### ROCK HARBOR COMMERCIAL WHARF IMPROVEMENTS TOWNS OF ORLEANS, MA ADDENDUM #3

AWARDING AUTHORITY:	Town of Orleans
PROJECT:	Rock Harbor Commercial Wharf Improvements
DATE:	March 22, 2024
то:	All Bidders
CONSULTING ENGINEER:	Foth Infrastructure & Environment, LLC 15 Creek Road, Marion, MA 02738

The following items shall modify or be added to the Contract Documents. This Addendum forms part of the Contract Documents and modifies the original bidding documents. Portions of the Contract Documents not altered by this Addendum remain in full force.

This Addendum forms part of the Contract Documents and as such, ALL BIDDERS SHOULD ACKNOWLEDGE IT IN THE "BID PROPOSAL". FAILURE TO DO SO COULD RESULT IN THE REJECTION OF YOUR BID.

Notice is hereby given to any and all plan holders of record with the Owner for the project herein captioned **"Rock Harbor Commercial Wharf Improvements"**, Owner of record being the Town of Orleans, of the following amendments to the Contract:

### I. <u>CONTRACT DOCUMENTS</u>

### 1. SECTION 004000 BID

**<u>REPLACE</u>** "Exhibit A" to Bid – Bid Schedule (pages 004000-3 through 004000-5) with the revised bid schedule attached herein.

### 2. SECTION 007010 SUPPLEMENTAL CONDITIONS Section 1.11 Guarantee

Item A. shall be **<u>REVISED</u>** to **DELETE** the language struck out as shown below:

A. The Contractor shall guarantee to the Owner all materials and workmanship against original defects, or against injury from proper and usual wear when used for the purpose intended, for one (1) year of final payment certifications. and shall maintain all items in perfect condition during the period of guarantee.

Item B. shall be **<u>REVISED</u>** to **DELETE** the language struck out as shown below:

B. Defects appearing during the period of guarantee shall be made good by the Contractor at his expense upon demand of the Owner. it being required that all work shall be in perfect condition when the period of guarantee shall have elapsed. In the event of default by the Contractor, the Company shall have the right to make good any and all defects and bill the Contractor cost plus 15% for administration fees.

### 3. SECTION 010100 SUMMARY OF WORK

### PART 1 - GENERAL

Section 1.5 Sequencing and Scheduling Item A. Mandatory Schedule Milestone

**DELETE** the following: A Project Schedule must be prepared and submitted by the Contractor with the bid.

### 4. SECTION 010250 MEASUREMENT & PAYMENT

PART 1 - GENERAL Item 4. Bid Items: <u>ADD</u> the following:

### **BID ITEM NO. 24 – POLICE DETAIL**

- A. WORK COVERED BY CONTRACT PRICE
  - 1. This item includes all costs associated with the miscellaneous police details/detours which may be required to complete work for the Rock Harbor Commercial Wharf Improvement Project.

### B. MEASUREMENT

- 1. Unit of Measure ALLOWANCE; measurement of actual police detail will be hourly.
- 2. This item will be measured as HOURLY to include compensation for the actual hours of police detail required.
- **3.** Payment will be made for costs associated with the police detail based on actual costs for this detail.
- **4.** Payment will be made for costs associated with this bid item including all incidental work described in the specifications and contract documents.

### 5. SECTION 099713 COATING OF STEEL WATERFRONT STRUCTURES

### PART 2 – PRODUCTS Section 2.1 Epoxy Coating

Item C. shall be **<u>REVISED</u>** as follows:

- C. Epoxy coating field touch-up material shall be identical to factory coating specified in paragraphs 2.1 A <u>AND 2.1 B</u> above.
- Item D. shall be **<u>REVISED</u>** follows:
  - D. The topcoat color for all surfaces is to be black <u>WITH THE EXCEPTION OF STEEL PIPE PILES</u> WHICH SHALL BE GREEN.

### PART 3 – EXECUTION

### Section 3.2 Protective Coating Application

Item A. shall be **<u>REVISED</u>** as follows:

The protective coating shall be installed in strict accordance with manufacturers written instructions. **BAR RUST 235** coating is to be applied in two coats to achieve a minimum overall dry film thickness

### (DFT) of 15 mils. FUSION BONDED EPOXY (FBE) COATING IS TO BE APPLIED AS A SINGLE COAT WHICH MUST HAVE A MINIMUM DFT OF 15 MILS.

### 6. ATTACHMENT B - DRAWINGS

The drawings entitled: *Rock Harbor Commercial Wharf Improvements*, Town of Orleans, Massachusetts, Department of Public Works; Issued for Bid on 03/08/2024 (57 total sheets, including cover sheet) shall be **<u>REVISED</u>** as shown on the attached sheets listed below.

Sheet G-002 Notes Sheet G-003 Notes, Legends and Abbreviations Sheet C-102 Demolition Plan 1 of 2 Demolition Plan 2 of 2 Sheet C-103 Sheet C-201 Site Plan 1 of 2 Sheet C-202 Site Plan 2 of 2 Sheet C-203 Layout Plan 1 of 2 Sheet C-204 Layout Plan 2 of 2 Sheet C-701 Standard Civil Details Sheet C-707 **Pumpout Station Details** Sheet S-504 Section Views 4 of 4 Sheet S-701 Structural Details 1 of 8 Sheet S-702 Structural Details 2 of 8 Sheet S-703 Structural Details 3 of 8

# II. RESPONSES TO BIDDER QUESTIONS

1. Who is responsible for the cost of the police details?

**RESPONSE:** See **Bid Item No. 24 – POLICE DETAIL** which has been added to the Bid Schedule (see revised *Exhibit A to Bid* attached herein) and Section 010250, Measurement and Payment.

2. Referring to Drawing G-003, Pile driving note 6 states "lengths shown on drawings are considered average values, and the actual length may vary when so accepted by the engineer of record." The drawing does not call out the length or tip elevation for the 24" steel pipe pile. Please advise.

**RESPONSE:** The 24-inch steel pipe piles shall be installed to achieve a 275-ton ultimate capacity. Refer to sheet G-002, Design Criteria note #7 & sheets C-203 & C-204 for pile information. The Contractor shall assume a pile length of 75 feet to achieve the required ultimate capacity.

3. The provided geotechnical boring (i.e. LB1, LB2, LB3, LB4, LB5, RH-2003-B1, RH-2003-B2) information is not deep enough for the Contractor to determine the pile tip elevation to achieve the 275-ton ultimate capacity of the 24-inch diameter steel pipe pile. Please provide deeper borings, provide the estimated pile tip elevation of 24-inch diameter steel pipe piles for bidding purposes or change the unit of measurement of the bid item 8 from each (EA) to vertical foot (VF).

**RESPONSE:** The Contractor shall assume a pile length of 75 feet to achieve the required 270-ton ultimate capacity for all steel pipe piles.

4. Please provide estimated tip elevation for the 12-inch diameter timber piles at timber pile support town pier.

**RESPONSE:** The Contractor shall assume a pile length of 50 feet to achieve the required 11-ton ultimate capacity for all plumb (vertical) timber piles and 6-ton ultimate capacity for battered timber piles for reconstruction of the Town Pier.

5. Please provide estimated tip elevation for the 12-inch diameter timber piles at timber pile support Commercial landing pier.

**RESPONSE:** The Contractor shall assume a pile length of 50 feet to achieve the required 11-ton ultimate capacity for all plumb (vertical) timber piles and 6-ton ultimate capacity for battered timber piles for the Commercial Landing Pier.

6. Drawing S-703 shows sacrificial anodes for the steel sheeting bulkhead. Please confirm there are no anodes for the 24-inch diameter steel pipe pile.

**RESPONSE:** No anodes are required for the 24-inch steel pipe piles.

7. Specification section 028100 transportation and disposal part 1.1 A specifies "Contractor shall properly transport and dispose of all items, including solid hazardous and non-hazardous wastes removed from the site, to appropriate disposal facilities." MADEP Chapter 401 listed a few upland disposed sites and it does not listed any hazardous disposal facilities. There is a major difference in cost between non-hazardous soil and hazardous soil. In the event that hazardous soil is encountered, please confirm it will be paid under extra work.

**RESPONSE:** The 401 Water Quality Certification issued by MADEP for the proposed project regulates the on-site beneficial reuse and offsite disposal of only the "soil" that is required to be excavated up to a maximum allowable depth of -4.0 feet MLW within the area located 20-feet landward of the existing bulkhead as shown on the Contract Drawings. Should the Contractor need to dispose of any "soil" outside of this specific area, then it must be at an off-site facility that authorized to receive such material. If hazardous "soil" is encountered, the Contractor is required to immediately report this condition to the Owner and Project Engineer for further direction. Any costs associated with the handling/removal of hazardous soil from the project site will be considered additional work for which payment will be made through a negotiated change order to the contract price.

8. Please confirm that there is no corrosion inhibitor admixture required for the cast-in-place concrete work.

**RESPONSE:** No corrosion inhibitor admixture is required.

 Drawing S-504 PC Cap Connection Detail calls for "Countersunk 2-inch diameter ASTM F1554 galv. 36ksi threaded rod with double nut" Please confirm the threaded rods are galvanized not stainless steel.

**RESPONSE:** The 2-inch diameter ASTM F1554 threaded rods are to be galvanized.

10. Referring to drawing S-504 Pile reinforcement detail, are there any rebar coupler terminators at the top of the #8 bars that come out of the steel pipe pile?

**RESPONSE:** The reinforcement cage for the steel pipe piles must use headed reinforcement as show on the Pile Plug Detail on S-504.

11. Referring to drawing S-702 Gantry Beam Detail, please clarify who is responsible to furnish and install the winch and the hook above the winch?

**RESPONSE:** The Contractor is responsible for furnishing and installing the beam, angle bracing, eye bolt, and hook. Rigging below the eyebolt will be provided by Owner as shown on the drawing.

12. Is there a grout joint or deck Panel shear key in between the precast deck planks? If so, please provide detail for the grout joint in between precast deck planks.

**RESPONSE:** See Precast Plank Joint Detail added to sheet S-504 attached herein.

13. Referring to drawing S-702, detail A shows the 2" C900 PVC water service with 4" PVC Sleeve on 8x12 CCA treated timber chock. Is the 2" C900 PVC water pipe or 4" PVC sleeve required insulated?

**RESPONSE:** Neither the 2-inch C900 PVC water pipe or 4-inch PVC sleeve are required to be insulated.

14. Specification section 004000 part 1.07 of Bid form specified The Construction Schedule will be requested upon the award of the Contract. Specification section 00700 part 1.09 specified "A Project schedule will be required for this project and is to be forwarded in writing to the Project Engineer five (5) days after the Notice to proceed..." Specification section 010100 Part 1.5 A specified "A Project Schedule must be prepared and submitted by the Contractor with the bid." Please advise which one is correct.

**RESPONSE:** As per Section 004000, Bid, Part 1.07, the Contractor shall describe in as much detail as possible how work is intended to proceed and demonstrate that all required work under the Contract can be completed within the timeframe that has been allotted for construction. The Contractor that is selected as the lowest qualified bidder will be required to submit a formal schedule within five (5) days after the issuance of a Notice to Proceed (NTP) in accordance with Section 00700 part 1.09. Project schedule requirements as per Section 010100 Part 1.5 A. have been deleted.

15. We refer to the drawing C-104 section B calls for the existing steel sheet pile bulkhead to be removed. In the event that existing steel sheet piles deteriorate and cannot be removed. Is it acceptable that the Contractor cut the existing sheet piles below the mud line?

**RESPONSE:** In the case that existing sheet pilings cannot be removed in their entirety, the Contractor shall report the change in condition to the Project Engineer for further direction. For bidding purposes, the Contractor shall assume that all existing sheet piles can be extracted in their entirety.

16. Please provide detail or thickness for the concrete sidewalk and stamp concrete public landing.

**RESPONSE:** The concrete sidewalk shall have a thickness of 6-inches and include reinforcement as shown on typical section "H" on sheet S-703. The thickness for the stamped concrete public landing varies and shall match the slope & grades indicated on sheet C-208. Additionally, see section "B" on sheet S-501.

17. Drawing C-202 shows some fence & gate at the relocated pump station location. Please advise whether this is a new timber fence. If so, please provide details of this timber fence & gate.

**RESPONSE:** See sheet C-707 attached herein for new timber fence and gate detail.

18. Drawing G-002 & C-203 provided minimum tip elevation of the timber berth piles, what is the cutoff elevation of the timber berth piles?

**RESPONSE:** Cutoff elevation of the timber berth piles shall be EL. +23.00' MLW.

19. Drawing G-002& C-203 provided minimum tip elevation of the timber float piles, what is the cutoff elevation of the timber float piles?

### **RESPONSE:**

Cutoff elevation of the Northern Dock float, gantry, and berthing piles shall be EL. +23.00 MLW. Cut off elevation of the South Dock berthing piles shall be EL. +23.00 MLW. Cutoff elevation of the South Dock timber fender piles along bulkhead be EL. +17.50' MLW and EL. +16.30 along the Commerical Wharf.

20. Reading through the drawings for the project, I noticed that you guys are asking for Timber floating dock systems. Here at AccuDock, we manufacture marine grade aluminum framed floating docks with closed cell foam incapsulated in hand welded HDPE plastic and decked with Wolf PVC decking. I've attached our specifications and a few brochures for reference. Would you consider us an approved equal?

**RESPONSE:** The Contractor can propose the use of aluminum floats as a substitution after award.

21. Please provide details on the site lighting poles and fixtures. The specifications have details on the shore power equipment and the bulkhead mount lights but no information on the pole mount lights.

**RESPONSE:** See response to question # 74 below.

22. Please provide details on the New fuel system electrical panel located in the fuel shed.

**RESPONSE:** Panel shall be 80 amps and meet National Electric Code (NEC).

23. Does a construction schedule need to be submitted with the bid and if so, is it considered a mandatory bid submission requirement?

**RESPONSE:** See Response to Question #14 above.

24. Do certificates of insurance for the Contractor and all listed subcontractors have to be submitted with the bid?

RESPONSE: No.

25. Will the Contractor be required to provide All-Risk / Builder's Risk insurance coverage for the project?

RESPONSE: Yes.

26. Please clarify the requirements for hardware on the timber piers. The plans and specifications conflict with respect to utilizing stainless steel hardware for all MCA treated timber yet details calling out galvanized bolts for MCA treated timber.

**RESPONSE:** Hardware used to connect CCA treated timber, including bolts, nuts and washers, etc., shall be hot dip galvanized steel. Galvanizing shall conform to the requirements of ASTM A153. Hardware and fasteners used to connect MCA treated timber including bolts, nuts and washers, etc., shall be grade 316 stainless steel. Hardware shall provide a flush finish where applicable.

27. Please clarify the requirements for the timber grade for treated timber. The specifications conflict with respect to all timber being #1 grade vs. #2 or better grade.

**RESPONSE:** Timber grade #1 or better shall be used for all timber construction.

28. Is the pipe pile test pile program to be completed ahead of ordering production piles or during the driving of production piles?

**RESPONSE:** Pile testing shall be performed on production piles to be specified by the Project Engineer.

29. Please remove the pressure treated timber pier piles from the scope of work covered by the line item for the timber pier(s) and put the piles in their own line item.

**RESPONSE:** Timber piles shall be included in per square foot (SF) cost for Bid Item No. 10 - Furnish and Install Timber Town Pier and Bid Item No. 11 - Furnish and Install Commercial Landing Pier.

30. Where borings were not taken beyond elevation -45' +/-, and given the required relatively high ultimate pile capacities, it is near impossible for Contractors to determine estimated pile lengths. Please provide an estimated tip elevation for piles that are currently specified only with an ultimate capacity (timber & pipe piles). Alternatively, if no estimated tip elevation will be provided, please change the unit of measurement for piles required to meet an ultimate capacity from per each to per linear foot and add a per each line item for field splices.

**RESPONSE:** See response provided to Questions #2 - #5 above.

31. Please review the duration of time afforded the Contractor for completion of the project as noted in Article 1 of the Agreement, section 05000. The duration conflicts with the dates provided elsewhere in the contract documents.

**RESPONSE:** Article 1 is written correctly.

32. Will the Contractor be allowed to utilize a vibratory hammer to install piles that are scheduled to be driven to an ultimate capacity provided the Contractor proofs each pile with an impact hammer to confirm the required pile capacity has been achieved?

**RESPONSE:** Yes, this installation methodology is acceptable.

33. What capacity, relative to the specified ultimate capacity, will the Contractor be required to drive piles that are specified as being required to achieve an ultimate capacity? (i.e. 2 x ultimate capacity,  $\frac{1}{2}$  x ultimate capacity, etc.).

**RESPONSE:** Steel piles must be driven to an ultimate capacity times a factor of 1.0.

34. Currently the timber fender system is included in the line item for fender, float and tie-off piles and the line item utilizes a per each unit of measurement. Please consider creating a line item for the timber fender system and removing it from the line item for fender, float and tie-off piles.

**RESPONSE:** Timber fender system shall be included in per each (EA) cost for Bid Item No. 13.

35. Where the exact quantity of material that is required to be dredged is not known, please consider adding a per cubic yard line item for dredging, transport and disposal of the sediment to be dredged.

**RESPONSE:** See response provided to Question #7 above. An estimated volume is provided on sheet C-208. Costs associated with this activity shall be included under Bid Item No. 3 – Demolition, Removal and Disposal.

36. Where the exact quantity of rip rap that is required to be removed, relocated and/or hauled off-site is not known, please consider adding a per cubic yard line item for the rip rap work.

**RESPONSE:** Costs shall be included under Bid Item No. 3 – Demolition, Removal and Disposal.

37. Will the Contractor be required to complete a pre & post dredge survey for the dredging?

**RESPONSE:** The Contractor is required to perform an as-built survey of the upland work completed. The Owner will perform confirmatory survey of within the area where material is excavated from behind the existing bulkhead to 20-feet landward to the face of the new replacement structure to confirm the Contractor has achieved a minimum mudline depth of -3.0' MLW.

38. Will the Contractor or owner be responsible for onsite testing (concrete, soil, asphalt, etc.)?

**RESPONSE:** The Contractor shall be responsible for meeting onsite testing requirements.

39. Reference specification section 99713, section 3.1.A. Commercial coaters typically utilize a shot mix that includes both steel shot and grit, in compliance with classification society requirements to achieve required profiles prior to coating. A requirement to utilize only grit, without any steel shot, may result in no coaters being willing to quote the job. Please clarify if the wording in this section is intended to mean that the shot mix must have no steel shot in it or if the mix may have shot provided the mix achieves the required performance criteria for surface profile prior to coating.

**RESPONSE:** Surfaces shall be cleaned to a Near-White Metal Blast Cleaning per SSPC-SP-10. The SSPC-SP10 definition of a near-white metal blast clean requires the surface to be free of all visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, corrosion products, and other foreign matter when viewed without magnification. The standard also provides requirements for random staining on the surface which shall not exceed five percent of each unit area of surface. The surface shall be cleaned of oil, grease, and dust after the near-white metal blasting procedure. The mix may have a steel shot if it achieves the required performance criteria.

40. Reference specification section 310519.13, section 2.3.D. Is the intent of this section that the Contractor is responsible for completing independent testing of the filter fabric, in the field, even if the filter fabric is a commercially manufactured product that has been factory tested and meets the criteria specified in the specifications?

**RESPONSE:** The intent of this section is to provide the data or results of the factory testing indicating that it meets the criteria specified in the specifications and is in accordance with ASTM D5101.

41. Where it is not anticipated that pipe and timber bearing piles will reach refusal on ledge, please confirm that neither pile type requires a driving shoe.

**RESPONSE:** Timber piles do not require a driving shoe. Steel pipe piles require a driving shoe.

42. Do steel pipe piles need to be fitted with an end plate or closed driving point so that they are driven closed? If so, which end treatment should be utilized and if a plate, what is the required thickness of the plate?

**RESPONSE:** Steel pipe piles shall be driven open-ended and require a driving shoe.

43. Reference specification section 316216.13, section 3.6.C. Is the Contractor required to have an independent inspector onsite at all times while pipe piles are being driven?

**RESPONSE:** The independent inspector and certification is for the fielding splicing of piles. The Contractor is not required to have an independent inspector on site for the entire duration of the production pile installation.

44. Reference specification section 331000, sections 1.2.D and 1.6.C. Are the PE stamped drawings and engineer referenced in these sections the contract drawings and project engineer or a separate set of drawings and engineer that the Contractor is responsible for developing and providing?

**RESPONSE:** Specification Section 331000, Section 1.2.D refers to the Contract Drawings and Project Engineer. Specification Section 331000, Section 1.6.C pertains to the Contractor providing stamped as-builts at the end of construction.

45. Reference specification section 355113.23, section 2.3.A.4. It is very difficult, and costly if even possible, to find a kiln drier who will dry pressure treated timber after treatment. Please remove this requirement from the project.

**RESPONSE:** This request will be considered on a case-by-case basis.

46. Reference specification section 15607, section Part 2.3.A. For the purpose of its bid, can the Contractor assume that soils and debris removed as part of the underground fuel tank removal are not considered hazardous waste?

**RESPONSE:** See Response to Question #7 above.

47. Please confirm that despite not including language to the same, section 17.2, the USACE permit allows in-water work to occur during the time of year restriction if adequate containment structures (i.e. silt curtain) are in-place prior to the time of year restriction starting.

**RESPONSE:** Foth has confirmed with USACE that in water work will be allowed as long as adequate containment structures (i.e. silt curtain) are installed prior to the start of the winter flounder Time of Year (TOY) restriction which begins on February 1<sup>st</sup>.

48. Reference the Order of Conditions with DEP file number 54-2618, special condition 1. Is the Contractor required to develop and submit a planting and restoration plan or has that requirement already been met by the project engineer? If the Contractor is required to submit the plan, how will the Contractor be compensated for work included in the plan that is not currently included in the contract documents?

**RESPONSE:** No. This requirement is not applicable to the Commercial Wharf Improvement project.

49. Reference drawing G-002, note "Cathodic Protection #3". Does the testing specified herein need to be completed by an independent third party or can it be completed by the Contractor?

**RESPONSE:** Testing of cathodic protection system must be performed by an independent agency.

50. Is there a requirement for continuity welding of the sheet piles as part of the cathodic protection system?

**RESPONSE:** It is customary to weld sheet piles the top 6 inches for continuity.

51. Reference drawing G-002, note "General Conditions #23". Where the facility will be in use by the public following completion by the Contractor, it is not realistic to expect that the Contractor will maintain the facility in "perfect condition" for the duration of the one year warranty. Please revise the wording in this

section to state that the Contractor is not responsible for restoring normal wear and tear to the facility during the warranty period.

**RESPONSE:** General Condition No. 23 has been revised. See Sheet G-002.

52. Reference drawing G-003, note "Timber Floats #4". Please confirm that 2" galvanized deck screws are the intended length and material composition of the screws intended to secure the decking on the timber float.

**RESPONSE:** Float decking shall be MCA and screws shall be 2" stainless steel.

53. Reference drawing S-504, "Pile Plug Detail", note 4. Are the pile plug plates that the Contractor is responsible for have a PE design intended to be structural plates or simply temporary form plates to support the weight of the concrete plug until it reaches design strength?

**RESPONSE:** See sheet S-504 attached for revised note with reference to PE requirement removed. The plug plate shall be sized as shown on the drawing, but the installation means and methods will be the responsibility of the Contractor. The intent of the plug plate is a bottom form for temporary support of the concrete during installation of the pile plug.

54. Please provide details for the new fuel shed called out on Web Engineering drawing A-1.

**RESPONSE:** The fuel shed is a pre-fabricated timber-framed structure approximately 8' x 8' in size and provided by Owner. The Contractor will be required to temporarily relocate this structure and reinstall at the location shown on the Contract Drawings (see sheet C-202).

55. Could you clarify for us the preferred south floating dock segment length that you would prefer that makes up the 150 ft span at this location.

**RESPONSE:** Refer to the Contract Drawings Sheets C-203 & C-204.

56. Is the berth timber pile required fiberglass cap? yes If so, please provide detail (i.e. is it a conical cap or flat cap per drawing S-701?)

**RESPONSE:** Timber berthing piles require a flat fiberglass cap. This cap shall consist of a white, heat-fused fiberglass wrap.

57. Is the floating timber pile required fiberglass cap? If so, please provide detail (i.e. is it a conical cap or flat cap per drawing S-701?)

**RESPONSE**: See response to Question #56 above.

58. Is the Jib Crane rotation motorized or manual.

**RESPONSE:** The jib crane is electric/motorized.

59. Does the Jib Hoist require a motorized or manual trolley.

**RESPONSE:** The jib crane requires an electric/motorized trolley.

60. Drawing C-201 shows 2 each timber pile and timber beam for the gantry crane. Please advise under which bid item to pay for the gantry beam timber piles and gantry timber beam.

**RESPONSE:** Timber piles for the gantry shall be counted under the berthing, float, and fender pile line item. The gantry beam shall be included in the cost per each (EA) cost for Bid Item No. 13.

61. Drawing C-201 call typical of 26 each of 12inch CCA Treated timber piles @ Town Pier, there is only 25 each count, please advise which one is correct.

**RESPONSE:** The call out on the plans for the both the timber pier plumb piles and timber pier batter piles are intended to cover both the Town Pier and the Town Landing. A total of 26 plumb piles are to installed at both locations and a total of 9 battered piles are to installed at both locations. The 2 fender piles on the face of each pier shall be greenhearts and counted in the fender pile quantity.

62. Drawing C-706 calls for the Town of Orleans Water Meter. Is the Town of Orleans furnishing the water pit to the Contractor at no cost to the Contractor?

**RESPONSE:** The Contractor is to provide the water meter pit and apply with the Town of Orleans Water Department for the installation of a water meter (\$80 fee). The water meter that meets the Town of Orleans Water Department standards will be provided by the Town at the Contractor's expense. See Town of Orleans water services installation regulations for more information.

63. Specification section 316216 Steel Pipe Piles PART 3.1 EQUIPMENT paragraph B states "Rig the pile driver with fixed leads to guide the hammer from highest to lowest point of travel in a manner permitting free vertical movements of the hammer, and with leads laterally braced to assure fir support of the piles during driving." and paragraph C states "The pile is to be located by temporary frames containing members of adequate size to guide and stabilize placement of the pile prior to and during driving." Is the intention to have the Contractor use either paragraph B (fixed leads) or paragraph C (temporary falsework frame) to driving the steel pipe piles? Or is it both fixed leads and temporary falsework frame?

**RESPONSE:** The means and methods of installation are ultimately the responsibility of the contractor. Due to the limited amount of allowable variance of the installed location of the pile for installation of precast concrete components, it is recommended that the contractor use false during the installation of the steel pipe piles.

64. Is the Contractor required to perform PDA testing on timber piles at Commercial Landing Pier? If so, how many PDA?

**RESPONSE:** No. PDA testing is not required on timber piles.

65. Specification section 010250 Measurement and Payment Bid item 8 para A3 states "pile load testing with Pile Driving Analyzer (PDA) on 2 test piles to be specified by the engineer in the field." Please confirm the 2 PDA test piles are permanent piles, not sacrificial piles.

**RESPONSE:** Testing will be done on 2 production (permanent) piles as specified by the Project Engineer in the field.

66. In reference to the existing utility pole that is to remain and be supported during construction. This is work that the utility company would likely control and do. Please confirm this work will be the responsibility of the utility company and not the Contractors. Will the Town assume the costs charged by the utility company for this work?

**RESPONSE:** The intent is the note is for the Contactor to protect the existing utility pole from work they are performing in proximity to the existing pole. Any cost associated with work performed by the utility company will be the responsibility of the Town.

67. In reference to the removal, transport and setting of the South revetment stone to the North revetment, please provide a scope of work or details for the North revetment improvements so that Contractors can better understand that work as well as how much surplus revetment stone will need to be hauled offsite.

**RESPONSE:** All existing revetment stone shall be hauled to the Town yard. See call outs and notes on revised sheets C-102 and C-103 attached herein.

68. When the Contractor delivers the excess revetment stone to the DPW yard, is the Contractor responsible for handling/stacking the stone at the DPW yard or just dumping it direct from trucks onto the ground?

**RESPONSE:** Rock loads can be dumped directly from trucks at the Towns DPW yard.

69. Please provide a separate bid/pay line item for the gravel borrow to be used under the areas scheduled to receive new asphalt paving.

**RESPONSE:** Full depth pavement section will be paid by the Square Yard as noted in Bid Item No. 5.

70. Have buoyancy calculations been completed on the precast drainage structures and if so, will additional measures be required during construction to secure the structures prior to backfilling?

**RESPONSE:** The Contractors means and method will determine if the drainage structures will need additional measures to secure the structures prior to backfill. The structures do not require any additional tie downs to address buoyancy after backfill.

71. Do the oil water separators require sealed rings and covers?

**RESPONSE:** Yes, grade rings and covers shall be sealed with a bitumastic sealer.

72. Most of the drainage structures will require a fair amount of dewatering for installation. Are there any requirements of the Contractor for a dewatering plan or dewatering disposal?

**RESPONSE:** The Contractors means and methods will determine if dewatering is required. If required, see 401 Water Quality Cert for dewatering requirements.

73. Based on conversations the pipe suppliers have had with Fusion Bond Epoxy coaters, the Fusion Bond Epoxy specifications cannot be met nor can the coaters handle the size/weight of the 24" x ¾" wall pipe. At least one Fusion Bond Epoxy coater has declined to quote for these reasons. Due to the tight timeframe with the bid date on this project, and lack of opportunity to submit questions beyond the deadline, please provide an alternative, non-Fusion Bond Epoxy coating system that can be utilized on the pipe piles.

**RESPONSE:** Fusion Bond Epoxy is the preferred coating for the 24" x <sup>3</sup>/<sub>4</sub>" pipe piles. The availability of the coating has been verified by suppliers and bidders shall base their bid on Fusion Bond Epoxy. The selected contractor can propose a substitution of a coal tar epoxy matching the sheet pile specification with a credit associated with the reduced costs.

74. Can you provide basis of design manufacturer/part number for the decorative light poles so we can price appropriately. If unavailable, can you provide an allowance you would like us to carry?

**RESPONSE:** Contractor to provide light poles, with fixtures, bases etc. installed as a complete unit, in locations as shown on the Contract Drawings.

Light pole to be aluminum pole with LED fixture meeting the requirements of Specification 260000.2.13. Light pole to be 14' tapered aluminum (4" butt diameter, w/0.125" thickness) with anchor base and tenon/side mounting (per Structural Drawings S-710). A basis of design light pole would be Hapco Cat#RTA14B4A401 or Valmont Cat#R130830404T4-D1-DNA-204

Light Fixture to be (1 per pole) Site/Area Lighting style with 60W LED (equivalent) fixture, IESNA Type III lighting coverage, 4000K, 240V 1-phase

Basis of Design / typical fixtures can include: Lithonia - DSX1 LED **P7** 40K 70CRI T3M MVolt RPA DF BAA DNAXD Lithonia - RSX1 LE P3 40K R3 MVOLT RPA DF BAA DNAXD

75. Please confirm NEMA rating of panel LP, 400-amp service disconnect meter and CT cabinet?

**RESPONSE:** All equipment shall be NEMA 4X per notes on Drawing E-106.

76. Drawing E-106 shows furnishing a CT cabinet and meter socket. Scope of work in spec section 260000 1.24A2 notes class 320 meter socket. Can you confirm which we are supplying?

**RESPONSE:** The 400A service will utilize a Class 320 meter socket per 260000.1.24. The Detail on E-106 is for installation guidance. We do not anticipate the utility requiring a CT cabinet on this project.

77. Drawing E-106 notes individual enclosures for panel LP, service disconnect and CT cabinet/meter socket. Spec section 260000 2.10 notes providing (1) outdoor enclosure. Can you confirm which we are supplying?

**RESPONSE:** A single enclosure is preferred with the exception of meter sockets, utility-required disconnects etc which are to be mounted externally. The Detail on E-106 is for installation guidance.

78. Specification sections 260000 2.11, 2.12 and 2.13 note individual timeclocks for flag pole lighting, wall lighting and photocells for decorative pole lighting. Scope of work in spec section 260000 1.24A2 notes a single timeclock for a lighting contactor to control all lighting. Can you confirm which we are supplying?

**RESPONSE:** A single time-clock with lighting contactor is preferred and can be reviewed during the submittal process.

79. Tank Full Interlock controls? Does the existing tank (to be reused) have a float switch interlock system? If not, is Keco's Tank Alert system something we should offer to the Contractor as an option?

**RESPONSE:** The existing has a float switch and will be reused onsite. No additional alert system is required.

80. Distance from fuel dispensers to pumpout? Will the pumpout be installed within the NFPA Class 1, Div. 2 area (aka explosion proof zone)?

**RESPONSE:** The pump out is more than 10 feet from the source location for the dispenser and is not within the NFPA Class 1, Div. Area.

81. Will you be installing utilities on the floating docks?

**RESPONSE:** The pumpout station will be installed at the location shown on the Contract Drawings. The pump specified will match the pump currently being used on site that is sufficient.

82. In looking through the bid package I noticed the spec for a 1-ton jib crane. We represent the Dutch manufacturer Roodberg <a href="http://www.roodberg.com">http://www.roodberg.com</a> and will be proposing our 2-ton jib crane to the same Contractor. The chain hoists Roodberg uses come equipped with wireless controls. Are wireless controls acceptable?

**RESPONSE:** The Contractor can propose to substitute a 2-ton jib crane after award. For bidding purposes, the 1-ton Jib crane shall be used. Wireless controls are not acceptable. A wired controller is required.

83. What is the estimated pile length for the 24" pipe piles?

**RESPONSE:** See response to Question #2 and #3 above.

84. What is the estimated pile length for the 12" CCA pier battered and plumb piles?

**RESPONSE:** See response to Questions #4 and #5 above.

85. Can you clarify what shore power outlets are bulkhead versus pedestal mount and please provide spec or detail on pedestal as multiple options are available from the manufacturer?

**RESPONSE:** All shore power outlets are bulkhead mounted. See Specification 260000 Part 2. Section 2.2 – A. for wall-mounted power units recommended manufacturer.

86. Can you provide mounting detail for shore power outlets attaching to bulkhead?

**RESPONSE:** Shore power units shall be mounted to the bulkhead per the manufacturer's recommendation.

87. Can you confirm if we are re-feeding (2) existing buildings as noted on drawing E-101 (marked up drawing attached)? If so, can you provide feeder sizes and detail drawings on connections at buildings?

**RESPONSE:** The Contractor shall install 2-3" PVC SCH 40 Elec. Conduit only for future transition to underground secondary service to existing building by others.

Item 5 Furnish & Install Asphalt Pavement is by The SY, the details provided have different depths 4.25" and 4". Could the Item be priced by the TON?

**RESPONSE:** Sheet C-701 revised and detail removed. The full depth pavement section is applicable throughout the entire footprint of paving. The unit price by square yard is applicable.

88. Items 6,8,9,10,11 and 13 obstructions that are 5 Ft or less are incidental to the Item, if the obstruction is more than 5 Ft how will the contractor be paid?

**RESPONSE:** See Section 316216 – Sheet Piles, Part 3 – 3.3 B. for Obstructions in Sheet Pile locations and Section 316216.13 – Steel Pipe Piles, Part 3- 3.7 B. for Obstructions in Pipe Pile Locations. Obstructions beyond the 5' depth from existing mudline will be dealt with on a case by case basis and the contractor will be compensated for additional work outside of the referenced pay items.

89. The contractor Layout and staging yards shown on C-102, can the contractor assume they will be made available on September 3, 2024, the day after Labor Day? This is necessary to meet the schedule and permit constraints.

**RESPONSE:** The contractor laydown area at shown on C-102 can be available to the contractor after September 3, 2024 as requested.

90. Sheet 701, El. Off by 1' for cap.

**RESPONSE:** Sheet S-701was revised accordingly.

91. Some of the layout does not match up, Sheet 502 14-770's show wrong dimension for the LF of wall.

**RESPONSE:** Length of sheet pile bulkhead has been corrected on C-204 and Unit Price Bid schedule. See attached C-204.

92. On Sheet S-701what is the length of the HP10x57 wale as shown on Detail B?

**RESPONSE:** The total length is +/- 129 linear feet. Final length will be determined during shop drawing review process.

### Attachments:

Revised Exhibit A" to Bid – Bid Schedule (3 pages) Plan Holders List Dated 03/22/2024 (2 pages) Revised Drawings – 14 sheets (total)

### \*\*\*END OF ADDENDUM #3\*\*\*

# EXHIBIT "A" TO BID (REVISED)

### **BID SCHEDULE**

ITEM	QUANITY	ITEM WITH UNIT BID PRICE			T BID PRICE UNIT PRICE AMOUNT		JNT
NUMBER		WRITTEN IN WORDS	DOLLARS	CENTS	DOLLARS	CENTS	
1	1	MOBILIZATION/DEMOBILIZATION					
		Dollars ( )					
		per LUMP SUM (LS)					
2	1	SITE PREPARATION					
		Dollars(    ) per LUMP SUM					
3	1	DEMOLITION, REMOVAL AND DISPOSAL					
		Dollars ( )					
		per LUMP SUM (LS)					
4	1	UNDERGROUND TANK REMOVAL &					
		DIGI GOAL					
		per LUMP SUM (LS)					
5	1,625	FURNISH AND INSTALL ASPHALT					
		PAVEMENT					
		Dollars ( ) per SOLIARE VARD (SV)					
6	368	FURNISH AND INSTALL STEEL					
		SHEET PILE REPLACEMENT					
		BULKHEAD					
		Dollars ( ) per LINEAR FOOT (LF)					
7	14	DRILLED GROUND ANCHORS					
		Dollars ( )					
		per EACH (EA)					
8	42	FURNISH AND INSTALL 24" DIAMETER STEEL PIPE PILES					
		per EACH (EA)					

### TOWN OF ORLEANS ROCK HARBOR COMMERCIAL WHARF IMPROVEMENT PROJECT 113 ROCK HARBOR ROAD, ORLEANS MA

ITEM				DICE		INIT
	QUANTIT			CENTS		CENTS
NOWIDER		WRITTEN IN WORDS	DOLLARS	CLINIS	DOLLARS	CENTS
			r			1
9	I	FURNISH AND INSTALL PILE-				
		SUPPORTED CONCRETE				
		COMMERCIAL WHARF WITH				
		PUBLIC VIEWING AREA				
		Dollars ( )				
		per LUMP SUM (LS)				
10	660	FURNISH AND INSTALL TIMBER				
		TOWN PIER				
		Dollars ( )				
		per SQUARE FOOT (SF)				
11	380	FURNISH AND INSTALL TIMBER				
		COMMERCIAL LANDING PIER				
		Dollars ( )				
		per SQUARE FOOT (SF)				
12	2,176	FURNISH AND INSTALL				
		TIMBER FLOATS				
10		per SQUARE FOUT (SF)				
13	65					
		GREENHEART TIMBER BERTHING,				
		FLUAT AND FENDER PILES				
		Dollars ( )				
14	470					
14	470					
		RAILING STSTEW				
		Dollars (				
		per LINEAR FOOT (LE)				
15	1/2					
15	142	GUARD RAIL				
		GOARD RAIL				
		Dollars ( )				
		per LINEAR FOOT (LF)				
16	13	FURNISH AND INSTALL				
10	10	CONCRETE-EILIED STEEL				
		BOLLARDS				
		Dollars ( )				
		per EACH (EA)				

### TOWN OF ORLEANS ROCK HARBOR COMMERCIAL WHARF IMPROVEMENT PROJECT 113 ROCK HARBOR ROAD, ORLEANS MA

	QUANITY			PRICE		
NUIVIDER		WRITTEN IN WORDS	DULLARS	CENTS	DOLLARS	CEN15
17	1	FURNISH AND INSTALL NEW FUEL DISPENSERS, UNDERGROUND LINES AND CONTROL SYSTEMS				
		Dollars ( ) per LUMP SUM (LS)				
18	1	FURNISH AND INSTALL PUMP-OUT SERVICE UPGRADES				
		Dollars ( ) per LUMP SUM (LS)				
19	1	FURNISH AND INSTALL 1-TON JIB CRANE				
		Dollars ( ) per LUMP SUM (LS)				
20	8	FURNISH AND INSTALL EMERGENCY ACCESS LADDERS				
		Dollars ( ) per EACH (EA)				
21	1	FURNISH AND INSTALL DRAINAGE SYSTEMS				
		Dollars ( ) per LUMP SUM (LS)				
22	1	FURNISH AND INSTALL ELECTRICAL SERVICE & LIGHTING				
		Dollars ( ) per LUMP SUM (LS)				
23	1	FURNISH AND INSTALL WATER SYSTEMS				
		Dollars ( ) per LUMP SUM (LS)				
24	1	POLICE DETAIL	\$10,000	00	\$10,000	00
		Ten Thousand Dollars (\$10,000.00) per ALLOWANCE				
	TOTAL BID	AMOUNT (ITEMS 1 -24)				

SEE MEASUREMENT AND PAYMENT SECTION 010250 - FOR DESCRIPTION OF BID ITEMS REFERENCED ABOVE.

#### ROCK HARBOR COMMERCIAL WHARF IMPROVEMENTS **IFB PLAN HOLDERS LIST** MARCH 22, 2024

ID Submission Date Company Name 2221 3/8/2024 8:27 Lawrence-Lynch Corp. 2222 3/8/2024 8:28 Dependable Service Company 2223 3/8/2024 8:45 MAS Building & Bridge, Inc 2224 3/8/2024 9:00 Tighe & Bond 2225 3/8/2024 9:22 Tighe & Bond, Inc. 3/8/2024 9:34 DW White Construction, Inc 2226 3/8/2024 9:52 PWXPress 2227 2228 3/8/2024 9:57 Coastal Marine Construction 2229 3/8/2024 10:08 Cjr Atlantic 2230 3/8/2024 10:45 Cjr Atlantic 2231 3/8/2024 10:50 cjr atlantic 2233 3/8/2024 11:05 Construct Connect 2234 3/8/2024 12:04 Manafort Transit 2235 3/8/2024 12:06 Great Eastern Marine Service In 3/8/2024 12:12 Aldon Electric 2236 2237 3/8/2024 12:32 North East Weathered 2238 3/8/2024 13:07 Robert B. Our Marine Division LLC 2239 3/8/2024 13:11 North-Eastern Tree Service Inc. 3/8/2024 13:21 Envirobidnet an Entram Corp 2240 2241 3/8/2024 14:14 Onvia 2242 3/8/2024 14:16 PWXPress 2243 3/8/2024 14:19 East Marine Services 2244 3/8/2024 14:20 Reagan Marine Construction, LLC 3/8/2024 14:29 AGM Marine Contractors, Inc. 2245 2246 3/8/2024 14:48 John Ricker 2247 3/8/2024 14:48 John Ricker 2248 3/8/2024 17:28 MIG Corporation Inc. 2249 3/8/2024 23:20 PWXPress 2250 3/9/2024 0:25 Projectdog 2251 3/9/2024 4:45 dodge and data 2252 3/9/2024 6:19 Beacon Marine Construction 2253 3/10/2024 7:44 EM Lofgren Corp. 2255 3/11/2024 1:04 visualinfomedia 2256 3/11/2024 8:33 R. Zoppo Corp 2257 3/11/2024 8:53 MIG Corporation, Inc. 2258 3/11/2024 10:11 Ruberti Construction 2259 3/11/2024 10:14 Trades Enterprises 2260 3/11/2024 10:33 Mass Bay Electrical Corp. 2261 3/11/2024 10:37 C White Marine, Inc. 2262 3/11/2024 10:48 AGM Marine Contractors 2263 3/11/2024 13:30 Northern Construction Service, LLC 2264 3/11/2024 17:48 PWXPress 2265 3/12/2024 12:27 Maine Drilling & Blasting 2266 3/12/2024 13:23 Smith Marine, Inc. 2267 3/12/2024 14:25 Jacobs 2268 3/12/2024 15:57 Biszko 2269 3/13/2024 12:28 Marina Technologies Inc 2270 3/13/2024 12:32 Foth Infrastructure & Environment, LLC 2277 3/14/2024 0:54 visualinfomedia 2279 3/14/2024 7:58 EJP 2280 3/14/2024 8:16 KOBO Utility Construction 2281 3/14/2024 11:00 ACK Marine & General Contracting, LLC 2282 3/14/2024 11:11 PWXPress 2284 3/14/2024 11:58 BTT Marine Construction Company, LLC 2286 3/14/2024 19:32 Manafort Transit, LLC 2288 3/15/2024 6:40 BTT Marine 2289 3/15/2024 11:02 Coastal 2290 3/15/2024 12:16 AGM Marine Contractors, Inc. 2292 3/15/2024 15:12 Construct Connect 2298 3/18/2024 9:28 J.F. Brennan Company, Inc. 2299 3/18/2024 9:35 AccuDock 2304 3/18/2024 13:44 BTT Marine Construction 2305 3/18/2024 18:00 AGM Marine Contractors, Inc.

Contact Name Christine Marie Astin Leandra Jennifer Mackey Britt Bursell Emilv White Joel Kosberg Kosberg Mary Miller John McNulty Adrienne Barnard Adrienne Barnard Adrienne Barnard Content Courtney Baro Jonathan Taliadoros Andrew Smith Iohn Kimberly M Boutin Marisa Sepe John Falcone Onvia Marv Miller Alexa Janeczko Ashley Stanley Jonah Mikutowicz John Ricker John Ricker mary mary miller Ali Didion dodge data Jon Hagenstein Taylor Lofgren siyakumar N Stan Carter Stephanie LaRosee James Ruberti John fov Ron Salvucci **Jenelle** Palladino John Mikutowicz Dulce Montana Gio Saravini Peter Marcotte Matt Plauche Ilker Tutuncu Estimating Dept John Wilson Christine Player sivakumar N REID Malisa Fearing Barry Belcastro Marv Miller Scott Haggerty Tom Le Scott Haggerty John McNulty Mark I Timmerman Scott Jonas Jared Blodgett Amy Pasqualone Scott Haggerty Jonah Mikutowicz

Phone Number Email Address 5085481800 castin@lawrencelynch.com 5087269277 Imorales@dependablecompany.com 508-520-2277 jmackey@masbuildingandbridge.com masterusername@tighebond.com 6034338818 ewhite@tighebond.com 5087638868 ikosberg@dwwhite.com 4086768941 bids@pwxpress.com 5086494057 john@coastalmc.net Adrienne@cjratlantic.com 4065317847 Adrienne@cjratlantic.com 4065317847 adrienne@cjratlantic.com 5134585892 content@constructconnect.com 781-328-2366 CBaro@ManafortTransit.com 9782832123 jonathan@greateasternmarine.com 7813370222 a.smith@aldonelectric.com 781-706-2761 info@northeastweathered.com 5084320530 kboutin@robertbour.com 4019417204 marisa@northeasterntree.com 888-888-0900 cavenvirobid@gmail.com 2063739500 deltekplusonvia@gmail.com 408-676-8941 bids@pwxpress.com 2016871246 alexajaneczko@gmail.com 4016027071 astanley@reaganmarine.com 5087769759 jonah.mikutowicz@agmmarine.com 6033808817 Johnricker6805@gmail.com 6033808817 Johnricker6805@gmail.com Donald Corporation Voghel 978-264-4800 dvoghel@migcorporation.com 4086768941 bids@pwxpress.com 9784999014 addenda@projectdog.com 7894621256 dodge.docs@construcion.com 5084777880 ion@beaconmarineco.com 7815341021 emlofgrencorp@outlook.com 3474801475 techzone@visualinfomedia.com 7813189225 scarter@zoppo.com (508) 789-5968 slarosee@migcorporation.com james@ruberticonstruction.com johnfoytrades@yahoo.com 857-256-2046 ron@massbayelectric.com 9787775656 jpalladino@cwhitemarine.com 5084778801 john@agmmarine.com 4132891230 dmontana@northernconstruction.com 408-676-8941 guotes@gtechresearch.com 6036470299 pmarcotte@mdandb.com 7816314800 matt@smithmarineinc.com (646) 908-6550 ilker.tutuncu@iacobs.com 5086790518 estimating@biszkocorp.com 7273082313 john.w@marinatechnologies.com Christine.Player@foth.com 3474801475 techzone@visualinfomedia.com 2074582770 reid.pomerleau@ejprescott.com 5088882255 malisa.fearing@koboutility.com 6174815566 barry@ack-marinecontracting.com 4086768941 bids@pwxpress.com Scotth@reinauer.com 6175926144 Tle@manaforttransit.com 9174168560 scotth@reinauer.com 5086494057 john@coastalmc.net 5086819871 mltimmerman67@yahoo.com 5134585892 scott.jonas@constructconnect.com 308-860-8706 jblodgett@jfbrennan.com 9547857557 amy@accudock.com scotth@reinauer.com

5087769759 jonah.mikutowicz@agmmarine.com

#### ROCK HARBOR COMMERCIAL WHARF IMPROVEMENTS IFB PLAN HOLDERS LIST MARCH 22, 2024

2306 3/19/2024 10:06 Chapman Electric
2307 3/19/2024 11:54 Construct Connect
2309 3/19/2024 15:27 ATLANTIC CONCRETE
2310 3/19/2024 15:29 JW Dubis & Sons, Inc.
2311 3/19/2024 16:45 Dock Hardware Marine Fabrication
2313 3/20/2024 7:51 manafort transit, LLC
2314 3/20/2024 8:26 BTT Marine
2316 3/21/2024 10:33 Town of Bourne
2317 3/22/2024 8:01 BTT Marine
2318 3/22/2024 10:33 cape coastal builders

Steven Beal Scott Jonas JOHN CHUCKRAN JW Dubis & Sons, Inc Matt Stevenson Tom Le Scott Haggerty Asa Mintz scott haggerty peter hopple 7745593902 steven@chapmanelectric.co
5134585892 scott.jonas@constructconnect.com
508-759-7032 atlcncrete@aol.com
5089450283 pam@jwdubis.com
843- 798-3625 dockshardware1@optonline.net
6175926144 tle@manaforttransit.com
9174168560 scotth@reinauer.com
508 400 2365 amintz@townofbourne.com
9174168560 scotth@reinauer.com
5082465432 peterhopple@yahoo.com

ſ	SURVEY NOTES:	
	1. SURVEYOR: M. COUNT, J. HILL & M. COUNT, H. CHOUINARD 2. VESSEL: CLE OLAE	$\frac{1}{24\%} = \frac{24\%}{34\%} \times \frac{1}{3}\% \times \frac{1}{$
	3. TRANS./FATH.: ODOM CVM, 200 KHZ TRANSDUCER, TRIMBLE RTK W/	AZ19-700 SHEET PILES AZ14 770 SHEET PILES AZ14 770 SHEET PILES MIN. TIP EL. = -35.50' MIN. TIP EL. = -28.75'
	4. WEATHER COND: SUNNY, 63 DEGREES, WIND 0-5 KTS & SUNNY, 35	AZ 14-770 SHEET PILES       MIN. TIP EL. = -26.75         12"Ø GREENHEART NORTH FLOAT PILES       MIN. TIP EL. = -27.00'         12"Ø OPEENIUEART DEPTUNO PULES       MIN. TIP EL. = -27.00'
	5. DATA REDUCTION: 1' DATA SORT	12"Ø GREENHEART BERTHING PILESMIN. TIP EL. = -27.00"12"Ø GREENHEART GANTRY PILESMIN. TIP EL. = -27.00"12"Ø GREENHEART GANTRY PILESMIN. TIP EL. = -27.00"
	<ol> <li>RESULTS OF HYDROGRAPHIC &amp; TOPOGRAPHIC SURVEY BY FOTH INFRASTRUCTURE &amp; ENVIRONMENT, LLC. (FOTH) ON 10/24/2019 (HYDRO), 10/25/2019, 4/2/2021, &amp; 5/10/2022 (TOPO).</li> </ol>	12"Ø GREENHEART FENDER PILES (FIXED TO BULKHEAD) MIN. TIP EL. = -23.70'
	<ol> <li>ELEVATIONS AND SOUNDINGS ARE IN FEET AND TENTHS, AND REFER TO THE MLW DATUM.</li> <li>DATUM CONVERSIONS SHOWN WERE CALCULATED USING VDATUM 4.1.2 AT THE PROJECT SITE (LAT:</li> </ol>	AT: 12"Ø CCA PIER PLUMB PILES 11 TON ULTIMATE CAPACITY (EST. LENGTH = 50') 12"Ø CCA PIER BATTERED PILES 6 TON ULTIMATE CAPACITY (EST. LENGTH = 50')
	-70.00566, LONG: 41.80346) 9. COORDINATES ARE BASED ON NAD83 MASSACHUSETTS MAINLAND STATE PLANE GRID SYSTEM.	* CONTRACTOR SHALL CONFIRM REQUIRED PILE LENGTHS
	<ol> <li>PROJECT BENCHMARK IS DISK LOCATED AT ROUTE 6 ROTARY STAMPED "424 G" PUBLISHED EL. +13.23' NAVD88 (+18.94' MLW).</li> </ol>	8. THE STRUCTURES HAVE BEEN DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER CONSTRUCTION IS COMPLETE. THE STABILITY OF THE STRUCTURES PRIOR TO COMPLETION IS
	11. SITE BENCHMARK IS DRILLHOLE IN CONCRETE SIDEWALK EL. +9.81 NAVD88 (+15.52' MLW) (HELD) 12. RTK CORRECTIONS: RTK CORRECTIONS FOR THIS SURVEY PROVIDED BY KEYNET - VRS	SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THIS RESPONSIBILITY EXTENDS TO RELATED
	<ol> <li>BENCHMARK / RTK TIDES: TIDES ARE RECORDED USING RTK TIDES IN HYPACK. ELEVATIONS FROM ELLIPSOID TO ORTHOMETRIC NAVD88 USE GEOID 124</li> </ol>	1 ERECTION SEQUENCE, CONNECTIONS, TEMPORARY BRACING, FORMS, SHORING, USE OF EQUIDMENT, AND SIMILAR CONSTRUCTION PROCEDURES, REVIEW OF CONSTRUCTION BY THE
	14. PROJECT SITE IS IN FEMA ZONE VE 17 AND ZONE AE 14 NAVD88 IN ACCORDANCE TO FEMA FIRM	OWNER AND ENGINEER OF RECORD IS FOR GENERAL CONFORMANCE WITH THE CONTRACT
	15. PROPERTY LINES ARE REPRESENTED BY THE LATEST FROM THE DATABASE INFORMATION BASED	TO CONSTRUCTION PROCEDURES SHALL NOT BE INTERPRETED AS APPROVAL OR ACCEPTANCE OF
	16. THE INFORMATION DEPICTED ON THIS PLAN SET REPRESENTS THE RESULTS OF SURVEYS ON THE	SUCH PROCEDURES.
	DATES SHOWN, AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THAT TIME.INTERPOLATED INFORMATION FROM BETWEEN SOUNDING RUNS IS NOT GUARANTEED.	AI <u>GENERAL CONDITIONS:</u>
	SHOALS, OBSTRUCTIONS OR OTHER DIFFERING CONDITIONS MAY EXIST BETWEEN THESE RUNS. CONSULT WITH FOTH ENGINEERING FOR MORE DETAILED INFORMATION.	<ol> <li>NO GUARANTEE TO THE ACCURACY OF THE REFERENCE DOCUMENTS IS PROVIDED HEREIN AND THE CONTRACTOR SHALL RELY ON HIS OWN FIELD VERIFICATION FOR ITEMS SO REQUIRED.</li> </ol>
	<ol> <li>POSSESSION AND USE OF THE MATERIAL CONTAINED ON THESE DRAWINGS IS GRANTED ONLY IN CONNECTION WITH ITS USE AS IT RELATES TO THE TITLED PROJECT, ANY OTHER USE,</li> </ol>	<ol> <li>NOTES HEREIN ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS AND ADDITIONAL INFORMATION.</li> </ol>
	REPRODUCTION OR DISCLOSURE OF THE INFORMATION CONTAINED HEREON IS EXPRESSLY PROHIBITED WITHOUT THE WRITTEN CONSENT OF FOTH.	<ol> <li>DATA COLLECTED ASSOCIATED WITH THIS PROJECT IS CONTAINED WITH THE DOCUMENT ENTITLED "ROCK HARBOR COMMERCIAL WHARF IMPROVEMENTS" PROVIDED AS AN ATTACHMENT TO THE BID</li> </ol>
	18. DIMENSIONS ARE IN FEET AND INCHES OR TENTHS OF A FOOT UNLESS OTHERWISE NOTED.	DOCUMENTS. 4. SEE ATTACHMENT "A" IN THE CONTRACT DOCUMENTS FOR GEOTECHNICAL BORING LOG
	DESIGN CRITERIA:	INFORMATION PERFORMED BY FOTH ON DECEMBER 19-23, 2019, RH-2023-B1 TAKEN MARCH 16, 2023, AND RH-2023-B2 TAKEN AUGUST 22, 2023.
	1. STRUCTURAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MASSACHUSETTS BUILDING CODE, NINTH EDITION. WORK SHALL COMPLY WITH FEDERAL. STATE, AND LOCAL PERMITS ISSUED	G 5. THE CONTRACTOR IS ADVISED THAT THE DRAWINGS AND SPECIFICATIONS FORM A PART OF THE CONTRACT DOCUMENTS. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT
	FOR THE PROJECT. 2. THE COMPLETED STRUCTURE HAS BEEN DESIGNED TO WITHSTAND THE FOLLOWING DESIGN LOADS	DOCUMENTS. THE CONTRACTOR SHALL KEEP A COPY OF THE DRAWINGS, SPECIFICATIONS, AND DS PERMITS ONSITE AT ALL TIMES DURING THE PROJECT
	APPLIED IN CONJUNCTION WITH DESIGN DREDGE/MUDLINE ELEVATIONS INDICATED ON THE CONTRACT DRAWINGS	<ul> <li>6. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES AND SUBMERGED</li> <li>1. THE LIMITS OF THE WORK PRIOR TO COMMENCING ANY EXCAVATION OF CROUND</li> </ul>
	2.1. GENERAL BUILDING RISK CATEGORY	PENETRATING WORK. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" (1-888-344-7223) AT LEAST 3
	CONCENTRATED LIVE LOAD: 32,000 LBS	7. THIS THE CONTRACTORS RESPONSIBILITY TO PROVIDE AND MAINTAIN ENVIRONMENTAL CONTROLS AS REQUIRED BY STATE, LOCAL, AND FEDERAL REGULATION AND LAW, AS WELL AS REQUIRED
	CONCENTRATED LIVE LOAD: 8,000 LBS	<ul> <li>WITHIN EXISTING PERMITS AND APPROVALS.</li> <li>8. BASE PLAN COMPILED BY FOTH USING AVAILABLE MAGIS DATA.</li> </ul>
	BULKHEAD: 250 PSF UNIFORM LOAD CONCENTRATED LIVE LOAD: 32,000 LBS	<ol> <li>SECTIONS, DETAILS, NOTES, DIMENSIONS AND CONDITIONS ARE APPLICABLE AT ANY OTHER LOCATION WHERE CONDITIONS AND DETAIL ARE SIMILAR BUT ARE NOT SPECIFICALLY NOTED AS</li> </ol>
	TIMBER PIER: 100 PSF UNIFORM LOAD ACCESS GANGWAYS: 50 PSF FOR 4 FT WIDE	SUCH OR ARE NOT SHOWN. 10. THE CONTRACTOR SHALL PERFORM THE WORK IN A MANNER THAT DOES NOT IMPEDE THE OWNER'S
	100 PSF FOR WIDER THAN 4 FT 2.3. WIND LOAD	OPERATIONS ON SITE OR THE OWNER'S ON-SITE OPERATING EQUIPMENT. 11. THE CONTRACTOR PRIOR TO CONSTRUCTION AND FABRICATION OF CONSTRUCTION MATERIALS
	BASIC WIND SPEED 140 MPH WIND EXPOSURE CATEGORY: D	SHALL VERIFY EXISTING CONDITIONS AND DIMENSIONS. LENGTHS SHOWN ON THE DRAWINGS ARE CONSIDERED APPROXIMATE, AND THE ACTUAL LENGTHS MAY VARY WHEN SO ACCEPTED BY THE
	2.4. SNOW LOAD GROUND SNOW LOAD 50 PSF	ENGINEER. 12. IF, DURING THE PERFORMANCE OF THE WORK, THE CONTRACTOR FINDS A CONFLICT, ERROR, OR
	2.5. EARTHQUAKE LOAD SEISMIC IMPORTANCE FACTOR le=1.0	DISCREPANCY IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SO REPORT TO THE ENGINEER OF RECORD IN WRITING AT ONCE. BEFORE PROCEEDING WITH THE WORK AFFECTED
	MCE <sub>R</sub> GROUND MOTION (PERIOD=0.2s) $S_S=0.15$ MCE <sub>D</sub> GROUND MOTION (PERIOD=1.0s) $S_A=0.048$	THEREBY, THE CONTRACTOR SHALL OBTAIN A WRITTEN INTERPRETATION OR CLARIFICATION FROM THE ENGINEER OF RECORD. WORK DONE BEFORE THE ENGINEER OF RECORD RENDERS HIS
	SITE-MODIFIED SPECTRAL ACCELERATION S <sub>MS</sub> =0.239 SITE-MODIFIED SPECTRAL ACCELERATION SM =0.115	DECISION IS AT THE CONTRACTOR'S SOLE RISK. 13 THE WORK SHALL BE PERFORMED IN A GENERAL SEQUENCE DEVELOPED BY THE CONTRACTOR AND
	NUMERIC SEISMIC DESIGN VALUE AT 0.2S SA SDS=0.16	SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW, IN ACCORDANCE WITH THE REQUIREMENTS
	SITE CLASS D SEIMIC DESIGN CATEGORY B	CONSTRUCTION AND FOR THE SEQUENCES AND PROCEDURES TO BE USED.
	DESIGN PROCEDURE: EQUIVALENT LATERAL FORCE RESPONSE MODIFICATION FACTOR R=2	EQUIPMENT AND APPLIANCES FOR DEMOLITION AND/OR CONSTRUCTION WORK IN CONNECTION
	2.6. VESSEL LOADS	15. THE OWNER HAS SECURED CERTAIN PERMITS REQUIRED BY FEDERAL, AND STATE AUTHORITIES
	2.7. ICE LOADS	WORK IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMITS. THIS INCLUDES BUT
	PILE PULLOUT LOAD. 6 KIP	SAFETY, HEALTH ACT, 401 WATER QUALITY CERTIFICATION, CHAPTER 91 LICENSE, STATE & LOCAL
	3. FOUNDATION REQUIRED SOIL BEARING CAPACITY 1500 PSF	WEILAND REGULATIONS, AND U.S. ARMY CORP OF ENGINEERS PERMIT. THE CONTRACTOR SHALL POST COPIES OF THE PERMITS AT THE SITE THROUGHOUT THE COURSE OF THE WORK. THE
	ON THE FOUNDATION PLAN. A GEOTECHNICAL ENGINEER SHALL REVIEW ALL BEARING	CONTRACTOR IS RESPONSIBLE TO OBTAIN PERMITS ASSOCIATED WITH THE LEGAL DISPOSAL OF CONSTRUCTION DEBRIS. THE CONTRACTOR SHALL SECURE REQUIRED LOCAL AUTHORIZATIONS
	VALUE.	AND PERMITS. 16. SPECIAL INSPECTION REQUIREMENTS PER LOCAL AND/OR STATE BUILDING CODES SHALL BE
	4. CONCRETE CAST-IN-PLACE CONCRETE f'c=5,000 PSI (UNLESS OTHERWISE NOTED)	FULFILLED AND SHALL BE COORDINATED BY THE OWNER. THE CONTRACTOR SHALL INFORM THE OWNER OF THE PROGRESS OF WORK AND PROVIDE ADEQUATE NOTICE AS TO WHEN SPECIAL
	CONCRETE EXPOSURECLASSES F3, S1, W2, C2W/CM RATIO0.40	INSPECTIONS ARE TO OCCUR SUCH AS TO NOT DELAY THE SCHEDULE. 17. THE CONTRACTOR SHALL FURNISH MATERIALS FOR INSTALLATION IN THE COMPLETED WORK AS
	REINFORCING BARS ASTM A615 GR. 60 EPOXY COATING ASTM A775	SPECIFIED HEREINAFTER. THE CONTRACTOR SHALL HANDLE THESE MATERIALS AS THEY ARE DELIVERED TO THE SITE OR OFF-SITE WORK AREAS AND SHALL STORE THEM IN A DESIGNATED
	WELDED WIRE REINFORCEMENT ASTM A1064 PROVIDE THE FOLLOWING COVER FOR REINFORCEMENT:	STORAGE AREA. 18. THE CONTRACTOR WILL INDEMNIFY AND SAVE HARMLESS THE OWNER AND ENGINEER OF RECORD
	ALL STEEL REINFORCEMENT MUST HAVE A CLEAR COVER OF 3 INCHES. 5. STEEL	FROM AND AGAINST ALL LOSSES AND ALL CLAIMS, DEMANDS, PAYMENTS, SUITS, ACTIONS, RECOVERIES, AND JUDGMENTS OF EVERY NATURE AND DESCRIPTION BROUGHT OR RECOVERED
	STEEL W AND WT SHAPESASTM A992OTHER STEEL SHAPESASTM A572 GR 50	AGAINST THE OWNER AND ENGINEER OF RECORD BY REASON OF ANY ACT OR OMISSION OF THE CONTRACTOR, OR OF ANY SUBCONTRACTOR TO THE CONTRACTOR, OR OF ANY PERSON DIRECTLY
	STEEL PLATESASTM A572 GR 50STEEL HSSASTM A500 GR C	OR INDIRECTLY EMPLOYED BY THE CONTRACTOR OR ANY SUCH SUBCONTRACTOR, IN THE PERFORMANCE OF ANY WORK FOR, OR THE RENDERING OF ANY SERVICES TO, THE OWNER.
	STEEL PIPEASTM A252, fy=50KSI OR API 5LX52STEEL SHEET PILEASTM A572 GR 60, fy=60KSI	19. THE CONTRACTOR AGREES THAT, AT ITS OWN COST AND EXPENSE, IT SHALL PROCURE AND CONTINUE IN FORCE: INSURANCE COVERAGE AS REQUIRED BY THE OWNER. SUCH INSURANCE
	BOLTED CONNECTIONS ASTM F3125 GR A325 TYPE 1 SNUG TIGHT U.N.O.	SHALL BE WRITTEN BY A COMPANY OR COMPANIES AUTHORIZED TO ENGAGE IN THE BUSINESS OF GENERAL LIABILITY INSURANCE IN THE STATE IN WHICH THE DEMISED PREMISES ARE LOCATED, AND
	ANCHOR BOLTS ASTM F1554 GR 36 HDG OR HILTI KWIK BOLT #3 NUTS ASTM A563	THERE SHALL BE DELIVERED TO THE OWNER WITH THE BID CUSTOMARY CERTIFICATES EVIDENCING
	WASHERS (EXCEPT AGAINST TIMBER) ASTM F436, WASHERS AGAINST TIMBER COMMON DOCK WASHERS	COMPANIES. GOOD AND RESPONSIBLE COMPANIES, REASONABLY ACCEPTABLE TO THE OWNER, SHALL WRITE SUCH INSURANCE
	THREADBAR ASTM A615 GR. 100 WELDING ELECTRODES E70XX	20. THE ENGINEER AND ITS SUB CONSULTANTS SHALL BE ADDED TO THE CONTRACTOR'S GENERAL
	AWS D1.1, AWS A5.1 AND AWS A5.5	BASIS. SUBMIT CERTIFICATES OF INSURANCE TO THE ENGINEER AS EVIDENCE OF THIS COVERAGE.
	TIMBER PILES - FENDER12" Ø GREENHEARTTIMBER PILES - PIER12" Ø SOUTHERN YELLOW PINE	DIMENSIONS, AND LEVELS AND NO PLEA AS TO INSTRUCTIONS OR ORDER RECEIVED FROM OTHER SOURCES OTHER THAN INFORMATION CONTAINED ON CONTRACT DRAMINGS, SPECIFICATIONS OR IN
	TIBER BRACES SYP NO. 2 OR BETTER	WRITTEN ORDERS OF THE OWNER OR ENGINEER OF RECORD SHALL JUSTIFY DEPARTURE FROM THE DIMENSIONS AND ELEVATIONS REQUIRED BY THE CONTRACT DRAMINGS, THE CONTRACTOR SHALL
	TIMBER STRINGERS SYP NO. 2 OR BETTER TIMBER DECKING SYP NO. 2	MAINTAIN ADEQUATE SURVEY CONTROL AT ALL TIMES TO ESTABLISH AND MAINTAIN ALL LINES AND ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS
	PRESERVATIVES PILES - PIER 25 PCE CCA	<ul> <li>22. THE CONTRACTOR SHALL TAKE HIS OWN MEASUREMENTS AT THE SITE, VERIFYING THE SAME WITH</li> <li>A THE CONTRACT DRAWINGS AND EXISTING FACILITIES, AND WILL BE HELD DECODONOIDLE FOR THE</li> </ul>
	BRACES 2.5 PCF CCA PILE CAPS AND STRINGERS 2.5 PCF CCA	PROPER FIT AND ALIGNMENT OF COMPLETED WORK W POSITION.
	TIMBER RAILING 0.23 PCF MCA	ORIGINAL DEFECTS, OR AGAINST INJURY FROM PROPER AND USUAL WEAR WHEN USED FOR THE
		DEFECTS APPEARING DURING THE PERIOD OF GUARANTEE SHALL BE MADE GOOD BY THE CONTRACTOR AT HIS EXPENSE HEAD DEMAND OF THE OWNER. IT DEVIDED THE
	STAINLESS STEEL IN COMPLIANCE WITH AISI 316, U.N.O. SEE TIMBER CONSTRUCTION	SHALL BE IN PERFECT CONDITION WHEN THE PERIOD OF GUARANTEE SHALL HAVE ELAPSED. IN THE
	3ECTION 001333.	EVENT OF DEFAULT BY THE CONTRACTOR, THE COMPANY SHALL HAVE THE RIGHT TO MAKE GOOD DEFECTS AND BILL THE CONTRACTOR COST PLUS 15% FOR ADMINISTRATION FEES.
Calle		24_AINTECOUNTRACTOR'S AXPENSE, LHE CONTRACTOR'S WORKING AREAS SHALL BE OLEAMED ON A DAY-TO-DAY BASIS, WITH RUBBISH REMOVED FROM THE SITE AND WORK AREAS CLEANED AT THE
		END OF EACH DAY. AT FINAL COMPLETION OF WORK THE CONTRACTOR SHALL LEAVE THE ENTIRE PREMISES, WITHIN THE SITE OF HIS OPERATIONS, CLEAN AND FREE FROM THE RUBBISH RESULTING
		FROM HIS CONSTRUCTION OPERATIONS. 25. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND MAINTAIN UTILITIES AS DEEMED NECESSARY
_ 1		

26. THE CONTRACTOR SHALL PROVIDE FIELD ENGINEERING SERVICES REQUIRED FOR PROPER COMPLETION OF THE WORK INCLUDING, BUT NOT NECESSARILY LIMITED TO: ESTABLISHING AND MAINTAINING LINES AND LEVELS; STRUCTURAL DESIGN OF SHORES, FORMS, AND SIMILAR ITEMS PROVIDED BY THE CONTRACTOR AS PART OF HIS MEANS AND METHODS OF CONSTRUCTION.

- 27. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AT HIS EXPENSE REQUIRED FIRE PROTECTION SYSTEMS AND DEVICES AS NECESSARY TO SAFELY PERFORM THE WORK IN ACCORDANCE WITH THE APPLICABLE REGULATIONS. IT SHALL BE OPERATIONAL THROUGHOUT THE PERIOD OF CONSTRUCTION.
- 28. THE OWNER SHALL HAVE THE RIGHT TO WITHHOLD WITHOUT PENALTY PAYMENT DESCRIBED ABOVE, OR SECTIONS REFERENCED HEREIN, FOR COMPLETED WORK SHOULD THE CONTRACTOR FAIL TO MEET OBLIGATIONS OR REQUIREMENTS OF THE CONTRACT. WITHHELD PAYMENT SHALL BE PROMPTLY MADE UPON THE CONTRACTOR'S FULL COMPLIANCE WITH THE CONTRACT.
- 29. COMPLY WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR PROTECTION OF THE ENVIRONMENT DURING THE WORK. ENSURE THAT PERSONNEL ARE PROPERLY TRAINED AND THAT SUFFICIENT EQUIPMENT AND MATERIALS ARE READILY AVAILABLE FOR USE IF REQUIRED. ABIDE BY STATE AND FEDERAL SPILL REPORTING REQUIREMENTS. NO LATER THAN 21 DAYS FOLLOWING AWARD OF CONTRACT. SUBMIT A COMPREHENSIVE PLAN DESCRIBING THE MEANS AND METHODS TO BE EMPLOYED FOR PROTECTION, CONTAINMENT, AND CLEAN UP.
- 30. THE OWNER RESERVES THE RIGHT TO CHARGE THE CONTRACTOR FOR ADDITIONAL ENGINEERING SERVICES IF REQUIRED DUE TO THE CONTRACTOR'S ACTIONS OR INACTIONS.
- 31. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF HIS OPERATIONS. THE CONTRACTOR SHALL TAKE REASONABLE PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE REASONABLE PROTECTION TO PREVENT DAMAGE, INJURY, OR LOSS TO PERSONS EMPLOYED BY THE CONTRACTOR IN PERFORMANCE OF THE WORK, AND PERSONS NEARBY THAT MAY BE AFFECTED BY THE CONTRACTOR'S OPERATIONS OR THE WORK, INCLUDING EQUIPMENT AND MATERIALS WHICH WILL BE INCORPORATED IN THE WORK, AND OTHER PROPERTIES AND
- STRUCTURES AT THE SITE, OR ON ADJACENT PROPERTIES. 32. OBSTRUCTIONS ARE DEFINED AS UNFORESEEN OBJECTS, WHICH IMPEDE PROGRESS. OBJECTS, WHICH ARE MADE KNOWN TO THE CONTRACTOR, WILL NOT BE CONSIDERED TO BE OBSTRUCTIONS. NOTIFY THE ENGINEER OF RECORD IMMEDIATELY UPON ENCOUNTERING OBSTRUCTIONS. NO CONSIDERATION WILL BE GIVEN FOR ADDITIONAL COMPENSATION ON THIS ACCOUNT WITHOUT THIS TIMELY NOTIFICATION.
- 33. SUBSTITUTIONS MAY BE FURNISHED FOR MATERIALS SPECIFIED HEREIN PROVIDED THE CONTRACTOR SECURES ACCEPTANCE FROM THE ENGINEER OF RECORD.

# ALUMINUM GANGWAY:

- 1. ALUMINUM RAMP AND ALL INCIDENTAL PARTS INCLUDING FASTENERS AND CONNECTORS SHALL BE MANUFACTURED BY ALUMINDOCK, RANDOLF, NY, OR AN EQUIVALENT ACCEPTED BY THE ENGINEER OF RECORD. THE RAMP SHALL HAVE A MINIMUM CLEAR WALKWAY OF 48 INCHES AND BY 40 FEET IN TOTAL WALKWAY LENGTH.
- ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ALLOY 6061-T6 EXTRUDED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF FEDERAL SPECIFICATION QQ-A-200. BOLTS, RODS, NUTS, WASHERS, SCREWS, AND OTHER FASTENERS SHALL BE TYPE 304 STAINLESS
- STEEL 4. ROLLERS FOR RAMP SHALL BE UHMW POLYURETHANE WITH BLACK ULTRAVIOLET LIGHT INHIBITOR
- ADDED, OR AN EQUIVALENT ACCEPTED BY THE ENGINEER OF RECORD. METAL FOR DECKING AND HANDRAILS SHALL BE 6063-T6 ALUMINUM ALLOY. EXTRUDED PIPE FOR
- HANDRAILS AND STRUCTURES SHALL BE 1-1/2" DIAMETER MINIMUM PIPE. 6. DECKING SHALL BE EXTRUDED ALUMINUM SLATS, EMBOSSED TO PROVIDE A NON-SLIP SURFACE, AND SHALL NOT EXCEED NINE (9) INCHES IN WIDTH WITH NOT MORE THAN 3/8-INCH AIR SPACE
- BETWEEN ADJACENT SLATS. THE LEGS OF EACH DECKING SLAT SHALL BE WELDED TO THE SIDE MEMBERS AND TO ANY LONGITUDINAL MEMBERS WITH A MINIMUM OF 1-1/4 INCHES OF WELD PER LEG. THE DECKING SLATS SHALL BE PLACED TRANSVERSELY ON THE GANGWAY OR DOCK.
- HANDRAILS ARE REQUIRED ALONG EACH SIDE OF EACH GANGWAY. REMOVABLE HANDRAILS SHALL BE MOUNTED WITHIN SLEEVES FASTENED TO THE GANGWAY, SECURED WITH STAINLESS STEEL BOLTS.
- 8. GANGWAYS SHALL HAVE A DETACHABLE HINGE MOUNT FOR SECURING THE GANGWAY TO A WALL OR FIXED STRUCTURE. HINGE MOUNT EXTRUSIONS SHALL BE WELDED TO THE FRAME OF THE GANGWAY WITH A CONTINUOUS FILLET WELD UNLESS OTHERWISE SHOWN ON THE DRAWINGS. NON-HINGED DECK MODULE CONNECTORS SHALL BE SHOWN ON THE DRAWINGS.
- 9. ANY INSTALLATION OF DISSIMILAR MATERIALS SHALL BE PROPERLY INSULATED TO AVOID CONTACT OF DISSIMILAR METALS AND TO MINIMIZE OR ELIMINATE CORROSION IN A MARINE ENVIRONMENT.
- 10. GANGWAYS SHALL BE SECURELY FASTENED TO CERTAIN FIXED STRUCTURES. DETAIL SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MASSACHUSETTS AND BE PROVIDED TO THE OWNERS REPRESENTATIVE FOR APPROVAL. UTILITIES RUNNING ON THE GANGWAY SHALL BE INSTALLED SO AS NOT TO INTERFERE WITH THE ACCESS AREA OF THE GANGWAY OR TO BE DAMAGED DURING NORMAL OPERATION.

## BITUMINOUS CONCRETE PAVING:

- 1. BITUMINOUS CONCRETE PAVING SHALL CONFORM TO THE REQUIREMENTS OF THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR HIGHWAYS AND BRIDGES.
- 2. ASPHALT MIXTURE SHALL MATCH EXISTING.

## CATHODIC PROTECTION:

- 1. ALUMINUM ANODES FOR PASSIVE CATHODIC PROTECTION OF STEEL STRUCTURES IN MARINE ENVIRONMENTS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM B418.
- 2. ANODES SHALL BE INSTALLED BY AN EXPERIENCED CONTRACTOR, MINIMUM 5 YEARS OF
- EXPERIENCE, UNDER THE SUPERVISION OF A CORROSION SPECIALIST CERTIFIED BY NACE. CATHODIC PROTECTION SYSTEM SHALL BE TESTED AFTER INSTALLATION. SUBMIT TEST RESULTS IN 3 A REPORT TO THE ENGINEER FOR REVIEW AND ACCEPTANCE.
- CONTRACTOR SHALL SUBMIT, FOR THE REVIEW OF THE ENGINEER, INSTALLER AND TESTER QUALIFICATIONS, NACE INTERNATIONAL CORROSION CERTIFICATIONS, METHODS, AND PROCEDURES FOR TESTING CORROSION CONTROL SYSTEM, INCLUDING DESCRIPTION OF INSTRUMENTS AND EQUIPMENT TO BE USED.
- ANODES SHALL BE ROTOMETALS ALUMANODE AHC20 (2" X 4" X 24") OR EQUIVALENT ACCEPTED BY THE ENGINEER.
- VANODES SHALL BE INSTALLED AS SHOWN ON SHEET S-703.

# CONCRETE:

- CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI-318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", & SECTION 13 OF ACI-320 FOR PRECAST CONCRETE AS ADOPTED BY THE AMERICAN CONCRETE INSTITUTE.
- NO WATER SHALL BE ADDED TO THE MIX AT THE JOB SITE.
- STRUCTURAL JOINTS SHOWN ON THE DRAWINGS ARE MANDATORY. ADDITIONAL STRUCTURAL JOINTS AND MODIFICATIONS AS REQUIRED TO EXECUTE THE CONSTRUCTION SHALL BE SUBMITTED
- TO THE ENGINEER FOR APPROVAL. DO NOT PLACE CONCRETE UNTIL REINFORCEMENT AND EMBEDDED ITEMS HAVE BEEN APPROVED BY THE ENGINEER AND/OR THE APPROVED TESTING AGENCY (IF/WHEN DIRECTED). PROVIDE A
- MINIMUM OF 24 HOURS NOTIFICATION TO THE ENGINEER. 5. THE SLABS FOR THE SIDEWALK SHALL BE SEPARATED BY TRANSVERSE PREFORMED EXPANSION JOINT FILLERS 1/2 INCH IN THICKNESS. THE SURFACE OF THE SIDEWALK SHALL BE UNIFORMLY

SCORED 4-FOOT SPACING LONGITUDINALLY & MAXIMUM 5-FOOT SPACING TRANSVERSE.

# DEMOLITION NOTES:

- 1. NOTIFY OWNER/OWNER'S PROJECT ENGINEER OF DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DRAWINGS BEFORE PROCEEDING WITH DEMOLITION.
- 2. LIMITS DEPICTED ON THE CONTRACT PLANS CAN ONLY BE CONSIDERED AS APPROXIMATE FIELD CONDITIONS. IT IS NOT THE INTENT OF THE PLANS TO SHOW THE EXACT LOCATION OR EXTENT OF EXISTING DETERIORATION ON STRUCTURES. THE CONTRACTOR IS TO FULLY APPRISE HIMSELF OR HERSELF OF THE SITE CONDITIONS PRIOR TO START OF WORK.
- DO NOT BEGIN DEMOLITION UNTIL NOTIFIED TO PROCEED BY THE OWNER OR PROJECT ENGINEER AND ALL REQUIRED PERMITS & PERMISSIONS FROM THE TOWN OF ORLEANS ARE OBTAINS.
- SELECTIVE DEMOLITION AND DISPOSAL SHALL BE PERFORMED IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL PERMIT AND BUILDING CODE REQUIREMENTS.
- 5. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THOSE STRUCTURES AND DERELICT COMPONENTS AS REQUIRED TO PERFORM THE WORK. THIS WORK INCLUDES BUT IS NOT LIMITED TO TIMBER OR STEEL BULKHEAD, CONCRETE PLATFORMS, TIMBER PILES, CONCRETE AND TIMBER
- DEBRIS, STEEL DEBRIS, UTILITIES, AND OTHER ITEMS AS INDICATED ON THE DRAWINGS. SELECTIVE DEMOLITION INCLUDES BUT IS NOT LIMITED TO REMOVAL AND REUSE (WHERE POSSIBLE) OF EXISTING MATERIALS, UTILITIES, AND OTHER COMPONENTS ESSENTIAL FOR A COMPLETE
- PROJECT. ITEMS TO BE REMOVED AND REUSED SHALL BE PLACED IN A STAGING AREA ACCESSIBLE FOR INSPECTION BY THE OWNER.
- PRIOR TO COMMENCEMENT OF SELECTIVE DEMOLITION, THE CONTRACTOR SHALL SUBMIT A DISPOSAL PLAN FOR ITEMS TO BE DEMOLISHED. DEMOLITION MATERIAL DESIGNATED BY THE OWNER TO BE REMOVED FROM THE SITE SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE DEBRIS DISPOSAL PLAN SHALL ACKNOWLEDGE THIS OWNERSHIP AND SHALL IDENTIFY THE MEANS AND METHODS AND FINAL DISPOSITION FOR DISPOSAL MATERIALS.

- 9. PRIOR TO COMMENCEMENT OF DEMOLITION, THE CONTRACTOR SHALL CLEARLY MARK THE LIMITS OF THE DEMOLITION FOR REVIEW AND APPROVAL BY THE OWNER.
- 10. COMPLETELY REMOVE ITEMS DESIGNATED LEAVING SURFACES CLEAN, SOUND, AND READY TO RECEIVE NEW MATERIALS AS SPECIFIED IN THE CONTRACT DOCUMENTS.
- 11. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DUF THE COURSE OF DEMOLITION. 12. THE CONTRACTOR SHALL SUBMIT A DISPOSAL CERTIFICATE TO THE OWNER'S REPRESENTATIVE
- CERTIFYING LEGAL AND PROPER DISPOSAL 13. THE CONTRACTOR SHALL TAKE REASONABLE CARE IN REMOVING ELEMENTS SELECTED TO BE
- DEMOLISHED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. IF THE CONTRACTOR'S EQUIPMENT OR METHODS RESULT IN DAMAGE TO ADJACENT STRUCTURES OR ELEMENTS TO REMAIN OR CAUSE DEMOLITION BEYOND INDICATED LIMITS OR ACCEPTABLE LIMITS NECESSARY COMPLETE SUCCESSFUL REPAIRS, OR RESULTS IN DAMAGE TO OTHER PROPERTY OF THE OWNER THEN THE PROJECT ENGINEER WILL DIRECT THE CONTRACTOR TO MODIFY DEMOLITION OPERATIONS. SUCH MODIFICATION SHALL BE PERFORMED AT NO ADDITIONAL EXPENSE TO THE OWNER AND/OR FOTH. DEMOLITION BEYOND ACCEPTED LIMITS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. DAMAGE OR DESTRUCTION BY THE CONTRACTOR TO EXISTING ELEMENTS DESIGNATED TO REMAIN SHALL BE REPAIRED OR REPLACE IN-KIND AT THE DISCRETION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER AND/OR FC
- 14. APPLICABLE FOR AREAS WHERE NEW CONCRETE ABUTS EXISTING CONCRETE SURFACES, CONTRACTOR SHALL COMPLETELY REMOVE ALL LOOSE, DELAMINATED AND WEAK CONCRETE, C GREASE, LAITANCE, MARINE GROWTH AND OTHER CONTAMINANTS FROM THE SURFACE IN PREPARATION FOR NEW CONCRETE. PREPARE CONCRETE SURFACE USING ACCEPTABLE MECHANICAL MEANS AND CONCRETE CLEANERS AND DEGREASERS AS NECESSARY TO OBTAIN CLEAN, SOUND AND ROUGH SURFACES. COARSE AGGREGATE SHALL BE EXPOSED AND ALL MAR GROWTH REMOVED.

# EARTHWORK NOTES:

- 1. DO NOT BEGIN BACKFILLING UNTIL CONSTRUCTION BELOW FINISH GRADE HAS BEEN APPROVED THE EXCAVATION IS CLEAN OF TRASH AND DEBRIS.
- 2. HEAVILY SURFACE COMPACT SUBGRADE IN UPLAND AREA WITH A MINIMUM OF 6 PASSES OF A VIBRATORY ROLLER HAVING A DRUM WEIGHT OF AT LEAST 10,000 POUNDS AND A DYNAMIC FORCE OF AT LEAST 20,000 POUNDS PRIOR TO PLACING FILL.
- 3. PLACE AND COMPACT FILL AND BACKFILL TO INDICATED FINISH GRADE WITHIN A TOLERANCE OF ONE FOOT HORIZONTALLY AND 1 INCH VERTICALLY.
- STRUCTURAL FILL SHALL CONSIST OF BROKEN OR CRUSHED STONE, BANK OR CRUSHED GRAVE OR MIXTURES THEREOF. BROKEN OR CRUSHED STONE SHALL CONSIST OF WELL-GRADED, SOUI TOUGH, DURABLE STONE. BANK OR CRUSHED GRAVEL SHALL CONSIST OF WELL-GRADED, SOUN TOUGH, DURABLE PARTICLES OF CRUSHED OR UNCRUSHED GRAVEL FREE FROM SOFT, THIN, ELONGATED OR LAMINATED PIECES AND ORGANIC OR OTHER DELETERIOUS SUBSTANCES. STRUCTURAL FILL SHALL WELL GRADED WITH 100% MASS PASSING THE 90 mm (3.5") SQUARE ME SIEVE. SUBMIT AN INDEPENDENT GRADATION ANALYSIS AND MODIFIED PROCTOR TEST FOR ENGINEER OF RECORD'S REVIEW. INCLUDE A REPRESENTATIVE SAMPLE OF THE FILL MATERIAL
- WITH THE SUBMITTAL. 5. THE CONTRACTOR SHALL EXCAVATE UNSUITABLE MATERIALS, BACKFILL, COMPACT AND GRADE SITE TO THE ELEVATIONS AND LIMITS SHOWN AND AS NEEDED TO MEET THE REQUIREMENTS OF CONSTRUCTION.
- 6. STRUCTURAL FILL SHALL BE PLACED IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH. DO NOT PLACE FILL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN OR CONTAINING FROST AND/OR PLACE FILL MATERIALS EVENLY ADJACENT TO STRUCTURES, TO REQUIRED ELEVATIONS. TAKE CARE TO PREVENT WEDGING ACTION OF BACKFILL AGAINST STRUCTURES BY CARRYING THE MATERIAL UNIFORMLY AROUND THE STRUCTURE TO APPROXIMATELY THE SAME ELEVATION IN E I IFT
- 7. CONTROL STRUCTURAL FILL COMPACTION DURING CONSTRUCTION TO PROVIDE THE MINIMUM PERCENTAGE OF DENSITY SPECIFIED FOR EACH AREA AS DETERMINED ACCORDING TO ASTM D STRUCTURAL FILL AREAS SHALL NOT FALL BELOW 95% OF ITS DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE ABOVE TEST.
- 8. GRADE THE AREAS ADJACENT TO BUILDINGS TO ACHIEVE DRAINAGE AWAY FROM THE STRUCTU AND TO PREVENT PONDING.

## EROSION AND SEDIMENTATION CONTROL:

- 1. SITE WORK SHALL NOT BE PERFORMED UNTIL SEDIMENT AND EROSION CONTROL DEVICES ARE INSTALLED AND WRITTEN APPROVAL IS SECURED FROM THE TOWN OF ORLEANS AND/OR OWNER REPRESENTATIVE.
- 2. EROSION AND SEDIMENTATION CONTROL DEVICES AND PROVISIONS SHALL BE MAINTAINED IN OPERATIONAL CONDITION BY THE CONTRACTOR AND SHALL BE REMOVED AND LEGALLY DISPOS AT THE COMPLETION OF THE PROJECT.
- 3. STRAW WATTLES SHALL CONSIST OF BIOROLL FILLED WITH GRAIN STRAW FREE FROM SEED BEARING STALKS AND NOXIOUS GRASSES AND PLANTS.
- 4. HAY BALES SHALL CONSIST OF FIRM, NEW BALES OF SALT HAY OR SMALL GRAIN STRAW, JUTE T WITH AN AVERAGE DRY WEIGHT OF 10 TO 40 POUNDS PER BALE AND SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
- 5. SILT FENCE SHALL BE MIRAFI 600X AS MANUFACTURED BY MIRAFI INC., GEOTEX 300ST AS MANUFACTURED BY SYNTHETIC INDUSTRIES, INC., PROPEX 2004 AS MANUFACTURED BY AMOCO FABRICS & FIBERS CO. OR EQUIVALENT.
- 6. FABRIC FENCE MATERIAL SHALL BE SUPPLIED IN ROLLS WITH APPROVED STAKING ATTACHMENT FROM AN APPROVED SUPPLIER AND SHALL BE PLACED AS DIRECTED BY THE ENGINEER. 7. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE INSPECTED WEEKLY DUR
- THE CONSTRUCTION PERIOD. 8. STOCKPILING OF MATERIALS IS NOT PERMITTED.
- WORKING OR PLACING MATERIAL ON EXISTING WETLAND VEGETATION IS PROHIBITED. 10. VEGETATION PROTECTION FENCE SHALL BE SAFETY ORANGE FABRIC FENCE WITH TEMPORARY SUPPORT POSTS. POSTS MAY BE SUPPORTED ON THE LEDGE ROCK BY MEANS OF SANDBAGS OF OTHER ACCEPTABLE METHOD. THE FENCE IS TO REMAIN IN PLACE AT ALL TIMES WHILE CONSTRUCTION IS UNDERTAKEN.

### FLAGPOLE:

- 1. FLAGPOLE SHALL BE A FIBERGLASS REINFORCED COMPOSITE (FRC) NAUTICAL DOUBLE MASTED FLAGPOLE WITH YARDARM/GAFF AS MANUFACTURED BY PLP COMPOSITE TECHNOLOGIES OR APPROVED EQUAL. COLOR SHALL BE STANDARD WHITE AND BASE TO BE PROVIDED PER MANUFACTURERS RECOMMENDATIONS.
- 2. FLAGPOLE SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 25-FEET, ALONG WITH A MINIMUM BUT DIAMETER OF 6-INCHES. 3. LOAD CALCULATIONS SHALL BE BASED ON AASHTO AND NAAMM STANDARDS DESIGNED FOR 150
- M.P.H. WINDS, UNFLAGGED WITH A 1.3 GUST FACTOR. 4. FLAGPOLE: FLAGPOLE SHALL BE MOUNTED TO THE CAST-IN-PLACE CONCRETE TOPPING SLAB DE
- IN THE LOCATION SHOWN ON THE CONTRACT DRAWINGS. INSTALLATION DETAIL SHOWN ON THE CONTRACT DRAWINGS SHALL BE USED TO SECURE THE ITEMS TO THE DECK SECTION AS REQUI OR WITH THE MANUFACTURERS RECOMMENDATIONS UPON COORDINATION AND APPROVAL WITI THE ENGINEER.

# GEOTEXTILE FABRIC:

- 1. GEOTEXTILE FABRIC SHALL BE MIRAFI FILTERWEAVE FW-700 GEOTEXTILE FABRIC OR AN EQUIVALENT ACCEPTED BY THE ENGINEER OF RECORD.
- 2. INSTALL GEOTEXTILE FABRIC IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- MAINTAIN MINIMUM 12-INCH LAP AT ADJACENT SECTIONS. 3. PROVIDE ADEQUATE SLACK IN FABRIC DURING INSTALLATION BY PROVIDING CONTINUOUS 12 INC
- FOLDS AT 15 FOOT CENTERS PARALLEL TO THE SHORELINE. 4. PROPERLY ANCHOR FABRIC TO PREVENT SLIDING OR TEARING DURING INSTALLATION OF OVERBURDEN MATERIAL.

# GROUND ANCHORS

- 1. GROUND ANCHORS SHALL BE INSTALLED TO A 45 DEGREE INCLINATION WITH RESPECT TO THE
- HORIZONTAL. 2. THE GROUND ANCHOR DESIGN LOAD IS 403.3 KIPS. THE SPACING OF THE GROUND ANCHOR IS 9.2
- FEET +/- UNO. 3. GROUND ANCHORS AND THEIR COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF THE RECOMMENDATIONS FOR PRESTRESSED ROCK AND SOIL ANCHORS, LATEST EDITION, ADOPTED THE POST-TENSIONING INSTITUTE.
- 4. GROUND ANCHORS AND THEIR COMPONENTS SHALL BE PROTECTED FROM CORROSION. CORROSION PROTECTION SHALL INCLUDE DELIVERY AND STORAGE METHOD OF TENDONS OR BA ADEQUATE BOREHOLE DIAMETER, PVC SHEATHING IN FREE LENGTH, TEMPORARY AND PERMANENT LUBRICANTS, PERMANENT SHEATHING OF TENDON, COVER BOX FOR ANCHORAGE HEAD, CORRUGATED PVC PIPE FOR CASING, IF REQUIRED, AND CONSOLIDATION GROUT FOR ANCHOR ZONE
- 5. GROUND ANCHOR DESIGN IS BY CONTRACTOR. GROUND ANCHOR ASSEMBLY INCLUDING GROUND ANCHOR, STAND-OFF PLATES, AND CAP PLATES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MASSACHUSETTS.

RING TO ER, DIL, INE AND								
CE L, ND, ND, SH								
THE THE CICE. EACH 1557. RES, RES, ED ED,	CITY OF MONTEREY		MONTEREY, CALIFORNIA		WESTERN FLYER DOCK PREPORATION	AND RESTORATION		
PR T ECK RED, H	REVISIONS	NO. BY DATE DESCRIPTION	▲ JSD 03/22/2024 ADDENDUM #3				$\overline{\nabla}$	
СН	SURVE DRAWN DESIGN CHECK SHEET	YED N NED ED TITL	E:	PREF A A IB IB	01 01 01	TION DATE NA /01/20 /01/20	)22 )26 )21	
2 BY			NC	DTE	ΞS			
ARS, ENT	ISSUAN	ICE:	DF	RAI	FT			

PROJECT NO: 0024M001.00

G-002

SHEET NUMBER

# <u>GUARDRAIL:</u>

- STANDARD GUARDRAIL AND POST SHALL BE SINGLE FACE, AS SPECIFIED IN MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES 1988 EDITION, AND ALL AMENDMENTS; - CONSTRUCTION STANDARDS; SUBSECTION 601 GUARDRAIL AND SECTION E.401.1 - AND E.401.11.0.
- POSTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36. GALVANIZING SHALL MEET THE REQUIREMENTS OF M7.10.0: GALVANIZED COATINGS.
- POSTS SHALL BE SET PLUMB, IN HAND OR MECHANICALLY DUG HOLES, OR DRIVEN, THEN
- BACKFILLED WITH ACCEPTABLE MATERIAL PLACED IN LAYERS AND THOROUGHLY COMPACTED. STEEL BEAM RAIL: THE RAIL SHALL BE ERECTED SO AS TO FORM A SMOOTH CONTINUOUS RAIL CONFORMING TO THE REQUIRED LINE AND GRADE. THE RAIL ELEMENTS AND SPLICES SHALL BE PER THE PLANS. ALL BOLTS, EXCEPT WHERE OTHERWISE REQUIRED AT EXPANSION JOINTS, SHALL BE DRAWN TIGHT.
- THE STEEL RAIL ELEMENT, TRANSITION PANELS, TERMINAL SECTIONS AND CONNECTING
- HARDWARE SHALL CONFORM TO AASHTO M 180, TYPE II, CLASS A. GUARDRAIL END TREATMENT: PROPRIETARY END TREATMENT SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' SPECIFICATIONS AND RECOMMENDATIONS.
- EACH END OF THE STEEL RAIL FOR EVERY STRETCH OF GUARD SHALL BE FITTED WITH A
- TERMINAL SECTION AS SHOWN ON THE PLANS. 8. ALL STEEL COMPONENTS AND HARDWARE SHALL CONFORM TO M8.07.0: GUARDRAIL. ALL METAL WORK SHALL BE DONE IN THE SHOP.
- THE APPROACH END SHALL HAVE TYPE 3 OBJECT MARKER SHEETING THAT CONFORMS TO THE REQUIREMENTS OF THE MUTCD. THE SHEETING MATERIAL SHALL MEET THE REQUIREMENTS OF M9.30.0: RETROREFLECTIVE SHEETING.

## JIB CRANE:

- LIFT CAPACITY: JIB CRANE SHALL HAVE A LIFT CAPACITY OF 1-TON.
- . MAST: MAST SHALL BE FREESTANDING WITH A CLEAR HEIGHT OF THE MAST SHALL BE 16'-0", MEASURED FROM THE BOTTOM OF THE BASE PLATE TO THE BOTTOM OF THE BOOM. BOOM: TOTAL BOOM LENGTH SHALL BE 12'-0", MEASURED FROM THE CENTERLINE OF THE MAST
- TO THE END OF THE BOOM. DISTANCE FROM THE FACE OF THE STOP TO THE END OF THE BOOM SHALL BE 11'-6". 4. ROTATION: JIB CRANE SHALL HAVE 180-DEGREE ROTATION; BOOM WILL NOT DRIFT WHEN AT
- REST. ROTATION STOPS: SHALL BE FIELD MOUNTED WELDED OR BOLTED AS APPROVED BY THE
- ENGINEER. DEFLECTION: DEFLECTION WHEN LOADED TO THE MAXIMUM CAPACITY AT THE FURTHEST PICK POINT SHALL BE LIMITED TO A DEFLECTION OF APPROXIMATELY L/150.
- ANCHOR BOLTS: SHALL BE 1-INCH DIAMETER J-BOLTS TO THE LENGTH RECOMMENDED BY THE MANUFACTURER. MATERIALS: JIB CRANE BOOM, MAST AND BASE SHALL BE FABRICATION FROM STEEL MEETING
- ASTM STANDARDS. 9. FINISH: JIB CRANE BOOM, MAST AND BASE SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE
- WITH ASTM STANDARDS. 10. PROVIDE ALL ENGINEERING DESIGN, LABOR, MATERIALS, EQUIPMENT AND SUPERVISION NECESSARY TO MANUFACTURE AND INSTALL A 1-TON JIB CRANE.

# NON-SHRINK GROUT:

NON-SHRINK GROUT SHALL BE FIVE STAR GROUT, HIGH PERFORMANCE PRECISION GROUT OR EQUIVALENT ACCEPTED BY ENGINEER, CONFORMING TO ASTM C827 AND SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 8000 PSI, AS MANUFACTURED BY FIVE STAR PRODUCTS, INC., FAIRFIELD, CT.

### REINFORCEMENT:

- REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60, OR 75
- AS CALLED FOR. DETAILING, FABRICATION, AND ERECTION OF REINFORCING STEEL SHALL BE EPOXY COATED AND CONFORM TO THE REQUIREMENTS OF ACI-318 AND ACI-315 'DETAILS AND DETAILING OF
- CONCRETE REINFORCEMENT'. REINFORCEMENT SHALL CONFORM TO BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318), ACI DETAILING MANUAL (SP-66), CRSI MANUAL OF STANDARD PRACTICE (MSP) AND THE STRUCTURAL WELDING CODE-REINFORCING STEEL (AWS D1.4), ELECTRODES TO BE E-80.
- PROVIDE SUPPLEMENTAL BARS AND ACCESSORIES AS REQUIRED TO HOLD REINFORCEMENT SECURELY IN POSITION.
- 5. ALL CONTINUOUS REINFORCEMENT SHALL BE EXTENDED AROUND CORNERS AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS. USE STANDARD HOOKS UNLESS OTHERWISE INDICATED.
- LAPS SHALL BE CLASS B TENSION LAP SPLICES, UNLESS NOTED OTHERWISE. REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS. PROVIDE MECHANICAL COUPLERS WHERE REQUIRED CONTINUOUS REINFORCEMENT EXCEEDS AVAILABLE LENGTHS.

## STEEL:

- 1. STRUCTURAL STEEL SHALL COMPLY WITH THE "STEEL CONSTRUCTION MANUAL" FIFTEENTH
- EDITION PUBLISHED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION. CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE STEEL FABRICATOR EXCEPT FOR
- THOSE SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS.

## PILES - TIMBER:

- TIMBER PILES SHALL BE DRIVEN TO A MINIMUM CAPACITY OR MINIMUM EMBEDMENT LENGTH AS INDICATED ON THE CONTRACT DRAWINGS.
- CUT AND DRILLED EXPOSED SURFACES SHALL BE LIBERALLY RECOATED BY BRUSH WITH A FIELD TREATMENT ACCEPTED BY THE ENGINEER OF RECORD.
- TIMBER PILES SHALL HAVE A MINIMUM BUTT DIAMETER OF 12 INCHES, MINIMUM TIP DIAMETER OF 8 INCHES (12-3-8), CLASS B PILE. MATERIAL, TAPER, STRAIGHTNESS, AND ALLOWABLE DEFECTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-25.
- TIMBER PILES SHALL BE FREE FROM DEFECTS THAT MAY IMPAIR STRENGTH, DURABILITY OR DRIVABILITY; CUT FROM SOLID, SOUND LINE, CLOSED GRAINED TREES, FREE FROM INJURIOUS RINGS AND LARGE UNSOUND KNOTS OR DECAY. USE TREES THAT HAVE A UNIFORM STRAIGHT TAPER FROM BUTT TO TIP.
- HANDLE TIMBER PILES CAREFULLY, WITHOUT SUDDEN DROPPING, BREAKING OF OUTER FIBERS, BRUISING OR PENETRATING THE SURFACE WITH TOOLS.

# PILE DRIVING:

- DRIVE PILES WITH AN AIR OR DIESEL OPERATED HAMMER WITH SUFFICIENT ENERGY AND ENERGY TRANSFER CHARACTERISTICS TO DRIVE THE PILES TO THE REQUIRED CAPACITY AND TOE ELEVATIONS WITHOUT DAMAGING THE PILE HEAD. USE CAUTION NOT TO DAMAGE THE PILES BY OVER DRIVING AS WOULD BE INDICATED BY REBOUND OF HAMMER OR STAGGERING OF PILE. CUT OFF HEADS OF PILES ACCURATELY IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AFTER COMPLETION OF DRIVING.
- DRIVE THE PILES STRAIGHT AND TRUE AT INDICATED LOCATIONS, WITH DEVIATION FROM THE LONGITUDINAL AXIS OF NOT MORE THAN 1/4 INCH PER FOOT.
- LOCATE THE PILES WITHIN 3 INCHES OF THE POSITIONS INDICATED ON THE DRAWINGS. CONTINUOUSLY DRIVE EACH PILE TO REACH THE CAPACITY AND/OR FULL EMBEDDED LENGTH CALLED FOR ON THE DRAWINGS.
- WITHDRAW PILES THAT ENCOUNTER UNDERGROUND OBSTRUCTIONS SUFFICIENT TO IMPEDE PILE DRIVING. REDRIVE AS CLOSE AS POSSIBLE TO ORIGINAL POSITION, SUBJECT TO REVIEW BY THE ENGINEER AND OWNER. REMOVE PILES WHICH SPLIT, BROOM, BREAK OR DRIVE OUT OF LINE. DRIVE ANOTHER PILE IN ITS PLACE. PROVIDE AND MAINTAIN NECESSARY LIGHTING AND BARRIERS TO ADEQUATELY ASSURE PUBLIC SAFETY. PROVIDE ADEQUATE SAFEGUARDS TO PROTECT FROM DAMAGE IMPROVEMENTS ON THE WORK SITE AND ON ADJACENT PROPERTIES.
- LENGTHS SHOWN ON THE DRAWINGS ARE CONSIDERED AVERAGE VALUES, AND THE ACTUAL LENGTHS MAY VARY WHEN SO ACCEPTED BY THE ENGINEER OF RECORD. PROVIDE DRIVING RESISTANCE PENETRATION AND REFUSAL VALUES AS ACCEPTED BY THE
- ENGINEER OF RECORD. ALL SHEET PILES AND PIPE PILES DRIVEN TO REFUSAL IN ROCK TO HAVE HARDENED CUTTING
- SHOES INSTALLED BEFORE DRIVING. USE SUITABLE CUSHIONS OR DRIVING HEADS TO AVOID DAMAGE TO THE PILES, DEVELOPING PROPER TOTAL DRIVING ENERGY, AND DIRECTING THE ENERGY ALONG THE LONGITUDINAL
- CENTER OF GRAVITY OF THE PILE. 10. DRIVE PILES TO THEIR FULL PENETRATION WITHOUT BENDING, RUPTURING, OR SEVERELY DAMAGING THE PILES. IF FAILURE IN THE ABOVE RESPECTS IS ENCOUNTERED, PULL THE PILE AND DRIVE A NEW PILE AT NO ADDITIONAL COST TO THE OWNER. IF A REPLACEMENT PILE FAILS TO DEVELOP FULL DRIVING RESISTANCE, PULL THE REPLACEMENT PILE AND DRIVE A NEW PILE WITH LARGER DIAMETER AT NO ADDITIONAL COST TO THE OWNER.

- 11. JETTING TO ASSIST PENETRATION WILL NOT BE ENGINEER OF RECORD. PRE-DRILLING WILL NO ENGINEER OF RECORD, WHEREBY ACCEPTED USED WHERE EXTREME DRIVING RESISTANCE DRIVING MAY BE DETRIMENTAL TO ADJACENT
- 12. WHERE PILES ARE PUSHED UP BY PRESSURE
- REQUIRED AND AT NO ADDITIONAL COST TO TH 13. THE CONTRACTOR SHALL PROVIDE THE OWNE DATE OF FINAL INSTALLATION AND TIP ELEVATI WEEKLY AND SIGNED BY A REPRESENTATIVE C KEEP AN ACCURATE SET OF PILE RECORDS IND INSTALLED LENGTH, TYPE OF HAMMER AND RA
- ELEVATION, AND CONTRACTOR'S REPRESENTA 14. STEEL PIPE PILES MUST BE DRIVEN TO AN ULTI PILES MUST BE TESTED WITH PILE DRIVING ANA REQUIREMENTS AND ULTIMATE CAPACITY. PRO AND ACCEPTANCE PRIOR TO CUTTING PILES TO SELECTED BY THE ENGINEER.

# PROTECTIVE COATING:

- ALL STEEL SHEET PILES EXPOSED TO SALT WA ACCORDANCE WITH SPECIFICATIONS AND TO 1 2. COATING SHALL BE APPLIED IN ACCORDANCE
- WITH SURFACE PREPARATION FOR IMMERSION WHITE FINISH (SSPC-SP10 OR NACE). 3. NO COATING SHALL BE APPLIED WITHIN THE LI
- REMAIN FREE SLIDING. MATERIAL USED FOR FACTORY EPOXY COATIN
- EPOXY COATING AS MANUFACTURED BY DEVO PROJECT ENGINEER FOR STEEL SHEET PILES. 5. MATERIAL USED FOR FACTORY EPOXY COATIN
- COATING 6233 AS MANUFACTURED BY 3M OR E ENGINEER FOR STEEL PIPE PILES.
- FIELD TOUCH\_UP COATING SHALL BE IDENTICA ACCORDANCE WITH THE MANUFACTURER'S RE
- PROTECTIVE COATING TOPCOAT SHALL BE BLA DRAWINGS OR BY THE OWNER.
- 8. SURFACES SHALL BE PREPARED IN STRICT AC SYSTEM MANUFACTURER'S WRITTEN INSTRUC ABRASION BLASTED TO A NEAR WHITE SURFA SSPC SP 10. BLAST PROFILE ON STEEL SHALL JAGGED NATURE AS OPPOSED TO A "PEEN" PA BE SOUND, DRY, CLEAN, FREE OF OIL, GREASE COMPOUNDS, LOOSE AND FLAKING PAINT, GRIT ROTO BLASTED SURFACES ARE NOT ACCEPTA 9. THE PROTECTIVE COATING SHALL BE INSTALLE
- MANUFACTURER'S WRITTEN INSTRUCTIONS. CO ACHIEVE A MINIMUM OVERALL DRY FILM THICK
- 10. ALL HOLIDAYS OR OTHER IMPERFECTIONS IN T AT THE CONTRACTORS EXPENSE PRIOR TO FIN

# TEMPORARY WORK:

- 1. LABOR, EQUIPMENT, AND MATERIALS REQUIRE COMPLETION, ARE NOT A PART OF THE WORK, SUBSEQUENTLY REMOVED FROM THE SITE BY
- 2. TEMPORARY WORK SHALL BE SUBJECT TO THE LOCAL BUILDING CODES.
- 3. THE CONTRACTOR SHALL SAFERGUARD AND P DURING EXECUTION OF THE WORK, THE CONTI REQUIRED SEDIMENTATION AND EROSION CON WATERWAYS, STREETS, AND PROPERTIES. MEA TEMPORARY BERMS, STRAW WATTLES, HAY BA TURBIDITY CURTAINS. IN ACCORDANCE WITH S CONTRACTOR SHALL FURNISH, INSTALL, MAINT CONSTRUCTION. TEMPORARY MATERIALS AND FOR TEMPORARY WORK.

## TIMBER:

- 1. VISUALLY GRADED STRUCTURAL LUMBER AND ASTM D245-06 STANDARD PRACTICE FOR ESTA
- ALLOWABLE PROPERTIES FOR VISUALLY GRAD 2. MECHANICAL STRENGTH OF TIMBER SHALL BE D4761-16.
- 3. HARDWARE USED TO CONNECT CCA TREATED ETC., SHALL BE HOT DIP GALVANIZED STEEL CO GALVANIZING SHALL CONFORM TO THE REQUI
- 4. HARDWARE AND FASTENERS USED TO CONNE NUTS AND WASHERS, ETC., SHALL BE GRADE 3 REQUIREMENTS OF THE RESPECTIVE ASTM STA FINISH WHERE APPLICABLE.

# TIMBER FLOATS:

- 1. WOOD FRAMING SHALL BE SOUTHERN YELLOW MINIMUM CCA CONTENT OF 2.5 PCF AND SHALL MOISTURE CONTENT SHALL NOT EXCEED 19%
- 2. WOOD DECKING SHALL BE SOUTHERN YELLOW
- MINIMUM MCA CONTENT OF 0.23 PCF AND SHAL 3. CLEATS SHALL BE COMPOSED OF ALMAG 35 CA
- REQUIREMENTS OF THE FEDERAL SPECIFICATI 4. DECKING SHALL BE FASTENED TO THE FLOAT F
- WOOD SCREWS.
- 5. FLOATATION MATERIAL SHALL BE CONTAINED I PROPERTIES TO SUPPORT THE DEAD LOAD OF LOAD OF 20 PSF WITHOUT LIST.
- 6. REFER TO THE CONTRACT SPECIFICATIONS SE
- SYSTEM FOR APPLICABLE DESIGN & LOAD CON ALL STRUCTURAL STEEL CONNECTORS, BRACK
- TO BE FABRICATED FROM ASTM A 36 GRADE ST
- 8. PILE GUIDES SHALL BE REMOVABLE TO ALLOW FROM THE ANCHOR PILES FOR SEASONAL AND

### UTILITY NOTES:

- 1. THE SUBSURFACE UTILITY INFORMATION SHOV SURVEY INFORMATION, RECORD INFORMATION COMPANIES, AND PLAN INFORMATION SUPPLIED BY THE OWNER, IF ANY; THEREFORE NO UTILITY FEATURES FALL WITHIN NORMAL STANDARD OF CARE ACCURACIES.
- 2. THE LOCATIONS OF UNDERGROUND PIPES, CONDUITS, AND STRUCTURES HAVE BEEN THEIR ACTUAL LOCATIONS.
- 3. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED 4. THE STATUS OF UTILITIES, WHETHER ACTIVE, ABANDONED, OR REMOVED, IS AN UNKNOWN CONDITION AS FAR AS OUR COMPILATION OF THIS INFORMATION.
- 5. IT IS INCUMBENT UPON INDIVIDUALS USING THIS INFORMATION TO UNDERSTAND THAT COMPILING UTILITY INFORMATION IS NOT EXACT, AND IS SUBJECT TO CHANGE BASED UPON
- VARYING PLAN INFORMATION RECEIVED AND ACTUAL LOCATIONS. 6. THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES IS SUBJECT TO FIELD CONDITIONS, THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS AND OTHER MATTERS.
  - © COPYRIGHT 2024, FOTH INFRASTRUCTURE & ENVIRONMENT, LLC.

E PERMITTED UNLESS ACCEPTED BY THE OT BE PERMITTED UNLESS ACCEPTED BY THE PRE_DRILLING TO ASSIST PENETRATION MAY BE IS ENCOUNTERED, OR WHERE VIBRATIONS FROM	LEGEN	<u>ND</u>
STRUCTURES. FROM DRIVING OF ADJACENT PILES, RE-DRIVE AS	DESCRIPTION	
RE OWNER. R WITH A COMPLETE DRIVING RECORD WITH THE ONS. THIS RECORD SHALL BE SUBMITTED		
OF THE CONTRACTOR. THE CONTRACTOR SHALL DICATING PILE NUMBER, PILE TYPE AND		® #
ATED ENERGY, DATE OF INSTALLATION, FINAL TIP ATIVE NAME AND SIGNATURE. TIMATE CAPACITY OF 275 TONS AT LEAST TWO		
ALYZER (PDA) TO CONFIRM PILE DRIVING OVIDE PDA REPORT TO ENGINEER FOR REVIEW		
O GRADE. THE PILES FOR TESTING WILL BE		
ATER TO BE EPOXY COATED (BOTH SIDES) IN 10 FEET BELOW DREDGED MUDLINE.		
WITH THE MANUFACTURES RECOMMENDATION N SERVICE WITH MINIMUM GRIT BLASTING TO NEAR		
MITS OF THE INTERLOCK. INTERLOCKS SHALL		
IG SHALL BE BAR-RUST 235 MULTI-PURPOSE DE COATINGS OR EQUIVALENT ACCEPTED BY THE		O GG
IG SHALL BE SCOTCHKOTE FUSION BOND EPOXY EQUIVALENT ACCEPTED BY THE PROJECT	WATER SHUT-OFF WATER GATE	O WG O WG
AL TO FACTORY COATING AND APPLIED IN	CLEANOUT	O CI FANOUT
EQUIREMENTS. ACK UNLESS OTHERWISE INDICATED ON THE		
CORDANCE WITH THE PROTECTIVE COATING TIONS. SURFACES ARE TO BE	GATE VALVE	
ACE CLEANLINESS IN ACCORDANCE WITH L BE 1.5 TO 2.5 MILS IN DEPTH AND BE OF A SHARP,		
TERN (FROM SHOT BLASTING). SURFACES MUST , DIRT, MILDEW, FORM RELEASE AGENTS, CURING T DUST, AND OTHER FOREIGN SUBSTANCES.	UTILITY POLE WITH CONDUIT LINE TO GRADE	ی UP W/ UE
BLE. ED IN STRICT ACCORDANCE WITH OATING IS TO BE APPLIED IN TWO COATS TO	LIGHT POLE	×
THE COATING SHALL BE REMOVED OR REPAIRED	LIGHT BOLLARD	
NAL ACCEPTANCE OF THE WORK.	LANDSCAPE LIGHT	
ED TO PERFORM THE WORK THAT, UPON	HAND HOLE	
SHALL BE FURNISHED, INSTALLED, AND THE CONTRACTOR. E REQUIREMENTS OF THE STATE AND ADDUCABLE	TRASH CAN	тс О
PROTECT EXCAVATIONS.	FIRE ALARM CALL BOX	FACB
RACTOR IS REQUIRED TO INSTALL AND MAINTAIN NTROL MEASURES TO PROTECT ADJACENT	METAL POST	• MP
ASURES INCLUDE BUT ARE NOT LIMITED TO ALES, SILT FENCES, CONTAINMENT BOOMS, AND STATE REGULATORY AUTHORIZATIONS. THE	CONCRETE POST	• CP
TAIN TEMPORARY TURBIDITY CURTAINS DURING DEQUIPMENT SHALL CONFORM TO REQUIREMENTS	SIGN POST	• SP
	DECIDUOUS TREE WITH TRUNK DIAMETER	12" දී. අ. දි. අ. ද
WOOD CONSTRUCTION SHALL CONFORM TO	CONIFEROUS TREE WITH DIAMETER	12"
ABLISHING STRUCTURAL GRADES AND RELATED DED LUMBER.	HANDICAP PARKING	Ë,
TIMBER INCLUDING BOLTS NUTS AND WASHERS	SPOT ELEVATION	601×43
ONFORMING TO ASTM A307 GRADE A. REMENTS OF ASTM A153.	BITUMINOUS CONCRETE BERM	BB
CT MCA TREATED TIMBER INCLUDING BOLTS, 316 STAINLESS STEEL AND CONFORM TO THE	SLOPED GRANITE CURB	SGC
ANDARD. HARDWARE SHALL PROVIDE A FLUSH $\land$	VERTICAL GRANITE CURB	VGC
$\frac{1}{2}$	VERTICAL CONCRETE CURB	VCC
V PINE NO. 1 STRUCTURAL STRESS GRADE WITH A L BE KILN DRIED AFTER TREATMENT (KDAT).	WHEELCHAIR RAMP	WCR
V PINE NO. 1 STRUCTURAL STRESS GRADE WITH A	LANDSCAPE TIMBER	LST
AST ALUMINUM ALLOY CONFORMING TO THE ION QQ-A-571F AND QQ-A-601E. ERAMEWORK WITH 2-INCH LONG STAINLESS STEEL	SALT MARSH	<u>* * * * *</u>
IN A CLOSED CELL WITH SUFFICIENT MATERIAL	PHRAGMITES	┍╶╤╶─╶╤╶╌┿ ╘╧┈╧╶╧╌╧╶╧
ECTION 35 51 13.23 TIMBER FLOATING DOCK		
NDITIONS. KETS, PILE GUIDES AND MISCELLANEOUS PARTS		
TEEL. / THE FLOATING DOCKS TO BE DISCONNECTED		
	LIST OF ARREV/IATIONS	INI
WN HEREON IS COMPILED BASED ON FIELD	ALTERNATE - AL	T
N AS SUPPLIED BY THE APPROPRIATE UTILITY	AMERICAN ASSOCIATION OF STATE - AA	SHTO

GUARANTEE IS MADE AS TO THE ACCURACY OF SAID COMPILED SUBSURFACE INFORMATION TO ANY CERTAIN DEGREE OF STATED TOLERANCE. ONLY PHYSICALLY LOCATED SUB-SURFACE

DETERMINED FROM SAID INFORMATION, AND ARE APPROXIMATE ONLY. COMPILED LOCATIONS OF ANY UNDERGROUND STRUCTURES, NOT VISIBLY OBSERVED AND LOCATED, CAN VARY FROM

APPRO)

BM

- BOS

- BOC

- BLDG

- CB

- CL

- C-C

- CLF

- CFS

- EOP

- FT

- GALV

- HDPE

- HDG

- IN

- CY

-

CLSM

CP

EL. ELEV

EPA

EX. EXIST

- C.I.P.

-

& HIGHWAY TRANSPORTATION OFFICIALS

CONTROLLED LOW-STRENGTH MATERIAL -

ENVIRONMENTAL PROTECTION AGENCY -

APPROXIMATE

BOTTOM OF SLOPE

CENTER TO CENTER

EDGE OF PAVEMENT

CUBIC FEET PER SECOND

HIGH DENSITY POLYETHYLENE

HOT DIPPED GALVANIZED

CHAIN LINK FENCE

CONTROL POINT

CUBIC YARDS

ELEVATION

EXISTING

GALVANIZED

FEET

INCHES

BOTTOM OF CURB

BENCHMARK

CATCH BASIN

CENTERLINE

CAST IN PLACE

BUILDING

	LEGEN	LEGEND				
UT	DESCRIPTION	CALLOUT				
]	RM ELEVATION EQUALS	R=				
	INVERT ELEVATION EQUALS	I=				
	TOP OF HOOD ELEVATION EQUALS	TH=				
	NO PIPES VISIBLE	NPV				
	TOP OF WATER	TOW=				
	TRAFFIC CONTROL BOX	ТСВ				
	UNDERGROUND LOOP DETECTOR	ULD				
	DETECTABLE WARNING PANEL	DWP				
	TOP OF WALL ELEVATION	601×43TW				
	TOP OF WATER ELEVATION	601×43TOW				
1	TOP OF PIPE ELEVATION	601×43TP				
ANOUT	TOP OF RAILROAD TRACK ELEVATION	601443TR				
	CHAIN LINK FENCE	x				
	STRAW WATTLE	_ <b>~</b> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
	EXISTING UNDERGROUND CABLE TV LINE	CATV				
	EXISTING UNDERGROUND DRAIN LINE	D				
	EXISTING UNDERGROUND ELECTRIC LINE	E				
3	EXISTING UNDERGROUND GAS LINE	G				
_	EXISTING UNDERGROUND SEWER LINE	S				
Н	EXISTING UNDERGROUND TELEPHONE LINE	T				
	UNDERGROUND WATER LINE	w				
	PROPOSED STRAW WATTLE LINE	SW				
)	OVERHEAD WIRES	OHW				
	UNDERGROUND LIGHTING CIRCUIT	UGE				
	MONITORING WELL	\$				
<b>}</b>	BENCHMARK					
	SILT CURTAIN					
	NAVIGATIONAL CHANNEL LIMIT					
3	APPROXIMATE PROPERTY LINE					
	MEAN HIGH WATER					
 C	MEAN LOW WATER					
2	ANNUAL HIGH TIDE LINE	·				
 C	PROPOSED FUEL LINE					
R	PROPOSED WATER LINE	w				
-	PROPOSED STORM DRAIN LINE	SD				
<u>ب</u> ب ب	HISTORICAL BORING	- <del>-</del>				
<u>∓ −+− ∓ ]</u>	BORING					

DEPARTMENT OF PUBLIC WORKS		TOWN OF ORLEANS, MASSACHUSETTS		ROCK HARROR COMMERCIAL WHARF	IMPROVEMENTS	
SURVEY DRAWN DESIGN	Description	A JSD 03/22/2024 ADDENDUM #3 A JSD 03/22/2024 ADDENDUM #3 A MEC/J SUS	REP	ARA 10/24 12 06	TION DATE 4/19 & 3 /05/20	3/2/21 023 021
CHECKE SHEET NC AB		ES, Al REV	LE NC /IA			D IS

NFILTRATION CHAMBER	-	I.F.
(IPS PER SQUARE INCH	-	KSI
ENGTH	_	
	_	
	_	MH
ASS HIGHWAY DEPARTMENT	_	MHD
	_	ΜΔΧ
AFAN HIGH WATER	_	MHW
AEAN LOWER LOW WATER	_	MIIW
	_	MIN
	_	MISC
IOT TO SCALE	-	NTS
DRGANIC MATERIAL	_	
	-	
)VERDREDGE	-	
POUNDS PER SQUARE INCH	-	PSI
PROPOSED	-	PROP
REMOVE & DISPOSE	-	R&D
REMOVE & RESET	-	R&R
SPECIFICATION	-	SPEC
STATION	-	STA
SQUARE FOOT	-	SF
OP OF CURB	-	TOC
OP OF SLOPE	-	TOS
RENCH DRAIN	-	T.D.
YPICAL	-	TYP

UGE

WT

-

-

UNDERGROUND ELECTRICAL

WALL THICKNESS

DA OFF	TUM SETS	
MLW	NAVD	88
12.11 -	6.40	AHTL
10.48 –	4.77	MHHW
10.03 –	- 4.32	мнพ
5.71 –	- 0	NA∨D88
0 –	5.71	MLW
-0.31 -	L -6.02	MLLW
OFFSETS T NOAA TIDA BOSTON EPOCH 1 AND VDA	AKEN FF AL STATI #844397 983–200 TUM V4.1	ROM ON 70 D1 I.2

SHEET NUMBER

G-003



ursday, March 21, 2024 3:21:57 PM VG Filename: c-101 key plan.dwg Layou:

	GRAPHIC SCALE		
		DEPARTMENT OF PUBLIC WORKS TOWN OF ORLEANS, MASSACHUSETTS	ROCK HARBOR COMMERCIAL WHARF IMPROVEMENTS
····       ···         ···       ···         ···       ···         ···       ···         ···       ···         ···       ···         ···       ···         ···       ···         ···       ···         ···       ···         ···       ···         ···       ···         ···       ···		LESIGNED DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DRAWN DESIGNED DESIGNED DESIGNED DESIGNED	Image: state interval and
	<ol> <li>NOTE:</li> <li>ALL EXISTING PAVEMENT AND GRAVEL WITHIN LIMITS OF NEW FULL DEPTH PAVEMENT TO BE REMOVED.</li> <li>R &amp; D - REMOVE AND DISPOSAL .</li> <li>R &amp; R - REMOVE AND RESET.</li> <li>EXISTING BACKFILL TO BE REMOVED/DREDGED TO ELEVATION -3.0 MLW WITH 1' OF ALLOWABLE OVERDIG/OVERDREDGE TO -4 MLW (± 2,300 CY). SEE MADEP 401WQC 22-WW08-0018-AAP FOR REUSE/DISPOSAL REQUIREMENTS.</li> </ol>	ISSUANCE: ISSUEC PROJECT NO: SHEET NUMBE	) FOR BID 00190004.10 R -102





y, March 22, 2024 2:21:28 PM Filename: c-201 general site plan.dwg Layout: c-2

![](_page_24_Figure_2.jpeg)

GRAPHIC SCALE (IN FEET) 1 INCH = 10 FEET

CONTRACTOR TO DESIGN GROUND ANCHOR ASSEMBLY INCLUDING GROUND ANCHOR, STAND-OFF PLATES AND CAP PLATES. CONTRACTOR SHALL SUBMIT CALCULATIONS AND DRAWINGS FOR GROUND ANCHOR DESIGN, STAMPED BY AN ENGINEER REGISTERED IN THE STATE OF MA. FOR SOILS INFORMATION SEE ATTACHMENT "A" OF THE CONTRACT DOCUMENTS.

![](_page_25_Figure_0.jpeg)

![](_page_26_Picture_0.jpeg)

![](_page_26_Figure_1.jpeg)

GRAPHIC SCALE (IN FEET) 1 INCH = 10 FEET

1. PARKING SPACES AND STRIPING SHALL BE PAINTED IN ACCORDANCE WITH MASSACHUSETTS HIGHWAY DEPARTMENT (MHD) AND THE ARCHITECTURAL ACCESS BOARD (AAB) 521 CMR.

2. LINES SHALL BE A MINIMUM OF 4" WIDE AND SHALL BE ONE CONSISTENT COLOR, REFLECTIVE WHITE PAINT.

![](_page_27_Figure_0.jpeg)

:50 PM al site p 3:16:

![](_page_28_Figure_0.jpeg)

![](_page_28_Figure_3.jpeg)

![](_page_29_Figure_0.jpeg)

ЪΜ 23 12:13: details 024 civil 1, 2 701 2 Q C

![](_page_30_Figure_0.jpeg)

Jursday, March 21, 2024 1:50:06 PM WG Filename: s-501 structural sections.dwg Layout: s-504 section views

![](_page_31_Figure_0.jpeg)

riday, March 22, 2024 12:55:59 PM WG Filename: s-701 structural details.dwg Layout: s-701 structural de MG Folder Location:

![](_page_32_Figure_0.jpeg)

![](_page_33_Figure_0.jpeg)

day, March 21, 2024 1:57:43 PM Filename: s-701 structural details.dwg Layout: s-703 stru