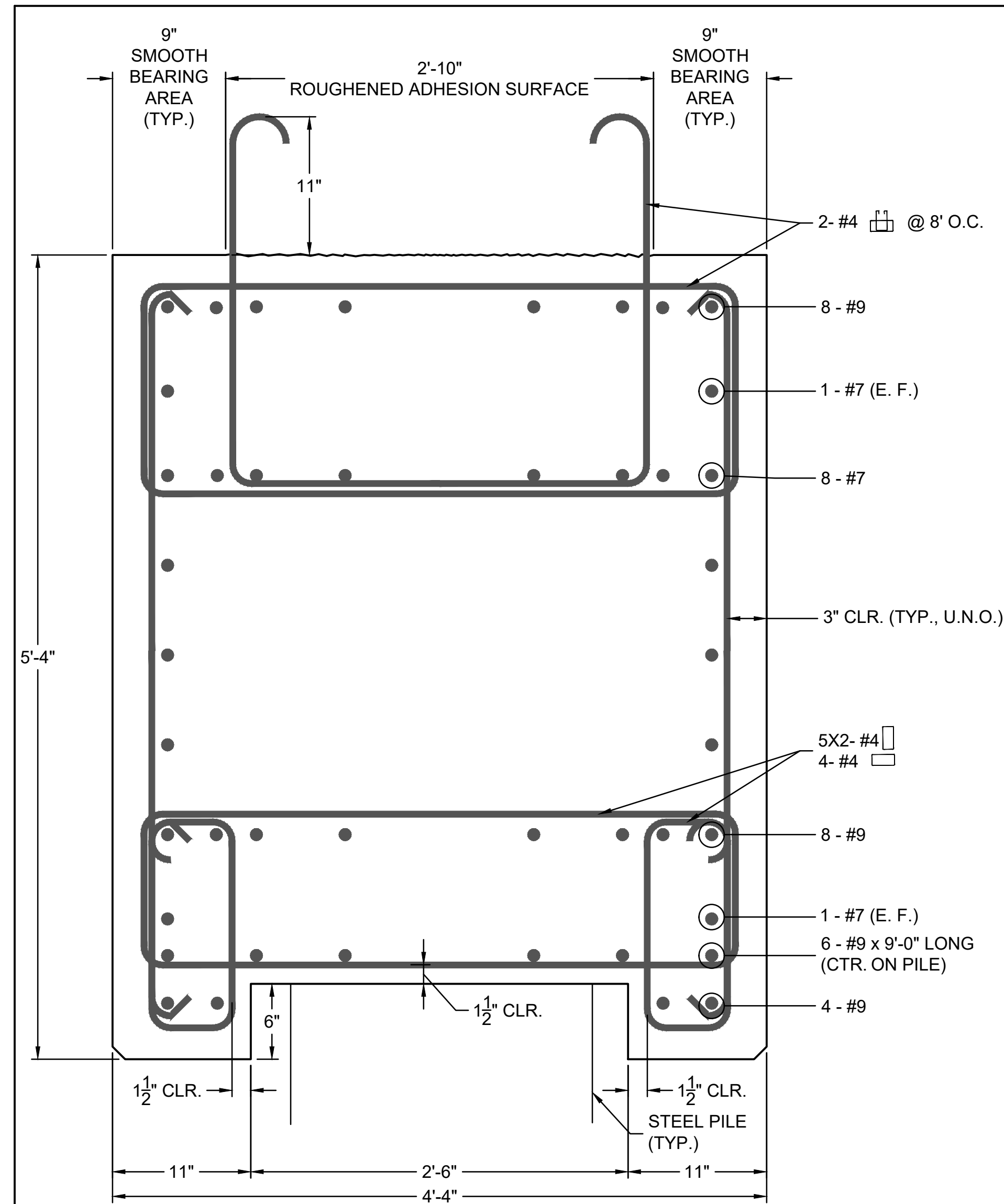
**5** SECTION: CONCRETE PILE CAP REINFORCEMENT AT TRENCH  
 (TYPE: 1, 1A)  
 SCALE: 1 1/2" = 1'-0"

- PILE CAP NOTES:**
- ALL EXPOSED CONCRETE TO WEATHER SHALL HAVE A MINIMUM OF 3" CLEAR COVER AT ALL LOCATIONS. ALL CONCRETE NOT TO WEATHER SHALL HAVE A MINIMUM OF 1.5" CLEAR COVER AT ALL LOCATIONS.
  - FABRICATOR TO LOCATE ALL CONNECTION DOWEL BAR LOCATIONS.
  - GROUT FILL SIDES OF TRENCHES BETWEEN TRENCH AND PILE CAPS. GROUT NOT SHOWN FOR CLARITY.

**I.F.B.**  
 NOT FOR CONSTRUCTION  
 JANUARY 26, 2024

ADDENDUM #6		DDF	3/22/2024
NO.	ISSUE/DESCRIPTION	BY	DATE
<small>UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.</small>			
<b>MAINE MARITIME ACADEMY WATERFRONT CAMPUS          PIER UPGRADES AND WATERFRONT IMPROVEMENTS          CASTINE, MAINE</b>			
<b>PIER PILE CAP AND BEAM DETAILS - 1</b>			
<small>PREPARED BY:</small> GZA GeoEnvironmental, Inc. www.gza.com		<small>PREPARED FOR:</small> MAINE MARITIME ACADEMY CASTINE, ME	
<small>PROJ MGR:</small> RKC <small>DESIGNED BY:</small> MAR <small>DATE:</small> JANUARY 2024	<small>REVIEWED BY:</small> <small>DRAWN BY:</small> BDW <small>PROJECT NO.:</small> 03.0035109.00	<small>CHECKED BY:</small> <small>SCALE:</small> <small>REVISION NO.:</small>	<small>DRAWING</small> <b>S-149</b> <small>SHEET NO. 78 OF 142</small>

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 GZA is an Equal Opportunity Employer. Minorities and women are encouraged to apply.



**1** SECTION: CONCRETE PILE CAP REINFORCEMENT AT PILE  
(TYPE: 1, 1A)  
SCALE: 1 1/2" = 1'-0"

**2** SECTION: CONCRETE PILE CAP REINFORCEMENT AT TRENCH  
(TYPE: 1, 1A, 5, 6)  
SCALE: 1 1/2" = 1'-0"

**PILE CAP NOTES:**

- ALL EXPOSED CONCRETE TO WEATHER SHALL HAVE A MINIMUM OF 3" CLEAR COVER AT ALL LOCATIONS. ALL CONCRETE NOT TO WEATHER SHALL HAVE A MINIMUM OF 1.5" CLEAR COVER AT ALL LOCATIONS.
- FABRICATOR TO LOCATE ALL CONNECTION DOWEL BAR LOCATIONS.
- GROUT FILL SIDES OF TRENCHES BETWEEN TRENCH AND PILE CAPS. GROUT NOT SHOWN FOR CLARITY.

**I.F.B.**  
NOT FOR CONSTRUCTION  
JANUARY 26, 2024

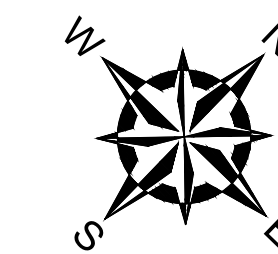
NO.	ISSUE/DESCRIPTION	BY	DATE
1	<b>ADDENDUM #6</b>	<b>DDF</b>	<b>3/22/2024</b>
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MAINE MARITIME ACADEMY WATERFRONT CAMPUS PIER UPGRADES AND WATERFRONT IMPROVEMENTS CASTINE, MAINE			
PIER PILE CAP AND BEAM DETAILS - 2			
PREPARED BY: GZA GeoEnvironmental, Inc. www.gza.com		PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME	
PROJ MGR: RKC	DESIGNED BY: MAR	REVIEWED BY: BDW	CHECKED BY:
DATE: JANUARY 2024	DRAWN BY: BDW	PROJECT NO. 03.0035109.00	SCALE: REVISION NO.
			<b>S-150</b> SHEET NO. 79 OF 142

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**LEGEND:**

DESCRIPTION	EXISTING
COMMUNICATIONS MANHOLE	⊠
ELECTRICAL BOX	⊞
UTILITY POLE	⊙
GUY ANCHOR	⊗
PROPERTY LINE	---
APPROXIMATE EXTERIOR PROPERTY LINE	---
TIE/REFERENCE LINE	---
OVERHEAD UTILITY LINE	---
UNDERGROUND ELECTRICAL LINE	---
UNDERGROUND COMMUNICATIONS LINE	---
FLOOD LINE	---
MEAN HIGH WATER LINE (MHW)	---
MEAN LOW WATER LINE (MLW)	---

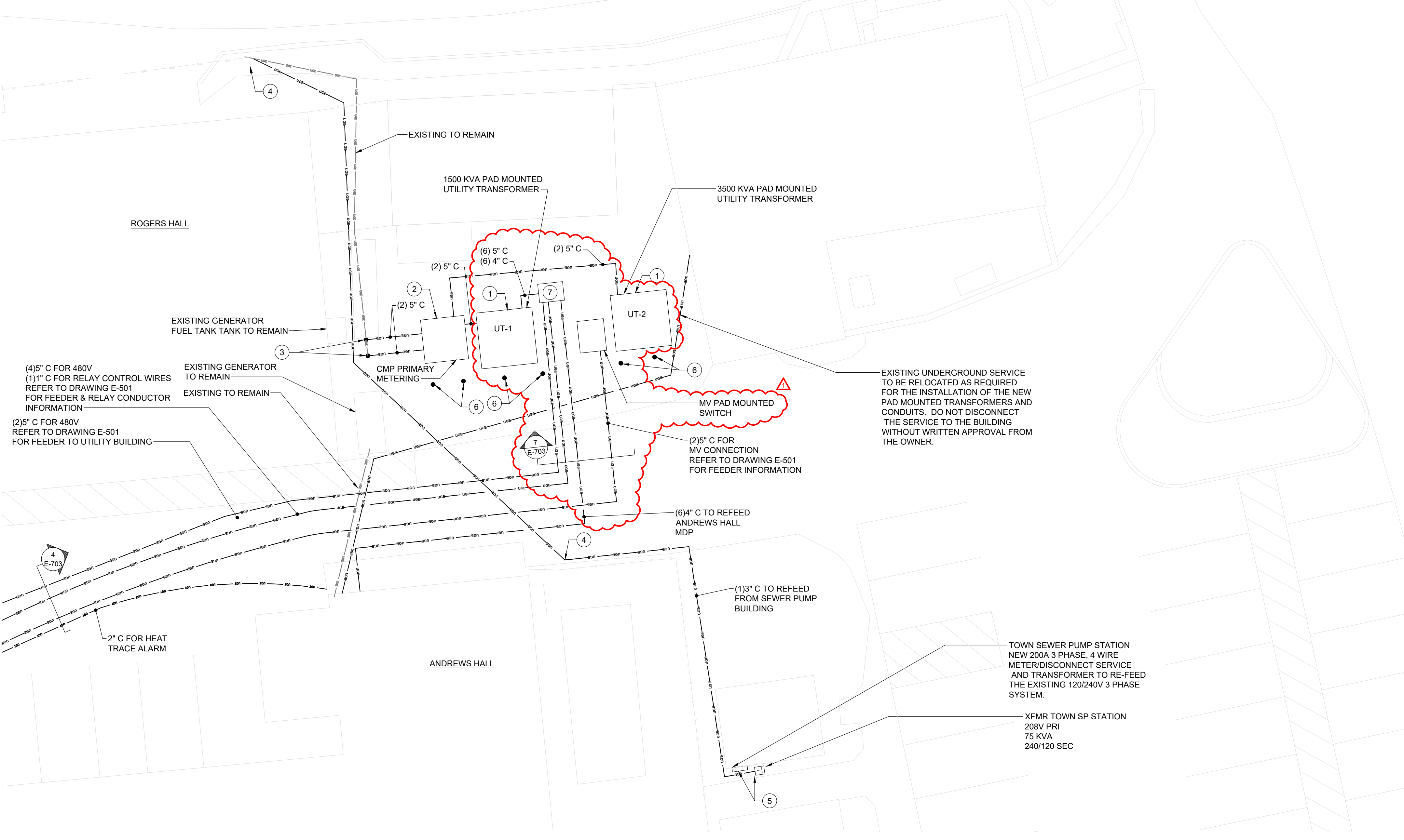


**SHEET E-201 GENERAL NOTES**

1. THERE MAY BE ADDITIONAL UNDERGROUND WIRES, CABLES, UTILITIES, AND/OR STRUCTURES NOT SHOWN ON THIS PLAN. THE LOCATIONS SHOWN HEREON ARE BASED UPON SURFACE FEATURES VISIBLE AT THE TIME OF THE SURVEY AND FROM PLAN REFERENCE #2. NO EXCAVATIONS WERE MADE DURING THE COURSE OF THIS SURVEY TO VERIFY AND/OR LOCATE ANY UNDERGROUND STRUCTURES.
2. CONTRACTOR SHALL COORDINATE ALL SITE WORK WITH THE OWNER FOR ALL ELECTRICAL ITEMS THAT ARE TO REMAIN AND TO BE REMOVED. PHASED CONSTRUCTION INCLUDING DEMOLITION IS EXPECTED TO MINIMIZE THE DISRUPTION OF THE CONSTRUCTION WITH THE WATERFRONT ACTIVITIES.
3. CONTRACTOR SHALL COORDINATE ALL PRIMARY UTILITY CONSTRUCTION WITH THE OWNER, TOWN AND CENTRAL MAINE POWER.
4. CONTRACTOR SHALL REFER TO SHEET E-501 FOR CONDUIT SIZES AND QUANTITIES FOR ADDITIONAL INFORMATION.
5. ALL ROUTING IS SHOWN AS DIAGRAMMATICAL, CONTRACTOR SHALL COORDINATE THE ROUTING WITH ALL OTHER TRADES AND ADJUST ROUTING AS REQUIRED.
6. CONTRACTOR SHALL KEEP ON SITE AND PROVIDE TO THE OWNER IN THE AS-BUILT DRAWINGS THE EXACT LOCATION OF TRENCHING, EACH EDGE AND CENTER MEASURED FROM A STRUCTURE AND DEPTH OF THE CONDUITS.
7. CONTRACTOR SHALL REFER TO THE ELECTRICAL ONE-LINE DIAGRAMS FOR ADDITIONAL INFORMATION ON THE CONDUITS, CONDUCTORS AND EQUIPMENT.

**SHEET E-201 NUMBERED ELECTRICAL NOTES**

1. CONTRACTOR SHALL PROVIDE NEW CMP APPROVED 9'x9' TRANSFORMER VAULT FOR NEW TRANSFORMERS.
2. CONTRACTOR SHALL PROVIDE A NEW CMP APPROVED 7'x7' VAULT FOR THE NEW PRIMARY METERING CABINET TO BE LOCATED ON.
3. CONTRACTOR SHALL RE-ROUTE THE EXISTING 4" SERVICE CONDUITS ONE AT A TIME TO KEEP POWER AT ANDREWS HALL UNIT NEW WORK IS DONE AND REFEED FROM THE NEW TRANSFORMER.
4. NEW 3Ø SERVICE FOR THE TOWN SEWER PUMP STATION RUN FROM CMP POLE ON WATER STREET TO NEW METER / DISCONNECT ON THE PUMP STATION BUILDING. ENCASE CONDUIT IN CONCRETE PER CMP STANDARDS.
5. CONTRACTOR SHALL PROVIDE A NEW CMP APPROVED METER / DISCONNECT AND 208V, 120/240V NEMA 3R TRANSFORMER AND REFEED THE EXISTING BUILDING. REMOVE EXISTING SERVICE EQUIPMENT.
6. CONTRACTOR SHALL PROVIDE PROTECTIVE BOLLARDS IN FRONT OF THE NEW ELECTRICAL EQUIPMENT.
7. PROVIDE CUSTOM STAINLESS STEEL ENCLOSURE TO HOUSE THREE (3) GROUPED DISCONNECTS. DISCONNECT RATINGS SHOWN ON DRAWING E-501.



**ENLARGED SITE ELECTRICAL PLAN**

SCALE: 1" = 10'



NO.	ISSUE/DESCRIPTION	BY	DATE
2	ADDENDUM 6	JMM	3-21-24
1	ADDENDUM 3	JMM	3-1-24

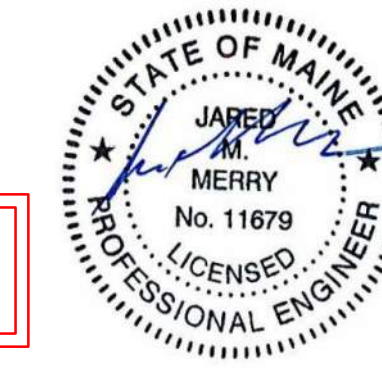
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MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
PIER UPGRADES AND WATERFRONT IMPROVEMENTS  
CASTINE, MAINE

ELECTRICAL SITE PART PLAN A

PREPARED BY: 	PREPARED FOR: MAINE MARITIME ACADEMY CASTINE, ME
PROJ MGR: JHW DESIGNED BY: JMM DATE: JANUARY 2024	REVIEWED BY: JHW DRAWN BY: MEB PROJECT NO. 35109.00
CHECKED BY: JMM SCALE: AS NOTED REVISION NO.	<b>DRAWING</b> <b>E-201</b> SHEET NO. 127 OF 142

I.F.B.  
NOT FOR CONSTRUCTION  
JANUARY 19, 2024



© 2024 - GZA Geotechnical, Inc. GZA-PA-MV-19975-GZA-001-GZA-Main-WATERFRONT RECONSTRUCTION-MB-02-04D-FILES/MEPA/13070.001 E-201 ELECTRICAL SITE PART PLAN A.DWG E-201 March 21, 2024 MARK BENNER

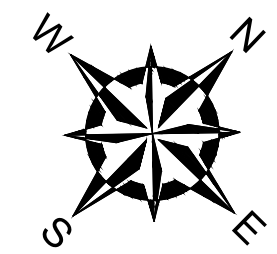
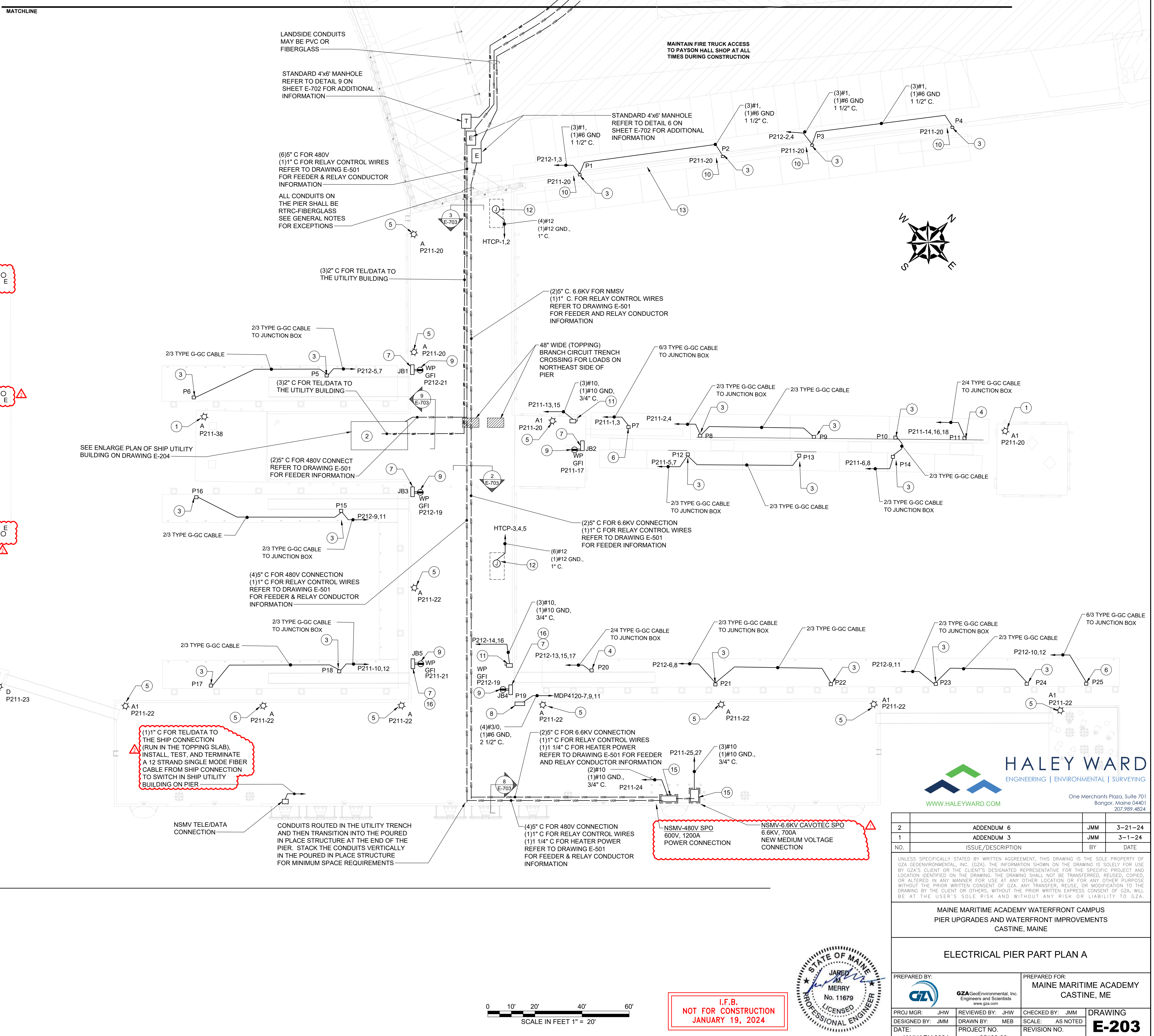
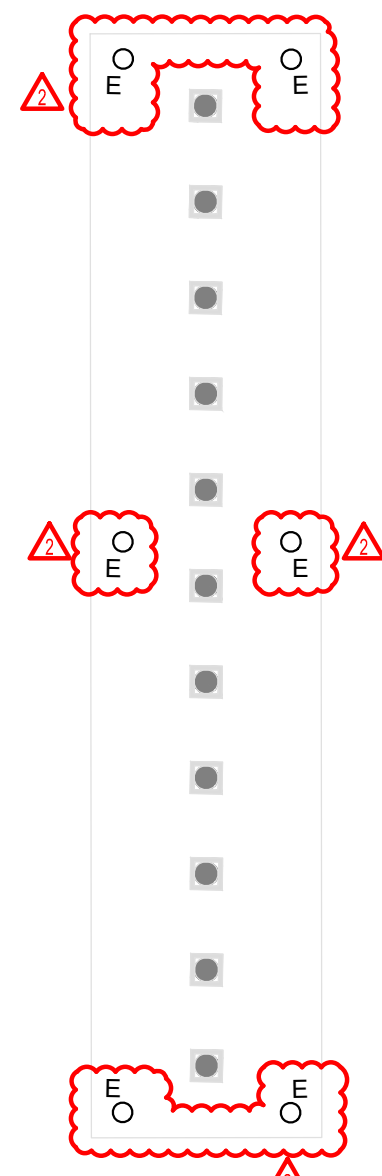


**SHEET E-203 GENERAL NOTES**

1. ALL CONDUIT STUB UPS OUT OF THE PIER CONCRETE SHALL BE GALVANIZED RIGID STEEL CONDUIT AND THE TRANSITION SHALL BE MADE BEFORE THE CONDUIT BEND.
2. ALL EXPOSED CONDUITS ON THE PIER SHALL BE RTRC-FIBERGLASS UNLESS STUBBING UP TO EQUIPMENT.
3. REFER TO THE ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION FOR THE ELECTRICAL EQUIPMENT.

**SHEET E-203 NUMBERED NOTES**

1. PROVIDE A NEW POLE MOUNTED LIGHT TO REPLACE THE EXISTING POLE AND FIXTURE.
2. NEW SHIP UTILITY BUILDING WITH NEW ELECTRICAL ROOM AND STORAGE ROOM.
3. CONTRACTOR SHALL PROVIDE EATON LIGHTHOUSE MARINE POWER PEDESTAL WITH 120/240 VOLT, SINGLE PHASE, 30 AMP AND 50 AMP GFCI PROTECTED CONNECTION. REPLACE THE EXISTING PVC JUNCTION BOX WITH A NEW NEMA 4X, STAINLESS STEEL JUNCTION BOX.
4. CONTRACTOR SHALL PROVIDE EATON LIGHTHOUSE MARINE POWER PEDESTAL WITH 100 AMP 120/240 VOLT, 3 PHASE CONNECTIONS FOR THE LARGER BOATS.
5. CONTRACTOR SHALL PROVIDE A NEW POLE AND LIGHT, COORDINATE MOUNTING WITH THE STRUCTURAL PLANS OF THE NEW PIER.
6. CONTRACTOR SHALL PROVIDE EATON LIGHTHOUSE MARINE POWER PEDESTAL WITH 100 AMP 120/240 VOLT, SINGLE PHASE CONNECTIONS FOR THE LARGER BOATS.
7. CONTRACTOR SHALL PROVIDE A NEMA 4X STAINLESS STEEL, SINGLE DOOR, WALL MOUNTABLE, HINGED COVER ENCLOSURE WITH CLAMPS AND PADLOCKABLE HASP, 36"H-24"W-10"D INCLUDE A STEEL PAINTED BTRC PANEL BOX, E-BOX #S362410N4X OR APPROVED EQUAL, TO TRANSITION FROM IN SLAB CONDUITS TO EXTRA HEAVY DUTY CABLES WITH STRAIN RELIEF CONNECTORS AND SECONDARY STRAIN RELIEF THAT WILL TRAVEL DOWN THE RAMP TO THE UTILITY TRENCH ON THE FLOATING DOCK. ALL SPLICES SHALL BE MADE USING MODULAR POWER BLOCKS MANUFACTURED BY ILSO, OR APPROVED EQUAL. ALL CIRCUITS SHALL BE CLEARLY AND PERMANENTLY MARKED WITH PANEL NAME, CIRCUIT NUMBER, PHASE AND PEDESTAL NUMBER. EACH CIRCUIT INCLUDING THE NEUTRAL SHALL BE BUNDLED TOGETHER FOR A NEAT AND WORKMAN LIKE INSTALLATION SEE DETAIL 6/E-703.
8. CONTRACTOR SHALL PROVIDE AN EATON SUPER YACHT 277/480V, 200 AMP, 3 PHASE POWER PEDESTAL FOR LARGER VESSEL CONNECTIONS.
9. CONTRACTOR SHALL MOUNT THE RECEPTACLE WITH A WEATHERPROOF IN USE COVER TO THE BACK OF THE MOUNTING RACK FOR THE JUNCTION BOX.
10. CONTRACTOR SHALL RE-FEED THE EXISTING LIGHTING FROM THE NEW ELECTRICAL PANELS IN THE UTILITY BUILDING.
11. PUMP OUT STATION NEMA 4X DISCONNECT SWITCH IS FURNISHED WITH THE PUMP OUT EQUIPMENT. ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION AND POWER CONNECTIONS WITH THE PUMP OUT STATION CONTRACTOR PRIOR TO ROUGH-IN AND FINAL CONNECTIONS.
12. POWER CONNECTION FOR THE HEAT TRACE SYSTEM, ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION AND CONNECTION POINTS WITH THE MECHANICAL CONTRACTOR IN THE AREA UNDER THE ACCESS HATCH. REFER TO THE MECHANICAL TRENCH DRAWINGS FOR HEAT TRACE POWER CONNECTIONS. THE HEAT TRACE CIRCUITS SHALL BE 2-POLE 20 AMP CIRCUITS. PROVIDE (2)1/2" (1)1/2" GROUND IN 1" CONDUIT FOR EACH CIRCUIT FROM THE HEAT TRACE CONTROL PANEL TO THE HEAT TRACE POWER CONNECTION.
13. CONTRACTOR SHALL ROUTE CONDUITS ALONG THE FACE OF THE EXISTING BULK HEAD FOR THE LIGHTING AND POWER CONNECTIONS. PROVIDE ALL NEW FIBERGLASS CONDUITS AND SUPPORTS AS REQUIRED.
14. CONTRACTOR SHALL PROVIDE A RED LED NAVIGATIONAL WARNING LIGHTS ON THE CATWALKS. THE LIGHTS SHALL TURN ON AT 1/2 HOUR BEFORE DUSK AND A 1/2 HOUR AFTER DAWN, ALSO WHEN EVER THERE IS LOW VISIBILITY/LIGHT LEVELS AT THE PIER. LIGHT SHALL BE MOUNTED ABOVE THE TOP RAIL WITH 3/4 GALVANIZED RIGID STEEL CONDUIT FOR POWER AND SUPPORT.
15. CONTRACTOR SHALL PROVIDE ONE 1" SPARE CONDUIT FROM THE SPO TO THE UTILITY BUILDING ON THE PIER FOR CONNECTION TO THE TELECOMMUNICATION SYSTEM. COORDINATE ALL CONDUIT STUB UPS WITH THE APPROVED EQUIPMENT OUT SHEETS AND SEAL ALL CONDUITS AS REQUIRED BY THE MANUFACTURE. CONCRETE HOUSEKEEPING PAD BY OTHERS SHALL BE 6" DEPTH AND 6" OF CLEAR SPACE OUTSIDE THE DIMENSIONS OF EACH UNIT.
16. CONTRACTOR SHALL PROVIDE A 1" CONDUIT BACK TO THE TELECOMMUNICATIONS RACK IN THE UTILITY BUILDING AND A WEATHERPROOF BOX MOUNTED TO THE STRUT RACK FOR FUTURE SECURITY SYSTEMS.



**PARTIAL SITE PLAN**  
SCALE: 1" = 20'



**I.F.B.**  
**NOT FOR CONSTRUCTION**  
**JANUARY 19, 2024**



2	ADDENDUM 6	JMM	3-21-24
1	ADDENDUM 3	JMM	3-1-24
NO.	ISSUE/DESCRIPTION	BY	DATE

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**MAINE MARITIME ACADEMY WATERFRONT CAMPUS**  
**PIER UPGRADES AND WATERFRONT IMPROVEMENTS**  
**CASTINE, MAINE**

**ELECTRICAL PIER PART PLAN A**

PREPARED BY: **GZA**  
DESIGNED BY: JMM  
DRAWN BY: MEB  
DATE: JANUARY 2024

PREPARED FOR: **MAINE MARITIME ACADEMY**  
**CASTINE, ME**  
CHECKED BY: JMM  
SCALE: AS NOTED  
REVISION NO.  
PROJECT NO. 35109.00  
DRAWING **E-203**  
SHEET NO. 129 OF 142

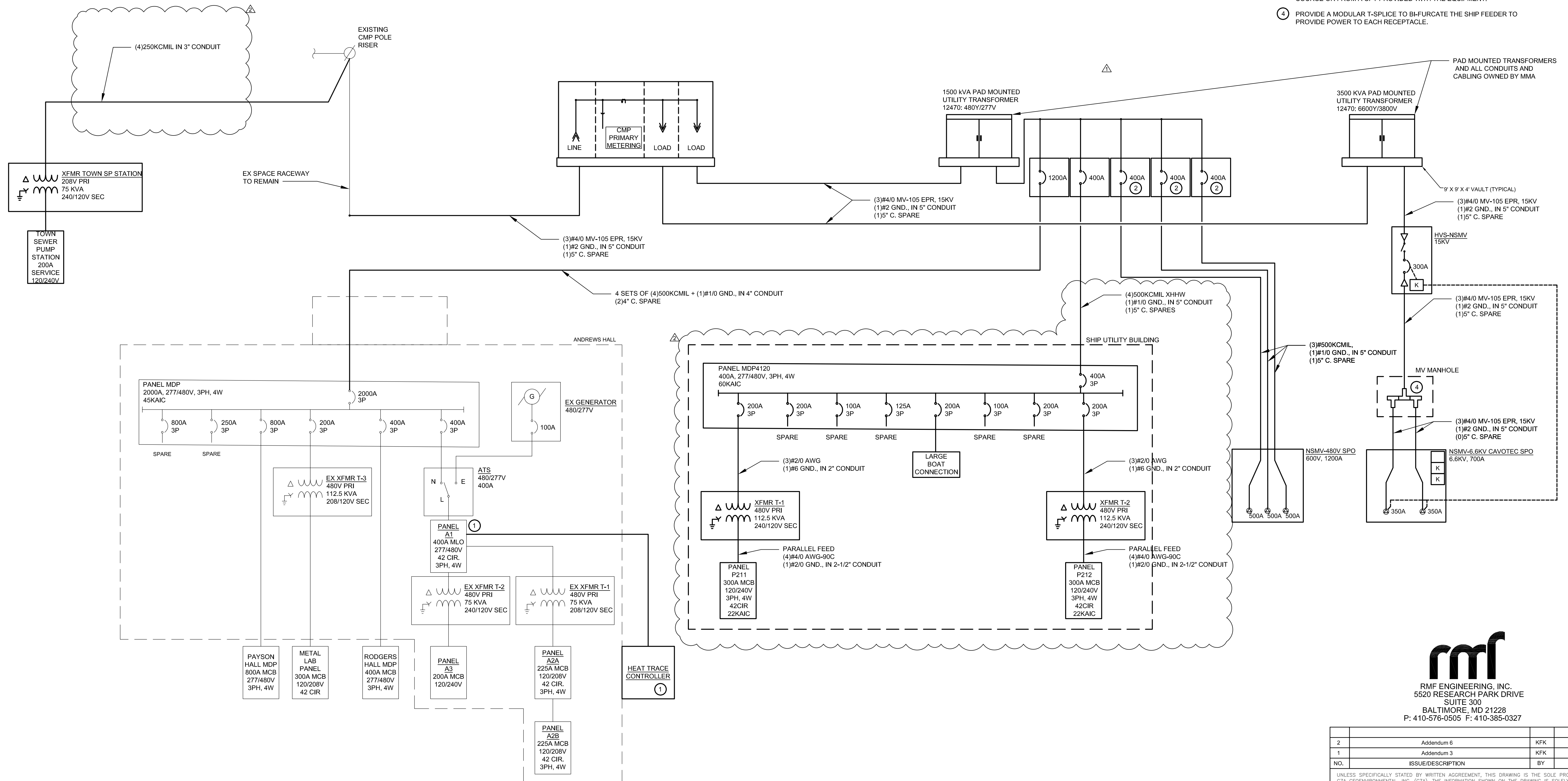


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**DRAWING NOTES:**

- ① PROVIDE 2P-60A GFPE CIRCUIT BREAKER IN EX PANEL A1, UTILIZING EXISTING SPACE. PROVIDE 2-#6 THWN + #10 AWG GND IN 1" RGS CONDUIT FROM PANEL A1 TO HEAT TRACE CONTROLLER.
- ② PROVIDE THREE (3) GROUPED 400A CIRCUIT BREAKERS ASSOCIATED WITH EACH SPO RECEPTACLE. PROVIDE SHUNT TRIP MODULE AND ASSOCIATED WIRING FROM SPO FOR SAFETY FROM EXPOSURE TO ENERGIZED PARTS. EACH 500A RECEPTACLE MICRO SWITCH SHALL SHUNT TRIP THE ASSOCIATED UPSTREAM BREAKER.
- ③ PROVIDE AUXILIARY POWER TO EACH SPO ENCLOSURE FROM AN EXTERNAL SOURCE OR FROM A CPT PROVIDED WITH THE EQUIPMENT.
- ④ PROVIDE A MODULAR T-SPLICE TO BI-FURCATE THE SHIP FEEDER TO PROVIDE POWER TO EACH RECEPTACLE.



**rnf**  
 RNF ENGINEERING, INC.  
 5520 RESEARCH PARK DRIVE  
 SUITE 300  
 BALTIMORE, MD 21228  
 P: 410-576-0505 F: 410-385-0327

2	Addendum 6	KFK	3/22/2024
1	Addendum 3	KFK	3/1/2024
NO.	ISSUE/DESCRIPTION	BY	DATE

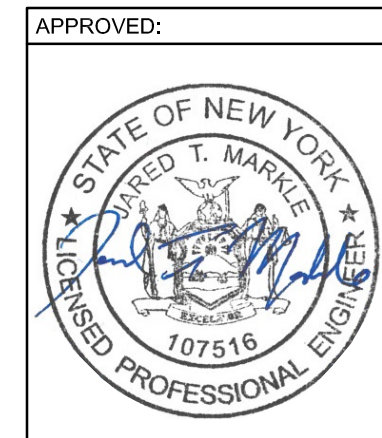
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MAINE MARITIME ACADEMY WATERFRONT IMPROVEMENTS PROJECTS  
 MAINE MARITIME ACADEMY WATERFRONT CAMPUS  
 CASTINE, MAINE

**ELECTRICAL ONE-LINE DIAGRAM**

PREPARED BY:	GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:	MAINE MARITIME ACADEMY CASTINE, ME
PROJ MGR:	KFK	CHECKED BY:	AHJ
DESIGNED BY:	KFK/RSR	SCALE:	NONE
DATE:	JANUARY 2024	REVISION NO.:	
			<b>E-501</b> SHEET NO. 134 OF 142

I.F.B.  
NOT FOR CONSTRUCTION  
JANUARY 19, 2024





BRANCH: NORMAL		TYPE: SURFACE		
PANEL: MDP4120		MAINS: MCB		
FED FROM: 15MVA XFMR/SERVICE DISC		AMPS: 400		
VOLTAGE: 480 Y/277, 3 PHASE, 4 WIRE		AIC: 60,000		
DEVICES	BRANCH CIRCUIT	KILO VOLT AMPS	BRANCH CIRCUIT	DEVICES
AMP S TRIP	DESCRIPTION	K T C PHASE A PHASE B PHASE C	K T C PHASE A PHASE B PHASE C	AMP S TRIP
200	PANEL N211 VIA XFMR T-1	37.5 3 75.0	2 37.5	3 200
200	LARGE BOAT CONNECTION	33.0 9 33.0	10	3 125
100	SPARE	13 15 17	14 16 18	2 200
200	SPARE	19 21 23	20 22 24	3 100
30	HEAT TRACE ZONE 1	25 27	26	1 30
30	HEAT TRACE ZONE 3	27 29	28	1 30
30	HEAT TRACE ZONE 5	29 31	30	1 30
	SPACE	31 33	32	
	SPACE	33 35	34	
	SPACE	35 37	36	
	SPACE	37 39	38	
	SPACE	39 41	40	
	SPACE	41 43	42	
PROVIDE MAIN BREAKER WITH GFPE PROTECTION AS REQUIRED BY THE 2023 NATIONAL ELECTRICAL CODE				TOTAL KVA: 324
PROVIDE GFPE BREAKERS FOR CIRCUITS 7,9,11 - 13,15,17 AND 19,21,23				TOTAL AMPS: 390

BRANCH: NORMAL		TYPE: SURFACE		
PANEL: P211		MAINS: MCB		
VOLTAGE: 240 Y/120, 3 PHASE, 4 WIRE		AMPS: 300		
		AIC: 22,000		
DEVICES	BRANCH CIRCUIT	KILO VOLT AMPS	BRANCH CIRCUIT	DEVICES
AMP S TRIP	DESCRIPTION	K T C PHASE A PHASE B PHASE C	K T C PHASE A PHASE B PHASE C	AMP S TRIP
50	PEDESTAL P7	4.0 1 11.2	2 7.2	2 100
100	PEDESTAL P12, P13	7.2 5 14.4	4 7.2	2 100
100	PEDESTAL P15, P16	7.2 9 14.4	8 7.2	2 100
30	PUMP OUT STATION	1.2 13 8.4	14 7.2	3 100
20	RECEPTACLE	0.2 17	7.4 18 7.2	1 20
20	RECEPTACLE	0.2 19 1.2	20 1.0	1 20
20	RECEPTACLE	2.0 21	3.0 22 1.0	2 30
20	PIER NAVIGATIONAL WARNING LIGHTS	0.1 23	0.6 24 0.5	1 20
20	6.6KV SPO HEATER	1.5 25 1.5	26	1 20
20	SPARE	1.5 27	28	1 20
20	SPARE	29	30	1 20
20	SPARE	31	32	1 20
20	SPARE	33	34	1 20
100	2 SPARE	35 37	36 38	2 100
50	2 SPARE	39 41	40 42	2 50
DEMAND LOAD BASED ON 2023 NEC ARTICLE 220 INCLUDING TABLE 220-120				TOTAL KVA: 112
				TOTAL DEMAND KVA: 88.68
				TOTAL AMPS: 269
				TOTAL DEMAND AMPS: 213

BRANCH: NORMAL		TYPE: SURFACE		
PANEL: P212		MAINS: MCB		
VOLTAGE: 240 Y/120, 3 PHASE, 4 WIRE		AMPS: 300		
		AIC: 22,000		
DEVICES	BRANCH CIRCUIT	KILO VOLT AMPS	BRANCH CIRCUIT	DEVICES
AMP S TRIP	DESCRIPTION	K T C PHASE A PHASE B PHASE C	K T C PHASE A PHASE B PHASE C	AMP S TRIP
100	PEDESTAL P1, P2	7.2 1 14.4	2 7.2	2 100
100	PEDESTAL P5, P6	7.2 3 14.4	4 7.2	2 100
100	PEDESTAL P23, 24	7.2 7 14.4	8 7.2	2 50
100	PEDESTAL P20	7.5 13 8.7	10 3.6	2 30
20	RECEPTACLE	7.5 15	14 1.2	2 100
20	RECEPTACLE	0.2 19 0.2	15 1.2	2 100
20	UTILITY BUILDING RECEPTACLE	0.2 21	0.2 22	2 100
20	UTILITY BUILDING RECEPTACLE	0.7 23	0.7 24	1 30
20	UTILITY BUILDING RECEPTACLE	0.7 25 0.7	26	1 30
20	UTILITY BUILDING RECEPTACLE	0.6 27	1.1 28 0.5	1 20
20	SPARE	29	30	2 30
20	SPARE	31	32	1 20
20	SPARE	33	34	2 30
20	SPARE	35	36	1 20
20	SPARE	37	38	1 20
20	SPARE	39	40	1 20
20	SPARE	41	42	1 20
DEMAND LOAD BASED ON 2023 NEC ARTICLE 220 INCLUDING TABLE 220-120				TOTAL KVA: 107
				TOTAL DEMAND KVA: 88.68
				TOTAL AMPS: 257
				TOTAL DEMAND AMPS: 213

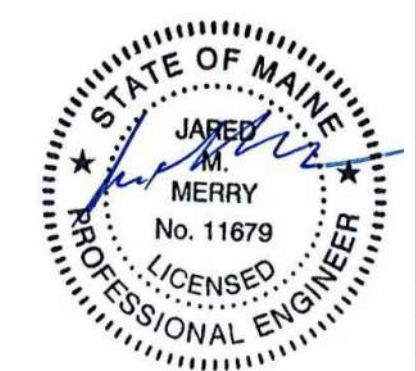
MARINE PEDESTAL SCHEDULE															
ITEM #	BUSSING	LIGHTING	LENS COLOR	SIDE 1				SIDE 2				ADDITIONAL RECEPTACLES	COMMUNICATIONS QTY OF EACH	WATER OPTIONS	COMMENTS
				RECEPT. 1	BREAKER	RECEPT. 2	BREAKER	RECEPT. 1	BREAKER	RECEPT. 2	BREAKER				
P1	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P2	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P3	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P4	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P5	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P6	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P7	1PH CU	LED	CLEAR	100A 125/250V	N/A	N/A	N/A	20A 125V GFCl	STANDARD	N/A	N/A	NONE	NONE	NONE	ADMIRAL POWER SURFACE PEDESTAL
P8	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P9	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P10	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P11	3PH CU	LED	CLEAR	100A 125/250V	N/A	N/A	N/A	20A 125V GFCl	STANDARD	N/A	N/A	NONE	NONE	NONE	ADMIRAL POWER SURFACE PEDESTAL
P12	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P13	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P14	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P15	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P16	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P17	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P18	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P19	3PH CU	LED	CLEAR	200A 277/480V	N/A	N/A	N/A	20A 125V GFCl	STANDARD	N/A	N/A	NONE	NONE	NONE	ADMIRAL POWER SURFACE PEDESTAL
P20	3PH CU	LED	CLEAR	100A 125/250V	N/A	N/A	N/A	20A 125V GFCl	STANDARD	N/A	N/A	NONE	NONE	NONE	ADMIRAL POWER SURFACE PEDESTAL
P21	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P22	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P23	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P24	1PH CU	LED	CLEAR	50A 125/250V	GFI	30A 125V	GFI	20A 125V GFCl	STANDARD	20A 125V GFCl	STANDARD	NONE	NONE	NONE	LIGHTHOUSE POWER PEDESTAL
P25	1PH CU	LED	CLEAR	100A 125/250V	N/A	N/A	N/A	20A 125V GFCl	STANDARD	N/A	N/A	NONE	NONE	NONE	ADMIRAL POWER SURFACE PEDESTAL

NOTES:  
1. COORDINATE EXACT CONFIGURATION WITH EQUIPMENT MANUFACTURER  
2. ALL MARINE POWER PEDESTALS SHALL MEET THE CURRENT 2023 NATIONAL ELECTRICAL CODE REQUIREMENTS FOR GFPEF AND ALL OTHER REQUIREMENTS

LIGHTING FIXTURE SCHEDULE									
FIXTURE LETTER	DESCRIPTION	MANUFACTURER & CATALOG NUMBER	MOUNTING	LAMPS		VOLTS	REMARKS		
				TYPE	WATTS LUMEN				
A	DARK BRONZE DIE-CAST ALUMINUM POLE MOUNTED LED LIGHT FIXTURE. MINIMUM INITIAL LUMEN OUTPUT OF 7500 LM, CCT OF 3000K, CRI OF 80, TYPE 3 DISTRIBUTION, INTERGRAL AUTOMATIC DIMMING PHOTOCELL PROGRAMABLE SENSOR WITH UNIVERSAL VOLTAGE DRIVER MOUNTED TO A ROUND POLE	BEACON VP-1-160L-50-3K8-4W-UNV-A4-DBT-NXWS16F	POLE	LED	50 7,500	UNV	MOUNTED TO A ROUND ALUMINUM 12" POLE. B1-U0-G2		
A1	DARK BRONZE DIE-CAST ALUMINUM POLE MOUNTED LED LIGHT FIXTURE. MINIMUM INITIAL LUMEN OUTPUT OF 7500 LM, CCT OF 3000K, CRI OF 80, TYPE 3 DISTRIBUTION, INTERGRAL AUTOMATIC DIMMING PHOTOCELL PROGRAMABLE SENSOR WITH UNIVERSAL VOLTAGE	BEACON VP-1-160L-50-3K8-3-UNV-A4-DBT-NXWS16F	POLE	LED	50 7,500	UNV	MOUNTED TO A SQUARE ALUMINUM 15" POLE. B1-U0-G2		
B	4' LED SURFACE MOUNTED STRIP LIGHT WITH LENS, MINIMUM INITIAL LUMEN OUTPUT OF 4000 LM, CCT OF 3000K, CRI OF 80+, WITH STANDARD UNIVERSAL VOLTAGE DRIVER	COLUMBIA LIGHTING MPS4-30LW-CPW-EU	SURFACE	LED	27 4,000	UNV			
BE	4' LED SURFACE MOUNTED STRIP LIGHT WITH LENS, MINIMUM INITIAL LUMEN OUTPUT OF 4000 LM, CCT OF 3000K, CRI OF 80+, WITH STANDARD UNIVERSAL VOLTAGE DRIVER WITH 90 MINUTE EMERGENCY BATTERY BACK UP	COLUMBIA LIGHTING MPS4-30LW-CPW-EU-ELL14	SURFACE	LED	27 4,000	UNV			
C	DARK BRONZE DIE-CAST ALUMINUM, WALL MOUNTED EXTERIOR LIGHT, MINIMUM INITIAL LUMEN OUTPUT OF 1300 LM, CCT OF 3,000, CRI OF 70+, UNIVERSAL BUTTON PHOTOCELL	XO OUTDOOR LIGHTING SG1-10-3K7-FV-UNV-DBT-PCU	WALL	LED	10 1,300	UNV	PROVIDED WITH INTERGRAL PHOTOCELL CONTROL		
D	RED LED MARINE OBSTRUCTION WARNING LIGHT, MINIMUM RANGE OF 1 NAUTICAL MILE, MADE OF HIGH-IMPACT POLYCARBONATE, 120 VOLT POWER SUPPLY AND EITHER PIPE OR STAND MOUNTED	M-DERMONT LIGHT & SIGNAL PLAT 120 1L5V	PIPE/STAND	LED	5 N/A	120	PIPE OR STAND MOUNTED TO CATWALK PLATFORM FOR OBSTRUCTION WARNING TO BOATERS. CONTROLLED BY TIMECLOCK AND PHOTE EYE PROVIDED SEPARATLY		
E	LED SOLAR POWERED MARINE LIGHT WITH REMOTE CONTROLLER. MINIMUM RANGE OR 2.5 NAUTICAL MILES. INTEGRATED SOLAR PANEL WITH BIRD SPIKE, RECHARGEABLE NIMH BATTERY, AUTOMATIC NIGHT ACTIVATION, UV-STABILIZER LEXAN POLYCARBONATE LENS.	LANSING HB30-RF	PIPE/STAND	LED	N/A N/A	3.6	PIPE OR STAND MOUNTED TO FLOATING BREAKWATER STRUCTURE		

BRANCH: NORMAL		TYPE: SURFACE		
LOCATION: ANDREWS HALL		MAINS: MCB		
PANEL: EXISTING PANEL P1		AMPS: 200		
VOLTAGE: 480 Y/277, 3 PHASE, 4 WIRE		AIC: 22,000		
DEVICES	BRANCH CIRCUIT	KILO VOLT AMPS	BRANCH CIRCUIT	DEVICES
AMP S TRIP	DESCRIPTION	K T C PHASE A PHASE B PHASE C	K T C PHASE A PHASE B PHASE C	AMP S TRIP
20	SALT WATER HIGH TEMP	1 3 4	2 2	2 100
20	F.O. SKID HEATER	7 8 10	11 12	2 100
15	SALT WATER LOW TEMP	13 14 15	16 17 18	2 50
15	PRE LUBE	19 20 21	22 23 24	2 50
15	HFO DAY TANK	25 26 27	28 29 30	2 50
30	FO PURIFIER	31 1.0 33 1.0	32 1.0 34 1.0	1 20
15	SPARE	35 36 37 38 39 40 41 42	36 37 38 39 40 41 42	1 20
* - CONTRACTOR SHALL CONNECT THE NEW LOAD TO THE EXISTING BREAKER IN THE PANEL				TOTAL KVA: 2
				TOTAL AMPS: 2

I.F.B.  
NOT FOR CONSTRUCTION  
JANUARY 19, 2024



2	ADDENDUM 6	JMM	3-21-24
1	ADDENDUM 3	JMM	3-1-24
NO.	ISSUE/DESCRIPTION	BY	DATE
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MAINE MARITIME ACADEMY WATERFRONT CAMPUS PIER UPGRADES AND WATERFRONT IMPROVEMENTS CASTINE, MAINE			
ELECTRICAL SCHEDULES			
PREPARED BY:	JMM	PREPARED FOR:	MAINE MARITIME ACADEMY CASTINE, ME
PROJ MGR:	JHW	REVIEWED BY:	JMM
DESIGNED BY:	JMM	DRAWN BY:	MEB
DATE:	JANUARY 2024	CHECKED BY:	JMM
		SCALE:	AS NOTED
		PROJECT NO.	35109.00
		REVISION NO.	
			<b>DRAWING</b> <b>E-801</b>
			SHEET NO. 138 OF 142

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