

Contract Documents
for
GOOSE HUMMOCK BOAT RAMP BULKHEAD REHABILITATION

Towns of Orleans
Department of Public Works
40 Giddiah Hill Road
Orleans, Massachusetts 02653



Issuance Date:
7/18/2025

OWNER

Town of Orleans
19 School Road
Orleans, MA 02653
Tel No. (508) 240-3700

PROJECT ENGINEER



15 Creek Road
Marion, MA 02738
Tel No. (508) 748-0937

TABLE OF CONTENTS

PROCUREMENT AND CONTRACTING REQUIREMENTS

IFB	Invitation for Bids
00100	Notice to Bidders
00103	Project Directory
00200	Bid Requirements
00400	Bid
	♦ “Exhibit A” to Bid – Bid Schedule
	♦ List of Sub-Contractors
	♦ Certificate of Non-Collusion
	♦ Statement of Tax Compliance
	♦ Acknowledgement of Principal
	♦ Bidder Certifications
	♦ Certificate of Vote Authorization
	♦ OSHA Training Certification of Contractors
00500	Agreement
00510	Notice of Award
00610	Faithful Performance Bond
00620	Payment Bond
00700	General and Special Conditions
00720	Supplemental Conditions – Waterfront Work

GENERAL REQUIREMENTS

00 62 76	Application for Payment
00 62 83	Construction Schedule
00 63 63	Change Order Form
01 01 00	Summary of Work
01 02 50	Measurement and Payment
01 05 00	Field Engineering
01 25 13	Submittals and Substitutions
01 29 73	Schedule of Values
01 29 83	Laboratory Testing Services
01 31 19	Project Meetings
01 35 50	Environmental Protection
01 45 10	Contractor Quality Control
01 50 00	Temporary Facilities and Controls
01 35 50	Environmental Protection
01 45 10	Contractor Quality Control
01 60 00	Equipment
01 66 00	Product Storage and Handling Requirements
01 73 29	Cutting and Patching

01 74 23	Cleaning
01 77 19	Execution and Close Out Requirements
01 78 39	Project Record Documents
01 90 00	General Safety Requirements

TECHNICAL SPECIFICATIONS

02 41 00	Selective Demolition
03 33 00	Cast-in-Place Concrete
05 12 00	Structural Steel
05 50 13	Miscellaneous Metal Fabrication
06 13 33	Pier Timberwork
09 97 13	Coating of Steel Waterfront Structures
31 23 00	Excavating, Backfilling, and Compacting
31 25 00	Erosion and Sediment Controls
31 41 16	Steel Sheet Piles
31 62 19	Timber Piles
31 68 13	Soil and Rock Anchors

LIST OF ATTACHMENTS:

PERMITS

- Order of Conditions, Town of Orleans, MA; MADEP File# SE54-2643 issued 4/19/2024;
- Minor Project Modification to DPW License No. 6256, Goose Hummock Boat Ramp, Town Cove, Orleans issued 2/29/2024;
- USACE Massachusetts General Permit NAE-2024-02126 issued 10/26/2024;

ATTACHMENT A: Soil Boring Logs for the Goose Hummock Boat Ramp, Orleans, MA, performed December 2019 – February 2020

ATTACHMENT B: Drawings Entitled: GOOSE HUMMOCK BOAT RAMP BULKHEAD REHABILITATION, 9 Sheets (including Cover Sheet); Date Issued: 7/18/2025 (Stamped by Alex I Mora, PE, Foth Infrastructure & Environment, LLC)

ATTACHMENT C: Massachusetts Prevailing Wage Rates; Issuance Date 7/11/2025 (35 pages)

ATTACHMENT D: Record Documents

INVITATION FOR BIDS

The Orleans Town Manager will receive sealed bids for the Goose Hummock Boat Ramp Bulkhead Rehabilitation project located in the Town of Orleans, MA. The project generally consists of the installation of a ±143 LF Concrete Capped Steel Sheet Pile Bulkhead with Ground Anchors and Whaler in front of the existing bulkhead along Town parcel on the east side of the Concrete Boat Ramp located at 1 Route 6A in Orleans, MA.

Sealed bids will be received at the Town Managers Office, Town Hall, 19 School Road, Orleans, Massachusetts 02653 until 12:00 P.M., prevailing time, on Friday, 8/22/2025 at which time all timely-received bids received will be publicly opened and read aloud. Any late bids received after this date and time will be rejected and returned to the applicant unopened. No exceptions will be made. Faxed/mailed bids will not be accepted.

Bids must be submitted in a sealed envelope indicating the applicant's name and address and clearly marked **"Goose Hummock Boat Ramp Bulkhead Rehabilitation"**. Unforeseen Office Closure – if, at the time of the scheduled bid opening, Orleans Town Hall is closed due to uncontrolled events such as fire, snow, ice, wind, or building evacuation, the bid opening will be postponed until 3:00 PM. on the next normal business day. Bids will be accepted until that date and time.

Electronic bid specifications may be obtained from the Town of Orleans Website, Bid & RFP System at www.town.orleans.ma.us/bids beginning on Friday, 7/18/2025.

A non-mandatory, Pre-Bid Conference will be conducted at the Project Site located at 1 MA-6A, Orleans, MA 02635 at 11:00 A.M. on Wednesday, 7/30/2025.

Bid Security: Each bid shall be accompanied by a Bid Security in the form of either a Certified Check, a Bid Bond, a Treasurer's Check or Cashier's Check drawn on or issued by a responsible bank or trust company, made payable to the Town of Orleans in an amount equal to five percent (5%) of the Contractor's bid.

A Performance Bond and also a Labor and Materials Payment Bond, each of a surety company qualified to do business under the laws of the Commonwealth of Massachusetts, satisfactory to the Owner, and each in the sum of 100% of the Contract Price will be required of the successful general bidder. No Bidder may withdraw its Bid within 30 business days after the date of the Bid opening.

The bid award of a contract is subject to the availability of funding and the Owner's receipt of all regulatory approvals from local, state or federal agencies.

All bids for this project are subject to applicable bidding laws of Massachusetts, including General Laws Chapter 30, Section 39M as amended.

Prevailing Wage Rates as determined by the Commissioner of the Division of Occupational Safety of the Executive Office of Labor and Workforce Development under the provisions of the Massachusetts General Laws Chapter 149, Section 26 to 27D, as amended, apply to this project. A weekly certified payroll submittal shall be required of the successful bidder in accordance with MGL C149, S27B. No payments will be made by the Town until all payroll information necessary for the Town to determine compliance with prevailing wage law requirements for the time period of the payment request have been submitted.

Bidders are not to include in their Bid sales and compensating use taxes on materials and supplies purchased for this project. All materials used are tax exempt.

The Town Manager reserves the right to accept and/or reject any and all bids and to waive any informalities to the extent allowed by law, and to make the award as deemed to be in the best interest of the Town.

Kimberly Newman, Town Manager

SECTION 00100
NOTICE TO BIDDERS

Notice is hereby given that the Town of Orleans, MA will receive bids for furnishing all labor, materials, transportation and services for the project known as:

GOOSE HUMMOCK BOAT RAMP BULKHEAD REHABILITATION
TOWNS OF ORLEANS, MA

- A. Located at 1 MA-6A, Orleans, MA, 02653. Each bid shall be in accordance with the plans, specifications and other contract documents available from the Town of Orleans Website, Bid & RFP System at <https://www.town.orleans.ma.us/bids> beginning on Friday, 7/18/2025 and also on file at the Office of the Town Manager located at 19 School Road, Town of Orleans, MA 02653, where they may be examined.
- B. Notice is also hereby given that all Bidders may be required to furnish a sworn statement of their financial responsibility, technical ability and experience before award is made to any particular Bidder.
- C. The project generally consists of the installation of a ±143 LF Concrete Capped Steel Sheet Pile Bulkhead with Ground Anchors and Whaler in front of the existing bulkhead along Town parcel on the east side of the Concrete Boat Ramp located at 1 Route 6A in Orleans, MA.
- D. A non-mandatory, Pre-Bid Conference will be conducted at the Project Site located at 1 MA-6A, Orleans, MA, 02653 at 11:00 A.M. on 7/30/2025.
- E. Each bid shall be made out on a form Section 00400 Bid and shall be accompanied by a DEPOSIT in the form of a bid bond, certified check or cashier's check, made payable to the **Town of Orleans**, in the amount of five percent (5%) of the sum of the Contractor's bid (CASH WILL NOT BE ACCEPTED) on or before Friday, 8/22/2025 at 12:00 P.M. local time. Each bid shall be in a separate sealed envelope, addressed to Town of Orleans, Goose Hummock Boat Ramp Bulkhead Rehabilitation c/o Kimberly Newman, Town Manager.
- F. The above-mentioned check or bid bond shall be given as a guarantee that the bidder will enter into the contract if awarded to him/her, and will be declared forfeited if the successful bidder refuses to enter into said contract within ten (10) days after being requested to do so by the Owner.
- G. The Owner may, if in their interest, award the contract to the lowest responsible and eligible bidder after negotiations. The term "lowest responsible and eligible bidder" shall mean the bidder: (1) whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; (2) who shall certify, that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (3) who shall certify that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee;

(4) who, where the provisions of section 8B of chapter 2963 apply, shall have been determined to be qualified thereunder; and (5) who obtains within ten (10) days of the notification of contract award the security by bond required under section 29 of chapter 149; provided that for the purposes of this section the term "security by bond" shall mean the bond of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority; and provided further, that if there is more than one surety company, the surety companies shall be jointly and severally liable. The Owner reserves the right to reject any or all bids or waive any informality in a bid.

- H. No bidder may withdraw his/her bid for a period of thirty (30) business days after the date set for the opening thereof.
- I. All Contractors performing work for the Owner are required to present evidence of Workers' Compensation and Employers' Liability Insurance coverages; a certificate of insurance and copies of the information or declaration page(s) for Broad Form Comprehensive General Liability or Commercial General Liability, and Business Automobile Liability Insurance policies of not less than \$1,000,000 for bodily injury or death arising out of any one occurrence and property damage limits of not less than \$3,000,000 arising out of any occurrence for each type of coverage; as well as excess liability coverage in an amount to be no less than \$3,000,000; as well as copies for said General Liability and Business Auto Liability Insurance Policies or an endorsement naming the Owner, its Board, and its officers, agents and employees as additional insureds, a standard cross-liability endorsement, an endorsement precluding cancellation or reduction in coverage before the expiration of thirty (30) days after Owner has received written notification by first class mail from the insurance carrier of such cancellation or reduction, and an endorsement stating that the insurance afforded thereby to Owner and its officers, agents and employees shall be primary insurance to the full limits of the policy, and that if Owner and its officers and employees have other insurance against a loss covered by such a policy, such other insurance shall be excess insurance only. Contractor shall further procure for the Owner benefit, course of construction insurance coverage for all risks of loss in an amount equal to the completed value of the project. The certificates of insurance and copies of information or declaration page(s) and of endorsements are to be reviewed and approved as to form by the Owner before work commences. Bidders that may "self-insure" are to provide detailed evidence of coverage and may be required to produce additional financial disclosures, such that any and all concerns raised by any Owner shall be redressed to the satisfaction of said Owner. A bidder that fails to comply with said additional requests by Owner may be deemed to be unresponsive and as such may be precluded from any further consideration by the Owner(s).
- J. The award of a contract is subject to the Owner's receipt of all regulatory approvals from local, state or federal agencies. The award is also subject to availability of sufficient funding.
- K. The "Contract Documents" consist of this Notice to Bidders; Section 00103 Project Directory, Section 00200 Bid Requirements, Section 00400 Bid; Section 00500 Agreement; Section 00510 Notice of Award; Section 00610 Faithful Performance Bond; Section 00620 Payment Bond; Section 00700 General and Special Conditions; Section 00720 Supplemental Conditions – Waterfront Work, General Requirements, Technical Specifications, Construction Drawings and any and all exhibits attached to any of the above listed documents. Bidders may obtain

complete set(s) of Contract Documents from the Town of Orleans Website, Bid & RFP System at www.town.orleans.ma.us/bids beginning on Friday, 7/18/2025. All who register with the Town for the bid documents will automatically be emailed with any addenda or bid updates posted.

- L. Any questions pertaining to the plans, specifications, or any of the Contract Documents shall be in writing, addressed and submitted via email to the attention of: Mr. Benjamin Foley, Owner's Project Engineer, Foth Infrastructure & Environment, LLC at Benjamin.Foley@foth.com. **To be given consideration, all questions must be received by no later than 12:00 P.M. on Friday, 8/1/2025.** Any and all interpretations and any supplemental instructions will be in the form of written Addenda to the Contract Documents which, if issued, will be provided via email to all persons on record as having received a complete set of Contract Documents at the respective email addresses furnished for such purposes. Such Addenda will be provided not later than 48 hours prior to the time set for opening of bids. Failure of any Bidder to receive any Addendum or interpretation shall not relieve such bidder from any obligation under his Bid as submitted.
- M. The Owner reserves the right to request change orders at any time.
- N. A successful bidder shall provide proof of a current business license issued by the jurisdiction where the work of improvement is to be conducted upon award of the Contract.
- O. A successful bidder shall, within ten (10) days from the date of a request by the Owner, enter into a contract with the Owner, which contract shall be accompanied by a payment bond and a faithful performance bond, each in a sum equal to 100% of the amount of the bid, and all documents evidencing insurance coverage requested by the Owner. **The Owner anticipates that a contract will be awarded to the successful bidder within 30 days of the bid opening, contingent upon the availability of funding and the issuance of all required environmental permits. A Notice-To-Proceed (NTP) is anticipated to be issued by the Owner on/about 11/1/2025.**
- P. All Construction shall be completed by no later than **Sunday, 3/15/2026**
- Q. The prevailing wages to be paid mechanics, apprentices, teamsters, chauffeurs, and laborers on the Project shall be established by the Prevailing Wage Schedule, as determined by the Commissioner of Labor and Industries, pursuant to the provisions of M.G.L. Chapter 149, Section 26 to 27D, inclusive, as amended, which schedule is included in **Attachment C** of the Contract Documents.
- R. The bidding documents may be examined at, but not removed or taken from, the Office of the Town Manager, 19 School Road, Town of Orleans, MA during normal business hours.
- S. All Bidding procedures will be in accordance with the Massachusetts General Laws Chapter 30, section 39M, as amended, and applicable provisions of General Laws, Chapter 149, sections 26-27D, and Chapter 30, sections 39F-39P, which are included herein by reference.

SECTION 00103
PROJECT DIRECTORY

OWNER: TOWN OF ORLEANS
19 SCHOOL ROAD
ORLEANS, MASSACHUSETTS, 02653

PROJECT LOCATION: GOOSE HUMMOCK BOAT RAMP
1 ROUTE 6A
ORLEANS, MASSACHUSETTS, 02653

OWNER'S REPRESENTATIVE: PAUL MARSALA
CLIENT TEAM LEADER
FOTH INFRASTRUCTURE & ENVIRONMENT,
LLC
15 CREEK ROAD, MARION, MA 02738
PAUL.MARSALA@FOTH.COM
(5857) 939-4436

ENGINEER-OF-RECORD: ALEX MORA, PE
SENIOR WATERFRONT ENGINEERING
LEADER
FOTH INFRASTRUCTURE & ENVIRONMENT,
LLC
15 CREEK ROAD, MARION, MA 02738
ALEX.MORA@FOTH.COM
(508) 762-0787

END OF SECTION

SECTION 00200
BID REQUIREMENTS

PART 1: GENERAL

1.01 SECURING DOCUMENTS

- A. Bidders may obtain complete set(s) of electronic Contract Documents from the Town of Orleans Website, Bid & RFP System at www.town.orleans.ma.us/bids beginning on Friday, 7/18/2025. All who register with the Town for the bid documents will automatically be emailed with any addenda or bid updates posted.

1.02 BID REQUIREMENTS

In order to receive consideration, bids shall be prepared and submitted in conformance with the requirements and instructions:

- A. Bidders shall carefully examine the site of the contemplated work and the Contract Documents therefore. It will be assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, and as to the character, quality and quantities of work to be performed, and materials to be furnished, and as to the requirements of these contract documents.
- B. Specific data required in regard to the location of existing public utility companies' pipes, conduits and structures shall be obtained by the Contractor from the respective public utility companies.
- C. Bids shall be prepared and submitted only on the forms supplied by the Owner and shall be signed by the bidder. Contractors must complete all bid items; no incomplete bids will be accepted. Written amounts shall prevail over numbers. If the unit price and the total amount named by the bidder for any item do not agree, the unit price shall govern. The Bidder Certification, fully completed and executed by the bidder, shall accompany the bid.
- D. If the bid is by an individual, his/her name and address shall be shown; if by a firm, the firm or partnership name shall be shown; or if by a corporation, the bid shall show the name and the State under the laws of which the corporation is chartered, and addresses of the President and of the Secretary and/or Treasurer. All bids shall be signed in long-hand and executed by a principal duly authorized to make contracts. Oral, telegraphic, or telephonic bids or modifications will not be considered. Bidders shall include with their bid a completed Certificate of Vote of Authorization. Such forms are included with the bid documents.
- E. Bids shall not contain any recapitulation of the work to be done. Alternative bids will not be considered unless called for. The completed form shall be without interlineations or alterations.
- F. All bids shall be presented to the Owner under sealed cover, and plainly marked on the outside with the title of the work being bid and the name of the bidder. It is the sole responsibility of the bidder to insure that his/her bid is received by the Owner prior to the

time specified for receipt of bids. Any bid received after the scheduled closing time for receipt of bids shall be returned to the bidder unopened and will be deemed unresponsive and thus rejected by the Owner(s). Bids will not be accepted via electronic mail or facsimile.

1.03 BIDDER'S GUARANTY

- A.** Each bid must be accompanied by cashier's check, or check certified by a responsible bank, or by bid bond issued by a corporate surety licensed to do business in the Commonwealth of Massachusetts, payable to the **Town of Orleans** in a sum not less than 5% of sum of the Contractor's bid. Bid security will be returned to all but the two lowest responsible and eligible bidders within ten (10) days, Saturdays, Sundays and legal holidays excluded, after the opening of the bids. The bid deposits of the two lowest responsible and eligible bidders shall be returned upon the execution and delivery of a Contract and furnishing of a Performance Bond and Labor and Materials Payment Bond, or, if no award is made, upon the expiration of the time for making an award. Notwithstanding the foregoing, should any bidder fail to perform his agreement to execute a contract and furnish the required bonds, his bid deposit shall become and be the property of the Town of Orleans to which it is payable, as liquidated damages; provided that the amount of the bid deposit which becomes the property of the Town of Orleans shall not, in any event, exceed the difference between his bid price and the bid price of the next lowest responsible and eligible bidder; and provided further, that, in case of death, disability, bona fide clerical or mechanical error of a substantial nature, or other similar unforeseen circumstances affecting the bidder, his bid deposit shall be returned to him.

1.04 BID QUANTITIES

- A.** See **Exhibit "A"** for bid quantities, also refer to **Section 01 02 50 Measurement and Payment**.

1.05 CONTRACTOR'S LICENSE

- A.** Prior to submitting bids, bidders shall be licensed (if applicable) as Contractors under the laws of the Commonwealth of Massachusetts to perform the type and class of work contemplated by the Contract Documents.
- B.** Sub-Contractors of bidding general Contractors shall be licensed under the laws of the Commonwealth of Massachusetts to perform the type and class of work contemplated by the Contract Documents.

1.06 WITHDRAWAL OF BID

- A.** Any bid may be withdrawn by the bidder prior to, but not after, the time fixed for the opening of bids, either personally or by telegraphic or written request. The withdrawal of a bid shall not prejudice the right of a bidder to file a new bid. No bid may be withdrawn for a period of 30 business days after the bid opening. Contract award is contingent upon funding and receipt of permits. Any withdrawal after that time shall be in writing and shall not be effective until received by Owner.

1.07 INTERPRETATION OF DOCUMENTS AND PLANS

- A. If any person contemplating submitting a bid for the proposed contract is in doubt as the true meaning of any part of the plans, specifications or other contract documents, or finds discrepancies in, or omissions from the drawings or specifications, he/she may submit to the Project Engineer a written request for an interpretation or corrections thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation or corrections of the proposed documents will be made only by addendum duly issued and a copy of such addendum will be mailed or delivered to all persons known by the Project Engineer to have received a set of Contract Documents. Neither the Owner nor the Project Engineer will be responsible for any other explanations or interpretations of the proposed Contract Documents.

1.08 ADDENDA

- A. The Contract Documents are subject to revision prior to the time fixed for opening bids by submitting the revision, in writing, to all persons who are known by Owner to have secured such documents for purposes of submitting bids. All addenda issued shall become an integral and integrated part of the contract documents and shall be included in any bid submitted.

1.09 OPENING OF BIDS

- A. Sealed Bids for the Contract will be received by Kimberly Newman, Town Manager, 19 School Road., Town of Orleans, Orleans, MA 02653 **until 12:00 P.M., local time on Friday, 8/22/2025** and at that time and place will be publicly opened and read aloud.

1.10 AWARD OF CONTRACT OR REJECTION OF BIDS

- A. Bids may be rejected if they show any alterations of form, additions not called for, conditional bids, incomplete bids, erasures, or irregularities of any kind. The Owner reserves the right to waive any irregularities in the bids as received.
- B. The basis for determining the lowest bid will be the lowest total sum of Bid Items 1 through 9 as listed in **Exhibit "A"** to Bid – Bid Schedule (see Section 00400 Bid).
- C. The Owner reserves the right to reject any or all bids. More than one bid from an individual, firm or partnership, corporation or association, under the same or different name, will not be considered. Reasonable grounds for believing that a bidder is interested in more than one bid for work contemplated, will cause the rejection of all bids in which said bidder is interested. Bids in which prices are considered unbalanced may be rejected by the Owner.

1.11 COMPETENCY OF BIDDERS

- A. Bidders may be required to furnish evidence of financial competency, organizational ability and experience to enable him/her to undertake and successfully complete the work to be performed, including past performance which shall include past performance on projects performed for the Owner.

1.12 BONDS AND INSURANCE

- A. Bidder's attention is directed to the provisions of the contract documents relating to the requirements of contract bonds. The successful bidder, simultaneously with execution of

the Agreement, will be required to furnish a faithful performance bond in an amount equal to at least one hundred percent (100%) of the contract price, and a labor and material bond in an amount equal to at least one hundred percent (100%) of the contract price; both said bonds to be secured from a corporate surety admitted in the Commonwealth of Massachusetts and shall be satisfactory to the Owner.

- B. Bidder's attention is further directed to the provisions relating to the Contractor's insurance requirements, and the prescribed form of Bidder's Bond, Agreement, Contract Bonds and insurance documentation.

1.13 CONTRACT PROGRESS SCHEDULE

- A. Bidder's attention is directed to the provisions of the Contract Documents relating to the requirement for the submission of a contract progress schedule after the receipt of the Notice to Proceed.

1.14 LEGAL RELATIONS AND RESPONSIBILITIES

- A. Bidder's attention is specifically directed to the provisions of the General Conditions concerning laws to be observed, hours of labor, minimum wages, employment of labor, safety codes, patents, taxes, and other matters of concern to the bidder.
- B. The prevailing wages to be paid mechanics, apprentices, teamsters, chauffeurs, and laborers on the Project shall be established by the Prevailing Wage Schedule, as determined by the Commissioner of Labor and Industries, pursuant to the provisions of M.G.L. Chapter 149, Section 26 to 27D, inclusive, as amended, which schedule is included in the Contract Documents (See **Attachment C**).

1.15 SUB-CONTRACTORS

- A. Each bidder must state in his/her bid the Sub-Contractors he/she intends to employ to perform any work or labor, or render service to the Contractor for the construction of the work or improvement in an amount in excess of one half of one percent of the Contractor's bid. This statement shall include the name of each Sub-Contractor, the location of his/her place of business, and the nature of the work to be performed by him/her.

*****END OF SECTION*****

SECTION 00400

BID

Dear Owner:

The undersigned, as a bidder, declares that he/she has carefully examined the location of the proposed work, the proposed form of Agreement, and Contract Documents, and he/she proposes and agrees that, if this bid is accepted, he/she will contract with the Owner to provide all necessary machinery, tools and apparatus, to do all the work and furnish all the materials specified in the Contract Documents in the manner and time therein set forth required to complete the

**GOOSE HUMMOCK BOAT RAMP BULKHEAD REHABILITATION
TOWNS OF ORLEANS, MA**

The work to be performed pursuant to this Bid shall be in strict conformity with the Contract Documents prepared therefore by the Owner, copies of which are on file in the office of the Town Manager, which Contract Documents are hereby made a part thereof, and incorporated by this reference as if fully set forth herein.

The bidder proposes and agrees to contract with the Owner to furnish and perform all of the above described work, for the following **TOTAL BID PRICE**, to wit:

(\$) _____ U.S. Dollars

A breakdown of the Contract pricing is attached hereto marked **Exhibit "A"** and incorporated by this reference.

Owner reserves the right to add or delete items from this list. The price of the contract shall be adjusted accordingly. The price set forth herein includes any and all costs and expenses of whatever source or nature for the work to be performed pursuant to the terms and conditions of the Contract Documents.

If awarded the contract, the undersigned hereby agrees to sign said contract and to furnish the necessary bonds and insurance certificates within ten (10) days after being requested to do so by the Owner.

The undersigned has examined the location of the proposed work and is familiar with the Contract Documents and the local conditions at the place where the work is to be done.

The undersigned has checked carefully all of the above figures and understands that the Owner will not be responsible for any errors or omissions on the part of the undersigned in making up this bid.

The undersigned hereby certifies that this bid is genuine, and not sham or collusive, or made in the interest or in behalf of any person not herein named, and that the undersigned has not directly or indirectly induced or solicited any other bidder to put in a sham bid or any other person, firm or corporation to refrain from bidding and that the undersigned has not in any manner sought by collusion to secure for himself or herself an advantage over any other bidder.

Enclosed find bidder's bond or certified check in the amount of five (5%) percent of the TOTAL Bid for _____ (\$ _____) to guarantee execution of contract and furnishing of the necessary bonds as above provided, if awarded the contract.

The undersigned has satisfied him/herself by personal examination of the location of proposed work, and by such other measures as they may prefer, as to the actual conditions and requirements of the work, and shall not, after submission of the bid, dispute, complain or assert that there was any misunderstanding in regard to the nature or amount of the work to be done.

Contractor acknowledges receipt of Addenda Nos. _____ through _____.

Company: _____

Principal's Signature: _____

Signed by : _____

Title : _____

Address : _____

Telephone : _____ **Fax:** _____

Email: _____

Dated this _____ **day of** _____, 20__

License No. _____ **Class(es)** _____

Exp. Date: _____

NOTE: Bidders must hold current licenses as required under the laws of the Commonwealth of Massachusetts and all Federal Statutes.

EXHIBIT “A” TO BID

BID SCHEDULE

ITEM NUMBER	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE DOLLARS CENTS	AMOUNT DOLLARS CENTS
1	1 LS	MOBILIZATION/DEMOBILIZATION _____ Dollars () per LUMP SUM		
2	1 LS	SITE PREPARATION _____ Dollars () per LUMP SUM		
3	1 LS	DEMOLITION, REMOVAL, AND DISPOSAL _____ Dollars () per LUMP SUM		
4	2 EA	FURNISH AND INSTALL GROUTED ANCHORS _____ Dollars () per EACH		
5	143 LF	FURNISH AND INSTALL STEEL SHEET PILE BULKHEAD & CONCRETE CAP _____ Dollars () per LINEAR FOOT		
6	30 SF	FURNISH AND INSTALL PILE SUPPORTED TIMBER PIER _____ Dollars () per SQUARE FOOT		
7	132 LF	FURNISH AND INSTALL STEEL- BACKED TIMBER GUARDRAIL TYPE B _____ Dollars () per LINEAR FOOT		
8	1 LS	FURNISH AND INSTALL 36” RCP EXTENSION & FLAP GATE _____ Dollars () per LUMP SUM		

TOWN OF ORLEANS
GOOSE HUMMOCK BOAT RAMP BULKHEAD REHABILITATION
1 MA-6A, ORLEANS, MA 02653

ITEM NUMBER	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE DOLLARS CENTS	AMOUNT DOLLARS CENTS
9	1 LS	SITE RESTORATION _____ Dollars () per LUMP SUM		
TOTAL BID AMOUNT (ITEMS 1 -11)				

SEE MEASUREMENT AND PAYMENT SECTION 01 02 50 - FOR DESCRIPTION OF BID ITEMS REFERENCED ABOVE.

LIST OF SUB-CONTRACTORS

Any person making a bid or offer to perform the work, shall in his or her bid or offer, set forth:
(a) The name and location of the place of business of each Sub-Contractor who will perform work or labor or render service to the prime Contractor in or about the construction of the work or improvement, or a Sub-Contractor licensed by the Commonwealth of Massachusetts who, under subcontract to the primary Contractor specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime Contractor's total bid; (b) The portion of the work which will be done by each such Sub-Contractor under this act. The prime Contractor shall list only one Sub-Contractor for each such portion as defined by the prime Contractor in his or her bid.

Any item of work, which does not set forth a designated Sub-Contractor will be done by the Prime Contractor.

Name & Address

Portion of Work

(Prime Contractor)

Signed by: _____

Title : _____

(TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID)

**TOWN OF ORLEANS
CERTIFICATE OF NON-COLLUSION**

Project Name: **Goose Hummock Boat Ramp Bulkhead Rehabilitation**

Pursuant to M.G.L. Ch. 30B Section 10, the undersigned certifies under penalties of perjury that this bid or bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word “person” shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

(Signature of individual submitting bid or bid)

(Name of business)

(TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID)

STATEMENT OF STATE TAX COMPLIANCE

Project Name: **Goose Hummock Boat Ramp Bulkhead Rehabilitation**

Pursuant to Ch. 233 of the Acts of 1983, §49A(b),

I, _____, acknowledge that I am the authorized signatory for _____, whose principal place of business is at _____, and as such, do hereby certify under the pains of penalties of perjury that this company has complied with all laws of the Commonwealth relating to taxes and child support.

Social Security or Federal ID Number _____

Subscribed and sworn to this _____ day of _____, 20____.

Notary Public

(TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID)

ACKNOWLEDGEMENT OF PRINCIPAL, IF A CORPORATION:

State of _____

County of _____ SS:

On this _____ day of _____, 20____, before me personally came and appeared _____ to me known, who, being by me duly sworn, did depose and say to me that he resides at _____, that he is of _____, the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the impressions affixed to said instrument is an impression of such seal; that it was so affixed by the order of the directors of said corporation, and that he signed his name thereto by like order.

(Seal)

Contractor's Signature

Notary Public Signature

My Commission expires on: _____

ACKNOWLEDGEMENT OF PRINCIPAL, IF A PARTNERSHIP:

State of _____

County of _____ SS:

On this _____ day of _____, 20____, before me personally came and appeared to me known, and known to me to be one of the members of the firm of described in and which executed the foregoing instrument and he acknowledged to me that he executed the same as and for the act and deed of said firm.

(Seal)

Contractor's Signature

Notary Public Signature

My Commission expires on: _____

BIDDER CERTIFICATIONS

1.01 GENERAL

- A. The undersigned Bidder certifies to the Owner, as set forth in sections 1 through 12 below.

1. Certificate of Non-Discrimination

By my signature hereunder, on behalf of the Bidder making this Bid, the undersigned certifies that there will be no discrimination in employment with regard to race, color, religion, gender, sexual orientation, or national origin; that all federal, state, and local directives and executive orders regarding non-discrimination in employment will be complied with; and that the principle of equal opportunity in employment will be demonstrated positively and aggressively.

2. State of Convictions

By my signature hereunder, I hereby swear, under penalty of perjury, that no more than one final, unappealable finding of contempt of court by a Federal Court has been issued against Bidder within the past two years because of failure to comply with an order of a Federal Court or to comply with an order of the National Labor Relations Board.

3. Previous Disqualifications

By my signature hereunder, I hereby swear, under penalty of perjury, that the below indicated Bidder, any officer of such Bidder, or any employee of such Bidder who has a proprietary interest in such Bidder, has never been disqualified, removed or otherwise prevented from bidding on, or completing a Federal, State, or local government project because of a violation of law or a safety regulation except as indicated on the separate sheet attached hereto entitled "Previous Disqualifications." If such exceptions are attached, please explain the circumstances.

4. Certification of Workers Compensation Insurance

By my signature hereunder, as the Contractor, I certify that I am aware of the provisions of Title 28-29 Labor and Labor Relations of the General Laws of Massachusetts which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that law, and I will comply with such provisions before commencing the performance of the Work of this Contract.

5. Certificate Of Non-Collusion

In accordance with Massachusetts General Law Chapter 40, Section 4B ½, Chapter 30, Section 39M and/or Chapter 30B, Section 10: Undersigned certifies under penalties of perjury that this bid or bid is in all respects bona fide and fair and has been made and submitted in good faith without collusion or fraud with

any other person. As used in this certification, the work "person" shall mean any natural person, joint venture, business, partnership, corporation, union, committee, club, organization, group of individuals, or other business or legal entity.

6. Conflict Of Interest

The bidder must certify that no official or employee of the Town of Orleans has a financial interest in the bidder's bid or executed Contract, or in the expected profit to arise therefrom, unless there has been compliance with the provisions of MGL C 43, Section 27 (Interest in Public Contracts by Public Employees) and of provisions of MGL C 268A, Section 20 (Conflict of Interest Law).

7. Indemnification Agreement

The contracted Bidder hereby indemnifies and shall at all times save and hold harmless the Town of Orleans, and its officers, attorneys, employees, and agents from and against any and all claims (including workers' compensation and wage claims), demands, suits, actions, liabilities, damages, penalties, judgments, and costs and expenses, including without limitation the costs and expenses of litigation, of or by anyone that in any way is caused by, arises out of, or is occasioned by the performance, activities, operations, conducts, negligence, or omissions of the contracted Bidder, or any of its agents or employees.

8. Taxes Paid

Pursuant to Massachusetts General Laws, Chapter 62C, Section 49A, the undersigned certifies under the penalties of perjury that, to the best of my knowledge and belief, all Massachusetts State Tax returns and all Massachusetts State Taxes required under law have been paid, and I have complied with the reporting of employees and Contractors, and withholding and remitting of child support.

9. Right To Know Law

Bidder agrees to submit a Material Safety Data Sheet (MSDS) for each toxic or hazardous substance or mixture containing such substance, pursuant to MGL Chapter 111F, Sections 8, 9, 10 and the regulations contained in 454 CMR 21.06 when deliveries are made; and agrees to deliver all containers properly labeled pursuant to MGL Chapter 111F, Section 7 and 454 CMR 21.05. Failure to submit an MSDS and/or label on each container will place the vendor in non-compliance with the Purchase Order and/or Contract. Failure to furnish MSDS and/or labels on each container may result in civil or criminal penalties. All vendors furnishing substances or mixtures subject to MGL Chapter 111F or 454 CMR are cautioned to obtain and read the Law and Rules and Regulations. Failure to comply with these requirements could result in cancellation of Contract.

10. Foreign Corporation

In Accordance with Massachusetts General Laws Chapter 30, Section 39L, any foreign Contractor or Sub-Contractor is required to provide a certificate from the

Secretary of State stating that such corporation has complied with Massachusetts General Laws Chapter 181, Section 3 and 5, including the date of compliance. Further, bidder's attention is called to Massachusetts General Laws Chapter 268A, in connection with which the bidder is requested to submit the information requested in the signature section of this document.

11. Compliance

The undersigned is in compliance with all of the provisions, and shall remain in full compliance with the provisions for the life of any Contract resulting from this solicitation. Bidder is qualified to perform any such Contract and possesses, or shall obtain, all requisite licenses and/or permits to complete performance; shall maintain all unemployment, workers' compensation, and personal liability insurance policies sufficient to cover its performance under any such Contract; and shall comply with relevant prevailing wage rates and employment laws. To the best of its knowledge and belief has paid all local taxes, tax titles, utilities, motor vehicle excise taxes, water and wastewater bills in Massachusetts as required by Law.

12. Affirmative Action Plan

In witness whereof, the bidder certifies under the pains and penalties of perjury, that as an employer, it is committed to non-discrimination in employment and if selected to execute contracts with the Commonwealth of Massachusetts and/or the Town of Orleans shall also be committed to procure commodities, services and supplies from certified minority and women-owned business enterprises, businesses owned by individuals with disabilities and businesses owned and controlled by socially or economically disadvantaged individuals, both in the performance of contracts with the Commonwealth of Massachusetts and/or the Town of Orleans execution of this certification by an authorized signatory of the bidder as of the last date indicated below.

1.02 INSURANCE AND BOND VERIFICATION

A. The undersigned Bidder Certifies that he has the following insurance coverage:

1. Workers' Compensation:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

2. General Liability:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

3. **Automotive Liability:**

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

4. **All-risk Course of Construction (as applicable):**

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

5. **Excess Liability (if applicable):**

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

B. Additional endorsements to insurance are required for the following coverages:

1. Additional Insured

It is hereby understood and agreed that Additional Insured for General Liability and Auto Liability Coverage shall include: The Owner, its Board, commissions, committees, boards, officers, employees, and agents as additional insured as respects to work done by Named Insured.

2. Primary Coverage

With respect to claims arising out of the operations of the Name Insured, such insurance as afforded by the policy is primary, and is not additional to or contributing with any other insurance carried by or for the benefit of the above Additional Insureds.

3. Cross Liability/Severability of Interest

The naming of more than one person, firm or corporation as insured under this policy shall not, for that reason alone, extinguish any rights of the insured against another, but this endorsement, and the naming of multiple insureds, shall not increase the total liability of the Company under this policy.

4. Notice of Cancellation for General Liability and Auto Liability

It is understood and agreed that in the event of cancellation of or reduction in the policy for any reason, including non-payment of premium, 30 days written notice will be sent to the Project Engineer.

C. The name of the Bidder's Bonding Company is as follows:

Carrier/Surety: _____

Address: _____

Phone and Fax: _____

A.M. Best Rating: _____

1.03 RELEVANT EXPERIENCE

- A.** List Bidder's comparable projects completed by Bidder in the last five (5) years, with Owner contact information. (Attach separate sheets if necessary).

- B.** List any projects where Bidder has been default terminated by an Owner or has been involved in arbitration/litigation with an Owner on a construction project. Provide Owner contact information:

1.04 SAFETY & EXPERIENCE RECORD

- A.** The following statements as to safety and experience of Bidder are submitted, and Bidder

- B.** guarantees the truthfulness and accuracy of the information:

1. Safety

- a. List Bidder's Interstate Experience Modification Rate for the last three years.

2022: _____
2023: _____
2024: _____

- b. State the name of Bidder's safety Project Engineer/manager or Site Safety Officer: _____

1.05 CONTRACTOR EXPLANATION OR NOTES ON ANY OF THE ABOVE:

1.06 LIST OF ALL EQUIPMENT TO BE USED ON THIS PROJECT (include year, type, size and condition):

1.07 CONTRACTOR'S NARRATIVE ON CONSTRUCTION SCHEDULE AND METHODOLOGY: *(Please describe in as much detail as possible how your firm/company will proceed with the work as described within the contract documents. Attach or utilize additional sheets if necessary. The Construction Schedule will be requested upon the award of the Contract).*

BIDDER CERTIFIES, UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE COMMONWEALTH OF MASSACHUSETTS, THAT THE FOREGOING INFORMATION IS CURRENT AND ACCURATE AND AUTHORIZES OWNER AND ITS AGENTS AND

REPRESENTATIVES TO OBTAIN A CREDIT REPORT AND/OR VERIFY ANY OF THE ABOVE INFORMATION.

BIDDER: _____
(COMPANY NAME)

BY: _____
NAME TITLE

BY: _____
SIGNATURE DATE

NOTE: This bid must bear the written signature of the Bidder. If the Bidder is a partnership, the bid must be signed by a partner. If the Bidder is a corporation, the bid must be signed by a duly authorized officer or agent of such corporation.

CERTIFICATE OF VOTE OF AUTHORIZATION
(TO BE SUBMITTED WITH BID)

I, Clerk of _____
(Name of Corporation)

the principal office of which is located at: _____
(Address of Principal Office)

do hereby certify that a duly authorized meeting of the Board of Directors of the above-named corporation held on: _____, at which all Directors were
(Date)

present or waived notice, it was VOTED that:

(Name)
_____ of this corporation be and hereby is authorized to
(Office)

execute contracts, bonds, and other instruments in the name and behalf of said corporation and affix its corporate seal thereto, and such execution of any contract or other instrument or obligation in this corporation's name on its behalf by the above-named officer shall be valid and binding on this corporation.

I hereby certify that I am the Clerk of this corporation and that the above-named officer was duly elected to the above-stated office and that the above-stated VOTE has not been amended or rescinded and remains in full force and effect as of the date of this contract executed with the Town of Orleans.

A true copy,

Attest:

_____, Clerk

(Corporate Seal)

OSHA TRAINING CERTIFICATION OF CONTRACTORS

The Town of Orleans will comply with the amended M.G.L. C. 30 section 39S “**Contracts for Construction: Requirements**” as follows:

The Town of Orleans in all bids and contracts that fall under the application of this law, as amended, will require bidders and/or Contractors to comply with the requirements of certifying that they and their employees have complied with M.G.L. C.30 section 39S. This law requires successful completion of a 10 hour OSHA safety training course prior to working on the Town’s worksite or in the work subject to the bid or contract.

The Town will reject any bids that do not include proper certification submitted with the bids at the posted time for bid opening, however, the town may, at its sole discretion, allow up to two (2) working days for the Contractor to submit the required certification. In those cases where contracts are offered without using the sealed bid process, the same certification will be due upon contract signing.

It is expected that the Contractor, by signing the certification form provided with the bid is fully meeting the language of the law, as amended, and that they are accepting the responsibilities to comply with the law for the full term of the work.

The statute indicates that with the first certified payroll submitted to the Town, documentation must be provided that each employee on the payroll documents submitted to the Town has successfully completed the OSHA training.

Any employee whose name does not appear on the first certified payroll must submit certification with the first payroll they do appear on. Failure to provide full documentation may result in a delay in payment to the vendor as the packet submitted for payment would be determined to be incomplete.

Any employee found on a worksite subject to this section without documentation of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal.

This certification requirement will go into effect for any bids received or contracts awarded in accordance with M.G.L. C30 39s as amended by Chapter 306 of the Acts of 2004.

CERTIFICATION FORM
(To Be Attached and Submitted with Bid)

**OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
(OSHA) TRAINING**

In accordance with Massachusetts General Law Chapter 30, Section 39S, as amended by Chapter 306 of the Acts of 2004, for all contracts for the construction, reconstruction, alteration, remodeling or repair of any public work or the construction, reconstruction, installation, demolition, maintenance or repair of any public building estimated to cost more than \$10,000. The Contractor hereby certifies to the following:

(a) (1) that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration.

(b) Any employee found on a worksite subject to this section without documentation of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal.

(c) The attorney general, or his designee, shall have the power to enforce this section including the power to institute and prosecute proceedings in the superior court to restrain the award of contracts and the performance of contracts in all cases where, after investigation of the facts, he has made a finding that the award or performance has resulted in violation, directly or indirectly, of subsection (b), and he shall not be required to pay to the clerk of the court an entry fee in connection with the institution of the proceeding.

The undersigned hereby certifies under the penalties of perjury to the above:

Company: _____

Authorized Signature: _____

Print Name: _____

Title: _____

Date: _____

Telephone: _____ **Email:** _____

SECTION 00500
AGREEMENT

Made in triplicate this the ____ day of _____ between the **Town of Orleans, MA**
AND _____, hereafter the "Contractor".

WITNESSETH: That for and in consideration of the following mutual covenants contained herein the parties agree with each other as follows:

ARTICLE 1 – PROJECT REQUIREMENTS: The Contractor agrees to sell and/or deliver to the Town materials and/or services in accordance with the following:

The contractor shall perform everything required to be performed, shall provide and furnish all of the labor, equipment, materials, and tools to perform, within seven (7) calendar days after the NOTICE TO PROCEED, which is anticipated to be given on/about 11/1/2025 and contingent upon funding appropriation and receipt of all environmental permits for the following work:

GOOSE HUMMOCK BOAT RAMP BULKHEAD REHABILITATION
TOWNS OF ORLEANS, MA

in strict accordance with the Contract Documents pertaining thereto and signed by the Project Engineer for the Owner, which Documents are incorporated herein and made a part of this Agreement as if herein fully set forth. Subject to all authorized modifications, **all work must be completed by no later than Sunday, 3/15/2026.**

- | | |
|-------------------|--|
| Exhibit 1. | Bid Documents |
| Exhibit 2. | Bid |
| Exhibit 3. | Certificate of Non-Collusion |
| Exhibit 4: | Statement of State Tax Compliance |
| Exhibit 5. | Acknowledgment of Principal |
| Exhibit 6. | Certificate of Insurance |
| Exhibit 7. | Performance Bond |
| Exhibit 8. | Payment Bond |
| Exhibit 9. | Addenda (if issued) |

ARTICLE 2 – CONTRACT AMOUNT: The Town agrees to process the bills for payment to the Contractor upon the execution of the contract, satisfactory completion of the services as outlined in the specifications and approval by the appropriate Department Manager, Town Manager and Town Accountant in the amount of _____ -- and 00/100 (\$ _____.) Dollars.

ARTICLE 3 - SUPERVISION: All of the work to be done shall be done under the direction and supervision of, and to the approval of, Owner or its authorized representative, and the work shall be done in the best workmanlike manner, conforming strictly to the provisions of the specifications and plans made thereof. The Contractor shall be required to submit to the Owner a list of Subcontractors it intends to use at a certain date to be specified by the Owner. The Contractor shall not use any Subcontractor to which the Owner objects and to which the Owner provides written notice of such objection to the Contractor.

ARTICLE 4 - COMPLIANCE WITH LAWS: The Contractor shall comply with all applicable provisions of the Massachusetts General Laws inclusionary of any and all Labor and Labor Relations Statutes. This Contract shall be considered to include in their entirety all terms respecting workers' compensation insurance and other terms required to be included in it by Chapter 152 of the Massachusetts General Laws, as amended, and applicable provisions of any other laws, including, without limitation, Chapter 30, Sections 39F, 39G, 39K, 39L, 39M, 39N, 39O, 39P, and 39R of the Massachusetts General Laws, as amended, and Chapter 149, Sections 25, 30, 34, 34A, and 34B of the Massachusetts General Laws, as amended, and Chapter 82, Section 40 of the Massachusetts General Laws, as amended, as though such terms were set forth in their entirety herein.

Before the Agreement between Owner and Contractor is entered into, Contractor shall submit written evidence that it and any Sub-Contractors have obtained for the period of the Contract full Workers' Compensation insurance coverage for all persons whom they employ or may employ in carrying out the work under this Contract. This insurance shall be in accordance with the requirements of the most current and applicable state Workers' Compensation insurance laws. The Contractor in signing this Agreement certifies to Owner as true the following statement:

I am aware of the provisions of Massachusetts General Laws, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Contract.

ARTICLE 5 - PERFORMANCE STANDARDS: The Work must be performed and completed in accordance with all requirements of law and no Work shall be undertaken until Contractor has been issued all required permits from all applicable municipal, state and federal governmental bodies. "Completion" of the Work includes obtaining all certificates, or amendments of existing certificates, as the case may be, which relate to the performance of the Work. Unless otherwise specified in this Agreement, the Work must be performed in a good and workmanlike manner and in accordance with the best modern practice and with materials and workmanship of the highest quality. Contractor shall check and verify all dimensions, grades, and levels before commencement of performance and whenever necessary during the progress thereof.

ARTICLE 6 – PAYMENTS: Owner shall pay the Contractor for complete and accepted performance of the Work, subject to additions and deductions by Change Orders. The Contractor agrees to provide with each payment application (invoice), lien waivers sufficient to discharge any liability from the Owner to Contractor. Partial payments shall cover work completed through the 25th calendar day of each month for contracts where the number of working days exceeds twenty

(20). No partial payments will be made for contracts having a time limit of twenty (20) days or less, unless completion has been significantly delayed by causes which are clearly not the fault of the Contractor. When partial payments are to be made, the Contractor shall submit to the Owner, on Owner' forms, an estimate of the total amount of work accomplished, which will show the computed amount due less a retention which shall be 5% of the value of the work accomplished. No partial payments will be made for materials stored on the job but not yet installed, unless otherwise provided in the Contract Documents. Each request for payment application must be approved by the Project Engineer and will not be considered as submitted until the Owner, Contractor and Project Engineer agree to unit quantities covered by the payment application. Once Owner has received the approved request for payment application, Owner shall process the Contractor's invoice and pay Contractor any undisputed amount within thirty (30) calendar days from the date of receipt of a complete application for payment from Contractor. Pursuant to M.G.L. c.44 §31C, the contract shall not be deemed to have been made until the auditor or accountant or other officer of the Town or Town having similar duties has certified thereon that an appropriation in the amount of the contract is available therefor and that an officer or agent of the Town, Town, or Awarding Authority has been authorized to execute said contract and approve all requisitions and change orders. No order to the Contractor for a change in or addition to the work, whether in the form of a drawing, plan, detail or any other written instruction, unless it is an order which the Contractor is willing to perform without any increase in the contract price, shall be deemed to be given until the auditor or accountant, or other officer of the Awarding Authority having similar duties, has certified thereon that an appropriation in the amount of such order is available therefore; but such certificate shall not be construed as an admission by the Awarding Authority of its liability to pay for such work. The certificate of the auditor or accountant or other officer of the Awarding Authority having similar duties that an appropriation in the amount of the contract or in the amount of such order is available shall bar any defense by the Awarding Authority on the grounds of insufficient appropriation.

ARTICLE 7 - JOB SITE: The Contractor shall at all times enforce strict discipline and good order among its employees and shall not employ on the Work any unfit person or anyone not skilled in the assigned task. The Contractor at all times shall keep the job site free from accumulation of waste materials or rubbish caused by its operations. At the completion of the Work, it shall remove all its waste materials and rubbish from and about the job site as well as its tools, construction equipment, machinery and surplus materials. The Contractor shall comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the Work, the safety of persons and property and their protection from damage, injury, or loss. Contractor shall provide repair response within twenty-four (24) hours of request by Owner during the course of performance of the Work under this Agreement for any repair work that has been poorly constructed and or performed or any work that results in either consequential or actual damage to any property associated with the Contractor's operations. The Contractor shall be solely responsible for compliance with laws and regulations governing the handling, storage, use or disposal of hazardous materials or wastes used, stored, generated or disposed of in connection with construction of the Work and shall obtain all permits and approvals, give all required notices, and observe all applicable procedures prescribed by the EPA, DEP or other governmental authorities having jurisdiction with respect to such activities. At the Owner's request, the Contractor shall properly furnish the Owner with evidence satisfactory to the Owner

demonstrating the Contractor's compliance with such procedures, the giving of such notices, and the issuance of such permits and approvals.

ARTICLE 8 - STORAGE OF MATERIALS: Materials and equipment shall be stored in a neat and orderly manner at locations designated by the Owner, taking all necessary precautions to prevent fire hazards and spontaneous combustion and to conform to the requirements of all applicable regulatory agencies and insurance policies.

ARTICLE 9 - EQUIPMENT AND MATERIALS: Contractor shall furnish all labor, tools, scaffolding, ladders, equipment, supplies and materials required in performing all Work under this Agreement. Owner assumes no liability or responsibility for the care, safety, or preservation of any tools, machinery, equipment, material or supplies and all risks thereof are assumed by Contractor. If the Contractor persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if the Contractor fails to make prompt payment to Subcontractors or for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction or disregards an instruction, order or decision of the Engineer, or otherwise is guilty of a substantial violation of any provision of the Contract, then the Contractor shall be in default, and the Owner may, without prejudice to any other right or remedy and upon written notice to the Contractor of such default, take possession of all materials, tools, appliances, equipment, construction equipment and machinery and vehicles, offices and other facilities on the Project site, and all materials intended for the Work, wherever stored, and, if such default is not cured within seven (7) days after such notice, may terminate the employment of the Contractor, accept assignment of any or all subcontracts, and finish the Work by whatever method the Owner may deem expedient. The Owner shall be entitled to collect from the Contractor all direct, indirect, and consequential damages suffered by the Owner on account of the Contractor's default, including without limitation additional services and expenses of the Engineer made necessary thereby. The Owner shall be entitled to hold all amounts due the Contractor at the date of termination until all of the Owner's damages have been established, and to apply such amounts to such damages.

ARTICLE 10 - SAFETY PROCEDURES: Contractor shall at all times take all necessary and customary precautions in introducing and maintaining safety measures to protect the persons and property of others on or adjacent to the Work site against all damage, loss, or injury resulting from the Work involved under this Agreement. Contractor shall comply with any site specific safety plans for the individual project properties. Protective arrangements will be taken in all instances to prevent Work operations from in any way damaging the premises or any personal property or any other work or operations, and from causing or allowing any pollution to leak, flow, or escape into any waterway or sewer. Contractor's obligation to protect shall include the duty to provide, place, and adequately maintain at or about the Worksite suitable and sufficient guards, lights, barricades, and enclosures. Contractor shall dispose of all hazardous materials used or produced in connection with this Agreement in the manner required by law.

ARTICLE 11 - PERMITS AND TAXES: The Contractor shall pay any and all federal, state, and municipal taxes for which the Contractor may be liable in carrying out this Agreement.

ARTICLE 12 - LIQUIDATED DAMAGES: Subject to all authorized modifications, it is hereby agreed by the parties to the Agreement that in case all work called for under the Agreement is not finished or completed on or before the time set forth in this Agreement, damage will be sustained by Owner, and that it is and will be impracticable and extremely difficult to ascertain and determine the actual damage which the Owner will sustain in event of and by reason of such delay; Liquidated damages (which are damages and not a penalty) have been read, negotiated and agreed to by both parties as set forth in the project specifications at \$1,500.00 per calendar day. Time is of the essence in all respects on this Contract. The contractor shall accordingly prosecute all Work diligently, using such means and methods of construction as will assure full completion not later than the dates set forth, respectively, as such dates may for good cause (as set forth in the Construction Documents) be extended by the Owner. Nothing in this Article, however, grants the Contractor the privilege to use means or methods that do not accord with sound and accepted practices. The amounts of liquidated damages shall be cumulative and may, at Owner's option, be deducted in whole or in part as a credit from any Contract Sum amounts then owed Contractor or which may have been paid to the Contractor. If no amounts are then owed to Contractor, Contractor shall pay to Owner the amount of liquidated damages upon written demand. The liquidated damages shall cease once the Contractor has fully and completely any breach as set forth hereunder.

ARTICLE 13 - ABANDONMENT; INCREASE: All Work shall be performed according to a mutually agreed upon schedule. The suspension of work by the Contractor for any reason (other than the sole fault of the Owner) which exceeds four hundred and eighty hours (480) hours shall be deemed abandonment of the project by the Contractor, and the Owner shall have available any and all remedies, including but not limited to surety participation pursuant to the terms of the Performance Bond. The Contractor shall furnish sufficient forces, plant and equipment as may be necessary to insure the progress of the Work in accordance with the Project Schedule. If, in the opinion of the Owner, the Contractor has fallen behind the Project Schedule, the Contractor shall submit its bid demonstrating the manner in which the desired rate of progress may be increased and shall take such steps, at the Contractor's own cost, as may be necessary to meet the Project Schedule. It shall be the responsibility of the Contractor to maintain its schedule so as not to delay the progress of the Work or the scheduled work of separate Contractors.

It is further agreed that in case the work called for under this Agreement is not completed in all of its parts and requirements within the number of calendar days specified, Owner shall have the right to increase the number of calendar days or not, as may seem best to serve the interest of Owner; and if it is decided to increase the said number of calendar days, Owner shall further have the right to charge to Contractor, and deduct from the final payment for the work, all or any part, as Owner may deem proper, of the actual cost of engineering, inspection, superintendence, and other overhead expenses of Owner which are directly chargeable to this Agreement, except that the cost of final surveys and the preparation of the final estimate shall not be included in such charges to be paid by Contractor.

ARTICLE 14 – INDEMNIFICATION: The Contractor hereby indemnifies and shall at all times save and hold harmless the Town of Orleans, and its officers, attorneys, employees, and agents from and against any and all claims (including workers' compensation and wage claims), demands, suits, actions, liabilities, damages, penalties, judgments, and costs and expenses, including without limitation additional engineering costs and attorney's fees and the costs and expenses of litigation,

of or by anyone that in any way is caused by, arises out of, or is occasioned by the performance, activities, operations, conducts, negligence, or omissions of the Contractor, or any of its agents or employees, including Sub-Contractors. The Contractor shall compensate the Town of Orleans for all damage to Town property of any nature arising out of the Contractor's work. To the fullest extent permitted by law, the Contractor shall indemnify, defend, and hold harmless the Town of Orleans and all of its officers, employees, boards, commissions, committees, agents and representatives from and against all claims, causes of action, suits, costs, damages, and liability of any kind which arise out of the breach by the Contractor of its obligations under this Contract, or the act or omission of the Contractor, its subcontractors, or their officers, employees, agents and representatives or anyone directly or indirectly employed by them, or anyone for whose acts or omissions they may be liable, regarding the work to be performed by the Contractor under the Contract, or which arise out of the violation of any federal, Massachusetts or Town statute, by-law, rule, regulation, order or directive, or which relate to personal injury or property damage suffered by the Contractor or any of its officers or employees regarding the subject matter of this Contract. Said costs shall include, without limitation, reasonable legal costs, collections fees, and counsel fees incurred in defending any claim or suit that may be brought against the Town and any judgment that may be obtained in any such claim or suit.

ARTICLE 15– INSURANCE: Contractor, at its sole cost and expense, shall acquire and maintain in full force and effect throughout the term of this Agreement Workers' Compensation, employer's liability, commercial general liability, and owned, non-owned and hired automobile liability insurance coverage relating to Contractor's Work to be performed hereunder covering Owner' and Department's respective risks, as their interest may appear, in form subject to the approval of the Owner. The minimum amounts of coverage corresponding to the aforesaid categories of insurance per insurable event shall be as follows:

<u>Insurance Category</u>	<u>Minimum Limits</u>
Workers' Compensation	Statutory minimum and endorsement for United States Longshoremen's & Harbor Workers Act, the Jones Act Coverages
Employer's Liability	Statutory minimum per accident for bodily injury or disease.
Commercial General Liability	\$1,000,000/\$3,000,000 per occurrence for bodily injury, personal injury and property damage.
Excess Liability (Umbrella)	\$3,000,000
Automobile Liability	\$1,000,000 per accident for bodily injury and property damage (coverage required to the extent applicable to Contractor's vehicle usage in performing work hereunder).

Any deductibles or self-insured retentions must be declared to, and approved by Owner. At the option of Owner either Contractor's insurer shall reduce or eliminate the deductibles or self-insured retentions with respect to Owner, its Board, commissions, boards, committees, officers, agents and employees, or Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

Concurrently with the execution of this Agreement, Contractor shall furnish Owner with certificates of the insurance required hereunder and, with respect to evidence of commercial general liability automobile liability and fire insurance coverage, original endorsements:

- (a) Precluding cancellation or reduction in coverage before the expiration of thirty (30) days after Owner shall have received written notification of cancellation or reduction in coverage first class mail.
- (b) Providing that Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability (cross liability endorsements);
- (c) Naming Owner, its Board, commissions, boards, committees, officers, employees and agents as additional insured's; and
- (d) Providing that Contractor's insurance shall be primary insurance relating to Contractor's work hereunder with respect to Owner, and further providing that any insurance or self-insurance maintained by Owner shall not be excess of Contractor's insurance and shall not be contributory with it.

ARTICLE 16 - FAITHFUL PERFORMANCE BOND: Contractor shall provide, on the execution of this Agreement, a good and sufficient corporate surety bond in the penal sum of one hundred percent (100%) of amount bid, which bond shall be conditioned upon the faithful performance of all work required to be performed by Contractor under this Agreement. Said bond shall be liable for any and all penalties and obligations which may be incurred by Contractor under this Agreement. Acceptance of the bond by the Owner is subject to the review and approval of the bond by the Owner Counsel's office. See the attached sample Performance Bond.

ARTICLE 17 - PAYMENT BOND: In addition to the faithful performance bond required herein, Contractor shall furnish a good and sufficient corporate surety bond in the penal sum of one hundred percent (100%) of amount of bid. Acceptance of the bond by the Owner is subject to the review and approval of the bond by the Owner Counsel's office. See the attached sample Payment Bond.

ARTICLE 18 - TIME DELAYS: If the Contractor is delayed in the performance of the Work due to changes ordered in the Work by the Owner or, by labor disputes, fire, unusual delay in

transportation, unavoidable casualties, certified natural disasters, then the contract time may be extended by a Change Order for such reasonable time as both parties have mutually agreed upon. Winter weather conditions are not a reason for a delay in the performance of work. Contractor agrees, as a special inducement to the Owner, to make no claim for damages for delay in the performance of this Contract occasioned by the Owner act, or omission to act, or anyone acting on the Owner's behalf; and Contractor agrees that any claim for delays by the Owner shall be fully compensated for by an extension of time to complete performance of the Contract Work.

ARTICLE 19 - PAYMENT OF MATERIALMAN AND LABORERS: The Contractor shall make prompt payment of all claims for labor performed and materials furnished, used or consumed in the Work, including without limitation fuel, lumber, building materials, machinery, vehicles, tractors, equipment, fixtures, apparatus, tools, appliances, supplies, electric energy, gasoline and other motor oil, lubricating oil and greases, and the premiums for Worker's Compensation insurance. Contractor shall indemnify and hold Owner harmless for any and all losses or expenses from any and all mechanic's or material man's liens from being filed on any Owner's Property. Should any mechanic's liens or materials man's liens be filed by Contractor agrees to have any and all releases cleared and satisfied prior to any payments being released. The Owner shall, in its discretion notify Contractor and or Contractor's representative of any lien and require Contractor to release liens as a condition precedent to further monthly progress payments.

ARTICLE 20 - FINAL PAYMENT: Upon completion of all the Work included under the Contract, the Contractor shall submit its final invoice. The Owner will, at the expiration of thirty (30) days after delivery of the approved payment application and acceptance, pay, and hereby binds itself to pay the Contractor for accepted work, except such sum or sums of money as may have been already paid, and as may be lawfully retained under any of the provisions of the Agreement herein set forth. Prior to the final payment, the Contractor will deliver to the Owner waivers of lien from all those who supplied labor, material, or services in completion of the Contract, together with satisfactory proof of full payment to such suppliers.

ARTICLE 21 - PAYMENTS AND COMPLETION: Any payment not made when duly due and owing to the Contractor shall bear interest at the rate of seven percent (7%) per annum from the date on which said amount is found to be due and payable until the date, which it is paid. Payments may be withheld on account of (1) Work defects not remedied, (2) claims filed, (3) failure of the Contractor to make payments properly to sub-Contractor's or for labor, materials or equipment, (4) damage of the Owner's property or neighboring property, or (5) failure to carry out the Work in accordance with this Agreement or any other breach of this Agreement.

ARTICLE 22 - CHANGE ORDERS: (a) Contractor understands that the Owner may modify or change the details of the Project so as to require the performance of extra Work. All change orders or modifications to the Agreement shall be in writing, signed by the Contractor and the Owner. If any changes are made, Contractor will perform the same but only after receiving a written order for such performance from the Owner, it being understood by Contractor that under no circumstances shall any extra Work be performed unless and until such written order is given to Contractor by the Owner. For any such extra Work performed, Contractor shall be compensated by the Owner at the unit prices set forth in the Contract Documents, or for unspecified items shall be negotiated by the Owner and Contractor in a commercially reasonable amount at the time the Change Order is signed. The Owner may at its election omit items from the Contract Work whenever the Owner deems it advisable to do so. And if the Owner shall notify Contractor of such

omission, the omitted Work shall not be performed and there shall be deducted from the Contract price at the stated amounts set forth in the Contract Documents or for unspecified items, a commercially reasonable amount at the time the Change Order is signed to compensate for the omission.

If any dispute shall arise at any time on a claim by Contractor that an item of Work is not Contract Work but extra Work, Contractor shall nevertheless perform the same if directed to do so by the Owner. However, to preserve Contractor's right to claim extra compensation for the disputed Work, Contractor must, prior to the commencement of the disputed Work, notify the Owner in writing that Contractor is performing the same under protest. The same procedure shall prevail as to any dispute as to a deduction for omitted Work (or as the case may be, to sustain Contractor's contention as to the appropriate compensation for extra Work that is not disputed to be an "extra" as long as the Contractor so notifies the Owner prior to commencement of the "extra") the notice in that circumstance to be given no later than ten (10) days after the tender of payment by the Owner to Contractor of the reduced amount (failing such written protest, it shall be deemed that Contractor has acquiesced to the Owner's contention that the Work is not extra but Contract Work or that the reduction (or amount of compensation for a non-disputed "extra" is correct, as the case may be). The giving of the protest provided for above, and giving it timely, are express conditions precedent to maintaining any remedial procedure, whether arbitration or otherwise, pertaining to Contractor's claim.

ARTICLE 23 - WARRANTIES AND CORRECTION OF WORK: Contractor warrants materials and workmanship to be in compliance with all applicable codes, ordinances and laws, constructed according to sound engineering and construction standards, in a workmanlike manner, and to be free from defects and liens at the time of installation and performance and as of the Completion Date. Contractor shall promptly perform such work and supply such materials necessary to correct, at its own expense, defects in materials and workmanship, and any Work failing to conform to the Agreement. In the event that Contractor fails to perform any Warranty Work within thirty (30) days of written notice by the Owner, or in the event that performance is not possible within such time period because of weather or other unavoidable delays and if the Contractor fails to provide a written undertaking to the Owner to perform such Warranty Work within a specific time period after notice, then the Owner shall be entitled to contract for the repairs or replacement of the defective work with a third party and Contractor agrees to reimburse the Owner for the costs of such Warranty Work promptly upon demand, together with interest at the rate provided herein on any sums unpaid under the Agreement and all costs of collection, including reasonable attorney's fees, if such reimbursement is not made within thirty (30) days of written demand therefore by the Owner.

ARTICLE 24 - COOPERATION WITH CONSULTANT: Contractor understands and agrees that the Owner has hired Foth Infrastructure & Environment, LLC (FOTH) as Construction Manager, Project Engineer, and Project Consultant. Contractor agrees to fully cooperate with FOTH or any other such person or organization with regard to such oversight.

ARTICLE 25 - DEFAULT AND TERMINATION: The following shall be considered to be Events of Default under the Contract:

- a. Contractor's failure to complete all Work in accordance with the schedule provided for in the Agreement;

- b. Contractor's failure to perform the Work described in the Agreement in accordance with the scope of services and specifications provided;
- c. The dissolution, termination of existence, insolvency, or business failure of the Contractor;
- d. The appointment of a receiver for any property belonging to Contractor;
- e. Contractor's making of an assignment for the benefit of creditors, or the commencement of proceedings under a bankruptcy or insolvency law by or against the Contractor;
- f. The failure of the Contractor to obtain or maintain any insurance coverage required under the contract; and
- g. Contractor's failure to comply with any of the Agreement terms as set forth in the specifications plans and permits required.

If an Event of Default is not corrected or remedied within five (5) working days of written notice of such default, then the Owner shall be entitled to terminate this Agreement without further notice. In such event, the Owner shall be entitled to contract for the completion of the Work to be performed under the Agreement by a third party and Contractor shall be responsible for all extra costs and damages incurred by the Owner.

ARTICLE 26 – NOTICES: Notices to be given under this Agreement shall be in writing and may be personally delivered or sent by United States mail, first class postage prepaid, addressed to the respective party at the address set forth above, or to such other addresses that the parties shall designate in writing from time to time. Notices shall be deemed given when personally delivered or three (3) business days after mailing.

ARTICLE 27 – CAPTIONS: Any captions to or headings of the sections, paragraphs or subparagraphs of this Agreement are solely for the convenience of the parties, are not a part of this Agreement and shall not be used for the interpretation or determination of the validity of this Agreement or any provision hereof.

ARTICLE 28 – INCONSISTENCIES: To the extent that any term or provision of the Contractor's Bid is inconsistent with any term or provision contained in this document, the terms and provisions contained in this document shall supersede and control this Agreement. To the extent that any term or provision in this agreement is found to be void or unenforceable, nevertheless any and all remaining terms shall remain in full force.

ARTICLE 29 – DEFINITIONS: Terms and phrases, which are defined in any part of this Agreement, shall have the defined meanings wherever used throughout this Agreement. The terms "hereunder" and "herein" and similar terms used in this Agreement shall refer to this Agreement in its entirety and not merely the article, section, sub-section, paragraph or sub-paragraph in which they are used.

ARTICLE 30 - STATE LAW: This Agreement and its application shall be governed by the laws of the Commonwealth of Massachusetts. Any and all disputes shall be brought in the trial court for **Barnstable County**, Massachusetts

ARTICLE 31 - ENTIRE AGREEMENT; INTEGRATION: This Agreement supersedes any and all other Agreements, either oral or in writing, and contains all of the covenants and agreements between the parties. Each party to this Agreement acknowledges that no representations, inducements, promises or agreements, orally or otherwise, have been made by either party or anyone acting on behalf of any party to this Agreement, which is not embodied herein, and that no other agreement, statement or promise not contained in this Agreement shall be valid or binding. Any modification of this Agreement will be effective only if it is in writing, signed by the party to be charged. If any provision in this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions will nevertheless continue in full force without being impaired or invalidated in any way. Failure of any party hereto at any time to require performance by the other party of any provision of this Agreement shall not affect the right of such party to require performance of that provision, and any waiver by any party of any breach of any provision of this Agreement shall not be construed as a waiver of any continuing or succeeding breach of such provision, a waiver of the provision itself, or a waiver of any right under this Agreement. This Agreement may be executed in any number of counterparts by different parties hereto in separate counterparts, each of which when so executed and delivered shall be deemed to an original and all of which counterparts of this Agreement, taken together, shall constitute but one and the same instrument. Neither Contractor nor Owner shall assign, sublet or transfer any rights under or interest of this Agreement (including, but without limitation, moneys that may become due or moneys that are due) without the prior written consent of the other, except to the extent that any assignment, subletting or transfer is mandated by law or the effect of this limitation may be restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement. Contractor and Owner each is hereby bound, and the partners, successors, approved assigns, executors, Managers, and legal representatives of each are hereby bound to the other party to this Agreement and to the partners, successors, approved assigns, executors, Managers, and legal representatives of such other party, in respect to all covenants, agreements and obligations of this Agreement.

The documents listed below are part of the Contract Documents and are incorporated by this reference as if fully set forth herein. Contractor shall pay particular attention to any and all mitigation measures set forth in the permit documents and shall comply with same.

- A. Contract Specifications
- B. Contract Drawings
- C. Addendums
- D. Invitation for Bids
- E. Notice to Bidders
- F. Bid Requirements
- G. Bid
- H. Agreement
- I. Notice of Award
- J. Faithful Performance Bond
- K. Payment Bond

- L. General and Special Conditions
- M. Supplemental Conditions
- N. General Requirements
- O. Technical Specifications
- P. Attachments:
 - 1. Permits:
 - i. Order of Conditions, Town of Orleans, MA; MADEP File# SE54-2643 issued 4/19/2024;
 - ii. Minor Project Modification to DPW License No. 6256, Goose Hummock Boat Ramp, Town Cove, Orleans issued 2/29/2024;
 - iii. USACE Massachusetts General Permit NAE-2024-02126 issued 10/26/2024;

ATTACHMENT A: Soil Boring Logs for the Goose Hummock Boat Ramp, Orleans, MA, performed December 2019 – February 2020

ATTACHMENT B: Drawings Entitled: GOOSE HUMMOCK BOAT RAMP BULKHEAD REHABILITATION, 9 Sheets (including Cover Sheet); Date Issued: 7/18/2025 (Stamped by Alex I Mora, PE, Foth Infrastructure & Environment, LLC)

ATTACHMENT C: Massachusetts Prevailing Wage Rates; Issuance Date 7/11/2025 (35 pages)

ATTACHMENT D: Record Documents

ARTICLE 32 - UNDISPUTED PAYMENTS: The acceptance by the Contractor of an undisputed payment made under the terms of the Contract shall operate as, and shall be, a release to the Owner, and their duly authorized agents, from all claims of and/or liability to Contractor arising by virtue of the Contract related to those amounts. Disputed contract claims in stated amounts may be, specifically excluded by the Contractor from the operation of the release.

ARTICLE 33 - SUBSTITUTION OF SECURITIES: The Contractor may substitute securities for the amounts retained by the Owner to ensure performance of the Contract in a form acceptable to the Owner(s).

ARTICLE 34 - STATEMENT UNDER PENALTY OF PERJURY: The representations made herein, including the Bidder's licensing information hereinafter furnished, are made under penalty of perjury. The undersigned understands that any bid not containing said licensing information, or containing any information, which is subsequently proven false, shall be considered non-responsive, and shall be rejected by Owner.

ARTICLE 35 – UNENFORCEABILITY: In the event that any provision of this Agreement is unenforceable or held to be unenforceable, then the parties agree that all other provisions of this Agreement have force and effect and shall not be affected thereby.

ARTICLE 36 - FINAL PAYMENT SUBJECT TO ACCEPTANCE: Final Payment is subject to acceptance of the Project by Owner.

ARTICLE 37 - FORCE MAJEURE: Either party's performance under this agreement is subject to acts of God, war (declared or undeclared), government regulation, terrorism, disaster, strikes, civil disorder, curtailment of transportation facilities, or similar occurrence beyond the party's control, making it impossible, illegal or commercially impracticable for one or both parties to perform its obligations under this agreement, in whole or in part. Either party may terminate this agreement without liability for any one or more of such reasons upon written notice to the other party within ten (10) days of such occurrence or receipt of notice of any of the above occurrences.

ARTICLE 38 – AUTHORIZATION: Each party by signing below hereby warrants that they are fully and duly authorized to enter into this agreement, do so freely and have read and understand the conditions and terms set forth herein along with any and all other documents forming the Contract Documents.

ARTICLE 39 – Warranties of Contractor: The Contractor warrants that its financial condition is sound and that the Contractor shall be capable of obtaining any bonds required by the Contract Documents. The Contractor shall promptly advise the Owner of any occurrence, event, fact, or other matter that has had or will have a materially adverse effect upon the financial condition of the Contractor.

The Contractor hereby represents and warrants to the Owner that the Contractor is a business entity which is experienced and skilled in the construction of projects of the type described in the Contract Documents, is licensed to engage in the general construction business in the Commonwealth of Massachusetts, and is in compliance with all applicable governmental laws and regulations and all case law relative thereto.

IN WITNESS: Whereof the respective parties hereto have caused this instrument to be duly subscribed and sealed.

TOWN OF ORLEANS

(INSERT CONTRACTOR'S NAME)

Kimberly Newman
Town Manager

Signature of Individual or
Corporate Name (Mandatory)

APPROVED AS TO APPROPRIATIONS:

Orleans Town Accountant

Corporate Officer
(Mandatory, If applicable)

SOURCE: _____

EIN # (Mandatory)

Not to Exceed: \$ _____

*****END OF SECTION*****

SECTION 00510
NOTICE OF AWARD

DATE : _____

TO: _____

ADDRESS: _____

**RE: GOOSE HUMMOCK BOAT RAMP BULKHEAD REHABILITATION
TOWN OF ORLEANS, MA**

The Contract Sum of your contract is _____ Dollars
(\$ _____).

Four (4) copies of each of the Contract Documents accompanying will be delivered separately or otherwise made available to you.

You must comply with the following conditions precedent within ten (10) calendar days after the date of this Notice of Award, that is by _____.

- A. You must deliver to the Owner four (4) fully executed counterparts of the Agreement. Each of the Contract Documents must bear your signature.
- B. You must deliver to the Owner the Performance Bond, executed by you and your surety.
- C. You must deliver to the Owner the Construction Labor and Material Payment Bond, executed by you and your surety.
- D. Provide all certificates of insurance and endorsement pages required hereunder to the Owner.

Failure to comply with these conditions within the time specified will entitle the Owner to consider your Bid abandoned, to annul this Notice of Award, and to declare your Bid Security forfeited.

Within ten (10) Days after you comply with those conditions, the Owner will return to you one fully signed counterpart of the Agreement.

Owner: (Town of Orleans)

BY: _____
(Name and Title)

SECTION 00610
FAITHFUL PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that, WHEREAS, Town of Orleans ("Owner"), Commonwealth of Massachusetts, has awarded to _____, hereinafter designated as the "Principal", a contract (the "Contract"), the terms and provisions of which Contract are incorporated herein by reference, for constructing the following project:

GOOSE HUMMOCK BOAT RAMP BULKHEAD REHABILITATION
TOWN OF ORLEANS, MA

and

WHEREAS, said Principal is required under the terms of said Contract to furnish a bond for the faithful performance of said Contract;

NOW, THEREFORE, we, the Principal, and _____, as surety, are held and firmly bound unto Owner, in the penal sum of _____ and _____/100 Dollars (\$ _____), lawful money of the United States, being one hundred percent (100%) of the Contract amount, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, Managers and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bounden Principal, his or its heirs, executors, Managers, successors or assigns, shall in all things stand to and abide by, and will truly keep and faithfully perform the covenants, conditions, and agreements in the said Contract and any alterations made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless, Owner, its Board, officers, employees and agents, as therein stipulated, then this obligation shall be null and void; otherwise it shall be and remain in full force and virtue.

As a condition precedent to the satisfactory completion of the said Contract, the above obligation shall hold good for a period of one (1) year after the completion and acceptance of the said work, during which time if the above bounded Principal, his or its heirs, executors, Managers, successors or assigns shall fail to make full, complete and satisfactory repair and replacements or totally protect the said Owner from loss or damage made evident during said period of one (1) year from the date of acceptance of said work, and resulting from or caused by defective materials or faulty workmanship, in the prosecution of the work done, the above obligation shall be and remain in full force and virtue.

And the said Surety, for value received, hereby stipulates and agrees to waive any consent to change, extension of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this bond; and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract, or to the work, or to the Specifications.

In the event Owner, or its successors or assigns, shall be the prevailing party in an action brought upon this bond, then, in addition to the penal sum hereinabove specified, we agree to pay to the said Owner, or its successors or assigns, a reasonable sum on account of attorney's fees in such action, which sum shall be fixed by the court.

IN WITNESS THEREOF, the above bounden parties have executed this instrument under their seals this day of __, _____, 20__, the name and corporate seal of each corporate party being hereto affixed, and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Principal

Witness as to Principal

By:

Address

Surety

ATTEST:

Witness to Surety

Attorney-in-Fact

(Seal)

If **Contractor** is partnership, all partners must execute **BOND**.

*****END OF SECTION*****

SECTION 00620
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we, _____

as Principal, and, _____ organized and existing under the laws of the Commonwealth of Massachusetts, and authorized to execute bonds and undertaking as sole surety, as Surety, are held and firmly bound unto any and all persons named whose claim has not been paid by the Contractor, company or corporation in the aggregate total of _____ and _____/100 Dollars (\$_____) (being 100% of the Contract amount) for the payment whereof, well and truly to be made, said Principal and Surety bond themselves, their heirs, Managers, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that, whereas the above with Town of Orleans ("Owner") to do the following work, to-wit:

GOOSE HUMMOCK BOAT RAMP BULKHEAD REHABILITATION
TOWNS OF ORLEANS, MA

NOW, THEREFORE, if the above-bounden Principal or his Sub-Contractors fail to pay any of the persons named or unnamed, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the Contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Contractor and his Sub-Contractor pursuant to the Unemployment Insurance Code of the Commonwealth of Massachusetts, with respect to such work and labor, the surety will pay for the same, in the amount not exceeding the sum specified in this bond, and also, in case suit is brought upon this bond, a reasonable attorney's fee, to be fixed by the Court.

This bond shall inure to the benefit of any person named or who has provided goods or services so as to give a right of action to them or their assignees in suit brought upon this bond.

And the said Surety, for value received, hereby stipulates and agrees to waive the provisions regarding consent to change, extension of time alteration, or addition to the terms of the Contract, or to the work to be performed thereunder, or the Specifications accompanying the same, shall in any way affect its obligations on this bond; and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract, or to the work, or to the Specifications.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their seals this _____ day of _____, 20____ the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Principal

Witness as to Principal

By: _____

Address

Surety

ATTEST:

Witness to Surety

Attorney-in-Fact

_____(Seal)

If **Contractor** is partnership, all partners must execute **BOND**.

*****END OF SECTION*****

SECTION 00700
GENERAL AND SPECIAL CONDITIONS

PART 1: GENERAL

1.01 SCOPE OF WORK

- A.** The project generally consists of the installation of a ±143 LF Concrete Capped Steel Sheet Pile Bulkhead with Ground Anchors and Whaler in front of the existing bulkhead along Town parcel on the east side of the Concrete Boat Ramp located at 1 Route 6A in Orleans, MA. All work shall be performed as shown on the Contract Drawings, specified herein and/or is evidently required to complete the work and the specifications set forth herein. Performance Bond shall equal 100% of contract price. Payment Bond shall equal 100% of contract price.
- B.** The Owner may select a Contractor based upon bids received and provided there are sufficient funds available and regulatory approvals are in-hand. The Owner will require an executed contract, which it will prepare, bonds and insurance certificates as set forth herein prior to any activities being commenced by the selected Contractor.
- C.** Owner reserves the right to reject any and all Bids if it is deemed to be in the best interest do so.
- D.** The bid and schedule of value(s) as proposed by the Contractor in its offer shall be firm and include any and all labor, materials, equipment, supplies, overhead and profit to perform and deliver a complete project as set forth herein and on the project plans.
- E.** The Contractor must include any and all materials, labor, equipment or other items in each bid item. If an item includes ancillary work or apparatuses then the item must be priced by the Contractor to include such other work.
- F.** Measurements and calculations shall be reviewed for accuracy by the Project Engineer and prepared for submission to the Owner. The Contractor shall coordinate any and all construction activities to allow the Project Engineer to verify quantities such that verification activities are minimal and the processing of payment application is effectuated in a timely and organized manner.
- G.** Any requests for information (RFI's) shall be submitted to the Project Engineer in writing. The Project Engineer shall endeavor to have all responses from Contractor's request for information within ten (10) working days of the submitted date, thereby the Contractor is to plan construction activities accordingly.
- H.** The Contractor is an independent entity and shall act as an independent Contractor and not as an agent or employee of Owner or Project Engineer. No employee, agent or representative of the Contractor shall be entitled to receive any benefits of employment with the Town including without limitation salary, overtime, vacation pay, holiday pay, sick leave, health insurance, life insurance, pension or deferred compensation. Nothing herein creates a relationship of partnership, joint venture, or principal and agent between the parties. The Contractor shall have complete professional, managerial, technical and supervisory responsibility for the work provided hereunder including the direction and

control of all personnel providing goods, equipment, materials and/or services pursuant to or in furtherance of the work whether directly or indirectly employed or working for the Owner or the Project Engineer. The Owner and the Project Engineer shall retain the right to stop and start the work, adjust the schedule of work, coordinate the Contractor's work with other work and receive reports, however, such rights shall not be construed as controlling the details of the work.

1.02 PROJECT SITE

- A. The work to be performed is located at 1 MA-6A, Orleans, MA 02653. The exact project locations are denoted as shown on the Contract Drawings that have been issued.

1.03 DRAWINGS AND SPECIFICATIONS

- A. All work shall conform and be in accordance with these specifications and/or the accompanying drawings entitled:

“GOOSE HUMMOCK BOAT RAMP BULKHEAD REHABILITATION”

Drawings issued on 7/18/2025 consist of a total of 9 sheets (including Cover Sheet) as prepared by Foth Infrastructure & Environment, LLC (Foth), 15 Creek Road, Marion, MA 02738 and stamped by Alex Mora, PE. Drawings are on file with the Owner and any changes, drawings and direction(s) that may from time to time be furnished by the Project Engineer.

1.04 WORK SEQUENCE

- A. General: There are certain essential criteria relative to the preparation of a work sequence and time schedule that the Contractor will be required to implement and follow during the performance of all work. The Contractor shall begin work by providing and establishing horizontal and vertical control, locating the project limits and mobilization of all necessary equipment to the project site.
- B. The Contractor's work methods and schedule shall be planned and carried out such that there is no damage to any existing structures. Any and all existing structures are to be carefully and adequately protected, such that they are not in any way damaged or compromised. Any damage to adjacent structures or any property which is in any way damaged as a result of (directly or consequently) to any activities undertaken by the Contractor shall remain at all times at the Contractor's expense and peril.
- C. **All construction activities shall be completed by no later than 3/15/2026.**
- D. The Order of Work shall be developed by the Contractor and submitted in his/her construction schedule. The Contractor will be responsible for coordinating construction activities with the Owner's facility schedules.
- E. Hours of Operation: Working hours shall be limited to between the hours of 7:00 A.M. and 5:00 P.M unless otherwise specified or approved by the Owner.

1.05 CONTRACTOR'S LIABILITY INSURANCE

- A. The Contractor shall purchase and maintain such insurance as will protect him/her from the Contractor's operations under the Contract, whether such operations be by

himself/herself or by any Sub-Contractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

- B.** Insurance similar to that required of the Contractor shall be provided by or on behalf of all Sub-Contractors to cover their operations performed under the Contract Documents. The Contractor shall be held responsible for compliance with and enforcement of the insurance requirements and for any modifications of these insurance requirements as they apply to Sub-Contractors. The Contractor shall not permit any Sub-Contractor commence work until such Sub-Contractor has furnished evidence that insurance has been procured and certificates of insurance have been obtained by the Contractor providing that, in the event of restrictions in or cancellation of Sub-Contractor policies, thirty (30) days advance written notice be given to Contractor by U.S. first class mail.
- C.** The Contractor shall purchase and maintain during the life of this Contract:
1. Insurance sufficient to discharge its obligations under all applicable workers' or workmen's compensation laws of the territories and States of the United States.
 2. Employer's liability insurance with minimum limit per accident or disease as required by statute.
 3. Statutory disability and other employee benefit insurance.
- D.** The Contractor shall purchase and maintain during the term of this Contract, at a minimum, comprehensive liability insurance including a comprehensive broad form endorsement and covering the full scope of this contract with limits not less than \$1,000,000 per occurrence and \$3,000,000 per occurrence and aggregate for property damage. All policies issued shall include permission for partial or total occupancy of the premises by the Owner within the scope of this Contract. Such insurance shall include at least the following:
1. Comprehensive general liability insurance, including all products, premises-operations, and completed operations liability, independent Contractors, additional interests of employees, incidental medical malpractice liability, including notice of occurrence and knowledge of occurrence endorsements satisfactory to the Owner.
 2. Comprehensive business automobile liability insurance covering use of any motor vehicle to be used in conjunction with this contract with a minimum coverage of \$1,000,000. A compulsory Massachusetts automobile policy is acceptable for vehicles registered in Massachusetts only.
 3. Coverage for loading and unloading of any motor vehicle must be covered by endorsement to the comprehensive (or compulsory) automobile liability policy.
 4. Blanket contractual liability insurance covering all liabilities assumed under the Contract Documents, including, but not limited to, Contractor's obligations under the General Conditions.
 5. Personal injury coverage endorsement (coverages A, B, and C), with no exclusions for liability assumed contractually or injury sustained by employees of Contractor.
 6. Excess Liability coverage in an amount which is to be no less \$3,000,000.

7. Broad form coverage for damage to property of the Owner, as well as other third parties, while in the care, custody, or control of Contractor.
8. Insurance sufficient to discharge its obligations under all applicable workers' or workmen's compensation laws of the territories and states of the United States., the United States Longshoremen's & Harbor Workers Act, the Jones Act and Admiralty or Maritime Law. If any operations performed within the scope of this Contract by Contractor or its Sub-Contractors require the use of any aircraft or watercraft (owned or un-owned), Contractor shall maintain liability insurance satisfactory to, and naming as an additional insured, the Owner.
9. Insurance similar to that required of the Contractor shall be provided by or on behalf of all Sub-Contractors to cover their operations performed under the Contract Documents. The Contractor shall be held responsible for compliance with and enforcement of the insurance requirements and for any modifications of these insurance requirements as they apply to Sub-Contractors. The Contractor shall not permit any Sub-Contractor commence work until such time as the Sub-Contractor has furnished evidence that insurance has been procured and certificates of insurance have been obtained by the Contractor, forwarded to the Owner and provide that, in the event of restrictions in or cancellation of Sub-Contractor policies, thirty (30) days advance written notice be given to Contractor and Owner by registered mail.
10. Insurance certificates acceptable to the Owner evidencing the above coverages are to be furnished to the Owner prior to execution of any Contract. Any and all such certificates and all insurance policies required by these Insurance Requirements shall contain provisions requiring at least 30 (thirty) days prior written notice to the Owner of any cancellations of, or material change in the policies. Certificates shall indicate effective dates of expiration of policies and shall refer to the corresponding subparagraphs listed above. An additional certificate evidencing continuation of all insurance coverages is required to remain in force after final payment, and neither final payment nor any remaining retainage under this contract shall be due until such certificate has been submitted to the Owner.
11. All insurance policies provided pursuant to the foregoing provisions of these Insurance Requirements shall be in the form and written by companies satisfactory to the Owner, and the Owner shall be named as an additional insured. All such policies shall contain provisions or endorsements necessary to assure coverage of claims by one insured against another. All required insurance policies are to be endorsed to state that the Contractor's policies shall be primary to all other insurance available to the Owner for liability arising out or resulting from the Contractor's operations under the Contract, whether such operations be by Contractor or by a Sub-Contractor or by anyone directly to indirectly employed by any of them or by anyone for whose acts any of them may be liable.
12. The purchase of insurance to satisfy the above requirements, or the furnishing of certificates evidencing same, shall not be a satisfaction of Contractor's liability under this Contract or in any way modify Contractor's indemnification of the Owner.

13. Without limitation of any other provisions of the Contract Documents, if (a) the Contractor's agreement herein to insure or to name as an insured the Owner with respect to contractual liability assumed by the Contractor under the terms of the Contract Documents or otherwise, or (b) any contract of insurance between the Contractor or any Sub-Contractor and its or their insurance company, shall to the extent be or be determined to be void and unenforceable, it is the intent of the Owner that such circumstances shall not otherwise affect the validity or enforceability or the Contractor's agreements and obligations under the Contract documents nor the validity or enforceability of such contract or insurance, each of which shall be enforced to the fullest extent permitted by law. Insurance sufficient to discharge its obligations under all applicable workers' or workmen's compensation laws of the territories and states of the United States, the United States Longshoremen's & Harbor Workers Act, the Jones Act and Admiralty or Maritime Law.
14. Without limitation of any other provisions of the Contract Documents, if (a) the Contractor's agreement herein to insure or to name as an insured the Owner with respect to contractual liability assumed by the Contractor under the terms of the Contract Documents or otherwise, or (b) any contract of insurance between the Contractor or any Sub-Contractor and its or their insurance company, shall to the extent be or be determined to be void and unenforceable, it is the intention of the parties that such circumstances shall not otherwise affect the validity or enforceability or the Contractor's agreements and obligations under the Contract documents nor the validity or enforceability of such contract or insurance, each of which shall be enforced to the fullest extent permitted by law.
15. The Contractor shall purchase and maintain during the term of this contract property insurance in the amount of the contract value plus any subsequent revisions of the contract. Such insurance shall name the Owner as an additional insured and shall insure against all perils normally covered in an "all risk" form, including flood and earthquake. This insurance shall include coverage of owned and rented tools, equipment, temporary facilities and other items, whether or not the capital value of which has been included in the contract amount, and shall also include coverage for portions of the work stored off the site or in transit which are included in any application for payment. Deductibles in the Contractor's coverage shall be the responsibility of the Contractor. Certificates or binders of insurance indicating that the Contractor has obtained the aforesaid property insurance coverage shall be filed with the Owner prior to execution of the Contract. If binders are filed, certificates shall then be filed for the coverage prior to the expiration date of the binder. The policy shall be written with an insurance company with a Best's insurance rating classification of "A" or better. Such certificates and binders shall be in form and substance reasonably acceptable to the Owner and shall contain a provision that such property insurance coverage shall not be materially changed or canceled until at least 30 (thirty) days prior to written notice has been given to the Owner.
16. In the event that the Contractor or the Contractor's insurance company fails to provide the Owner with documentation sufficient in the Owner's sole discretion to remedy all damage and loss to any property referred to in the above section.

1.06 SURETY BONDS

- A.** The Contractor shall obtain a payment and performance bond for one hundred percent of the contract value naming the Owner and project and present the bond to the Owner prior to the commencement of any work on the project. The surety shall be “AAA” rated admitted in the Commonwealth of Massachusetts with duly granted authority to produce bonds and shall be approved by the Project Engineer as an acceptable security for the project. Any modifications, additions or deletions to the Contractor’s bid during the contract performance shall be the Contractor’s expressed responsibility to notify the surety where the bond(s) are procured. A failure to notify the surety of a material addition, deletion or modification to the project shall be at the Contractor’s peril and shall be deemed as accepted by the Contractor’s surety as ratified. The Contractor hereby warrants to the Owner that the Contractor’s surety has had ample opportunity to review the plans, specifications and agreements and by issuing a payment and performance bond ratifies and agrees to be bound to the conditions and terms set forth herein and the Contractor’s surety agrees to the same.
- B.** The Contractor and Owner agree that any and all costs for procuring, securing or otherwise obtaining any of the aforementioned insurance and/or bonds is the expressed responsibility of the Contractor and has been included in the Contractor’s bid to the Owner.

1.07 PRE-BID MEETING

- A.** A non-mandatory, Pre-Bid Conference will be conducted at the Project Site located at 1 MA-6A, Orleans, MA at 11:00 A.M. on 7/30/2025 which will overview and acquaint the Contractor with the work set forth hereunder. The Contractor is to fully apprise himself or herself of the site conditions, access to the project site and price their bid in order to take any and all constraints into account such that the Contractor is prepared to provide whatever means and at whatever costs necessary to insure that measures are in place to insure that the project is executed according to the plans and specification set forth herein. Questions regarding the site or to coordinate any access that the Contractor wants to undertake prior to the submission of a bid may be addressed to the Project Engineer. As such the Contractor shall examine the existing conditions and thoroughly acquaint himself or herself with the obstacles and advantages of performing the work. The Contractor shall also study the Contract Drawings and compare the same with the information gathered during his examination of the site, as no extra compensation will be authorized for work resulting from the Contractor’s unfamiliarity with the site and/or the drawings, or the conditions peculiar to this job. If the Contractor chooses not to attend this meeting, he/she shall waive the right to raise their non-attendance as a defense or claim for any cause whatsoever for any information provided at this meeting.

1.08 SUBMITTALS

- A.** Shop drawings and brochures shall be submitted in accordance with the requirements of the General Conditions and Section 01 25 13, Submittals and Substitutions. Submittals are required for the items whether named or not. Additional submittals may be required by the Project Engineer which the Contractor will comply with at no additional cost(s) to be charged to the Owner(s).

1.09 PROJECT SCHEDULE

- A. 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 prior to the start of any work. No work may begin under the contract until the project schedule has been approved by the Owner and the Project Engineer. Failure to submit a project schedule shall be adequate grounds for the Owner to suspend any and all Contractor operations at no cost or liability to the Owner whatsoever.
- B. Time required for review and approval of these items shall not constitute a basis for time extension. Full compensation for supplying the "Project Schedule" and all required updates shall be considered as included in the contract prices paid for the various bid items and no separate payment will be made.

1.10 SUBSURFACE CONDITIONS

- A. Boring logs associated with the Project Site are provided in **Attachment A**. This data is considered to provide a general representation of subsurface conditions anticipated to be encountered during construction activities. The Contractor is expected to examine the locations where work shall be performed along with the data provided in **Attachment A** and decide for themselves if additional information is required to support means and methods that will be used during construction. Any additional subsurface information deemed required to support the Contractor's selected means and methods shall be covered in the Contract Price.

1.11 DIFFERING SITE CONDITIONS

- A. The Contractor shall promptly, and before such conditions are disturbed, notify the Project Engineer in writing of: subsurface or latent physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in this contract. The Project Engineer shall promptly investigate the conditions, and if he finds that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed as a result of such conditions, an equitable adjustment shall be made and the contract modified in writing accordingly. The decision of the Project Engineer is final and binding on the parties, but subject to the claim resolution procedures set forth in Section 1.26 below.
- B. No claim of the Contractor under this clause shall be allowed unless the Contractor has given the notice required in A. above; provided, however, the time prescribed therefore may be extended by the Owner.
- C. No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this contract.

1.12 CLEANING AND EQUIPMENT

- A. During the progress of the work, the site shall be cleaned daily of all rubbish, packing materials or other debris. No debris capable of being windblown or washed away by rainfall shall be left unsecured on the site overnight. All roadways that have been used

as access routes shall be swept on a regular basis, and kept in reasonably clean condition. "Reasonably clean" shall be defined as a condition acceptable to the local Department of Public Safety, and/or Department of Public Works having jurisdiction over the specific roadways. All equipment shall be located as authorized by the Project Engineer to provide that at the end of work day or shift the site or roadways are left in a passable condition and all equipment is safe and secure.

1.13 CONTRACT DOCUMENTS IN THE FIELD

- A.** The Contractor must keep a copy of the contract documents including but not limited to plans, specifications, schedule, materials list, daily reports, materials safety data sheets, and safety reports at the site of the work at all times while work is being performed and said copy is to be available to those in charge of the work, including Owner and Project Engineer.

1.14 CONSTRUCTION SEQUENCE

- A.** For the protection of life and property any and all construction operations shall be phased such that the site is safe and secure. The Contractor shall insure that no equipment or materials are left unattended.
- B.** The Contractor is responsible for the requisition and logistics of on-site local law enforcement detail where required by state or local law. Contractor's responsibilities include all Contractor and Sub-Contractor sites associated with the project and are inclusive of any and all pricing set forth herein.

1.15 UTILITIES

- A.** Prior to commencing work, the Contractor is responsible for obtaining the location, size and depth of all existing underground or underwater utilities and structures. Dig Safe Systems, Inc. (DIGSAFE) may assist in this task, but should not be considered comprehensive.
- B.** The Contractor shall assume that there are existing utility lines in the vicinity of the work, whether they appear on the drawings or not and should be independently verified by the Contractor using commercially reasonable methods that are normal and customary in the business of marine construction work.
- C.** Existing utilities may not be known by the Owner or Project Engineer. The Contractor assumes any and all risks associated with the damage, disruption or repair of any utilities that are disturbed by any action(s) of the Contractor in the prosecution of the work set forth herein. As such, the Contractor will assure the Owner that any and all repairs to utilities that are damages by Contractor's operations will be made expeditiously, in a professional, workman like manner and must be satisfactory to both the Owner and Project Engineer at no additional cost to the Owner.
- D.** It is not the intent of the plans to show the exact location of existing or relocated utilities, and the Owner assumes no responsibility therefore. Whenever any such utilities are indicated thereon, the Contractor shall be responsible for verifying their actual location and depth in the field. The Contractor shall notify DIG SAFE (1-800-272-4480) and

local Water Department (508-255-1200) and Department of Public Works (508-240-3790) prior to excavation.

- E. The Contractor has reviewed the Project Site and areas surrounding the project and shall take full responsibility for existing utilities or apparatuses which may in any way impede, hamper or delay the Contractor's performance of the work set forth herein. The Owner(s) shall bear no responsibility for the removal of or temporary relocation of any existing utilities or apparatuses.
- F. Where excavations are performed in the vicinity of underground utility mains and/or services the Contractor shall, as necessary, perform initial exploratory excavations to determine their exact depth and location. Extreme care shall be exercised to avoid damage, and it will be the Contractor's responsibility to have repairs made to existing facilities at his/her expense in the event of damage.
- G. Construction work for each site shall be coordinated with any work by other Contractors and utility entities to avoid conflicts. It is anticipated that any necessary work by others will be identified and performed prior to operations by the Contractor.
- H. Schedule constraints will be discussed at the pre-construction conference and the Contractor shall consider such adjustments in contract scheduling as necessary.
- I. Full compensation for complying with the above provisions shall be considered as included in the contract price for the various bid items and no separate payment will be made.

1.16 BARRICADES, GUARD LIGHTS AND TRAFFIC CONTROL

- A. Barricades, signs, fences, and similar safety and warning devices shall be provided as required in order to insure the protection of the public at large as well as employees of the Contractor and all Sub-Contractor employees.
- B. Barricades, signs, fences, and similar safety and warning devices shall be provided as required in order to insure the protection of the public as well as employees.
- C. All signs and other warning devices (including construction and warning signs placed beyond the limits of work), shall be provided by the Contractor, and shall remain his/her property after the completion of the contract. All flaggers shall be provided by the Contractor at his/her expense.
- D. Barricades, Guard Lights and Traffic Control shall include furnishing all labor (including flaggers and detours, when necessary), materials and equipment necessary to provide for the convenience and safety of the public and to facilitate the performance of the contract work as shown on the plans and specified herein. Full compensation for complying with the above provisions shall be considered as included in the contract price for the various bid items and no separate payment will be made.

1.17 PROTECTION OF WORK AND PROPERTY

- A. The Contractor shall be responsible for the preservation of all public and private property or their prosecution of the work and shall carefully protect the property from disturbance or damage.

- B.** The Contractor shall be responsible for all damage or injury to public or private property resulting from any act, omission, neglect, or misconduct in, or either the Contractor's or its Sub-Contractors' manner or method of executing the work, or in consequence of the non-execution thereof. Furthermore, the Contractor shall be responsible for all such damage due to defective materials or acts. The Contractor shall restore, at its own expense such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as directed by the Project Engineer.
- C.** All work is to be carefully protected so that no injury will come to it from water, frost, accident or other cause, and any injury, which will come to the work, is to be repaired by the Contractor at his expense. The Contractor shall protect the Owner's property, equipment and fixtures from injury, or loss. The Contractor shall protect the Owner's property from injury or loss arising in connection with this contract and he shall make good any damage, injury, or loss. The Contractor shall also adequately protect adjacent property as provided by statute and the contract documents.
- D.** The Contractor shall take all necessary precautions for the safety of employees on the work. The Contractor shall comply with all applicable provisions of federal, state and municipal safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where the work is being performed. The Contractor shall erect, properly maintain, at all times, as required by the conditions and progress of the work, all necessary fences, barriers, warning signs and lights that may be necessary to adequately protect the general public.
- E.** The Contractor shall provide temporary containment for all fuel tanks, pumps and appurtenances as a precaution against accidental spills or leaks. The Contractor shall maintain no greater than a two (2) day supply of fuel to any piece of equipment located on the site. The containment structures shall be capable of preventing releases of any fuel or other hazardous liquids to the environment, shall have volumes greater than that of the fuel tanks to be contained and shall be covered if necessary to eliminate the intrusion of rain water. In accordance with State or local laws and permit requirements, the Contractor shall furnish and maintain all other necessary containment materials to insure zero release of hazardous materials to the environment.

1.18 RESTORATION

- A.** The Contractor shall be solely responsible for performing any necessary acts and providing any materials required to restore areas disturbed during construction to their pre-construction condition. During the Pre-Bid time period prior to submitting a Bid, the Contractor shall note the condition of all areas within the project and include costs in their Bid for full and complete restoration.

1.19 PERMITS, FEES AND BONDS

- A.** The Contractor shall obtain and comply with all required permits, pay all fees and provide all bonds necessary to complete the work as specified. The Contractor shall be advised that there are no permit fees associated with this project. The Contractor shall be solely responsible for performing any necessary acts and providing any materials

required in order to comply with any and all terms and conditions set forth in any permits and licenses.

- B.** The Contractor shall obtain all construction permits required for Contract operations, not a part of the Contract, in accordance with the requirements of the regulations of the appropriate authorities.

1.20 INTERPRETATION OF CONTRACT DOCUMENTS IN CASE OF CONFLICT

- A.** Where reference is made in the Contract Documents to publications, standards, or codes issued by associations or societies, such reference shall be interpreted to mean the current edition of such publications, standards, or codes, including revisions in effect on the date of the Advertisement, notwithstanding any reference to a particular date. The foregoing sentence shall not apply to the dates, if any, specified with respect to insurance policy endorsement forms.

- B.** In case of any conflict among the Contract Documents, unless the context clearly otherwise requires, the Contract Documents shall be construed according to the following priorities:

First Priority: Contract Modifications

Second Priority: Contractor Agreement

Third Priority: General Conditions of the Contract

Fourth Priority: Drawings

Schedules take precedence over enlarged detail Drawings, and enlarged Detail Drawings take precedence over reduced scale Drawings; figured dimensions shall prevail over scale.

Fifth Priority: Specifications

1.21 GENERAL CLAUSES AND CONDITIONS

- A.** Suspension of work: The Owner may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Project Engineer determines appropriate for the convenience of the Owner.
- B.** If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted by an act of the Owner in the administration of this project, or by the Owner's Project Engineer, failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this project (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor.
- C.** A submittal shall not be allowed for any costs incurred more than twenty (20) days before the Contractor shall have notified the Owner in writing of the act or failure to act

involved (but this requirement shall not apply as to a claim resulting from a suspension or work notice), and unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

1.22 SUSPENSION OF WORK

- A.** The Owner may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Project Engineer determines appropriate for the convenience of the Owner.
- B.** If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted by an act of the Owner in the administration of this project, or by the Owners' failure to act within the time specified in this contract (or within a commercially reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this project (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the partial fault or partial negligence of the Contractor.
- C.** The Project Engineer reserves the right to suspend all or any portion of the work for any reasons during the execution of the work. If the work is suspended for a period of time and the Contractor believes the period is unreasonable and additional compensation and/or contract time is due, the Contractor shall submit to the Project Engineer in writing a request for adjustment within seven (7) calendar days of receipt of the notice to resume work. The request shall include the justification for adjustment.
- D.** Upon receipt, the Project Engineer will consider the Contractor's request. If the Project Engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and was caused by conditions beyond the control of and not the fault of the Contractor, suppliers, Sub-Contractors, the Project Engineer will make an equitable adjustment (excluding profit) and modify the contract in writing accordingly. No contract adjustment will be allowed unless the Contractor has submitted a request for adjustment within the time prescribed.
- E.** The Owner may terminate for their convenience, performance of work under in whole or, from time to time, in part if the Owner determines that a termination is in the Owners' interest. The Owner shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date. After receipt of a Notice of Termination, and except as directed by the Owner or Project Engineer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this provision. Stop work as specified in the notice. Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract. Terminate all subcontracts to the extent they relate to the work terminated. With approval or ratification to the extent required by the Project Engineer, settle all outstanding liabilities and termination settlement bids

arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause. The Owner shall be obligated to pay the Contractor for work in place and Contractor agrees that Owners' responsibility regarding the subject contract shall be limited only to work in place and the Contractor waives any rights or claims against the Owner for consequential damages should this project be terminated by the Owner for its Convenience.

1.23 STAND-BY AND IDLE EQUIPMENT TIME

- A.** Equipment that is in operational condition and is standing by with the Project Engineer's approval will be paid for at 50 percent of the appropriate hourly rate as determined by the provisions set forth by the United States Army Corp of Engineers, Construction Equipment Ownership Schedule (EP 1110-1-8) less operating costs. Payment for such "stand-by" will be limited to not more than 8 hours in a 24 hour day or 40 hours in a normal work week.
- B.** No compensation will be allowed for equipment that is inoperable due to breakdown.
- C.** No payment will be allowed for equipment that is not operating because the work has been suspended in accordance with the specifications unless the suspension is for the convenience of the State. No payment will be allowed for equipment that is not operating because the work has been suspended by the Contractor for the Contractor's own reasons.
- D.** The hourly rate of compensation for idle equipment will be the monthly rate times a factor of 0.50 divided by 176 hours per month, regardless of the duration of the delay or stand-by.
- E.** The time for which such compensation will be paid will be the actual normal working time during which such delay condition exists, but will in no case exceed 8 hours in any one day.
- F.** The days for which compensation will be paid will be the number of working days charged during the existence of such delay. No compensation will be made for days that are considered lost due to weather as determined by the Project Engineer.
- G.** Compensation will only be made for equipment physically located at the work site that would be used to prosecute the delayed work during the existence of such delay.

1.24 SIGNIFICANT CHANGES IN SCOPE OF WORK

- A.** The Project Engineer reserves the right to make, at any time during the work, such increases or decreases in quantities and such alteration in the work as necessary to satisfactorily complete the project. Such increases or decreases and alterations shall not invalidate the contract nor release the Surety, and the Contractor agrees to perform the work as altered.
- B.** If the increase on any item of work for which a unit price exists in the contract does not exceed the lesser of \$100,000.00 or five percent of the total contract price, then such increase shall be regarded as covered by the unit bid price for such items as contained in the original contract.

- C. If the alteration or decrease in an item of work significantly changes the scope or the character of the work, then an adjustment may be made to the unit price. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, an adjustment will be made either for or against the Contractor in an amount as the Project Engineer may determine to be fair and equitable.

1.25 ELIMINATED ITEMS

- A. Should any items contained in the bid be found unnecessary for the proper completion of the work, the Project Engineer may, upon written order to the Contractor, eliminate such items from the contract, and such action shall in no way invalidate the contract.
- B. If the Contractor is notified of the decrease or elimination of an item, reimbursement will be made for the reasonable cost of material incurred, in connection with such item or portions, prior to the date of such decrease or elimination made by order of the Project Engineer but in no case shall such compensation exceed the contract bid price for the item.
- C. No claim shall be made by the Contractor for any loss of anticipated profits because of any alteration or variation between the approximate quantities and the quantities of work as done.

1.26 RESOLUTION OF CONSTRUCTION CLAIMS

- A. JURISDICTION: This Contract shall be interpreted by the laws of the Commonwealth of Massachusetts and any suit brought pursuant to this Contract shall be commenced only in the Trial Court for Barnstable County, Massachusetts.
- B. Any Claim arising out of or related to the Contract, except those waived as provided in herein, shall, after final decision by the Engineer or thirty (30) days after submission of the Claim to the Engineer, be subject to mediation as a condition precedent to the institution of legal or equitable proceedings by either party.
- C. The Owner and Contractor shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be conducted under the auspices of the American Arbitration Association in accordance with the most current version of the Association's Construction Industry Mediation Rules in effect at the time the request for mediation is filed. Request for mediation shall be filed in writing with the other party to this Contract and with the American Arbitration Association. All necessary parties may be brought into such mediation.
- D. The parties shall bear equally the mediator's fee and any filing fees required for the mediation. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Written Contracts reached in mediation shall be enforceable as written settlement Contracts in any court having jurisdiction thereof. In the event that any such claim, dispute or controversy is not resolved through the mediation process, either party is free to pursue any such claim, dispute or other matter in an appropriate court proceeding.

- E. This paragraph 1.26E shall not prohibit the initiation of legal proceedings or equitable proceedings in circumstances where mediation will not be completed before the expiration of the applicable time within which to initiate legal proceedings or equitable proceedings. Under no circumstances shall either party call for mediation of any claim or dispute arising out of this Contract after such period of time as would normally bar the initiation of legal proceedings to litigate such a claim or dispute under the laws of the Commonwealth of Massachusetts.

1.27 CONTRACTOR ABANDONMENT

- A. The Contractor may not remove any mobilized equipment that is material to this project located within Town Cove without the expressed written consent of the Project Engineer.

PART 2: PRODUCTS

2.01 GENERAL

- A. A statement indicating the source of each proposed import material shall be submitted by the Contractor. The statement shall indicate that the proposed import does not include any contamination or hazardous material and the results of analytical testing. If the source of import material is questionable or if the preliminary analytical test results indicate the presence of contamination or hazardous material, the Owner may require performance of additional analytical testing at no cost to the Owner prior to approval of proposed import materials.
- B. Any and all products, materials and workmanship shall be warranted by the Contractor for a period of not less than one (1) year from the date of completion of the project. Completion shall be deemed as acceptance by the Owner of the final payment application prepared by the Contractor.

2.02 APPROVAL OF MATERIALS

- A. As soon as practicable but not to exceed five (5) calendar days after award of the contract and before any materials or equipment are purchased, the Contractor shall submit to the Project Engineer a complete list of material and equipment to be incorporated in the work, together with the names and addresses of the manufacturer and their catalog numbers and trade names. Approval of materials will be based on manufacturer's published ratings. Materials that are incorporated into the project that have not been expressly approved by the Project Engineer will be subject to removal, replacement and or verification by the Project Engineer on behalf of the Owner and shall be solely at the Contractor's expense and peril.

2.03 SUBSTITUTIONS

- A. If a specific means, method, technique, sequence, or procedure of construction is indicated in or required by the Contract Sections, the Contractor may furnish or utilize a substitute means, method, sequence, technique, or procedure of construction acceptable to the Owner, if the Contractor submits sufficient information to allow the Owner to determine that the substitute proposed is equivalent to that indicated or required by the Contract Sections, in quality, warranty, life-cycle costs, design cost,

construction time, warranty, and efficiency considerations. Contractor may submit requests for substitution up to thirty-five (35) days following Notice of Award after which time the Owner will consider substitutions in its sole discretion.

- B.** The Owner will respond in writing to the Contractor within ten (10) days indicating the time necessary to evaluate each proposed substitute. The Owner will be the sole judge of acceptability, and no substitute will be ordered, installed, or utilized without the Owner's prior written acceptance, which will be evidenced by either a change order or an approved shop drawing. The Owner may require the Contractor to furnish at the Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- C.** The Owner will record time required by the Owner and the Owner's consultants in evaluating substitutions proposed by the Contractor and in making changes in the Contract Sections occasioned thereby. Regardless of whether or not the Owner accepts a proposed substitute, the Contractor shall reimburse the Owner for the charges of the Owner and Owner's consultants for evaluating each proposed substitute.
- D.** Cost or time impacts to other items of Contract work, which are caused by any Contractor initiated request for substitution, whether anticipated or unforeseen, shall be the responsibility of the Contractor.

2.04 TRADE NAMES

- A.** Whenever the Trade Name of a product, or the name of a Manufacturer appears in these Contract Documents or on the Plans, it shall be understood to specify the product so identified or its approved equal. The words "or equal" or "approved equal" shall mean equal in the opinion of and approved by the Project Engineer in writing. For convenience in designation, certain equipment or parts or materials may be designated under trade name or the name of a manufacturer or product and his catalogue information. The use of alternative equipment or an Part or material which is of equal quality and of the required characteristics for the purpose intended will be permitted, subject to the written approval of the Project Engineer, in accordance with the following requirements:
 - 1. The burden of proof as to the comparative quality and suitability of alternative equipment or Parts or materials shall be upon the Contractor and he shall furnish, at his own expense, all information necessary or related thereto as required by the Project Engineer. The Project Engineer shall be the sole judge as to the comparative quality and suitability of alternative equipment or Parts or materials and the decision of the Project Engineer shall be final.
 - 2. The above provisions shall not be construed as permitting the use of alternative equipment or Parts or materials for equipment or Parts or materials which are not designated under a Trade Name or the name of a manufacturer or producer and his catalogue information, and for which detail specifications are set forth.

PART 3: EXECUTION-NOT USED

*****END OF SECTION*****

ATTACHMENTS

SECTION 00 62 76

APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 DESCRIPTION

Work included: Comply with procedures described in this Section when applying for progress payment and final payment under the Contract.

1.2 QUALITY ASSURANCE

- A. Prior to start of construction, secure the Engineer's review of the schedule of values required to be submitted and described in Section 01 29 73 of these Specifications.
- B. During progress of the Work, modify the schedule of values as reviewed by the Engineer to reflect changes in the Contract Sum due to Change Orders or other modifications of the Contract.
- C. Base requests for payment on the accepted schedule of values.

1.3 SUBMITTALS

- A. Informal submittal: Unless otherwise directed by the Engineer:
 - 1. Make an informal submittal of request for payment by filling in with erasable pencil, pertinent portions of the accepted schedule of values.
 - 2. Make this preliminary submittal to the Engineer at least one week prior to the date of formal submittal.
 - 3. Revise the informal submittal of request for payment as agreed, initialing all copies.
- B. Formal submittal: Unless otherwise directed by the Engineer:
 - 1. Make formal submittal of request for payment by filling in the agreed data, by typewriter upon the forms reviewed and accepted by the Engineer.
 - 2. Sign and notarize the Application and Certificate for Payment.
 - 3. Submit the original of the Application and Certificate for Payment to the Owner plus one identical copy to the Engineer.

PART 2 - PRODUCTS

2.1 MATERIALS

Provide materials, not specifically described but required for a complete and proper execution of the Work, as selected by the Contractor subject to the review of the Engineer.

PART 3 - EXECUTION

3.1 PROCEDURES

- A. Prepare and submit applications as outlined in Article 1.3 above.
- B. Progress payment applications are to be submitted at a frequency of not more than one application per month.

END OF SECTION

SECTION 00 62 83

CONSTRUCTION SCHEDULES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work included: To assure adequate planning and execution of the Work so that the Work is completed within the time allowed in the Contract, and to assist the Owner and Engineer in appraising the reasonableness of the proposed schedule and in evaluating progress of the Work, prepare and maintain the schedules and reports described in this Section.
- B. Definitions:
 - 1. “Day,” as used throughout the Contract unless otherwise stated, means “calendar day.”

1.2 QUALITY ASSURANCE

- A. Employ a scheduler who is thoroughly trained and experienced in compiling construction schedule data, and in preparing and issuing periodic reports as required below.
- B. Perform data preparation, analysis, charting, and updating in accordance with standards acceptable to the Engineer.
- C. Reliance upon the reviewed schedule:
 - 1. The construction schedule as reviewed by the Engineer will be an integral part of the Contract and will establish interim completion dates for the various activities under the Contract.
 - 2. Should any activity not be completed within 15 days after the stated scheduled date, the Owner shall have the right to require the Contractor to expedite completion of the activity by whatever means the Owner deems appropriate and necessary, without additional compensation to the Contractor.
 - 3. Should any activity be 30 days or more behind schedule, the Owner shall have the right to perform the activity or have the activity performed by whatever method the Owner deems appropriate.
 - 4. Costs incurred by the Owner in connection with expediting construction activity under this Section shall be reimbursed by the Contractor and may be withheld from payments due the Contractor.

5. It is expressly understood and agreed that failure by the Owner to exercise the option either to order the Contractor to expedite an activity or to expedite the activity by other means shall not be considered to set a precedent for any other activities.

1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01 25 13.
- B. Construction schedule: Within twenty-one (21) days after the Contractor has received the Contract, submit electronically in PDF format a construction schedule prepared in accordance with Part 3 of this Section. This submittal shall be a refinement of the schedule submitted with the Bid.
- C. Periodic reports: On the first working day of each month following the submittal described in Paragraph 1.3-B above, submit electronically in PDF format a construction schedule updated as described in Part 3 of this Section.

PART 2 - PRODUCTS

2.1 CONSTRUCTION ANALYSIS

- A. Graphically show by bar chart the order and interdependence of all activities necessary to complete the Work, and the sequence in which each activity is to be accomplished, as planned by the Contractor and his project field superintendent in coordination with all subcontractors whose work is shown on the diagram.
- B. Include, but do not necessarily limit indicated activities to:
 1. Project mobilization.
 2. Submittal and review of Shop Drawings and Samples.
 3. Procurement of equipment and critical materials.
 4. Fabrication of material and equipment, and its installation and testing
 5. Final cleanup.
 6. Final inspecting and testing; and
 7. All activities by the Owner and Engineer that affect progress, required dates for completion, or both, for all and each part of the Work.

PART 3 - EXECUTION

3.1 CONSTRUCTION SCHEDULE

- A. As soon as practicable after receipt of Notice to Proceed, complete the construction analysis in preliminary form, meet with the Engineer, review contents of the proposed construction schedule, and make all revisions agreed upon.
- B. Include a detailed written methodology; a detailed description of the methods the Contractor proposes to use to perform the Work including a description of all major equipment that will be used.
- C. Submit in accordance with Paragraph 1.3-B above.

3.2 PERIODIC REPORTS

As required under Paragraph 1.3-C above, update the construction schedule.

- A. Indicate “actual” progress in percent completion for each activity.
- B. Provide written narrative summary of revisions causing delay in the program, and an explanation of corrective actions taken or proposed.
- C. Include a detailed written methodology; a detailed description of the methods the Contractor proposes to use to perform the Work including a description of all major equipment that will be used.

3.3 REVISIONS

Make only those revisions to approved construction schedule as are reviewed and accepted in advance by the Engineer.

END OF SECTION

SECTION 00 63 63

CHANGE ORDER FORM

PART 1 - GENERAL

1.1 DESCRIPTION

Work included: Make such changes in the Work, in the Contract Sum, in the Contract Time of Completion, or any combination thereof, as are described in written Change Orders signed by the Owner and issued after execution of the Contract, in accordance with the provisions of this Section.

A. Engineer's Field Orders:

1. From time to time during progress of the Work the Engineer may issue an "Engineer's Field Order" which interprets the Contract Documents or orders minor changes in the Work without change in Contract Sum or Contract Time.
2. Should the Contractor consider that a change in Contract Sum or Contract Time is required, he shall submit an itemized proposal to the Engineer immediately and before proceeding with the Work. If the proposal is found to be satisfactory and in proper order, the Field Order in that event will be superseded by a Change Order.

B. Proposal Requests:

1. From time to time during progress of the Work the Engineer may issue a "Proposal Request" for an itemized quotation for changes in the Contract Sum and/or Contract Time incidental to proposed modifications to the Contract Documents.
2. This will not be a Change Order and will not be a direction to proceed with the changes described therein.

1.2 QUALITY ASSURANCE

Include within the Contractor's quality assurance program such measures as are needed to assure familiarity of the Contractor's staff and employees with these procedures for processing Change Order data.

1.3 SUBMITTALS

- A. Make submittals directly to the Engineer at the address listed in Section 00103.
- B. Submit the number of copies called for under the various items listed in this Section.

1.4 PRODUCT HANDLING

- A. Maintain a “Register of Proposal Requests, Field Orders, and Change Orders” at the job site, accurately reflecting current status of all pertinent data.
- B. Make the Register available to the Engineer for review at his request.

1.5 PROCESSING CHANGES INITIATED BY THE OWNER

- A. Should the Owner contemplate making a change in the Work or a change in the Contract Time of Completion, the Engineer will issue a “Proposal Request” or “Field Order” to the Contractor.
- B. If the Contractor has been directed by the Engineer to make the described change in the Work at no change in the Contract Sum and no change in the Contract Time of Completion, but the Contractor wishes to make a claim for one or both of such changes, the Contractor shall proceed with the change and shall immediately notify the Engineer of the claim.
- C. If the Contractor has been directed by the Engineer to make the described change subject to later determination of cost or credit, the Contractor shall:
 - 1. Take such measure as needed to make the change.
 - 2. Consult with the Engineer and reach agreement on the most appropriate method for determining credit or cost for the change.
- D. If the Contractor has been directed by the Engineer to promptly advise him as to credit or cost proposed for the described change, the Contractor shall:
 - 1. Analyze the described change and its impact on costs and time.
 - 2. Secure the required information and forward it on to the Engineer for review.
 - 3. Meet with the Engineer as required to explain costs and, when appropriate, determine other acceptable ways to achieve the desired objective.
 - 4. Alert pertinent personnel and subcontractors as to the impending change and, to the maximum extent possible, avoid such work as would increase the Owner’s cost for making the change, advising the Engineer in writing when such avoidance no longer is practicable.

1.6 PROCESSING CHANGES INITIATED BY THE CONTRACTOR

- A. Should the Contractor discover a discrepancy among the Contract Documents, a concealed condition, or other cause for suggesting a change in the Work, a change in the Contract Sum, or a change in the Contract Time of Completion, he shall

notify the Engineer in writing as required by pertinent provisions of the Contract Documents.

- B. Upon agreement by the Engineer that there is reasonable cause to consider the Contractor's proposed change, the Engineer will issue a Proposal Request in accordance with the provisions described above.
- C. If the Contractor proceeds without making the required written notification, he waives any possible claims for additional costs or Contract time and proceeds at his own risk.

1.7 PROCESSING PROPOSAL REQUESTS

- A. Make written reply to the Engineer in response to each Proposal Request no later than five days following the date of the Proposal Request.
 - 1. State proposed change in the Contract Sum, if any.
 - 2. State proposed change in the Contract Time of Completion, if any.
 - 3. Clearly describe other changes in the Work, if any, required by the proposed change or desirable therewith
 - 4. Include full backup data including subcontractor's letter of proposal, materials quotation, and similar information to the satisfaction of the Engineer.
 - 5. Submit this response in single copy.
- B. When cost or credit for the change has been agreed upon by the Owner and the Contractor, or the Owner has directed that cost or credit be determined in accordance with provisions of the Contract Documents, the Engineer will issue a "Change Order" to the Contractor.

1.8 PROCESSING CHANGE ORDERS

- A. Change Orders will be dated and will be numbered in sequence.
- B. The Change Order will describe the change or changes will refer to the Proposal Requests or Field Orders involved and will be signed by the Owner.
- C. The Engineer will issue two (2) copies of each Change Order to the Contractor.
 - 1. The Contractor promptly shall sign both copies and return them to the Engineer.
 - 2. After signature by the Owner, the Owner will retain one copy, and one fully executed copy will be returned to the Contractor.

- D. Should the Contractor disagree with the stipulated change in Contract Sum or change in Contract Time of Completion, or both:
 - 1. The Contractor promptly shall return both copies of the Change Order, unsigned by him, to the Engineer with a letter signed by the Contractor and stating the reason or reasons for the Contractor's disagreement.
 - 2. The Contractor's disagreement with the Change Order shall not in any way relieve the Contractor of his responsibility to proceed with the change as ordered and to seek settlement of the dispute under pertinent provisions of the Contract Documents.
- E. Rates for labor, equipment, and materials shall remain unchanged for the duration of the Project, including additional Work resulting from a Change Order.

1.9 "COST PLUS" WORK

- A. The Owner, at his prerogative, may direct the Contractor to proceed with necessary work on a "Cost Plus" basis. "Cost Plus" basis is defined as the Contractor's cost to perform the work, plus a pre-determined rate for overhead and profit.
- B. On a daily basis, the Contractor shall submit, for the Engineer's review and acknowledgment, a daily work report containing a summary of all labor, equipment, and materials expended on the work in question.
- C. The Contractor shall not proceed with "Cost Plus" Work until he has secured the appropriate written direction of Change Order to do so from the Engineer.

1.10 ALLOWABLE MARK-UP

- A. The maximum percentages for overhead and profit, to be applied for all Change Order work, are as follows:
- B. For work performed by the Contractor's own forces: Ten (10) percent overhead and ten (10) percent profit.
- C. For work performed by Sub-contractors: Five (5) percent overhead and five (5) percent profit.

1.11 DEDUCTS AND CREDITS

The Contractor shall credit the Owner for any such change that results in a net decrease in cost the amount of the actual net decrease, plus ten (10) percent of the net decrease.

PART 2 - PRODUCTS

2.1 MATERIALS

Provide materials, not specifically described but required for a complete and proper execution of the Work, as selected by the Contractor subject to the review of the Engineer.

PART 3 - EXECUTION

3.1 PROCEDURES

Procedures are outlined in Part 1 above.

END OF SECTION

SECTION 01 01 00

SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division Specification Sections, apply to this section.

1.2 SUMMARY

The “Work” that is required by this Contract is set forth in the following documents:

- A. General requirements and technical specifications titled:

**ROCK HARBOR COMMERCIAL WHARF IMPROVEMENT PROJECT
TOWN OF ORLEANS, MA**

- A. Contract Drawings Entitled: “Goose Hummock Boat Ramp Bulkhead Rehabilitation” and Issued for Bid on 7/18/2025, Drawings consist of a total of 9 sheets (including Cover Sheet) as prepared by Foth Infrastructure & Environment, LLC (Foth), 15 Creek Road, Marion, MA 02738 and stamped by Alex I. Mora P.E. Drawings are on file with the Owner and any changes, drawings and direction(s) that may from time to time be furnished by the Project Engineer.
- B. The Contractor shall furnish all supervision, labor, equipment, appliances and materials, and carry out all operations, including monitoring and other field engineering, as necessary to accomplish the Work, complete. The Contractor shall perform the work in strict accordance with these specifications and the Contract Drawings, and subject to the terms and conditions of the Contract and all applicable permits, certifications, codes and regulations and in accordance with the schedules for completion set forth herein.
- C. In case of any conflict among the Contract Documents, unless the context clearly otherwise requires, the Contract Documents shall be construed according to the following priorities:
 - 1. First Priority: Contract Modifications
 - 2. Second Priority: Contractor Agreement
 - 3. Third Priority: General Conditions of the Contract

4. Fourth Priority: Drawings - Schedules take precedence over enlarged detail Drawings and enlarged Detail Drawings take precedence over reduced scale Drawings; figured dimensions shall prevail over scale.
5. Fifth Priority: Specifications

1.3 DESCRIPTION OF WORK

The general description below is given to indicate the approximate scope of the proposed project only. It does not limit the work required under the Contract Drawings and specifications. For reference, the word "Project Site" shall mean the parcel of land located at 1 Route 6A at the Goose Hummock Boat Ramp and the waterways adjacent thereto, the structures and land adjacent thereto, and any stockpiling, laydown areas and adjacent areas.

In general, the Work to be performed shall consist of steel bulkhead oversheeting, ground anchors, concrete cap installation, timber landing installation/reconstruction, steel-backed timber guard rail type b construction, and restoration of the site and existing grades at the existing Goose Hummock Boat Ramp.

The Work to be performed includes all labor, materials, and transportation, environmental protection, safety, and all other items incidental to complete the proposed project.

On-site work by the selected Contractor may commence on/after November 1, 2025 and Construction shall be completed by no later than March 15, 2026.

1.4 PROJECT/SITE CONDITIONS

Data and information furnished or referred to below is for the Contractor's information. Neither the Owner nor the Project Engineer shall be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

A. Site Conditions:

1. The indications of physical conditions on the Contract Drawings and in the specifications are the result of site investigations and surveys. The conditions represented prevailed at the time the investigations and surveys were made.
2. Historic record information found to be available and relevant to the Project Site is provided in **Attachment D**.

B. Staging Area: A Contractor staging and laydown area will be coordinated with and provided by the Owner. Any additional or supplemental staging areas required by the Contractor will be the responsibility of the Contractor and at the Contractor's expense.

- C. Weather Conditions: The monthly normal mean temperature and the monthly normal mean precipitation for the site may be obtained by the Contractor from the nearest U.S. National Weather Service Office.
- D. Transportation: The Contractor shall make his own investigation on transportation to the Project Site.
- E. Height Limitations: While there are no specific height limitations imposed at the Project Site, the Contractor shall be aware of existing overhead wires located along Bay View Drive and in the vicinity of work.

1.5 SEQUENCING AND SCHEDULING

A. Mandatory Schedule Milestone

All work items shall be shown on the project schedule along with days of performance and completion dates. The milestone shall be graphically depicted on the schedule clearly delineating the completion of work and the overall progress earning for said work, depicting reaching the interim Milestone schedule along with substantial and final completion of the project or the Contractor will be subject to liquidated damages.

- 1. Failure to achieve completion of the work required by the Mandatory Scheduled Milestones and reaching substantial and final completion in accordance with the Contract requirements will incur Liquidated Damages.

B. Hours of Operations

- 1. Working hours are allowed seven (7) days a week between the hours of 7:00 A.M. and 5:00 P.M unless otherwise specified or approved by the Owner.
- 2. Any request for revised work hours shall be provided in the form of a written request to the Owner for consideration.

C. Weekly Progress Schedules

- 1. Weekly progress schedules shall be in the form of a chart graphically indicating the sequence proposed to accomplish each work feature or operation. Contractor shall indicate on the chart the important work features or operations that are critical to the timely overall completion of the project. Key dates for such important work features and portions of work features are milestone dates and shall be so indicated on the chart. This schedule will be the medium through which the timeliness of the Contractor's construction effort is appraised. Anticipated adverse weather delay days shall be included in the schedule. Preparation of the weekly progress schedules shall be completed in accordance with Section 01 31 19 Project Meetings. Progress meetings with the Owner's Project Engineer are anticipated on a weekly basis order to go over problems, issues, questions, etc.

D. Organization at the Site

1. General

The Contractor shall employ ample personnel and sufficient equipment to accomplish the Work within the timeframes specified herein.

2. Rate of Progress

Should the Contractor fail to maintain a satisfactory rate of progress such that there is a reasonable basis to find that the Mandatory Schedule Milestone will not be achieved, the Owner's Project Engineer may require that additional personnel and equipment be placed on the Work and weekend and overtime work be performed, in order that the work be brought up to schedule and maintained. All costs associated with the acceleration of work to meet the mandatory schedule milestones shall be the responsibility of the Contractor and shall not be deemed Liquidated Damages.

1.6 WORK LIMITS

- A. The Work shall be restricted to the areas as shown on the Contract Drawings.

1.7 COORDINATION

- A. The Contractor is required to coordinate its activities with the appropriate authorities and affected parties within the vicinity of the Project Site. A partial list of the parties to coordinate with is included in the sub-sections below. (This list is not intended to be a complete listing of the entities that may require notification, coordination, and/or action, but rather represents examples of the entities that will require coordination.)
- B. To the maximum extent practicable, the area shall remain operational; and the Contractor shall conduct their work in such a manner to assure minimal interference and complete communication with local operations. This shall include, but not be limited to, the construction site and roadways.
- C. Before commencing work, the Contractor shall coordinate with the Town of Orleans Department of Public Works and Harbormaster and the Owner's Project Engineer/representatives.

1.8 SECURITY

- A. Personnel Security (NOT USED)

B. Equipment Security

The Contractor will be responsible for security of equipment while that equipment is onsite.

At all times, the Contractor is responsible to ensure that public access to equipment is precluded, except for authorized personnel.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 02 50

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1. LUMP SUM PAYMENT ITEMS

Payment items for the Work for which contract lump sum payments will be made are listed in Section 004000, Bid, "Exhibit A" to Bid – Bid Schedule, and described below. All costs for items of Work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed item most closely associated with the Work involved. The lump sum price and payment made for each item listed shall constitute full and final compensation for furnishing all supervision, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all Work required for which separate payment is not otherwise provided.

2. UNIT PRICE PAYMENT ITEMS

Payment items for the Work of this contract on which the contract unit price payments will be made are listed in Section 004000, Bid, "Exhibit A" to Bid – Bid Schedule, and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all supervision, plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all Work required for each of the unit price items.

3. BIDDING SCHEDULE

Payment Items for the Work of this contract on which the contract progress payments will be based are listed in Section 00400, Bid, "Exhibit A" to Bid – Bid Schedule, and described below. All costs for items of Work, which are not specifically mentioned to be included in a particular Bidding Schedule payment item, shall be included in the listed item most closely associated with the Work involved.

4. BID ITEMS

BID ITEM NO. 1 - MOBILIZATION/DEMobilIZATION

A. WORK COVERED BY CONTRACT PRICE

1. This item includes all costs associated with Contractor's mobilization and demobilization for the Goose Hummock Boat Ramp Bulkhead Rehabilitation Project. Costs shall include, but are not limited to, work shown on the Contract Drawings and described in the specifications herein.

2. Mobilization shall also include the completion of pre-construction submittals, obtaining any necessary permits and approvals not already in place for the work specified in accordance with the Contract, full reimbursement for the premiums actually paid for payment bond, all costs connected with the mobilization of the Contractor's equipment and supported vessels, coordination, submittals and preparation of site and staging area as required; equipment and tools, purchase of materials needed for construction, temporary facilities, security measures, coordination with the regulatory agencies, and any other work that is necessary to mobilize for project.
3. Demobilization shall include removal of all equipment and temporary construction facilities from the site.
4. There will be only one (1) mobilization and one (1) demobilization paid. If, for any reason, the Contractor must shut down and remove their equipment from the site, then remobilize, the Owner will not be responsible for the payment of additional costs associated with such Work or undertaking, and this is to remain the sole responsibility of the Contractor.
5. Demobilization shall include general preparation for transfer of equipment to its home base, restoration as required from the Contractor's operations, and preparation of as-built drawings.

B. MEASUREMENT

1. Unit of Measure – LUMP SUM (LS)
2. Mobilization and demobilization will be measured as a lump sum to include compensation for project preparations, procurement and assembly of all equipment, materials, supplies, permits, labor, submittals and bonds required for the prosecution of the work not otherwise included in other pay items and upon completion of the work as specified and directed, the clean-up of the work areas, removal of equipment, materials and supplies from the work area.
3. Payment will be made for costs associated with mobilization and demobilization for operations including all incidental work described in the specifications and contract documents.
4. 60% of the lump sum price for mobilization/demobilization unit will be paid to the Contractor upon completion of mobilization with the remaining 40% paid upon acceptance of Work by the Owner, submission & acceptance of As-Built Drawings and completion of demobilization from the Project Site. In the event that the Owner considers the lump sum price for the bid item does not bear a reasonable relationship to the cost of the work in this contract, the Owner may require the Contractor to produce cost data to justify the price bid to the satisfaction of the Owner. If the Contractor fails to substantiate the price bid, then payment will be made for actual mobilization and demobilization costs as determined by the Owner. Payment for this item will be considered full compensation for all labor, materials, off-site disposal, and other fees, equipment, supervision, and supplies required for the work.

BID ITEM NO. 2 - SITE PREPARATION

A. WORK COVERED BY CONTRACT PRICE

1. This item includes all work and costs associated with Contractor's Site Preparation for the Goose Hummock Boat Ramp Bulkhead Rehabilitation Project. Costs shall include, but are not limited to, work shown on the Contract Drawings and described in the specifications herein.
2. Site preparation shall include the furnishing, installation and maintenance of erosion and sedimentation controls, coordination of temporary electrical service during construction, temporary safety fence, installation and maintenance of environmental controls required by the Permits; staging area/stockpile management, suppression of dust onsite as necessary, management of odors and noise, final site cleanup/restoration, and all other miscellaneous work obviously required to complete the project, but not covered by individual items in the contract.
3. Site Preparation shall include all site investigation work to identify site conditions including, but not limited to, the location of existing utilities and coordination.
4. Site Preparation shall include efforts and costs associated with the Contractor application to obtain any/all additional permit(s)/authorization(s) that may be required beyond those provided herein and as required for the scope of work to be completed herein.

B. MEASUREMENT

1. Unit of Measure - LUMP SUM (LS)
2. This item will be measured as the lump sum to include compensation for the work covered by contract price.
3. Payment will be made for costs associated with this bid item including all incidental work described in the specifications and Contract Documents.
4. Payment shall be for all costs, including but not limited to, furnishing all labor, materials, equipment, and incidentals as required for installation of this bid item in accordance with the Contract Documents.

BID ITEM NO. 3 – DEMOLITION, REMOVAL AND DISPOSAL

A. WORK COVERED BY CONTRACT PRICE

1. This item includes all work and costs associated with performing all required demolition, removal and disposal for the Goose Hummock Boat Ramp Bulkhead Rehabilitation Project as shown on the Contract Drawings and specified herein.
2. This item shall include the demolition, removal, disposal and reuse of existing above and below ground infrastructure including but not limited to: elements of timber bulkhead to be removed as shown on the contract drawings; untreated, CCA-treated and creosote treated timber and pilings; tie-backs/anchor system(s); connections, fasteners, appurtenances or other items not suitable for reuse; utilities, including water lines; asphalt pavement; riprap, and any other miscellaneous demolition.
3. This item includes the removal of backfill/soils located between the existing bulkhead and proposed new bulkhead to the limits and elevations shown on the Contract Drawings, dewatering (as necessary), stockpiling, on-site reuse and/or off-site disposal, as required.

4. This item shall include the saw-cutting of the boat ramp to facilitate new sheet installation and removal/disposal of those materials.
5. This item shall include removing all materials; removal and storage of any utilities scheduled for re-installation, labor, transportation and equipment to demolish to the extent shown on the plans. Bid item shall also include all work such as disconnecting, trimming, disposal of excess, splicing, transitions, bracing, staging, water and erosion control, manpower, fueling, maintenance, operation, field engineering, environmental protection, purchase of materials, and disposal of all waste associated with demolition work. Items to remain shall be removed and replaced to facilitate work as indicated on the Contract Drawings or as directed by the Engineer.
5. The Contractor shall be responsible for removal and proper off-site disposal of all materials.

B. MEASUREMENT

1. Unit of Measure – LUMP SUM (LS)
2. This item will be measured as the lump sum to include compensation for the work covered by contract price.
3. Payment will be made for costs associated with this bid item including all incidental work described in the specifications and Contract Documents.
4. Payment shall be for all costs, including but not limited to, furnishing all labor, supervision, materials, equipment, tools, expenses and incidentals as required for installation of this bid item in accordance with the Contract Documents.

BID ITEM NO. 4 – FURNISH AND INSTALL GROUTED ANCHORS

A. WORK COVERED BY CONTRACT PRICE

1. This item includes all work and costs associated with, including but not limited to, furnishing all labor, materials, equipment, and any other incidentals for the installation of drilled ground anchors to stabilize the AZ26 over sheet bulkhead for the Goose Hummock Boat Ramp Bulkhead Rehabilitation Project.
2. This item includes the investigation of existing structures in proximity of work and temporary bracing and shoring as needed to protect existing structures including, but not limited to, the existing 36" RCP pipe.
3. This Item includes all costs including, but not limited to, furnishing all labor, materials, equipment, and incidentals required to install the drilled ground anchors at locations shown on the on the Contract Drawings. All drilling and grouting equipment and procedures, stressing equipment and calibration thereof and mill test results for pre-stressing steel wire, strand or bars, anchorage head materials, bearing plates, trumpets, epoxy coatings, grout, sheathing, corrosion inhibitors, miscellaneous metal fabrications are considered part of or incidental to this Bid item. Calibrations and field testing are also included in this Bid item.
4. A detailed design with supporting calculations to achieve the specified ultimate stress as shown on the Contract Drawings shall be provided by the Contractor, certified by a Professional Engineer licensed in the Commonwealth of Massachusetts.
5. Costs shall include, but are not limited to, work shown on the Contract Drawings and described in the specifications herein.

B. MEASUREMENT

1. Unit of Measure – EACH (EA)
2. This item will be measured per each drilled ground anchor, tested, and complete in-place to include compensation for the work covered by the contract price.
3. Payment shall be made for all costs, including but not limited to, furnishing all labor, supervision materials, equipment, tools and incidentals as required to install the drilled ground anchors in accordance with the Contract Documents.

BID ITEM NO. 5 – FURNISH AND INSTALL STEEL SHEET PILE BULKHEAD & CONCRETE CAP

A. WORK COVERED BY CONTRACT PRICE

1. This item includes all work and costs associated with, including but not limited to, furnishing all labor, materials, equipment, and any other incidentals for the installation of the steel sheet pile bulkhead for the Goose Hummock Boat Ramp Bulkhead Rehabilitation Project.
2. This item includes the investigation and initial condition documentation of existing structures in proximity of work and temporary bracing and shoring as needed to protect existing structures.
3. This item includes installation of AZ26-700 steel sheet piles to the lines and elevations shown on the Contract Drawings, falsework, steel wales, hardware and bearing plates, welding, protective marine coatings and field touch up, reinforced cast-in-place concrete caps, tie-rods and any other miscellaneous metals including steel plates, steel piles and flowable fill required for the closure of the bulkhead, installation of geotextiles, backfill material, excavation/compaction, installation of anodes and any other item as necessary to construct the new bulkhead as shown on the Contract Drawings.
4. This item shall include a closure pile and all fabrication, interlock, and blocking associated with a solid pile wall closure to the existing timber bulkhead.
5. Driving through any obstructions, if encountered, shall be considered incidental to the sheet pile installation.
6. This item shall include the probing of the sheet pile alignment as necessary to drive sheets.
7. This item shall include removal and disposal of the rock toe if deemed necessary to drive sheets.
8. This item shall include repair of adjacent boat ramp should the ramp settle or is otherwise disturbed.
9. Costs shall include, but are not limited to, work shown on the Contract Drawings and described in the specifications herein.

B. MEASUREMENT

1. Unit of Measure – LINEAR FOOT (LF)

2. This item will be measured per linear foot complete in-place to include compensation for the work covered by the contract price.
3. Payment shall be made for all costs, including but not limited to, furnishing all labor, supervision materials, equipment, tools and incidentals as required to install the steel sheet pile replacement bulkhead in accordance with the Contract Documents. The Contractor shall provide an itemized cost breakdown of the LF cost of this item as a submittal prior to start of construction.

BID ITEM NO. 6 – FURNISH AND INSTALL PILE SUPPORTED TIMBER PIER

A. WORK COVERED BY CONTRACT PRICE

1. This item includes all work and costs associated with, including but not limited to, furnishing all labor, materials, equipment, and any other incidentals for the replacement of the existing timber pier for the Goose Hummock Boat Ramp Bulkhead Rehabilitation Project.
2. This item includes the installation of 12-inch diameter CCA-treated timber piles, GRLWEAP analysis, falsework, timber stringers, split caps, decking and cross-bracing, rails, marine hardware and all other incidentals related to this item.
3. This item includes removing, repairing, and reusing the existing gangway connection, with new fasteners as needed as shown on the Contract Plans.
4. Driving through any obstructions, if encountered, shall be considered incidental to the pile installation.
5. Costs shall include, but are not limited to, work shown on the Contract Drawings and described in the specifications herein.

B. MEASUREMENT

1. Unit of Measure – SQUARE FOOT (SF)
2. This item will be measured per square foot of pile-supported timber Town Pier installed complete in-place to include compensation for the work covered by the contract price.
3. Payment shall be made for all costs, including but not limited to, furnishing all labor, supervision materials, equipment, tools and incidentals as required to install the pile-supported timber Town Pier in accordance with the Contract Documents.

BID ITEM NO. 7 – FURNISH AND INSTALL STEEL-BACKED TIMBER GUARDRAIL TYPE B

A. WORK COVERED BY CONTRACT PRICE

1. This item includes all work and costs associated with, including but not limited to, furnishing all labor, materials, equipment, and any other incidentals required for the

installation of a steel-backed timber guardrail type b system for the Goose Hummock Boat Ramp Bulkhead Rehabilitation Project.

2. This item includes treated timber railings and posts, post connections, hardware and all other incidentals required for installation of a railing system at the locations and to elevations shown on the Contract Drawings and in compliance with the US FHA Customary Standards.
3. Costs shall include, but are not limited to, work shown on the Contract Drawings and described in the specifications herein.

B. MEASUREMENT

1. Unit of Measure – LINEAR FOOT (LF).
2. This item will be measured per linear foot of steel back timber guardrail type b system installed complete in-place to include compensation for the work covered by the contract price.
3. Payment shall be made for all costs, including but not limited to, furnishing all labor, supervision materials, equipment, tools and incidentals as required to install a timber railing system in accordance with the Contract Documents.

BID ITEM NO. 8 – FURNISH AND INSTALL 36” RCP EXTENSION

A. WORK COVERED BY CONTRACT PRICE

1. This item includes all costs to furnishing labor, materials, equipment, and incidentals for the installation of the 36” RCP Extension and Flap Gate at location shown on the Contract Drawings for the Goose Hummock Boat Ramp Bulkhead Rehabilitation Project.
2. This item includes management of outfall flow during weather events during construction.
3. Costs shall include, but are not limited to, work shown on the Contract Drawings and described in the specifications herein.

B. MEASUREMENT

1. Unit of Measure - Lump Sum (LS)
2. Furnishing and Installation of Flap Gate will be measured as the lump sum to include compensation for the work covered by Contract price. The Contractor shall provide a breakdown of this Lump Sum item with the Bid documents
3. Payment will be made for furnishing all labor, materials, equipment, and incidentals associated with this Bid Item including all incidental work described in the specifications and Contract Documents.

BID ITEM NO. 9 – SITE RESTORATION

A. WORK COVERED BY CONTRACT PRICE

1. This item includes all work and costs associated with performing all required site restoration for the Goose Hummock Boat Ramp Bulkhead Rehabilitation Project as shown on the Contract Drawings and specified herein.
2. This item shall include the backfill and compaction of the subsurface layer behind the new bulkhead reusing the excavated material.
3. This item includes installation of the 4" dense grade course from the new bulkhead cap and extending to the area disturbed, to the elevations shown on the Contract Drawings.
4. This item shall include placement of a 4" minimum layer of crushed stone between the saw-cut boat ramp and the new sheet pile wall.
5. This item shall include restoration and grading of the parking lot west of the boat ramp with dense grade.
6. This item shall include the replacement in kind of the water line and all associated valves and fittings near the timber landing.

C. MEASUREMENT

5. Unit of Measure – LUMP SUM (LS)
6. This item will be measured as the lump sum to include compensation for the work covered by contract price.
7. Payment will be made for costs associated with this bid item including all incidental work described in the specifications and Contract Documents.
8. Payment shall be for all costs, including but not limited to, furnishing all labor, supervision, materials, equipment, tools, expenses and incidentals as required for installation of this bid item in accordance with the Contract Documents.

END OF SECTION

SECTION 01 05 00

FIELD ENGINEERING

PART 1 - GENERAL

1.1 DESCRIPTION

Work included: Provide such field engineering services as are required for proper completion of the Work including, but not necessarily limited to:

- A. Establishing and maintaining lines and levels.
- B. Structural design of shores, forms, and similar items provided by the Contractor as part of his means and methods of construction.

1.2 QUALITY ASSURANCE

Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01 25 13.
- B. Upon request of the Engineer, submit:
 - 1. Data demonstrating qualifications of persons proposed to be engaged for field engineering services.
 - 2. Documentation verifying accuracy of field engineering work.
 - 3. Certification, signed by the Contractor's retained field engineer, certifying that elevations and locations of improvements are in conformance or non-conformance with requirements of the Contract Documents.

PART 2 - PRODUCTS

2.1 MATERIALS

Provide materials, not specifically described but required for a complete and proper execution of the Work, as selected by the Contractor subject to the review of the Engineer.

PART 3 - EXECUTION

3.1 PROCEDURES

In addition to procedures directed by the Contractor for proper performance of the

Contractor's responsibilities:

A. Locate and protect control points before starting work on the site.

Preserve permanent reference points during progress of the Work.

Do not change or relocate reference points or items of the Work without specific direction from the Engineer.

Promptly advise the Engineer when a reference point is lost or destroyed or requires relocation because of other changes in the Work.

1. Upon direction of the Engineer, require the field engineer to replace reference stakes or markers.
2. Locate such replacements according to the original survey control.

END OF SECTION

SECTION 01 25 13

SUBMITTALS AND SUBSTITUTIONS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work included: Make submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements.
- B. Work not included:
 - 1. Non-required submittals will not be reviewed by the Engineer.
 - 2. The Contractor may require his subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the Work, but such data shall remain between the Contractor and his subcontractors and will not be reviewed by the Engineer.
- C. Definitions:
 - 1. “Or equivalent”:
 - a. Where the phrase “or equivalent,” or “or equivalent as accepted by the Engineer,” occurs in the Contract Documents, do not assume that the materials, equipment, or methods will be approved as equivalent unless the item has been specifically so accepted for this Work by the Engineer.
 - b. The decision of the Engineer shall be final.

1.2 QUALITY ASSURANCE

- A. Coordination of submittals:
 - 1. Prior to each submittal, carefully review and coordinate all aspects of each item being submitted.
 - 2. Verify that each item and the submittal for it conform in all respects with the specified requirements.
 - 3. The Contractor shall procure a rubber stamp with identical wording to the sample Contractor’s submittal stamp shown below.

CONTRACTOR: _____

THIS SUBMITTAL IS REQUIRED PER SECTION _____ OF THE SPECIFICATIONS. THE SUBMITTED ITEMS HAVE BEEN REVIEWED IN DETAIL AND ARE CORRECT AND IN STRICT CONFORMANCE WITH THE CONTRACT DOCUMENTS. THE SUBMITTED ITEMS HAVE BEEN COORDINATED WITH OTHER WORK OF THIS CONTRACT, EXISTING STRUCTURES, AND WORK OF OTHER CONTRACTS.

BY: _____

DATE: _____

4. By affixing the Contractor's submittal stamp to each submittal, certify that this coordination has been performed. Submittals which do not bear the requisite stamp will be returned to the Contractor non-reviewed.

B. Substitutions:

1. The Contract is based on the standards of quality established in the Contract Documents. Substitutions will be considered only when listed at time of bidding, on the form provided therefore in the bidding documents, and when substantiated by the Contractor's submittal of required data.
2. Do not substitute materials, equipment, or methods unless such substitution has been specifically accepted in writing for this Work by the Engineer.

1.3 SUBMITTALS

- A. Make submittals of Shop Drawings, Samples, substitution requests, and other items in accordance with the provisions of this Section.

PART 2 - PRODUCTS

2.1 SHOP DRAWINGS

- A. Scale and measurements: Make Shop Drawings accurately to a scale sufficiently large to show all pertinent aspects of the item and its method of connection to the Work.
- B. Types of prints required:
 1. Submit Shop Drawings electronically in PDF format.
 2. Blueprints will not be acceptable.
- C. One electronic set of shop drawings with the Engineer's review comments will be returned to the Contractor. The Contractor may distribute as required for his purposes.

2.2 MANUFACTURERS' LITERATURE

- A. Where contents of submitted literature from manufacturers include data not pertinent to the submittal, clearly show which portions of the contents is being submitted for review.
- B. Submit manufacturers' data electronically in PDF format for review. One electronic set of manufacturer's data with the Engineer's review comments will be returned to the Contractor. The Contractor may distribute as required for his purposes.

2.3 SAMPLES

- A. Provide Sample or Samples identical to the precise article proposed to be provided. Identify as described under "Identification of submittals" below.
- B. Number of Samples required:
 - 1. Unless otherwise specified, submit Samples in the quantity, which is required to be returned, plus one, which will be retained by the Engineer.
 - 2. By prearrangement in specific cases, a single Sample may be submitted for review and, when accepted, be installed in the Work at a location agreed upon by the Engineer.

2.4 COLORS AND PATTERNS

Unless the precise color and pattern is specifically called out in the Contract Documents, and whenever a choice of color or pattern is available in the specified products, submit accurate color and pattern charts to the Engineer for selection.

PART 3 - EXECUTION

3.1 IDENTIFICATION OF SUBMITTALS

- A. Consecutively number all submittals.
 - 1. When material is resubmitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.
 - 2. On re-submittals, cite the original submittal number for reference.
- B. Clearly label each submittal with a reference to the appropriate Specification Section for which the submittal is made.
- C. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.
- D. On at least the first page of each submittal, and elsewhere as required for positive

identification, show the submittal number in which the item was included.

- E. Maintain an accurate submittal log for the duration of the Work, showing current status of all submittals at all times. Make the submittal log available to the Engineer for his review upon request.

3.2 GROUPING OF SUBMITTALS

- A. Unless otherwise specified, make submittals in groups containing all associated items to assure that information is available for checking each item when it is received.
- B. Partial submittals may be rejected as not complying with the provisions of the Contract.
- C. The Contractor may be held liable for delays so occasioned.

3.3 TIMING OF SUBMITTALS

- A. Make submittals far enough in advance of scheduled dates for installation to provide time required for reviews, for securing necessary approvals, for possible revisions and re-submittals, and for placing orders and securing delivery.
- B. In scheduling, allow at least fourteen (14) days for review by the Engineer following his receipt of the submittal.

3.4 ENGINEER'S REVIEW

- A. Review by the Engineer does not relieve the Contractor from responsibility for errors or omissions that may exist in the submitted data.
- B. Revisions:
 - 1. Make revisions required by the Engineer.
 - 2. If the Contractor considers any required revision to be a change, he shall so notify the Engineer as provided for in Section 00 63 63.
 - 3. Make only those revisions directed or accepted by the Engineer.
- C. Reimbursement of Engineer's Costs:
 - 1. In the event substitutions are proposed to the Engineer after the Contract has been awarded, the Engineer will record all time used by him and by his consultants in evaluation of each such proposed substitution.
 - 2. Whether or not the Engineer accepts a proposed substitution, the Contractor shall be responsible for the costs of the Engineer and his consultants for all

time spent by them in evaluating the proposed substitution, plus administrative fees. The costs will be deducted from outstanding pay requests due to the Contractor by way of a Change Order.

- D. Engineer's Review Stamp: The Engineer's review stamp will indicate the status of the submittal, and corresponding action to be taken by the Contractor as follows:
1. No Exceptions Taken: When the Engineer marks the submittal "No Exceptions Taken", the Work covered by the submittal may proceed, provided it complies with the requirements of the Contract Documents.
 2. Make Corrections Noted: When the Engineer marks the submittal "Make Corrections Noted", the Work covered by the submittal may proceed provided it complies with the notations on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.
 3. Amend and Resubmit: When the Engineer marks the submittal "Amend and Resubmit", the Work covered by the submittal may proceed provided it complies with the notations on the submittal and requirements of the Contract Documents. The submittal must be revised to comply with the notations on the submittal and requirements of the Contract Documents, and must then resubmitted to the Engineer. Final payment depends on that compliance.
 4. Rejected – See Remarks: When the Engineer marks the submittal "Rejected – See Remarks", do not proceed with the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise and prepare a new submittal according to the notations, resubmit without delay. Repeat if necessary to obtain a different action mark.
 - a. Do not use or allow others to use submittals marked "Resubmit" at the Project Site or elsewhere where Work is in progress.

END OF SECTION

SECTION 01 29 73

SCHEDULE OF VALUES

PART 1 - GENERAL

1.1 DESCRIPTION

Work included: Provide a detailed breakdown of the agreed Contract Sum showing value allocated to each of the various parts of the Work, as specified herein and in other provisions of the Contract Documents.

1.2 QUALITY ASSURANCE

- A. Use required means to assure arithmetical accuracy of the sums described.
- B. When so required by the Engineer, provide copies of the subcontracts or other data acceptable to the Engineer, substantiating the sums described.

1.3 SUBMITTALS

Prior to first application for payment, but not later than twenty-one (21) days after the Contractor has received his Contract, submit a proposed schedule of values to the Engineer.

- A. Meet with the Engineer and determine additional data, if any, required to be submitted.
- B. Secure the Engineer's review of the schedule of values prior to submitting first application for payment.

PART 2 - PRODUCTS

(No products are required in this Section)

PART 3 - EXECUTION

- 3.1** Submittal process is described in PART 1 above.

END OF SECTION

SECTION 01 29 83

LABORATORY TESTING SERVICES

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work Included:

1. Cooperate with the Owner's selected testing agency and all others responsible for testing and inspecting the Work.
2. Provide such other testing and inspecting as specified by the Contractor in this Section and/or elsewhere in the Contract Documents.

B. Work Not Included:

1. Selection of testing laboratory: The Engineer will select a pre-qualified independent testing laboratory.
2. Payment for initial testing: The Owner will pay for all initial services of the testing laboratory as further described in Article 2.1 of this Section.

1.2 QUALITY ASSURANCE

- A. The testing laboratory will be qualified to the Engineer's acceptance in accordance with ASTM E329.
- B. Testing, when required, will be in accordance with all pertinent codes and regulations and with selected standards of the American Society for Testing and Materials.

1.3 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01 66 00.
- B. Promptly process and distribute required copies of test reports and related instructions to assure necessary re-testing and replacement of materials with the least possible delay in progress of the Work.

PART 2 - PRODUCTS

2.1 PAYMENT FOR TESTING

- A. Initial services: The Owner will pay for initial testing services requested by the Engineer.

- B. Retesting: When initial tests indicate non-compliance with the Contract Documents, subsequent retesting occasioned by the non-compliance shall be performed by the same testing agency, and costs thereof plus administrative fees will be deducted by the Owner from the Contract Sum.

2.2 CODE COMPLIANCE TESTING

Inspections and tests required by codes or ordinances, or by a plan approval authority, and which are made by a legally constituted authority, shall be the responsibility of and shall be paid for by the Contractor, unless otherwise provided in the Contract Documents.

2.3 CONTRACTOR'S CONVENIENCE TESTING

Inspecting and testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.

PART 3 - EXECUTION

3.1 COOPERATION WITH TESTING LABORATORY

Representatives of the testing laboratory shall always have access to the Work and at all locations where the Work is in progress. Provide facilities for such access to enable the laboratory to perform its functions properly.

3.2 TAKING SPECIMENS

All specimens and samples for testing, unless otherwise provided in the Contract Documents, shall be taken by the testing personnel. All sampling equipment and personnel will be provided by the testing laboratory. All deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory.

3.3 SCHEDULES FOR TESTING

A. Establishing schedule:

1. By advance discussion with the testing laboratory selected by the Engineer, determine the time require for the laboratory to perform its tests and to issue each of its findings.
2. Provide all required time within the construction schedule.

- B. Revising schedule: When changes of construction schedule are necessary during construction, coordinate all such changes with the testing laboratory as required.

- C. Adherence to schedule: When the testing laboratory is ready to test according to the established schedule, but is prevented from testing or taking specimens due to incompleteness of the Work, all extra charges for testing attributable to the delay shall not be borne by the Owner and may be withheld from payments due the

Contractor.

END OF SECTION

SECTION 01 31 19

PROJECT MEETINGS

PART 1 - GENERAL

1.1 DESCRIPTION

Work included: To enable orderly review during progress of the Work, and to provide for systematic discussion of problems, the Engineer will conduct project meetings throughout the construction period.

1.2 QUALITY ASSURANCE

For those persons designated by the Contractor to attend and participate in project meetings, provide required authority to commit the Contractor to solutions agreed upon in the project meetings.

1.3 SUBMITTALS

- A. Agenda items: To the maximum extent practicable, advise the Engineer at least 24 hours in advance of project meetings regarding items to be added to the agenda.
- B. Minutes:
 - 1. The Engineer will compile minutes of each project meeting, and will furnish one copy to the Contractor and required copies to the Owner.
 - 2. Recipients of copies may make and distribute such other copies as they wish.

PART 2 - PRODUCTS

(No products are required in this Section)

PART 3 - EXECUTION

3.1 MEETING SCHEDULE

- A. Except as noted below for Pre-construction Meeting, project meetings will be held weekly.
- B. Coordinate as necessary to establish mutually acceptable schedule for meetings.

3.2 MEETING LOCATION

The Engineer will establish meeting location. To the maximum extent practicable, meetings will be held at the job site.

3.3 PRE-CONSTRUCTION MEETING

- A. Pre-construction Meeting will be scheduled to be held within twenty-one (21) days after the Owner has issued the Contract.
 - 1. Provide attendance by authorized representatives of the Contractor, including the Contractor's Representative (reference Section 00103), and major subcontractors.
 - 2. The Engineer will advise other interested parties, including the Owner, and request their attendance.
- B. Minimum agenda: Data will be distributed and discussed on at least the following items.
 - 1. Organizational arrangement of Contractor's forces and personnel, and those of subcontractors, materials suppliers, and Engineer.
 - 2. Channels and procedures for communication.
 - 3. Construction schedule, including sequence of critical work.
 - 4. Contract Documents, including distribution of required copies of original Documents and revisions.
 - 5. Processing of Shop Drawings and other data submitted to the Engineer for review.
 - 6. Processing of Bulletins, field decisions, and Change Orders.
 - 7. Rules and regulations governing performance of the Work; and
 - 8. Procedures for safety and first aid, security, quality control, housekeeping, and related matters.

3.4 PROJECT MEETINGS

- A. Attendance:
 - 1. As a minimum, the Contractor's Representative (reference Section 00103) is required to represent the Contractor at project meetings throughout progress of the Work.
 - 2. Subcontractors, materials suppliers, and others may be invited to attend those project meetings in which their aspect of the Work is involved.
- B. Minimum agenda:
 - 1. Review and revise as necessary the minutes of previous meetings.

2. Review progress of the Work since last meeting, including status of submittals for review.
 3. Identify problems that impede planned progress.
 4. Develop corrective measures and procedures to regain planned schedule.
 5. Complete other current business.
- C. Revisions to minutes:
1. Unless published minutes are challenged in writing within two days of issuance, they will be accepted as properly stating the activities and decisions of the meeting.
 2. Persons challenging published minutes shall submit the challenge to the Engineer in writing.
 3. Challenge to minutes shall be settled as priority portion of “old business” at the next regularly scheduled meeting.

END OF SECTION

SECTION 01 35 50

ENVIRONMENTAL PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this section.
- B. The publications listed below are incorporated into these Technical Specifications by reference. The publications are referred to in the text by basic designation only. The Contractor shall comply with all applicable local, state and federal regulations whether specifically listed or not in this Section.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

33 CFR 328	Definitions
40 CFR 68	Chemical Accident Prevention Provisions
40 CFR 129	Toxic Pollutant Effluent Standards
40 CFR 260	Hazardous Waste Management System: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
49 CFR 171 - 178	Hazardous Materials Regulations

1.2 EROSION AND SEDIMENTATION CONTROLS

- A. All temporary erosion and sediment controls as required for proper management of the Project Site shall be installed by the Contractor and shall be approved by the Project Engineer and the Orleans Conservation Commission prior to commencing any Work. (see Contract Drawings and Section 31 25 00, Erosion and Sedimentation Controls, for additional information).

1.3 DEFINITIONS

- A. Environmental Pollution

Environmental pollution is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

B. Environmental Protection

Environmental protection is the prevention/control of environmental pollution and habitat disruption that may occur to the environment during the Work. The control of environmental pollution requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

C. Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of Hazardous Wastes as defined by Massachusetts Department of Environmental Protection (MassDEP) regulation 310 CMR 30. These waste streams would typically consist of material brought on site by the Contractor to execute Work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents and sediment admixtures.

D. Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

E. Wetlands

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs.

1.4 ENVIRONMENTAL PROTECTION REQUIREMENTS

A. General

The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent Work shall be protected during the entire duration of this contract. The Contractor shall comply with all

applicable environmental Federal, State, and local laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.

1.5 SUBCONTRACTORS

The Contractor shall ensure compliance with this section by subcontractors.

1.6 FINES AND PENALTIES

The Contractor shall be solely responsible for any and all permit violations and fines levied thereto as a result of their construction or operations. The Contractor indemnifies the Owner from any fines or penalties levied and shall defend said fines or penalties as it sole coast with the Owner's cost relating to any defense of said fines or penalties to be assessed to the Contractor.

1.7 SUBMITTALS

The following shall be submitted in accordance with Section 01 25 13, Submittal Procedures:

A. Preconstruction Submittals:

1. Environmental Protection Plan:

The Environmental Protection Plan shall include the following plans as further described herein:

- a. Spill Control and Countermeasure Plan
- b. Boom-Supported, Bottom-Anchored Silt Curtain

2. Storm Water Pollution Protection Plan (SWPPP): The Contractor shall be responsible for the development and implementation of a SWPPP developed specifically for the site as needed. This plan will utilize EPA guidance to ensure that construction phase impacts are mitigated for the site. Special care shall be taken to install proposed drainage structures in a manner that provides the maximum feasible protection of adjacent resource areas. The schedule for this project may require installation of stormwater structures outside of the paving window, the installed structures must function to provide stormwater treatment for effluent running off exposed unpaved roadway. All structures are to be cleaned prior to acceptance by the Owner.

3. Erosion and Sediment Control Plan including details of Contractor proposed maintenance (see Contract Drawings, Section 00720, Supplementary Conditions and Section 31 25 00, Erosion and Sedimentation Controls).

- a. Controls shall be deployed to enclose all Work areas near bodies of water.

- b. The Contractor's plan for installment of controls shall be submitted to the Project Engineer for review and inspected by the Orleans Conservation Commission prior to the start of Work.
- c. The Contractor shall submit the Erosion and Sedimentation Control Plan at least five (5) days prior to commencing installation. The Plan shall incorporate the requirements specified herein with respect to the material regarding installation and anchoring procedures. Additionally, the plan shall provide information on the specific materials/appurtenances, delivery of the control materials to the Project Site, handling, storage, placement, and maintenance procedures. Fabrication details and installation techniques shall also be documented.

1.8 ENVIRONMENTAL PROTECTION PLAN

Prior to commencing construction activities or delivery of materials to the site, the Contractor shall submit an Environmental Protection Plan for review and approval by the Project Engineer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during the Work. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this Section. The Contractor shall address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Topics or issues which are not identified in this Section, but which the Contractor considers necessary, shall be identified and discussed after those items formally identified in this section. Prior to submittal of the Environmental Protection Plan, the Contractor shall meet with the Project Engineer for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's environmental plans. The Environmental Protection Plan shall be current and maintained onsite by the Contractor.

A. Compliance

No requirement in this Section shall be construed as relieving the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During Construction, the Contractor shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

B. Contents

The Environmental Protection Plan shall include, but shall not be limited to, the following:

1. Name(s) and cell phone of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.
2. Name(s), cell phone, and qualifications of person(s) responsible for managing waste to be removed from the site, if applicable.
3. Name(s), cell phone, and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.

4. Description of the Contractor's environmental protection personnel training program.
5. Work area plan showing the proposed activity in each portion of the site and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.
6. The Spill Prevention Control and Countermeasure Plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations (such as 310 CMR 40.0000, The Massachusetts Contingency Plan). Any spill above a reportable quantity should be reported to MassDEP at (888) 304-1133. The proper notifications need to comply with 310 CMR 40. This plan shall include as a minimum:
 - a. The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Project Engineer in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.
 - b. The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.
 - c. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.
 - d. The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.
 - e. The methods and procedures to be used for expeditious contaminant cleanup.
7. A Contaminant Prevention Plan that identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. A copy of the Safety Data Sheets (SDS) and the maximum quantity of each hazardous material to be on site at any given time shall be included in the Contaminant Prevention Plan. As new hazardous materials are brought on site or removed from the site, the plan shall be updated.

1.9 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Project Engineer and may require an extended review, processing, and approval time. The Project Engineer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Project Engineer determines that the proposed alternate method will have an adverse environmental impact.

The Project Engineer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, project performance standards, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the Project Engineer of the proposed corrective action and take such action when approved by the Project Engineer. The Project Engineer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the Project Engineer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials for use as erosion and sedimentation control devices shall be in accordance with the Contract Drawings and MassDOT's Standard Specifications for Highways and Bridges (2025) unless otherwise instructed/approved by the Project Engineer.
- B. Acceptable sediment control devices include, but are not limited to, silt sacks, compost filter tube (wattles), hay bales and silt fence and/or approved equal(s). Sediment control devices shall be constructed in accordance with MassDOT's Standard Specifications for Highways and Bridges (2025), unless otherwise instructed by the Project Engineer. The sediment control methods and materials shall be approved, in writing by the Project Engineer, prior to commencement of work in accordance with Section 01 25 13, Submittal Procedures.

PART 3 - EXECUTION

3.1 GENERAL

The Contractor shall be responsible for complying with all environmental regulations required by Federal, State, Regional, and local environmental laws and regulations.

A. Delivery

All materials shall be delivered to the site and installed prior to any Work. Geotextiles shall be labeled, shipped, stored, and handled in accordance with ASTM D4873 and as specified herein. Materials damaged as a result of delivery, storage, or handling shall be repaired or replaced, as directed, at no additional time or cost.

B. Handling

No hooks, tongs, or other sharp instruments shall be used for handling the geotextiles. Geotextiles shall not be dragged along the ground.

C. Storage

All materials shall be stored according to manufacturer's specifications. Geotextiles shall be stored in areas where water cannot accumulate, elevated off the ground, and protected from conditions that will affect the properties or performance of the geotextile. Storage location preparation shall be the responsibility of the Contractor. Prior to installation, the geotextile shall not be exposed to direct sunlight for more than 14 days. Any materials damaged during delivery, storage, or handling shall be repaired or replaced as directed by the Project Engineer at no additional time or cost.

D. Placement

Controls shall be placed and/or maintained at the installed areas. Means of assuring that controls are properly aligned and anchored shall be incorporated into the placement methodology presented in the Contractor's Erosion and Sediment Control Plan. At the time of installation, fabric shall be rejected if it has defects, rips, holes, flaws, deterioration, or damage incurred during transportation, storage, or installation.

E. Damages

Damaged materials shall be replaced or repaired by Contractor. Materials that cannot be repaired shall be replaced. Anchoring system components and fasteners shall be replaced if damaged at no additional cost.

3.2 LAND RESOURCES

The Contractor shall confine all activities to areas defined by the Contract Drawings and specifications. Prior to the beginning of any construction, the Contractor shall identify any land resources to be preserved within the Work area.

A. Work Area Limits

Prior to commencing construction activities, the Contractor shall mark the areas that need not be disturbed under this contract. Isolated areas within the general work area which are not to be disturbed shall be marked or fenced. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, any markers shall be visible in the dark. The Contractor's personnel shall be knowledgeable of the purpose for marking and/or protecting particular objects.

B. Erosion and Sediment Controls

The Contractor shall be responsible for providing erosion and sediment control measures in accordance with Federal, State, and local laws and regulations and as per Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges (2025).

C. Contractor Facilities and Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary facilities shall be placed in areas designated on the Contract Drawings or as directed by the Owner and/or the Project Engineer. Temporary movement or relocation of Contractor facilities shall be made only when approved by the Project Engineer.

3.3 WATER RESOURCES

The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation. All water areas affected by construction activities shall be monitored by the Contractor. For construction activities immediately adjacent to impaired surface waters, the Contractor shall be capable of quantifying sediment or pollutant loading to that surface water as required by the Clean Water Act.

A. Wetlands

The Contractor shall not enter, disturb, destroy, or allow discharge of contaminants into any wetlands. The Contractor shall be responsible for the protection of wetlands shown on the drawings in accordance with the applicable permits. Authorization to enter specific wetlands identified shall not relieve the Contractor from any obligation to protect other wetlands within, adjacent to, or in the vicinity of the construction site and associated boundaries.

3.4 AIR RESOURCES

Equipment operation, activities, or processes performed by the Contractor shall be in accordance with all Federal and State air emission and performance laws and standards.

A. Particulates

Dust particles; aerosols and gaseous by-products from construction activities shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain the work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. The Contractor must have sufficient, competent equipment available to accomplish these tasks. The Contractor shall implement particulate control measures whenever a particulate nuisance or hazard occurs. The Contractor shall comply with all State and local visibility regulations.

B. Odors

Odors from construction activities shall be controlled at all times. The odors shall not cause a nuisance or health hazard and shall be in compliance with State regulations and/or local ordinances.

C. Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize environment damage by noise. The Contractor shall comply with the provisions of the Commonwealth of Massachusetts rules.

D. Additional Dust, Odor and Noise Control

If, in the opinion of the Project Engineer, the dust, odor and noise control measures are inadequate or insufficient to meet the intent of the specification, the Contractor shall be requested to implement additional measures to control dust, odor and noise at no additional cost to the Owner.

E. Diesel Exhaust

Impacts to air quality shall be mitigated with the addition of after engine emission controls and the use of low sulfur diesel fuel (500 ppm sulfur) in accordance with MassDEP's diesel retrofit program.

3.5 MATERIALS MANAGEMENT AND WASTE DISPOSAL

Disposal of wastes shall be as directed below, unless otherwise specified in other sections and/or shown on the drawings.

A. Solid Wastes

Solid waste shall be managed in accordance with all applicable regulations.

B. Contractor Generated Hazardous Wastes/Excess Hazardous Materials

Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in M.G.L. Chapter 21E and 49 CFR 171 - 178. The Contractor shall take sufficient measures to prevent spillage of hazardous and toxic materials during performance of the work. The Contractor shall segregate hazardous waste from other materials and wastes, shall protect it from the weather by placing it in a safe covered location, and shall take precautionary measures such as berming or other appropriate measures against accidental spillage. The Contractor shall be responsible for storage, describing, packaging, labeling, marking, and placarding of hazardous waste and hazardous material in accordance with 49 CFR 171 - 178, State, and local laws and regulations. The Contractor shall transport

Contractor generated hazardous waste off Government property within thirty days in accordance with the Environmental Protection Agency and the Department of Transportation laws and regulations. The Contractor shall dispose of hazardous waste in compliance with Federal, State and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the Project Engineer. Cleanup and cleanup costs due to spills shall be the Contractor's responsibility. The Contractor shall coordinate the disposition of hazardous waste that is unearthed as a result of the dredging activity with the Project Engineer. The Contractor shall provide to the Project Engineer three quotes for the disposal of such hazardous materials for consideration of payment as a changed condition.

C. Fuel and Lubricants

Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations. Fuel storage at the project site must comply with all appropriate, relevant and applicable regulations.

3.6 RECYCLING AND WASTE MINIMIZATION

The Contractor shall participate in State and local government sponsored recycling programs. The Contractor is further encouraged to minimize solid waste generation throughout the duration of the project.

3.7 BIOLOGICAL RESOURCES

The Contractor shall make every reasonable effort to minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The Contractor shall be responsible for the protection of threatened and endangered animal and plant species including their habitat.

The Contractor shall clean all previously used construction equipment prior to bringing it onto the project site. The Contractor shall ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds.

3.8 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in all phases of environmental protection and pollution control. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Additional meetings shall be conducted for new personnel and when site conditions change. The training and meeting agenda shall include: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

3.9 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for Construction ("Construction Areas" shall be defined as any area used by the Contractor) to their pre-construction condition. The Contractor shall, unless otherwise instructed in writing by the Project Engineer, obliterate all signs of temporary construction facilities such as work areas, structures, construction trailers, staging areas, stockpiles of excess or waste materials, and all other vestiges of construction prior to final acceptance of the Work.

END OF SECTION

SECTION 01 45 10

CONTRACTOR QUALITY CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this section.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

- A. The Contractor is responsible for quality control and shall establish and maintain an effective quality control system. The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The site project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Project Engineer for non-compliance with the quality requirements specified in the contract. The site project superintendent in this context shall be the highest-level manager responsible for the overall construction activities at the site, including quality and production. The site project superintendent shall maintain a physical presence at the site at all times, except as otherwise acceptable to the Project Engineer, and shall be responsible for all construction and construction related activities at the site.

3.2 COORDINATION MEETING

- A. After the Pre-Construction Meeting and before start of construction, the Contractor shall meet with the Project Engineer and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Owners' Quality Assurance. Minutes of the meeting shall be prepared by the Project Engineer and signed by both the Contractor and the Project Engineer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the quality control system or procedures which may require corrective action by the Contractor.

3.3 CONTROL

A. Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the Contractor for each definable feature of work as follows.

B. Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

1. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Project Engineer until final acceptance of the work.
2. A review of the Contract Drawings.
3. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
4. Review of provisions that have been made to provide required control inspection and testing.
5. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
6. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
7. A review of the appropriate activity hazard analysis to assure safety requirements are met.
8. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
9. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Project Engineer.
10. Discussion of the initial control phase.
11. The Owner and Project Engineer shall be notified at least 48 hours in advance of beginning the preparatory control phase. This phase shall

include a meeting attended by the superintendent, and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the Contractor and attached to the Contractor's daily report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

C. Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

1. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
2. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
3. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards.
4. Resolve all differences.
5. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
6. The Project Engineer shall be notified at least 48 hours in advance of beginning the initial phase.
7. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

D. Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the Contractor's daily report. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

E. Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable staff, onsite production supervision or work crew; if work

on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.4 COMPLETION INSPECTION

A. Pre-Final Inspection

The Owner and/or Project Engineer will perform the pre-final inspection to verify that the work is complete. An Owner and/or Project Engineer Pre-Final Punch List may be developed as a result of this inspection. The Contractor shall ensure that all items on this list have been corrected before notifying the Owner and/or Project Engineer, so that a final acceptance inspection can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

B. Final Acceptance Inspection

The Contractor's superintendent or other primary management person, and the Project Engineer shall be in attendance at the final acceptance inspection. Additional Owner personnel may also be in attendance.

3.5 DOCUMENTATION

A. The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, at a minimum, the following information:

1. Contractor/subcontractor and their area of responsibility.
2. Operating plant/equipment with hours worked, idle, or down for repair.
3. Work performed each day, giving location, description, and by whom.
4. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
5. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
6. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.
7. Offsite surveillance activities, including actions taken.

8. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
 9. Instructions given/received and conflicts in plans and/or specifications.
 10. Contractor's verification statement.
- B. These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Owner daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the Contractor. The report from the Contractor shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.6 NOTIFICATION OF NONCOMPLIANCE

- A. The Project Engineer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Project Engineer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work included: Provide temporary facilities and controls needed for the Work including, but not necessarily limited to:
1. Temporary utilities such as heat, water, electricity, and telephone.
 2. Field office for the Contractor's personnel.
 3. Sanitary facilities.
 4. Enclosures such as tarpaulins, barricades, and canopies.
 5. Temporary fencing of the construction site.
- B. Definitions:
1. Temporary: Labor, equipment, and materials required for the installation of facilities and controls which, upon completion of the Work, are not a part of the completed Work, shall be furnished, installed, and subsequently removed from the site by the Contractor.

1.2 PRODUCT HANDLING

Maintain temporary facilities and controls in proper and safe condition throughout progress of the Work.

PART 2 - PRODUCTS

2.1 UTILITIES

- A. Water:
1. Fresh water supply is not available at the site. Contractor is responsible for supplying fresh water.
 2. Provide necessary temporary service and piping.
- B. Electricity:
1. Provide and pay for temporary electrical service and electricity used in construction.

2. Provide necessary temporary wiring.
3. Provide temporary area distribution boxes so located that the individual trades may furnish and use extension cords to obtain power and lighting at points where needed for work, inspection, and safety.

C. Heating:

1. Provide and maintain temporary heat necessary for proper conduct of operations needed in the Work.

D. Telephone:

1. Provide and maintain temporary telephone service to the Contractor's office at the site.

2.2 FIELD OFFICES AND SHEDS

A. Contractor's facilities:

1. Provide a temporary field office building and sheds adequate in size and accommodation for Contractor's offices, supply, and storage. As a minimum, equip the Contractor's field office with a telephone, telephone answering machine, facsimile machine, and photocopier which shall remain in operation throughout the Work.

B. Sanitary facilities:

1. Provide temporary sanitary facilities in the quantity required by applicable health regulations for use by all personnel.
2. Always maintain in a sanitary condition.

2.3 ENCLOSURES

Provide and maintain for the duration of construction all temporary scaffolds, tarpaulins, canopies, warning signs, steps, platforms, bridges, and other temporary construction necessary for proper completion of the Work in compliance with pertinent safety and other regulations.

2.4 CONTAINERS FOR DEBRIS & REFUSE REMOVAL

Provide and maintain suitable containers for the collection and disposal of trash and debris generated from demolition and construction. Do not use containers that are the property of the Owner, or the property of others that may be present on site.

PART 3 - EXECUTION

3.1 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the Work.
- B. Remove such temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Engineer.

END OF SECTION

SECTION 01 60 00

EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this section.

1.2 SUBMITTALS

- A. Section 01 60 00, Equipment, shall be submitted in accordance with Section 01 25 13, Submittal Procedures.
- B. Submit a list of the equipment the Contractor intends to employ in the performance of the Work of this Contract. (See Section 00400, Bid)

1.3 EQUIPMENT

- A. Sufficient Capacity

The Contractor shall keep on the job sufficient equipment to meet the requirements of the Work. The equipment shall be in satisfactory operating condition and be capable of safely and efficiently performing the Work. The equipment shall be subject to inspection by the Project Engineer at all times.

- B. Minimum Capacity

The equipment listed on an Equipment Schedule, submitted with the Contractor's bid, is the minimum which the Contractor shall place and keep on the job unless otherwise determined by the Project Engineer. The listing of equipment is not to be construed as an agreement on the part of the Owner that the equipment is adequate to perform the required Work.

- C. Reduction in Capacity

No reduction in the capacity of the equipment employed on the Work shall be made except by written permission of the Project Engineer. The measure of the capacity of the equipment shall be its actual performance on the Work covered by this Contract.

- D. Inspections and Certifications

Prior to commencement of Work at the site, the Contractor shall submit to the Project Engineer for review, copies of all applicable inspections and certifications of equipment as required by Federal, State and local laws and regulations. Such inspections and

certifications shall be current and maintained in force for the duration of this contract. Each item of equipment shall have on board a waste oil management plan which details the intended disposal method for waste oil. All equipment used in the prosecution of the work that uses fuel, oil or hydraulic fluid shall be inspected daily for leakage.

1.4 LICENSE REQUIREMENTS

Each piece of equipment used during the work shall be manned by a properly licensed person.

1.5 PERMIT REQUIREMENTS

The Contractor's equipment employed on the work shall meet the requirements of all applicable permits, certifications, and performance standards issued for the project as specified in these specifications.

1.6 HEIGHT LIMITATIONS (NOT USED)

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01 66 00

PRODUCT STORAGE AND HANDLING REQUIREMENTS

PART 1 - GENERAL

1.1 DESCRIPTION

Work included: Protect products scheduled for use in the Work by means including, but not necessarily limited to, those described in this Section.

1.2 QUALITY ASSURANCE

Include within the Contractor's quality assurance program such procedures as are required to assure full protection of work and materials.

1.3 MANUFACTURERS' RECOMMENDATIONS

Except as otherwise required by the Engineer, determine, and comply with manufacturers' recommendations on product handling, storage, and protection.

1.4 PACKAGING

A. Deliver products to the job site in their manufacturer's original container, with labels intact and legible.

1. Maintain packaged materials with seals unbroken and labels intact until time of use.

2. Promptly remove damaged material and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to the Owner.

B. The Engineer may reject as non-complying such material and products that do not bear satisfactory identification as to manufacturer, grade, quality, and other pertinent information.

1.5 PROTECTION

A. Protect finished surfaces through which equipment and materials are handled.

B. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.

1.6 REPAIRS AND REPLACEMENTS

A. In event of damage, promptly make replacements and repairs to the acceptance of the Engineer and at no additional cost to the Owner.

- B. Additional time required to secure replacements and to make repairs will not be considered by the Engineer to justify an extension in the Contract Time of Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

Provide materials, not specifically described but required for a complete and proper execution of the Work, as selected by the Contractor subject to the review of the Engineer.

PART 3 - EXECUTION

3.1 PROCEDURES

Handle products as outlined in Part 1 above.

END OF SECTION

SECTION 01 73 29

CUTTING AND PATCHING

PART 1 - GENERAL

1.1 DESCRIPTION

Work included: This Section establishes general requirements pertaining to cutting (including excavating), fitting, and patching of the Work required to:

- A. Make the several parts fit properly.
- B. Uncover work to provide for installing, review, or both, of ill-timed work.
- C. Remove and replace work not conforming to requirements of the Contract Documents; and
- D. Remove and replace defective work.

1.2 QUALITY ASSURANCE

Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.3 SUBMITTALS

- A. Request for Engineer's consent:
 - 1. Prior to cutting which affects structural safety, submit written request to the Engineer and secure written authorization to proceed cutting.
 - 2. Should conditions of the Work, or schedule, indicate a required change of materials or methods for cutting and patching, so notify the Engineer and secure his written authorization and the required Change Order prior to proceeding.
- B. Notices to the Engineer:
 - 1. Prior to cutting and patching performed pursuant to the Engineer's instructions, submit cost estimate to the Engineer. Secure the Engineer's written authorization before proceeding with cutting and patching.
 - 2. Submit written notice to the Engineer designating the time the Work will be uncovered, to provide for the Engineer's observation.

PART 2 - PRODUCTS

2.1 MATERIALS:

For replacement of items removed, use materials complying with pertinent Sections of these Specifications.

2.2 PAYMENT FOR COSTS

The Owner will reimburse the Contractor for cutting and patching performed pursuant to the written Change Order, after claim for such reimbursement is submitted by the Contractor. Perform other cutting and patching needed to comply with the Contract Documents at no additional cost to the Owner.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspection by the Contractor:

1. Inspect existing conditions, including elements subject to movement or damage during cutting, excavating, patching, and backfilling.
2. After uncovering the work, inspect conditions affecting installation of new work.

B. Discrepancies:

1. If uncovered conditions are not as anticipated, immediately notify the Engineer in writing, and secure the Engineer's written directions.
2. Do not proceed until unsatisfactory conditions are corrected.

3.2 PREPARATION PRIOR TO CUTTING

- A. Provide required protection including, but not necessarily limited to, shoring, bracing, and support to maintain structural integrity of the Work.
- B. Prior to cutting new or existing elements, carefully lay out the work required. Verify that the layout is correct and accurate as necessary to perform the construction safely and within the tolerances required.

3.3 PERFORMANCE

- A. Perform required excavating and backfilling as required under pertinent other Sections of these Specifications.
- B. Perform cutting and demolition by methods that will prevent damage to other portions of the Work and provide proper surfaces to receive installation of repair and new work.

- C. Perform fitting and adjusting of products to provide finished installation complying with the specified tolerances and finishes.
- D. Prevent migration of soils into waterways. Do not affect water quality of waterways.

END OF SECTION

SECTION 01 74 23

CLEANING

PART 1 - GENERAL

1.1 DESCRIPTION

Work included: Throughout the construction period, maintain the buildings and site in a standard of cleanliness as described in this Section.

1.2 QUALITY ASSURANCE

- A. Conduct daily inspection, and more often if necessary, to verify that requirements for cleanliness are being met.
- B. In addition to the standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.2 COMPATIBILITY

Use only the cleaning materials and equipment that are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

PART 3 - EXECUTION

3.1 PROGRESS CLEANING

- A. General:
 - 1. Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.
 - 2. Do not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work.
 - 3. At least twice each month, and more often, if necessary, completely remove all scrap, debris, and waste material from the job site.
 - 4. Provide adequate storage for all items awaiting removal from the job site,

observing requirements for fire protection and protection of the ecology.

B. Site:

1. Daily, a more often, if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
2. Weekly, and more often, if necessary, inspect all arrangements of materials stored on the site. Re-stack, tidy, or otherwise service arrangements to meet the requirements of subparagraph 3.1-A-1 above.
3. Always maintain the site in a neat and orderly condition.

C. Structures:

1. Weekly, and more often, if necessary, inspect the structures and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
2. As required preparatory to installation of succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using equipment and materials required to achieve the necessary cleanliness.

3.2 FINAL CLEANING

A. Prior to completion of the Work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Article 3.1 above.

B. Site:

1. Unless otherwise specifically directed by the Engineer, broom clean paved areas on the site and public paved areas adjacent to the site.
2. Completely remove resultant debris.

C. Structures:

1. Exterior:
 - a. Visually inspect exterior surfaces and remove all traces of soil, cement based materials, waste materials, smudges, and other foreign matter.
 - b. Remove all traces of splashed materials from adjacent surfaces.

- c. If necessary to achieve a uniform degree of cleanliness, hose down the exterior of the structure.
 - d. In the event of stubborn stains not removable with water, the Engineer may require light sandblasting or other cleaning at no additional cost to the Owner.
- D. Schedule final cleaning as approved by the Engineer to enable the Owner to accept a completely clean Work.

3.3 CLEANING DURING OWNER'S OCCUPANCY

Should the Owner occupy the Work or any portion thereof prior to its completion by the Contractor and acceptance by the Owner, responsibilities for interim and final cleaning shall be as determined by the Engineer in accordance with the General Conditions of the Contract.

END OF SECTION

SECTION 01 77 19

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 DESCRIPTION

Work included: Provide an orderly and efficient transfer of the completed Work to the Owner.

1.2 QUALITY ASSURANCE

- A. Prior to requesting review by the Engineer, use adequate means to assure that the Work is completed in accordance with the specified requirements and is ready for the requested review.
- B. Submit written certification that Contract Documents have been reviewed by the Contractor, the Work has been inspected by the Contractor, and that the Work is complete and in accordance with the Contract Documents.

1.3 PROCEDURES

- A. Substantial Completion:
 - 1. Substantial Completion is defined as the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.
 - 2. When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Engineer a comprehensive list of items to be completed or corrected.
 - 3. Prepare and submit the list required by Paragraph 1.3-A-2 above.
 - 4. Within a reasonable time after receipt of the list, the Engineer will review to determine status of completion.
 - 5. Should the Engineer determine that the Work is not substantially complete:
 - a. The Engineer promptly will so notify the Contractor, in writing, giving the reasons, therefore.
 - b. Remedy the deficiencies and notify the Engineer when ready for additional review.
 - c. The Engineer will review the Work.

6. When the Engineer concurs that the Work is substantially complete:
 - a. The Engineer will prepare a “Certificate of Substantial Completion”, accompanied by the Contractor’s list of items to be completed or corrected, as verified by the Engineer.
 - b. The Engineer will submit the Certificate to the Owner and to the Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

B. Final Completion:

1. Prepare and submit to the Engineer a notice that the Work is complete and ready for final review and acceptance.
2. Certify that:
 - a. Contract Documents have been reviewed.
 - b. Work has been reviewed for compliance with the Contract Documents.
 - c. Work has been completed in accordance with the Contract Documents.
 - d. Equipment and systems have been tested as required and are operational.
 - e. Work is completed and ready for final review.
3. The Engineer will make a review to verify status of completion.
4. Should the Engineer determine that the Work is incomplete or defective:
 - a. The Engineer promptly will so notify the Contractor, in writing, listing the incomplete or defective work.
 - b. Remedy the deficiencies promptly and notify the Engineer when ready for additional review.
5. When the Engineer determines that the Work is acceptable under the Contract Documents, he will request the Contractor to make closeout submittals.

C. Closeout submittals include, but are not necessarily limited to:

1. Project Record Documents described in Section 01 78 39.
2. Operation and maintenance data for items so listed in pertinent other

Sections of these Specifications, and for other items when so directed by the Engineer;

3. Warranties and bonds.
4. Spare parts and materials extra stock.
5. Evidence of compliance with requirements of governmental agencies having jurisdiction including, but not necessarily limited to:
 - a. Certificates of Inspection.
 - b. Certificates of Occupancy.
6. Certificates of Insurance for products and completed operations.
7. Evidence of payment and release of liens.
8. List of subcontractors, service organizations, and principal vendors, including names, address, and telephone numbers where they can be always reached for emergency service including nights, weekends, and holidays.
9. As built drawings and surveys.

D. Final adjustment of accounts:

1. Submit a final statement of accounting to the Engineer, showing all adjustments to the Contract Sum.
2. If so required, the Engineer will prepare a final Change Order showing adjustments to the Contract Sum that were not made previously by Change Orders.

1.4 INSTRUCTION

Instruct the Owner's personnel in proper operation and maintenance of systems, equipment, and similar items which were provided as part of the Work.

PART 2 - PRODUCTS

(No products are required in this Section)

PART 3 - EXECUTION

- 3.1 Closeout procedures are described in Part 1 above.

END OF SECTION

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 DESCRIPTION

Work included:

- A. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents, as described in Article 3.1 below.
- B. Upon completion of the Work, transfer the recorded changes to a set of Record Documents, as described in Article 3.2 below.

1.2 QUALITY ASSURANCE

- A. Accuracy of records:
 - 1. Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of Drawings and other Documents where such entry is required to show the change properly.
 - 2. Accuracy of records shall be such that future searches for items shown in the Contract Documents may rely reasonably on information obtained from the approved Project Record Documents.
- B. Make entries within 24 hours after receipt of information that the change has occurred.

1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01 25 13.
- B. The Engineer's review of the current status of Project Record Documents may be a prerequisite to the Engineer's review of requests for progress payment and request for final payment under the Contract.
- C. Prior to submitting each request for progress payment, secure the Engineer's review of the current status of the Project Record Documents.
- D. Prior to submitting request for final payment, submit the final Project Record Documents to the Engineer and secure his review.

1.4 PRODUCT HANDLING

- A. Maintain the job set of Record Documents completely protected from deterioration and from loss and damage until completion of the Work and transfer of all recorded data to the final Project Record Documents.
- B. In the event of loss of recorded data, use means necessary to again secure the data to the Engineer's review.
 - 1. Such means shall include, if necessary, in the opinion of the Engineer, removal and replacement of concealing materials.
 - 2. In such case, provide replacements to the standards originally required by the Contract Documents.

PART 2 - PRODUCTS

2.1 RECORD DOCUMENTS

- A. Job set: Promptly following receipt of the Contract, secure from the Engineer at no charge to the Contractor one complete set of all Documents comprising the Contract.
- B. Final Record Documents: At a time nearing the completion of the Work, secure from the Engineer at no charge to the Contractor one complete set of Drawings in the Contract.

PART 3 - EXECUTION

3.1 MAINTENANCE OF JOB SET

- A. Immediately upon receipt of the job set described in Paragraph 2.1-A above, identify each of the Documents with the title, "RECORD DOCUMENTS - JOB SET."
- B. Preservation:
 - 1. Considering the Contract completion time, the probable number of occasions upon which the job set must be taken out for new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the job set.
 - 2. Do not use the job set for any purpose except entry of new data and for review by the Engineer, until start of transfer of data to final Project Record Documents.
 - 3. Maintain the job set at the site of Work as designated by the Engineer.
- C. Making entries on Drawings:

1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe the change by graphic line and note as required.
 2. Date all entries.
 3. Call attention to the entry by a “cloud” drawn around the area or areas affected.
 4. In the event of overlapping changes, use different colors for the overlapping changes.
- D. Make entries in the pertinent other Documents.
- E. Conversion of schematic layouts:
1. In some cases, on the Drawings, arrangements of conduits, circuits, piping, ducts, and similar items are shown schematically and are not intended to portray precise physical layout.
 - a. Final physical arrangement is determined by the Contractor, subject to the Engineer’s review.
 - b. However, design of future modifications of the facility may require accurate information as to the final physical layout of items that are shown only schematically on the Drawings.
 2. Show on the job set of Record Drawings, by dimension accurate to within one inch, the centerline of each run of items such as is described in subparagraph 3.1-E-1 above.
 - a. Clearly identify the item by accurate note such as “cast iron drain,” “galv. water,” and the like.
 - b. Show, by symbol or note, the vertical location of the item (“under slab,” “in ceiling plenum,” “exposed,” and the like).
 - c. Make all identification sufficiently descriptive that it may be related reliably to the Specifications.
 3. The Engineer may waive the requirements for conversion of schematic layouts where, in the Engineer’s judgment, conversion serves no useful purpose. However, do not rely upon waivers being issued except as specifically issued in writing by the Engineer.

3.2 FINAL PROJECT RECORD DOCUMENTS

- A. The purpose of the final Project Record Documents is to provide factual information regarding all aspects of the Work, both concealed and visible, to enable

future modification of the Work to proceed without lengthy and expensive site measurement, investigation, and examination.

B. Engineer's review of recorded data prior to transfer:

1. Following receipt of the Drawings described in Paragraph 2.1-B above, and prior to start of transfer of recorded data thereto, secure the Engineer's review of all recorded data.
2. Make required revisions.

C. Transfer of data to Drawings:

1. Carefully transfer change data shown on the job set of Record Drawings to the corresponding final set of Record Drawings, coordinating the changes as required.
2. Clearly indicate at each affected detail and other Drawing a full description of changes made during construction, and the actual location of items described in subparagraph 3.1-E-1 above.
3. Call attention to each entry by drawing a "cloud" around the area or areas affected.
4. Make changes neatly, consistently, and with the proper media to assure longevity and clear reproduction.

D. Transfer of data to other Documents:

1. If the Documents other than Drawings have been kept clean during progress of the Work, and if entries thereon have been orderly to the acceptance of the Engineer, the job set of those Documents other than Drawings will be accepted as final Record Documents.
2. If any such Document is not so accepted by the Engineer, secure a new copy of that Document from the Engineer at the Engineer's usual charge for reproduction and handling, and carefully transfer the change data to the new copy to the acceptance of the Engineer.

E. Review and submittal:

1. Submit the completed set of Project Record Documents to the Engineer as described in Paragraph 1.3-D above.
2. Participate in review meetings as required.
3. Make required changes and promptly deliver the final Project Record Documents to the Engineer.

3.3 CHANGES SUBSEQUENT TO ACCEPTANCE

The Contractor has no responsibility for recording changes in the Work subsequent to Final Completion, except for changes resulting from work performed under Warranty.

END OF SECTION

SECTION 01 90 00

GENERAL SAFETY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this section.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

- 1. CODE OF FEDERAL REGULATIONS (CFR)

- 29 CFR 1910 Occupational Safety and Health Standards
 - 29 CFR 1926 Safety and Health Regulations for Construction

- 2. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

- NFPA 70 (1996) National Electrical Code
 - NFPA 241 (1996) Safeguarding Construction, Alteration, and Demolition Operations

- 3. NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

- NIOSH Pub No. 85-115 (1985) Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities

1.3 REGULATORY REQUIREMENTS

Work performed under this contract shall comply with Occupational Safety and Health Administration (OSHA) requirements in 29 CFR 1910 and 29 CFR 1926, especially OSHA's Hazardous Waste Operations and Emergency Response Standard 29 CFR 1926.65/29 CFR 1910.120 and state specific OSHA requirements where applicable. Matters of interpretation of standards shall be submitted to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply.

1.4 SUBMITTALS

- A. Submit the following for acceptance by the Project Engineer. Follow the administrative procedures for making submittals as specified in Section 013000, Submittal Procedures.
- B. Statements
 - 1. Site Specific Accident Prevention Plan.
 - 2. Equipment / Machinery Inspection Certification:
 - a. Submit certifications that equipment is in safe operating condition.
 - 3. Modification to Equipment:
 - a. Submit manufacturers' written approval of modifications or additions to equipment. Owner acceptance of submittal must be attained before such equipment can be brought on the job site.
 - 4. Safety Meeting Report:
 - a. Submit safety meeting reports detailing the subjects discussed at safety meetings within three days after each meeting.
- C. Accident Prevention Plan Submittal
 - 1. List all major definable features of work to be completed under this Contract.
 - 2. Accident Reporting
 - a. All accidents shall be investigated and a report prepared that outlines basic causes and proposed actions to prevent future occurrence.
 - 3. Severe Weather Plan: The Contractor shall submit a Severe Weather Plan describing the actions to be taken to protect persons and property in the event of severe weather warnings. This plan shall include but not be limited to the following:
 - a. The types of storms anticipated (winter storm, hurricane, tornado)
 - b. The time intervals before storms when action will be taken and the details of the actions to be taken.
 - c. List of the equipment to be used on the project and its ability to handle adverse weather.

- d. Location equipment will be secured if not at the work site.
- e. Method of securing equipment that is moved.
- f. Methods of securing equipment not moved.
- g. Plan of evacuation to include immediate reaction plans to be taken for all storm occurrences, particularly sudden storms.
- h. A statement that full time monitoring of the National Oceanic and Atmospheric Administration (NOAA) marine weather broadcasts and other local commercial weather forecasting services will be the Contractor's primary source of information in the decision process to implement action under the severe weather plan.

1.5 UNFORESEEN HAZARDOUS MATERIAL

If hazardous materials are encountered during construction operations that may be dangerous to human health upon disturbance, stop that portion of work and notify the Project Engineer immediately.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 WEEKLY SAFETY MEETINGS

At least once a month, the Contractor shall conduct a safety meeting for all supervisors and foremen. Additionally, at least one safety meeting per week shall be conducted by the foremen for all workers. After each safety meeting, a safety meeting report shall be completed. A copy of a suggested weekly safety meeting form is attached at the end of this section.

END OF SECTION

WEEKLY SAFETY MEETING

Date Held: _____

Time _____

CLIENT: _____ CONTRACT: _____

PROJECT: _____

PERSONNEL PRESENT: _____

CONDUCTED BY: _____

All persons attending the meeting must sign the bottom or back of this form.

Subjects discussed (Note, delete, or add)

Accident Prevention Plan _____ Individual Protective Equipment _____

Prevention of Falls _____ Back Injury/Safe Lifting Techniques _____

Fire Prevention _____ Sanitation, First Aid, Waste Disposal _____

Tripping Hazards _____ Clean-up - trash, nails in lumber _____

Staging, Ladders, Concrete Forms, Safety Nets _____

Hand Tools, Power Tools, Machinery, Chain Saws _____

Equipment Inspection & Maintenance (Zero Defects) _____

Hoisting Equipment, Winch and Crane Safety _____

Ropes. Hooks, Chains and Slings _____

Vehicle Operation Safety _____

Electrical Grounding, Temporary Wiring, GFCI _____

Lockouts/Safe clearance procedures (electrical, pressure, moving parts)

Welding, Cutting _____ Excavation Hazard/Rescue _____

Loose Rock/Steep Slopes _____ Explosives _____

Water Safety _____ Boat Safety _____

HAZMAT, Toxic hazards, SDS, respiratory, ventilation _____

Other items of concern specific to this contract: _____

SECTION 02 41 00

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Carefully demolish and remove from the site those items scheduled to be so demolished and removed.
- B. Carefully remove and store off or on site those items scheduled to be reused. Replace these items as indicated on the drawings such that they are undamaged and fit for their intended purpose.
- C. All utility lines that are altered or relocated during the construction are to be of an equal standard to those now existing and are to be acceptable to the Owner and the appropriate Utility Company. The Contractor is to inform and liaise with the Owner regarding all work that may affect the existing utilities. The Owner will make arrangements with the Utility Company for services to be cut-off if required during construction. The Contractor is responsible for notification of local utilities.

1.2 QUALITY ASSURANCE

Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.

1.3 SUBMITTALS

Except for items specifically scheduled for reuse, demolished material shall be considered to be property of the Contractor and shall be completely removed from the job site and disposed of in legal manner. The Contractor shall submit a detailed disposal plan to the Engineer. The disposal plan shall include the name, address, and telephone number of the disposal site. The Contractor shall submit to the Engineer a signed manifest and trip ticket stating that the debris was disposed at the stated site within 24 hours after the material has left the site.

PART 2 - PRODUCTS

2.1 MATERIALS

(NONE)

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

Examine the areas and conditions under which Work of this Section will be performed.

Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until satisfactory conditions are corrected.

3.2 DEMOLITION

- A. By careful study of the Contract Documents, determine the location and extent of selective demolition to be performed.
- B. In company with the Engineer, visit the site and verify the extent and location of selective demolition required.
 - 1. Carefully identify limits of selective demolition.
 - 2. Secure the Engineer's review of the items scheduled for selective demolition.
 - 3. Demolish and remove the scheduled items.
- C. Prepare and follow an organized plan for demolition and removal of items.
 - 1. Shut off, cap, and otherwise protect existing utility lines in accordance with the requirements of the public agency or utility having jurisdiction.
 - 2. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid, and ready to receive new materials specified elsewhere or excavation.
 - 3. In all activities, comply with pertinent regulations of governmental agencies having jurisdiction.
- D. Exercise all necessary care so as not to damage items scheduled to remain in place for re-use.
- E. Except for items specifically scheduled for reuse or to be turned over to the Owner, demolished material shall be considered to be property of the Contractor and shall be completely removed from the job site and disposed of in accordance with all Federal, State and local regulations. Provide documentation to the Engineer that material has been disposed of in such a manner.

3.3 REPLACEMENTS

In the event of demolition or damage caused to items not so scheduled to be demolished, promptly replace such items to the approval of the Owner and at no additional cost to the Owner.

3.4 ALTERATIONS TO REUSED ITEMS

All alterations to reused items are to be of an equal standard to their original construction, or as otherwise indicated in these Specifications. The Contractor is responsible for ensuring

that the dimensions of reused items are adjusted to suit the new construction. Drawings are to be presented to the Engineer for review prior to making any alterations; however, this review does not relieve the Contractor of his responsibilities as indicated elsewhere in this Contract.

3.5 RELOCATION OF UTILITIES

Relocate existing utilities as required during construction such that services to the site are maintained to the Owner's satisfaction. The Contractor is responsible for liaison with the Owner on all aspects of utility service maintenance and relocation. If replacement of utilities is undertaken by a Utility Company or others, the Contractor shall coordinate these activities with its own work.

END OF SECTION

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 – GENERAL

1.1 WORK SPECIFIED

Work included: The Work covered under this Section of these Specifications consist of furnishing all plant, labor, supervision, equipment, appliances, and materials and in performing all operations in connection with the installation of reinforced concrete for all aspects of the project, all in strict accordance with the Contract Documents.

1.2 SUBMITTALS

A. Shop Drawings and Product Data.

Shop drawings and product data showing all fabricated dimensions and locations for placing of the reinforcing steel and accessories shall be submitted for review. Shop Drawings shall provide sufficient technical data to demonstrate compliance with the specified requirements. Products, materials, or information submitted for review shall not be used or fabricated until after receipt of the Engineer's review comments. Distribute only reviewed shop drawings to the job site.

B. Mix Design.

Submit concrete mix design, with known test results, to the Engineer for review. The concrete mix design submittal shall consist of at least the following:

1. Type of cement.
2. Dry weight of cement.
3. Saturated surface-dry weights of fine and coarse aggregates.
4. Specific gravity of fine and coarse aggregates.
5. Quantities, type, name, and producer of admixtures, as applicable.
6. Total weight of water, including the water that is absorbed by and on the surface of the aggregates.
7. Water to cement ratio.
8. Slump: Maximum slump, taken at the truck, will be determined based on the pump hose length. The mix designs shall include the anticipated loss of slump per 100-foot length of specified hose size.

9. Strength test data of the proposed mix design as specified herein.

Distribute reviewed mix design to testing laboratory, batch plant, and job site.

- C. Submit concrete batch tickets for each truck delivered to site. Each ticket shall note at least the following data: design mix strength; batch proportions including actual water and aggregate moisture contents; date and batch time; arrival time at site; discharge time; concrete volume; and any change to concrete made at the site.
- D. Construction Joints: Submit proposed construction and control joint details and locations for Engineer's review.
- E. Curing and protection procedures: including product data on materials proposed for use.
- F. Test Reports
- 1 Concrete Temperature
 - 2 Concrete Slump
 - 3 Concrete Air Content
 - 4 Compressive Strength Tests

PART 2 – PRODUCTS

2.1 MATERIALS

A. Quality Assurance:

- 1. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- 2. The Owner, through the Engineer, reserves the right of approval of any Subcontractor pre-qualified and selected for this portion of the Work by the Contractor. Approval will be based, in part, on a documented successful experience in performing work of a similar nature.
- 3. Cast-In-Place Concrete work shall conform to all requirements of ACI 301, "Specifications for Structural Concrete for Buildings".
- 4. Detailing, fabrication, and erection of reinforcing steel shall conform to ACI 318, "Building Code Requirements for Structural Concrete and

Commentary” and ACI 315, “Details and Detailing of Concrete Reinforcement”.

5. Ready mix plant equipment and facilities shall conform to the “Check List for Certification of Ready Mixed Concrete Production Facilities” of the NRMCA.

B. Concrete:

1. Portland cement: Type II - low alkali conforming to ASTM C 150, “Standard Specification for Portland Cement”.

Portland cement may be replaced by one of the following supplementary cementitious materials:

- a) Ground Granulated Blast Furnace (GGBF) Slag at a minimum of 40 percent of total cementitious material.
- b) Fly Ash or natural pozzolan at a minimum of 20 percent of total cementitious material.
- c) Silica fume at a minimum of 7 percent of total cementitious material.

2. Aggregate, general:

- a. Shall be normal weight and uniformly graded and clean conforming to ASTM C33, “Standard Specification for Concrete Aggregates”.
- b. Do not use aggregate known to cause excessive shrinkage.

3. Aggregate, coarse: Crushed rock or washed gravel with a maximum size of 3/4”.

4. Aggregate, fine: Natural washed sand of hard and durable particles varying from fine to particles passing a 3/8” screen, of which at least 12% shall pass a 50-mesh screen.

5. Water: Clean and potable.

6. Air entraining admixture shall conform to ASTM C260, “Standard Specification for Air Entraining Admixture for Concrete”. The air entraining agent shall be a nontoxic concentrated solution of neutralized Vinsol resin, such as "Daravair 1000" as manufactured by GCP Applied Technologies or equivalent accepted by the Engineer.

7. Water reducing admixture shall conform to ASTM C494 "Standard Specification for Chemical Admixtures for Concrete." Water reducing agent shall be of Type A, F, or G (as noted in concrete mix design) such as "Daracem-100" as manufactured by GCP Applied Technologies or equivalent accepted by the Engineer.

C. Reinforcing Steel:

1. All reinforcing steel shall conform to ASTM 615 Grade 60, "Specification for Deformed and Plain Billet Steel Bars for Concrete Reinforcement".
2. Reinforcing steel shall be fusion bond epoxy coated per ASTM A775 or hot dip galvanized per ASTM A767.
3. Fabricate reinforcement to the required shapes and dimensions, within fabrication tolerances stated in the CRSI "Manual of Standard Practices."
4. Do not use reinforcement having any of the following defects:
 - a. Bar lengths, depths, or bends exceeding the specified fabricating tolerances.
 - b. Bends or kinks not indicated on the Drawings or required for this Work.
 - c. Bars with cross section reduced due to excessive rust or other causes.

D. Moisture Protection:

Curing materials for concrete cast above the tidal zone shall conform to ASTM C309, "Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete", wet burlap, or plastic membrane.

E. Accessories:

All spacers, chairs, bolsters, and other devices necessary for proper reinforcing steel placement shall be epoxy coated with nylon tipped legs. All reinforcing steel shall be adequately tied with nylon, epoxy, or plastic-coated tie wire and supported with epoxy-coated chairs that hold the bars to the specified clearance. One chair sample shall be submitted to the Engineer for review. No clay or concrete bricks or any other material other than reviewed chairs shall be permitted to support reinforcing steel.

F. Bonding Agent and Fusion Bonded Epoxy Coating Touch-Up:

Bonding agent shall be Sika Armatec 110 Epocem, as manufactured by Sika Corporation or an equivalent accepted by the Engineer.

G. Product Delivery, Storage, and Handling:

Conform to the recommendations of ACI 304, "Guide for Measuring, Mixing, Transporting, and Placing Concrete".

PART 3 – EXECUTION

3.1 INSTALLATION

A. Concrete Mix Proportioning

1. Concrete shall be proportioned by the Contractor in accordance with ACI 301. The proposed design mix, together with all the Test Records, or Trial Mix Data, as required by ACI 301, shall be submitted to the Engineer for review at least two weeks prior to the first intended placement. Submit a separate pump mix if different from concrete mix placed by conventional methods.
2. Concrete shall be normal weight with a minimum compressive strength of 5000 psi at 28 days, unless noted otherwise (UNO).
3. Concrete shall have a maximum water to cement ratio of 0.40, UNO.
4. Concrete shall be proportioned to have a slump of 4 inches, \pm 1 inch, at the discharge end of the pump hose. Use a water reducing agent as required to achieve the desired slump range. Addition of water at site will not be permitted.
5. Concrete shall contain 4% to 6% entrained air (based on 3/8" coarse aggregate).

B. Form Construction

1. Design, erect, support, brace, and maintain formwork so it will safely support vertical and lateral loads which might be applied until such loads can be supported safely by the concrete structure in accordance with ACI 347.
2. Construct forms to the exact sizes, shapes, lines, and dimensions shown, and as required to obtain accurate alignment, location, grades, and level and plumb work in the finished structure.
3. Form coating or water shall be applied to all forms. If coating is used, it shall be applied prior to placement of reinforcing steel.
4. Form ties and spreaders shall be of such type as to leave no metal closer than 3 inches from any exposed concrete surface.

C. Reinforcement Placement

1. All coated reinforcing steel shall be protected from damage to the coating during handling and placement. Any coated reinforcing steel, where the coating has been damaged shall be either removed from the site or re-coated, at the Engineer's discretion with strict conformance to the manufacturer's instructions at the Contractors expense.
2. Place reinforcement to obtain the required coverage for concrete protection. Minimum concrete cover for all reinforcing shall be 3 inches except where specifically noted otherwise.
3. Clean reinforcement and remove loose dust, earth, and other materials which reduce bond or destroy bond with concrete other than coating.
4. Position, support, and secure reinforcement against displacement by forms, construction, and the concrete placement operations.
5. All reinforcing steel shall be continuous unless specifically detailed otherwise on the Contract Drawings. Provide dowels or lap splices of the appropriate class to maintain continuity. Unless otherwise shown on the Contract Drawings lap bars in compliance with ACI 318. Dowels or splices shall be shown on the shop drawings and shall be subject to the field review of the Engineer. No more than 60% of the total number of bars shall be spliced at one location.

D. Embedded Items

1. Install embedded items furnished under this Section and other Sections. All sleeves, inserts, anchors, and embedded items required for adjoining work or for its support shall be placed prior to casting concrete. All embedded items shall be positioned accurately and supported against displacement.
2. Where existing timber pile tops are to be embedded in the concrete, thoroughly clean the embedded portion of the piles of all debris and foreign matter prior to concrete placement. Do not damage the existing piles by cleaning.

E. Concrete Mixing

1. Transit-mix the concrete in accordance with provisions of ASTM C94.
2. Do not use concrete after 90 minutes from time of introduction of water to the mix.

F. Concrete Placement

1. All concrete work shall conform to the requirements of ACI 318, “Building Code Requirements for Structural Concrete”.
2. Preparation:
 - a. Remove foreign matter accumulated in the forms.
 - b. Rigidly close openings left in the formwork.
 - c. Wet wood forms immediately prior to concrete placement. Wet wood forms sufficiently to tighten up cracks. Wet other material sufficiently to maintain workability of the concrete.
 - d. Use only clean tools.
3. Conveying:
 - a. Perform concrete placing at such a rate that concrete which is being integrated with fresh concrete is still plastic.
 - b. Deposit concrete as nearly as practicable in its final location so as to avoid separation due to re-handling and flowing.
 - c. Do not use concrete which becomes non-plastic and unworkable, or does not meet required quality control limits, or has been contaminated by foreign materials.
 - d. Remove rejected and excess concrete from the job site.
4. Placing concrete in forms:
 - a. Concrete shall be cast to full dimensions in one operation.
 - b. Free-fall of concrete during placement greater than eight feet is prohibited. The contractor shall place concrete with a tremie tube for drops greater than eight feet.
 - c. Deposit concrete in horizontal layers not deeper than 24 inches and avoid inclined construction joints.
 - d. Remove temporary spreaders in forms when concrete has reached the elevation of the spreaders.
5. Consolidation
 - a. Consolidate each layer of concrete immediately after placing, by use of internal concrete vibrators supplemented by hand spading, rodding, or tamping.

- b. Do not use vibrators to transport concrete inside the forms.

6. Construction Joints

- a. Do not use horizontal construction joints.
- b. Secure the Engineer's review of joint design and location prior to start of concrete placement.

G. Curing And Protection

1. Beginning immediately after placement, concrete shall be protected from premature drying, excessively hot or cold temperatures, and mechanical damage and shall be maintained with minimal moisture loss at a relative constant temperature for the period necessary for hydration of the cement and hardening of the concrete.
2. Concrete surfaces not covered by forms or within the inter-tidal elevations shall be protected from loss of surface moisture for not less than seven days using moisture protection as specified herein.
3. If cold-weather concreting is anticipated, a preconstruction meeting should be held to define how cold weather concreting methods will be used. When the mean daily ambient temperature is at or below 40 degrees F or 45 degrees F and falling the Contractor shall follow the requirements of ACI 306.1, "Standard Specification for Cold Weather Concreting":
 - a. Set up proper enclosure and heat to 50 degrees F for at least two (2) hours before starting any pour. Set up individual thermometers within enclosure to monitor ambient temperatures near the face of fresh concrete. Thermometers shall be placed at a maximum of 50-foot centers, at major corners or returns, and at ends of concrete sections. Monitor and record temperatures in a log at early morning, noon, and early evening.
 - b. Use a water-reducing admixture with an accelerated set, but do not use or rely upon any material as an anti-freeze. Use of calcium chloride is forbidden.
 - c. Use vented heaters with blowers so placed that they do not produce localized hot spots which may dry out the concrete. Exposure to exhaust gases from combustion heaters is prohibited for the first 24 hours of the curing period.
 - d. Maintain the temperature of the formwork at not less than 50 degrees F but not greater than 70 degrees F for 48 hours after completion of pour; formwork may be stripped after 72 hours after

completion of pour. After 48 hours of maintaining at least 50 degrees F, the temperature may be allowed to drop gradually and shall be kept above 32 degrees F for a period of seven (7) days after completion of pour. Protection during this period may be provided by existing enclosure or by means indicated in note e below.

- e. Protection may be provided by use of insulation methods. Adequate insulation shall consist of at least one of the following:

12" of dry earth; provide moisture cover if over slab concrete.

4" of hay under adequate moisture cover.

1" of insulation blankets with vapor barrier seal.

Other insulating material acceptable to the Engineer.

NOTE: Extreme conditions of temperature or wind may require more protection.

- f. Concrete may not be placed on frozen ground.
- g. All frozen concrete shall be removed from the job and replaced at a cost to the Contractor.

4. When the mean daily ambient and substrate temperature is above 80 degrees F, the Contractor shall follow the requirements of ACI 305.1, "Standard Specification for Hot Weather Concreting". Concrete shall be protected from thermal damage. Provisions for windbreaks, shading, fog spraying, sprinkling, ponding, or wet covering with a light-colored material shall be made in advance of placement and such protective measures shall be taken as quickly as concrete hardening and finishing operations will allow.

- a. No concrete shall be placed when the air temperature is above 90 degrees F unless the air is still, and relative humidity is above 80%.
- b. Set up proper windbreakers for concrete surfaces whenever the relative humidity is less than 70% for slight air motion or 80% for light breezes.
- c. Provide shade for pours otherwise exposed to the sun.
- d. Concrete is to be at a temperature of 80 degrees F or less when placed. If necessary, the batching plant shall cool aggregates by

spraying or by using chilled water or ice. All such water shall be accounted for as part of the mixing water.

- e. Use an admixture with a retarded set.
- f. All forms shall be thoroughly wetted at least daily and more often when the relative humidity is low.
- g. For slabs, maintain the required materials for curing on hand, so they may be placed immediately upon finishing. All concrete placed in ambient temperatures over 80 degrees F shall be kept wet for a minimum of 24 hours. Intermittent spraying will not be permitted. No water shall be applied before concrete has acquired its initial set. When the concrete temperature of any slab goes above 100 degrees F, place a layer of sand on it and keep it continuously wet until the temperature is below 80 degrees F.

H. Finishing

- 1. Remove all fins, blemishes, and defective concrete areas and patch where required with reworked cement mortar of the same proportions as that used in the concrete.
- 2. Form tie holes shall be plugged solid with reworked cement mortar of the same proportions as that used in the concrete.
- 3. Exposed surfaces of concrete shall receive a wood float finish or a light broom finish, unless noted otherwise.

3.1.1 CONCRETE TESTING

- A. A minimum of four (4) cylinders are required for strength tests for each batch of concrete. The testing is done at 7, 14, 28 days, leaving one for 56 days (in case of low strength)
- B. Concrete testing shall comply with ACI-318. Test reports shall be submitted to the Engineer for review.

END OF SECTION

SECTION 05 12 00

STRUCTURAL STEEL

PART 1 – GENERAL

1.1 WORK SPECIFIED

Work included: Provide miscellaneous structural steel items including but not limited to accessories as shown on the Drawings, specified herein, and needed for a complete and proper installation.

1.2 SUBMITTALS

- A. Sufficient technical data to demonstrate compliance with the specified requirements.
- B. Complete shop drawings detailing all members, profiles, sizes, spacing, proposed cuts, connections, camber, holes, openings, fasteners, and similar data. Erection plans showing the location and field connection of all members. Identify members by piece numbers which correspond to erection numbers. Structural steel connection details not specifically shown in the Contract Documents shall be detailed by the Contractor and included with shop drawing submittals.
- C. Submit manufacturer's certifications showing that the products meet or exceed the required standards for the following items:
 - 1. Bolts, including nuts and washers.
 - 2. Threaded rods including all hardware.
 - 3. Filler material and flux for welding.
 - 4. Expansion bolts.
- D. Submit Certified Mill Test Reports indicating structural strength, destructive and non-destructive test analysis, chemical and physical properties of each type of steel and conformance with ASTM A6.
- E. Submit welder's certificates certifying welders employed on the Work, verifying AWS qualifications within the previous twelve months.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Quality Assurance

1. Use adequate number of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this section.
2. Perform welding with electric arc process and in accordance with AWS "Code for Arc and Gas Welding in Building Construction".
3. In addition to complying with pertinent codes and regulations, comply with:
 - a. The American Institute of Steel Construction, AISC, "Steel Construction Manual", Sixteenth Edition.
- B. Structural Steel Shapes shall conform to ASTM A992, A690, or A572 Grade 50.
- C. Steel Angles, Channels and Plates shall conform to ASTM A572 Grade 50.
- D. Anchor rods shall conform to ASTM F1554, for Grades 36, 55 and 105.
- E. Carriage bolts and Lag screws shall conform to ASTM A307, Grade A.
- F. High Strength Structural Bolts: Shall conform to ASTM F3125 Grade A325 with hexagonal heads.
- G. Nuts: Shall be hexagonal and conform to ASTM A563.
- H. Washers (except against timber): Shall conform to ASTM F436.
- I. Threadbar Rods and Nuts: DYWIDAG Threadbar or equivalent accepted by the Engineer, shall conform to ASTM A615 for Grades 60, 70, 80, and 100, and ASTM A722 Grade 150.
- J. Adhesive Anchors: Adhesive shall be HIT RE 500 V3 Injection Adhesive Anchor as manufactured by Hilti Corporation, or equivalent acceptable to the Engineer. Anchor rods shall be as specified above for threadbar anchors.
- K. Expansion bolts: Shall be stainless steel HILTI KWIK BOLT 3, as manufactured by HILTI or equivalent accepted by the Engineer.
- L. Welding Materials: AWS D1.1; Type E70XX or type required for materials being welded.
- M. Grout: Non-shrink, non-metallic, high-performance cement-based grout conforming to ASTM C827 such as Sikagrout 212 as manufactured by Sika Corporation or equivalent accepted by the Engineer.
- N. Fabrication:

1. Fabricate items of structural steel in accordance with AISC specifications and as shown on the accepted shop drawings.
2. Properly mark materials for field assembly and for identification of the structure and location intended. Fabricate for delivery sequence which will expedite erection and minimize field handling of Materials.
3. Provide bolts, nuts, and washers of all types and sizes required for completion of field erection.
4. Comply with AWS code for procedures, appearance, and quality of welds, and methods used in correcting welded work.
5. Cut, drill, or punch holes perpendicular to metal surfaces. Do not flame cut holes or enlarge holes by burning. Drill holes in bearing plates. No holes will be allowed unless first shown on the Shop Drawings and accepted by the Engineer.
6. Should holes be required in addition to those provided under this Section, provide all such holes, and strengthen the area as required to compensate but only as accepted by the Engineer.
7. Moment connections shall develop the full strength of joined members. The cold weather welding requirements of AWS shall be required and enforced.
8. Where finishing is required, complete the assembly, including welding of units, before start of finishing.
9. Provide finish surfaces of members exposed in the final structure free from markings, burrs, and other defects.
10. Assemble and weld built-up sections by methods which will produce true alignment of axes without warp.

O. Protective Coating

1. General: Unless specifically noted otherwise, all items scheduled to receive protective coating shall be fully fabricated with holes, cuts, threads, etc. prior to receiving protective coating, prior to delivery to site.
2. Steel Sections: Unless specifically noted otherwise, all steel sections shall be shop coated prior to delivery to site in accordance with Section 09 97 13 Coating on Steel Waterfront Structures.
3. Bolts, Nuts, and Washers: All bolts, nuts, and washers shall be hot dipped galvanized in accordance with ASTM A153.

4. Threadbar Rods, and Nuts: Epoxy coated in accordance with ASTM A775.
5. Adhesive Anchor Rods: anchor rods, nuts, and washers shall be hot-dipped galvanized in accordance with ASTM A153.
6. Field Touch-Up of Epoxy-Coated Items: Shall be performed in accordance with Section 09 97 13 Coating on Steel Waterfront Structures.
7. Field Touch-Up of Hot-Dipped Galvanized Items: Touch-up shall be performed with Tnemec 90-97 Tneme-Zinc primer or equivalent accepted by the Engineer. Surface preparation and coating application shall be in strict accordance with manufacturers written instructions.

P. Other Material

Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the review of the Engineer prior to final installation.

Q. Product Handling and Storage

1. Deliver materials to the job site properly marked to identify the location for which they are intended.
2. Use markings corresponding to markings shown on the reviewed shop drawings.
3. Store in a manner to maintain identification and prevent damage, off the ground, using pallets or other supports, and to permit easy access for inspection.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Surface Conditions

Examine the areas and verify the conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

B. Erection

1. Surveys:
 - a. Establish benchmarks necessary for accurate erection of structural steel.

- b. Check elevations of concrete surfaces, and locations of anchor bolts and similar items, before erection proceeds.
- 2. Temporary shoring and bracing:
 - a. Provide temporary shoring and bracing members with connections of sufficient strength to bear imposed loads.
 - b. Provide temporary guy lines to achieve proper alignment of the structure as erection proceeds.
 - c. Remove temporary connections and members when permanent members are in place and final connections are made.
 - d. Field touch-up protective coating where damaged.
- 3. Anchor bolts:
 - a. Install anchor bolts and other connectors required for securing structural steel to adjacent work as shown on the Contract Drawings.
 - b. Provide templates and other devices as needed for presetting bolts and other anchors to accurate locations.
- 4. Field Assembly:
 - a. Set structural frames accurately to the lines and elevations indicated.
 - b. Align and adjust the members forming part of a complete frame or structure before fastening permanently.
 - c. Clean the bearing surfaces and other surfaces which will be in permanent contact before assembly.
 - d. Adjust as required to compensate for discrepancies in elevation and alignment.
 - e. Level and plumb individual members of the structure within specified AISC tolerances.
 - f. Establish required leveling and plumbing measurements on the mean operating temperature of the structure, making allowances for the difference between temperature at time of erection and the mean temperature at which the structure will be when completed and in service.

- g. Comply with AISC specifications for bearing, adequacy of temporary connections, alignment, and removal of paint on surfaces adjacent to welds.
- 5. Gas cutting:
 - a. Do not use gas cutting torches for correcting fabricating errors in structural framing, except on secondary members where acceptable to the Engineer.
 - b. When gas cutting is permitted, finish the gas cut section to a sheared appearance acceptable to the Engineer.
- 6. Expansion Bolts and Adhesive Anchors: Install anchors in strict accordance with manufacturers written instructions.
- 7. Field Welding: Where field welds are scheduled, surfaces to be joined are to be properly prepared, including removal of any existing coatings prior to welding. Following welding, prepare and touch-up all areas requiring coating as set forth in Section 09 97 13 Coating on Steel Waterfront Structures.

END OF SECTION

SECTION 05 50 13

METAL FABRICATIONS

PART 1 – GENERAL

1.1 WORK SPECIFIED

The Work covered under this Section of these Specifications consists of providing all plant, labor, supervision, equipment, appliances, and materials, and in performing all operations in connection with the installation of metal fabrications (miscellaneous steel), all in strict accordance with the Contract Documents. The Work covered under this Section included, but is not necessarily limited to: rough hardware; pipe supports; railings and related connections; expanded metal mesh; grating; steel plate; steel diamond plate; pipe bollards; and fasteners. Provide accessories as shown in the Contract Documents specified herein, and needed for a complete and proper installation.

1.2 SUBMITTALS

- A. The Contractor shall submit shop drawings detailing fabrication and erection of each metal fabrication indicated. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items. Provide templates for anchors and bolts specified for installation under other Sections.
- B. Product data for gratings; shop paint products; anchor bolt systems; and grout.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Quality Assurance
 - 1. Use adequate number of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.
 - 2. The Owner reserves the right of approval of any Subcontractor selected for this portion of the Work by the Contractor. Approval will be based, in part, on:
 - a. Documented successful experience in performing work of a similar nature.
 - b. Acceptable schedule of unit prices for measurement and payment in event of changes in the Work of this Section.

3. Fabricator Qualifications: Firm experienced in producing metal fabrications similar to those indicated for this Project with a record of successful in-service performance, and with sufficient production capacity to produce required units without delaying the Work.
4. Perform welding with electric arc process and in accordance with "Structural Welding Code-Steel" (ANSI/AWS D1.1). All structural welds shall be performed by American Welding Society (AWS) welders certified for the appropriate welding application.
5. In addition to complying with pertinent codes and regulations, comply with:
 - a. The American Institute of Steel Construction, AISC, "Steel Construction Manual", Fifteenth Edition.
6. All connections shall be designed by the steel fabricator except those specifically detailed on the Contract Documents. Submit design calculations for review if requested by Owner.
7. All references to SSPC shall be interpreted as Steel Structures Painting Council Manual, Systems and Specifications, now part of the Association for Materials Protection and Performance (AMPP).

B. Ferrous Metals

1. Steel Plate, Diamond Plate, and Bar Stock: ASTM A 36.
2. Steel Pipe: ASTM A 53, standard weight (Schedule 40).
3. Welding Rods and Bare Electrodes: Select according to AWS specifications for the metal alloy to be welded.

C. Protective Coating

1. General: Unless specifically noted otherwise, all items scheduled to receive protective coating shall be fully fabricated with holes, cuts, threads, etc. prior to receiving protective coating, prior to delivery to site.
2. Steel Sections: Unless specifically noted otherwise, all steel sections shall be shop coated prior to delivery to site in accordance with Section 09 97 13 Coating of Steel Waterfront Structures.
3. Bolts, Nuts, and Washers: All bolts, nuts, and washers shall be hot dipped galvanized in accordance with ASTM A153.
4. Field Touch-Up of Epoxy-Coated Items: Shall be performed in accordance with Section 09 97 13 Coating of Steel Waterfront Structures.

5. Field Touch-Up of Hot-Dipped Galvanized Items: Touch-up shall be performed with Tnemec 90-97 Tnemec-Zinc primer or equivalent accepted by the Engineer. Surface preparation and coating application shall be in strict accordance with manufacturers written instructions.

D. General Fabrication

1. Form metal fabrications from materials of size, thickness, and shapes indicated but not less than that needed to comply with performance requirements indicated. Work to dimensions indicated or accepted on shop drawings, using proven details of fabrication and support. Use type of materials indicated or specified for various components of each fabrication.
2. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges.
3. Remove sharp or rough areas on exposed traffic surfaces.
4. Weld corners and seams continuously to comply with the following:
 - a. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - b. Obtain fusion without undercut or overlap.
 - c. Remove welding flux immediately.
 - d. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing, and contour of welded surface matches those adjacent.
5. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of type indicated or, if not indicated, Phillips flathead (countersunk) screws or bolts. Locate joints where least conspicuous.
6. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.
7. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

8. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.
9. Fabricate joints that will be exposed to weather in a manner to prevent water entry or provide weep holes where water may accumulate.

E. Rough Hardware

1. Furnish bent, or otherwise custom-fabricated, bolts, plates, anchors, hangers, dowels, and other miscellaneous steel and iron shapes as required for framing and supporting woodwork, and for anchoring or securing woodwork to concrete or other structures.
2. Fabricate items to sizes, shapes, and dimensions required. Furnish malleable-iron washers for heads and nuts that bear on wood structural connections and furnish steel washers elsewhere.

F. Miscellaneous Steel Trim

1. Unless otherwise indicated, fabricate units from structural steel shapes, plates, and bars of profiles shown with continuously welded joints, and smooth exposed edges. Miter corners and use concealed field splices wherever possible.
2. Provide cutouts, fittings, and anchorages as required to coordinate assembly and installation with other work. Provide anchors, welded to trim, for embedding in concrete or masonry construction, spaced not more than 6 inches from each end, 6 inches from corners, and 24 inches o.c., unless otherwise indicated.
3. Galvanize miscellaneous steel trim at all exterior locations and as indicated.

G. Steel Finishes

1. Rust-inhibitive, Alkyd Primer: Product to be Devguard 4160 manufactured by Devoe Coatings or equivalent accepted by Engineer. Apply 1 coat minimum 2.0-2.5 mils dry film thickness; color to be selected by Owner.
2. Galvanizing: For those items indicated for galvanizing, apply zinc coating by the hot dip process complying with the following requirements:
 - a. ASTM A153 for galvanizing iron and steel hardware.

- b. ASTM A123 for galvanizing both fabricated and un-fabricated iron and steel products made of uncoated rolled, pressed, and forged shapes, plates, bars, and strip 0.0299 inch thick or thicker.
- 3. Epoxy Coating: Finish items per Section 09 97 13 Coating of Steel Waterfront Structures, where noted in Contract Documents.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Field Measurements

Check actual locations of walls and other construction to which metal fabrications must fit by accurate field measurements before fabrication. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work. Where field measurements cannot be made without delaying the Work, guarantee dimensions and proceed with fabricating products without field measurements. Coordinate construction to ensure that actual dimensions correspond to guaranteed dimensions. Allow for trimming and fitting.

B. Preparation

- 1. Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions, and directions for installing anchorages, including concrete inserts, sleeves, anchor bolts, and miscellaneous items having integral anchors that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to Project site.
- 2. Set sleeves in concrete with tops flush with finish surface elevations. Protect sleeves from water and concrete entries.

C. General Installation

- 1. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction. Include threaded fasteners for concrete inserts, toggle bolts, through-bolts, and other connectors as required.
- 2. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing miscellaneous metal fabrications. Set metal fabrication accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

3. Provide temporary bracing or anchors in formwork for items that are to be built into concrete masonry or similar construction.
4. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop-welded because of shipping size limitations. Do not weld, cut, or abrade the surfaces of exterior units that have been hot dip galvanized after fabrication and are intended for bolted or screwed field connections.
5. Field Welding shall comply with the following requirements:
 - a. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - b. Obtain fusion without undercut or overlap.
 - c. Remove welding flux immediately.
 - d. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing, and contour of welded surface matches those adjacent.

D. Field Touch-Up of Finishes

1. Touch-up of Galvanizing: Thoroughly clean galvanized steel by SSPC-SP 3 Power Tool Cleaning method at all damaged, scratched and field-welded galvanized surfaces. Apply a zinc-rich primer such as Cathacoat 304V by Devco Coatings or equivalent accepted by Engineer. Touch-up repair shall conform to ASTM A780 and shall overlap a minimum of 2" with hot dip galvanized surfaces. Allow to dry to a minimum dry film thickness of 2.0-4.0 mils.
2. Touch-up of Epoxy Coating: Thoroughly clean all field-welded, damaged, scratched, and chipped coating areas per SSPC-SP 2 Hand Tool Cleaning. Remove all rust and weld slag. Field touch-up areas shall be coated with epoxy coating with material specified in Section 09 97 13 Coating of Steel Waterfront Structures. Overlap touch-up 2" minimum with existing coating.

END OF SECTION

SECTION 06 13 33

TIMBER CONSTRUCTION

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

The Work covered by this Section of these Specifications consists of furnishing all plant, labor, supervision, equipment, appliances, and materials and in performing all operations in connection with the timber construction, all in strict accordance with this Section of the Specifications and the applicable drawings and subject to the terms and conditions of the Contract.

1.2 QUALITY ASSURANCE

- A. Use adequate number of workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work in this Section.
- B. The Owner reserves the right of approval of any Subcontractor pre-qualified and selected for this portion of the Work by the Contractor. Approval will be based, in part, on:
 - 1. Documented successful experience in performing work of a similar nature.
 - 2. Acceptable schedule of unit prices for measurement and payment in event of changes in the Work of this Section.
- C. Comply with the requirements of the "Wood Engineering Handbook" by US Forest Products Laboratory, except as may be modified herein, and
- D. All visually graded structural lumber and wood construction shall conform to the "National Design Specification for Wood Construction", and its Supplement, "Design Values for Wood Construction" by the National Forest Products Association.

1.3 SUBMITTALS

- A. No later than the time of delivery of materials to the site, submit certificates as to conformance with the specified species, grade, and treatment prior to installation of any timber or hardware.

1.4 PRODUCT DELIVERY AND STORAGE

- A. The Contractor shall notify the Owner twenty-four hours in advance of delivery of timber materials. The Contractor guarantees timber shall be stored in a safe manner within Owner designated area provided on the site.

- B. Store off the ground in a manner to prevent damage and to permit easy access for inspection.

PART 2 - PRODUCTS

2.1 TIMBER

- A. Timber shall meet the requirements of the Southern Pine Inspection Bureau Inspection Rule, for Southern Yellow Pine No. 1, Paragraph 508 Marine Grade minimum.
- B. Clean-peel and preservative pressure treat all timber that will have continuous marine exposure in accordance with AWP Service Condition Use Category UC5A and P5 for Chromated Copper Arsenate (CCA) to a minimum retention of 2.5 pounds per cubic foot or equivalent accepted by the Project Engineer.
- C. Clean-peel and preservative pressure treat timber in accordance with AWP Service Condition Use Category UC4B (Marine, out-of-water, saltwater splash, above ground, ground contact) for Micronized Copper Azole (MCA). All timber components without-in-water use except as noted above shall have a minimum retention of 0.23 pounds per cubic foot or equivalent as accepted by the Project Engineer.
- D. All material used shall be sound, well-seasoned, and straight grained, free from shakes and large or loose knots, and shall have no decayed wood, worm holes, or any defects which the Owner determines will impair its strength or durability.
- E. Pieces of exceptionally lightweight will not be accepted.
- F. Lumber shall be surfaced four sides unless otherwise noted.
- G. Alternate preservative treatment shall be submitted for review and acceptance by Engineer.

2.2 HARDWARE

- A. All hardware for CCA treated timber, including all bolts, nuts and washers shall be galvanized steel conforming to ASTM A307, Grade A. Galvanizing shall conform to the requirements of ASTM A153.
- B. All hardware for MCA treated timber, including all bolts, nuts and washers shall be stainless steel conforming to Grade A316. Galvanized hardware shall not be used in contact with MCA treated timber.
- C. Finish of all hardware and metal fittings shall be hot dipped galvanized after fabrication.

- D. Furnish Certificates of Compliance with ASTM Specifications and Standards specified herein. Each certificate to be signed by Contractor and Galvanizer certifying that steel materials, bolts, nuts, washers and items of iron and steel hardware in conformance with specified requirements, and that the galvanizing is in full conformance with these Specifications.
- E. Galvanized materials are to be given passivating treatment to prevent wet storage stain. Treatment shall consist of quenching newly galvanized material in a water quench containing not more than 0.2% sodium dichromate.

PART 3 - EXECUTION

3.1 HANDLING, CUTTING AND FRAMING

- A. Handle lumber and timber carefully, without sudden dropping, breaking of outer fibers, bruising, or penetrating the surface with tools. Accurately cut and frame lumber to a close fit in such a manner that the joints shall have an even bearing over the entire contact surface. All drilled holes and field cuts shall be treated with a preservative (product to be submitted for review by the Contractor and approved by the Owner) in accordance with AWWA M4 - "Standard for the Care of Preservative Treated Wood Products" prior to erection of timber member or installation of bolt.
- B. All lumber shall be accurately cut and framed to a close fit in such a manner that joints shall have even bearing over the entire contact surface. No shimming will be permitted in making joints nor will open joints be accepted.

3.2 HARDWARE

- A. A washer of the size and type specified shall be used under all bolt heads and nuts which would otherwise come in contact with timber. The nuts of all bolts shall be effectively locked after they have been finally tightened.
- B. Field touch-up of hot-dipped galvanizing shall be 90-97 Tneme-Zinc zinc-rich coating as manufactured by Tnemec Company, Inc. of Kansas City, MO, or equivalent accepted by the Owner. Material shall be applied in strict accordance with manufacturers written instructions.

END OF SECTION

SECTION 09 97 13

COATING OF STEEL WATERFRONT STRUCTURES

PART 1 - GENERAL

1.1 WORK SPECIFIED

The work includes: The furnishing of all plant, labor, materials, tools and equipment, and the performance of all operations and incidentals necessary for the coating, handling, storing, and shipping of plant coated steel sheet piling, structural steel, and miscellaneous ancillary items.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. The Owner, through the Engineer, reserves the right of approval of any Subcontractor pre-qualified and selected for this portion of the Work by the Contractor. Approval will be based, in part, on:
 - 1. Documented successful experience in performing work of a similar nature.
 - 2. Acceptable schedule of unit prices for measurement and payment in event of changes in the Work of this Section.
- C. Coating materials shall be handled, stored, and applied in accordance with the manufacturer's specifications, or as directed by an authorized representative of the coating manufacturer.
- D. All references to SSPC shall be interpreted as Steel Structures Painting Council, part of Association for Materials Protection and Performance.
- E. Structural steel fabrications shall be received by coating applicator free of all oil and grease.

1.3 SUBMITTAL

Submit material certification data for the coating system to the Engineer for review no later than the time of delivery of materials to the site. Certification shall include a statement by the coating applicator that the protective coating was installed in strict accordance with manufacturers written instructions, including all surface preparation.

1.4 PRODUCT DELIVERY AND STORAGE

The Contractor guarantees that material shall be stored in a safe manner within Owner-designated area provided at the site.

PART 2 - PRODUCTS

2.1 EPOXY COATING

- A. Material used for factory epoxy coating of all scheduled surfaces shall be BAR-RUST 235 Multi-Purpose Epoxy Coating as manufactured by Devoe Coatings or equivalent accepted by the Engineer.
- B. Epoxy coating field touch-up material shall be identical to factory coating specified in paragraph 2.1-A above.
- C. The topcoat color for all surfaces is to be black.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

- A. Surfaces shall be prepared in strict accordance with the protective coating system manufacturers written instructions. Surfaces are to be abrasion-blasted to a near-white surface cleanliness in accordance with SSPC-SP-10. Blast profile on steel shall be 1.5 to 2.5 mils in depth and be of a sharp, jagged nature as opposed to a "peen" pattern (from shot blasting). Surfaces must be sound, dry, clean, free of oil, grease, dirt, mildew, form release agents, curing compounds, loose and flaking paint, grit dust, and other foreign substances. Roto blasted surfaces are not acceptable.
- B. Surfaces requiring field touch-up shall be prepared as described in paragraph 3.1-A above.

3.2 PROTECTIVE COATING APPLICATION

- A. The protective coating shall be installed in strict accordance with manufacturers written instructions. Coating is to be applied in two coats to achieve a minimum overall dry film thickness of 15 mils.
- B. All holidays or other imperfections in the coating shall be removed or repaired at the Contractors expense prior to final acceptance of the Work.
- C. Surfaces requiring field touch-up of any required areas shall be prepared as described in paragraph 3.1-A above or by the following procedure:
 - 1. Clean all surfaces to be repaired per SSPC-SP1 Solvent Clean to remove chlorides and general surface contamination.
 - 2. Grind all welded areas to provide a smooth surface with no sharp edges.

3. Feather existing coatings back to sound material.
4. Clean all other surfaces to be repaired per SSPC-SP2 (Hand Tool Clean) or SSPC-SP3 (Power Tool Clean). Do not grind surfaces smooth; maintain adequate surface profile from original blast cleaning.
5. Stripe-coat all welds and edges with the epoxy coating prior to painting to insure adequate film thickness.

END OF SECTION

SECTION 31 23 00

EXCAVATING, BACKFILLING AND COMPACTING

PART 1 – GENERAL

1.1 WORK SPECIFIED

Work included: Excavate, backfill, compact, and grade the site to the elevations and limits shown on the Drawings, as specified herein, and as needed to meet the requirements of the construction shown on the Contract Documents.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Use equipment adequate in size, capacity, and numbers to accomplish the work of this Section in a timely manner.
- C. In addition to complying with requirements of governmental agencies having jurisdiction, comply with the directions of the Consulting Engineer.

1.3 SUBMITTALS

- A. Submit the pre-qualified list of subcontractors and the proposed schedule of unit prices to the Engineer for review.
- B. Submit material gradation, moisture density curve, and representative material sample for each material proposed for use.
- C. Submit de-watering plan if de-watering is to be performed. Include proposed intake and discharge location, containment measures for discharge, including details on size, type, and intended location of all components.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Granular Backfill

Where the Drawings indicate “structural fill” material, it shall meet the requirements of granular backfill as described herein. Granular backfill shall consist of broken or crushed stone, bank or crushed gravel, or mixtures thereof. A sample and grading curve is to be provided for the Engineer's review prior to commencing work. Make submittal in accordance with Section 00720 and Section

01 25 13. Recycled man-made products such as asphalt and concrete are not acceptable.

1. Broken or crushed stone shall consist of sound, tough, durable stone.
2. Bank or crushed gravel shall consist of sound, tough, durable particles of crushed or uncrushed gravel free from soft, thin, elongated, or laminated pieces and organic or other deleterious substances.

B. Uncontrolled Fill

Uncontrolled backfill material may consist of surplus excavated materials from the site.

C. Pipe Bedding Material

This material shall be sand or sandy soil, all of which passes a 3/8" sieve, and not more than ten (10) percent passes a No. 200 sieve.

D. Other Materials

Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the review of the Engineer. Make submittals in accordance with Section 00720 and Section 01 25 13.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Surface Conditions

1. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

B. Finished Elevations and Lines

Comply with pertinent provisions of Section 01 05 00.

C. Procedures

1. Utilities:
 - a. Unless shown to be removed, protect active utility lines shown on the Drawings or otherwise made known to the Contractor prior to excavating. If damaged, repair or replace at no additional cost to the Owner. The Contractor is responsible for notification of local utilities.

- b. If active utility lines are encountered and are not shown on the Drawings or otherwise made known to the Contractor, promptly take necessary steps to assure that service is not interrupted.
 - c. If service is interrupted as a result of Work under this Section, immediately restore service by repairing the damaged utility at no additional cost to the Owner.
 - d. If existing utilities are found to interfere with the permanent facilities being constructed under this Section, immediately notify the Engineer, and secure his instructions.
 - e. Do not proceed with permanent relocation of utilities until written instructions are received from the Engineer.
2. Protection of persons and property:
- a. Barricade open holes and depressions occurring as part of the Work, and post warning lights on property adjacent to or with public access.
 - b. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
 - c. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, washout, and other hazards created by operations under this Section.
 - d. Provide grounding of equipment.
3. Dewatering of Upland Excavations:
- a. Remove all water, including rainwater, encountered during trench and substructure work to an approved location by pumps, drains, and other approved methods.
 - b. Keep excavations and site construction area free from water.
 - c. Should de-watering systems be employed, discharge effluent to an upland location contained by hay bales, silt fencing or other means of containment acceptable to the Owner.
4. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.
5. Always maintain access to adjacent areas.

6. Upland soil stockpiles shall be contained by hay bales or silt fencing to prevent erosion. Maintain containment measures during the Work.

D. Excavating

1. Perform excavating of every type of material encountered within the limits of the Work to the lines, grades, and elevations indicated and specified herein.
2. Satisfactory Excavated Materials

Transport to, and place in, fill or embankment areas within the limits of the Work.
3. Unsatisfactory Excavated Materials
 - a. Excavate to a distance below grade as directed by the Engineer and replace with satisfactory materials.
 - b. Include excavation of unsatisfactory materials, and replacement by satisfactory materials, as part of the work of this Section.
4. Surplus Materials
 - a. It is a requirement of this Contract that no excavated soils, including riprap and other stone products, are permitted to be removed from the site. Surplus materials are to be stockpiled by the Contractor at a location on site per the direction of the Owner. Stockpiles are to conform to the requirements of Paragraph 3.1-C above.
5. Excavating of Surfaces and Subsurfaces
 - a. Where rocks, boulders, granite, or similar material is encountered, and where such material cannot be removed or excavated by conventional earth moving or ripping equipment, take required steps to proceed with the general grading operations of the Work, and remove or excavate such material by means which will neither cause additional cost to the Owner nor endanger buildings or structures whether on or off the site.
 - b. Where existing subsurface structures are encountered, notwithstanding items described in Paragraph 3.1-C, where these subsurface structures are classified as abandoned by the Engineer, and where these structures impede progress of the Work, shall be removed by means which will neither cause additional cost to the Owner nor endanger buildings or structures on or off site.

- c. Do not use explosives without written permission from the Engineer.
- 6. Excavate and backfill in a manner and sequence that will always provide proper drainage.
- 7. Borrow

Obtain material required for fill or embankment in excess of that produced within the grading limits of the Work from borrows areas selected and paid for by the Contractor and accepted by the Engineer.
- 8. Ditches and Gutters
 - a. Cut accurately to the cross sections, grades, and elevations shown.
 - b. Maintain excavations free from detrimental quantities of leaves, sticks, trash, and other debris until completion of the Work.
- 9. Unauthorized Excavations
 - a. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimension without specific instruction from the Engineer.
 - b. Under footings, foundations, or retaining walls:
 - i. Fill unauthorized excavations by extending the indicated bottom elevation of the footing or base to the excavation bottom, without altering the required top elevation.
 - ii. When acceptable to the Engineer, lean concrete fill may be used to bring the bottom elevation to proper position.
 - iii. Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations, unless otherwise directed by the Engineer.
- 10. Stability of Excavations
 - a. Slope excavations as necessary to make slopes safe in accordance with the appropriate regulations.
 - b. Shore and brace where sloping is not possible because of space restrictions or stability of the materials being excavated.
 - c. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

11. Shoring and Bracing

- a. Provide materials for shoring and bracing as may be necessary for safety of personnel, protection of work and compliance with requirements of govern-mental agencies having jurisdiction.
- b. Maintain shoring and bracing in excavations regardless of the time excavations will be open.
- c. Construct shoring and bracing as excavation progresses.

12. Excavating the Structure

- a. Conform to elevations and dimensions shown within a tolerance of 0.10 ft and extending a sufficient distance from footings and foundations to permit placing and removing concrete formwork, installation of services, other construction required, and for inspection.
- b. In excavating for footings, take care not to disturb bottom of excavation:
 - i. Excavate by hand tools to final grade just before concrete is placed.
 - ii. Trim bottoms to required lines and grades to leave solid base to receive concrete.
 - iii. Excavate for footings and foundations only after general site excavating, filling, and grading are complete.

13. Excavating the Pavement

Cut surface under pavements to comply with cross sections, elevations, and grades.

14. Cold Weather Protection

Protect excavation bottoms against freezing when ambient atmospheric temperature remains lower than 35 degrees F for more than four consecutive hours or is anticipated to be lower than 35 degrees F during non-working hours such as overnight, weekends, or holidays.

15. Filling and Backfilling

- a. General:

- i. For each area shown on the Drawings, place acceptable soil material in layers to required elevations.
 - ii. Perform all backfilling and compaction operations in a careful and controlled manner. Avoid damaging existing structures. Prevent loss of material through openings in the bulkhead and prevent materials from entering the waterway.
- 16. Backfill excavations as promptly as progress of the Work permits, but not until completion of the following:
 - a. Acceptance of construction below finish grade including, where applicable, damp-proofing and waterproofing.
 - b. Inspecting, testing, approving, and recording locations of underground utilities.
 - c. Removing concrete formwork.
 - d. Removing shoring and bracing, and backfilling of voids with satisfactory materials.
 - e. Removing trash and debris.
 - f. Placement of horizontal bracing on horizontally supported walls.
- 17. Ground Surface Preparation
 - a. Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious matter from ground surface prior to placement of fills.
 - b. Plow, strip, or break up sloped surfaces steeper than one vertical to four horizontals so that fill material will bond with existing surface.
 - c. When existing ground surface has a density less than specified under "compacting" for the particular area, break up the ground surface, pulverize, moisture condition to the optimum moisture content, and compact to required depth and percentage of maximum density.
- 18. Placing and Compacting
 - a. De-water area scheduled to receive backfill.
 - b. Place backfill and fill materials in layers not more than 8" in loose depth.

- c. Before compacting, moisten or aerate each layer as necessary to provide the optimum moisture content.
- d. Compact each layer to required percentage of maximum density for area.
- e. Do not place backfill or fill material on surfaces that are muddy, frozen, or containing frost or ice.
- f. Place backfill and fill materials evenly along structures, to required elevations.
- g. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around the structure to approximately the same elevation in each lift.

19. Grading

- a. General:
 - i. Uniformly grade the areas within limits of grading under this Section, including adjacent transition areas.
 - ii. Smooth the finished surfaces within specified tolerance.
 - iii. Compact with uniform levels or slopes between points where elevations are shown on the Drawings, or between such points and existing grades.
 - iv. Where a change of slope is indicated on the Drawings, construct a rolled transition section having a minimum radius of approximately 8'-0" unless adjacent construction will not permit such a transition, or if such a transition defeats positive control of drainage.
- b. Grading outside building lines:
 - i. Grade areas adjacent to buildings to achieve drainage away from the structures, and to prevent ponding.
 - ii. Finish the surfaces to be free from irregular surface changes, and:
 - i. Shape the surface of areas scheduled to be under walks to line, grade, and cross-section, with finished surface not more than 0.10 ft above or below the required subgrade elevation.

- ii. Shape the surface of areas scheduled to be under pavement to line, grade, and cross section, with finished surface not more than 0.05 ft above or below the required subgrade elevation.

20. Compacting

- a. Control backfill compaction during construction to provide the minimum percentage of density specified for each area as determined according to ASTM D1557.
- b. Backfill material's density shall not be below 99% of its density at optimum moisture content as determined by the above test in all layers.
- c. Moisture control:
 - i. Where subgrade or layer of soil material must be moisture-conditioned before compacting, uniformly apply water to surface of subgrade or layer of soil material to prevent free water appearing on surface during or subsequent to compacting operations.
 - ii. Remove and replace, or scarify and air dry, soil material that is too wet to permit compacting to the specified density.
 - iii. Soil material that has been removed because it is too wet to permit compacting may be stockpiled or spread and allowed to dry. Assist drying by dicing, harrowing, or pulverizing until moisture content is reduced to a satisfactory value as determined by moisture density relation tests reviewed by the Engineer.

21. Pipe Bedding Material

- a. Support pipe as required during placement and compaction of bedding fill. Place and compact as described in paragraphs above taking care not to damage piping. Extent of material shall be as indicated on the Drawings.

22. Dust Suppression

- a. Engineer shall determine if dust generated at the site is significant enough to require dust suppression.
- b. Contractor shall at all times keep machinery and a sufficient supply of water onsite to suppress dust generated at the site as necessary.

- c. Contractor shall suppress dust as necessary throughout construction and until vegetation or other surface treatments have been established, if necessary.
- d. Uniformly apply water to surface, subgrade, or layer of soil material requiring dust suppression.

3.2 MAINTENANCE

A. Protection of newly graded areas:

- 1. Protect newly graded areas from traffic and erosion and keep free from trash and weeds.
- 2. Repair and re-establish grades in settled, eroded, and rutted areas to the specified tolerances.

B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify the surface, reshape, and compact to the required density prior to further construction.

END OF SECTION

SECTION 31 25 00

EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The work in this Section includes the work necessary for the installation of any structures and measures for the prevention and control of soil erosion and runoff.
- B. The Contractor shall furnish all material, labor and equipment necessary for the proper installation, maintenance, inspection, monitoring, reporting, and removal (where applicable) of erosion prevention and control measures.

1.2 RELATED SECTIONS

- A. Not Used

1.3 REFERENCES

- A. Refer to the latest edition of the Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges, where required.

1.4 REQUIREMENTS

- A. Runoff from all disturbed areas and sediment-laden groundwater encountered during trenching, boring or excavation must be routed through a silt control structure or sediment trapping device prior to discharge from the construction area and prior to entering a receiving stream or other water body.
- B. Acceptable sediment trapping devices include, but are not limited to silt fence, diversion berms and swales, inlet protection, check dams, silt basins, silt traps, stabilized construction entrances, and vegetative cover.
- C. Pump around flow diversions may be used when construction activity is required within a flowing stream, creek, ditch, or piped system.
- D. Stockpiles shall be located away from streams, ponds, swales, and catch basins. Soil stockpiles shall be seeded, mulched and contained through the use of approved perimeter controls.
- E. Temporary stabilized construction entrances must be used at access points where construction traffic will enter onto public roadways or streets. These are used to reduce silt and mud tracking onto pavement. Construction rock entrances must be kept in good

condition and may require cleaning, additional rock, or replacement. Any mud and silt tracked onto public roads must be removed immediately.

- F. The construction schedule adopted by the Contractor will impact the placement and need for specific devices required for the control of erosion and runoff. The Contractor shall develop and implement such additional techniques as may be required to minimize erosion and off-site sedimentation. The location and extent of erosion and sedimentation control devices shall be revised at each phase of construction that results in a change in either the quantity or direction of surface runoff from constructed areas. All deviations from the erosion and sedimentation control provisions shall have the prior written acceptance of the Engineer.
- G. Erosion and sediment controls shall be maintained during construction and then removed at the completion of construction, as required by the Project Engineer.
- H. Land disturbance activities are not authorized to begin until after all required erosion and sediment control permits are obtained. Contractor shall comply with requirements specified in the Contract Documents or as directed by the Project Engineer. Contractor shall also comply with all other laws, rules, regulations, ordinances and requirements concerning soil erosion and sediment control.

1.5 SUBMITTALS

- A. Prior to commencement of work, the Contractor shall submit for approval, product data for perimeter controls, such as hay bales, silt fence, filter sock, coir log, or other sediment and erosion controls, along with a proposed work schedule, sequence of operations, and coordination of other work.
- B. The Contractor is responsible for meeting all the requirements of the relevant NPDES Permit for Construction Activities as described by Environmental Protection Agency (EPA). The Contractor shall determine the applicability of the aforementioned permit to the proposed project and develop a Stormwater Pollution Prevention Plan (SWPPP) based on guidance from EPA if required.
- C. Prior to commencement of work, the Contractor shall submit for approval:
 - 1. Potential erosion and sediment pollution problems and measures to be taken to control those problems.
 - 2. Erosion and sediment control practices to be employed are dependent on their location, size, maintenance requirements and design calculations.
 - 3. The schedule, phasing, and coordination of construction operations and erosion and sediment control practices.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials for use in erosion and sedimentation control devices shall be in accordance with MassDOT's Standard Specifications for Highways and Bridges (2025) unless otherwise instructed by the Engineer.
- B. Acceptable sediment control devices include, but are not limited to, hay bales, silt fence, silt curtain, filter sock, coir log, erosion control blanket, seed and straw, check dams, turbidity curtain, etc. Sediment control devices shall be constructed in accordance with MassDOT's Standard Specifications for Highways and Bridges (2025), unless otherwise instructed by the Engineer. The sediment control methods and materials shall be approved, in writing by the Project Engineer, prior to commencement of work.

PART 3 - EXECUTION

3.1 INSTALLATION AND MAINTENANCE

- A. Erosion and sedimentation control devices shall be established prior to clearing operations in a given area. Erosion and sediment control measures shall be applied to all disturbed areas. In addition, Contractor shall identify all site access, staging and stockpile areas in the field, and apply appropriate erosion and sediment control measures, prior to initiating any land disturbing activities.
- B. All sediment basins, trap embankments and slopes, perimeter dikes, swales and all disturbed slopes steeper than or equal to 3H:1V shall be stabilized with sod or seed and anchored straw mulch, or other approved stabilization measures, as soon as possible, but no later than 7 calendar days after establishment. All areas disturbed outside of the perimeter sediment control system must be minimized. Maintenance shall be performed as necessary to ensure continued stabilization. Requirement for stabilization may be reduced to 3 days for sensitive areas.
- C. The Contractor shall furnish the labor, materials and equipment required for routine maintenance of all erosion and sedimentation control devices. Maintenance shall include but not be limited to:
 - 1. The removal and satisfactory disposal of accumulated sediment from traps or silt barriers.
 - 2. Replacement of filter fabrics used for silt fences and stone used in temporary sediment traps, stone filters, and gravel construction entrances, etc.

3.2 INSPECTIONS AND MAINTENANCE

- A. Erosion and sediment control devices shall be inspected daily and within 24 hours after each rainfall event of 1/2 inch or more of precipitation. During inspection, the Contractor shall check for areas where runoff has breached, bypassed, or otherwise caused the device to fail or compromise its function. If an erosion and sediment control

device becomes ineffective due to weathering, decomposition or damage, then the Contractor shall replace the affected section immediately.

- B. Accumulated sediment must be removed when it reaches approximately 1/3 of the height of the silt fence or check dam.
- C. The Contractor shall take immediate action to correct deficiencies to Best Management Practices (BMP). The Project Engineer reserves the right to stop all construction activities not related to maintaining BMPs until such deficiencies are repaired.
- D. In areas that have been permanently stabilized, inspections and, if necessary, maintenance by Contractor, will occur at least once per month for the duration of the contract or project, whichever is longer.
- E. During inspections the following will be observed and appropriate maintenance procedures taken:
 - 1. The conformance to specifications and current condition of all erosion and sediment control structures.
 - 2. The effectiveness and operational success of all erosion and sediment control measures.
 - 3. The presence of sediments or other pollutants in storm water runoff at all runoff discharge points.
 - 4. If reasonably accessible, the presence of sediments or other pollutants in receiving waters.
 - 5. Evidence of off-site tracking at all locations where vehicles enter or exit the site.

3.3 REMOVAL OF TEMPORARY SEDIMENT CONTROL STRUCTURES

- A. At such time that temporary erosion and sediment control structures are no longer required under this item, the Contractor shall notify the Project Engineer of their intent, schedule for the removal of the temporary structures, and obtain the Engineer's approval in writing prior to removal.
- B. Once the Contractor has received written approval from the Project Engineer, the Contractor shall remove the temporary structures and all accumulated sediments.
- C. Final permanent stabilization will include finished grading per plan contours or the Engineer's approval.

END OF SECTION

SECTION 31 41 16

STEEL SHEET PILES

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

The Work covered by this Section of these Specifications consists of furnishing all plant, labor, supervision, equipment, appliances, and materials and in performing all operations in connection with the construction of the AZ, NZ, PZ steel sheet pile continuous wall bulkhead, all in strict accordance with this Section of the Specifications and the applicable drawings, and subject to the terms and conditions of the Contract.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.
- B. The Owner, through the Engineer, reserves the right of approval of the subcontractor pre-qualified and selected for this portion of the Work by the Contractor. Approval will be based, in part, on documented successful experience in performing work of a similar nature.
- C. Driving of additional piles at the Contractor's own expense may be required by the Engineer in the event tolerances are exceeded. Drive individual piles plumb within 2%, and in a manner that the completed wall appears vertical when viewed from any point.
- D. The Engineer may elect to observe the shop fabrication of the steel sheet piling. The Contractor shall provide the fabrication schedule and allow access for the Engineer to perform this task.
- E. The Owner reserves the right to take samples from steel sheet pile material at the site for testing to verify compliance with the Specifications.

1.3 SUBMITTALS

- A. Submit the pre-qualified list of subcontractors to the Engineer for review.
- B. Upon receipt of the Engineer's review of the pre-qualified subcontractor, promptly submit sufficient technical data on the equipment necessary to accurately measure and record pile penetration and capacity during the entire driving of each pile.

- C. Submit a detailed Work Plan for review by the Engineer that includes the following:
1. Written description of the means and methods necessary to install the steel sheet piles plumb and straight and protect coating.
 2. Falsework layout and temporary bracing plan.
 3. Layout plan of steel sheet piles including shop drawings and bill of materials. Provide details of all corners and transitions.
 4. Shop drawings of all temporary shoring and falsework components including calculations that demonstrate adequacy of such temporary work.
- Steel sheet piles shall not be installed until the work plan is reviewed and no exceptions taken by the Engineer.
- D. Submit steel certificates for review no later than the time of delivery of materials to the site.
- E. Submit three copies of pile driving records within twenty-four (24) hours of installation.

1.4 PRODUCT DELIVERY AND STORAGE

The Contractor shall notify the Engineer twenty-four hours in advance of delivery of steel sheet piles. The contractor guarantees that steel sheet piles shall be handled in such a manner as to not induce stresses which will damage the materials and shall be stored in a safe manner within designated areas provided on the site.

Materials delivered to the site must be new and undamaged and must be accompanied by certified test reports. Provide the manufacturer's logo and mill identification mark on the sheet piling as required by the referenced specifications. Store and handle sheet piling in the manner recommended by the manufacturer to prevent permanent deflection, distortion, or damage to the interlocks; as a minimum, support on level blocks or racks spaced not more than 10 feet apart and not more than 2 feet from the ends. Storage of sheet piling should also facilitate required inspection activities and prevent damage to coatings and corrosion protection prior to installation.

Lift piles to ensure that the maximum permissible curvature is not exceeded. Holes may be burned above the cutoff length for lifting piles into the leads. If there is evidence of pile damage during driving due to the holes, the Contracting Officer may forbid the burning of holes. Do not damage piles when dragging piles across the ground or barge deck.

Inspect piles for excessive curvature and for damage before transporting them from the storage area to the driving area and immediately prior to placement in the driving leads. Curvature in the pile must be measured with the pile laying on a flat surface and is the distance between the pile at the mid-length of the pile and the flat surface. Piles having excessive curvature will be rejected.

PART 2 - PRODUCTS

2.1 STEEL SECTIONS

A. Steel Sheet Pile

1. Steel sheet piling shall be manufactured by Arbed or equivalent as accepted by the Engineer. Sections shall be as indicated on the Contract Drawings. Steel grade shall be in ASTM A572 Grade 50 steel. Pile length to be as shown on the Drawings.
2. Subject to review of the Engineer, the Contractor may substitute higher section modulus piles at its option to facilitate driving at no additional cost to the Owner.
3. Steel sheet pile sections shall be shop fabricated by “hot-rolled” process. Steel sheet piles (referred to as “singles”) shall be shop fabricated from a single piece of stock which is formed into the completed unit by the hot rolling process. “Singles” may be shop assembled (into units referred to as “doubles”) after coating and prior to shipping to the site.

B. Welding - Special Conditions

1. Welding will be permitted only where specially fabricated pieces are required as shown on the Drawings, where field welds are scheduled, or where acceptable to the Engineer.
2. Welding shall conform to AWS D1.1 – Steel. Electrodes shall be in accordance with AWS A5.1 or A5.5.

2.2 PROTECTIVE COATING

Unless specifically noted on the Drawings, all steel piles shall be shop coated to a minimum of ten (10) feet below the design dredge depth elevation.

2.3 STEEL PILE PREPARATION

All holes are to be made in the piling prior to applying the epoxy coating except for holes to accommodate pipe sleeves for outlets and ground anchors. Field cut holes shall be carefully performed at the required locations in such a manner as to minimize damage to the coating. On completion of the welding of pipe sleeves, all damage to the coating is to be made good in accordance with these Specifications and to the satisfaction of the Engineer.

PART 3 - EXECUTION

3.1 EQUIPMENT

- A. Drive the piles with air, diesel, or vibratory hammers with sufficient energy and energy transfer characteristics to drive the piles to the required toe levels without crippling pile heads.
- B. Piles are to be located by temporary frames. The frames shall be rigidly located such as to keep the piles plumb and to line while being driven. Piles may be continuously or incrementally driven or driven singly or in pairs, as required to maintain the line and level of the completed bulkhead.
- C. Take precautions to avoid contact of coated pile surfaces with components of leads and/or falsework. Install timber rub strips or similar items at contact areas as may be required to reduce the potential for damage of the coating during driving. All damage to the protective coating shall be repaired at the Contractor's expense.
- D. 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.
 - 1. Drive sheet piles to their full penetration without bending, rupturing, or severely damaging the sheet piles.
 - 2. If failure in any of the above respects is encountered, pull the sheet pile, and drive a new pile at no additional cost to the Owner.

3.2 PILE DRIVING

- A. Drive the piles straight and true at indicated locations, with deviation from the longitudinal axis of not more than 1/4-inch per foot.
- B. Provide the Engineer with a complete driving log with date of final installation and tip elevation. This log shall be submitted weekly and signed by a representative of the Contractor.
- C. Plug all “lifting eye” holes in steel sheet piling per details on the Drawings.
- D. Jetting of steel sheet piles will not be permitted.
- E. Provide temporary wales, templates, [master pilings] [current deflectors] or guide structures to ensure that the pilings are placed and driven to the correct alignment. Use a system of structural framing sufficiently rigid to resist lateral and driving forces and to adequately support the sheet piling until design tip elevation is achieved. Use two templates, at least, when placing each piling at third points, not less than 20 feet apart. Templates must not move when supporting sheet piling. Fit

templates with wood blocking to bear against the web of each alternate sheet pile and hold the sheet pile at the design location alignment. Provide outer template straps or other restraints as necessary to prevent the sheets from warping or wandering from the alignment. Mark template for the location of the leading edge of each alternate sheet pile. If in view, also mark the second level to assure that the piles are vertical and in position. If two guide marks cannot be seen, other means must be used to keep the sheet pile vertical along its leading edge.

- F. If obstructions restrict driving a piling to the specified penetration, the obstructions must be removed or penetrated with a chisel beam. If the Contractor demonstrates that removal or penetration is impractical, make changes in the design alignment of the piling structure as directed to ensure the adequacy and stability of the structure. Pilings must be driven to depths shown and must extend up to the elevation indicated for the top of pilings. Piling driven to rock must be seated individually on the rock. A tolerance of 12 inches above the indicated top elevation will be permitted. Pilings must not be driven within 100 feet of concrete less than 7 days old.
- G. Submit records of the completed sheet piling driving operations, including a system of identification which shows the disposition of approved piling in the work, driving equipment performance data, piling penetration rate data, piling dimensions and top and bottom elevations of installed piling. Drive pilings with the proper size hammer and by approved methods so as not to subject the pilings to damage and to ensure proper interlocking throughout their lengths.

END OF SECTION

SECTION 31 62 19

TIMBER PILES

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

Work included: The work covered by this section of these Specifications consists of furnishing all plant, labor, supervision, equipment, appliances, and materials and in performing all operations in connection with the installation of the timber piles, all in strict accordance with this Section of the Specifications and the applicable Drawings and subject to the terms and conditions of the Contract.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.
- B. The Owner reserves the right of approval of the subcontractor pre-qualified by the Contractor and selected for this portion of the Work by the Contractor. Approval will be based, in part, on:
 - 1. Documented successful experience in performing work of a similar nature.
 - 2. Acceptable schedule of unit prices for measurement and payment in event of changes in the work of this section.
- C. Use only piles sufficiently straight that the center line of the pile at any cross section does not vary more than 2 inches from a straight line from the center of the butt to the center of the tip of the pile when the pile is supported plumb, on the tip. Drive piles within 3 inches of design location. Driving of additional piles at the Contractor's own expense may be required by the Owner in the event this tolerance is exceeded. Drive piles plumb within two percent tolerance.

1.3 SUBMITTALS

- A. The Contractor shall submit sufficient technical data on the equipment necessary to accurately measure and record pile penetration and capacity during the entire driving of each pile.
- B. No later than the time of delivery of materials to the site, submit certificates as to conformance with the specified species and grade prior to installation of any timber piles.

1.4 PRODUCT DELIVERY AND STORAGE

The Contractor shall notify the Owner twenty-four hours in advance of delivery of piles.

PART 2 - PRODUCTS

2.1 TIMBER PILES

- A. Use yellow pine or Douglas fir meeting ASTM-D25 with the following minimum dimensions:

Butt circumference (measured at 3' below butt) per ASTM D25 Table 1

Tip circumference = 25" (measured at top)

Tip diameter = 8" (measured at tip)

Use piles free from defects which may impair strength, durability, or drive ability. 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.

- B. All piles shall be treated with CCA, with a final net retention of not less than 2.5 pounds for each cubic foot of wood in accordance with AWWA Service Condition Use Category UC5B. All cut and drilled exposed surfaces shall be liberally recoated by brush with a field treatment accepted by the Owner. Alternate preservative treatment shall be submitted for review and acceptance by Engineer.

- C. Trim knots close to the body of the pile.

1. Inspect butts to assure they are cut perpendicular to the longitudinal axis of the pile.
2. Chamfer butt edges.
3. Provide butts with caps, collars, or bands to prevent brooming or splitting from driving pressure.

PART 3 - EXECUTION

3.1 SITE CONDITIONS

Withdraw piles that encounter underground obstructions sufficient to impede pile driving. Redrive as close as possible to original position, subject to review of the 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.

3.2 EQUIPMENT

- A. 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 care not to injure 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.
- B. Rig the pile driver with hanging or fixed leads to guide the hammer from highest to lowest points of travel in a manner permitting free vertical movement of the hammer, and with the leads laterally braced or cabled to assure firm support of the piles during driving.

3.3 PILE DRIVING

- A. Drive the piles straight and true at indicated locations, with deviation from the longitudinal axis of not more than 1/4 inch per foot or 2%.
- B. Locate the piles within 3 inches of the positions indicated on the Drawings.
- C. Continuously drive each pile to reach the capacity and/or full embedded length called for on the Drawings.
 - 1. Lengths shown on the Drawings are considered average values, and the actual lengths may vary when so accepted by the Owner.
 - 2. Provide driving resistance penetration and refusal values as accepted by the Owner.
- D. 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.
 - 1. Drive piles to their full penetration without bending, rupturing, or severely damaging the piles.
 - 2. If failure in any of the above respects is encountered, pull the pile and drive a new pile at no additional cost to the Owner.
 - 3. 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.
- E. Jetting and Pre-drilling
 - 1. Jetting to assist penetration will not be permitted unless accepted by the

Owner and Engineer.

2. Pre-drilling will not be permitted unless accepted by the Owner and Engineer, whereby approved pre-drilling to assist penetration may be used where extreme driving resistance is encountered, or where vibrations from driving may be detrimental to adjacent structures.
- F. Where piles are pushed up by pressure from driving of adjacent piles, re-drive as required and at no additional cost to the Owner.
- G. The Contractor shall provide the Owner with a complete driving record with the date of final installation and tip elevations. This record shall be submitted weekly and signed by a representative of the Contractor. The Contractor shall keep an accurate set of pile records indicating pile number, pile type and installed length, type of hammer and rated energy, date of installation, final tip elevation, and contractor's representative name and signature.

3.4 SAFE LOAD CALCULATION

Calculate "Safe Load" by Engineering News Formula as follows:

Formula: $P = \frac{2WH}{S+C}$ (single acting or drop hammer)

$S+C$

$P = \frac{2E}{S+C}$ (double acting hammer)

$S+C$

Where: P = Safe Load (pounds)

W = Weight of striking parts (pounds)

H = Height of stroke (feet)

S = Average penetration of pile (inches per blow of hammer) for last 5 blows

$C = 0.10$ (single and double acting hammers)

$C = 1.0$ (drop hammer)

E = Rated energy by manufacturer (foot-pounds)

Where appropriate, the term "WH" shall be modified to account for any inclination of the hammer required to drive the battered piles.

3.5 HANDLING, CUTTING AND FRAMING

Handle timber piles carefully, without sudden dropping, breaking of outer fibers, bruising or penetrating the surface with tools.

END OF SECTION

SECTION 31 68 13

SOIL AND ROCK ANCHORS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

Work included: The work covered by this section of these Specifications consists of furnishing all plant, labor, supervision, equipment, appliances, and materials and in performing all operations in connection with the installation of the soil and/or rock anchors, all in strict accordance with this Section of the Specifications and the applicable Drawings and subject to the terms and conditions of the Contract. The Contractor is responsible for furnishing of all design, materials, products, accessories, tools, equipment, services, transportation, labor, supervision, and manufacturing techniques required for design. The Contractor shall select the soil/rock anchor type, size, and installation means and methods, estimate the ground-grout bond value, and determine the required bond length and final soil/rock anchor diameter. The Contractor shall design and install soil/rock anchors that will develop the load capacities indicated on the Contract Documents. The soil/rock anchor load capacities shall be confirmed by verification and performance/proof load testing as required and must meet the test acceptance criteria specified herein.

1.1.1 Provide the design of the soil/rock anchor system that will be completely the Contractor's responsibility. General design criteria are shown on the drawings. The materials, design, stressing, load testing, and acceptance must be in accordance with PTI Recommendations for Prestressed Rock and Soil Anchors, and these specifications.

- a. Soil/Rock anchors may be threaded bar or strand type. The Contractor is responsible for the design of the anchor and bearing plate, determining drilling methods, and determining hole diameter and bond length. Submit design computations and data for the soil/rock anchors, bearing plates, and bond zones.
- b. Include computations with drawings, design assumptions, calculations, and other information in sufficient detail to verify the design proposed. The design must be certified by a registered professional engineer with proven experience in design of soil/rock anchor calculations for the stressing frames.
- c. Acceptance of the design calculations by the Engineer will not relieve the Contractor of responsibility for unsatisfactory performance of the installed soil/rock anchors. Furnish all design computations at least 30 calendar days prior to the proposed commencement of drilling. The complete design, including design computations, fabrication and installation drawings and installation plan, must be certified by registered Professional Engineer and must be submitted for approval.

- d. Submit a plan for installing the soil/rock anchors for review and comment. The proposal must describe the sequence for installation and other restrictions as outlined on the drawings or specified. Determine the anchor installation procedure as part of the anchor design. Include the installation plan with descriptions of methods and equipment to be used for alignment checking of anchor holes.

1.1.2 Design Load

The Design Load must not exceed 60 percent of the ultimate strength of the prestressing steel. The Lock Off Load must not exceed 70 percent of the ultimate strength of the prestressing steel. The maximum Test Load must not exceed 80 percent of the ultimate strength of the prestressing steel. The designer should include consideration of group effect of closely spaced anchors when determining design load and minimum spacing. Design the bearing plates so that the bending stresses in the plate do not exceed the yield strength of the steel when a load equal to 95 percent of the minimum specified ultimate tensile strength of the prestressing steel is applied and so that the average bearing stress on the structure does not exceed 3500 psi.

1.1.3 Design Schedule

Submit a design schedule for the anchors which includes the following:

- a. Anchor number.
- b. Anchor design load.
- c. Type and size of tendon.
- d. Minimum total anchor length.
- e. Minimum bond length.
- f. Minimum tendon bond length.
- g. Minimum unbonded length.
- h. Details of corrosion protection, including details of anchorage and installation.
- i. Submit the design schedule at least 30 days prior to commencement of work on the anchors covered by the schedule.

1.2 SITE CONDITIONS

A foundation investigation has been conducted at the site and data is presented on the foundation exploration drawings. While the foundation information is representative of subsurface conditions at the respective locations, local variations in the characteristics of the

subsurface materials may be anticipated. Local variations which may be encountered include, but are not limited to, classification and thickness of rock strata, fractures, and other discontinuities in the rock structure, and variation in the soil classifications. Such variations will not be considered as differing materially within the purview of the contract clauses. The contractor is responsible for verifying the location of all utilities that may be affected by construction or the installation of the anchors.

1.3 BASIS OF BID

1.3.1 Lump Sum Payment

Base bids upon providing the number, size, capacity, and length of anchors as indicated on the drawings. Include the cost of all necessary equipment, tools, material, labor, and supervision required to: deliver, handle, install, grout, test, cut-off, dispose of any cut-offs, and meet the applicable contract requirements. Include mobilization, pre-drilling, and redrilling anchors. Payment for anchors will be based on successfully installing anchors to satisfy the acceptance criteria. No additional payment will be made for: damaged, rejected, or misplaced anchors; withdrawn anchors; or other excesses beyond the assumed anchor length indicated for which the Contractor is responsible.

1.4 SUBMITTALS

Contractor shall submit the following in compliance with Section 01 25 13 Submittals and Substitutions.

Fabricator Qualifications.

Installer Qualifications.

Fabrication and Installation Shop Drawings.

Equipment Data.

Designer Qualifications.

Installation Plan.

Design Computations.

Anchor Design.

Design Schedule.

Prestressing Steel Test Reports.

Cement Grout Mixture Proportions.

Prestressing Steel Certificates.

Cement Certificate.

Bearing Plates Certificate.

Corrosion Inhibiting Compound Certificate.

Driller Logs.

Anchor Records.

1.5 DELIVERY, STORAGE, AND HANDLING

Materials must be suitable wrapped, packaged, or covered at the factory or shop to prevent being affected by dirt, water, oil, grease, and rust. Protect materials against abrasion or damage during shipment and handling. Place materials stored at the site above ground on a well-supported platform and covered with plastic or other approved material. Protect material from adjacent construction operations. Grounding of welding leads to prestressing steel will not be permitted. Reject and remove from the site prestressing steel, which is damaged by abrasion, cuts, nicks, heavy corrosions, pitting, excessive heat, welds, or weld splatter. Inspect tendons prior to insertion into anchor holes for damage to corrosion protection. Repair any such damage in a manner recommended by the tendon manufacturer and approved by the Engineer. Lifting of pre-grouted tendons must be to manufacturer's recommendations and not cause excessive bending, which can debond the prestressing steel from the surrounding grout.

PART 2 - PRODUCTS

2.1 MATERIALS

2.1.1 Prestressing Steel

Submit certified test reports for each heat or lot of prestressing steel with materials delivered to the site. Submit mill reports and certificates from the manufacturer stating chemical properties, ultimate strengths, yield strengths, modulus of elasticity, and any other physical properties needed for the required computations for the steel type of steel furnished.

2.1.1.1 High Strength Steel Bars

High strength steel bars shall be in compliance with ASTM A722.

2.1.1.2 Epoxy-Coated Steel Bars

Submit written certification for coating material and coated bars with the delivery of bars.

2.1.1.3 Steel Bar

Steel bars shall be in compliance with ASTM 615 Gr. 100.

2.1.1.4 Strand

Steel strand shall be in compliance with ASTM A416, Gr. 270, low relaxation strand.

2.2 Manufactured Units

2.2.1 Anchor Head

Anchor head must consist of steel bearing plate with wedge plate and wedges for strand anchors or steel bearing plate with nut for bar anchors, trumpet, and corrosion protection.

Anchorage devices must be capable of developing 95 percent of the guaranteed ultimate strength of prestressing steel.

2.2.2 Prestressing Steel Couplers

Prestressing steel couplers for bars must be capable of developing 100 percent of the minimum specified ultimate tensile strength of the prestressing steel. Splicing of strand will not be permitted.

2.2.3 Centralizers and Spacers

Fabricate centralizers and spacers from plastic, steel, or other approved material which is non-detrimental to the prestressing steel.

2.2.4 Casing

Casings must be steel pipe or steel tube in compliance with ASTM A53 or ASTM A500. Casing must be the necessary type and size to permit proper drilling of anchor holes and placing of anchors as specified herein and shown on the drawings.

2.2.5 Anchorage Covers

Fabricate anchorage covers from steel or plastic. The material used must not be subject to attack by cement, corrosion-inhibiting greases, or the environment. If plastic is used, it must not be susceptible to ultraviolet light degradation. Securely attach the cover to the bearing plate. If the cover is to be grease filled, the cover must form a permanent watertight enclosure for the anchorage device.

2.3 GROUT

2.3.1 Cement

Cement shall comply with ASTM C150 and be type II.

2.3.2 Water

Provide fresh, clean, potable water free from injurious amounts of sewage, oil, acid, alkali, salts, or organic matter.

2.3.3 Aggregates

Fine aggregates for sand-cement grout must conform to ASTM C33. Aggregates must not contain substances which may be deleteriously reactive with alkalis in the cement.

2.3.4 Admixtures

Admixtures which control bleed, improve flowability, reduce water content and retard set may be used in the grout subject to the acceptance of the Engineer. Any admixture used must be compatible with the prestressing steel and must be mixed in accordance with the manufacturer's recommendations.

PART 3 - EXECUTION

3.1 DRILLING HOLES

3.1.1 General

Drill holes at the locations and inclinations shown and the depths and diameter determined by the Contractor to provide the design bond length and capacity indicated on the drawings. The locations of the holes may be changed only as approved by the Engineer. Any redesign of the anchored structure due to relocation of anchor holes must be performed by the Contractor and reviewed/accepted by the Engineer. Take care while drilling to avoid damage of any kind to the existing structures. Damages of any nature will be evaluated by the Engineer and repairs or replacements must be made as required.

3.1.2 Drilling Through Existing Structure

Drill holes through existing structure by core drilling equipment to prevent damage to the surrounding structure. The contractor is advised that foreign material, including metals and other materials remaining from original construction of the existing structure, may be encountered during drilling through existing structures.

3.1.3 Drilling in Soil

Holes in soil may be drilled by rotary drilling, rotary percussive, or vibratory driven casing. Holes in soil must be provided with steel casing where required for support of the surrounding material.

3.1.4 Drilling in Rock

Holes in rock may be drilled by core drilling, rotary drilling, percussion drilling or down-the-hole hammer using equipment suitable for the intended purpose. The drilling method must not cause structural damage to existing structures.

3.2 INSTALLATION OF ANCHORS

3.2.1 General

The Contractor is responsible for each drilled hole until the anchor has been installed, grouted, stressed, and accepted. Holes in rock and casings must be cleaned by pressurized air and/or water to remove drill cuttings and mud.

3.2.2 Placing

All the equipment used in handling and placing the anchors must be such that it does not damage or deteriorate the prestressing steel, corrosion protection, or the anchorages. Each anchor must be inspected prior to insertion into the hole. Any damage to corrosion protection must be repaired prior to insertion or, if determined by the Engineer to be not repairable, the anchor must be replaced.

3.2.3 Grouting of Soil Anchors

Grout placement within the bond length must proceed such that the hole is filled in a manner to prevent air voids. The soil anchor hole must be progressively filled with grout and maintained completely full, from bottom to top of the bond zone, until the grout has set. Grouting of a soil anchor hole must be performed within 48 hours of the time the hole is drilled. Grouting may be accomplished through the casing pipe, grout tubes, hollow-stem augers or hollow drill rods.

3.2.4 Anchorage Installation

The bearing plate and anchor head must be installed perpendicular to the tendon, within 3 degrees, and centered on the tendon without bending of the stressing steel.

3.3 STRESSING

3.3.1 General Requirements

After the anchor grout has reached sufficient strength, as verified by grout cube break, the anchors must be stressed. Prior to stressing, surfaces upon which the stressing equipment is resting must be clean and the stressing equipment must be aligned as nearly with the center of the hole as possible. An alignment load of 10 percent of the design load must be applied to the anchor prior to setting dial gauges. All stressing must be done in the presence of a representative of the Engineer.

3.3.2 Lock-off

After completing of all required tests, the load must be returned to the alignment load and the specified lock-off load must be applied to the anchor. A lift-off test must be made to verify the load in the anchor tendon before the tendon is locked-off and the stressing equipment is removed. The lift-off reading must be within five percent of the specified lock-off load. If the lift-off reading is not within five percent of the specified lock-off load, the anchorage will be reset, and another lift-off reading must be made. This procedure must be repeated until a satisfactory lift-off reading is obtained.

3.4 FIELD QUALITY CONTROL

3.4.1 Performance Test

Performance test must consist of cyclically and incrementally loading and unloading the anchor and must be conducted in accordance with PTI Recommendations for Prestressed Rock and Soil Anchors.

Performance Test Steps

Load	Total Movement at load cycle Maximum	Residual Movement at AL after cycle Maximum	Elastic Movement at load cycle Maximum
AL 0.25 DL	dt1		dt1-dr1=de1
AL 0.25 DL 0.5 DL	dt2	dr1	dt2-dr2=de2
AL 0.25 DL 0.5 DL 0.75 DL	dt3	dr2	dt3-dr3=de3
AL 0.25 DL 0.5 DL 0.75 DL 1.0 DL	dt4	dr3	dt4-dr4=de4
AL 0.25 DL 0.5 DL 0.75 DL 1.0 DL 1.2 DL	dt5	dr4	dt5-dr5=de5
AL 0.25 DL 0.5 DL		dr5	

0.75 DL 1.0 DL 1.2 DL 1.33 DL	dt6 test load (zero reading for creep test) dtn final load Hold reading		dt6-dr6=de6
AL Adjust to lock- off load		dr6	

3.4.2 Proof Test

Proof test must consist of incrementally loading the anchor and must be conducted in accordance with PTI Recommendations for Prestressed Rock and Soil Anchors.

Proof Test Steps

AL
0.25 DL
0.5 DL
0.75 DL
1.0 DL
1.2 DL
1.33 DL (test load/10-minute hold)
AL (optional)
Adjust to lock-off load

3.5 ACCEPTANCE

3.5.1 General

Acceptance of anchors must be determined by the Engineer. The following criteria will be used in determination of the acceptability of each anchor.

3.5.1.1 Creep

Creep movement must not exceed 0.04 inch at maximum test load during the first 10 minutes of the performance or proof test. If the creep movement exceeds this limit, it must not exceed 0.08 inch at the maximum test load at the end of 60 minutes. If the creep movement exceeds 0.08 inch at the maximum test load at the end of 60 minutes, the anchor will be rejected.

END OF SECTION

ATTACHMENTS

PERMITS

ORDER OF CONDITIONS

Town of Orleans, MA
MADEP File# SE54-2618
Date Issued: 4/19/2024



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
54-2643

MassDEP File #

eDEP Transaction #
Orleans

City/Town

A. General Information

Please note:
this form has
been modified
with added
space to
accommodate
the Registry of
Deeds
Requirements

1. From: Orleans
Conservation Commission
2. This issuance is for
(check one): a. ☒ Order of Conditions b. ☐ Amended Order of Conditions

3. To: Applicant:

TOWN OF ORLEANS

a. First Name

b. Last Name

c. Organization

19 SCHOOL RD

d. Mailing Address

ORLEANS

MA

02653

e. City/Town

f. State

g. Zip Code

4. Property Owner (if different from applicant):

TOWN OF ORLEANS

a. First Name

b. Last Name

c. Organization

19 SCHOOL RD

d. Mailing Address

ORLEANS

MA

02653

e. City/Town

f. State

g. Zip Code

5. Project Location:

1 RT 6A

Orleans

a. Street Address

b. City/Town

18

48

c. Assessors Map/Plat Number

d. Parcel/Lot Number

Latitude and Longitude, if known:

d. Latitude

e. Longitude

Important:
When filling
out forms on
the
computer,
use only the
tab key to
move your
cursor - do
not use the
return key.





Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
54-2643

MassDEP File #

eDEP Transaction #
Orleans

City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
Barnstable
- | | |
|-------------------------|--|
| a. County
<u>N/A</u> | b. Certificate Number (if registered land)
<u>N/A</u> |
| c. Book | d. Page |
7. Dates: Mar 15, 2024 Apr 02, 2024 Apr 19, 2024
- | | | |
|--------------------------------|-------------------------------|---------------------|
| a. Date Notice of Intent Filed | b. Date Public Hearing Closed | c. Date of Issuance |
|--------------------------------|-------------------------------|---------------------|
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
Goose Hummock Boat Ramp Bulkhead Rehabilitation Sheets G-001, V-101, C-101, C-301
- | | |
|---|---|
| a. Plan Title
<u>Foth Infrastructure & Environment, LLC</u> | <u>Scott R. Skuncik, P.E.</u> |
| b. Prepared By
<u>Mar 15, 2024</u> | c. Signed and Stamped by
<u>as noted</u> |
| d. Final Revision Date
<u>Goose Hummock Bulkhead Oversheeting Notice of Intent</u> | e. Scale
<u>Mar 01, 2024</u> |
| f. Additional Plan or Document Title | g. Date |

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- | | | |
|--|--|---|
| <input type="checkbox"/> a. Public Water Supply | <input checked="" type="checkbox"/> b. Land Containing Shellfish | <input type="checkbox"/> c. Prevention of Pollution |
| <input type="checkbox"/> d. Private Water Supply | <input checked="" type="checkbox"/> e. Fisheries | <input checked="" type="checkbox"/> f. Protection of Wildlife Habitat |
| <input type="checkbox"/> g. Groundwater Supply | <input checked="" type="checkbox"/> h. Storm Damage Prevention | <input checked="" type="checkbox"/> i. Flood Control |

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- ☒ a. the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

54-2643

MassDEP File #

eDEP Transaction #

Orleans

City/Town

B. Findings (cont.)

Denied because:

- ☐ b. the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. A description of the performance standards which the proposed work cannot meet is attached to this Order.
- ☐ c. the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c)
- ☒ 3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1) <1'
a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
<input type="checkbox"/> 4. Bank	<u> </u> a. linear feet	<u> </u> b. linear feet	<u> </u> c. linear feet	<u> </u> d. linear feet
<input type="checkbox"/> 5. Bordering Vegetated Wetland	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
<input type="checkbox"/> 6. Land Under Waterbodies and Waterways	<u> </u> a. square feet <u> </u> e. c/y dredged	<u> </u> b. square feet <u> </u> f. c/y dredged	<u> </u> c. square feet	<u> </u> d. square feet
<input type="checkbox"/> 7. Bordering Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
Cubic Feet Flood Storage	<u> </u> e. cubic feet	<u> </u> f. cubic feet	<u> </u> g. cubic feet	<u> </u> h. cubic feet
<input type="checkbox"/> 8. Isolated Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet		
Cubic Feet Flood Storage	<u> </u> c. cubic feet	<u> </u> d. cubic feet	<u> </u> e. cubic feet	<u> </u> f. cubic feet
<input type="checkbox"/> 9. Riverfront Area	<u> </u> a. total sq. feet	<u> </u> b. total sq. feet		
Sq ft within 100 ft	<u> </u> c. square feet	<u> </u> d. square feet	<u> </u> e. square feet	<u> </u> f. square feet
Sq ft between 100-200 ft	<u> </u> g. square feet	<u> </u> h. square feet	<u> </u> i. square feet	<u> </u> j. square feet

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

54-2643

MassDEP File #

eDEP Transaction #

Orleans

City/Town

B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
<input type="checkbox"/> 10. Designated Port Areas	Indicate size under Land Under the Ocean, below			
<input checked="" type="checkbox"/> 11. Land Under the Ocean	<u>112</u> a. square feet <u>0</u> c. c/y dredged	<u>112</u> b. square feet <u>0</u> d. c/y dredged		
<input type="checkbox"/> 12. Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
<input type="checkbox"/> 13. Coastal Beaches	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> cu yd c. nourishment	<u> </u> cu yd d. nourishment
<input type="checkbox"/> 14. Coastal Dunes	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> cu yd c. nourishment	<u> </u> cu yd d. nourishment
<input type="checkbox"/> 15. Coastal Banks	<u> </u> a. linear feet	<u> </u> b. linear feet		
<input type="checkbox"/> 16. Rocky Intertidal Shores	<u> </u> a. square feet	<u> </u> b. square feet		
<input type="checkbox"/> 17. Salt Marshes	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
<input type="checkbox"/> 18. Land Under Salt Ponds	<u> </u> a. square feet	<u> </u> b. square feet		
<input checked="" type="checkbox"/> 19. Land Containing Shellfish	<u>112</u> a. square feet	<u>112</u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
<input type="checkbox"/> 20. Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	<u> </u> a. c/y dredged	<u> </u> b. c/y dredged		
<input checked="" type="checkbox"/> 21. Land Subject to Coastal Storm Flowage	<u>450</u> a. square feet	<u>450</u> b. square feet		
<input type="checkbox"/> 22. Riverfront Area	<u> </u> a. total sq. feet	<u> </u> b. total sq. feet		
Sq ft within 100ft	<u> </u> c. square feet	<u> </u> d. square feet	<u> </u> e. square feet	<u> </u> f. square feet
Sq ft between 100-200 ft	<u> </u> g. square feet	<u> </u> h. square feet	<u> </u> i. square feet	<u> </u> j. square feet



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

54-2643

MassDEP File #

eDEP Transaction #

Orleans

City/Town

B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

☐

23. Restoration/Enhancement *:

a. square feet of BVW

b. square feet of salt marsh

☐

24. Stream Crossing(s):

a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the **Order will expire on Apr 19, 2027** unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

54-2643

MassDEP File #

eDEP Transaction #

Orleans

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number 54-2643 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

54-2643

MassDEP File #

eDEP Transaction #

Orleans

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.

18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

19. The work associated with this Order (the "Project")

☐ (1) is subject to the Massachusetts Stormwater Standards

☒ (2) is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.

b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:

i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;

ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;

iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

54-2643

MassDEP File #

eDEP Transaction #

Orleans

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

54-2643

MassDEP File #

eDEP Transaction #

Orleans

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

This Order is subject to the Standard Conditions on all Orders dated 11/1/18 and the completion of the Acknowledgment of Contractor Form. This Order is also subject to the attached Special Conditions.

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
54-2643

MassDEP File #

eDEP Transaction #
Orleans

City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No
2. The Town of Orleans hereby finds (check one that applies):

Conservation Commission

☐

a. that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw

2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

☒

b. that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

Orleans Wetlands Bylaw/Regulations

Ch 160/196A

1. Municipal Ordinance or Bylaw

2. Citation

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

This Order is subject to the Standard Conditions on all Orders dated 11/1/18 and the completion of the Acknowledgment of Contractor Form: This Order is also subject to the attached Special Conditions.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
64-2643
MassDEP File #

eDEP Transaction #
Orleans
City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

Please indicate the number of members who will sign this form.

This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

[Handwritten signatures]
[Handwritten signature]

[Handwritten signature]
[Handwritten signature]

☒ by hand delivery on

Date

4/19/24

☐ by certified mail, return receipt requested, on

Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
54-2643

MassDEP File #

eDEP Transaction #

Orleans

City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Orleans

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Orleans

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

1 RT 6A

Project Location

54-2643

MassDEP File Number

Has been recorded at the Registry of Deeds of:

Barnstable

County

Book

Page

for:

TOWN OF ORLEANS

Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

FINDINGS AND STANDARD CONDITIONS ON ALL ORDERS, AS APPLICABLE
In accordance with M.G.L. Chapter 131, Section 40 and the Orleans Wetlands Protection Bylaw, Ch160

DEP #: 54-2643

Applicant: TOWN OF ORLEANS

The Commission finds that, the Applicant, through the Public Hearing, has presented to the Commission clear and convincing evidence and was able to demonstrate that all State and Local Wetland Interests will be protected, the Commission hereby approves the project with the issuance of this Order and all of its protective Conditions.

1. Preface: Failure to comply with all conditions of this Order of Conditions may result in the following: Stop Work Order, Fines, or the inability to obtain a Certificate of Compliance.

2. Recording: No work shall be undertaken until the Order has been recorded in compliance with General Condition #9 (page 6) of this Order and proof of such recording has been submitted to this Commission.

3. Acknowledgement of Contractor: No work may proceed until the Commission is provided with an executed Acknowledgement of Contractor form proving that these Orders have been reviewed and received by such Contractor and that the Contractor understands the Order and all Conditions. The Contractor shall furnish any sub-contractor with a copy of this Order. The approved Contractor must monitor their work throughout the project to ensure its success and establishment. If he/she is unable to continue with the project, the new contractor must meet with the Conservation Commission or their Administrator for approval before commencing work under the Order.

4. Other Permits: No work may proceed until the Applicant has received all other permits required by law, (i.e. building permit, Board of Health, Planning Board, Board of Appeals, Army Corps of Engineers, etc.)

5. Appeals: No work shall be undertaken until all administrative appeal periods from this Order have elapsed or, if such an appeal has been filed, until all appeal proceedings have been completed.

6. Transfer of Ownership: If the Applicant transfers the interests authorized herein by conveyance of realty, the deed shall reference this Order and the terms and Conditions specified herein, and this Order shall be recorded along with the deed.

7. Term: *This Order is valid for three (3) years.* Application for an Extension must be submitted, *in writing, thirty (30) days prior to the date of its expiration.*

8. Certificate of Compliance: *Upon completion of the work permitted by this Order, or the expiration of this Order, a Certificate of Compliance shall be requested from the Commission in writing.* Where a project has been completed in accordance with plans stamped by a professional engineer, architect, or other qualified professional, a written statement by such professional certifying compliance with the plans and Orders, shall accompany the request for the Certificate of Compliance. Please note the request should accompany the appropriate completed DEP form and Town of Orleans fee.

9. Approved Plans: *A copy of this Order of Conditions and all approved plans shall be kept on site at all times during construction.* All contractors and sub-contractors retained during construction must be provided with a copy of this Order and subsequent plans by the Applicant and should be prepared to produce the Order along with approved plans and supporting documents, upon request of the Conservation Commission. *No deviations from the plans are allowed herein without prior Commission approval.* All notes on the approved plans herein are adopted as additional conditions of this Order unless otherwise stated, except that where the Commission's Orders are more restrictive, they shall apply.

10. DEP Signage: A visible sign shall be displayed at the site, not less than two (2) square feet or more than three (3) square feet in size bearing the words "Massachusetts Department of Environmental Protection SE 54-" or "MA DEP SE 54-". Said sign is to remain in place until a Certificate of Compliance has been issued.

11. Silt Fence: If need is determined by the Commission, a continuous, securely staked fabric sedimentation barrier or other erosion control measures shall be installed along the Limit of Work and/or the access route as shown on the approved plan. *Five (5) days prior to construction, notice shall be given to the Conservation office that all sedimentation controls or other markings required by these Orders are in place and ready for inspection by the Conservation Administrator.* Properly installed sedimentation controls shall remain in place and be maintained throughout construction until the site is stabilized with vegetation and its removal has been permitted by the Commission or its Administrator. Additional erosion control measures may be required during construction activity, if needed, at the Commission or its Administrator's discretion.

12. Limit of Work: The Limit of Work as shown on the plan shall be clearly marked by stakes or by installation of a sedimentation barrier/silt fence, and be inspected and approved by the Commission or its Administrator prior to commencement of construction, and shall remain in place and in good order until all disturbed areas have been revegetated. *No work shall take place within the buffer zone or resource area outside the Limit of Work as marked on the plan without further approval by the Commission or its Administrator.*

13. Excavated Materials: All excess excavated materials shall be stockpiled per approved plan and as far from the resource area as possible. Excess materials shall be removed from the site upon completion of grading/construction. In no event shall excavated materials or additional materials brought on the site be stock piled less than 25' from the edge of a wetland or resource area unless approved by the Commission for special purposes.

14. Fertilizer Use: No fertilizer is permitted within 100' of a Resource Area per Town of Orleans General By-Law Chapter 103. If lawn and/or shrub fertilizers are used, in accordance with the exemptions allowed under Chapter 103, extreme care must be exercised to avoid contamination into the wetlands or groundwater.

15. Roof Runoff: Gutters and downspouts to drywells, or stone trenches at the roof drip line, are to be utilized to contain roof runoff. Drywell capacity should be able to accommodate a 2" rainfall in a 24-hour period. The size and location of the drywells shall be identified on the plan.

16. Vegetation Mitigation: All areas disturbed during construction are to be revegetated with suitable native plant materials according to the approved plans. Revegetation shall commence immediately upon completion of construction, unless otherwise addressed by an approved land management or landscape plan, and is to be completed by the beginning of the first growing season following completion of construction. Planting plans must be completed as part of this Order. Plants will be placed to ensure good coverage for the type and size of plant. More plants may be required than are shown on the planting plan and plants installed will be maintained and replaced until they have survived. Said vegetation and plants shall be successfully established, through multiple growing seasons, before a Certificate of Compliance can be granted.

17. Right of Entry: The Conservation Commission and/or its Administrator shall have the right of entry, during the period of the open Order, to inspect the property to determine and evaluate compliance with the provisions of this Order.

18. Violations: Failure to comply with any Conditions set forth herein shall be deemed a violation and good cause, after notice and an opportunity to be heard, to revoke or modify this Order, to impose fines of up to \$300 per day per violation, to impose a stop work Order, or to require mitigation or such other measures as are legally justified. *Owners, contractors, and sub-contractors will be liable for any violation of these Orders.*

In issuing these Orders, the Commission has relied on the information and data provided by the Applicant. If, subsequent to the issuance of this Order, such information and data prove to be false, incomplete, or inaccurate, this Order may be modified or revoked in whole or in part and the Commission may institute appropriate legal proceedings.



Town of Orleans Conservation Commission

Town Hall
19 School Road
Orleans, Massachusetts 02653-3699
t: (508) 240-3700 ext 2425
f: (508) 240-3388

APPLICANT: TOWN OF ORLEANS

DEP #: 54-2643

Attn: Homeowner and Engineer:

The Standard Conditions on all Orders issued by the Conservation Commission make it clear that no deviations from the approved Plan are to be permitted without prior Commission approval and that a silt fence on the limit of work must remain securely staked and in **good condition** throughout the project. Failure to comply with these conditions will subject the homeowner and contractors to fines of \$300 per day.

The purpose of this notice is to make sure that you, any subsequent owners, all engineers and all contractors are made aware of these conditions. The property owner will bear the ultimate responsibility for compliance, so please be sure that any deviations from approved Plans are brought to the attention of the Conservation Commission before any work commences.

Accordingly, your contractor(s) should read the statement below and return a signed copy of this notice to the Orleans Conservation Commission at the address shown above before any work on this project is undertaken.

Acknowledgment of Contractor(s):

I have read the attached Order of Conditions and noted Standard Condition #6, "No deviations from the Plan approved herein or from these Orders are permitted without prior Commission approval" and #9, "A continuous securely staked fabric sedimentation barrier or other erosion control measures shall be installed along this work limit or the access route as shown on the Plan."

Signed: _____

Name: _____

Address: _____

Phone #: _____

Date: _____

SPECIAL CONDITIONS:

1. In the water work shall be restricted to occur only between Nov. 1 and Apr. 1 of any year.
2. There shall be 100% oversight of the bore and fill of the lateral anchors.
3. All conditions of the Division of Marine Fisheries letter dated 3/29/2024 shall be met. They are:
 - a. A time-of-year (TOY) restriction should be observed on all in-water, silt-producing activities to protect sensitive life stages of winter flounder. No in-water, silt-producing activities should take place from Jan. 15 - May 31 of any year. However, work may occur within this TOY period if the proposed turbidity barrier is installed outside of this TOY period.
 - b. There shall be no land-based refueling of equipment unless there is adequate containment and clean up material.
 - c. Concrete delivery vehicles are prohibited from washing down equipment on site.

**Minor Project Modification to DPW License No. 6256
Goose Hummock Boat Ramp,
Town Cove, Orleans issued 2/29/2024**



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

February 29, 2024

Town of Orleans
c/o Foth Infrastructure & Environment, LLC
Attn: Benjamin Foley
114 Touro Street
Newport, RI 02840

RE: Minor Project Modification to DPW License No. 6256
Goose Hummock Boat Ramp, Town Cove, Orleans

Dear Mr. Foley:

The Department has reviewed your request on behalf of the Town of Orleans to modify the above referenced Chapter 91 License. The modification involves the installation of approximately 145 linear feet of steel sheet pile wall along the seaward face of the existing timber bulkhead. The proposed sheet pile wall will remain within the limits of the existing authorized rock toe along the face of the bulkhead.

The proposed modifications are shown on a plan titled, "Goose Hummock Boat Ramp Bulkhead Rehabilitation", 4 sheets, dated 11/10/2023, prepared by Foth Infrastructure & Environment, LLC.

The Department has determined that pursuant to 310 CMR 9.22, the activity constitutes a minor project modification, which represents an insignificant deviation from the original specifications of the license, and as such this activity does not require a new or amended license. Please note that other local, state and federal requirements may apply.

If you have any questions pertaining to this matter, please do not hesitate to contact me at (508) 946-2707 or brendan.mullaney@mass.gov.

Sincerely,

Brendan C. Mullaney
Section Chief
Waterways Regulation Program

ecc: DEP, Waterways Regulation Program, Boston
Orleans Conservation Commission
Orleans Harbormaster

The Commonwealth of Massachusetts

No. 6256



Sherras, The Town of Orleans -----

of-----, in the County of Barnstable ----- and Commonwealth
aforesaid, has applied to the Department of Public Works for license to construct and
maintain a timber bulkhead, additional concrete ramp, and to dredge and to
fill in the Town Cove in the town of Orleans, -----

and has submitted plans of the same; and whereas due notice of said application, and of
the time and place fixed for a hearing thereon, has been given, as required by law, to the
Selectmen ----- of the Town ----- of Orleans ----- ;

Now said Department, having heard all parties desiring to be heard, and having fully
considered said application, hereby, ~~subject to the approval of the Governor,~~ authorizes
and licenses the said The Town of Orleans -----

-----, subject to the provisions of the ninety-
first chapter of the General Laws, and of all laws which are or may be in force applicable
thereto, to construct and maintain a timber bulkhead, additional concrete ramp,
to dredge and to fill in Town Cove in the town of Orleans, in conformity with
the accompanying plan no. 6256.

An existing concrete boat launching ramp may be maintained and extended in
length and width so as to extend into the tidewater a total distance of 65
feet, more or less, from the present mean high water line, with a total width
of 25 feet, in the location shown on said plan, 100 feet more or less, from the
southwesterly property line and in accordance with the details there indicated.

Timber bulkheads, may be built, one section extending about northeasterly 90
feet, more or less, from the corner of an existing steel bulkhead of the
westerly abuttor, thence making a return shoreward at the location of said boat

Page 34
Book 2087-
See plan

ramp and extending 50 feet more or less to the mean high water line; and the second section extending about southwesterly 40 feet, more or less, from and in extension of the bulkhead authorized to be built by the easterly abuttor under License No. 5853 of this Department, thence making a return shoreward at the location of said boat ramp, and extending 50 feet more or less to the mean high water line; in the locations shown on said plan and in accordance with the details there indicated. The areas enclosed by said bulkheads, the mean high water line and fill to be placed to northeastward under License No. 5853 may be filled solid, as indicated on said plans. The area extending off said bulkhead for a distance of 100 feet, more or less, may be dredged to a depth of 4 feet below mean low water, as indicated on said plan.

BOOK 2087 PAGE 050

The dredged material may be deposited as fill under the authorization contained in this license and otherwise shall be placed in such location and manner shoreward of the mean high water line as will ensure against its return into tidewater. In the event that the fill proposed by the northeasterly abuttor and authorized by License No. 5853 is not placed, the town of Orleans may construct a bulkhead return running shoreward along its northeasterly property line. Utilities and services appurtenant to a marina-type installation may be carried on the floats authorized hereby.

Nothing in this license shall be construed as authorizing encroachment on property not owned or controlled by the licensee, except with the consent of the owner or owners thereof. Acceptance of this license shall constitute an agreement by the licensee to conform to all terms and conditions herein stated. Any drainage pipes in the area are to be filled shall be extended through said bulkhead by and at the expense of the licensee.

This license is granted subject to all applicable Federal, State, County and Municipal laws, ordinances and regulations, and upon the express condition that use by boats or otherwise of the structures hereby licensed shall involve no discharge of sewage or other polluting matter into the adjacent tidewaters except in strict conformity with the requirements of the local and State health departments and the Division of Water Pollution Control; and upon the further express condition that any other authorizations necessitated due to the provisions hereof shall be secured prior to the commencement of any work under this license.

This license is granted upon the further express condition that the authorization contained herein may be modified or may be revoked in whole or in part in the event of the licensee, its successors and assigns, failing to comply with said authorization or any provisions of the license, or failing to maintain all authorized structures and installations in good condition, to the satisfaction of the Department of Public Works, or its successors. This condition permitting modification or revocation of the license shall also apply in the event of failure of the licensee, its successors and assigns, to secure approval under all other applicable laws, ordinances and regulations or failure to adhere to the conditions of such approvals upon receipt of evidence of such failure provided by an agency having jurisdiction. Revocation or modification of this license as provided herein shall be without liability to the Commonwealth or claim for compensation by the licensee, its successors and assigns.

The plan of said work, numbered -----6 2 5 6----- is on file in the office of said Department, and duplicate of said plan accompanies this License, and is to be referred to as a part hereof.

— The amount of tide-water displaced by the work hereby authorized shall be ascertained by said Department, and compensation therefor shall be made by the said

heirs, successors

and assigns, by paying into the treasury of the Commonwealth
cents for each cubic yard so displaced, being the amount hereby assessed by
said Department.

Nothing in this License shall be so construed as to impair the legal rights of any person.

This License shall be void unless the same and the accompanying plan are recorded
within one year from the date hereof, in the Registry----- of Deeds for the -----
District of the County of Barnstable.

In Witness Whereof, said Department of Public Works have hereunto set their hands
this first ----- day of August ----- in the
year nineteen hundred and seventy-four.

7.18

James Campbell
Malcolm E. May
Thomas J. Nelson
Alfred C. Sanborn

Department of
Public Works

THE COMMONWEALTH OF MASSACHUSETTS

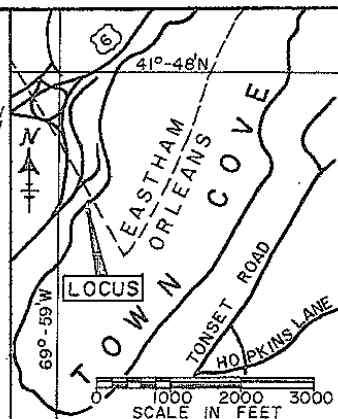
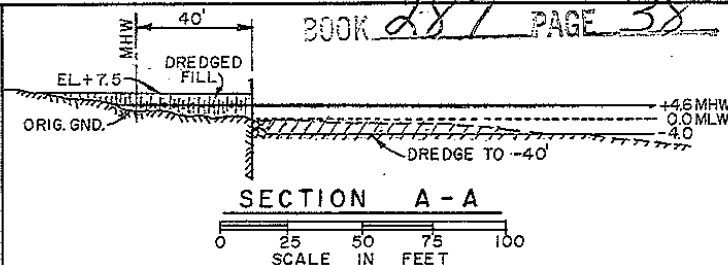
This license is approved in consideration of the payment into the treasury of the Com-
monwealth by the said
of the further sum of

the amount determined by the Governor as a just and equitable charge for rights and
Privileges hereby granted in land of the Commonwealth.

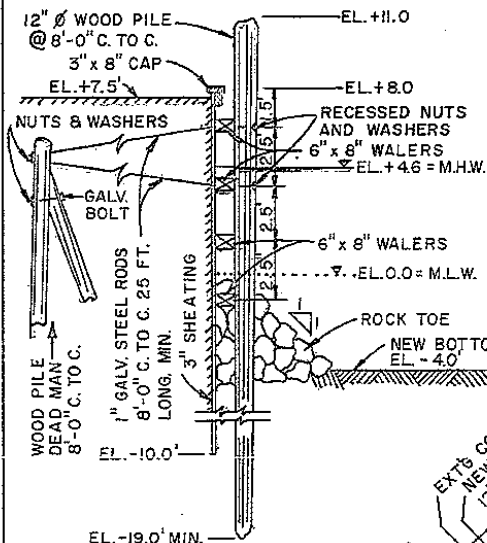
~~Boston,~~

Approved by the Governor,

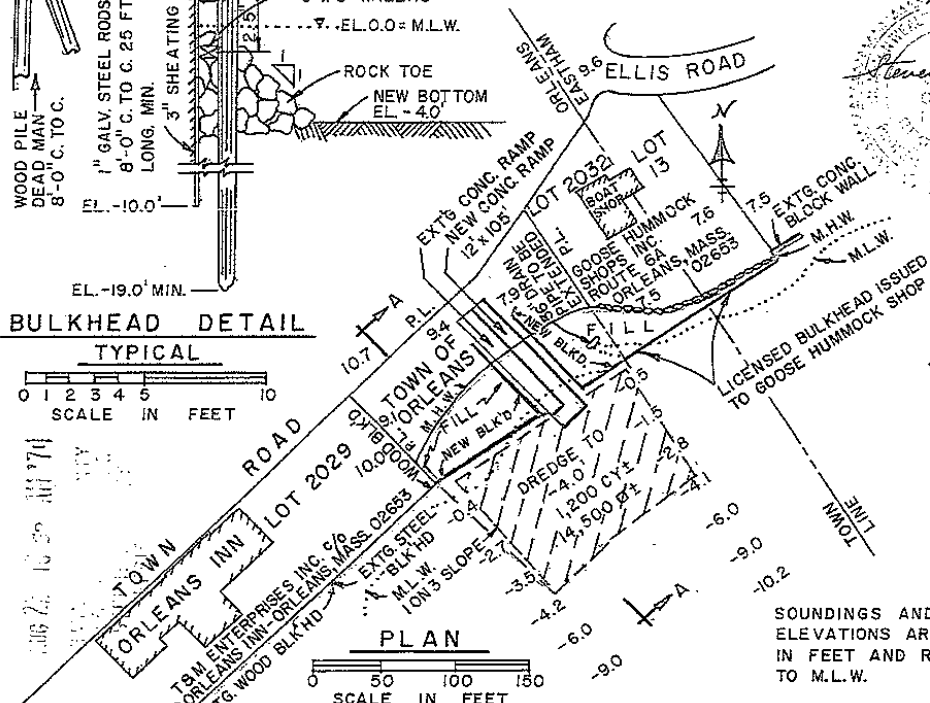
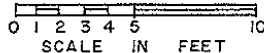
Governor



LOCATION MAP
FROM U.S.G.S. MAP - 7.5 MIN.
SERIES - ORLEANS QUADRANGLE



BULKHEAD DETAIL
TYPICAL



THERE ARE NO HARBOR LINES IN THE
AREA OF THE PROPOSED WORK

PLAN TO ACCOMPANY PETITION OF THE
TOWN OF ORLEANS
TO CONSTRUCT AND MAINTAIN A TIMBER
BULKHEAD, ADDITIONAL CONCRETE RAMP,
DREDGING AND FILL IN
TOWN COVE

ORLEANS, MASSACHUSETTS

SHEET 1 OF 1

15 DEC. 1973

LICENSE PLAN NO. 6256
APPROVED BY DEPARTMENT OF PUBLIC WORKS OF
MASSACHUSETTS
AUGUST 1, 1974
COMMISSIONER - DEPT.
OF PUBLIC WORKS
ASSOCIATE
COMMISSIONERS

**USACE Massachusetts General Permit
NAE-2024-02126 issued 10/26/2024;**



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NEW ENGLAND DISTRICT
696 VIRGINIA ROAD
CONCORD MA 01742-2751

November 26, 2024

Regulatory Division
File Number: NAE-2024-02126

Rich Waldo
Town of Orleans
19 School Road
Orleans, Massachusetts 02653
(Via Email): rwaldo@town.orleans.ma.us

Dear Rich Waldo:

This regards your application submitted to the U.S. Army Corps of Engineers (USACE) to permanently impact 450 square feet of area below the High Tide Line (HTL) for the purposes of repairing a bulkhead. Work will involve installation of 62 steel sheet piles spanning 145 linear feet. The sheet piles will be installed via vibratory hammer. The landward side of the sheet pile wall will be backfilled with 26 cubic yards of fill. Turbidity control measures will be used for the duration of all in-water work. 1 work barge and a tugboat will be used during the construction phase. The work is located in Orleans Cove at 13 Old Country Road, Orleans, Massachusetts 02653 at approximate site coordinates 41.795305, -69.98193. The work is shown on the enclosed plans titled "PROPOSED BULKHEAD REHABILITATION WATERBODY: ORLEANS TOWN COVE" on 8 sheets and dated "APRIL 11, 2024" and revised on "OCTOBER 22, 2024".

Based on the information that you have provided, we verify that the activity is authorized under General Permit # 4 of the June 2, 2023, federal permit known as the Massachusetts General Permits (GPs). The GPs are available at <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit>.

Please review the enclosed GPs carefully, in particular the general conditions beginning on page 35, and ensure that you and all personnel performing work authorized by the GPs are fully aware of and comply with its terms and conditions. A copy of the GPs and this verification letter shall be available at the work site as required by General Condition 17. You must perform this work in compliance with the following special condition(s):

- 1) All construction shall be completed in accordance with the limits of construction and construction sequences detailed on the enclosed plan drawings, titled "PROPOSED BULKHEAD REHABILITATION WATERBODY: ORLEANS TOWN COVE", on a total of 8 sheets, and dated "APRIL 11, 2024" and revised on "OCTOBER 22, 2024". If you change the plans or construction methods for work

within or adjacent to the Orleans Cove, please contact us immediately to discuss modification of this authorization. The Corps of Engineers must approve any changes before you undertake them.

- 2) You must complete and return the enclosed Work Start Notification Form to this office at least two weeks before the anticipated start date. The form shall be emailed to Maninder Singh at Maninder.Singh@usace.army.mil and cenae-r@usace.army.mil; or mailed to Maninder Singh, Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, Massachusetts 01742-2751.
- 3) You must complete and return the enclosed Compliance Certification Form to this office within one month of the completion of work. The form shall be emailed to Maninder Singh at Maninder.Singh@usace.army.mil and cenae-r@usace.army.mil; or mailed to Maninder Singh, Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, Massachusetts 01742-2751.
- 4) Vibratory pile driving shall be initiated for 15 seconds at reduced energy followed by a one-minute waiting period. This sequence of 15 seconds of reduced energy driving, one-minute waiting period shall be repeated two more times, followed immediately by pile-driving at full rate and energy. In addition to using a soft start at the beginning of the workday for pile driving, a soft start must also be used at any time following a cessation of pile driving for a period of 30 minutes or longer.
- 5) Time of the Year (TOY) restriction will be applied from January 15th to May 31st of any year to all in-water work. No in-water work shall take place with the TOY period. TOY restrictions will be waived if the turbidity curtains are installed 1 week prior to the beginning of the TOY period and are maintained in working condition.
- 6) If the work is going to take place within the TOY period of any year, then the turbidity curtains shall be installed one week prior to the beginning of the TOY period and shall be maintained in working condition for the duration of all in-water work.
- 7) Fuel spills from refueling of construction equipment will adversely impact sensitive resource areas. Impacts to resource areas can be avoided by prohibiting all land-based equipment from being refueled on-site. If equipment is refueled on-site, adequate containment and clean up material should be required to minimize impacts.

- 8) Concrete delivery vehicles should be prohibited from washing down equipment on site. This activity could potentially wash excess concrete and hydrocarbons into marine resource areas.
- 9) Maintain project vessels operating within the action area to speed limits below 10 knots and dredge vessel speeds of 4 knots maximum, while dredging.
- 10) Maintain a 1,500-foot buffer between project vessels and ESA-listed whales and a 150-foot buffer between project vessels and sea turtles unless the vessel is navigating to an in-water disposal site/activity.
- 11) The number of project vessels must be limited to the greatest extent possible, as appropriate to size and scale of project.
- 12) The permanent net increase in vessels resulting from a project (e.g., dock/float/pier/boating facility) must not exceed two non-commercial vessels. A project must not result in the permanent net increase of any commercial vessels (e.g., a ferry terminal).

This authorization expires on June 1, 2028. You must commence or have under contract to commence the work authorized herein by June 1, 2028, and complete the work by June 1, 2029. If not, you must contact this office to determine the need for further authorization and we recommend you contact us *before* the work authorized herein expires. Please contact us immediately if you change the plans or construction methods for work within our jurisdiction as we must approve any changes before you undertake them. Performing work within our jurisdiction that is not specifically authorized by this determination or failing to comply with the special condition(s) provided above or all the terms and conditions of the GPs may subject you to the enforcement provisions of our regulations.

This authorization does not obviate the need to obtain other federal, state, or local authorizations required by law. Applicants are responsible for applying for and obtaining any other approvals.

Your project is located within, or may affect resources within, the coastal zone. The Massachusetts Office of Coastal Zone Management (CZM) has already determined that no further Federal Consistency Review is required.

We continually strive to improve our customer service. To better serve you, we would appreciate your completing our Customer Service Survey located at <https://regulatory.ops.usace.army.mil/customer-service-survey>.

Please contact Maninder Singh of my staff at (978) 318-8967 or (978)-257-6884 or Maninder.Singh@usace.army.mil if you have any questions.

Sincerely,

Paul Maniccia

Paul Maniccia
Chief, Massachusetts Section
Regulatory Division

Enclosures

Cc:

Benjamin Foley, FOTH, Benjamin.Foley@foth.com

Ed Reiner, U.S. EPA, Region 1, Boston, MA, reiner.ed@epa.gov

Rachel Croy, U.S. EPA, Region 1, Boston, MA, croy.rachel@epa.gov

Sabrina Pereira, NMFS, Gloucester, MA; sabrina.pereira@noaa.gov

Alexa Cacacie, NMFS, Gloucester, MA; alexa.cacacie@noaa.gov

Sean Duffey, Coastal Zone Management, Boston, MA, sean.duffey@mass.gov

Patrice Bordonaro, Coastal Zone Management, Boston, MA,

patrice.bordonaro@mass.gov

Maissoun Reda, Chief, DEP SERO, Wetlands and Waterways, Lakeville, MA;

maissoun.reda@mass.gov

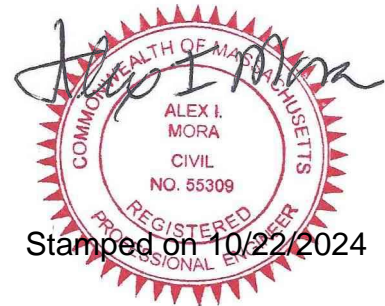
David Robinson, MA Board of Underwater Archaeological Resources (BUAR);

david.s.robinson@mass.gov

Orleans Conservation Commission; mbates@town.orleans.ma.us

DRAWING INDEX

<u>SHEET NUMBER</u>	<u>TITLE</u>
1	PROJECT NOTES
2	PROJECT LOCUS
3	EXISTING SITE PLAN
4	EXISTING SECTION
5	PROP. SITE PLAN
6	PROP. SECTION (1 OF 3)
7	PROP. SECTION (2 OF 3)
8	PROP. SECTION (3 OF 3)



GENERAL NOTES:

1. RESULTS OF TOPOGRAPHIC & HYDROGRAPHIC SURVEY BY FOTH INFRASTRUCTURE & ENVIRONMENT, LLC. (FOTH) ON 10/24/2019.
2. ELEVATIONS AND SOUNDINGS ARE IN FEET AND TENTHS, AND REFER TO THE NAVD88 DATUM.
3. MEAN LOW WATER, AND MEAN HIGH WATER ELEVATIONS ARE BASED ON COLLECTED TIDE DATA 9/27/2018 AND 11/20/2018 COLLECTED BY WOODS HOLE GROUP, INC. SEE NAUSET ESTUARY TIDE MEMORANDUM PUBLISHED BY THE TOWN OF EASTHAM FOR TOWN COVE, ORLEANS.
4. COORDINATES ARE BASED ON NAD83 MASSACHUSETTS MAINLAND STATE PLANE GRID SYSTEM.
5. SOIL BORINGS WERE COLLECTED BY FOTH INFRASTRUCTURE & ENVIRONMENT, LLC ON DECEMBER 30TH, 2019. SEE PROJECT NARRATIVE FOR SOIL BORING LOGS.
6. PROPERTY LINE BETWEEN TOWN OF ORLEANS AND HOWARTH HOLDINGS, LLC. (13 OLD COUNTY RD.) IS DEFINED BY THE HISTORIC CENTERLINE OF JEREMIAH'S GUTTER AS DEFINED ON "PLAN OF LAND IN ORLEANS, MASS, PREPARED IN JANUARY, 1964 BY ARTHUR L. SPARROW CO., AND RECORDED IN PLAN BOOK 182 PAGE 39.
7. LOCATION OF EXISTING 36" RCP/CIP TAKEN FROM DRAWING TITLED "SITE PLAN, LEGEND, AND NOTES" BY GHD INC. DATED 03/29/2019.
8. PROJECT SITE IS IN FEMA ZONE VE EL.12/13 (NAVD88) IN ACCORDANCE TO FEMA FIRM #25001C0436J, EFFECTIVE DATE 07/16/2014.

PRIOR USACE AUTHORIZATIONS

NAE-1974-00206 1/11/1974

LEGEND:

	DATUM OFFSETS
————— — — ———	ANNUAL HIGH TIDE LINE (AHTL)
—————	MEAN HIGH WATER (MHW)
.	MEAN LOW WATER (MLW)
—————	PROPERTY LINE
—————	HISTORIC HIGH WATER MARK (HHWM)
	MLW NAVD88 3.2 2.7 MHW 0.5 0.0 NAVD 88 0.0 -0.5 MLW -0.1 -0.6 MLLW OFFSETS TAKEN FROM NAUSET ESTUARY TIDE MEMORANDUM

PURPOSE: BULKHEAD REHABILITATION

DATUM: MLW: -0.5' NAVD88
MHW: 2.7' NAVD88

TOWN OF ORLEANS
19 SCHOOL RD.
ORLEANS, MA 02653

PROJECT NOTES

PROPOSED BULKHEAD REHABILITATION
WATERBODY: ORLEANS TOWN COVE

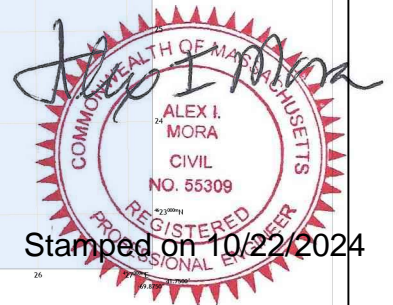
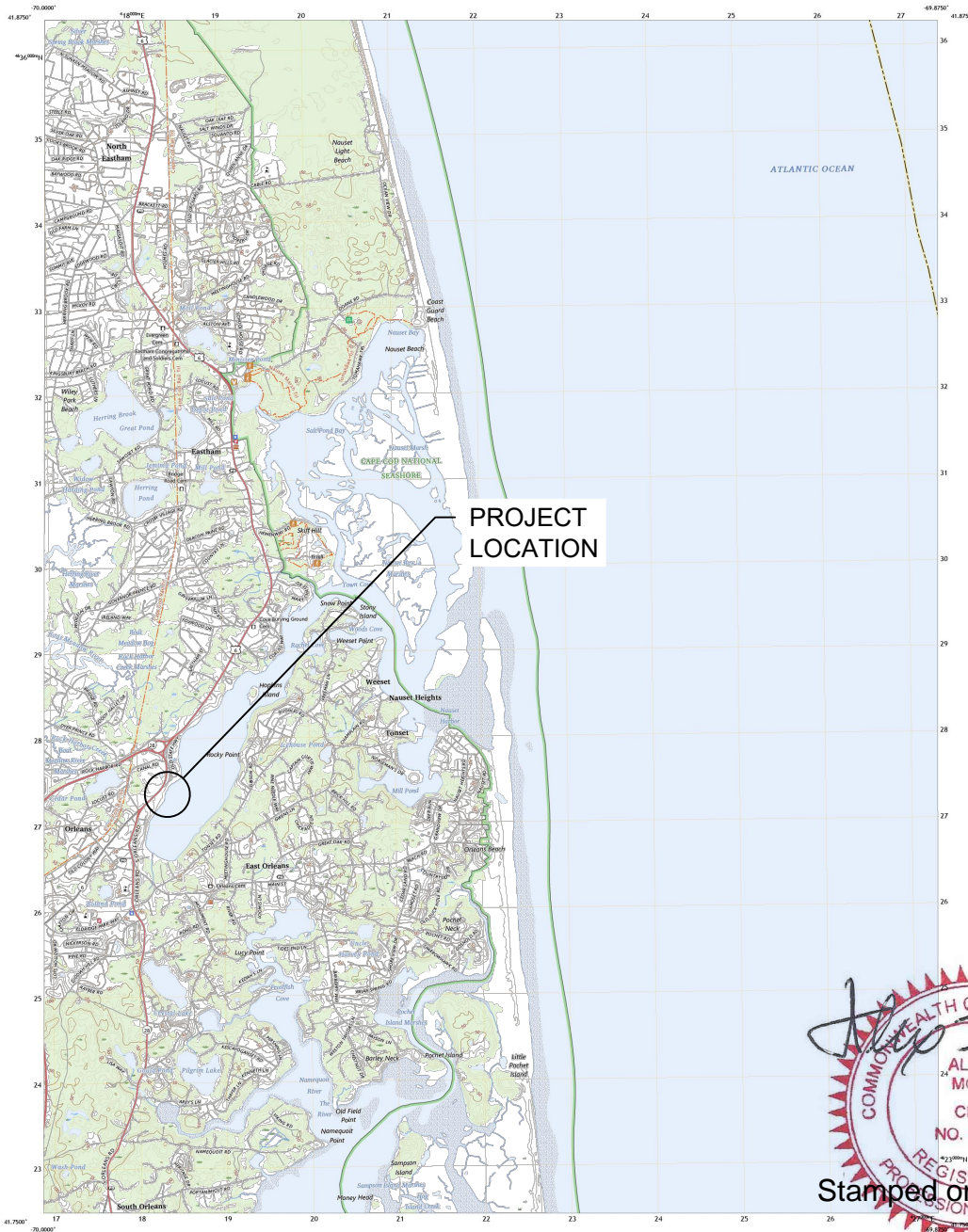
AT: 1 ROUTE 6A
COUNTY OF: BARNSTABLE, MA
APPLICATION BY: TOWN OF ORLEANS
REV DATE: OCTOBER 22, 2024
SHEET 1 OF 8 DATE: APRIL 11, 2024



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



ORLEANS QUADRANGLE
MASSACHUSETTS - BARNSTABLE COUNTY
7.5-MINUTE SERIES



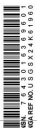
Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84) Projection and
1:250,000 scale horizontal and vertical datum. Zone 19T
This map is not a legal document. Boundaries may be
generated for the map scale. Private land with government
ownership may not be shown. Check previous editions
for private land.



SCALE 1:24,000
1 0.5 0 0.5 1
1000 500 0 500 1000
METERS
1 0.5 0 0.5 1
1000 500 0 500 1000
FEET
CONTOUR INTERVAL IN FEET
100
NORTH AMERICAN DATUM OF 1983
This map was produced to conform with the
National Coordinate Program (U.S. Time Project Standard).



ROAD CLASSIFICATION
Expressway
Secondary Hwy
Bypass
Interstate Route
US Route
Local Connector
Local Road
dirt
State Route



PURPOSE: BULKHEAD REHABILITATION

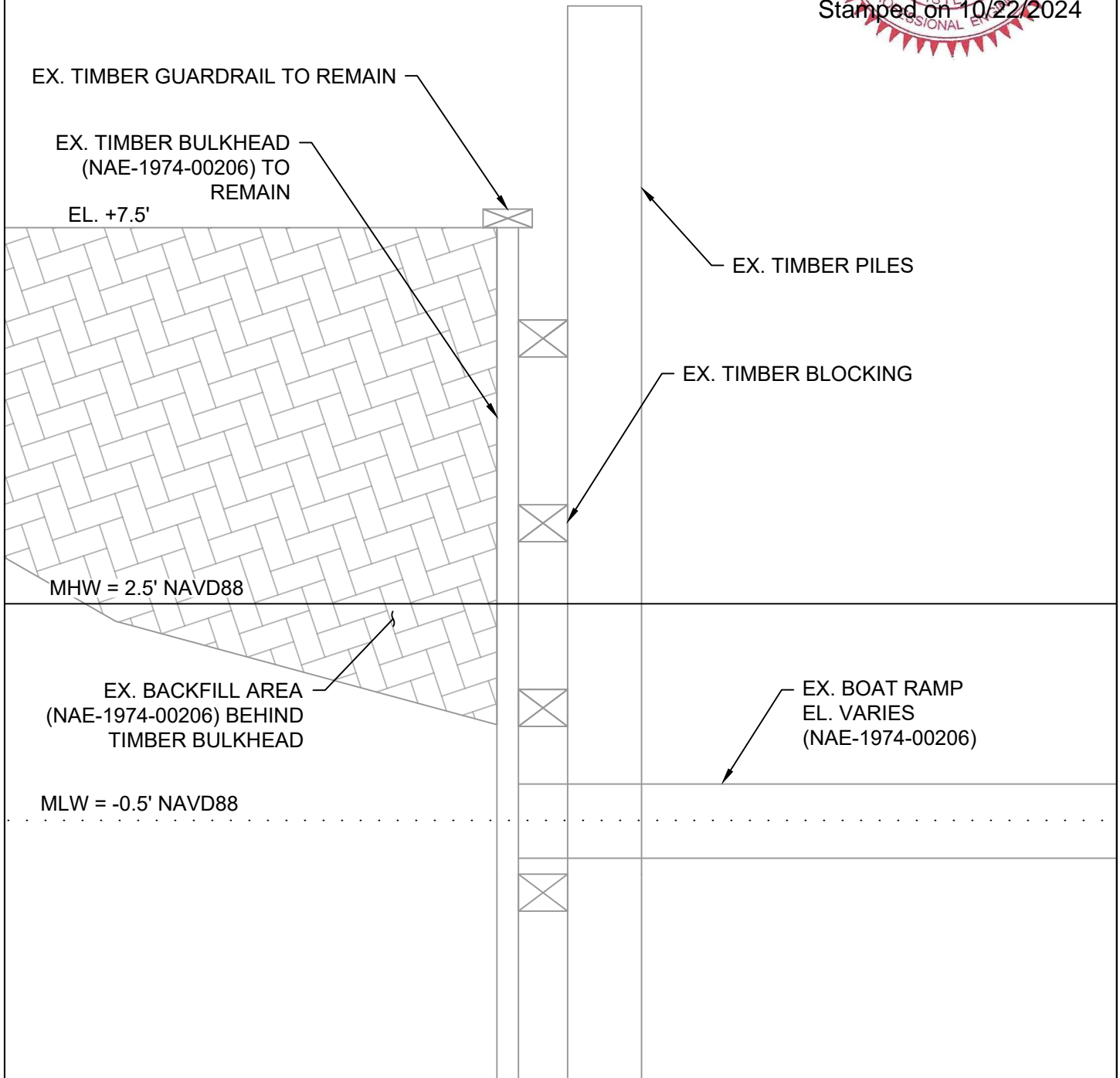
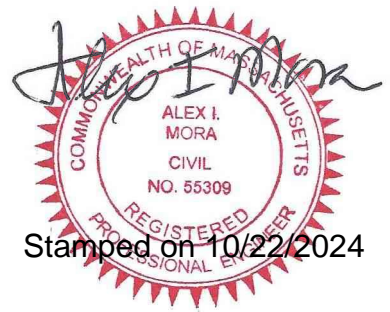
DATUM: MLW: -0.5' NAVD88
MHW: 2.7' NAVD88

TOWN OF ORLEANS
19 SCHOOL RD.
ORLEANS, MA 02653

LOCUS MAP NTS

PROPOSED BULKHEAD REHABILITATION
WATERBODY: ORLEANS TOWN COVE

AT: 1 ROUTE 6A
COUNTY OF: BARNSTABLE, MA
APPLICATION BY: TOWN OF ORLEANS
REV DATE: OCTOBER 22, 2024
SHEET 2 OF 8 DATE: APRIL 11, 2024



PURPOSE: BULKHEAD REHABILITATION

DATUM: MLW: -0.5' NAVD88
MHW: 2.7' NAVD88

TOWN OF ORLEANS
19 SCHOOL RD.
ORLEANS, MA 02653

EXISTING TYPICAL SECTION

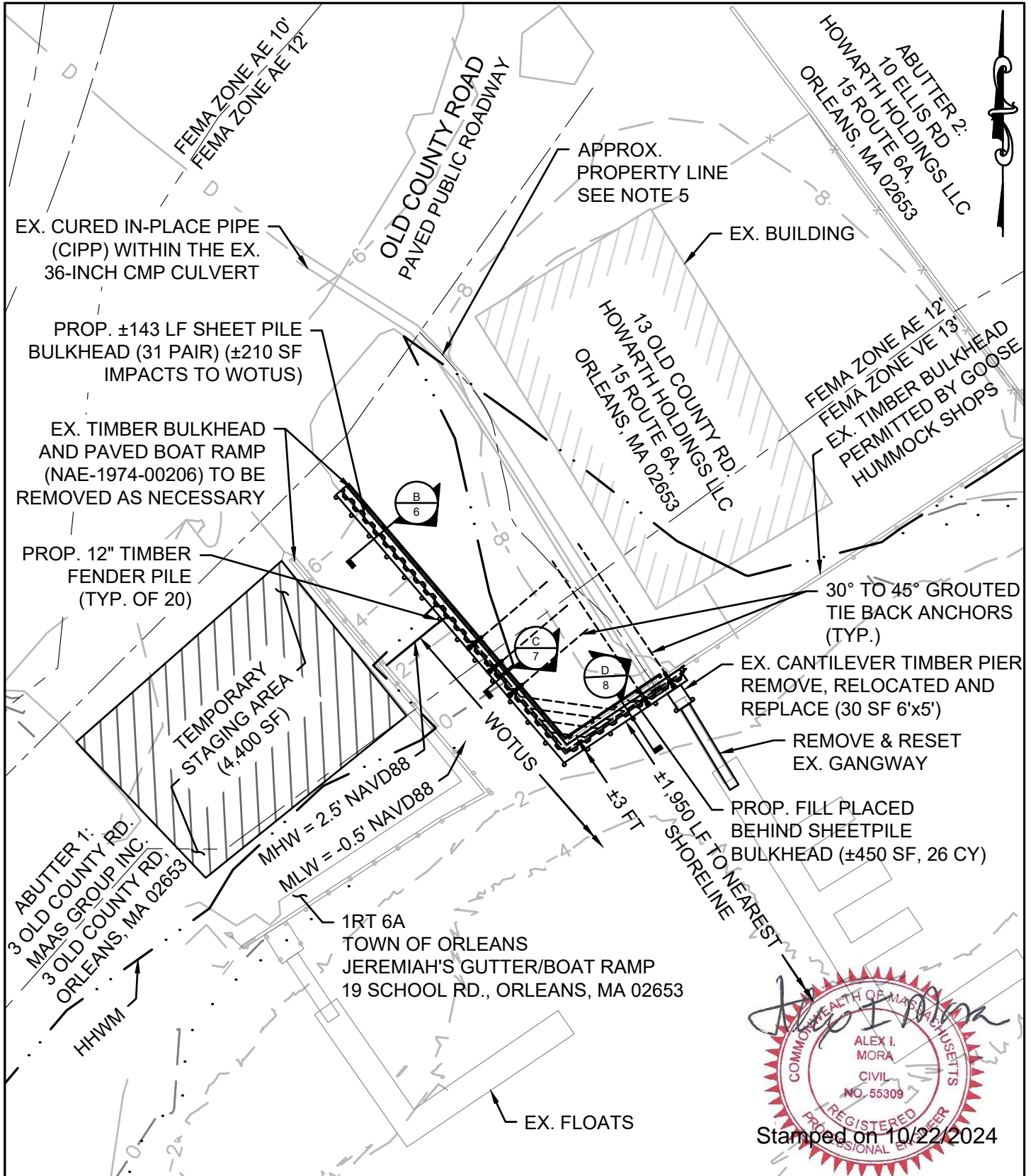
GRAPHIC SCALE



1 INCH = 2 FEET

PROPOSED BULKHEAD REHABILITATION
WATERBODY: ORLEANS TOWN COVE

AT: 1 ROUTE 6A
COUNTY OF: BARNSTABLE, MA
APPLICATION BY: TOWN OF ORLEANS
REV DATE: OCTOBER 22, 2024
SHEET 4 OF 8 DATE: APRIL 11, 2024

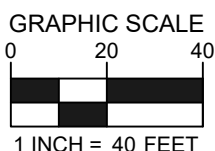


PURPOSE: BULKHEAD REHABILITATION

DATUM: MLW: -0.5' NAVD88
MHW: 2.7' NAVD88

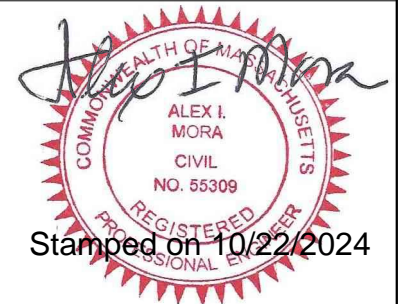
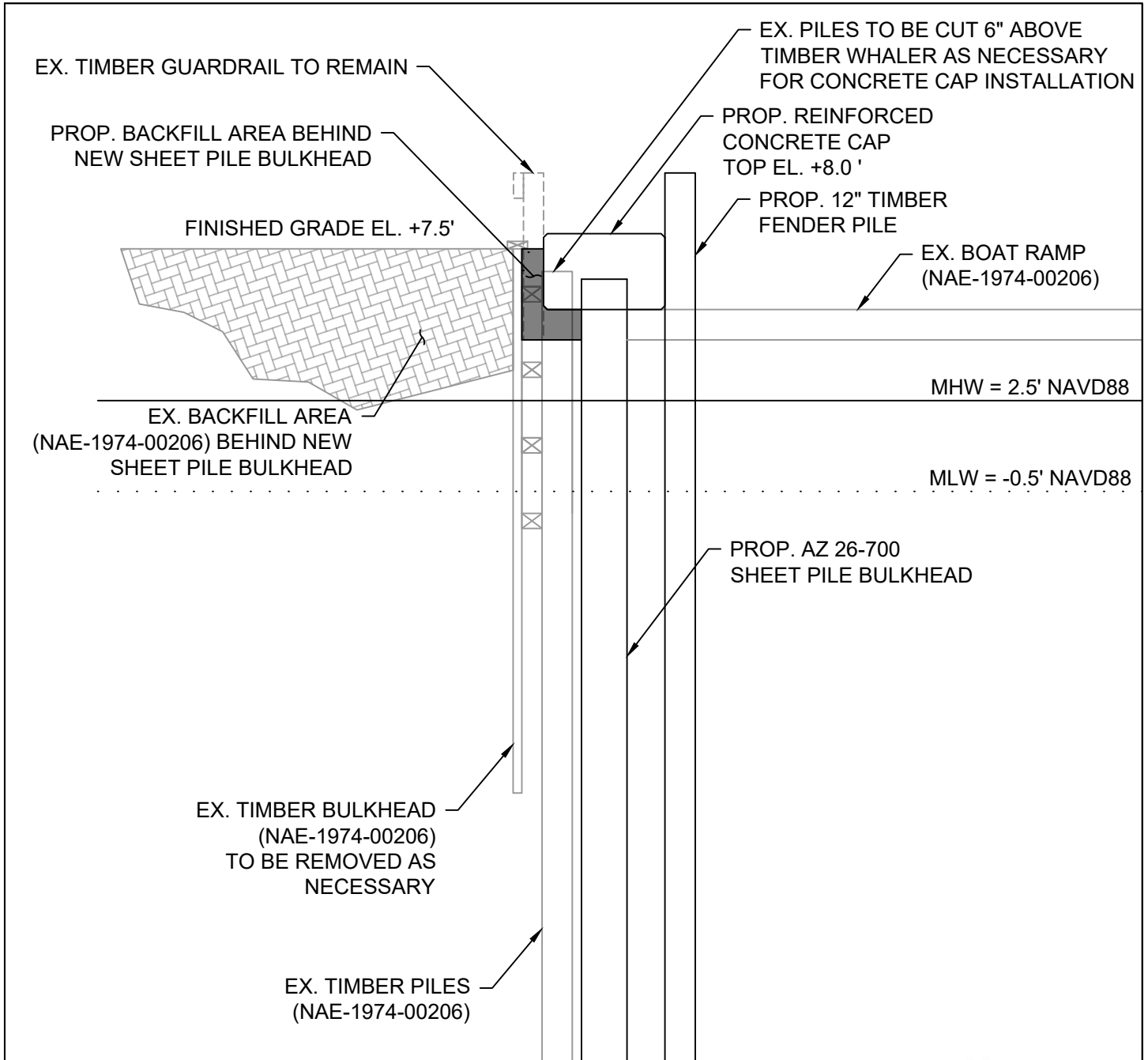
TOWN OF ORLEANS
19 SCHOOL RD.
ORLEANS, MA 02653

PROP. SITE PLAN



PROPOSED BULKHEAD REHABILITATION
WATERBODY: ORLEANS TOWN COVE

AT: 1 ROUTE 6A
COUNTY OF: BARNSTABLE, MA
APPLICATION BY: TOWN OF ORLEANS
REV DATE: OCTOBER 22, 2024
SHEET 5 OF 8 DATE: APRIL 11, 2024



PURPOSE: BULKHEAD REHABILITATION

DATUM: MLW: -0.5' NAVD88
MHW: 2.7' NAVD88

TOWN OF ORLEANS
19 SCHOOL RD.
ORLEANS, MA 02653

PROP. SECTION B

GRAPHIC SCALE

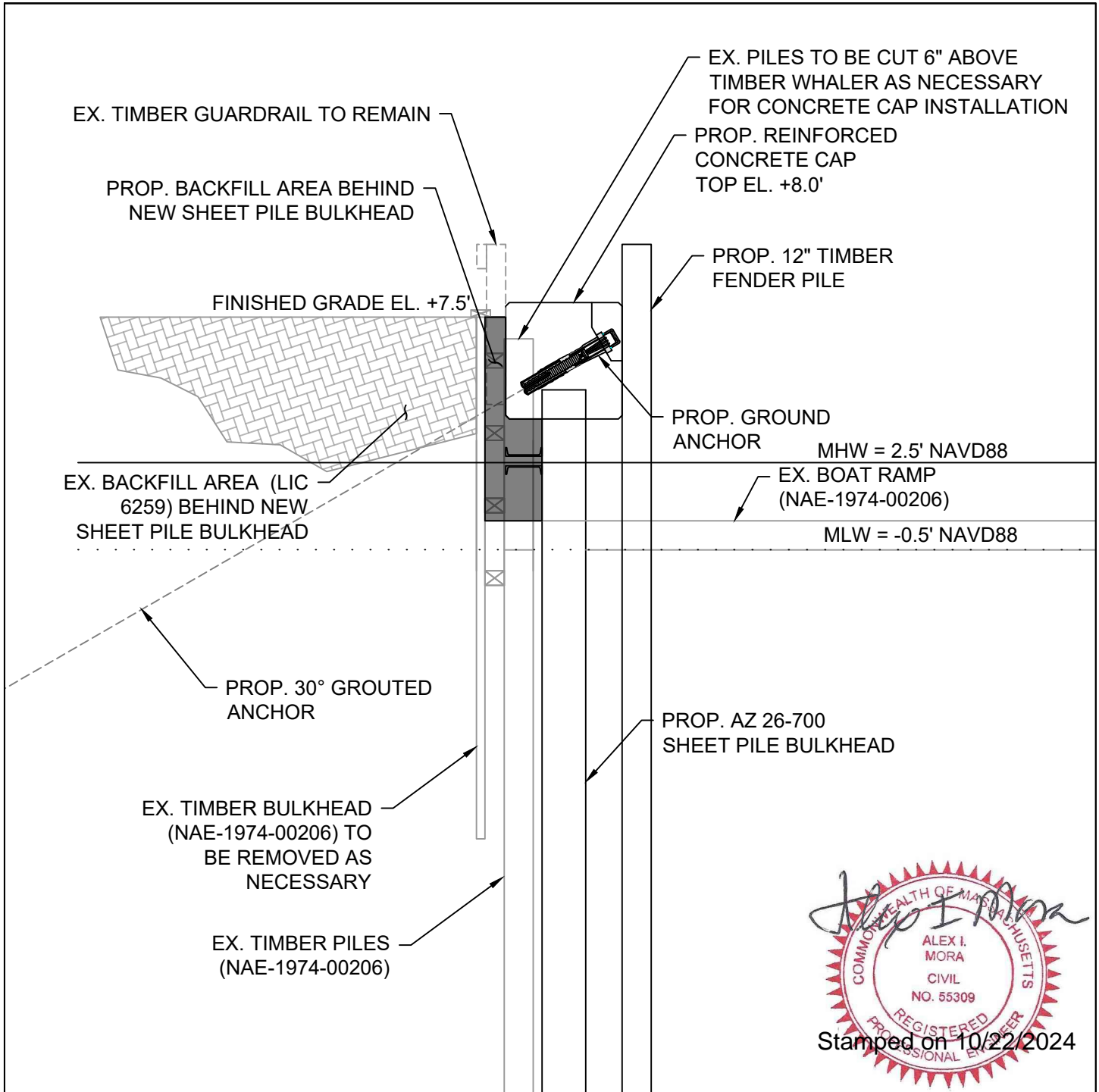
0 2.5 5



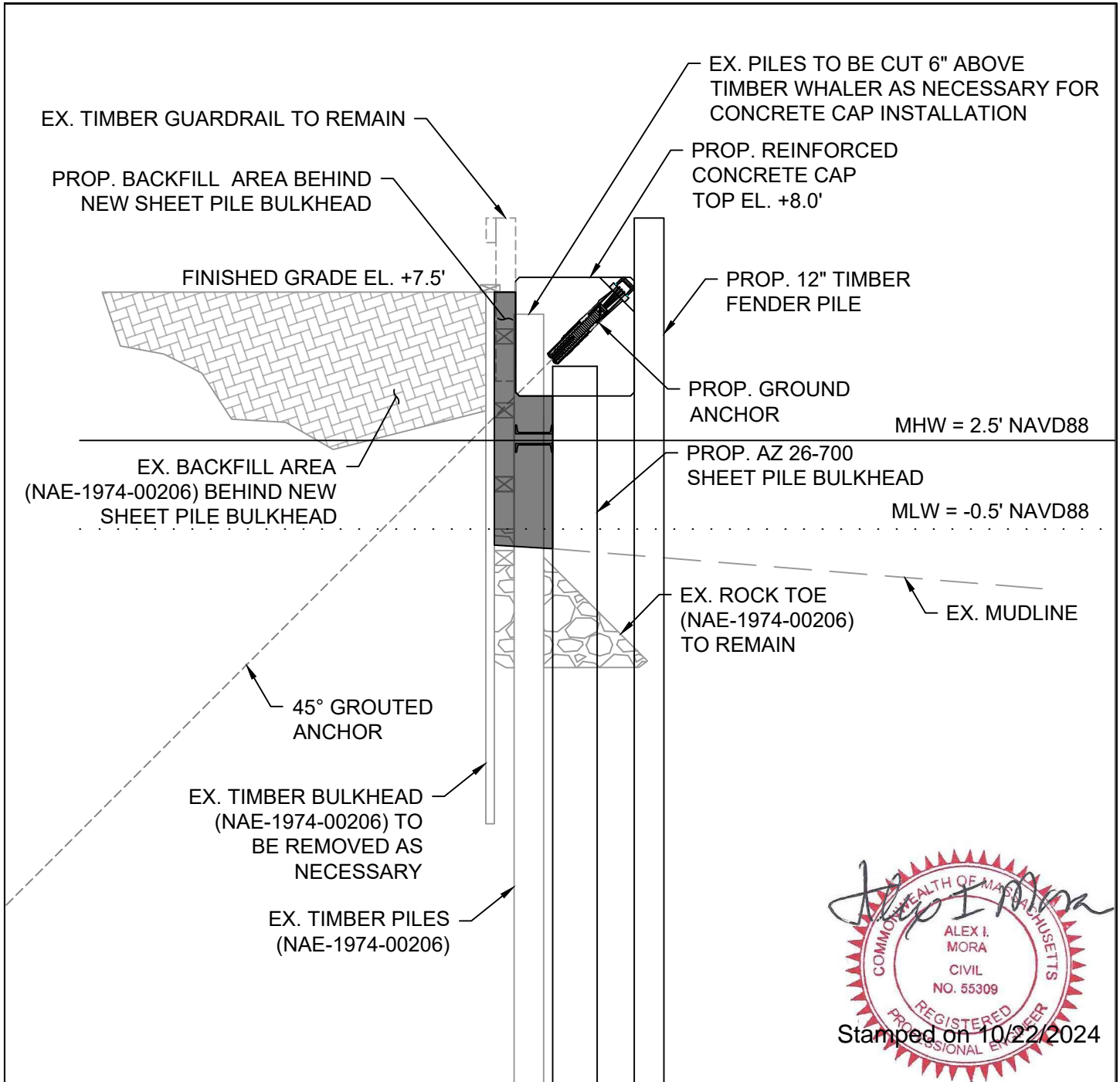
1 INCH = 5 FEET

PROPOSED BULKHEAD REHABILITATION
WATERBODY: ORLEANS TOWN COVE

AT: 1 ROUTE 6A
COUNTY OF: BARNSTABLE, MA
APPLICATION BY: TOWN OF ORLEANS
REV DATE: OCTOBER 22, 2024
SHEET 6 OF 8 DATE: APRIL 11, 2024



<p>PURPOSE: BULKHEAD REHABILITATION</p> <p>DATUM: MLW: -0.5' NAVD88 MHW: 2.7' NAVD88</p> <p>TOWN OF ORLEANS 19 SCHOOL RD. ORLEANS, MA 02653</p>	<p>PROP. SECTION C</p> <p>GRAPHIC SCALE</p> <p>0 2.5 5</p> <p>1 INCH = 5 FEET</p>	<p>PROPOSED BULKHEAD REHABILITATION WATERBODY: ORLEANS TOWN COVE</p> <p>AT: 1 ROUTE 6A COUNTY OF: BARNSTABLE, MA APPLICATION BY: TOWN OF ORLEANS REV DATE: OCTOBER 22, 2024 SHEET 7 OF 8 DATE: APRIL 11, 2024</p>



<p>PURPOSE: BULKHEAD REHABILITATION</p> <p>DATUM: MLW: -0.5' NAVD88 MHW: 2.7' NAVD88</p> <p>TOWN OF ORLEANS 19 SCHOOL RD. ORLEANS, MA 02653</p>	<p>PROP. SECTION D</p> <p>GRAPHIC SCALE</p> <p>0 2.5 5</p> <p>1 INCH = 5 FEET</p>	<p>PROPOSED BULKHEAD REHABILITATION WATERBODY: ORLEANS TOWN COVE</p> <p>AT: 1 ROUTE 6A COUNTY OF: BARNSTABLE, MA APPLICATION BY: TOWN OF ORLEANS REV DATE: OCTOBER 22, 2024 SHEET 8 OF 8 DATE: APRIL 11, 2024</p>



**US Army Corps
of Engineers®**
New England District

WORK-START NOTIFICATION FORM
(Minimum Notice: Two weeks before work begins)

EMAIL TO: Maninder.Singh@usace.army.mil and cenae-r@usace.army.mil; or

MAIL TO: Maninder Singh
Regulatory Division
U.S. Army Corps of Engineers, New England District
696 Virginia Road
Concord, Massachusetts 01742-2751

Also, if the work is in the Massachusetts Coastal Zone (<https://www.mass.gov/service-details/czm-regions-coastal-communities-and-coastal-zone-boundary>), email this form to Sean.Duffey@mass.gov and patrice.bordonaro@mass.gov or mail it to: The Massachusetts Office of Coastal Zone Management, Project Review Coordinator, Suite 800, 251 Causeway Street, Boston, MA 02114.

Corps of Engineers Permit No. **NAE-2024-02126** was issued to **Rich Waldo**. This work is located in Orleans Cove at 13 Old Country Road, Orleans, Massachusetts 02653 at approximate site coordinates 41.795305, -69.98193 and authorized to permanently impact 450 square feet of area below the High Tide Line (HTL) for the purposes of repairing a bulkhead. Work will involve installation of 62 steel sheet piles spanning 145 linear feet. The sheet piles will be installed via vibratory hammer. The landward side of the sheet pile wall will be backfilled with 26 cubic yards of fill. Turbidity control measures will be used for the duration of all in-water work. 1 work barge and a tugboat will be used during the construction phase.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

Phone & email: () () _____

Proposed Work Dates: Start: _____ Finish: _____

Permittee/Agent Signature: _____ Date: _____

Printed Name: _____ Title: _____

Date Permit Issued: _____ Date Permit Expires: _____

FOR USE BY THE CORPS OF ENGINEERS

PM: _____ **Submittals Required:** _____

Inspection Recommendation: _____



**US Army Corps
of Engineers®**
New England District

COMPLIANCE CERTIFICATION FORM
(Minimum Notice: Permittee must sign and return notification
within one month of the completion of work.)

Permit Number: NAE-2024-02126
Project Manager: Maninder Singh
Name of Permittee: Rich Waldo
Permit Issuance Date: November 26, 2024

Please sign this certification and return it to our office upon completion of the activity.

* E-MAIL TO: cenae-r-ma@usace.army.mil; & Maninder.singh@usace.army.mil *
* *
* MAIL TO: Massachusetts Section *
* Regulatory Division *
* U.S. Army Corps of Engineers, New England District *
* 696 Virginia Road *
* Concord, MA 01742-2751 *

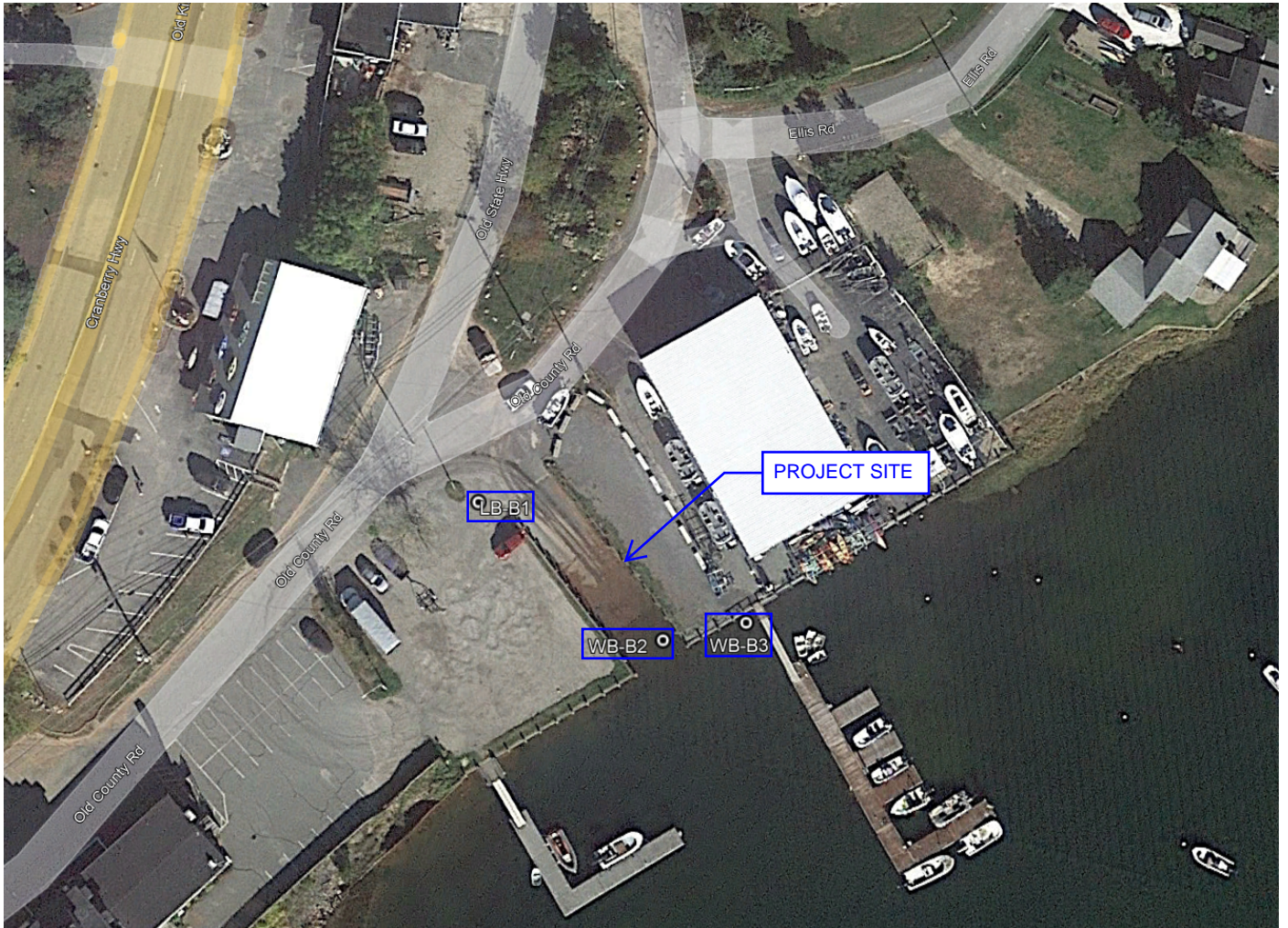
Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

_____ Signature of Permittee	_____ Date
_____ Printed Name	_____ Date of Work Completion
() _____ Telephone Number	() _____ Telephone Number

ATTACHMENT A

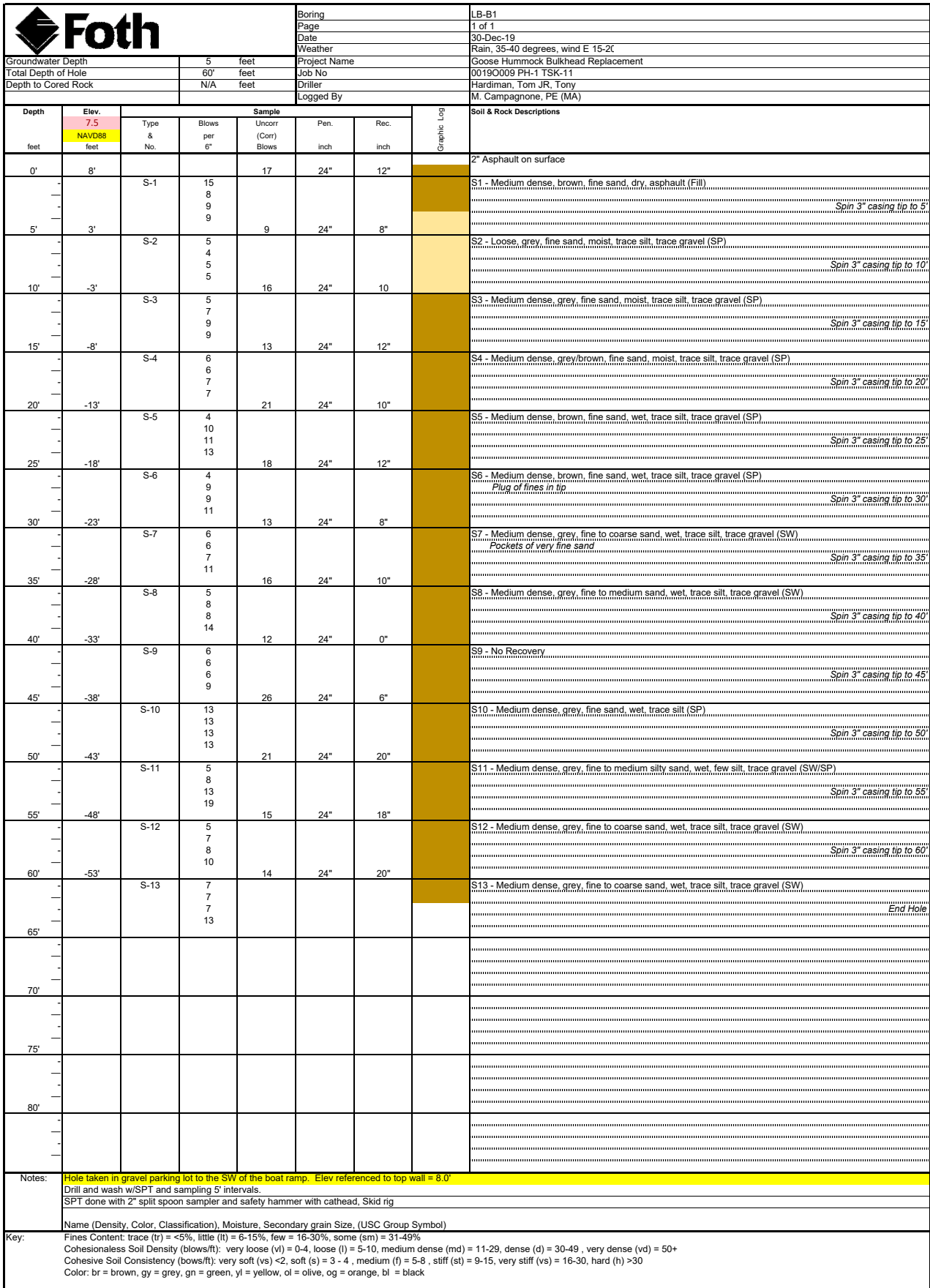
BORING DATA

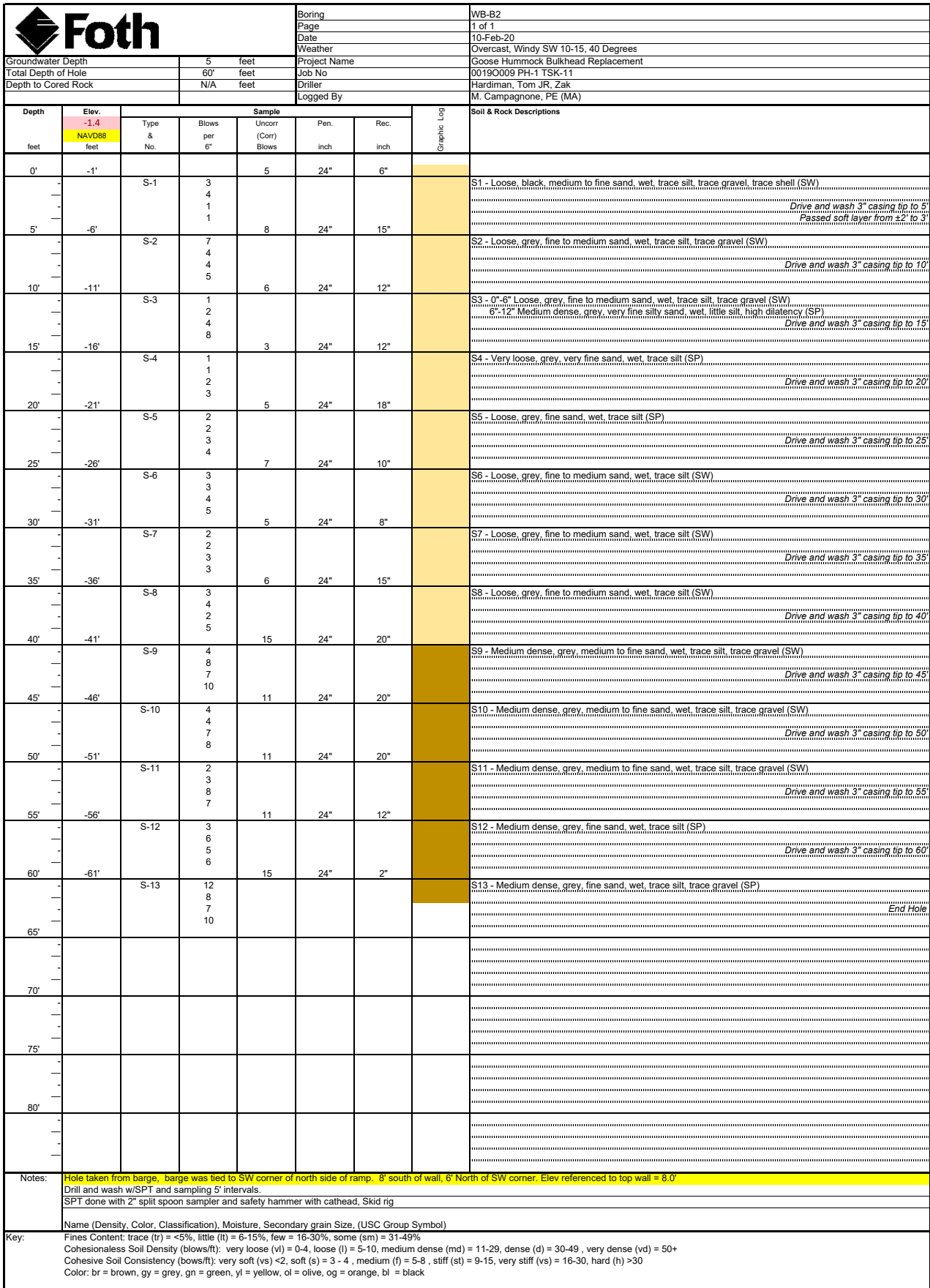


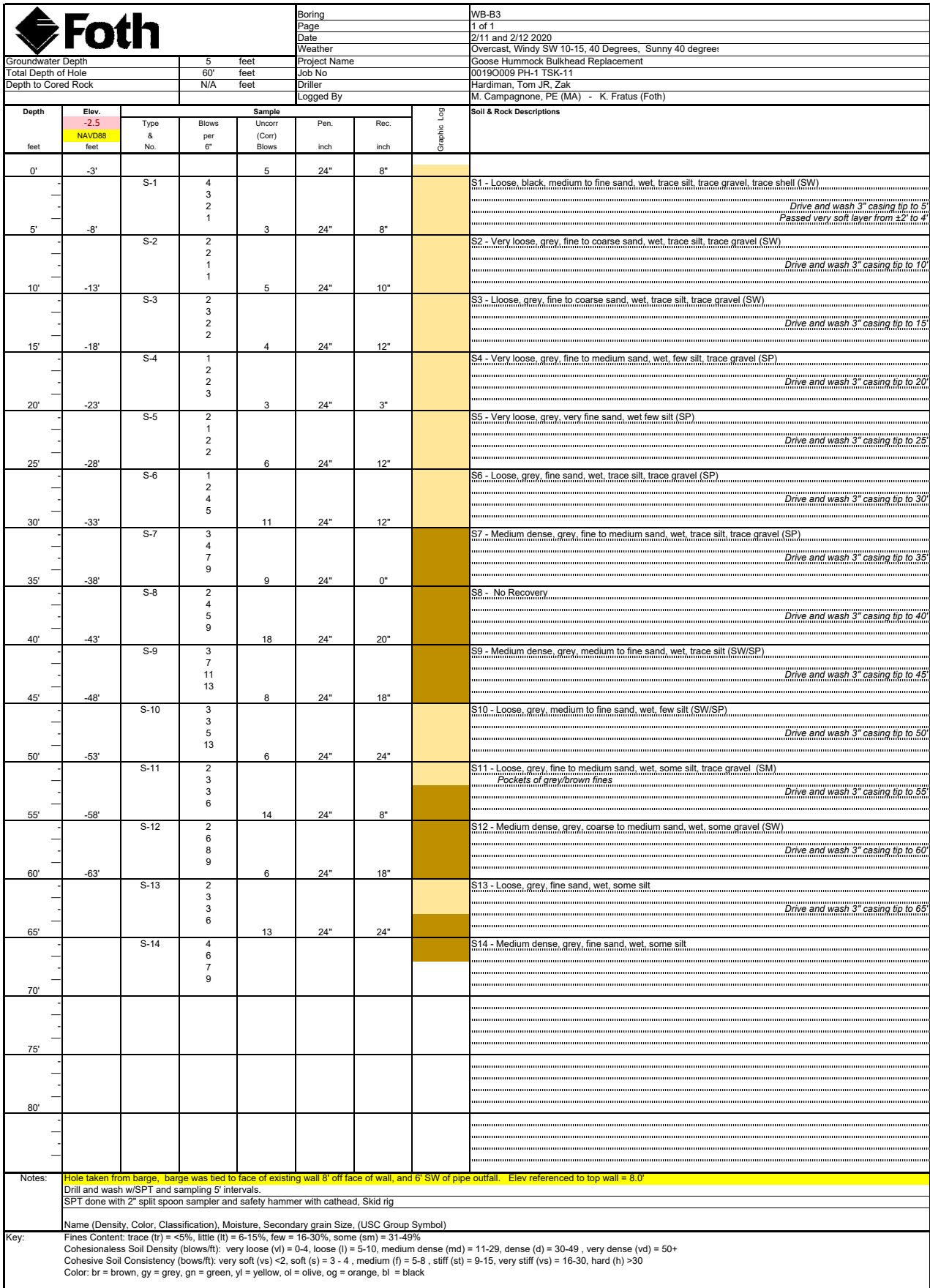
PROJECT LOCATION:
GOOSE HUMMOCK BOAT RAMP
1 ROUTE 6A
ORLEANS, MA 02653

ORLEANS GOOSE HUMMOCK
BOAT RAMP SOIL BORING
LOCATION MAP
NTS









ATTACHMENT B

CONTRACT DRAWINGS

Entitled:

“GOOSE HUMMOCK BOAT RAMP BULKHEAD REHABILITATION”

Date Issued: 7/18/2025

Total Sheet No.: 9 (including Cover Sheet)

Prepared By:

Foth Infrastructure & Environment, LLC

Stamped By:

Alex Mora, PE

GOOSE HUMMOCK BOAT RAMP
BULKHEAD REHABILITATION

TOWN OF ORLEANS
BARNSTABLE COUNTY, MASSACHUSETTS
JULY 18, 2025

Prepared for:
TOWN OF ORLEANS



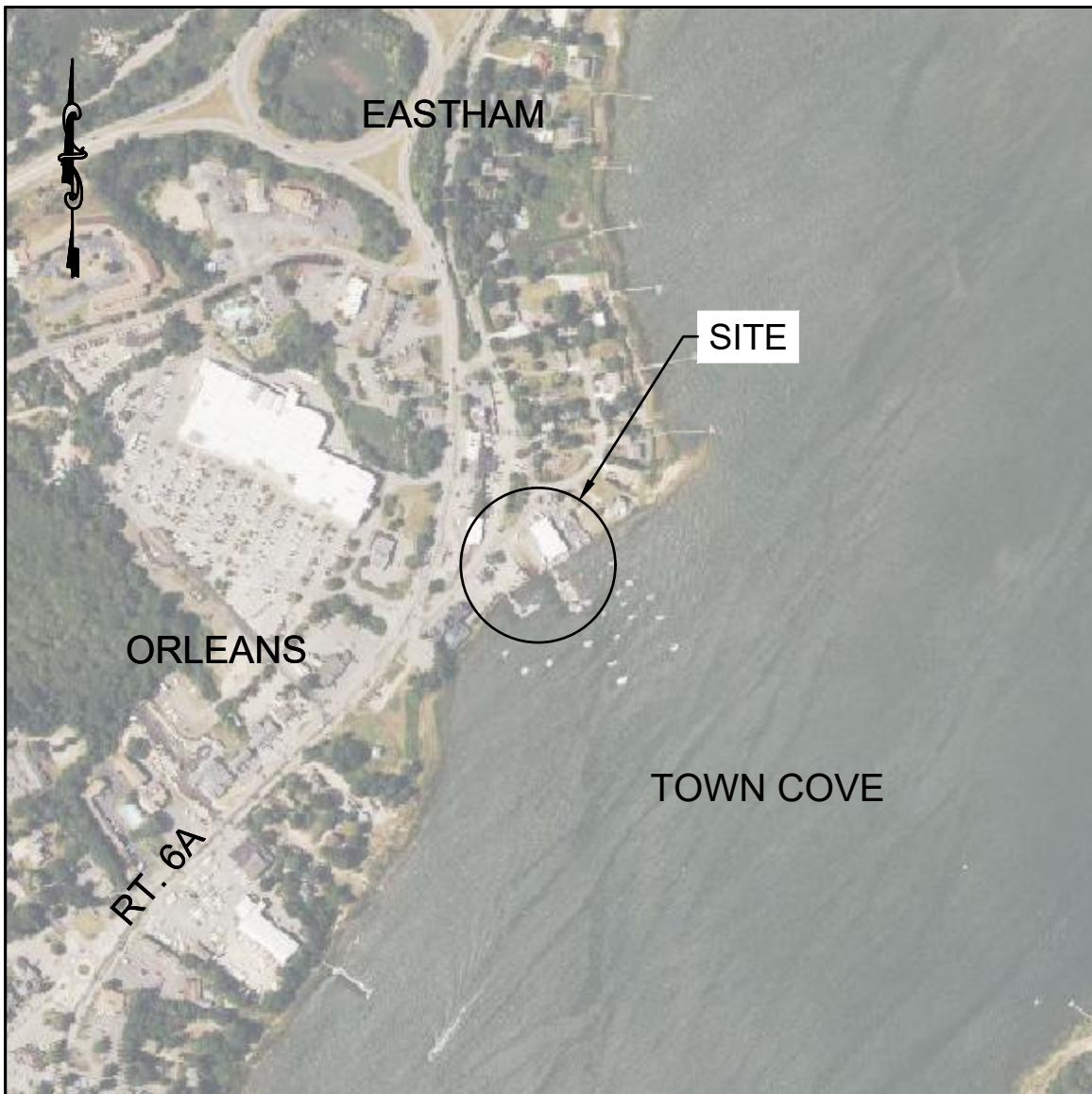
Prepared by:
Foth Infrastructure & Environment, LLC



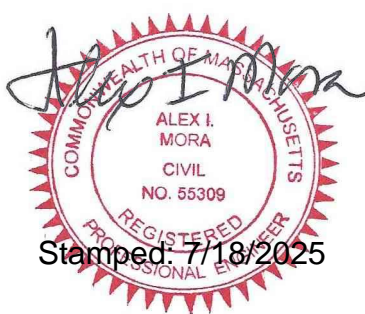
DRAWING INDEX	
SHEET NUMBER	TITLE
G-001	COVER SHEET
G-002	PROJECT NOTES SHEET 1 OF 2
G-003	PROJECT NOTES SHEET 2 OF 2
V-101	EXISTING SITE PLAN
C-101	GENERAL SITE PLAN
C-301	SECTIONS
S-501	DETAILS SHEET 1 OF 3
S-502	DETAILS SHEET 2 OF 3
S-503	DETAILS SHEET 3 OF 3



VICINITY MAP



LOCATION MAP



SHEET TITLE	
COVER SHEET	
SHEET NUMBER	
G-001	

DESIGN CRITERIA:

1.

STRUCTURAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MASSACHUSETTS BUILDING CODE, NINTH EDITION OR LATEST VERSION. WORK SHALL COMPLY WITH FEDERAL, STATE, AND LOCAL PERMITS ISSUED FOR THE PROJECT.
2.

THE COMPLETED STRUCTURE HAS BEEN DESIGNED TO WITHSTAND THE FOLLOWING DESIGN LOADS APPLIED IN CONJUNCTION WITH DESIGN DREDGE/MUDLINE ELEVATIONS INDICATED ON THE CONTRACT DRAWINGS:
- 2.1.

GENERAL
- 2.2.

LIVE LOADS:
BULKHEAD:
CONCENTRATED LIVE LOAD:
250 PSF UNIFORM LOAD
16,000 LBS
- 2.3.

WIND LOADS:
BASIC WIND SPEED
WIND EXPOSURE CATEGORY
120 MPH
D
- 2.4.

SNOW LOAD:
GROUND SNOW LOAD
50 PSF
- 2.5.

EARTHQUAKE LOAD:
SEISMIC IMPORTANCE FACTOR
MCE_E GROUND MOTION (PERIOD=0.2s)
MCE_E GROUND MOTION (PERIOD=1.0s)
SITE-MODIFIED SPECTRAL ACCELERATION
SITE-MODIFIED SPECTRAL ACCELERATION
NUMERIC SEISMIC DESIGN VALUE AT 0.2S SA
NUMERIC SEISMIC DESIGN VALUE AT 1.0S SA
MCE_E PEAK GROUND ACCELERATION
SITE CLASS
SEISMIC DESIGN CATEGORY
DESIGN PROCEDURE
Le=1.0
S_s=0.16
S_s=0.042
S_m=0.19
S_m=0.089
SDS=0.13
SD1=0.06
PGA=0.087
DE
A
EQUIVALENT LATERAL FORCE

3.

CONCRETE
CAST-IN-PLACE CONCRETE
CONCRETE EXPOSURE
W/C M RATIO
REINFORCING BARS
EPOXY COATING
WELDED WIRE REINFORCEMENT
PROVIDE THE FOLLOWING COVER FOR REINFORCEMENT:
ALL STEEL REINFORCEMENT MUST HAVE A CLEAR COVER OF 3 INCHES.
- fc=5,000 PSI (UNLESS OTHERWISE NOTED)
CLASSES F3, S1, W2, C2
0.40
ASTM A615 GR. 60
ASTM A775
ASTM A1064

4.

STEEL
STEEL CHANNELS
OTHER STEEL SHAPES
STEEL PLATES
STEEL SHEET PILE
BOLTED CONNECTIONS
ANCHOR BOLTS
NUTS
WASHERS (EXCEPT AGAINST TIMBER)
WASHERS AGAINST TIMBER
THREADBAR
WELDING ELECTRODES
- ASTM A992
ASTM A572 GR 50
ASTM A572 GR 50
ASTM A572 GR 60, fy=60KSI
ASTM F3125 GR A325 TYPE 1
SNUG TIGHT U.N.O.
ASTM F1554 GR 36 HDG OR HILTI KWIK BOLT #3
ASTM A563
ASTM F436,
COMMON DOCK WASHERS
ASTM A615 GR. 75 & 80
E70XX
AWS D1.1, AWS A5.1 AND AWS A5.5

5.

TIMBER
TIMBER PILES - FENDER
TIMBER PILES - PIER
TIMBER BRACES
TIMBER PILE CAPS
TIMBER STRINGERS
TIMBER DECKING
PRESERVATIVES
PILES - PIER
BRACES
PILE CAPS AND STRINGERS
TIMBER RAILING
DECKING
HARDWARE
HARDWARE FOR TIMBER CONSTRUCTION SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL IN COMPLIANCE WITH AISI 316, U.N.O. SEE TIMBER CONSTRUCTION SECTION 061333.
- 12" Ø GREENHEART
12" Ø SOUTHERN YELLOW PINE
SYP NO. 2 OR BETTER
SYP NO. 2 OR BETTER
SYP NO. 2 OR BETTER
SYP NO. 2
2.5 PCF COCA
2.5 PCF COCA
2.5 PCF COCA
0.23 PCF MCA
0.23 PCF MCA

GENERAL CONDITIONS:

1.

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.
2.

NOTES HEREIN ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS AND ADDITIONAL INFORMATION.
3.

DATA COLLECTED ASSOCIATED WITH THIS PROJECT IS CONTAINED WITH THE DOCUMENT ENTITLED "GOOSE HUMMOCK BULKHEAD REPLACEMENT PROJECT" PROVIDED AS AN ATTACHMENT TO THE BID DOCUMENTS.
4.

SEE ATTACHMENT "A" IN THE CONTRACT DOCUMENTS FOR GEOTECHNICAL BORING LOG INFORMATION PERFORMED BY FOTH, 2019, LB-B1 TAKEN DECEMBER 30, 2019, WB-B2 TAKEN FEBRUARY 10, 2020, AND WB-B3 TAKEN FEBRUARY 11 & 12, 2020.
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 DOCUMENTS. THE CONTRACTOR SHALL KEEP A COPY OF THE DRAWINGS, SPECIFICATIONS, AND PERMITS ONSITE AT ALL TIMES DURING THE PROJECT.
6.

THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES AND SUBMERGED UTILITIES WITHIN THE LIMITS OF THE WORK PRIOR TO COMMENCING ANY EXCAVATION OR GROUND PENETRATING WORK. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" (1-888-344-7223) AT LEAST 3 BUSINESS DAYS PRIOR TO COMMENCEMENT OF THE EXCAVATION OR GROUND PENETRATING ACTIVITY.
7.

IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE AND MAINTAIN ENVIRONMENTAL CONTROLS AS REQUIRED BY STATE, LOCAL, AND FEDERAL REGULATION AND LAW, AS WELL AS REQUIRED WITHIN EX. PERMITS AND APPROVALS.
8.

BASE PLAN COMPILED BY FOTH USING AVAILABLE MAGIS DATA.
9.

SECTIONS, DETAILS, NOTES, DIMENSIONS AND CONDITIONS ARE APPLICABLE AT ANY OTHER LOCATION WHERE CONDITIONS AND DETAIL ARE SIMILAR BUT ARE NOT SPECIFICALLY NOTED AS SUCH OR ARE NOT SHOWN.
10.

THE CONTRACTOR SHALL PERFORM THE WORK IN A MANNER THAT DOES NOT IMPEDE THE OWNER'S OPERATIONS ON SITE OR THE OWNER'S ON-SITE OPERATING EQUIPMENT.
11.

THE CONTRACTOR PRIOR TO CONSTRUCTION AND FABRICATION OF CONSTRUCTION MATERIALS SHALL VERIFY EX. CONDITIONS AND DIMENSIONS. LENGTHS SHOWN ON THE DRAWINGS ARE CONSIDERED APPROXIMATE, AND THE ACTUAL LENGTHS MAY VARY WHEN SO ACCEPTED BY THE ENGINEER.
12.

IF, DURING THE PERFORMANCE OF THE WORK, THE CONTRACTOR FINDS A CONFLICT, ERROR, OR 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 THEREBY, THE CONTRACTOR SHALL OBTAIN A WRITTEN INTERPRETATION OR CLARIFICATION FROM THE ENGINEER OF RECORD. WORK DONE BEFORE THE ENGINEER OF RECORD RENDERS HIS DECISION IS AT THE CONTRACTOR'S SOLE RISK.
13.

THE WORK SHALL BE PERFORMED IN A GENERAL SEQUENCE DEVELOPED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW, IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR THE SEQUENCES AND PROCEDURES TO BE USED.

14.

THE CONTRACTOR SHALL FURNISH AND COORDINATE PLANT, LABOR, SUPERVISION, MATERIALS, EQUIPMENT AND APPLANCES FOR DEMOLITION AND/OR CONSTRUCTION WORK IN CONNECTION WITH THE DEMOLITION AND/OR CONSTRUCTION OF THE WATERFRONT FACILITIES.
15.

THE OWNER HAS SECURED CERTAIN PERMITS REQUIRED BY FEDERAL, AND STATE AUTHORITIES FOR THE PROPOSED ACTIVITIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM THE WORK IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMITS. THIS INCLUDES BUT NOT LIMITED TO, THE CLEAN WATER ACT, THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY, HEALTH ACT, 401 WATER QUALITY CERTIFICATION, CHAPTER 91 LICENSE, STATE & LOCAL WETLAND REGULATIONS, AND U.S. ARMY CORP OF ENGINEERS PERMITS. THE CONTRACTOR SHALL POST COPIES OF THE PERMITS AT THE SITE THROUGHOUT THE COURSE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN PERMITS ASSOCIATED WITH THE LEGAL DISPOSAL OF CONSTRUCTION DEBRIS. THE CONTRACTOR SHALL SECURE REQUIRED LOCAL AUTHORIZATIONS AND PERMITS.
16.

SPECIAL INSPECTION REQUIREMENTS PER LOCAL AND/OR STATE BUILDING CODES SHALL BE 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 INSPECTIONS ARE TO OCCUR SUCH AS TO NOT DELAY THE SCHEDULE.
17.

THE CONTRACTOR SHALL FURNISH MATERIALS FOR INSTALLATION IN THE COMPLETED WORK AS 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 STORAGE AREA.
18.

THE CONTRACTOR WILL INDEMNIFY AND SAVE HARMLESS THE OWNER AND ENGINEER OF RECORD FROM AND AGAINST ALL LOSSES AND ALL CLAIMS, DEMANDS, PAYMENTS, SUITS, ACTIONS, RECOVERIES, AND JUDGMENTS OF EVERY NATURE AND DESCRIPTION BROUGHT OR RECOVERED 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 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.
19.

THE CONTRACTOR SHALL MAINTAIN AND CONTINUE IN FORCE, INSURANCE COVERAGE AS REQUIRED BY THE OWNER. SUCH INSURANCE 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 THERE SHALL BE DELIVERED TO THE OWNER WITH THE BID CUSTOMARY CERTIFICATES EVIDENCING SUCH PAID-UP INSURANCE, WHICH CERTIFICATES ARE TO BE ISSUED BY THE INSURANCE COMPANIES. GOOD AND RESPONSIBLE COMPANIES, REASONABLY ACCEPTABLE TO THE OWNER, SHALL WRITE SUCH INSURANCE.
20.

THE ENGINEER AND ITS SUB CONSULTANTS SHALL BE ADDED TO THE CONTRACTOR'S GENERAL LIABILITY INSURANCE POLICY AS ADDITIONAL INSURED ON PRIMARY AND CON-TRIBUTORY BASIS. SUBMIT CERTIFICATES OF INSURANCE TO THE ENGINEER AS EVIDENCE OF THIS COVERAGE.
21.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY OF LOCATIONS, DIMENSIONS, AND LEVELS AND NO PLEA AS TO INSTRUCTIONS OR ORDER RECEIVED FROM OTHER SOURCES OTHER THAN INFORMATION CONTAINED ON CONTRACT DRAWINGS, SPECIFICATIONS OR IN WRITTEN ORDERS OF THE OWNER OR ENGINEER OF RECORD SHALL JUSTIFY DEPARTURE FROM THE DIMENSIONS AND ELEVATIONS REQUIRED BY THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SURVEY CONTROL AT ALL TIMES TO ESTABLISH AND MAINTAIN ALL LINES AND ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS.
22.

THE CONTRACTOR SHALL TAKE HIS OWN MEASUREMENTS AT THE SITE, VERIFYING THE SAME WITH THE CONTRACT DRAWINGS AND EX. FACILITIES, AND WILL BE HELD RESPONSIBLE FOR THE PROPER FIT AND ALIGNMENT OF COMPLETED WORK IN ACCORDANCE WITH THE CONTRACT DRAWINGS.
23.

THE CONTRACTOR SHALL GUARANTEE TO THE OWNER MATERIALS AND WORKMANSHIP AGAINST THE ORIGINAL DEFECTS, OR AGAINST INJURY FROM PROPER AND USUAL WEAR WHEN USED FOR THE PURPOSE INTENDED, FOR TWELVE (12) MONTHS AFTER DATE OF FINAL PAYMENT CERTIFICATIONS. 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 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 DEFECTS AND BILL THE CONTRACTOR COST PLUS 15% FOR ADMINISTRATION FEES.
24.

AT THE CONTRACTOR'S EXPENSE, THE CONTRACTOR'S WORKING AREAS SHALL BE CLEANED ON A DAY-TO-DAY BASIS, WITH RUBBISH FROM THE 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 TO AFFECT THE WORK.
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. 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.
27.

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.
28.

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. 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.
29.

THE CONTRACTOR SHALL 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 THE WORK, AND PERSONS IN THE VICINITY OF THE WORK, AND PERSONS 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.

CONCRETE:

1.

CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI-318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
2.

NO WATER SHALL BE ADDED TO THE MIX AT THE JOB SITE.
3.

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.
4.

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.

DEMOLITION NOTES:

1.

NOTIFY OWNER/OWNER'S PROJECT ENGINEER OF DISCREPANCIES BETWEEN EX. CONDITIONS AND DRAWINGS BEFORE PROCEEDING WITH DEMOLITION.
2.

LIMITS DEFINED 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 EX. DETERIORATION ON STRUCTURES. THE CONTRACTOR IS TO FULLY APPRISE HIMSELF OR HERSELF OF THE SITE CONDITIONS PRIOR TO START OF WORK.
3.

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.
4.

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 BULKHEAD, TIMBER PILES, TIMBER DEBRIS, AND OTHER ITEMS AS INDICATED ON THE DRAWINGS.
6.

SELECTIVE DEMOLITION INCLUDES BUT IS NOT LIMITED TO REMOVAL AND REUSE (WHERE POSSIBLE) OF EX. MATERIALS, UTILITIES, AND OTHER COMPONENTS ESSENTIAL FOR A COMPLETE PROJECT.
7.

ITEMS TO BE REMOVED AND REUSED SHALL BE PLACED IN A STAGING AREA ACCESSIBLE FOR INSPECTION BY THE OWNER.
8.

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 DURING 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 ELEMEMENTS 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 TO 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 EX. ELEMENTS DESIGNATED TO REMAIN SHALL BE REPAIRED OR REPLACED IN-KIND AT THE DISCRETION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER AND/OR FOTH.

EARTHWORK NOTES:

1.

DO NOT BEGIN BACKFILLING UNTIL CONSTRUCTION BELOW FINISH GRADE HAS BEEN APPROVED AND THE EXCAVATION IS CLEAN OF TRASH AND DEBRIS.
2.

PLACE AND COMPACT FILL AND BACKFILL TO INDICATED FINISH GRADE WITHIN A TOLERANCE OF ONE FOOT HORIZONTALLY AND 1 INCH VERTICALLY.
3.

STRUCTURAL FILL SHALL CONSIST OF BROKEN OR CRUSHED STONE, BANK OR CRUSHED GRAVEL, OR MIXTURES THEREOF. BROKEN OR CRUSHED STONE SHALL CONSIST OF WELL-GRADED, SOUND, TOUGH, DURABLE STONE. BANK OR CRUSHED GRAVEL SHALL CONSIST OF WELL-GRADED, SOUND, 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 MESH SIEVE. SUBMIT AN INDEPENDENT GRADATION ANALYSIS AND MODIFIED PROCTOR TEST FOR ENGINEER OF RECORD'S REVIEW.
4.

THE CONTRACTOR SHALL EXCAVATE UNSUITABLE MATERIALS, BACKFILL, COMPACT AND GRADE THE SITE TO THE ELEVATIONS AND LIMITS SHOWN AND AS NEEDED TO MEET THE REQUIREMENTS OF THE CONSTRUCTION.
5.

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 ICE. 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 EACH LIFT.
6.

CONTROL STRUCTURAL FILL COMPACTION DURING CONSTRUCTION TO PROVIDE THE MINIMUM PERCENTAGE OF DENSITY SPECIFIED FOR EACH AREA AS DETERMINED ACCORDING TO ASTM D1557. STRUCTURAL FILL AREAS SHALL NOT FALL BELOW 95% OF ITS DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE ABOVE TEST.
7.

GRADE THE AREAS ADJACENT TO BUILDINGS TO ACHIEVE DRAINAGE AWAY FROM THE STRUCTURES, AND TO PREVENT PONDING.

DENSE GRADE:

1.

DENSE GRADE SHALL CONFORM TO THE REQUIREMENTS OF THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR HIGHWAYS AND BRIDGES.
2.

DENSE GRADE MIXTURE SHALL MATCH EX..

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 110 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 BY 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 BARS, 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, FOR THE TEST LOAD, BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MASSACHUSETTS.

GUARDRAIL:

1.

GUARDRAIL SHALL BE STEEL-BACK TIMBER GUARDRAIL TYPE B AS MANUFACTURED BY THE COR-TENN COMPANY, KNOXVILLE, TN OR EQUIVALENT ACCEPTED BY ENGINEER.
2.

POSTS SHALL BE SET PLUMB, IN HAND OR MECHANICALLY DUG HOLES, OR DRIVEN, THEN BACKFILLED WITH ACCEPTABLE MATERIAL PLACED IN LAYERS AND THOROUGHLY COMPACTED.
3.

STEEL-BACKED TIMBER 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.
4.

THE STEEL-BACKED RAIL ELEMENT, TRANSITION PANELS, TERMINAL SECTIONS AND CONNECTING HARDWARE SHALL CONFORM TO THE U.S. DOT FHA US CUSTOMARY STANDARD 617-60.
5.

GUARDRAIL END TREATMENT: PROPRIETARY END TREATMENT SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' SPECIFICATIONS AND RECOMMENDATIONS.
6.

EACH END OF THE STEEL-BACK GUARD RAIL FOR EVERY STRETCH OF GUARD SHALL CONFORM TO THE US DOT FHA US CUSTOMARY STANDARD 617-69.
7.

ALL STEEL COMPONENTS AND HARDWARE SHALL CONFORM TO U.S. DOT FHA US CUSTOMARY STANDARD 617-60. ALL METAL WORK SHALL BE DONE IN THE SHOP.
8.

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.

NON-SHRINK GROUT:

1.

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:

1.

REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60, OR 75 AS CALLED FOR.
2.

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'.
3.

REINFORCEMENT SHALL CONFORM TO BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318), ACI DETAILING MANUAL (SP-68), CRSI MANUAL OF STANDARD PRACTICE (MSP) AND THE STRUCTURAL WELDING CODE REINFORCING STEEL (AWS D1.4). ELECTRODES TO BE E-80.
4.

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.
6.

LAPS SHALL BE CLASS B TENSION LAP SPLICES, UNLESS NOTED OTHERWISE.
7.

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" SIXTEENTH EDITION OR LATEST VERSION PUBLISHED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
2.

CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE STEEL FABRICATOR EXCEPT FOR THOSE SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS.

PILES - TIMBER:

1.

TIMBER PILES SHALL BE DRIVEN TO A MINIMUM CAPACITY OR MINIMUM EMBEDMENT LENGTH AS INDICATED ON THE CONTRACT DRAWINGS.
2.

CUT AND DRILLED EXPOSED SURFACES SHALL BE LIBERALLY RECOATED BY BRUSH WITH A FIELD TREATMENT ACCEPTED BY THE ENGINEER OF RECORD.
3.

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.
4.

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 UNUSUAL KNOTS OR DECAY. USE TREES THAT HAVE A UNIFORM STRAIGHT TAPER FROM BUTT TO TIP.
5.

HANDLE TIMBER PILES CAREFULLY, WITHOUT SUDDEN DROPPING, BREAKING OF OUTER FIBERS, BRUISING OR PENETRATING THE SURFACE WITH TOOLS.

PILE DRIVING:

1.

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 PLACE AND COMPACT FILL AND BACKFILL TO INDICATED FINISH GRADE WITHIN A TOLERANCE OF ONE FOOT HORIZONTALLY AND 1 INCH VERTICALLY.
2.

DRIVE THE PILES STRAIGHT AND TRUE AT INDICATED LOCATIONS, WITH DEVIATION FROM THE LONGITUDINAL AXIS OF NOT MORE THAN 1/4 INCH PER FOOT.
3.

LOCATE THE PILES WITHIN 3 INCHES OF THE POSITIONS INDICATED ON THE DRAWINGS.
4.

CONTINUOUSLY DRIVE EACH PILE TO REACH THE CAPACITY AND/OR FULL EMBEDDED LENGTH CALLED FOR ON THE DRAWINGS.
5.

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, BROKEN 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.
6.

LENGTHS SHOWN ON THE DRAWINGS ARE CONSIDERED AVERAGE VALUES, AND THE ACTUAL LENGTHS MAY VARY WHEN SO ACCEPTED BY THE ENGINEER OF RECORD.
7.

PROVIDE DRIVING RESISTANCE PENETRATION AND REFUSAL VALUES AS ACCEPTED BY THE ENGINEER OF RECORD.
8.

ALL SHEET PILES DRIVEN TO REFUSAL IN ROCK TO HAVE HARDENED CUTTING SHOES INSTALLED BEFORE DRIVING.
9.

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 PERMITTED UNLESS ACCEPTED BY THE ENGINEER OF RECORD. PRE-DRILLING WILL NOT BE PERMITTED UNLESS ACCEPTED BY THE ENGINEER OF RECORD, WHEREBY ACCEPTED PRE DRILLING TO ASSIST PENETRATION MAY BE USED WHERE EXTREME DRIVING RESISTANCE IS ENCOUNTERED, OR WHERE VIBRATIONS FROM DRIVING MAY BE DETRIMENTAL TO ADJACENT STRUCTURES.
12.

WHERE PILES ARE PUSHED UP BY PRESSURE FROM DRIVING OF ADJACENT PILES, RE-DRIVE AS REQUIRED AND AT NO ADDITIONAL COST TO THE OWNER.
13.

THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A COMPLETE DRIVING RECORD WITH THE DATE OF FINAL INSTALLATION AND TIP ELEVATIONS. THIS RECORD SHALL BE SUBMITTED WEEKLY AND SIGNED BY A REPRESENTATIVE OF THE CONTRACTOR. THE CONTRACTOR SHALL KEEP AN ACCURATE SET OF PILE RECORDS INDICATING PILE NUMBER, PILE TYPE AND INSTALLED LENGTH, TYPE OF HAMMER AND DRIVING ENERGY, DATE OF INSTALLATION, FINAL TIP ELEVATION, AND CONTRACTOR'S REPRESENTATIVE NAME AND SIGNATURE.
14.

ALL ROCKS, TIMBERS, PILE STUBS, OR OTHER OBSTRUCTIONS AT THE GROUND SURFACE TO WITHIN 5 FEET OF THE MUDLINE (EITHER ABOVE OR UNDER WATER) WHICH INTERFERE WITH DRIVING OF PILES SHALL BE REMOVED AT NO ADDITIONAL COST TO THE OWNER.
15.

CONTRACTOR SHALL SUBMIT PLAN TO ENGINEER FOR CLEARING THE DRIVING LINE FOR REVIEW.
16.

THE NEW SHEET MAY NOT BE UTILIZED TO CLEAR THE DRIVE LINE.
17.

CONTRACTOR SHALL CLEAR THE DRIVING LINE PRIOR TO THE START OF SHEET PILE DRIVING. THE CONTRACTOR MAY HIRE AN INDEPENDENT CONSULTANT TO CONFIRM THE DRIVING LINE IS CLEAR.

PROTECTIVE COATING:

1.

ALL STEEL SHEET PILES EXPOSED TO SALT WATER TO BE EPOXY COATED (BOTH SIDES) IN ACCORDANCE WITH SPECIFICATIONS AND TO 10 FEET BELOW DREGED MUDLINE.
2.

COATING SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATION WITH SURFACE PREPARATION FOR IMMERSION SERVICE WITH MINIMUM GRIT BLASTING TO NEAR WHITE FINISH (SSPC-SP10 OR NACE).
3.

NO COATING SHALL BE APPLIED WITHIN THE LIMITS OF THE INTERLOCK. INTERLOCKS SHALL REMAIN FREE SLIDING.
4.

MATERIAL USED FOR FACTORY EPOXY COATING SHALL BE BAR-RUST 235 MULTI-PURPOSE EPOXY COATING AS MANUFACTURED BY DEVCO COATINGS OR EQUIVALENT ACCEPTED BY THE PROJECT ENGINEER FOR STEEL SHEET PILES.
5.

FIELD TOUCH UP COATING SHALL BE IDENTICAL TO FACTORY COATING AND APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
6.

PROTECTIVE COATING TOPCOAT SHALL BE BLACK UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR BY THE OWNER.
7.

SURFACES SHALL BE PREPARED IN STRICT ACCORDANCE WITH THE PROTECTIVE COATING SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS. SURFACES ARE TO BE ABRASION BLASTED TO A NEAR WHITE SURFACE CLEANLINESS IN ACCORDANCE WITH SSPC SP 10. BLAST PROFILE ON STEEL SHALL BE 1.5 TO 2.5 MILS IN DEPTH AND BE OF A SHARP, JAGGED NATURE AS OPPOSED TO A "PEEN" PATTERN (FROM SHOT BLASTING). SURFACES MUST BE SOUND, DRY, CLEAN, FREE OF OIL, GREASE, DIRT, MILDEW, FORM RELEASE AGENTS, CURING COMPOUNDS, LOOSE AND FLAKING PAINT, GRIT DUST, AND OTHER FOREIGN SUBSTANCES. ROAST BLASTED SURFACES ARE NOT ACCEPTABLE.
8.

THE PROTECTIVE COATING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. COATING IS TO BE APPLIED IN TWO COATS TO ACHIEVE A MINIMUM OVERALL DRY FILM THICKNESS OF 15 MILS.
9.

ALL HOLIDAYS OR OTHER IMPERFECTIONS IN THE COATING SHALL BE REMOVED OR REPAIRED AT THE CONTRACTORS EXPENSE PRIOR TO FINAL ACCEPTANCE OF THE WORK.

TEMPORARY WORK:

1.

LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK THAT, UPON COMPLETION, ARE NOT A PART OF THE WORK, SHALL BE FURNISHED, INSTALLED, AND SUBSEQUENTLY REMOVED FROM THE SITE BY THE CONTRACTOR.
2.

TEMPORARY WORK SHALL BE SUBJECT TO THE REQUIREMENTS OF THE STATE AND APPLICABLE LOCAL BUILDING CODES.
3.

THE CONTRACTOR SHALL SAFERGUARD AND PROTECT EXCAVATIONS.
4.

DURING EXECUTION OF THE WORK, THE CONTRACTOR IS REQUIRED TO INSTALL AND MAINTAIN REQUIRED SEWAGE TREATMENT AND EROSION CONTROL MEASURES TO PROTECT ADJACENT WATERWAYS, STREETS, AND PROPERTIES. MEASURES INCLUDE BUT ARE NOT LIMITED TO TEMPORARY BERMS, STRAW WATTLES, HAY BALES, SILT FENCES, CONTAINMENT BOOMS, AND TURBIDITY CURTAINS. IN ACCORDANCE WITH STATE REGULATORY AUTHORIZATIONS, THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN TEMPORARY TURBIDITY CURTAINS DURING CONSTRUCTION. TEMPORARY MATERIALS AND EQUIPMENT SHALL CONFORM TO REQUIREMENTS FOR TEMPORARY WORK.

FOOT

GOOSE HUMMOCK BOAT RAMP
BULKHEAD REHABILITATION
GOOSE HUMMOCK LANDING,
1 MA-6A, ORLEANS, MA 02653

DEPARTMENT OF PUBLIC WORKS

REVISIONS	DESCRIPTION	DATE	BY	NO	1	2	3	4	5
DATE OF PREPARATION									
SURVEYED	MCJ/H	10/24/2019							
DRAWN	WFG/BPF	7/18/2025							
DESIGNED	WFG	1/18/2025							
CHECKED	AIM	1/27/2025							
SHEET TITLE:									
ISSUANCE:									
PROJECT NO: 190009.00									
SHEET NUMBER									
G-002									

COMMITTEE OF THE TOWN OF ORLEANS
ALEX J. MOORE
CIVIL
REG. NO. 55309
Stamp: 7/18/2025

- TIMBER:**
1. VISUALLY GRADED STRUCTURAL LUMBER AND WOOD CONSTRUCTION SHALL CONFORM TO ASTM D245-06 STANDARD PRACTICE FOR ESTABLISHING STRUCTURAL GRADES AND RELATED ALLOWABLE PROPERTIES FOR VISUALLY GRADED LUMBER.
 2. MECHANICAL STRENGTH OF TIMBER SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D4761-16.
 3. HARDWARE USED TO CONNECT CCA TREATED TIMBER, INCLUDING BOLTS, NUTS AND WASHERS, ETC., SHALL BE HOT DIP GALVANIZED STEEL CONFORMING TO ASTM A307 GRADE A. GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A153.
 4. HARDWARE AND FASTENERS USED TO CONNECT MCA TREATED TIMBER INCLUDING BOLTS, NUTS AND WASHERS, ETC., SHALL BE GRADE 316 STAINLESS STEEL AND CONFORM TO THE REQUIREMENTS OF THE RESPECTIVE ASTM STANDARD. HARDWARE SHALL PROVIDE A FLUSH FINISH WHERE APPLICABLE.

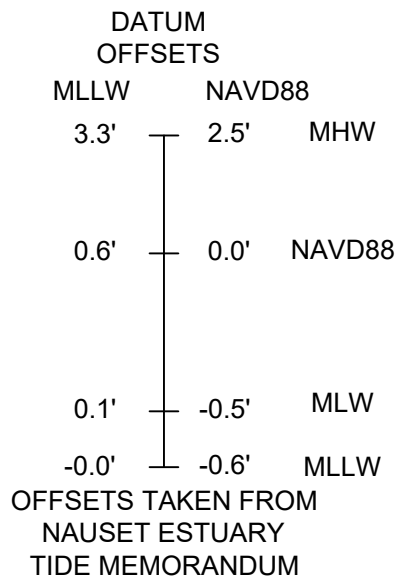
- UTILITY NOTES:**
1. THE SUBSURFACE UTILITY INFORMATION SHOWN HEREON IS COMPILED BASED ON FIELD SURVEY INFORMATION, RECORD INFORMATION AS SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES, AND PLAN INFORMATION SUPPLIED BY THE OWNER. IF ANY, THEREFORE NO GUARANTEE IS MADE AS TO THE ACCURACY OF SAID COMPILED SUBSURFACE INFORMATION TO ANY CERTAIN DEGREE OF STATED TOLERANCE. ONLY PHYSICALLY LOCATED SUB-SURFACE UTILITY FEATURES FALL WITHIN NORMAL STANDARD OF CARE ACCURACIES.
 2. THE LOCATIONS OF UNDERGROUND PIPES, CONDUITS, AND STRUCTURES HAVE BEEN DETERMINED FROM SAID INFORMATION, AND ARE APPROXIMATE ONLY. COMPILED LOCATIONS OF ANY UNDERGROUND STRUCTURES, NOT VISIBLY OBSERVED AND LOCATED, CAN VARY FROM 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 COMPILED 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.


- 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 OWNERS REPRESENTATIVE.
 2. EROSION AND SEDIMENTATION CONTROL DEVICES AND PROVISIONS SHALL BE MAINTAINED IN OPERATIONAL CONDITION BY THE CONTRACTOR AND SHALL BE REMOVED AND LEGALLY DISPOSED AT THE COMPLETION OF THE PROJECT.
 3. HAY BALES SHALL CONSIST OF FIRM, NEW BALES OF SALT HAY OR SMALL GRAIN STRAW, JUTE TIED, WITH AN AVERAGE DRY WEIGHT OF 10 TO 40 POUNDS PER BALE AND SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
 4. SILT FENCE SHALL BE MIRAFI 800X AS MANUFACTURED BY MIRAFI INC., GEOTEX 300ST AS MANUFACTURED BY SYNTHETIC INDUSTRIES, INC., PROPEX 2004 AS MANUFACTURED BY AMOCO FABRICS & FIBERS CO., OR EQUIVALENT.
 5. FABRIC FENCE MATERIAL SHALL BE SUPPLIED IN ROLLS WITH APPROVED STAKING ATTACHMENTS FROM AN APPROVED SUPPLIER AND SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
 6. TURBIDITY CURTAIN SHALL BE A TYPE 2 TURBIDITY CURTAINS AND INSTALLED FOLLOWING MANUFACTURERS RECOMMENDATIONS. CONTRACTOR SHALL FOLLOW TIME OF YEAR REQUIREMENTS OUTLINED IN THE ORLEANS ORDER OF CONDITIONS, MA DEP FILE NO. 54-2643.
 7. TURBIDITY CURTAIN SHALL BE TYPE 2 WC-DOT TURBIDITY CURTAIN AS MANUFACTURED BY ABASCO, INC., OR EQUIVALENT.
 8. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE INSPECTED WEEKLY DURING THE CONSTRUCTION PERIOD.
 9. STOCKPILING OF MATERIALS WITHIN THE FLOOD HAZARD ZONE IS PROHIBITED.
 10. WORKING OR PLACING MATERIAL ON EX. WETLAND VEGETATION IS PROHIBITED.
 11. 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 OR OTHER ACCEPTABLE METHOD. THE FENCE IS TO REMAIN IN PLACE AT ALL TIMES WHILE CONSTRUCTION IS UNDERTAKEN. HOWEVER, AS THE FENCED AREA IS SUBJECT TO TIDAL INUNDATION AND WAVE ACTION, THE SYSTEM SHALL BE REMOVED WHEN THE WAVE AND TIDE CONDITIONS COULD CAUSE DAMAGE TO THE FENCING.

© COPYRIGHT 2025, FOTH INFRASTRUCTURE & ENVIRONMENT, LLC.

- LIST OF ABBREVIATIONS:**
- | | | |
|--|---|-----------|
| ALTERNATE | - | ALT |
| AMERICAN ASSOCIATION OF STATE & HIGHWAY TRANSPORTATION OFFICIALS | - | AASHTO |
| APPROXIMATE | - | APPROX |
| BENCHMARK | - | BM |
| BOTTOM OF SLOPE | - | BOS |
| BOTTOM OF CURB | - | BOC |
| BUILDING | - | BLDG |
| CATCH BASIN | - | CB |
| CAST IN PLACE | - | C.I.P. |
| CENTERLINE | - | CL |
| CENTER TO CENTER | - | C-C |
| CHAIN LINK FENCE | - | CLF |
| CONTROLLED LOW-STRENGTH MATERIAL | - | CLSM |
| CONTROL POINT | - | CP |
| CUBIC FEET PER SECOND | - | CFS |
| CUBIC YARDS | - | CY |
| ELEVATION | - | EL. ELEV. |
| EDGE OF PAVEMENT | - | EOP |
| ENVIRONMENTAL PROTECTION AGENCY | - | EPA |
| EX. | - | EX. EXIST |
| FEET | - | FT |
| GALVANIZED | - | GALV |
| HIGH DENSITY POLYETHYLENE | - | HDPE |
| HOT DIPPED GALVANIZED | - | HDG |
| INCHES | - | IN |
| INFILTRATION CHAMBER | - | I.F. |
| KIPS PER SQUARE INCH | - | KSI |
| LENGTH | - | L |
| LINEAR FOOT | - | LF |
| MANHOLE | - | MH |
| MASS HIGHWAY DEPARTMENT | - | MHD |
| MAXIMUM | - | MAX |
| MEAN HIGH WATER | - | MHW |
| MEAN LOWER LOW WATER | - | MLLW |
| MINIMUM | - | MIN |
| MISCELLANEOUS | - | MISC. |
| NOT TO SCALE | - | NTS |
| ORGANIC MATERIAL | - | OL |
| OUTSIDE DIAMETER | - | OD |
| OVEREDGE | - | OD |
| POUNDS PER SQUARE INCH | - | PSI |
| PROPOSED | - | PROP. |
| REMOVE & DISPOSE | - | R & D |
| REMOVE & RESET | - | R & R |
| SPECIFICATION | - | SPEC |
| STATION | - | STA |
| SQUARE FOOT | - | SF |
| TOP OF CURB | - | TOC |
| TOP OF SLOPE | - | TOS |
| TRENCH DRAIN | - | T.D. |
| TYPICAL | - | TYP |
| UNDERGROUND ELECTRICAL | - | UGE |
| WALL THICKNESS | - | WT |

- SURVEY NOTES:**
1. SURVEYOR: M. COUNT, J. HILL
 2. PROJECT NUMBER: 190009
 3. SURVEY DATE: 10-24-2019
 4. VESSEL: FOTH OLAF
 5. TRANS./FATH.: ODOM CVM, 200 KHZ TRANSDUCER, TRIMBLE RTK W/ KEYNET
 6. WEATHER COND: SUNNY, 63° WIND 0-5 KTS
 7. PROJECT DATUM: NAVD88
 8. COOR. SYSTEM: NAD 83 MASS MAINLAND
 9. DATA REDUCTION: 1° DATA SORT
 10. RESULTS OF TOPOGRAPHIC & HYDROGRAPHIC SURVEY BY FOTH INFRASTRUCTURE & ENVIRONMENT, LLC. (FOTH) ON 10/24/2019.
 11. ELEVATIONS AND SOUNDINGS ARE IN FEET AND TENTHS, AND REFER TO THE NAVD88 DATUM.
 12. DATUM CONVERSIONS SHOWN WAS TAKEN FROM THE NAUSET ESTUARY TIDE MEMORANDUM AT THE PROJECT SITE.
 13. COORDINATES ARE BASED ON NAD83 MASSACHUSETTS MAINLAND STATE PLANE GRID SYSTEM.
 14. PROJECT BENCHMARK IS DISK LOCATED AT ROUTE 6 ROTARY STAMPED "424 G" PUBLISHED EL. +13.23' NAVD88.
 15. SITE BENCHMARK IS TOP OF HYDRANT SPINDLE EL. +10.42 NAVD88.
 16. PROPERTY LINE INFORMATION PROVIDED FROM PLAN BY GREEN SEAL ENVIRONMENTAL INC. TITLED "EXISTING CONDITIONS PLAN" 113 OLD COUNTY RD. ORLEANS, MA DATED 09/18/2018
 17. PROPERTY LINE BETWEEN TOWN OF ORLEANS AND HOWARTH HOLDINGS, LLC. (13 OLD COUNTY RD.) IS DEFINED BY THE HISTORIC CENTERLINE OF JEREMIAH'S GUTTER AS DEFINED ON "PLAN OF LAND IN ORLEANS, MASS. PREPARED IN JANUARY, 1964 BY ARTHUR L. SPARROW CO., AND RECORDED IN PLAN BOOK 182 PAGE 39.
 18. LOCATION OF EX. 36" CMP TAKEN FROM DRAWING TITLED "SITE PLAN, LEGEND, AND NOTES" BY GH D INC. DATED 03/29/2019
 19. RTK CORRECTIONS: RTK CORRECTIONS FOR THIS SURVEY PROVIDED BY KEYNET - VRS.
 20. BENCHMARK / RTK TIDES: TIDES ARE RECORDED USING RTK TIDES IN HYPACK. ELEVATIONS FROM ELLIPSOID TO ORTHOMETRIC NAVD88 USE GEOID 12A.
 21. PROJECT SITE IS IN FEMA ZONE VE EL. 12/13 (NAVD88) IN ACCORDANCE TO FEMA FIRM #25001C0436J, EFFECTIVE DATE 07/16/2014. DELINEATION OF EL. 12/13 ALONG FACE OF BULKHEAD.
 22. THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS THE RESULTS OF SURVEYS ON THE DATES SHOWN, AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THAT TIME. INTERPOLATED INFORMATION FROM BETWEEN SOUNDING RUNS IS NOT GUARANTEED. SHOALS, OBSTRUCTIONS OR OTHER DIFFERING CONDITIONS MAY EXIST BETWEEN THESE RUNS. CONSULT WITH FOTH ENGINEERING FOR MORE DETAILED INFORMATION.
 23. 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, REPRODUCTION OR DISCLOSURE OF THE INFORMATION CONTAINED HEREON IS EXPRESSLY PROHIBITED WITHOUT THE WRITTEN CONSENT OF FOTH.
 24. DIMENSIONS ARE IN FEET AND INCHES OR TENTHS OF A FOOT UNLESS OTHERWISE NOTED.





GOOSE HUMMOCK BOAT RAMP
BULKHEAD REHABILITATION
GOOSE HUMMOCK LANDING,
1 MA-6A, ORLEANS, MA 02653

TOWN OF ORLEANS
DEPARTMENT OF PUBLIC WORKS

REVISIONS	
DATE	DESCRIPTION
NO	NO
NO	NO
NO	NO
NO	NO
NO	NO

DATE OF PREPARATION	
BY	DATE
MCH	10/24/2019
WFG/BPF	7/18/2025
WFG	1/18/2025
AIM	1/27/2025

SHEET TITLE:

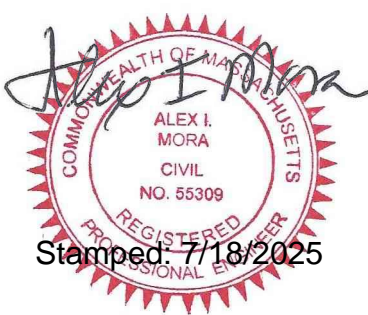
PROJECT
NOTES
SHEET 2 OF 2

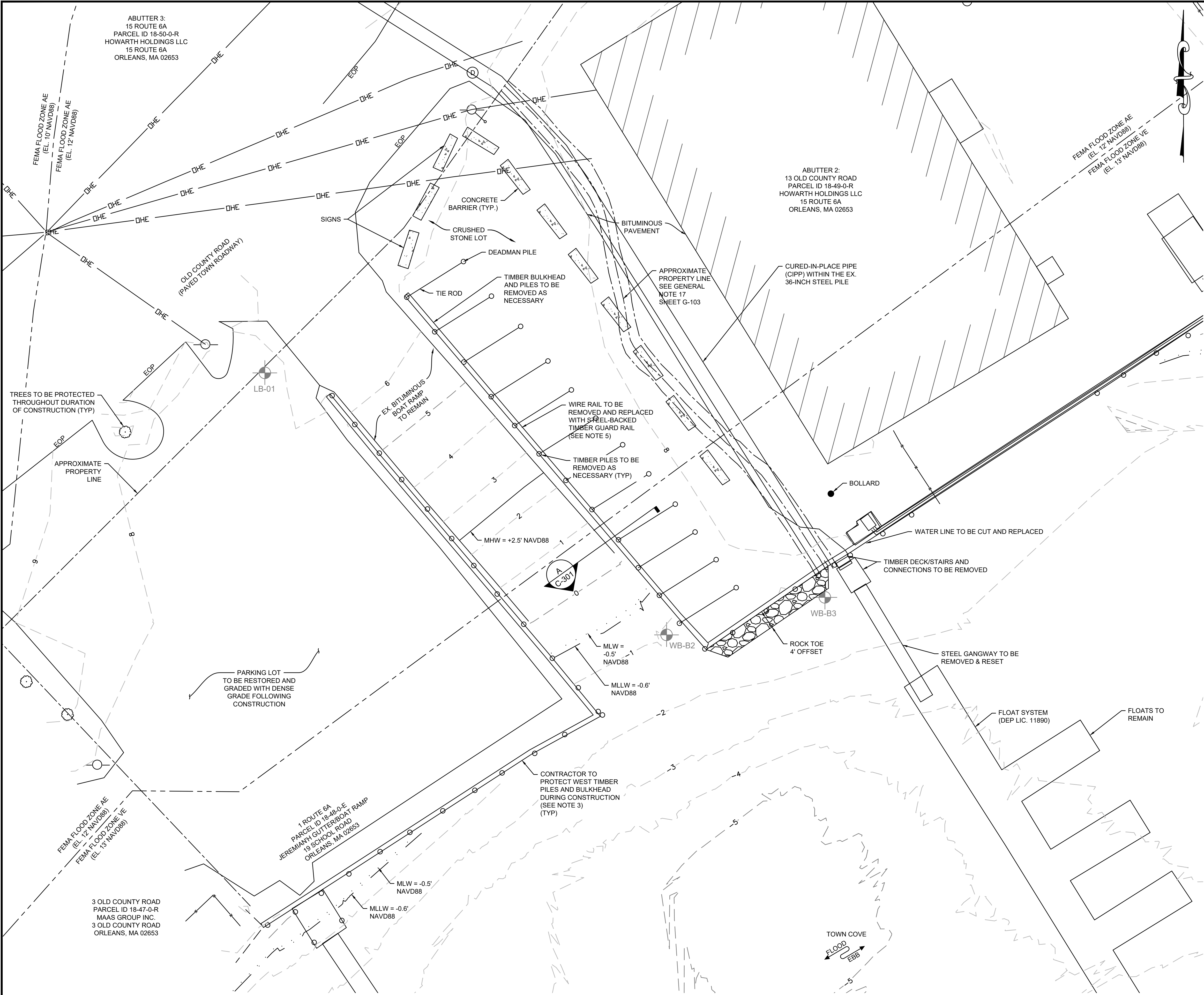
ISSUANCE:

ISSUE
FOR BID

PROJECT NO: 190009.00


SHEET NUMBER
G-002





NOTES:

1. EX. DEADMAN, TIEBACKS, & ANCHOR PILES, ETC. ARE SHOWN BASED UPON AVAILABLE RECORD PLANS AND HAVE NOT BEEN CONFIRMED IN FIELD.



GOOSE HUMMOCK BOAT RAMP
BULKHEAD REHABILITATION
GOOSE HUMMOCK LANDING,
1 MA-6A, ORLEANS, MA 02653

TOWN OF ORLEANS
DEPARTMENT OF PUBLIC WORKS

REVISIONS	
NO.	DESCRIPTION
1	
2	
3	
4	
5	

DATE OF PREPARATION		
BY	DATE	
MC/JH	10/24/2019	
WFG/BPF	7/18/2025	
WFG	1/18/2025	
AIM	1/27/2025	

SHEET TITLE:

EXISTING
SITE PLAN

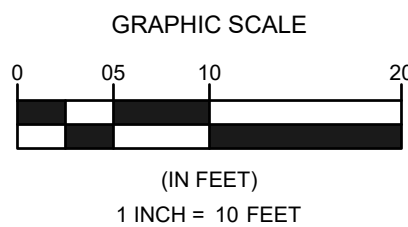
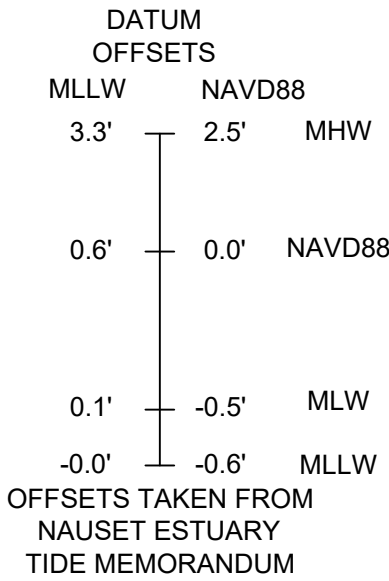
ISSUANCE:

ISSUE
FOR BID

PROJECT NO: 190009.00

SHEET NUMBER
V-101

EXISTING CONDITIONS PLAN
SCALE: 1" = 10'-0"



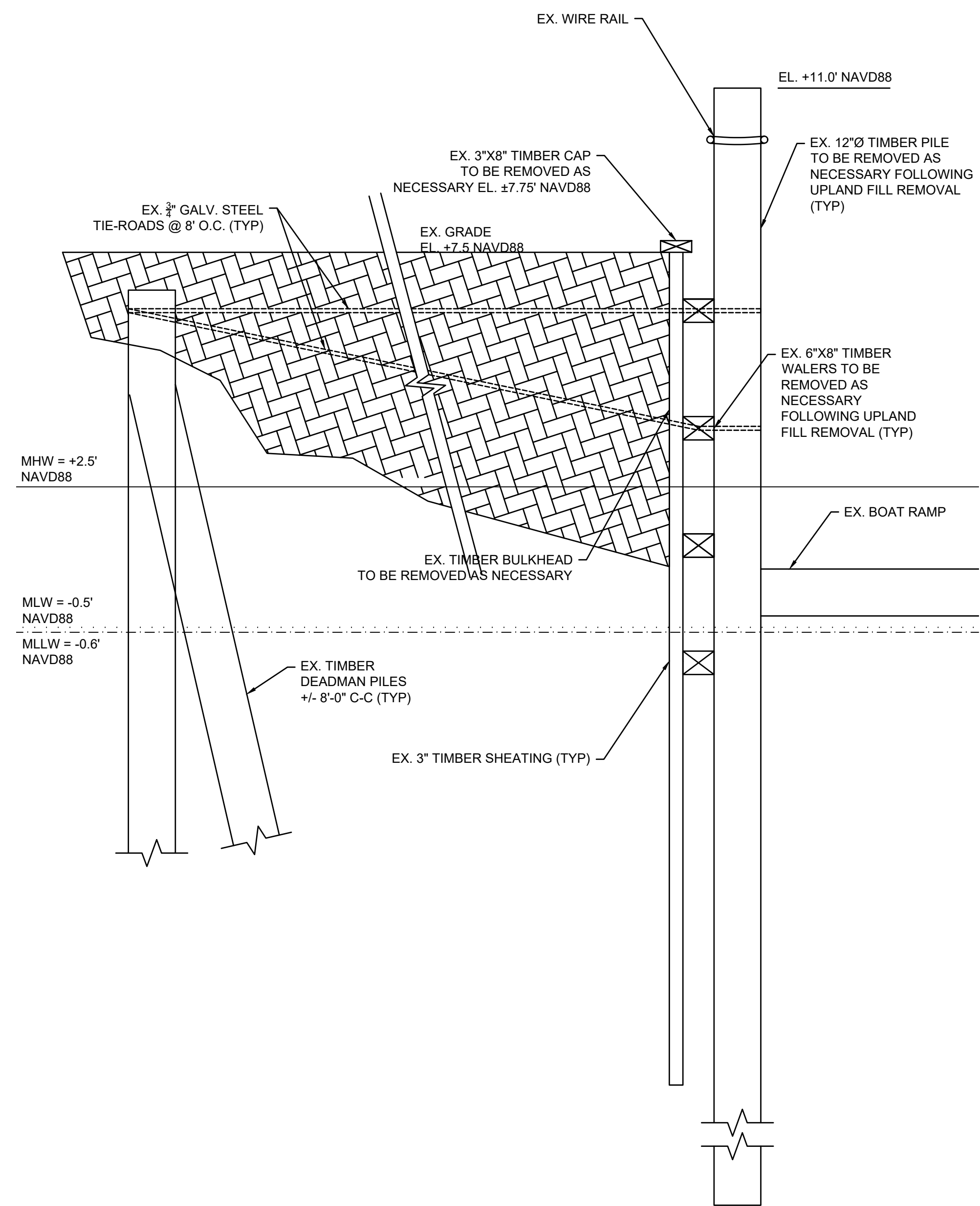
NO	BY	DATE	REVISIONS	
			DESCRIPTION	
1				
2				
3				
4				
5				

DATE OF PREPARATION		
BY	DATE	
SURVEYED	MC/JH	10/24/2019
DRAWN	WFG/BPF	7/18/2025
DESIGNED	WFG	1/18/2025
CHECKED	AIM	1/27/2025

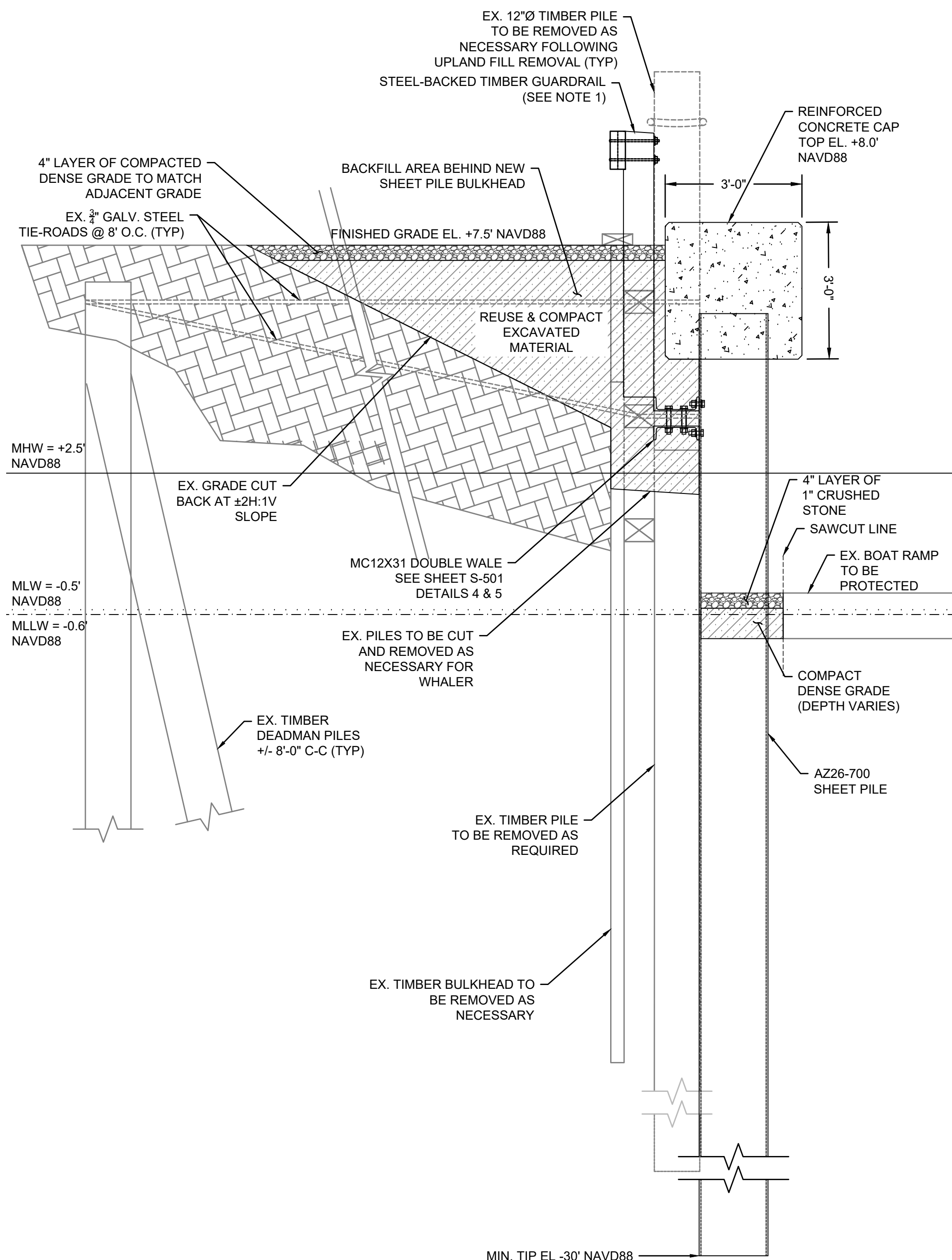
SHEET TITLE:

SECTIONS

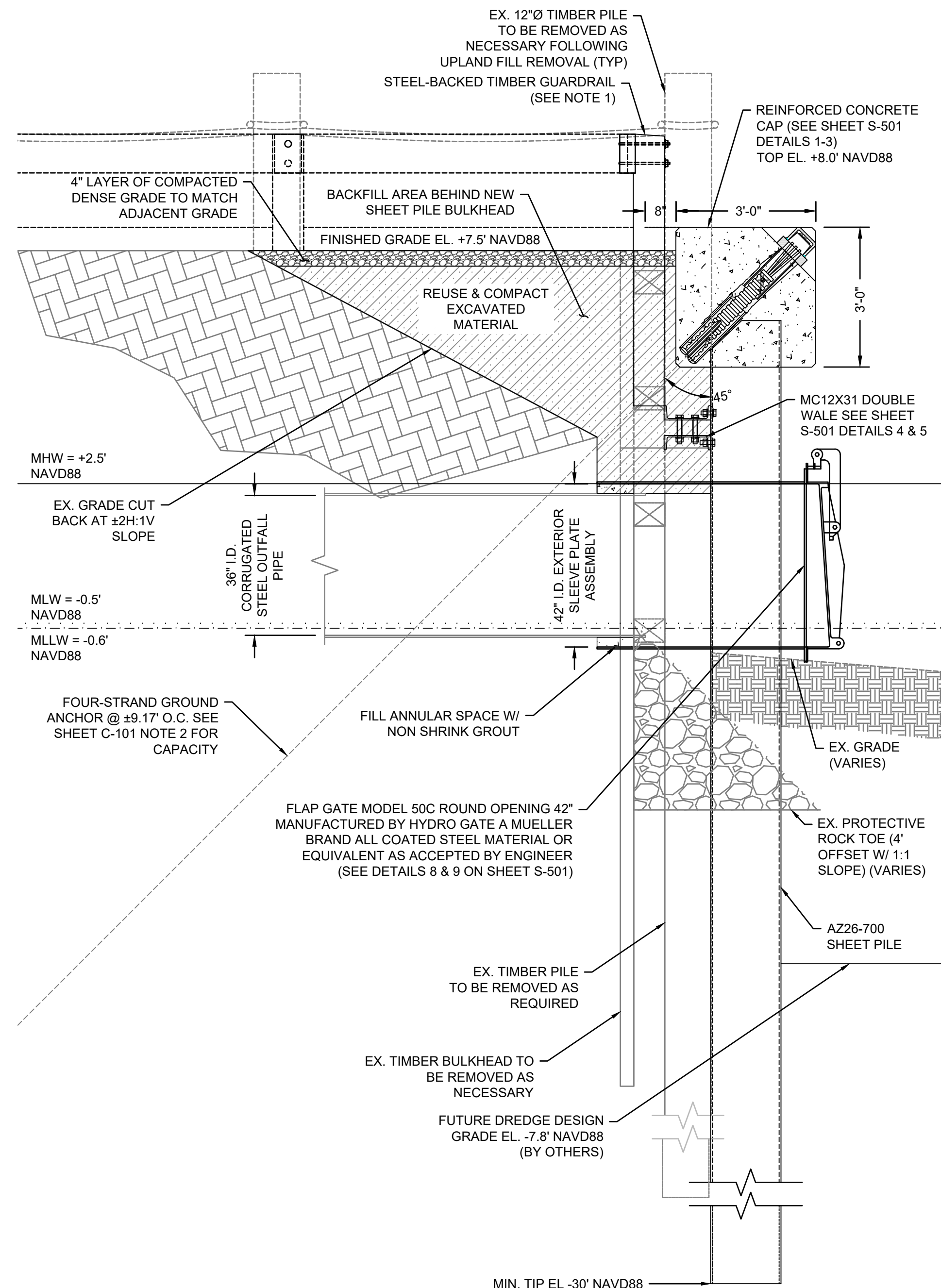
ISSUANCE:	
ISSUE FOR BID	
PROJECT NO: 190009.00	
SHEET NUMBER	
C-301	



A EXISTING TIMBER BULKHEAD SECTION
V-301 SCALE: 1" = 2'

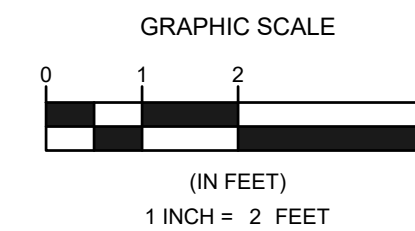
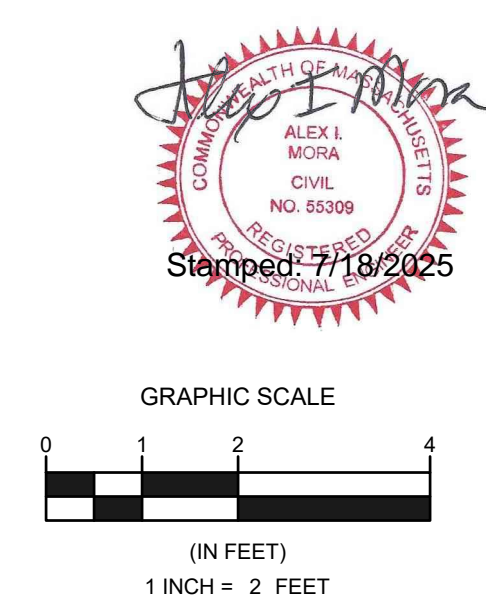


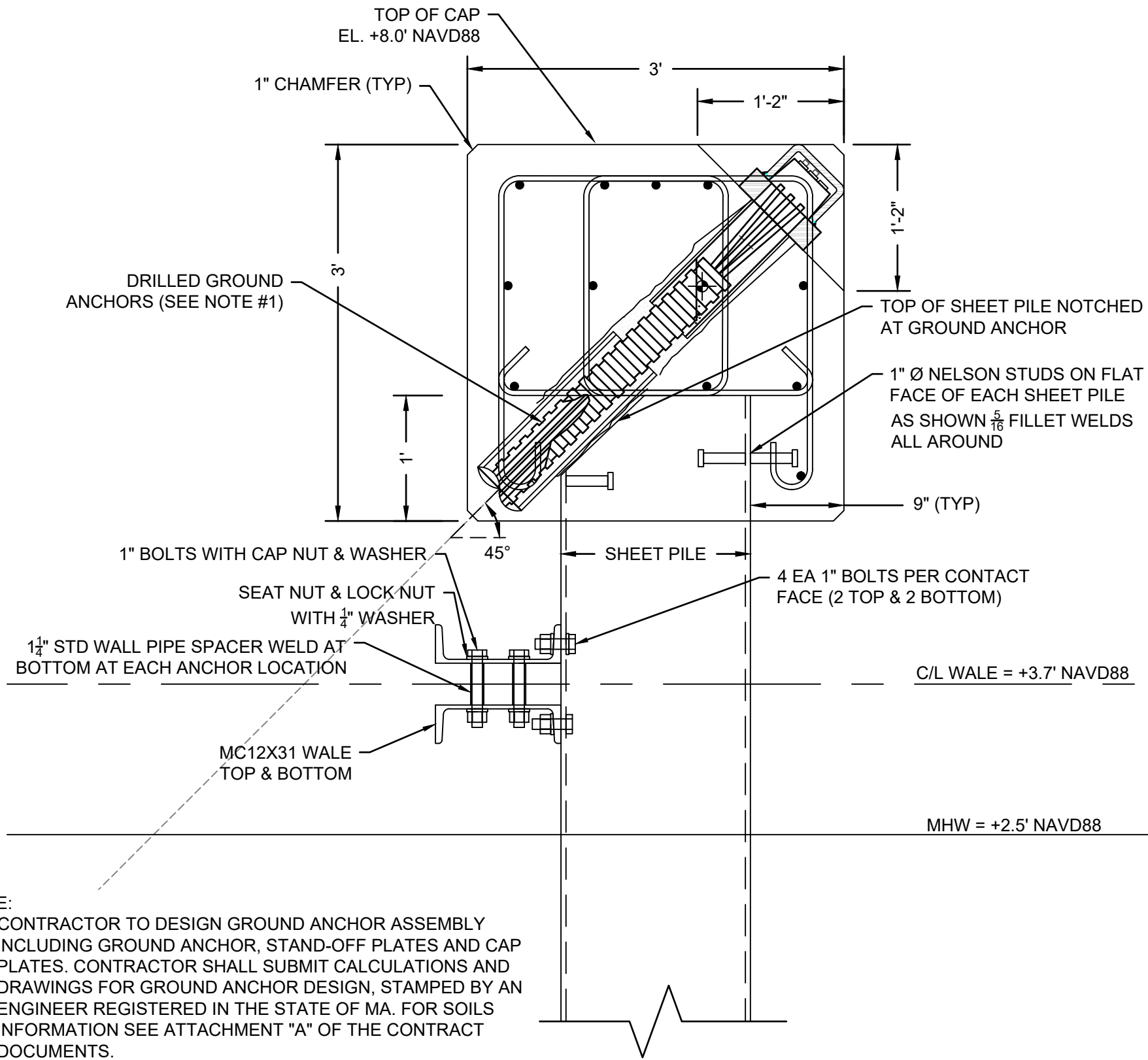
B CANTILEVER SHEET PILE BULKHEAD SECTION
C-301 SCALE: 1" = 2'



C GROUT ANCHORED SHEET PILE BULKHEAD SECTION
C-301 SCALE: 1" = 2'

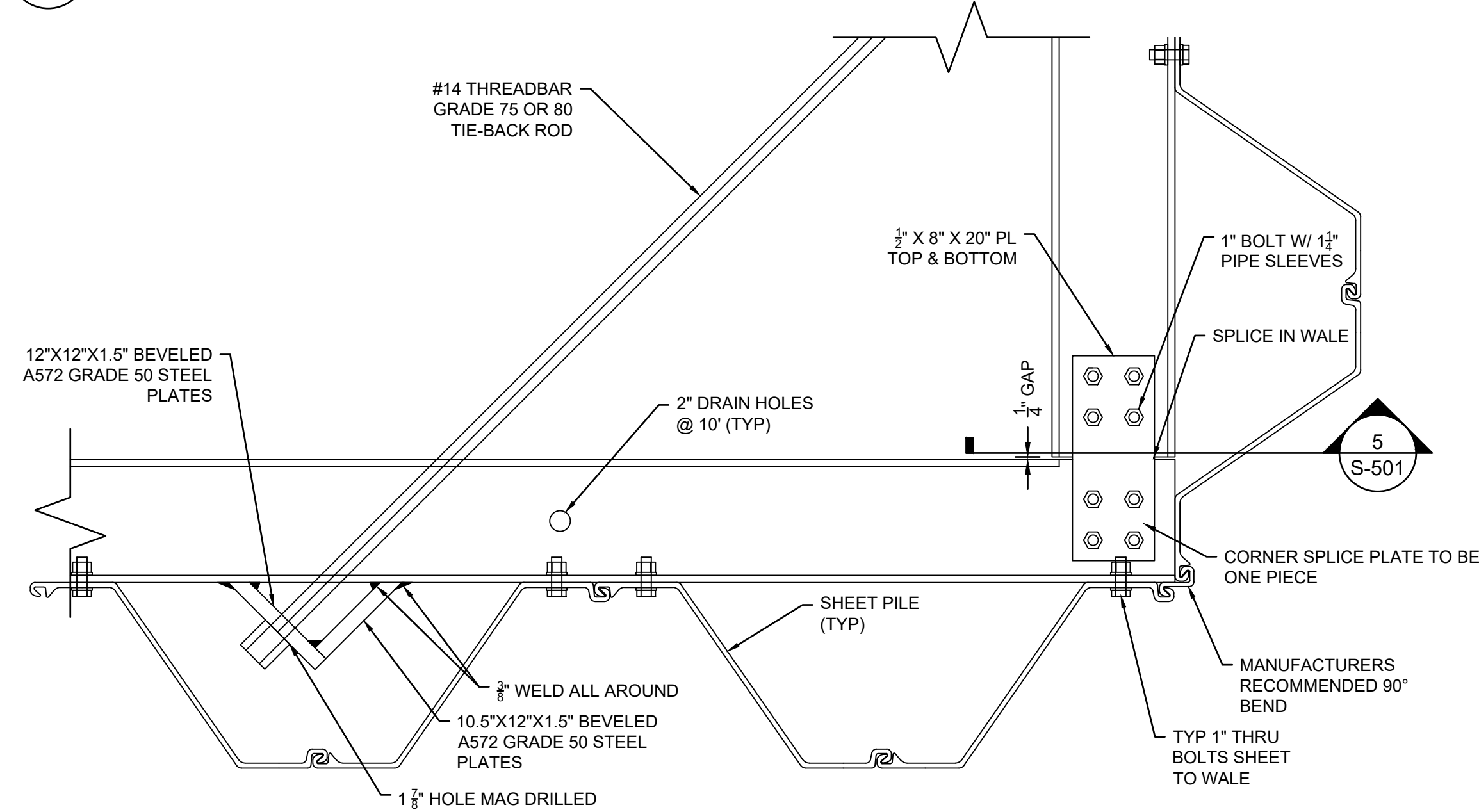
SITE PLAN NOTES:
1. GUARDRAIL SHALL BE STEEL-BACK TIMBER GUARDRAIL TYPE B AS MANUFACTURED BY THE COR-TENN COMPANY, KNOXVILLE, TN, OR EQUIVALENT ACCEPTED BY ENGINEER.





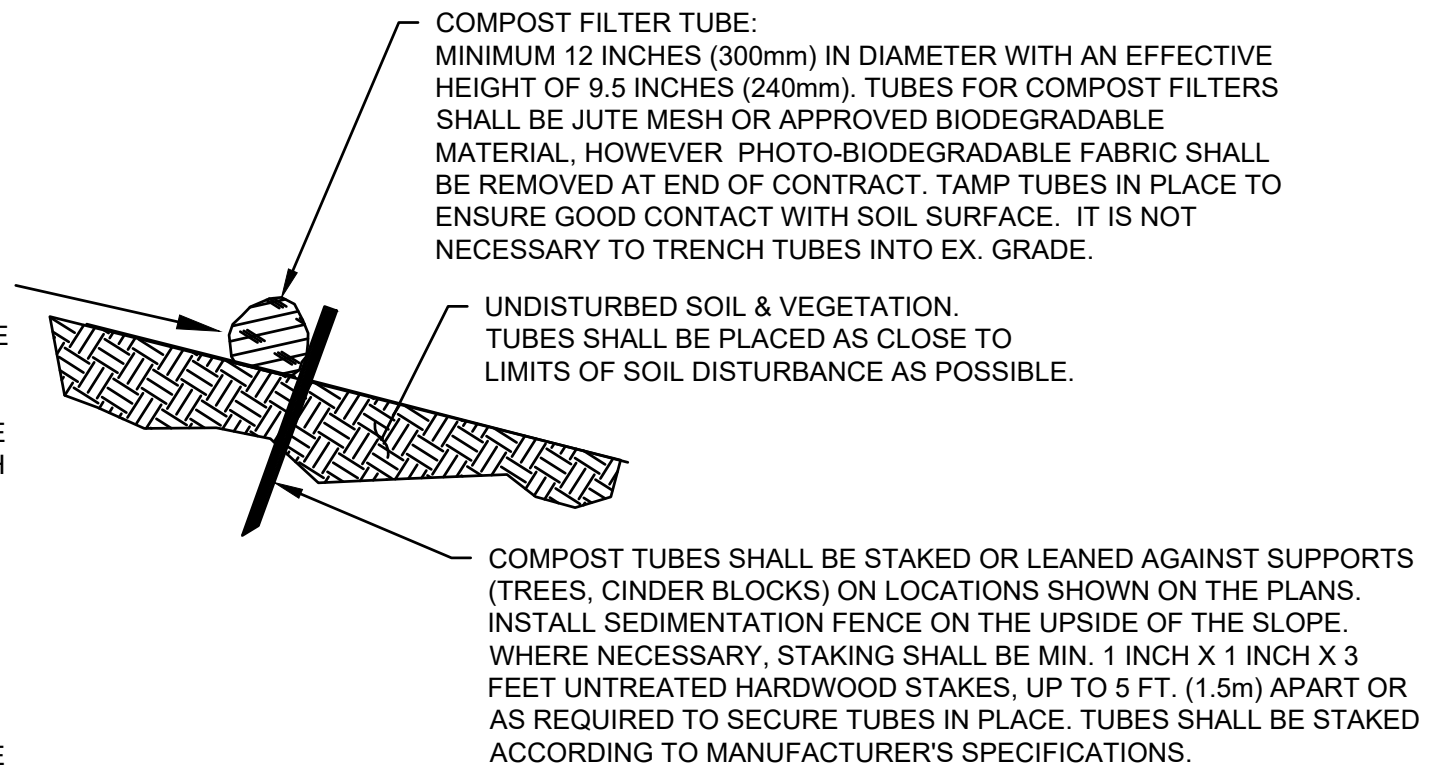
NOTE:
1. CONTRACTOR TO DESIGN GROUND ANCHOR ASSEMBLY INCLUDING GROUND ANCHOR, STAND-OFF PLATES AND CAP PLATES. CONTRACTOR SHALL SUBMIT CALCULATIONS AND DRAWINGS FOR GROUND ANCHOR DESIGN, STAMPED BY AN ENGINEER REGISTERED IN THE STATE OF MA. FOR SOILS INFORMATION SEE ATTACHMENT "A" OF THE CONTRACT DOCUMENTS.

1
S-501
TYPICAL CONCRETE SHEET PILE CAP & WALE CONNECTION TO SHEET PILES GROUTED ANCHORS
SCALE: 1" = 1'-0"

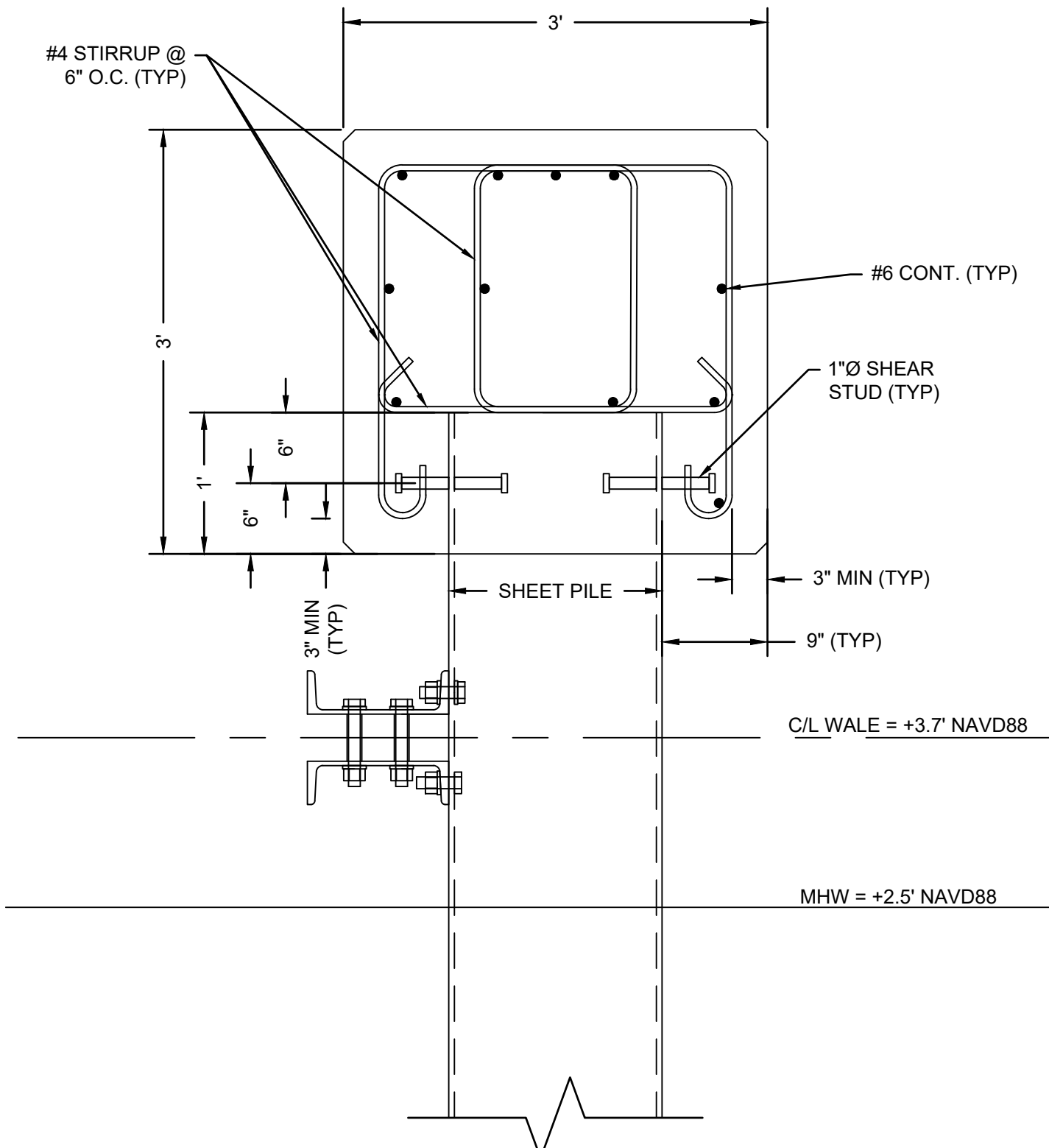


4
S-501
WALE SPLICE & CORNER DETAILS
SCALE: 1" = 1'-0"

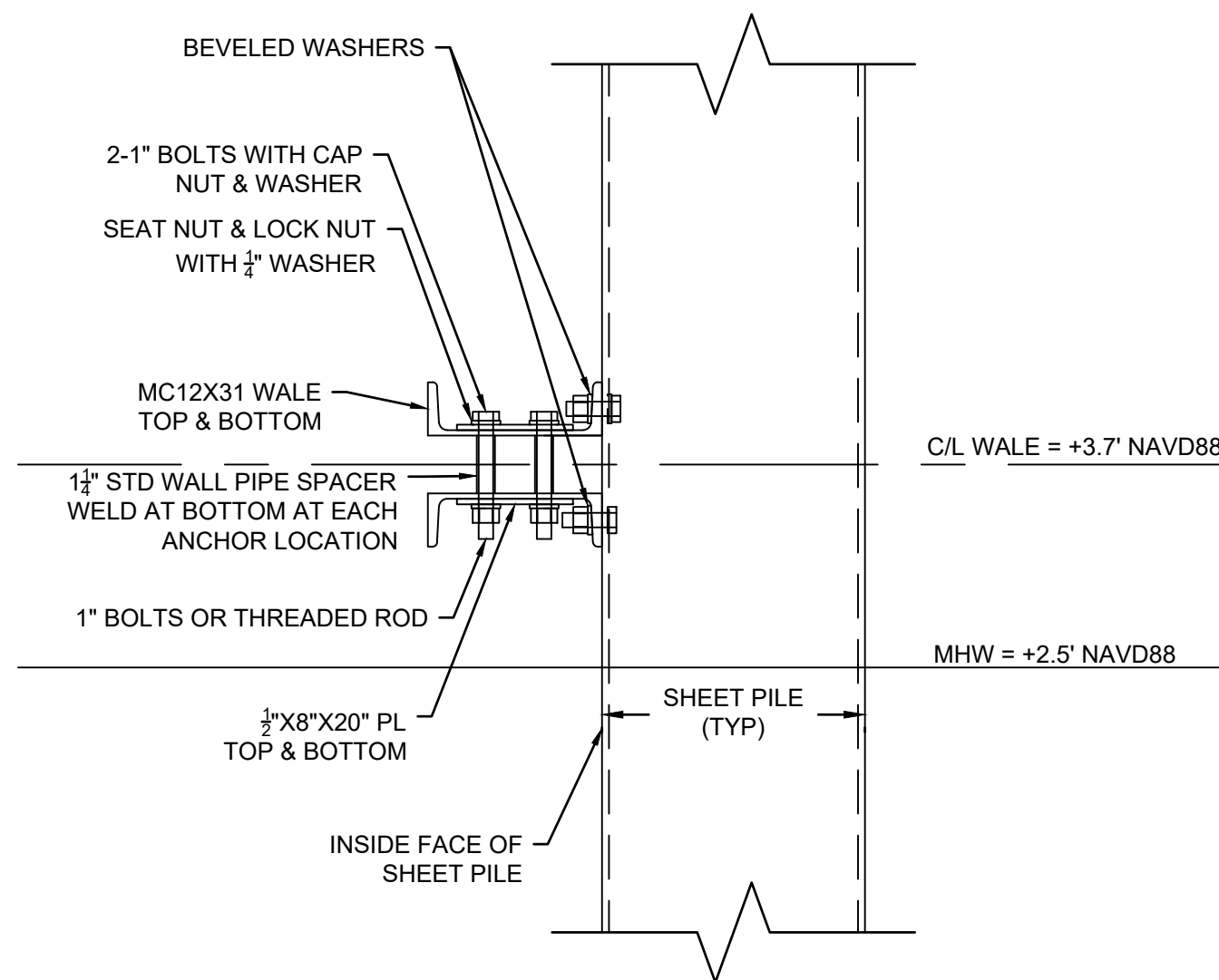
- NOTES:
- PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES (300mm) FOR SLOPES UP TO 50 FEET (15.24m) IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
 - INSTALL TUBES/SILT FENCE ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW. TUBE LOCATION MAY BE SHIFTED TO ADJUST TO LANDSCAPE FEATURES, BUT SHALL PROTECT UNDISTURBED AREA AND VEGETATION TO MAXIMUM EXTENT POSSIBLE.
 - FASTEN SEDIMENTATION FENCE FABRIC AND SUPPORT WIRE SECURELY TO THE UPSLOPE SIDE OF THE FENCE POST WITH WIRE TIES OR STAPLES. EXTEND WIRE 6 INCHES INTO THE TRENCH.
 - DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
 - ADDITIONAL TUBES SHALL BE USED AT THE DIRECTION OF THE ENGINEER.
 - ADDITIONAL STAKING SHALL BE USED AT THE DIRECTION OF THE ENGINEER.
 - CONTRACTOR MAY SUBMIT FOR APPROVAL AN ALTERNATIVE SEDIMENT CONTROL BARRIER FOR CONSTRUCTION USE



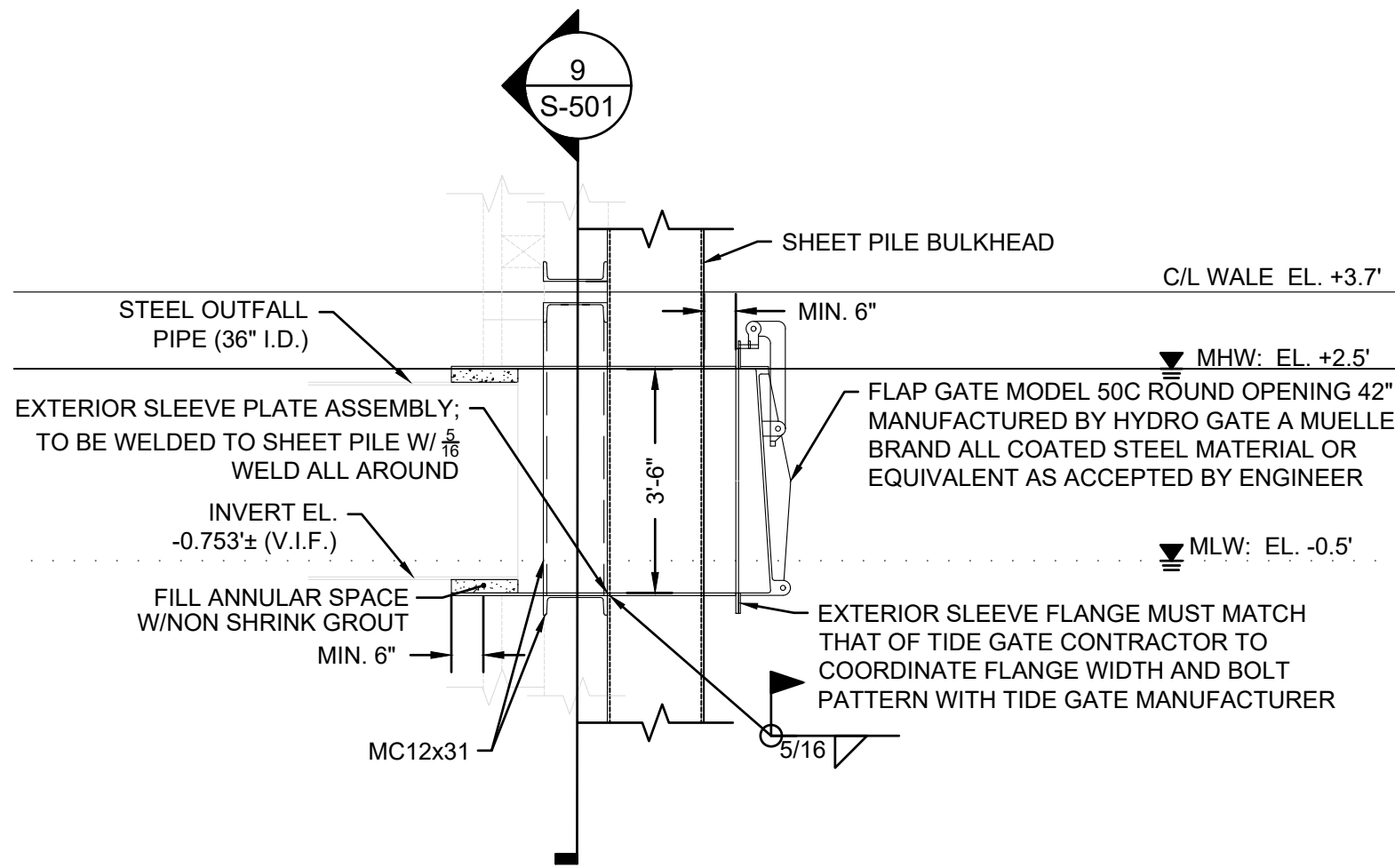
7
S-501
TEMPORARY COMPOST FILTER TUBE DETAIL
SCALE: N.T.S.



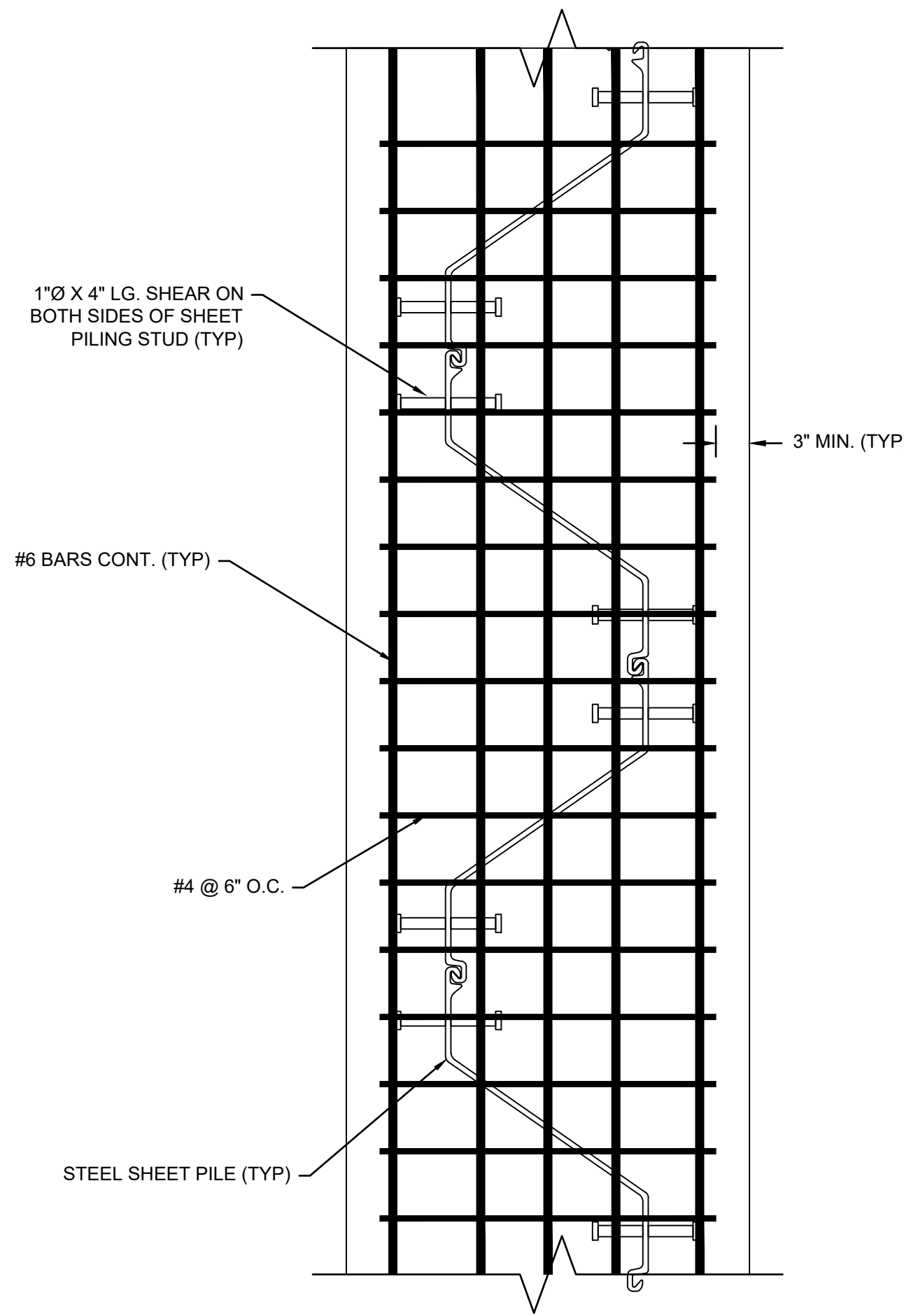
2
S-501
TYPICAL CONCRETE SHEET PILE CAP & WALE CONNECTION TO SHEET PILES GROUTED ANCHORS
SCALE: 1" = 1'-0"



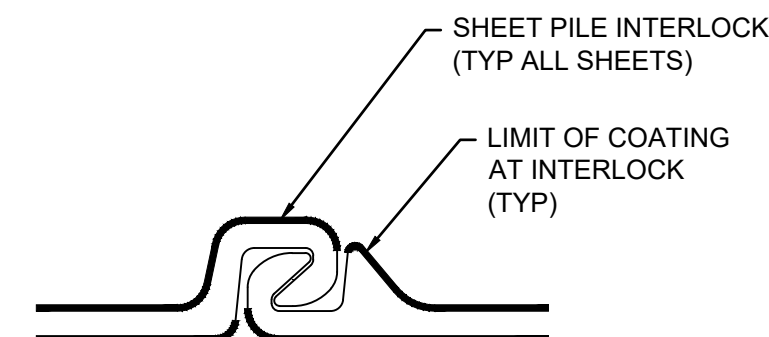
5
S-501
WALE SPLICE DETAIL
SCALE: 1" = 1'-0"



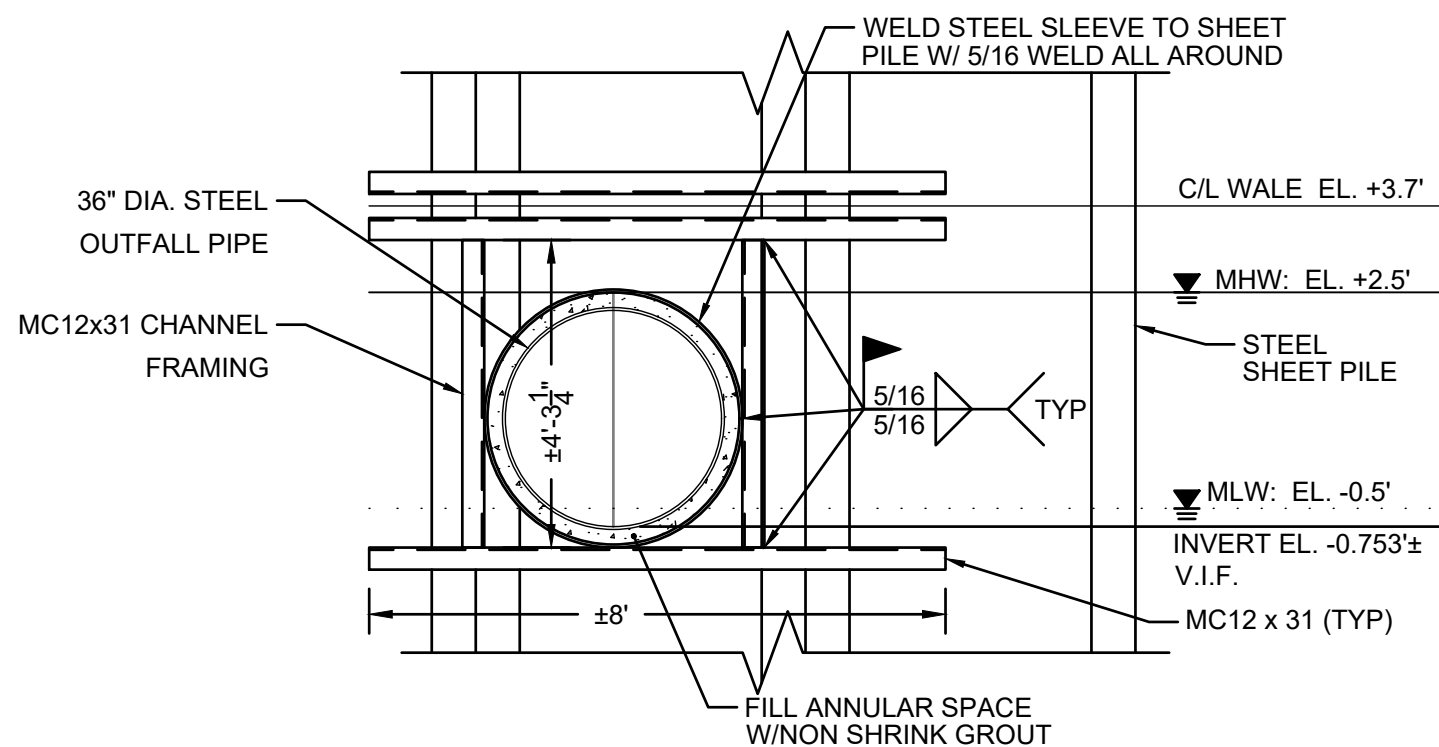
8
S-501
SECTION OF OUTFALL EXTENSION DETAIL
SCALE: 3/8" = 1'-0"



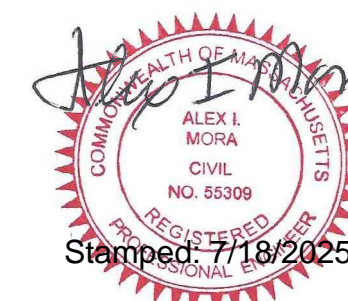
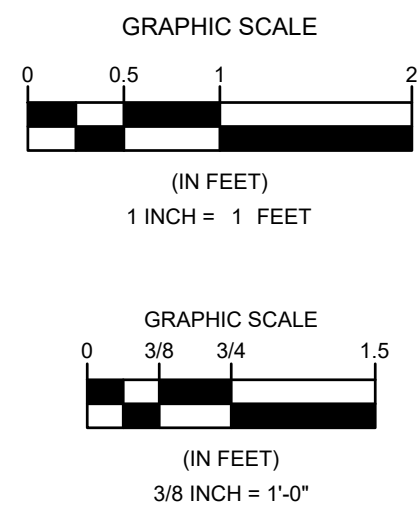
3
S-501
CAP REINFORCEMENT DETAIL
SCALE: 1" = 1'-0"



6
S-501
LIMITS OF PILE COATING
SCALE: NTS



9
S-501
ELEVATION OF OUTFALL OPENING FRAMING
SCALE: 3/8" = 1'-0"



GOOSE HUMMOCK BOAT RAMP
BULKHEAD REHABILITATION
GOOSE HUMMOCK LANDING,
1 MA-6A, ORLEANS, MA 02653
TOWN OF ORLEANS
DEPARTMENT OF PUBLIC WORKS

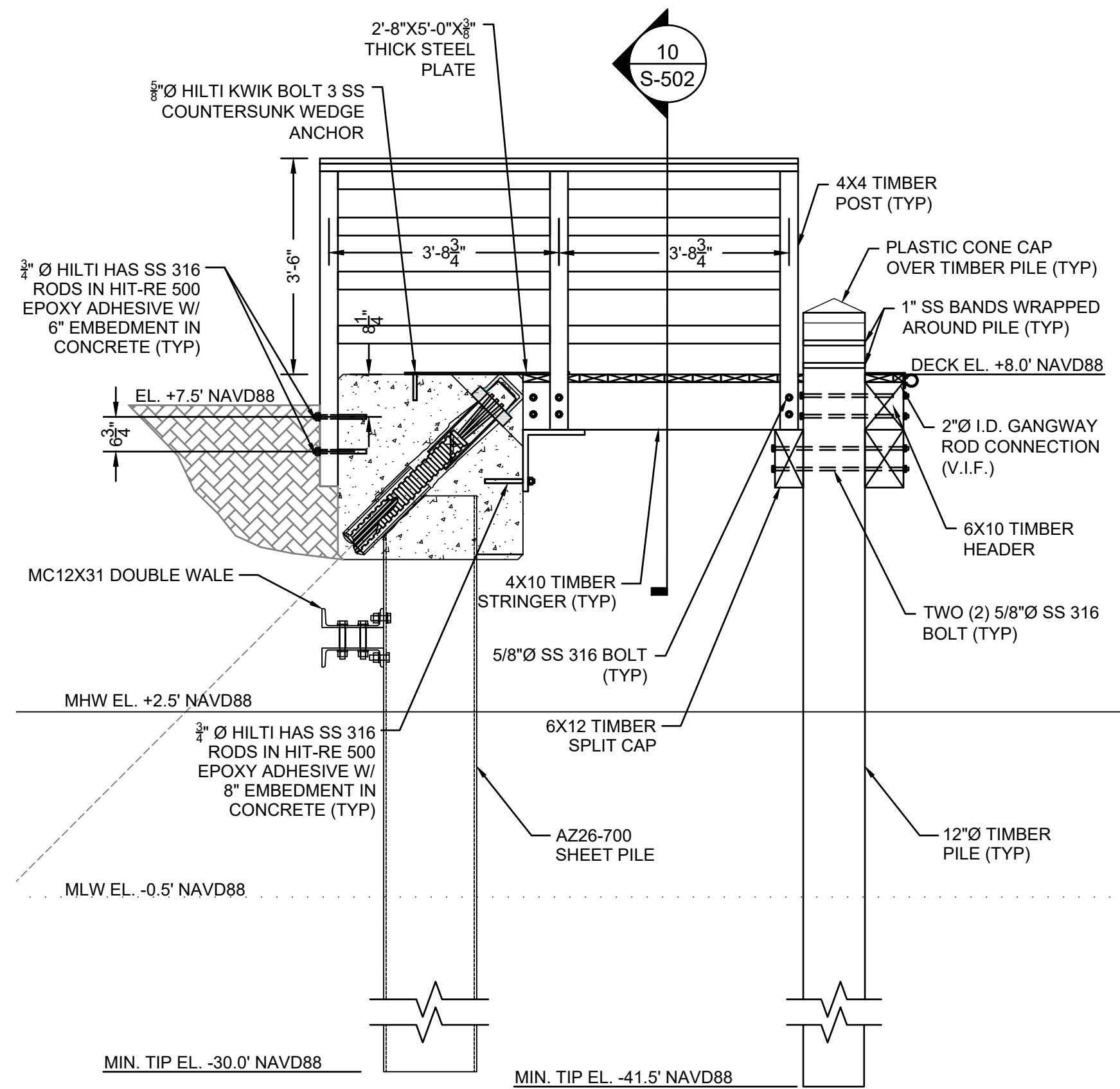
REVISIONS	DESCRIPTION	DATE	BY	NO.	DATE OF PREPARATION
					BY DATE
					SURVEYED MC/JH 10/24/2019
					DRAWN WFG/BPF 7/18/2025
					DESIGNED WFG 1/18/2025
					CHECKED AIM 1/27/2025
SHEET TITLE:					

DETAILS
SHEET 1 OF 3

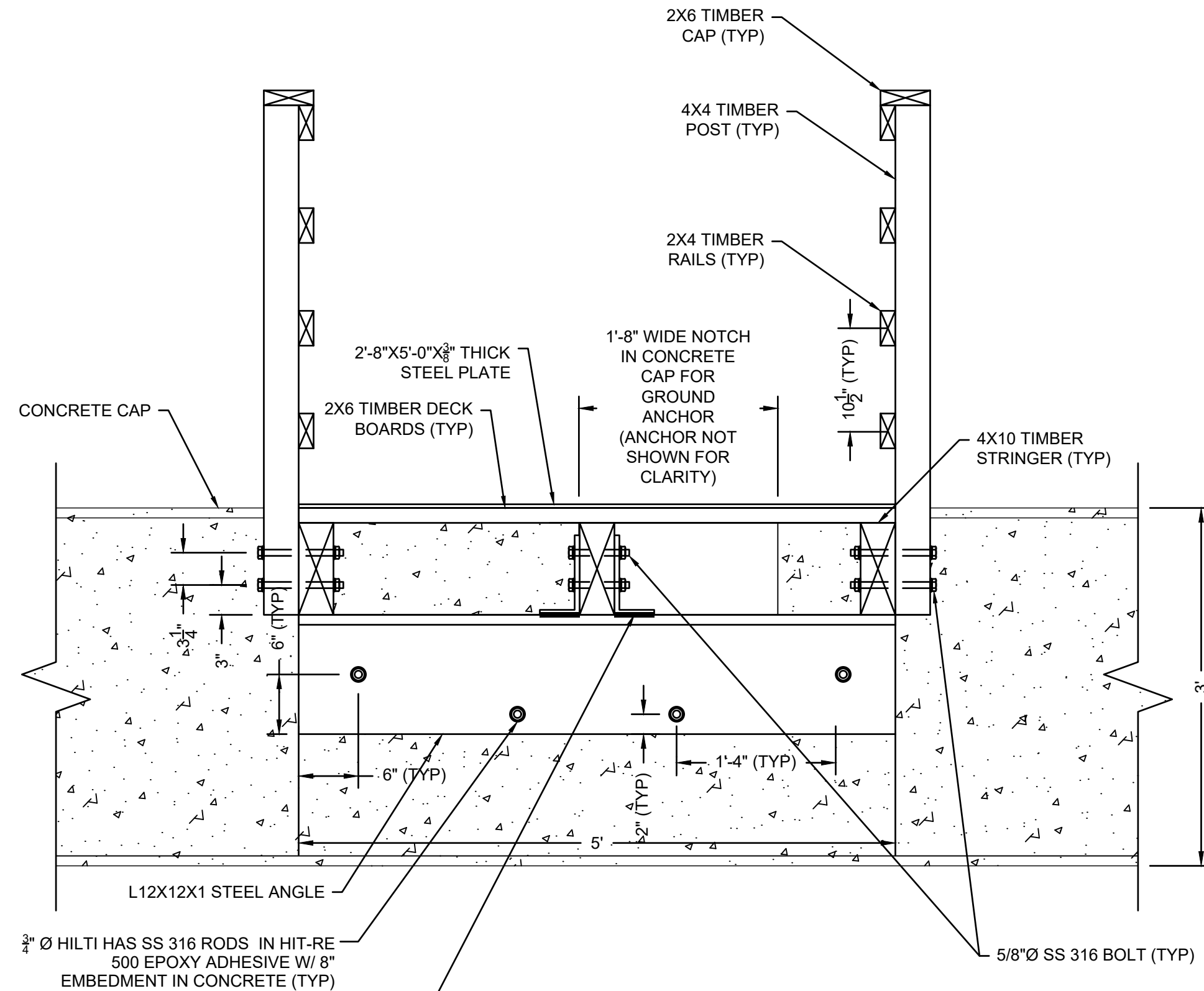
ISSUE
FOR BID

PROJECT NO: 190009.00
SHEET NUMBER

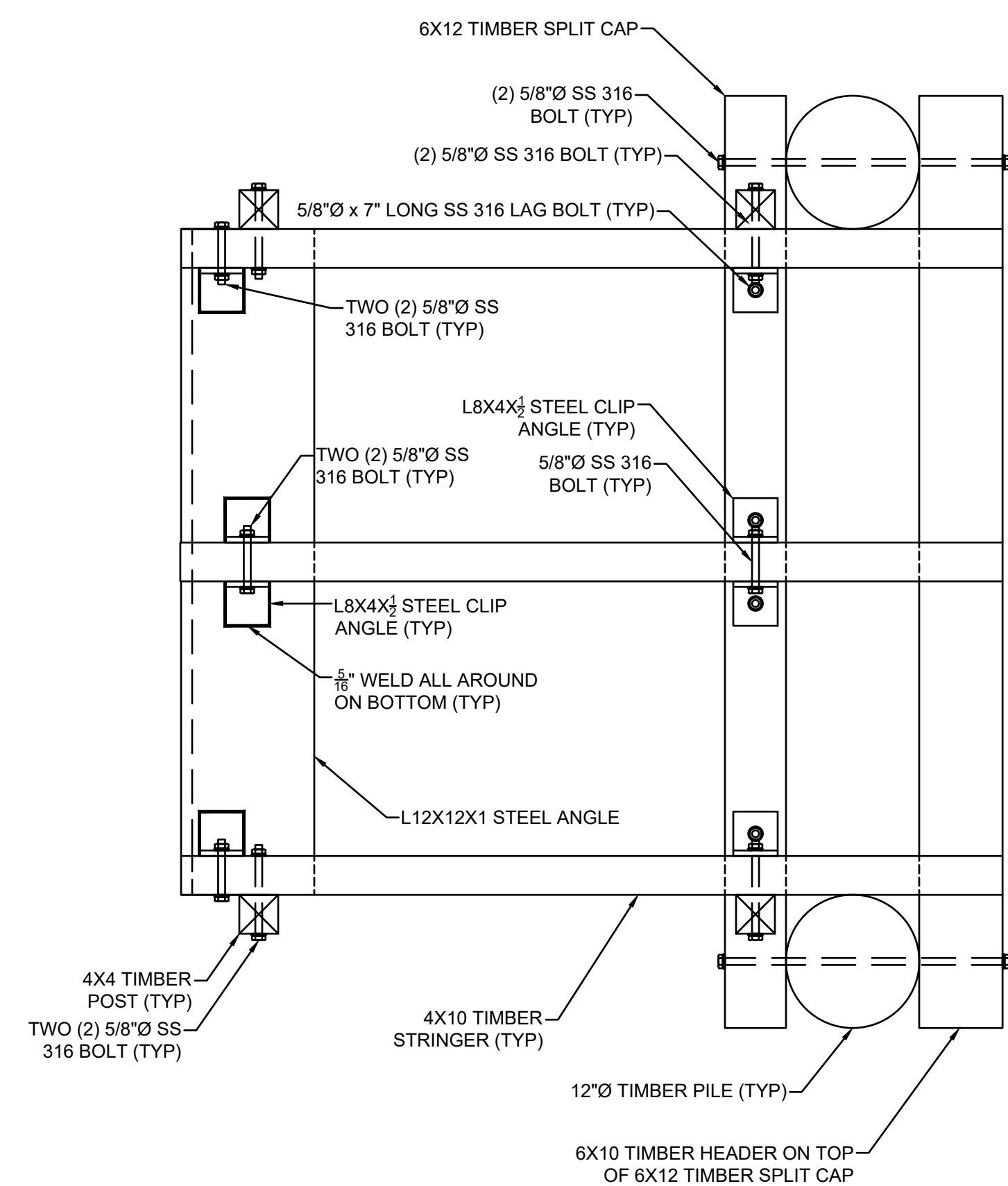
S-501



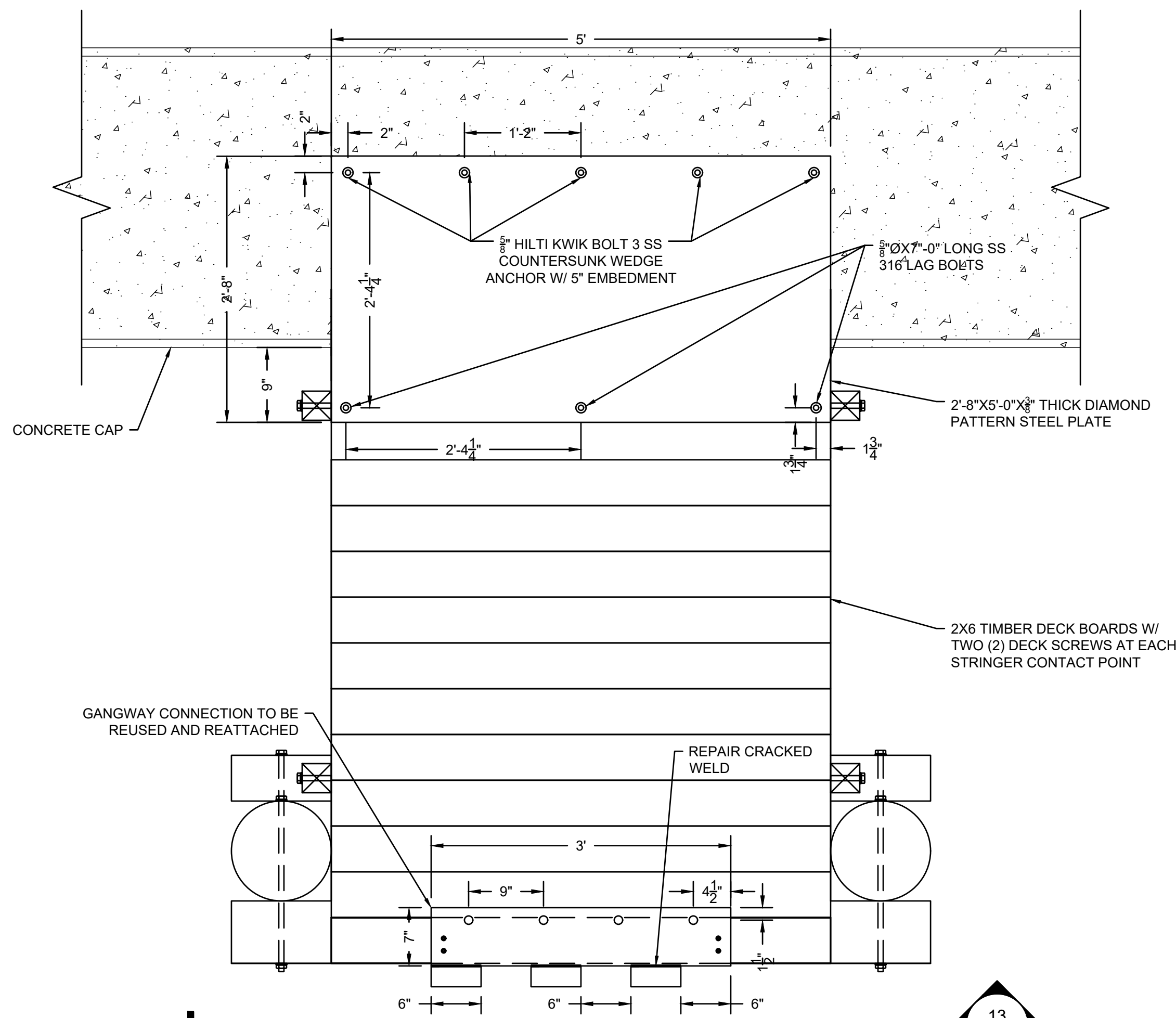
9
S-502
TIMBER LANDING SECTION
SCALE: 1" = 2'-0"



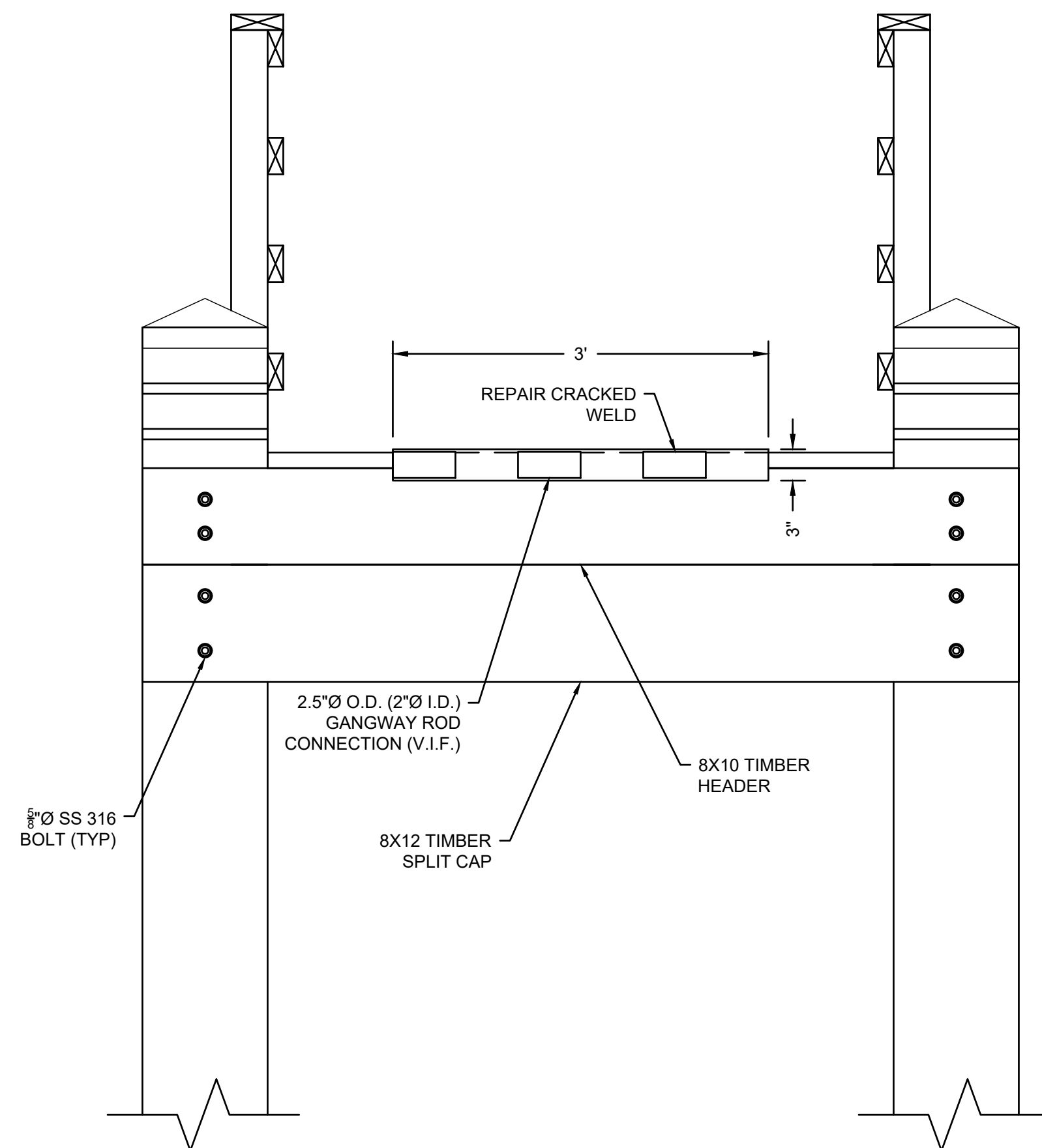
10
S-502
TIMBER LANDING CONCRETE CAP CONNECTION
SCALE: 1" = 1'-0"



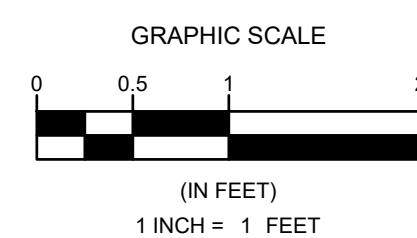
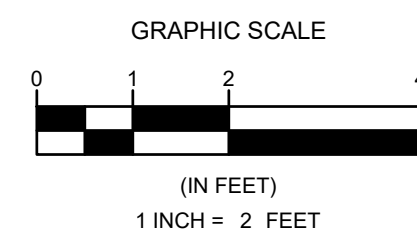
11
S-502
TIMBER LANDING FRAMING PLAN
SCALE: 1" = 1'-0"



12
S-502
TIMBER LANDING GANGWAY CONNECTION DETAIL
SCALE: 1" = 1'-0"



13
S-502
TIMBER LANDING GANGWAY CONNECTION DETAIL
SCALE: 1" = 1'-0"



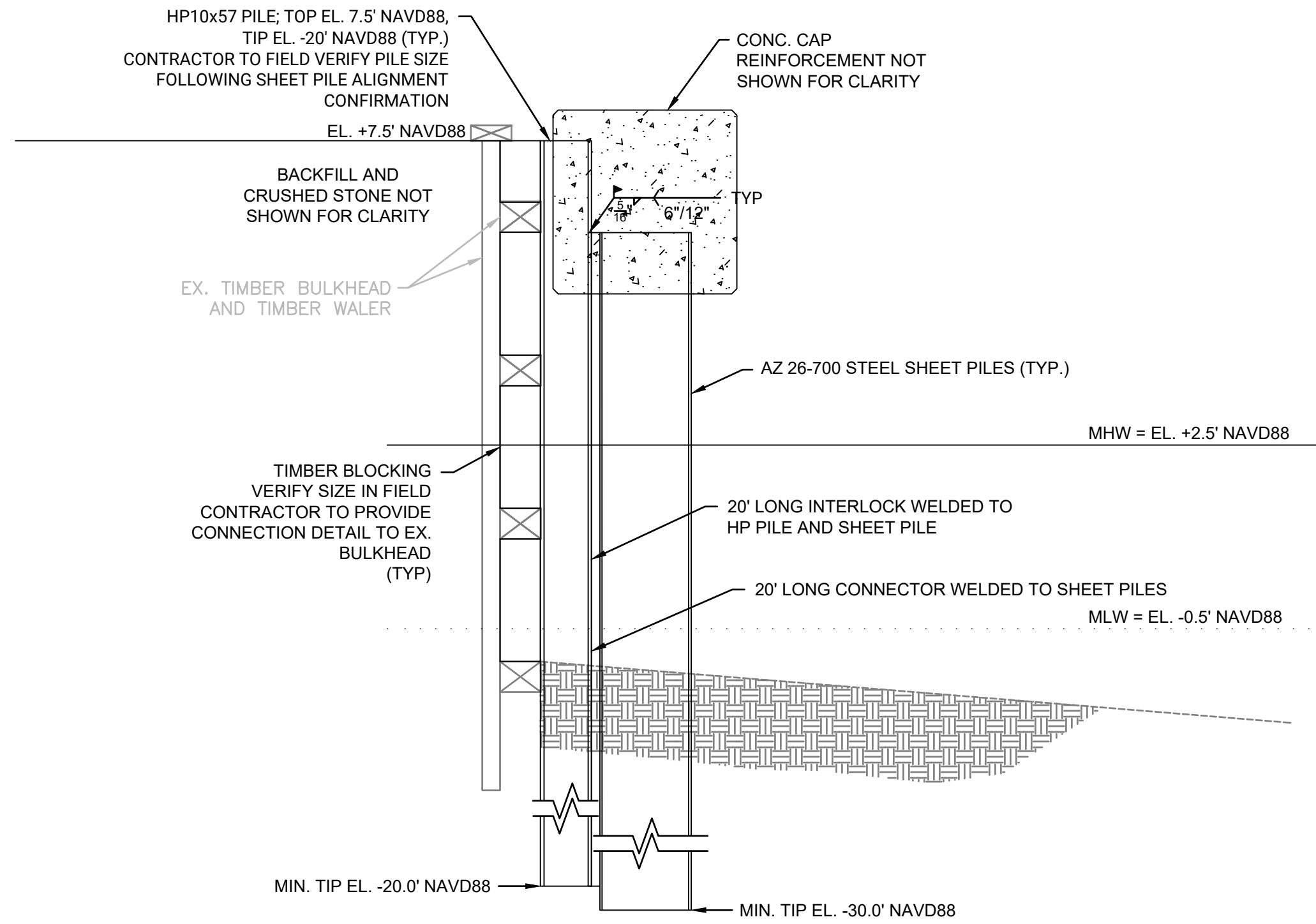
GOOSE HUMMOCK BOAT RAMP
BULKHEAD REHABILITATION
GOOSE HUMMOCK LANDING,
1 MA-6A, ORLEANS, MA 02653
TOWN OF ORLEANS
DEPARTMENT OF PUBLIC WORKS

NO.	BY	DATE	REVISIONS	
			DESCRIPTION	
1				
2				
3				
4				
5				
DATE OF PREPARATION				
SURVEYED	MC/JH	10/24/2019	BY	DATE
DRAWN	WFG/BPF	7/18/2025		
DESIGNED	WFG	1/18/2025		
CHECKED	AIM	1/27/2025		
SHEET TITLE:				

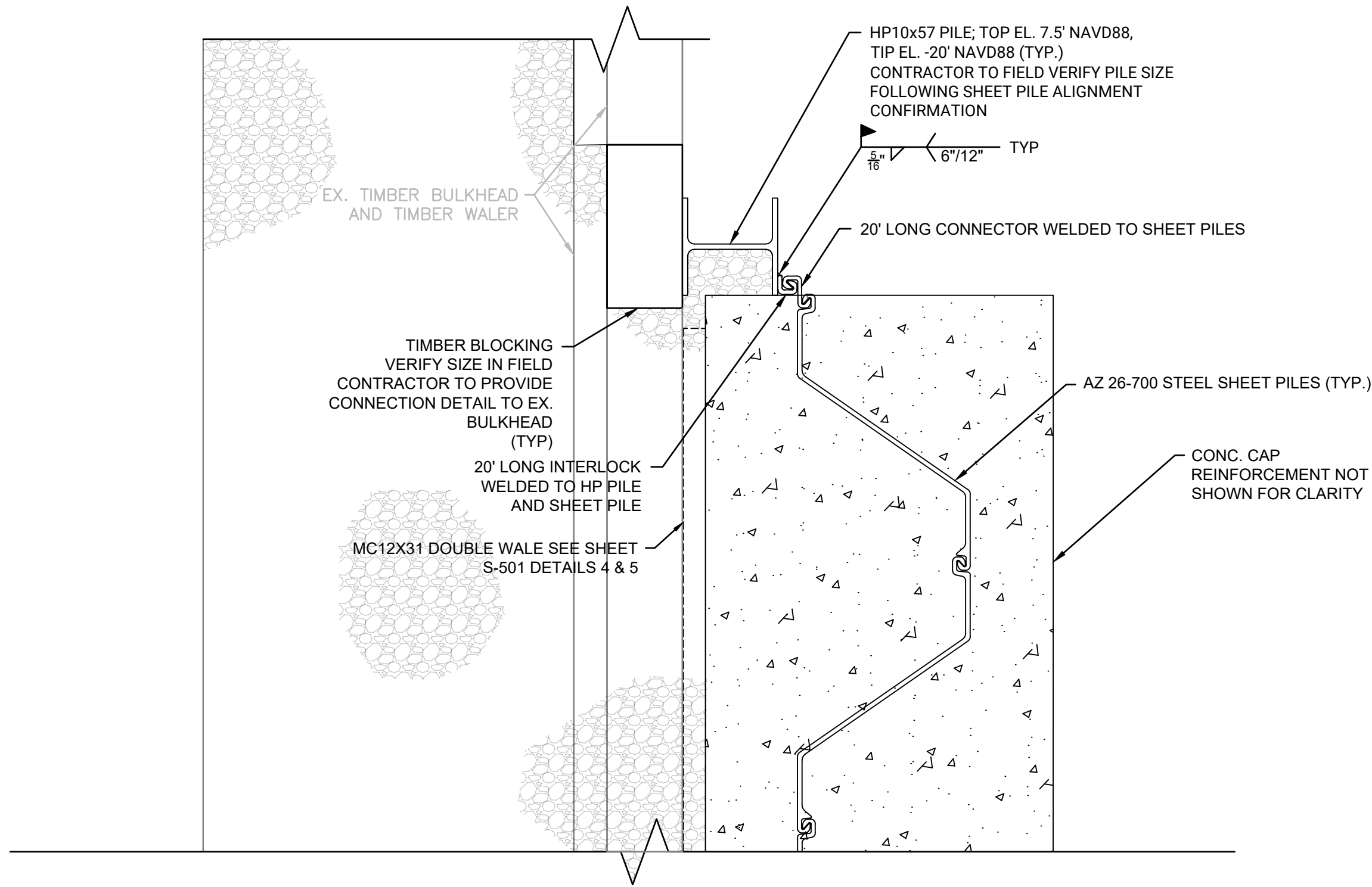
DETAILS
SHEET 2 OF 3

ISSUANCE:
ISSUE
FOR BID
PROJECT NO: 190009.00
SHEET NUMBER
S-502

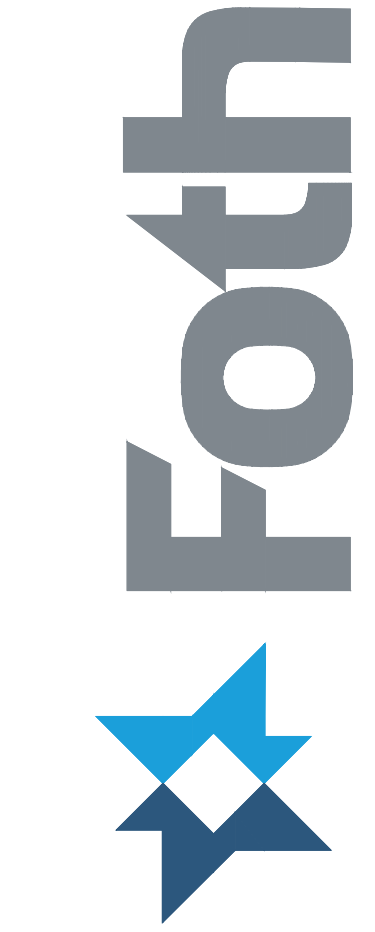




14 H-PILE CLOSURE SECTION
S-503 SCALE: 1" = 2'-0"



15 H PILE CLOSURE PLAN
S-503 SCALE: 1" = 1'-0"



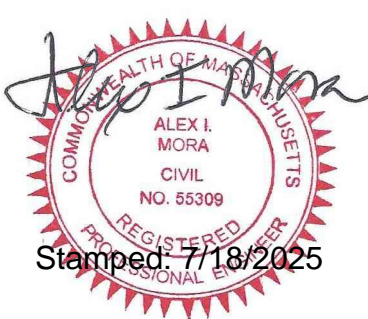
GOOSE HUMMOCK BOAT RAMP
BULKHEAD REHABILITATION
GOOSE HUMMOCK LANDING,
1 MA-6A, ORLEANS, MA 02653
TOWN OF ORLEANS
DEPARTMENT OF PUBLIC WORKS

REVISIONS		DESCRIPTION		NO	BY	DATE
				1		
				2		
				3		
				4		
				5		
DATE OF PREPARATION						
		BY	DATE			
SURVEYED	MC/JH		10/24/2019			
DRAWN	WFG/BPF		7/18/2025			
DESIGNED	WFG		1/18/2025			
CHECKED	AIM		1/27/2025			

SHEET TITLE:

DETAILS
SHEET 3 OF 3

ISSUANCE:
ISSUE
FOR BID
PROJECT NO: 190009.00
SHEET NUMBER
S-503



ATTACHMENT C

MA PREVAILING WAGE RATES

Date Issued: 7/1/2025 (35 pages)



**THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS
Prevailing Wage Rates**

MAURA HEALY
Governor

KIM DRISCOLL
Lt. Governor

As determined by the Director under the provisions of the
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

LAUREN JONES
Secretary
MICHAEL FLANAGAN
Director

Awarding Authority:	Town of Orleans	City/Town: ORLEANS
Contract Number:		
Description of Work:	Project generally consists of the installation of a +/- 143 LF Concrete Capped Steel Sheet Pile Bulkhead with Ground Anchors and Whaler in front of the existing bulkhead along Town parcel on the east side of the Concr	
Job Location:	1 Route 6A	

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. For multi-year CM AT RISK projects, the awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. The updated wage schedule must be provided to all contractors, including general and sub-contractors, working on the construction project.
- This annual update requirement is generally not applicable to 27F “rental of equipment” contracts. For such contracts, the prevailing wage rates issued by DLS shall remain in effect for the duration of the contract term. However, if the prevailing wage rate sheet issued does not contain wage rates for each year covered by the contract term, the Awarding Authority must request updated rate sheets from DLS and provide them to the contractor to ensure the correct rates are being paid throughout the duration of the contract. Additionally, if an Awarding Authority exercises an option to renew or extend the contract term, they must request updated rate sheets from DLS and provide them to the contractor.
- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the “Wage Request Number” on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or a sub-contractor.
- Apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Standards (DAS). Apprentices must keep their apprentice identification card on their persons during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DAS regardless of whether they are registered with another federal, state, local, or private agency must be paid the journeyworker's rate.**
- Every contractor or subcontractor working on the construction project must submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee's name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. For a sample payroll reporting form go to <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Contractors must obtain the wage schedules from awarding authorities. Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may file a complaint with the Fair Labor Division of the office of the Attorney General at (617) 727-3465.

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
(2 AXLE) DRIVER - EQUIPMENT	6/1/2025	\$40.95	\$15.57	\$20.17	\$0.00	\$0.00	\$76.69
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$40.95	\$15.57	\$21.78	\$0.00	\$0.00	\$78.30
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$40.95	\$16.17	\$21.78	\$0.00	\$0.00	\$78.90
	6/1/2026	\$41.95	\$16.17	\$21.78	\$0.00	\$0.00	\$79.90
	12/1/2026	\$41.95	\$16.17	\$23.52	\$0.00	\$0.00	\$81.64
	1/1/2027	\$41.95	\$16.77	\$23.52	\$0.00	\$0.00	\$82.24
(3 AXLE) DRIVER - EQUIPMENT	6/1/2025	\$41.02	\$15.57	\$20.17	\$0.00	\$0.00	\$76.76
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$41.02	\$15.57	\$21.78	\$0.00	\$0.00	\$78.37
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$41.02	\$16.17	\$21.78	\$0.00	\$0.00	\$78.97
	6/1/2026	\$42.02	\$16.17	\$21.78	\$0.00	\$0.00	\$79.97
	12/1/2026	\$42.02	\$16.17	\$23.52	\$0.00	\$0.00	\$81.71
	1/1/2027	\$42.02	\$16.77	\$23.52	\$0.00	\$0.00	\$82.31
(4 & 5 AXLE) DRIVER - EQUIPMENT	6/1/2025	\$41.14	\$15.57	\$20.17	\$0.00	\$0.00	\$76.88
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$41.14	\$15.57	\$21.78	\$0.00	\$0.00	\$78.49
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$41.14	\$16.17	\$21.78	\$0.00	\$0.00	\$79.09
	6/1/2026	\$42.14	\$16.17	\$21.78	\$0.00	\$0.00	\$80.09
	12/1/2026	\$42.14	\$16.17	\$23.52	\$0.00	\$0.00	\$81.83
	1/1/2027	\$42.14	\$16.77	\$23.52	\$0.00	\$0.00	\$82.43
ADS/SUBMERSIBLE PILOT	8/1/2024	\$117.16	\$10.08	\$11.62	\$12.67	\$0.00	\$151.53
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 2)							
For apprentice rates see "Apprentice- PILE DRIVER"							
AIR TRACK OPERATOR	6/1/2025	\$41.09	\$9.90	\$9.25	\$9.11	\$0.00	\$69.35
LABORERS	12/1/2025	\$42.47	\$9.90	\$9.25	\$9.11	\$0.00	\$70.73
LABORERS - ZONE 2	6/1/2026	\$43.91	\$9.90	\$9.25	\$9.11	\$0.00	\$72.17
	12/1/2026	\$45.35	\$9.90	\$9.25	\$9.11	\$0.00	\$73.61
	6/1/2027	\$46.80	\$9.90	\$9.25	\$9.11	\$0.00	\$75.06
	12/1/2027	\$48.25	\$9.90	\$9.25	\$9.11	\$0.00	\$76.51
	6/1/2028	\$49.75	\$9.90	\$9.25	\$9.11	\$0.00	\$78.01
	12/1/2028	\$51.25	\$9.90	\$9.25	\$9.11	\$0.00	\$79.51
For apprentice rates see "Apprentice- LABORER"							
AIR TRACK OPERATOR (HEAVY & HIGHWAY)	6/1/2025	\$41.09	\$9.90	\$9.25	\$9.21	\$0.00	\$69.45
LABORERS	12/1/2025	\$42.47	\$9.90	\$9.25	\$9.21	\$0.00	\$70.83
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$43.91	\$9.90	\$9.25	\$9.21	\$0.00	\$72.27
	12/1/2026	\$45.35	\$9.90	\$9.25	\$9.21	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASBESTOS REMOVER - PIPE / MECH. EQUIPT.	6/1/2025	\$43.80	\$14.50	\$4.30	\$6.75	\$0.00	\$69.35
HEAT & FROST INSULATORS LOCAL 6	12/1/2025	\$44.80	\$14.50	\$4.30	\$6.75	\$0.00	\$70.35
HEAT & FROST INSULATORS LOCAL 6 (BOSTON)							
ASPHALT RAKER	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
LABORERS - ZONE 2	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
ASPHALT RAKER (HEAVY & HIGHWAY)	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE	6/1/2025	\$58.33	\$15.55	\$13.25	\$3.25	\$0.00	\$90.38
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.78	\$15.55	\$13.25	\$3.25	\$0.00	\$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$61.08	\$15.55	\$13.25	\$3.25	\$0.00	\$93.13
	12/1/2026	\$62.53	\$15.55	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BACKHOE/FRONT-END LOADER	6/1/2025	\$58.33	\$15.55	\$13.25	\$3.25	\$0.00	\$90.38
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.78	\$15.55	\$13.25	\$3.25	\$0.00	\$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$61.08	\$15.55	\$13.25	\$3.25	\$0.00	\$93.13
	12/1/2026	\$62.53	\$15.55	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BARCO-TYPE JUMPING TAMPER	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
LABORERS - ZONE 2	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER	6/1/2025	\$41.09	\$9.90	\$9.25	\$9.11	\$0.00	\$69.35
LABORERS	12/1/2025	\$42.47	\$9.90	\$9.25	\$9.11	\$0.00	\$70.73
LABORERS - ZONE 2	6/1/2026	\$43.91	\$9.90	\$9.25	\$9.11	\$0.00	\$72.17
	12/1/2026	\$45.35	\$9.90	\$9.25	\$9.11	\$0.00	\$73.61
	6/1/2027	\$46.80	\$9.90	\$9.25	\$9.11	\$0.00	\$75.06
	12/1/2027	\$48.25	\$9.90	\$9.25	\$9.11	\$0.00	\$76.51
	6/1/2028	\$49.75	\$9.90	\$9.25	\$9.11	\$0.00	\$78.01
	12/1/2028	\$51.25	\$9.90	\$9.25	\$9.11	\$0.00	\$79.51
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)	6/1/2025	\$41.09	\$9.90	\$9.25	\$9.21	\$0.00	\$69.45
LABORERS	12/1/2025	\$42.47	\$9.90	\$9.25	\$9.21	\$0.00	\$70.83
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$43.91	\$9.90	\$9.25	\$9.21	\$0.00	\$72.27
	12/1/2026	\$45.35	\$9.90	\$9.25	\$9.21	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BOILER MAKER	1/1/2024	\$48.12	\$7.07	\$14.60	\$6.00	\$0.00	\$75.79
BOILERMAKERS LOCAL 29							
BOILERMAKERS LOCAL 29							

Apprentice: BOILER MAKER							
Effective Date: 1/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	65.00	\$31.28	\$7.07	\$9.32	\$3.90	\$0.00	\$51.57
2	65.00	\$31.28	\$7.07	\$9.32	\$3.90	\$0.00	\$51.57
3	70.00	\$33.68	\$7.07	\$10.03	\$4.20	\$0.00	\$54.98
4	75.00	\$36.09	\$7.07	\$10.74	\$4.50	\$0.00	\$58.40
5	80.00	\$38.50	\$7.07	\$11.45	\$4.80	\$0.00	\$61.82
6	85.00	\$40.90	\$7.07	\$12.18	\$5.10	\$0.00	\$65.25
7	90.00	\$43.31	\$7.07	\$12.88	\$5.40	\$0.00	\$68.66
8	95.00	\$45.71	\$7.07	\$13.62	\$5.70	\$0.00	\$72.10

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	2/1/2025	\$65.80	\$11.49	\$15.57	\$8.02	\$0.00	\$100.88
BRICKLAYERS LOCAL 3	8/1/2025	\$67.95	\$11.49	\$15.57	\$8.02	\$0.00	\$103.03
BRICKLAYERS LOCAL 3 (NEW BEDFORD)	2/1/2026	\$69.30	\$11.49	\$15.57	\$8.02	\$0.00	\$104.38
	8/1/2026	\$71.50	\$11.49	\$15.57	\$8.02	\$0.00	\$106.58
	2/1/2027	\$72.90	\$11.49	\$15.57	\$8.02	\$0.00	\$107.98

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)							
Effective Date: 2/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$32.90	\$11.49	\$15.57	\$8.02	\$0.00	\$67.98
2	60.00	\$39.48	\$11.49	\$15.57	\$8.02	\$0.00	\$74.56
3	70.00	\$46.06	\$11.49	\$15.57	\$8.02	\$0.00	\$81.14
4	80.00	\$52.64	\$11.49	\$15.57	\$8.02	\$0.00	\$87.72
5	90.00	\$59.22	\$11.49	\$15.57	\$8.02	\$0.00	\$94.30

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)							
Effective Date: 8/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$33.98	\$11.49	\$15.57	\$8.02	\$0.00	\$69.06
2	60.00	\$40.77	\$11.49	\$15.57	\$8.02	\$0.00	\$75.85
3	70.00	\$47.57	\$11.49	\$15.57	\$8.02	\$0.00	\$82.65
4	80.00	\$54.36	\$11.49	\$15.57	\$8.02	\$0.00	\$89.44
5	90.00	\$61.16	\$11.49	\$15.57	\$8.02	\$0.00	\$96.24

BULLDOZER/GRADER/SCRAPER	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
CAISSON & UNDERPINNING BOTTOM MAN LABORERS	6/1/2025	\$48.85	\$9.90	\$9.25	\$9.80	\$0.00	\$77.80
LABORERS - FOUNDATION AND MARINE	12/1/2025	\$50.35	\$9.90	\$9.25	\$9.80	\$0.00	\$79.30
	6/1/2026	\$51.90	\$9.90	\$9.25	\$9.80	\$0.00	\$80.85
	12/1/2026	\$53.40	\$9.90	\$9.25	\$9.80	\$0.00	\$82.35
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING LABORER LABORERS	6/1/2025	\$47.70	\$9.90	\$9.25	\$9.80	\$0.00	\$76.65
LABORERS - FOUNDATION AND MARINE	12/1/2025	\$49.20	\$9.90	\$9.25	\$9.80	\$0.00	\$78.15
	6/1/2026	\$50.75	\$9.90	\$9.25	\$9.80	\$0.00	\$79.70
	12/1/2026	\$52.25	\$9.90	\$9.25	\$9.80	\$0.00	\$81.20
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING TOP MAN LABORERS	6/1/2025	\$48.03	\$9.90	\$9.25	\$9.80	\$0.00	\$76.98
LABORERS - FOUNDATION AND MARINE	12/1/2025	\$49.53	\$9.90	\$9.25	\$9.80	\$0.00	\$78.48
	6/1/2026	\$51.08	\$9.90	\$9.25	\$9.80	\$0.00	\$80.03
	12/1/2026	\$52.58	\$9.90	\$9.25	\$9.80	\$0.00	\$81.53
For apprentice rates see "Apprentice- LABORER"							
CARBIDE CORE DRILL OPERATOR LABORERS	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
LABORERS - ZONE 2	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
CARPENTER	3/1/2025	\$49.62	\$9.83	\$11.47	\$8.50	\$0.00	\$79.42
CARPENTERS	9/1/2025	\$50.87	\$9.83	\$11.47	\$8.50	\$0.00	\$80.67
CARPENTERS -ZONE 2 (Eastern Massachusetts)	3/1/2026	\$52.12	\$9.83	\$11.47	\$8.50	\$0.00	\$81.92
	9/1/2026	\$53.37	\$9.83	\$11.47	\$8.50	\$0.00	\$83.17
	3/1/2027	\$54.62	\$9.83	\$11.47	\$8.50	\$0.00	\$84.42

Apprentice: CARPENTER**Effective Date: 3/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$22.33	\$9.83	\$0.00	\$1.73	\$0.00	\$33.89
2	45.00	\$22.33	\$9.83	\$0.00	\$1.73	\$0.00	\$33.89
3	55.00	\$27.29	\$9.83	\$0.00	\$3.40	\$0.00	\$40.52
4	55.00	\$27.29	\$9.83	\$0.00	\$3.40	\$0.00	\$40.52
5	70.00	\$34.73	\$9.83	\$11.41	\$5.10	\$0.00	\$61.07
6	70.00	\$34.73	\$9.83	\$11.41	\$5.10	\$0.00	\$61.07
7	80.00	\$39.70	\$9.83	\$11.44	\$6.80	\$0.00	\$67.77
8	80.00	\$39.70	\$9.83	\$11.44	\$6.80	\$0.00	\$67.77

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: CARPENTER							
Effective Date: 9/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$22.89	\$9.83	\$0.00	\$1.73	\$0.00	\$34.45
2	45.00	\$22.89	\$9.83	\$0.00	\$1.73	\$0.00	\$34.45
3	55.00	\$27.98	\$9.83	\$0.00	\$3.40	\$0.00	\$41.21
4	55.00	\$27.98	\$9.83	\$0.00	\$3.40	\$0.00	\$41.21
5	70.00	\$35.61	\$9.83	\$11.41	\$5.10	\$0.00	\$61.95
6	70.00	\$35.61	\$9.83	\$11.41	\$5.10	\$0.00	\$61.95
7	80.00	\$40.70	\$9.83	\$11.44	\$6.80	\$0.00	\$68.77
8	80.00	\$40.70	\$9.83	\$11.44	\$6.80	\$0.00	\$68.77
<hr/>							
CARPENTER WOOD FRAME	10/1/2024	\$26.65	\$7.02	\$3.80	\$1.00	\$0.00	\$38.47
CARPENTERS	10/1/2025	\$27.75	\$7.02	\$3.80	\$1.00	\$0.00	\$39.57
CARPENTERS-ZONE 3 (Wood Frame)	10/1/2026	\$28.85	\$7.02	\$3.80	\$1.00	\$0.00	\$40.67
All Aspects of New Wood Frame Work							

Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$15.99	\$7.02	\$0.00	\$0.00	\$0.00	\$23.01
2	60.00	\$15.99	\$7.02	\$0.00	\$0.00	\$0.00	\$23.01
3	65.00	\$17.32	\$7.02	\$0.00	\$1.00	\$0.00	\$25.34
4	70.00	\$18.66	\$7.02	\$0.00	\$1.00	\$0.00	\$26.68
5	75.00	\$19.99	\$7.02	\$3.80	\$1.00	\$0.00	\$31.81
6	80.00	\$21.32	\$7.02	\$3.80	\$1.00	\$0.00	\$33.14
7	85.00	\$22.65	\$7.02	\$3.80	\$1.00	\$0.00	\$34.47
8	90.00	\$23.99	\$7.02	\$3.80	\$1.00	\$0.00	\$35.81

Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$16.65	\$7.02	\$0.00	\$0.00	\$0.00	\$23.67
2	60.00	\$16.65	\$7.02	\$0.00	\$0.00	\$0.00	\$23.67
3	65.00	\$18.04	\$7.02	\$0.00	\$1.00	\$0.00	\$26.06
4	70.00	\$19.43	\$7.02	\$0.00	\$1.00	\$0.00	\$27.45
5	75.00	\$20.81	\$7.02	\$3.80	\$1.00	\$0.00	\$32.63
6	80.00	\$22.20	\$7.02	\$3.80	\$1.00	\$0.00	\$34.02
7	85.00	\$23.59	\$7.02	\$3.80	\$1.00	\$0.00	\$35.41
8	90.00	\$24.98	\$7.02	\$3.80	\$1.00	\$0.00	\$36.80

CEMENT MASONRY/PLASTERING	7/1/2024	\$49.19	\$13.35	\$16.43	\$7.78	\$1.80	\$88.55
---------------------------	----------	---------	---------	---------	--------	--------	---------

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BRICKLAYERS LOCAL 3							
BRICKLAYERS LOCAL 3 (NEW BEDFORD)							

Apprentice: CEMENT MASONRY/PLASTERING**Effective Date: 7/1/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.60	\$13.35	\$16.43	\$0.00	\$0.00	\$54.38
2	60.00	\$29.51	\$13.35	\$16.43	\$2.78	\$1.80	\$63.87
3	65.00	\$31.97	\$13.35	\$16.43	\$3.78	\$1.80	\$67.33
4	70.00	\$34.43	\$13.35	\$16.43	\$4.78	\$1.80	\$70.79
5	75.00	\$36.89	\$13.35	\$16.43	\$5.78	\$1.80	\$74.25
6	80.00	\$39.35	\$13.35	\$16.43	\$6.78	\$1.80	\$77.71
7	90.00	\$44.27	\$13.35	\$16.43	\$7.78	\$1.80	\$83.63

CHAIN SAW OPERATOR	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
LABORERS - ZONE 2	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES	6/1/2025	\$59.51	\$15.55	\$13.25	\$3.25	\$0.00	\$91.56
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$60.98	\$15.55	\$13.25	\$3.25	\$0.00	\$93.03
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$62.31	\$15.55	\$13.25	\$3.25	\$0.00	\$94.36
	12/1/2026	\$63.79	\$15.55	\$13.25	\$3.25	\$0.00	\$95.84

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

COMPRESSOR OPERATOR	6/1/2025	\$37.52	\$15.55	\$13.25	\$3.25	\$0.00	\$69.57
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$38.47	\$15.55	\$13.25	\$3.25	\$0.00	\$70.52
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$39.33	\$15.55	\$13.25	\$3.25	\$0.00	\$71.38
	12/1/2026	\$40.28	\$15.55	\$13.25	\$3.25	\$0.00	\$72.33

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE)	1/1/2025	\$58.46	\$9.95	\$11.85	\$12.10	\$0.00	\$92.36
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: DELEADER (BRIDGE)**Effective Date: 1/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$29.23	\$9.95	\$0.00	\$0.00	\$0.00	\$39.18
2	55.00	\$32.15	\$9.95	\$0.00	\$6.66	\$0.00	\$48.76
3	60.00	\$35.08	\$9.95	\$0.00	\$7.26	\$0.00	\$52.29

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																
<div>Apprentice: DELEADER (BRIDGE)</div> <div>Effective Date: 1/1/2025</div> <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>4</td><td>65.00</td><td>\$38.00</td><td>\$9.95</td><td>\$0.00</td><td>\$7.87</td><td>\$0.00</td><td>\$55.82</td></tr><tr><td>5</td><td>70.00</td><td>\$40.92</td><td>\$9.95</td><td>\$11.85</td><td>\$8.47</td><td>\$0.00</td><td>\$71.19</td></tr><tr><td>6</td><td>75.00</td><td>\$43.85</td><td>\$9.95</td><td>\$11.85</td><td>\$9.08</td><td>\$0.00</td><td>\$74.73</td></tr><tr><td>7</td><td>80.00</td><td>\$46.77</td><td>\$9.95</td><td>\$11.85</td><td>\$9.68</td><td>\$0.00</td><td>\$78.25</td></tr><tr><td>8</td><td>90.00</td><td>\$52.61</td><td>\$9.95</td><td>\$11.85</td><td>\$10.89</td><td>\$0.00</td><td>\$85.30</td></tr></tbody></table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	4	65.00	\$38.00	\$9.95	\$0.00	\$7.87	\$0.00	\$55.82	5	70.00	\$40.92	\$9.95	\$11.85	\$8.47	\$0.00	\$71.19	6	75.00	\$43.85	\$9.95	\$11.85	\$9.08	\$0.00	\$74.73	7	80.00	\$46.77	\$9.95	\$11.85	\$9.68	\$0.00	\$78.25	8	90.00	\$52.61	\$9.95	\$11.85	\$10.89	\$0.00	\$85.30
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																																
4	65.00	\$38.00	\$9.95	\$0.00	\$7.87	\$0.00	\$55.82																																																
5	70.00	\$40.92	\$9.95	\$11.85	\$8.47	\$0.00	\$71.19																																																
6	75.00	\$43.85	\$9.95	\$11.85	\$9.08	\$0.00	\$74.73																																																
7	80.00	\$46.77	\$9.95	\$11.85	\$9.68	\$0.00	\$78.25																																																
8	90.00	\$52.61	\$9.95	\$11.85	\$10.89	\$0.00	\$85.30																																																
DEMO: ADZEMAN	6/2/2025	\$47.75	\$9.90	\$9.25	\$9.65	\$0.00	\$76.55																																																
LABORERS	12/1/2025	\$49.25	\$9.90	\$9.25	\$9.65	\$0.00	\$78.05																																																
LABORERS - ZONE 2	6/1/2026	\$50.80	\$9.90	\$9.25	\$9.65	\$0.00	\$79.60																																																
	12/7/2026	\$52.30	\$9.90	\$9.25	\$9.65	\$0.00	\$81.10																																																
	6/7/2027	\$53.90	\$9.90	\$9.25	\$9.65	\$0.00	\$82.70																																																
	12/6/2027	\$55.50	\$9.90	\$9.25	\$9.65	\$0.00	\$84.30																																																
	6/5/2028	\$57.18	\$9.90	\$9.25	\$9.65	\$0.00	\$85.98																																																
	12/4/2028	\$58.85	\$9.90	\$9.25	\$9.65	\$0.00	\$87.65																																																
For apprentice rates see "Apprentice- LABORER"																																																							
DEMO: BACKHOE/LOADER/HAMMER OPERATOR	6/2/2025	\$48.75	\$9.90	\$9.25	\$9.65	\$0.00	\$77.55																																																
LABORERS	12/1/2025	\$50.25	\$9.90	\$9.25	\$9.65	\$0.00	\$79.05																																																
LABORERS - ZONE 2	6/1/2026	\$51.80	\$9.90	\$9.25	\$9.65	\$0.00	\$80.60																																																
	12/7/2026	\$53.30	\$9.90	\$9.25	\$9.65	\$0.00	\$82.10																																																
	6/7/2027	\$54.90	\$9.90	\$9.25	\$9.65	\$0.00	\$83.70																																																
	12/6/2027	\$56.50	\$9.90	\$9.25	\$9.65	\$0.00	\$85.30																																																
	6/5/2028	\$58.18	\$9.90	\$9.25	\$9.65	\$0.00	\$86.98																																																
	12/4/2028	\$59.85	\$9.90	\$9.25	\$9.65	\$0.00	\$88.65																																																
For apprentice rates see "Apprentice- LABORER"																																																							
DEMO: BURNERS	6/2/2025	\$48.50	\$9.90	\$9.25	\$9.65	\$0.00	\$77.30																																																
LABORERS	12/1/2025	\$50.00	\$9.90	\$9.25	\$9.65	\$0.00	\$78.80																																																
LABORERS - ZONE 2	6/1/2026	\$51.55	\$9.90	\$9.25	\$9.65	\$0.00	\$80.35																																																
	12/7/2026	\$53.05	\$9.90	\$9.25	\$9.65	\$0.00	\$81.85																																																
	6/7/2027	\$54.65	\$9.90	\$9.25	\$9.65	\$0.00	\$83.45																																																
	12/6/2027	\$56.25	\$9.90	\$9.25	\$9.65	\$0.00	\$85.05																																																
	6/5/2028	\$57.93	\$9.90	\$9.25	\$9.65	\$0.00	\$86.73																																																
	12/4/2028	\$59.60	\$9.90	\$9.25	\$9.65	\$0.00	\$88.40																																																
For apprentice rates see "Apprentice- LABORER"																																																							
DEMO: CONCRETE CUTTER/SAWYER	6/2/2025	\$48.75	\$9.90	\$9.25	\$9.65	\$0.00	\$77.55																																																
LABORERS	12/1/2025	\$50.25	\$9.90	\$9.25	\$9.65	\$0.00	\$79.05																																																
LABORERS - ZONE 2	6/1/2026	\$51.80	\$9.90	\$9.25	\$9.65	\$0.00	\$80.60																																																
	12/7/2026	\$53.30	\$9.90	\$9.25	\$9.65	\$0.00	\$82.10																																																
	6/7/2027	\$54.90	\$9.90	\$9.25	\$9.65	\$0.00	\$83.70																																																
	12/6/2027	\$56.50	\$9.90	\$9.25	\$9.65	\$0.00	\$85.30																																																
	6/5/2028	\$58.18	\$9.90	\$9.25	\$9.65	\$0.00	\$86.98																																																
	12/4/2028	\$59.85	\$9.90	\$9.25	\$9.65	\$0.00	\$88.65																																																
For apprentice rates see "Apprentice- LABORER"																																																							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
DEMO: JACKHAMMER OPERATOR LABORERS	6/2/2025	\$48.50	\$9.90	\$9.25	\$9.65	\$0.00	\$77.30
LABORERS - ZONE 2	12/1/2025	\$50.00	\$9.90	\$9.25	\$9.65	\$0.00	\$78.80
	6/1/2026	\$51.55	\$9.90	\$9.25	\$9.65	\$0.00	\$80.35
	12/7/2026	\$53.05	\$9.90	\$9.25	\$9.65	\$0.00	\$81.85
	6/7/2027	\$54.65	\$9.90	\$9.25	\$9.65	\$0.00	\$83.45
	12/6/2027	\$56.25	\$9.90	\$9.25	\$9.65	\$0.00	\$85.05
	6/5/2028	\$57.93	\$9.90	\$9.25	\$9.65	\$0.00	\$86.73
	12/4/2028	\$59.60	\$9.90	\$9.25	\$9.65	\$0.00	\$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: WRECKING LABORER LABORERS	6/2/2025	\$47.75	\$9.90	\$9.25	\$9.65	\$0.00	\$76.55
LABORERS - ZONE 2	12/1/2025	\$49.25	\$9.90	\$9.25	\$9.65	\$0.00	\$78.05
	6/1/2026	\$50.80	\$9.90	\$9.25	\$9.65	\$0.00	\$79.60
	12/7/2026	\$52.30	\$9.90	\$9.25	\$9.65	\$0.00	\$81.10
	6/7/2027	\$53.90	\$9.90	\$9.25	\$9.65	\$0.00	\$82.70
	12/6/2027	\$55.50	\$9.90	\$9.25	\$9.65	\$0.00	\$84.30
	6/5/2028	\$57.18	\$9.90	\$9.25	\$9.65	\$0.00	\$85.98
	12/4/2028	\$58.85	\$9.90	\$9.25	\$9.65	\$0.00	\$87.65
For apprentice rates see "Apprentice- LABORER"							
DIRECTIONAL DRILL MACHINE OPERATOR OPERATING ENGINEERS LOCAL 4	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
DIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 2)	8/1/2024	\$78.11	\$10.08	\$11.62	\$12.67	\$0.00	\$112.48
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Diver wage 70/80/90 2A \$69.83, 3A \$91.79,4A \$102.14 Total Rate							
DIVER TENDER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 2)	8/1/2024	\$51.97	\$10.08	\$11.62	\$12.67	\$0.00	\$86.34
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Piledriver wage 70/80/90 2A \$54.20, 3A \$73.93,4A \$82.05 Total Rate							
DIVER TENDER (EFFLUENT) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 2)	8/1/2024	\$83.69	\$10.08	\$11.62	\$12.67	\$0.00	\$118.06
For apprentice rates see "Apprentice- PILE DRIVER"							
DIVER/SLURRY (EFFLUENT) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 2)	8/1/2024	\$117.16	\$10.08	\$11.62	\$12.67	\$0.00	\$151.53
For apprentice rates see "Apprentice- PILE DRIVER"							
DRAWBRIDGE OPERATOR (Construction) DRAWBRIDGE - SEIU LOCAL 888 DRAWBRIDGE - SEIU LOCAL 888	7/1/2020	\$26.77	\$6.67	\$3.93	\$0.00	\$0.16	\$37.53
ELECTRICIAN ELECTRICIANS LOCAL 223 ELECTRICIANS LOCAL 223	9/1/2024	\$50.02	\$12.00	\$14.22	\$3.50	\$0.00	\$79.74
	9/1/2025	\$52.25	\$12.25	\$14.86	\$3.75	\$0.00	\$83.11

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	9/1/2026	\$54.72	\$12.50	\$15.56	\$4.00	\$0.00	\$86.78

Apprentice: ELECTRICIAN							
Effective Date: 9/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$20.01	\$12.00	\$0.60	\$0.00	\$0.00	\$32.61
2	45.00	\$22.51	\$12.00	\$0.68	\$0.00	\$0.00	\$35.19
3	50.00	\$25.01	\$12.00	\$0.75	\$0.00	\$0.00	\$37.76
4	55.00	\$27.51	\$12.00	\$6.34	\$2.25	\$0.00	\$48.10
5	60.00	\$30.01	\$12.00	\$6.90	\$2.25	\$0.00	\$51.16
6	65.00	\$32.51	\$12.00	\$7.49	\$2.25	\$0.00	\$54.25
7	70.00	\$35.01	\$12.00	\$8.05	\$2.25	\$0.00	\$57.31
8	75.00	\$37.52	\$12.00	\$8.64	\$2.25	\$0.00	\$60.41

Apprentice: ELECTRICIAN							
Effective Date: 9/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$20.90	\$12.25	\$0.63	\$0.00	\$0.00	\$33.78
2	45.00	\$23.51	\$12.25	\$0.71	\$0.00	\$0.00	\$36.47
3	50.00	\$26.13	\$12.25	\$0.78	\$0.00	\$0.00	\$39.16
4	55.00	\$28.74	\$12.25	\$6.61	\$2.50	\$0.00	\$50.10
5	60.00	\$31.35	\$12.25	\$7.21	\$2.50	\$0.00	\$53.31
6	65.00	\$33.96	\$12.25	\$7.82	\$2.50	\$0.00	\$56.53
7	70.00	\$36.58	\$12.25	\$8.41	\$2.50	\$0.00	\$59.74
8	75.00	\$39.19	\$12.25	\$9.02	\$2.50	\$0.00	\$62.96

ELEVATOR CONSTRUCTOR	1/1/2022	\$65.62	\$16.03	\$10.71	\$9.50	\$0.00	\$101.86
ELEVATOR CONSTRUCTORS LOCAL 4							
ELEVATOR CONSTRUCTORS LOCAL 4							

Apprentice: ELEVATOR CONSTRUCTOR							
Effective Date: 1/1/2022							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$32.81	\$16.03	\$0.00	\$0.00	\$0.00	\$48.84
2	55.00	\$36.09	\$16.03	\$10.71	\$9.50	\$0.00	\$72.33
3	65.00	\$42.65	\$16.03	\$10.71	\$9.50	\$0.00	\$78.89
4	70.00	\$45.93	\$16.03	\$10.71	\$9.50	\$0.00	\$82.17
5	80.00	\$52.50	\$16.03	\$10.71	\$9.50	\$0.00	\$88.74

ELEVATOR CONSTRUCTOR HELPER	1/1/2022	\$45.93	\$16.03	\$10.71	\$9.50	\$0.00	\$82.17
ELEVATOR CONSTRUCTORS LOCAL 4							
ELEVATOR CONSTRUCTORS LOCAL 4							

For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY)	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY	5/1/2025	\$53.22	\$15.30	\$13.15	\$3.25	\$0.00	\$84.92
OPERATING ENGINEERS LOCAL 4	11/1/2025	\$54.51	\$15.30	\$13.15	\$3.25	\$0.00	\$86.21
OPERATING ENGINEERS LOCAL 4	5/1/2026	\$55.95	\$15.30	\$13.15	\$3.25	\$0.00	\$87.65
	11/1/2026	\$57.24	\$15.30	\$13.15	\$3.25	\$0.00	\$88.94
	5/1/2027	\$58.67	\$15.30	\$13.15	\$3.25	\$0.00	\$90.37
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY	5/1/2025	\$54.82	\$15.30	\$13.15	\$3.25	\$0.00	\$86.52
OPERATING ENGINEERS LOCAL 4	11/1/2025	\$56.12	\$15.30	\$13.15	\$3.25	\$0.00	\$87.82
OPERATING ENGINEERS LOCAL 4	5/1/2026	\$57.57	\$15.30	\$13.15	\$3.25	\$0.00	\$89.27
	11/1/2026	\$58.87	\$15.30	\$13.15	\$3.25	\$0.00	\$90.57
	5/1/2027	\$60.32	\$15.30	\$13.15	\$3.25	\$0.00	\$92.02
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY	5/1/2025	\$26.22	\$15.30	\$13.15	\$3.25	\$0.00	\$57.92
OPERATING ENGINEERS LOCAL 4	11/1/2025	\$26.98	\$15.30	\$13.15	\$3.25	\$0.00	\$58.68
OPERATING ENGINEERS LOCAL 4	5/1/2026	\$27.83	\$15.30	\$13.15	\$3.25	\$0.00	\$59.53
	11/1/2026	\$28.59	\$15.30	\$13.15	\$3.25	\$0.00	\$60.29
	5/1/2027	\$29.44	\$15.30	\$13.15	\$3.25	\$0.00	\$61.14
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIRE ALARM INSTALLER	9/1/2024	\$50.02	\$12.00	\$14.22	\$3.50	\$0.00	\$79.74
ELECTRICIANS LOCAL 223	9/1/2025	\$52.25	\$12.25	\$14.86	\$3.75	\$0.00	\$83.11
ELECTRICIANS LOCAL 223	9/1/2026	\$54.72	\$12.50	\$15.56	\$4.00	\$0.00	\$86.78
For apprentice rates see "Apprentice- ELECTRICIAN"							
FIRE ALARM REPAIR / MAINTENANCE	9/1/2024	\$50.02	\$12.00	\$14.22	\$3.50	\$0.00	\$79.74
/ COMMISSIONING	9/1/2025	\$52.25	\$12.25	\$14.86	\$3.75	\$0.00	\$83.11
ELECTRICIANS LOCAL 223	9/1/2026	\$54.72	\$12.50	\$15.56	\$4.00	\$0.00	\$86.78
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"							
FIREMAN (ASST. ENGINEER)	6/1/2025	\$47.02	\$15.55	\$13.25	\$3.25	\$0.00	\$79.07
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$48.19	\$15.55	\$13.25	\$3.25	\$0.00	\$80.24
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$49.25	\$15.55	\$13.25	\$3.25	\$0.00	\$81.30
	12/1/2026	\$50.43	\$15.55	\$13.25	\$3.25	\$0.00	\$82.48
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FLAGGER & SIGNALER (HEAVY & HIGHWAY)	6/1/2025	\$28.09	\$9.90	\$9.25	\$9.21	\$0.00	\$56.45
LABORERS	12/1/2025	\$28.09	\$9.90	\$9.25	\$9.21	\$0.00	\$56.45
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$29.21	\$9.90	\$9.25	\$9.21	\$0.00	\$57.57
	12/1/2026	\$29.21	\$9.90	\$9.25	\$9.21	\$0.00	\$57.57
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
FLOORCOVERER	3/1/2024	\$49.47	\$8.83	\$11.47	\$8.80	\$0.00	\$78.57

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
FLOORCOVERERS LOCAL 2168							
FLOORCOVERERS LOCAL 2168 ZONE II							

Apprentice: FLOORCOVERER**Effective Date: 3/1/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.74	\$8.83	\$0.00	\$1.76	\$0.00	\$35.33
2	55.00	\$27.21	\$8.83	\$0.00	\$1.76	\$0.00	\$37.80
3	60.00	\$29.68	\$8.83	\$0.00	\$3.52	\$0.00	\$42.03
4	65.00	\$32.16	\$8.83	\$0.00	\$3.52	\$0.00	\$44.51
5	70.00	\$34.63	\$8.83	\$11.47	\$5.28	\$0.00	\$60.21
6	75.00	\$37.10	\$8.83	\$11.47	\$5.28	\$0.00	\$62.68
7	80.00	\$39.58	\$8.83	\$11.47	\$7.04	\$0.00	\$66.92
8	85.00	\$42.05	\$8.83	\$11.47	\$7.04	\$0.00	\$69.39

FORK LIFT/CHERRY PICKER	6/1/2025	\$58.33	\$15.55	\$13.25	\$3.25	\$0.00	\$90.38
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.78	\$15.55	\$13.25	\$3.25	\$0.00	\$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$61.08	\$15.55	\$13.25	\$3.25	\$0.00	\$93.13
	12/1/2026	\$62.53	\$15.55	\$13.25	\$3.25	\$0.00	\$94.58

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GENERATOR/LIGHTING PLANT/HEATERS	6/1/2025	\$37.52	\$15.55	\$13.25	\$3.25	\$0.00	\$69.57
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$38.47	\$15.55	\$13.25	\$3.25	\$0.00	\$70.52
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$39.33	\$15.55	\$13.25	\$3.25	\$0.00	\$71.38
	12/1/2026	\$40.28	\$15.55	\$13.25	\$3.25	\$0.00	\$72.33

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	6/1/2020	\$39.18	\$10.80	\$6.70	\$3.75	\$0.00	\$60.43
GLAZIERS LOCAL 1333							
GLAZIERS LOCAL 1333							

Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)**Effective Date: 6/1/2020**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$19.59	\$10.80	\$1.50	\$0.30	\$0.00	\$32.19
2	56.25	\$22.04	\$10.80	\$1.50	\$0.30	\$0.00	\$34.64
3	62.50	\$24.49	\$10.80	\$1.95	\$0.50	\$0.00	\$37.74
4	68.75	\$26.94	\$10.80	\$1.95	\$0.50	\$0.00	\$40.19
5	75.00	\$29.39	\$10.80	\$2.50	\$0.65	\$0.00	\$43.34
6	81.25	\$31.83	\$10.80	\$2.50	\$0.65	\$0.00	\$45.78
7	87.50	\$34.28	\$10.80	\$6.70	\$3.75	\$0.00	\$55.53
8	93.75	\$36.73	\$10.80	\$6.70	\$3.75	\$0.00	\$57.98

HOISTING ENGINEER/CRANES/GRADALLS	6/1/2025	\$58.33	\$15.55	\$13.25	\$3.25	\$0.00	\$90.38
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.78	\$15.55	\$13.25	\$3.25	\$0.00	\$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$61.08	\$15.55	\$13.25	\$3.25	\$0.00	\$93.13

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2026	\$62.53	\$15.55	\$13.25	\$3.25	\$0.00	\$94.58

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS							
Effective Date: 6/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$32.08	\$0.00	\$0.00	\$0.00	\$0.00	\$32.08
2	60.00	\$35.00	\$15.55	\$13.25	\$3.25	\$0.00	\$67.05
3	65.00	\$37.91	\$15.55	\$13.25	\$3.25	\$0.00	\$69.96
4	70.00	\$40.83	\$15.55	\$13.25	\$3.25	\$0.00	\$72.88
5	75.00	\$43.75	\$15.55	\$13.25	\$3.25	\$0.00	\$75.80
6	80.00	\$46.66	\$15.55	\$13.25	\$3.25	\$0.00	\$78.71
7	85.00	\$49.58	\$15.55	\$13.25	\$3.25	\$0.00	\$81.63
8	90.00	\$52.50	\$15.55	\$13.25	\$3.25	\$0.00	\$84.55

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS							
Effective Date: 12/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$32.88	\$0.00	\$0.00	\$0.00	\$0.00	\$32.88
2	60.00	\$35.87	\$15.55	\$13.25	\$3.25	\$0.00	\$67.92
3	65.00	\$38.86	\$15.55	\$13.25	\$3.25	\$0.00	\$70.91
4	70.00	\$41.85	\$15.55	\$13.25	\$3.25	\$0.00	\$73.90
5	75.00	\$44.84	\$15.55	\$13.25	\$3.25	\$0.00	\$76.89
6	80.00	\$47.82	\$15.55	\$13.25	\$3.25	\$0.00	\$79.87
7	85.00	\$50.81	\$15.55	\$13.25	\$3.25	\$0.00	\$82.86
8	90.00	\$53.80	\$15.55	\$13.25	\$3.25	\$0.00	\$85.85

HVAC (DUCTWORK)	4/1/2025	\$43.83	\$14.59	\$12.89	\$6.15	\$2.24	\$79.70
SHEETMETAL WORKERS LOCAL 17	10/1/2025	\$45.08	\$14.59	\$12.89	\$6.15	\$2.24	\$80.95
SHEETMETAL WORKERS LOCAL 17 - B	4/1/2026	\$46.58	\$14.59	\$12.89	\$6.15	\$2.24	\$82.45

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS)	9/1/2024	\$50.02	\$12.00	\$14.22	\$3.50	\$0.00	\$79.74
ELECTRICIANS LOCAL 223	9/1/2025	\$52.25	\$12.25	\$14.86	\$3.75	\$0.00	\$83.11
ELECTRICIANS LOCAL 223	9/1/2026	\$54.72	\$12.50	\$15.56	\$4.00	\$0.00	\$86.78

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR)	4/1/2025	\$43.83	\$30.43	\$12.89	\$6.15	\$2.24	\$95.54
SHEETMETAL WORKERS LOCAL 17	10/1/2025	\$45.08	\$30.43	\$12.89	\$6.15	\$2.24	\$96.79
SHEETMETAL WORKERS LOCAL 17 - B	4/1/2026	\$46.58	\$30.43	\$12.89	\$6.15	\$2.24	\$98.29

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (TESTING AND BALANCING - WATER)	8/26/2024	\$52.49	\$10.80	\$16.80	\$4.60	\$0.00	\$84.69
PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
HVAC MECHANIC	8/26/2024	\$52.49	\$10.80	\$16.80	\$4.60	\$0.00	\$84.69
PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

HYDRAULIC DRILLS	6/1/2025	\$41.09	\$9.90	\$9.25	\$9.11	\$0.00	\$69.35
LABORERS	12/1/2025	\$42.47	\$9.90	\$9.25	\$9.11	\$0.00	\$70.73
LABORERS - ZONE 2	6/1/2026	\$43.91	\$9.90	\$9.25	\$9.11	\$0.00	\$72.17
	12/1/2026	\$45.35	\$9.90	\$9.25	\$9.11	\$0.00	\$73.61
	6/1/2027	\$46.80	\$9.90	\$9.25	\$9.11	\$0.00	\$75.06
	12/1/2027	\$48.25	\$9.90	\$9.25	\$9.11	\$0.00	\$76.51
	6/1/2028	\$49.75	\$9.90	\$9.25	\$9.11	\$0.00	\$78.01
	12/1/2028	\$51.25	\$9.90	\$9.25	\$9.11	\$0.00	\$79.51

For apprentice rates see "Apprentice- LABORER"

HYDRAULIC DRILLS (HEAVY & HIGHWAY)	6/1/2025	\$41.09	\$9.90	\$9.25	\$9.21	\$0.00	\$69.45
LABORERS	12/1/2025	\$42.47	\$9.90	\$9.25	\$9.21	\$0.00	\$70.83
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$43.91	\$9.90	\$9.25	\$9.21	\$0.00	\$72.27
	12/1/2026	\$45.35	\$9.90	\$9.25	\$9.21	\$0.00	\$73.71

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

INSULATOR (PIPES & TANKS)	9/1/2024	\$56.92	\$14.75	\$9.52	\$10.09	\$0.00	\$91.28
HEAT & FROST INSULATORS LOCAL 6	9/1/2025	\$60.34	\$14.75	\$9.52	\$10.09	\$0.00	\$94.70
HEAT & FROST INSULATORS LOCAL 6 (BOSTON)	9/1/2026	\$63.76	\$14.75	\$9.52	\$10.09	\$0.00	\$98.12

Apprentice: INSULATOR (PIPES & TANKS)**Effective Date: 9/1/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$28.46	\$14.75	\$9.27	\$5.05	\$0.00	\$57.53
2	60.00	\$34.15	\$14.75	\$9.32	\$6.05	\$0.00	\$64.27
3	70.00	\$39.84	\$14.75	\$9.37	\$7.06	\$0.00	\$71.02
4	80.00	\$45.54	\$14.75	\$9.42	\$8.07	\$0.00	\$77.78

Apprentice: INSULATOR (PIPES & TANKS)**Effective Date: 9/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$30.17	\$14.75	\$9.27	\$5.05	\$0.00	\$59.24
2	60.00	\$36.20	\$14.75	\$9.32	\$6.05	\$0.00	\$66.32
3	70.00	\$42.24	\$14.75	\$9.37	\$7.06	\$0.00	\$73.42
4	80.00	\$48.27	\$14.75	\$9.42	\$8.07	\$0.00	\$80.51

IRONWORKER/WELDER	3/16/2021	\$42.46	\$7.70	\$12.10	\$5.00	\$0.00	\$67.26
IRONWORKERS LOCAL 37							
IRONWORKERS LOCAL 37							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
----------------	----------------	-----------	--------	---------	---------	---------------------------	------------

Apprentice: IRONWORKER/WELDER							
Effective Date: 3/16/2021							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	70.00	\$29.72	\$7.70	\$12.10	\$5.00	\$0.00	\$54.52
2	75.00	\$31.85	\$7.70	\$12.10	\$5.00	\$0.00	\$56.65
3	80.00	\$33.97	\$7.70	\$12.10	\$5.00	\$0.00	\$58.77
4	85.00	\$36.09	\$7.70	\$12.10	\$5.00	\$0.00	\$60.89
5	90.00	\$38.21	\$7.70	\$12.10	\$5.00	\$0.00	\$63.01
6	95.00	\$40.34	\$7.70	\$12.10	\$5.00	\$0.00	\$65.14

JACKHAMMER & PAVING BREAKER OPERATOR	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
LABORERS - ZONE 2	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

LABORER	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.11	\$0.00	\$68.60
LABORERS	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.11	\$0.00	\$69.98
LABORERS - ZONE 2	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.11	\$0.00	\$71.42
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.11	\$0.00	\$72.86
	6/1/2027	\$46.05	\$9.90	\$9.25	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.50	\$9.90	\$9.25	\$9.11	\$0.00	\$75.76
	6/1/2028	\$49.00	\$9.90	\$9.25	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.50	\$9.90	\$9.25	\$9.11	\$0.00	\$78.76

Apprentice: LABORER							
Effective Date: 6/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$24.20	\$9.90	\$9.25	\$9.11	\$0.00	\$52.46
2	70.00	\$28.24	\$9.90	\$9.25	\$9.11	\$0.00	\$56.50
3	80.00	\$32.27	\$9.90	\$9.25	\$9.11	\$0.00	\$60.53
4	90.00	\$36.31	\$9.90	\$9.25	\$9.11	\$0.00	\$64.57

Apprentice: LABORER							
Effective Date: 12/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$25.03	\$9.90	\$9.25	\$9.11	\$0.00	\$53.29
2	70.00	\$29.20	\$9.90	\$9.25	\$9.11	\$0.00	\$57.46

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: LABORER Effective Date: 12/1/2025							
		Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
3	80.00	\$33.38	\$9.90	\$9.25	\$9.11	\$0.00	\$61.64
4	90.00	\$37.55	\$9.90	\$9.25	\$9.11	\$0.00	\$65.81
LABORER (HEAVY & HIGHWAY)	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.21	\$0.00	\$68.70
LABORERS	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.21	\$0.00	\$70.08
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.21	\$0.00	\$71.52
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.21	\$0.00	\$72.96
Apprentice: LABORER (HEAVY & HIGHWAY) Effective Date: 6/1/2025							
		Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$24.20	\$9.90	\$9.25	\$9.21	\$0.00	\$52.56
2	70.00	\$28.24	\$9.90	\$9.25	\$9.21	\$0.00	\$56.60
3	80.00	\$32.27	\$9.90	\$9.25	\$9.21	\$0.00	\$60.63
4	90.00	\$36.31	\$9.90	\$9.25	\$9.21	\$0.00	\$64.67
Apprentice: LABORER (HEAVY & HIGHWAY) Effective Date: 12/1/2025							
		Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$25.03	\$9.90	\$9.25	\$9.21	\$0.00	\$53.39
2	70.00	\$29.20	\$9.90	\$9.25	\$9.21	\$0.00	\$57.56
3	80.00	\$33.38	\$9.90	\$9.25	\$9.21	\$0.00	\$61.74
4	90.00	\$37.55	\$9.90	\$9.25	\$9.21	\$0.00	\$65.91
LABORER: CARPENTER TENDER	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.11	\$0.00	\$68.60
LABORERS	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.11	\$0.00	\$69.98
LABORERS - ZONE 2	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.11	\$0.00	\$71.42
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.11	\$0.00	\$72.86
	6/1/2027	\$46.05	\$9.90	\$9.25	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.50	\$9.90	\$9.25	\$9.11	\$0.00	\$75.76
	6/1/2028	\$49.00	\$9.90	\$9.25	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.50	\$9.90	\$9.25	\$9.11	\$0.00	\$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: CEMENT FINISHER TENDER	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.11	\$0.00	\$68.60
LABORERS	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.11	\$0.00	\$69.98
LABORERS - ZONE 2	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.11	\$0.00	\$71.42
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.11	\$0.00	\$72.86
	6/1/2027	\$46.05	\$9.90	\$9.25	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.50	\$9.90	\$9.25	\$9.11	\$0.00	\$75.76

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/1/2028	\$49.00	\$9.90	\$9.25	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.50	\$9.90	\$9.25	\$9.11	\$0.00	\$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS	6/2/2025	\$40.43	\$9.90	\$9.25	\$9.17	\$0.00	\$68.75
LABORERS - ZONE 2	12/1/2025	\$41.81	\$9.90	\$9.25	\$9.17	\$0.00	\$70.13
	6/1/2026	\$43.25	\$9.90	\$9.25	\$9.17	\$0.00	\$71.57
	12/7/2026	\$44.69	\$9.90	\$9.25	\$9.17	\$0.00	\$73.01
	6/7/2027	\$46.14	\$9.90	\$9.25	\$9.17	\$0.00	\$74.46
	12/6/2027	\$47.59	\$9.90	\$9.25	\$9.17	\$0.00	\$75.91
	6/5/2028	\$49.09	\$9.90	\$9.25	\$9.17	\$0.00	\$77.41
	12/4/2028	\$50.59	\$9.90	\$9.25	\$9.17	\$0.00	\$78.91
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER LABORERS	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
LABORERS - ZONE 2	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER (HEAVY & HIGHWAY) LABORERS	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
LABORER: MULTI-TRADE TENDER LABORERS	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.11	\$0.00	\$68.60
LABORERS - ZONE 2	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.11	\$0.00	\$69.98
	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.11	\$0.00	\$71.42
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.11	\$0.00	\$72.86
	6/1/2027	\$46.05	\$9.90	\$9.25	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.50	\$9.90	\$9.25	\$9.11	\$0.00	\$75.76
	6/1/2028	\$49.00	\$9.90	\$9.25	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.50	\$9.90	\$9.25	\$9.11	\$0.00	\$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: TREE REMOVER LABORERS	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.11	\$0.00	\$68.60
LABORERS - ZONE 2	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.11	\$0.00	\$69.98
	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.11	\$0.00	\$71.42
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.11	\$0.00	\$72.86
	6/1/2027	\$46.05	\$9.90	\$9.25	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.50	\$9.90	\$9.25	\$9.11	\$0.00	\$75.76
	6/1/2028	\$49.00	\$9.90	\$9.25	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.50	\$9.90	\$9.25	\$9.11	\$0.00	\$78.76

This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LASER BEAM OPERATOR	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
LABORERS - ZONE 2	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

LASER BEAM OPERATOR (HEAVY & HIGHWAY)	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

MARBLE & TILE FINISHERS	2/1/2025	\$50.36	\$11.49	\$15.57	\$6.05	\$0.00	\$83.47
BRICKLAYERS LOCAL 3	8/1/2025	\$52.08	\$11.49	\$15.57	\$6.05	\$0.00	\$85.19
BRICKLAYERS LOCAL 3 - MARBLE & TILE	2/1/2026	\$53.16	\$11.49	\$15.57	\$6.05	\$0.00	\$86.27
	8/1/2026	\$54.92	\$11.49	\$15.57	\$6.05	\$0.00	\$88.03
	2/1/2027	\$56.04	\$11.49	\$15.57	\$6.05	\$0.00	\$89.15

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 2/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$25.18	\$11.49	\$15.57	\$6.05	\$0.00	\$58.29
2	60.00	\$30.22	\$11.49	\$15.57	\$6.05	\$0.00	\$63.33
3	70.00	\$35.25	\$11.49	\$15.57	\$6.05	\$0.00	\$68.36
4	80.00	\$40.29	\$11.49	\$15.57	\$6.05	\$0.00	\$73.40
5	90.00	\$45.32	\$11.49	\$15.57	\$6.05	\$0.00	\$78.43

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 8/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$26.04	\$11.49	\$15.57	\$6.05	\$0.00	\$59.15
2	60.00	\$31.25	\$11.49	\$15.57	\$6.05	\$0.00	\$64.36
3	70.00	\$36.46	\$11.49	\$15.57	\$6.05	\$0.00	\$69.57
4	80.00	\$41.66	\$11.49	\$15.57	\$6.05	\$0.00	\$74.77
5	90.00	\$46.87	\$11.49	\$15.57	\$6.05	\$0.00	\$79.98

MARBLE MASONS, TILELAYERS & TERRAZZO MECH	2/1/2025	\$65.82	\$11.49	\$15.57	\$7.99	\$0.00	\$100.87
BRICKLAYERS LOCAL 3	8/1/2025	\$67.97	\$11.49	\$15.57	\$7.99	\$0.00	\$103.02
BRICKLAYERS LOCAL 3 - MARBLE & TILE	2/1/2026	\$69.32	\$11.49	\$15.57	\$7.99	\$0.00	\$104.37
	8/1/2026	\$71.52	\$11.49	\$15.57	\$7.99	\$0.00	\$106.57
	2/1/2027	\$72.92	\$11.49	\$15.57	\$7.99	\$0.00	\$107.97

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH Effective Date: 2/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$32.91	\$11.49	\$15.57	\$7.99	\$0.00	\$67.96
2	60.00	\$39.49	\$11.49	\$15.57	\$7.99	\$0.00	\$74.54
3	70.00	\$46.07	\$11.49	\$15.57	\$7.99	\$0.00	\$81.12
4	80.00	\$52.66	\$11.49	\$15.57	\$7.99	\$0.00	\$87.71
5	90.00	\$59.24	\$11.49	\$15.57	\$7.99	\$0.00	\$94.29
Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH Effective Date: 8/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$33.99	\$11.49	\$15.57	\$7.99	\$0.00	\$69.04
2	60.00	\$40.78	\$11.49	\$15.57	\$7.99	\$0.00	\$75.83
3	70.00	\$47.58	\$11.49	\$15.57	\$7.99	\$0.00	\$82.63
4	80.00	\$54.38	\$11.49	\$15.57	\$7.99	\$0.00	\$89.43
5	90.00	\$61.17	\$11.49	\$15.57	\$7.99	\$0.00	\$96.22
MECH. SWEEPER OPERATOR (ON CONST. SITES)	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MECHANICS MAINTENANCE	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MILLWRIGHT (Zone 2)	1/6/2025	\$45.09	\$10.08	\$11.47	\$10.00	\$0.00	\$76.64
MILLWRIGHTS LOCAL 1121	1/5/2026	\$47.42	\$10.08	\$11.47	\$10.00	\$0.00	\$78.97
MILLWRIGHTS LOCAL 1121 - Zone 2							

Apprentice: MILLWRIGHT (Zone 2) Effective Date: 1/6/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$24.80	\$10.08	\$0.00	\$5.50	\$0.00	\$40.38
2	65.00	\$29.31	\$10.08	\$0.00	\$6.50	\$0.00	\$45.89
3	75.00	\$33.82	\$10.08	\$11.47	\$7.50	\$0.00	\$62.87
4	85.00	\$38.33	\$10.08	\$11.47	\$8.50	\$0.00	\$68.38

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: MILLWRIGHT (Zone 2) Effective Date: 1/5/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$26.08	\$10.08	\$0.00	\$5.50	\$0.00	\$41.66
2	65.00	\$30.82	\$10.08	\$0.00	\$6.50	\$0.00	\$47.40
3	75.00	\$35.57	\$10.08	\$11.47	\$7.50	\$0.00	\$64.62
4	85.00	\$40.31	\$10.08	\$11.47	\$8.50	\$0.00	\$70.36
MORTAR MIXER	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
LABORERS - ZONE 2	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
OILER (OTHER THAN TRUCK CRANES,GRADALLS)	6/1/2025	\$25.97	\$15.30	\$13.15	\$3.25	\$0.00	\$57.67
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$26.63	\$15.30	\$13.15	\$3.25	\$0.00	\$58.33
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$27.22	\$15.30	\$13.15	\$3.25	\$0.00	\$58.92
	12/1/2026	\$27.89	\$15.30	\$13.15	\$3.25	\$0.00	\$59.59
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OILER (TRUCK CRANES, GRADALLS)	6/1/2025	\$31.80	\$15.30	\$13.15	\$3.25	\$0.00	\$63.50
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$32.60	\$15.30	\$13.15	\$3.25	\$0.00	\$64.30
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$33.32	\$15.30	\$13.15	\$3.25	\$0.00	\$65.02
	12/1/2026	\$34.12	\$15.30	\$13.15	\$3.25	\$0.00	\$65.82
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OTHER POWER DRIVEN EQUIPMENT - CLASS II	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PAINTER (BRIDGES/TANKS)	1/1/2025	\$58.46	\$9.95	\$11.85	\$12.10	\$0.00	\$92.36
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: PAINTER (BRIDGES/TANKS) Effective Date: 1/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$29.23	\$9.95	\$0.00	\$0.00	\$0.00	\$39.18
2	55.00	\$32.15	\$9.95	\$0.00	\$6.66	\$0.00	\$48.76

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PAINTER (BRIDGES/TANKS)							
Effective Date: 1/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
3	60.00	\$35.08	\$9.95	\$0.00	\$7.26	\$0.00	\$52.29
4	65.00	\$38.00	\$9.95	\$0.00	\$7.87	\$0.00	\$55.82
5	70.00	\$40.92	\$9.95	\$11.85	\$8.47	\$0.00	\$71.19
6	75.00	\$43.85	\$9.95	\$11.85	\$9.08	\$0.00	\$74.73
7	80.00	\$46.77	\$9.95	\$11.85	\$9.68	\$0.00	\$78.25
8	90.00	\$52.61	\$9.95	\$11.85	\$10.89	\$0.00	\$85.30

PAINTER (SPRAY OR SANDBLAST, NEW) * 1/1/2025 \$49.36 \$9.95 \$11.85 \$12.10 \$0.00 \$83.26

* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.

PAINTERS LOCAL 35

PAINTERS LOCAL 35 - ZONE 2

Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) *							
Effective Date: 1/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.68	\$9.95	\$0.00	\$0.00	\$0.00	\$34.63
2	55.00	\$27.15	\$9.95	\$0.00	\$6.66	\$0.00	\$43.76
3	60.00	\$29.62	\$9.95	\$0.00	\$7.26	\$0.00	\$46.83
4	65.00	\$32.08	\$9.95	\$0.00	\$7.87	\$0.00	\$49.90
5	70.00	\$34.55	\$9.95	\$11.85	\$8.47	\$0.00	\$64.82
6	75.00	\$37.02	\$9.95	\$11.85	\$9.08	\$0.00	\$67.90
7	80.00	\$39.49	\$9.95	\$11.85	\$9.68	\$0.00	\$70.97
8	90.00	\$44.42	\$9.95	\$11.85	\$10.89	\$0.00	\$77.11

PAINTER (SPRAY OR SANDBLAST, REPAINT) 1/1/2025 \$47.42 \$9.95 \$11.85 \$12.10 \$0.00 \$81.32

PAINTERS LOCAL 35

PAINTERS LOCAL 35 - ZONE 2

Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT)							
Effective Date: 1/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$23.71	\$9.95	\$0.00	\$0.00	\$0.00	\$33.66
2	55.00	\$26.08	\$9.95	\$0.00	\$6.66	\$0.00	\$42.69
3	60.00	\$28.45	\$9.95	\$0.00	\$7.26	\$0.00	\$45.66
4	65.00	\$30.82	\$9.95	\$0.00	\$7.87	\$0.00	\$48.64
5	70.00	\$33.19	\$9.95	\$11.85	\$8.47	\$0.00	\$63.46
6	75.00	\$35.57	\$9.95	\$11.85	\$9.08	\$0.00	\$66.45
7	80.00	\$37.94	\$9.95	\$11.85	\$9.68	\$0.00	\$69.42
8	90.00	\$42.68	\$9.95	\$11.85	\$10.89	\$0.00	\$75.37

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PAINTER / TAPER (BRUSH, NEW) *	1/1/2025	\$47.96	\$9.95	\$11.85	\$12.10	\$0.00	\$81.86
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.							
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: PAINTER / TAPER (BRUSH, NEW) *							
Effective Date: 1/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$23.98	\$9.95	\$0.00	\$0.00	\$0.00	\$33.93
2	55.00	\$26.38	\$9.95	\$0.00	\$6.66	\$0.00	\$42.99
3	60.00	\$28.78	\$9.95	\$0.00	\$7.26	\$0.00	\$45.99
4	65.00	\$31.17	\$9.95	\$0.00	\$7.87	\$0.00	\$48.99
5	70.00	\$33.57	\$9.95	\$11.85	\$8.47	\$0.00	\$63.84
6	75.00	\$35.97	\$9.95	\$11.85	\$9.08	\$0.00	\$66.85
7	80.00	\$38.37	\$9.95	\$11.85	\$9.68	\$0.00	\$69.85
8	90.00	\$43.16	\$9.95	\$11.85	\$10.89	\$0.00	\$75.85

PAINTER / TAPER (BRUSH, REPAINT)	1/1/2025	\$46.02	\$9.95	\$11.85	\$12.10	\$0.00	\$79.92
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: PAINTER / TAPER (BRUSH, REPAINT)							
Effective Date: 1/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$23.01	\$9.95	\$0.00	\$0.00	\$0.00	\$32.96
2	55.00	\$25.31	\$9.95	\$0.00	\$6.66	\$0.00	\$41.92
3	60.00	\$27.61	\$9.95	\$0.00	\$7.26	\$0.00	\$44.82
4	65.00	\$29.91	\$9.95	\$0.00	\$7.87	\$0.00	\$47.73
5	70.00	\$32.21	\$9.95	\$11.85	\$8.47	\$0.00	\$62.48
6	75.00	\$34.52	\$9.95	\$11.85	\$9.08	\$0.00	\$65.40
7	80.00	\$36.82	\$9.95	\$11.85	\$9.68	\$0.00	\$68.30
8	90.00	\$41.42	\$9.95	\$11.85	\$10.89	\$0.00	\$74.11

PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)	6/1/2025	\$40.34	\$9.90	\$9.25	\$9.21	\$0.00	\$68.70
LABORERS	12/1/2025	\$41.72	\$9.90	\$9.25	\$9.21	\$0.00	\$70.08
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$43.16	\$9.90	\$9.25	\$9.21	\$0.00	\$71.52
	12/1/2026	\$44.60	\$9.90	\$9.25	\$9.21	\$0.00	\$72.96

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)

PANEL & PICKUP TRUCKS DRIVER	6/1/2025	\$40.78	\$15.57	\$20.17	\$0.00	\$0.00	\$76.52
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$40.78	\$15.57	\$21.78	\$0.00	\$0.00	\$78.13
	1/1/2026	\$40.78	\$16.17	\$21.78	\$0.00	\$0.00	\$78.73
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	\$41.78	\$16.17	\$21.78	\$0.00	\$0.00	\$79.73
	12/1/2026	\$41.78	\$16.17	\$23.52	\$0.00	\$0.00	\$81.47
	1/1/2027	\$41.78	\$16.77	\$23.52	\$0.00	\$0.00	\$82.07

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)	8/1/2024	\$51.97	\$10.08	\$11.62	\$12.67	\$0.00	\$86.34
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 2)							
For apprentice rates see "Apprentice- PILE DRIVER"							

PILE DRIVER	8/1/2024	\$51.97	\$10.08	\$11.62	\$12.67	\$0.00	\$86.34
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 2)							

Apprentice: PILE DRIVER**Effective Date: 8/1/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$23.39	\$10.08	\$0.00	\$2.53	\$0.00	\$36.00
2	55.00	\$28.58	\$10.08	\$0.00	\$5.07	\$0.00	\$43.73
3	70.00	\$36.38	\$10.08	\$11.62	\$7.60	\$0.00	\$65.68
4	80.00	\$41.58	\$10.08	\$11.62	\$10.14	\$0.00	\$73.42

PIPELAYER	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
LABORERS - ZONE 2	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

PIPELAYER (HEAVY & HIGHWAY)	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

PLUMBER & PIPEFITTER	8/26/2024	\$52.49	\$10.80	\$16.80	\$4.60	\$0.00	\$84.69
PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							

Apprentice: PLUMBER & PIPEFITTER**Effective Date: 8/26/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$21.00	\$10.15	\$2.50	\$0.00	\$0.00	\$33.65
2	50.00	\$26.25	\$10.15	\$2.50	\$0.00	\$0.00	\$38.90
3	60.00	\$31.49	\$10.15	\$8.40	\$0.50	\$0.00	\$50.54
4	70.00	\$36.74	\$10.15	\$13.44	\$0.80	\$0.00	\$61.13
5	80.00	\$41.99	\$10.15	\$16.80	\$1.00	\$0.00	\$69.94

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PLUMBER & PIPEFITTER Effective Date: 8/25/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$22.10	\$10.15	\$2.50	\$0.00	\$0.00	\$34.75
2	50.00	\$27.62	\$10.15	\$2.50	\$0.00	\$0.00	\$40.27
3	60.00	\$33.14	\$10.15	\$8.40	\$0.50	\$0.00	\$52.19
4	70.00	\$38.67	\$10.15	\$13.44	\$0.80	\$0.00	\$63.06
5	80.00	\$44.19	\$10.15	\$16.80	\$1.00	\$0.00	\$72.14
<hr/>							
PNEUMATIC CONTROLS (TEMP.)	8/26/2024	\$52.49	\$10.80	\$16.80	\$4.60	\$0.00	\$84.69
PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
<hr/>							
PNEUMATIC DRILL/TOOL OPERATOR	6/1/2025	\$41.09	\$9.90	\$9.25	\$8.29	\$0.00	\$68.53
LABORERS	12/1/2025	\$42.47	\$9.90	\$9.25	\$8.29	\$0.00	\$69.91
LABORERS - ZONE 2	6/1/2026	\$43.91	\$9.90	\$9.25	\$8.29	\$0.00	\$71.35
	12/1/2026	\$45.35	\$9.90	\$9.25	\$8.29	\$0.00	\$72.79
	6/1/2027	\$46.80	\$9.90	\$9.25	\$8.29	\$0.00	\$74.24
	12/1/2027	\$48.25	\$9.90	\$9.25	\$8.29	\$0.00	\$75.69
	6/1/2028	\$49.75	\$9.90	\$9.25	\$8.29	\$0.00	\$77.19
	12/1/2028	\$51.25	\$9.90	\$9.25	\$8.29	\$0.00	\$78.69
For apprentice rates see "Apprentice- LABORER"							
<hr/>							
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY)	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
<hr/>							
POWDERMAN & BLASTER	6/1/2025	\$41.34	\$9.90	\$9.25	\$9.11	\$0.00	\$69.60
LABORERS	12/1/2025	\$42.72	\$9.90	\$9.25	\$9.11	\$0.00	\$70.98
LABORERS - ZONE 2	6/1/2026	\$44.16	\$9.90	\$9.25	\$9.11	\$0.00	\$72.42
	12/1/2026	\$45.60	\$9.90	\$9.25	\$9.11	\$0.00	\$73.86
	6/1/2027	\$47.05	\$9.90	\$9.25	\$9.11	\$0.00	\$75.31
	12/1/2027	\$48.50	\$9.90	\$9.25	\$9.11	\$0.00	\$76.76
	6/1/2028	\$50.00	\$9.90	\$9.25	\$9.11	\$0.00	\$78.26
	12/1/2028	\$51.50	\$9.90	\$9.25	\$9.11	\$0.00	\$79.76
For apprentice rates see "Apprentice- LABORER"							
<hr/>							
POWDERMAN & BLASTER (HEAVY & HIGHWAY)	6/1/2025	\$41.34	\$9.65	\$9.25	\$9.21	\$0.00	\$69.45
LABORERS	12/1/2025	\$42.72	\$9.65	\$9.25	\$9.21	\$0.00	\$70.83
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$44.16	\$9.65	\$9.25	\$9.21	\$0.00	\$72.27
	12/1/2026	\$45.60	\$9.65	\$9.25	\$9.21	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
<hr/>							
POWER SHOVEL/DERRICK/TRENCHING MACHINE	6/1/2025	\$58.33	\$15.55	\$13.25	\$3.25	\$0.00	\$90.38

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.78	\$15.55	\$13.25	\$3.25	\$0.00	\$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$61.08	\$15.55	\$13.25	\$3.25	\$0.00	\$93.13
	12/1/2026	\$62.53	\$15.55	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (CONCRETE)	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (DEWATERING, OTHER)	6/1/2025	\$37.52	\$15.55	\$13.25	\$3.25	\$0.00	\$69.57
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$38.47	\$15.55	\$13.25	\$3.25	\$0.00	\$70.52
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$39.33	\$15.55	\$13.25	\$3.25	\$0.00	\$71.38
	12/1/2026	\$40.28	\$15.55	\$13.25	\$3.25	\$0.00	\$72.33
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
READY-MIX CONCRETE DRIVER TEAMSTERS 653 TEAMSTERS 653 - Southeastern Concrete (Weymouth)	8/1/2023	\$25.00	\$13.91	\$6.90	\$0.00	\$0.00	\$45.81
RECLAIMERS	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
RIDE-ON MOTORIZED BUGGY OPERATOR	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.11	\$0.00	\$68.85
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.11	\$0.00	\$70.23
LABORERS - ZONE 2	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.11	\$0.00	\$73.11
	6/1/2027	\$46.30	\$9.90	\$9.25	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.75	\$9.90	\$9.25	\$9.11	\$0.00	\$76.01
	6/1/2028	\$49.25	\$9.90	\$9.25	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.75	\$9.90	\$9.25	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
ROLLER/SPREADER/MULCHING MACHINE	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
ROOFER (Inc.Roofers Waterproofing &Roofers Damproofg)	2/1/2025	\$52.03	\$13.28	\$12.67	\$9.03	\$0.00	\$87.01
ROOFERS LOCAL 33	8/1/2025	\$53.53	\$13.28	\$12.67	\$9.03	\$0.00	\$88.51
ROOFERS LOCAL 33	2/1/2026	\$54.78	\$13.28	\$12.67	\$9.03	\$0.00	\$89.76

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: ROOFER (Inc.Roofers Waterproofing &Roofers Damproofg)							
Effective Date: 2/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$26.02	\$13.28	\$6.52	\$9.03	\$0.00	\$54.85
2	60.00	\$31.22	\$13.28	\$12.67	\$9.03	\$0.00	\$66.20
3	65.00	\$33.82	\$13.28	\$12.67	\$9.03	\$0.00	\$68.80
4	75.00	\$39.02	\$13.28	\$12.67	\$9.03	\$0.00	\$74.00
5	85.00	\$44.23	\$13.28	\$12.67	\$9.03	\$0.00	\$79.21

Apprentice: ROOFER (Inc.Roofers Waterproofing &Roofers Damproofg)							
Effective Date: 8/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$26.77	\$13.28	\$6.52	\$9.03	\$0.00	\$55.60
2	60.00	\$32.12	\$13.28	\$12.67	\$9.03	\$0.00	\$67.10
3	65.00	\$34.79	\$13.28	\$12.67	\$9.03	\$0.00	\$69.77
4	75.00	\$40.15	\$13.28	\$12.67	\$9.03	\$0.00	\$75.13
5	85.00	\$45.50	\$13.28	\$12.67	\$9.03	\$0.00	\$80.48

ROOFER SLATE / TILE / PRECAST CONCRETE	2/1/2025	\$52.28	\$13.28	\$12.67	\$9.03	\$0.00	\$87.26
ROOFERS LOCAL 33	8/1/2025	\$53.78	\$13.28	\$12.67	\$9.03	\$0.00	\$88.76
ROOFERS LOCAL 33	2/1/2026	\$55.03	\$13.28	\$12.67	\$9.03	\$0.00	\$90.01

For apprentice rates see "Apprentice- ROOFER"

SHEETMETAL WORKER	4/1/2025	\$43.83	\$14.59	\$12.89	\$6.15	\$2.24	\$79.70
SHEETMETAL WORKERS LOCAL 17	10/1/2025	\$45.08	\$14.59	\$12.89	\$6.15	\$2.24	\$80.95
SHEETMETAL WORKERS LOCAL 17 - B	4/1/2026	\$46.58	\$14.59	\$12.89	\$6.15	\$2.24	\$82.45

Apprentice: SHEETMETAL WORKER							
Effective Date: 4/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$17.53	\$14.59	\$4.18	\$0.00	\$1.09	\$37.39
2	45.00	\$19.72	\$14.59	\$4.71	\$0.00	\$1.17	\$40.19
3	50.00	\$21.92	\$14.59	\$11.84	\$0.00	\$1.45	\$49.80
4	55.00	\$24.11	\$14.59	\$11.84	\$0.00	\$1.52	\$52.06
5	60.00	\$26.30	\$14.59	\$11.84	\$3.69	\$1.64	\$58.06
6	65.00	\$28.49	\$14.59	\$11.84	\$4.00	\$1.71	\$60.63
7	70.00	\$30.68	\$14.59	\$11.84	\$4.31	\$1.78	\$63.20
8	75.00	\$32.87	\$14.59	\$11.84	\$4.61	\$1.86	\$65.77
9	80.00	\$35.06	\$14.59	\$11.84	\$4.92	\$1.93	\$68.34
10	85.00	\$37.26	\$14.59	\$11.84	\$5.23	\$2.00	\$70.92

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: SHEETMETAL WORKER							
Effective Date: 10/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$18.03	\$14.59	\$4.18	\$0.00	\$1.09	\$37.89
2	45.00	\$20.29	\$14.59	\$4.71	\$0.00	\$1.17	\$40.76
3	50.00	\$22.54	\$14.59	\$11.84	\$0.00	\$1.45	\$50.42
4	55.00	\$24.79	\$14.59	\$11.84	\$0.00	\$1.52	\$52.74
5	60.00	\$27.05	\$14.59	\$11.84	\$3.69	\$1.64	\$58.81
6	65.00	\$29.30	\$14.59	\$11.84	\$4.00	\$1.71	\$61.44
7	70.00	\$31.56	\$14.59	\$11.84	\$4.31	\$1.78	\$64.08
8	75.00	\$33.81	\$14.59	\$11.84	\$4.61	\$1.86	\$66.71
9	80.00	\$36.06	\$14.59	\$11.84	\$4.92	\$1.93	\$69.34
10	85.00	\$38.32	\$14.59	\$11.84	\$5.23	\$2.00	\$71.98

SPECIALIZED EARTH MOVING EQUIP < 35 TONS	6/1/2025	\$41.24	\$15.57	\$20.17	\$0.00	\$0.00	\$76.98
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$0.00	\$78.59
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$0.00	\$79.19
	6/1/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$0.00	\$80.19
	12/1/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$0.00	\$81.93
	1/1/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$0.00	\$82.53

SPECIALIZED EARTH MOVING EQUIP > 35 TONS	6/1/2025	\$41.53	\$15.57	\$20.17	\$0.00	\$0.00	\$77.27
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$41.53	\$15.57	\$21.78	\$0.00	\$0.00	\$78.88
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$41.53	\$16.17	\$21.78	\$0.00	\$0.00	\$79.48
	6/1/2026	\$42.53	\$16.17	\$21.78	\$0.00	\$0.00	\$80.48
	12/1/2026	\$42.53	\$16.17	\$23.52	\$0.00	\$0.00	\$82.22
	1/1/2027	\$42.53	\$16.77	\$23.52	\$0.00	\$0.00	\$82.82

SPRINKLER FITTER	3/1/2025	\$64.93	\$11.51	\$7.30	\$16.50	\$0.00	\$100.24
SPRINKLER FITTERS LOCAL 550							
SPRINKLER FITTERS LOCAL 550 - (Section B) Zone 2							

Apprentice: SPRINKLER FITTER							
Effective Date: 3/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	35.00	\$22.73	\$11.51	\$13.07	\$0.00	\$0.00	\$47.31
2	40.00	\$25.97	\$11.51	\$13.90	\$0.00	\$0.00	\$51.38
3	45.00	\$29.22	\$11.51	\$14.72	\$0.00	\$0.00	\$55.45
4	50.00	\$32.47	\$11.51	\$15.55	\$0.00	\$0.00	\$59.53
5	55.00	\$35.71	\$11.51	\$16.38	\$0.00	\$0.00	\$63.60
6	60.00	\$38.96	\$11.51	\$17.20	\$0.00	\$0.00	\$67.67
7	65.00	\$42.20	\$11.51	\$18.03	\$0.00	\$0.00	\$71.74
8	70.00	\$45.45	\$11.51	\$18.85	\$0.00	\$0.00	\$75.81
9	75.00	\$48.70	\$11.51	\$19.68	\$0.00	\$0.00	\$79.89
10	80.00	\$51.94	\$11.51	\$20.50	\$0.00	\$0.00	\$83.95

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
STEAM BOILER OPERATOR	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TELECOMMUNICATION TECHNICIAN	9/1/2024	\$40.69	\$11.75	\$11.53	\$3.00	\$0.00	\$66.97
ELECTRICIANS LOCAL 223	9/1/2025	\$42.52	\$12.00	\$12.05	\$3.25	\$0.00	\$69.82
ELECTRICIANS LOCAL 223	9/1/2026	\$44.41	\$12.25	\$12.59	\$3.50	\$0.00	\$72.75
	9/1/2027	\$46.51	\$12.50	\$13.18	\$3.75	\$0.00	\$75.94

Apprentice: TELECOMMUNICATION TECHNICIAN**Effective Date: 9/1/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

TERRAZZO FINISHERS	2/1/2025	\$64.74	\$11.49	\$15.57	\$8.02	\$0.00	\$99.82
BRICKLAYERS LOCAL 3	8/1/2025	\$66.89	\$11.49	\$15.57	\$8.02	\$0.00	\$101.97
BRICKLAYERS LOCAL 3 - MARBLE & TILE	2/1/2026	\$68.24	\$11.49	\$15.57	\$8.02	\$0.00	\$103.32
	8/1/2026	\$70.44	\$11.49	\$15.57	\$8.02	\$0.00	\$105.52
	2/1/2027	\$71.84	\$11.49	\$15.57	\$8.02	\$0.00	\$106.92

Apprentice: TERRAZZO FINISHERS**Effective Date: 2/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$32.37	\$11.49	\$15.57	\$8.02	\$0.00	\$67.45
2	60.00	\$38.84	\$11.49	\$15.57	\$8.02	\$0.00	\$73.92
3	70.00	\$45.32	\$11.49	\$15.57	\$8.02	\$0.00	\$80.40
4	80.00	\$51.79	\$11.49	\$15.57	\$8.02	\$0.00	\$86.87
5	90.00	\$58.27	\$11.49	\$15.57	\$8.02	\$0.00	\$93.35

Apprentice: TERRAZZO FINISHERS**Effective Date: 8/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$33.45	\$11.49	\$15.57	\$8.02	\$0.00	\$68.53
2	60.00	\$40.13	\$11.49	\$15.57	\$8.02	\$0.00	\$75.21

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																
<div>Apprentice: TERRAZZO FINISHERS</div> <div>Effective Date: 8/1/2025</div> <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>3</td><td>70.00</td><td>\$46.82</td><td>\$11.49</td><td>\$15.57</td><td>\$8.02</td><td>\$0.00</td><td>\$81.90</td></tr><tr><td>4</td><td>80.00</td><td>\$53.51</td><td>\$11.49</td><td>\$15.57</td><td>\$8.02</td><td>\$0.00</td><td>\$88.59</td></tr><tr><td>5</td><td>90.00</td><td>\$60.20</td><td>\$11.49</td><td>\$15.57</td><td>\$8.02</td><td>\$0.00</td><td>\$95.28</td></tr></tbody></table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	3	70.00	\$46.82	\$11.49	\$15.57	\$8.02	\$0.00	\$81.90	4	80.00	\$53.51	\$11.49	\$15.57	\$8.02	\$0.00	\$88.59	5	90.00	\$60.20	\$11.49	\$15.57	\$8.02	\$0.00	\$95.28
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																
3	70.00	\$46.82	\$11.49	\$15.57	\$8.02	\$0.00	\$81.90																																
4	80.00	\$53.51	\$11.49	\$15.57	\$8.02	\$0.00	\$88.59																																
5	90.00	\$60.20	\$11.49	\$15.57	\$8.02	\$0.00	\$95.28																																
TEST BORING DRILLER	6/1/2025	\$51.70	\$9.90	\$9.25	\$9.80	\$0.00	\$80.65																																
LABORERS	12/1/2025	\$53.20	\$9.90	\$9.25	\$9.80	\$0.00	\$82.15																																
LABORERS - FOUNDATION AND MARINE	6/1/2026	\$54.75	\$9.90	\$9.25	\$9.80	\$0.00	\$83.70																																
	12/1/2026	\$56.25	\$9.90	\$9.25	\$9.80	\$0.00	\$85.20																																
For apprentice rates see "Apprentice- LABORER"																																							
TEST BORING DRILLER HELPER	6/1/2025	\$47.82	\$9.90	\$9.25	\$9.80	\$0.00	\$76.77																																
LABORERS	12/1/2025	\$49.32	\$9.90	\$9.25	\$9.80	\$0.00	\$78.27																																
LABORERS - FOUNDATION AND MARINE	6/1/2026	\$50.87	\$9.90	\$9.25	\$9.80	\$0.00	\$79.82																																
	12/1/2026	\$52.37	\$9.90	\$9.25	\$9.80	\$0.00	\$81.32																																
For apprentice rates see "Apprentice- LABORER"																																							
TEST BORING LABORER	6/1/2025	\$47.70	\$9.90	\$9.25	\$9.80	\$0.00	\$76.65																																
LABORERS	12/1/2025	\$49.20	\$9.90	\$9.25	\$9.80	\$0.00	\$78.15																																
LABORERS - FOUNDATION AND MARINE	6/1/2026	\$50.75	\$9.90	\$9.25	\$9.80	\$0.00	\$79.70																																
	12/1/2026	\$52.25	\$9.90	\$9.25	\$9.80	\$0.00	\$81.20																																
For apprentice rates see "Apprentice- LABORER"																																							
TRACTORS/PORTABLE STEAM GENERATORS	6/1/2025	\$57.68	\$15.55	\$13.25	\$3.25	\$0.00	\$89.73																																
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.12	\$15.55	\$13.25	\$3.25	\$0.00	\$91.17																																
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.40	\$15.55	\$13.25	\$3.25	\$0.00	\$92.45																																
	12/1/2026	\$61.84	\$15.55	\$13.25	\$3.25	\$0.00	\$93.89																																
For apprentice rates see "Apprentice- OPERATING ENGINEERS"																																							
TRAILERS FOR EARTH MOVING EQUIPMENT	6/1/2025	\$41.82	\$15.57	\$20.17	\$0.00	\$0.00	\$77.56																																
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$41.82	\$15.57	\$21.78	\$0.00	\$0.00	\$79.17																																
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$41.82	\$16.17	\$21.78	\$0.00	\$0.00	\$79.77																																
	6/1/2026	\$42.82	\$16.17	\$21.78	\$0.00	\$0.00	\$80.77																																
	12/1/2026	\$42.82	\$16.17	\$23.52	\$0.00	\$0.00	\$82.51																																
	1/1/2027	\$42.82	\$16.77	\$23.52	\$0.00	\$0.00	\$83.11																																
TUNNEL WORK - COMPRESSED AIR	6/1/2025	\$59.93	\$9.90	\$9.25	\$10.25	\$0.00	\$89.33																																
LABORERS	12/1/2025	\$61.43	\$9.90	\$9.25	\$10.25	\$0.00	\$90.83																																
LABORERS (COMPRESSED AIR)	6/1/2026	\$62.98	\$9.90	\$9.25	\$10.25	\$0.00	\$92.38																																
	12/1/2026	\$64.48	\$9.90	\$9.25	\$10.25	\$0.00	\$93.88																																
For apprentice rates see "Apprentice- LABORER"																																							
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)	6/1/2025	\$61.93	\$9.90	\$9.25	\$10.25	\$0.00	\$91.33																																
LABORERS	12/1/2025	\$63.43	\$9.90	\$9.25	\$10.25	\$0.00	\$92.83																																
LABORERS (COMPRESSED AIR)	6/1/2026	\$64.98	\$9.90	\$9.25	\$10.25	\$0.00	\$94.38																																
	12/1/2026	\$66.48	\$9.90	\$9.25	\$10.25	\$0.00	\$95.88																																

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR	6/1/2025	\$52.00	\$9.90	\$9.25	\$10.25	\$0.00	\$81.40
LABORERS	12/1/2025	\$53.50	\$9.90	\$9.25	\$10.25	\$0.00	\$82.90
LABORERS (FREE AIR TUNNEL)	6/1/2026	\$55.05	\$9.90	\$9.25	\$10.25	\$0.00	\$84.45
	12/1/2026	\$56.55	\$9.90	\$9.25	\$10.25	\$0.00	\$85.95
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR (HAZ. WASTE)	6/1/2025	\$54.00	\$9.90	\$9.25	\$10.25	\$0.00	\$83.40
LABORERS	12/1/2025	\$55.50	\$9.90	\$9.25	\$10.25	\$0.00	\$84.90
LABORERS (FREE AIR TUNNEL)	6/1/2026	\$57.05	\$9.90	\$9.25	\$10.25	\$0.00	\$86.45
	12/1/2026	\$58.55	\$9.90	\$9.25	\$10.25	\$0.00	\$87.95
For apprentice rates see "Apprentice- LABORER"							
VAC-HAUL	6/1/2025	\$41.24	\$15.57	\$20.17	\$0.00	\$0.00	\$76.98
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$0.00	\$78.59
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$0.00	\$79.19
	6/1/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$0.00	\$80.19
	12/1/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$0.00	\$81.93
	1/1/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$0.00	\$82.53
WAGON DRILL OPERATOR	6/1/2025	\$42.00	\$9.65	\$9.00	\$8.70	\$0.00	\$69.35
LABORERS	12/1/2025	\$43.38	\$9.65	\$9.00	\$8.70	\$0.00	\$70.73
LABORERS - ZONE 2	6/1/2026	\$44.82	\$9.65	\$9.00	\$8.70	\$0.00	\$72.17
	12/1/2026	\$46.26	\$9.65	\$9.00	\$8.70	\$0.00	\$73.61
	6/1/2027	\$47.71	\$9.65	\$9.00	\$8.70	\$0.00	\$75.06
	12/1/2027	\$49.16	\$9.65	\$9.00	\$8.70	\$0.00	\$76.51
	6/1/2028	\$50.66	\$9.65	\$9.00	\$8.70	\$0.00	\$78.01
	12/1/2028	\$52.16	\$9.65	\$9.00	\$8.70	\$0.00	\$79.51
For apprentice rates see "Apprentice- LABORER"							
WAGON DRILL OPERATOR (HEAVY & HIGHWAY)	6/1/2025	\$40.59	\$9.90	\$9.25	\$9.21	\$0.00	\$68.95
LABORERS	12/1/2025	\$41.97	\$9.90	\$9.25	\$9.21	\$0.00	\$70.33
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$43.41	\$9.90	\$9.25	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.85	\$9.90	\$9.25	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
WASTE WATER PUMP OPERATOR	6/1/2025	\$58.33	\$15.55	\$13.25	\$3.25	\$0.00	\$90.38
OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.78	\$15.55	\$13.25	\$3.25	\$0.00	\$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$61.08	\$15.55	\$13.25	\$3.25	\$0.00	\$93.13
	12/1/2026	\$62.53	\$15.55	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
WATER METER INSTALLER	8/26/2024	\$52.49	\$10.80	\$16.80	\$4.60	\$0.00	\$84.69
PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"							

Marine Drilling

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BLASTER MARINE DRILLING MARINE DRILLING	1/1/2018	\$41.82	\$7.63	\$2.35	\$1.25	\$0.00	\$53.05
BOAT CAPTAIN MARINE DRILLING MARINE DRILLING	1/1/2018	\$33.87	\$7.63	\$2.35	\$0.95	\$0.00	\$44.80
BOAT CAPTAIN / Over 1,000 hp MARINE DRILLING MARINE DRILLING	1/1/2018	\$38.06	\$7.63	\$2.35	\$1.25	\$0.00	\$49.29
CORE DRILLER MARINE DRILLING MARINE DRILLING	1/1/2018	\$31.43	\$7.63	\$2.25	\$0.65	\$0.00	\$41.96
CORE DRILLER HELPER MARINE DRILLING MARINE DRILLING	1/1/2018	\$28.47	\$7.63	\$2.35	\$0.65	\$0.00	\$39.10
DRILLER MARINE DRILLING MARINE DRILLING	1/1/2018	\$39.70	\$7.63	\$2.35	\$1.25	\$0.00	\$50.93
ENGINEER MARINE DRILLING MARINE DRILLING	1/1/2018	\$39.69	\$7.63	\$2.25	\$1.25	\$0.00	\$50.82
HELPER MARINE DRILLING MARINE DRILLING	1/1/2018	\$34.24	\$7.63	\$2.35	\$0.65	\$0.00	\$44.87
MACHINIST MARINE DRILLING MARINE DRILLING	1/1/2018	\$38.88	\$7.63	\$2.35	\$0.95	\$0.00	\$49.81
OILER - MARINE DRILLING MARINE DRILLING MARINE DRILLING	1/1/2018	\$34.24	\$7.63	\$2.35	\$0.65	\$0.00	\$44.87
TUG DECKHAND MARINE DRILLING MARINE DRILLING	1/1/2018	\$27.61	\$7.63	\$2.35	\$0.65	\$0.00	\$38.24
WELDER MARINE DRILLING MARINE DRILLING	1/1/2018	\$38.88	\$7.63	\$2.35	\$0.95	\$0.00	\$49.81

Op Eng Marine (Dredging Work)

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BOAT OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$29.26	\$7.63	\$2.35	\$0.95	\$0.00	\$40.19
CERTIFIED WELDER OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$31.09	\$7.63	\$2.35	\$1.25	\$0.00	\$42.32
CHIEF WELDER/ CHIEF MATE OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$33.02	\$7.63	\$2.35	\$1.25	\$0.00	\$44.25
DERRICK / SPIDER / SPILLBARGE OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$33.02	\$7.63	\$2.35	\$1.25	\$0.00	\$44.25
DRAG BARGE OPERATOR / WELDER / MATE OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$30.24	\$7.63	\$2.35	\$0.95	\$0.00	\$41.17
ENGINEER / ELECTRICIAN OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$33.02	\$7.63	\$2.35	\$1.25	\$0.00	\$44.25
LICENSED BOAT OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$33.02	\$7.63	\$2.35	\$1.25	\$0.00	\$44.25
LICENSED TUG OPERATOR OVER 1000HP OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$38.18	\$7.63	\$2.35	\$1.25	\$0.00	\$49.41
MAINTENANCE ENGINEER OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$33.03	\$7.63	\$2.35	\$1.25	\$0.00	\$44.26
OILER - MARINE DIVISION OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$24.30	\$7.63	\$2.35	\$0.65	\$0.00	\$34.93
OPERATOR / LEVERMAN OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$38.18	\$7.63	\$2.35	\$1.25	\$0.00	\$49.41
RODMAN / SCOWMAN OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$24.30	\$7.63	\$2.35	\$0.65	\$0.00	\$34.93
SHOREMAN / DECKHAND OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	\$24.30	\$7.63	\$2.35	\$0.65	\$0.00	\$34.93

Outside Electrical

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CABLE TECHNICIAN (Power Zone) OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 For apprentice rates see "Apprentice- LINEMAN"	8/30/2020	\$29.67	\$9.25	\$0.89	\$1.00	\$0.00	\$40.81
CABLEMAN (Underground Ducts & Cables) OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 For apprentice rates see "Apprentice- LINEMAN"	8/30/2020	\$42.03	\$9.25	\$1.26	\$9.01	\$0.00	\$61.55
DRIVER / GROUNDMAN CDL OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 For apprentice rates see "Apprentice- LINEMAN"	8/30/2020	\$34.62	\$9.25	\$1.04	\$9.03	\$0.00	\$53.94
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 For apprentice rates see "Apprentice- LINEMAN"	8/30/2020	\$27.20	\$9.25	\$0.82	\$1.00	\$0.00	\$38.27
EQUIPMENT OPERATOR (Class A CDL) OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 For apprentice rates see "Apprentice- LINEMAN"	8/30/2020	\$42.03	\$9.25	\$1.26	\$13.09	\$0.00	\$65.63
EQUIPMENT OPERATOR (Class B CDL) OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 For apprentice rates see "Apprentice- LINEMAN"	8/30/2020	\$37.09	\$9.25	\$1.11	\$9.76	\$0.00	\$57.21
GROUNDMAN OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 For apprentice rates see "Apprentice- LINEMAN"	8/30/2020	\$27.20	\$9.25	\$0.82	\$1.00	\$0.00	\$38.27
GROUNDMAN -Inexperienced (<2000 Hrs.) OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 For apprentice rates see "Apprentice- LINEMAN"	8/30/2020	\$22.25	\$9.25	\$0.82	\$1.00	\$0.00	\$33.32
JOURNEYMAN LINEMAN OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/30/2020	\$49.45	\$9.25	\$1.48	\$16.00	\$0.00	\$76.18

Apprentice: JOURNEYMAN LINEMAN

Effective Date: 8/30/2020

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$29.67	\$9.25	\$0.89	\$2.50	\$0.00	\$42.31
2	65.00	\$32.14	\$9.25	\$0.96	\$2.50	\$0.00	\$44.85
3	70.00	\$34.62	\$9.25	\$1.04	\$2.50	\$0.00	\$47.41
4	75.00	\$37.09	\$9.25	\$1.11	\$4.00	\$0.00	\$51.45

Outside Electrical

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: JOURNEYMAN LINEMAN Effective Date: 8/30/2020							
		Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
5 80.00		\$39.56	\$9.25	\$1.19	\$4.00	\$0.00	\$54.00
6 85.00		\$42.03	\$9.25	\$1.26	\$4.00	\$0.00	\$56.54
7 90.00		\$44.51	\$9.25	\$1.34	\$6.00	\$0.00	\$61.10
<hr/>							
TELEDATA CABLE SPLICER OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	2/4/2019	\$30.73	\$4.70	\$0.92	\$2.25	\$0.00	\$38.60
<hr/>							
TELEDATA LINEMAN/EQUIPMENT OPERATOR OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	2/4/2019	\$28.93	\$4.70	\$0.89	\$2.25	\$0.00	\$36.77
<hr/>							
TELEDATA WIREMAN/INSTALLER/TECHNICIAN OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	2/4/2019	\$28.93	\$4.70	\$0.89	\$2.25	\$0.00	\$36.77

Additional Apprentice Information

All apprentices must be registered with the Division of Apprenticeship Training(DAS) in accordance with M.G.L.c. 23, §§ 11E-11L. Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the hourly prevailing wage rate established by the Commissioner under the provisions of M.G.L.c. 149, §§ 26-27D.

Apprentice ratios are established by DAS pursuant to M.G.L.c. 23, §§ 11E-11L. Ratios are expressed as the allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified. The ratios listed herein have been taken from relevant private collective bargaining agreements(CBAs) and are provided for illustrative purposes only. They have not been independently verified as being accurate or continuing to be accurate.

Parties having questions regarding what ratio to use should contact DAS.

ATTACHMENT D

RECORD DOCUMENTS

The Commonwealth of Massachusetts

No. 5988.



Whereas, Goose Hummock Shop, Inc.-----

of Orleans-----, in the County of Barnstable----- and Commonwealth
aforesaid, has applied to the Department of Public Works for license to construct
and maintain a timber bulkhead and backfill in Town Cove, at
its property in the towns of Orleans and Eastham,-----

and has submitted plans of the same; and whereas due notice of said application, and of
the time and place fixed for a hearing thereon, has been given, as required by law, to the
Selectmen-----of the towns----- of Orleans and Eastham;

Now said Department, having heard all parties desiring to be heard, and having fully
considered said application, hereby, ~~subject to the approval of the Governor and Council,~~
authorizes and licenses the said -----

Goose Hummock Shop, Inc.-----, subject to the provisions of the ninety-
first chapter of the General Laws, and of all laws which are or may be in force applicable
thereto, to construct and maintain a timber bulkhead and backfill in
Town Cove, at its property in the towns of Orleans and Eastham,
in conformity with the accompanying plan No. 5988.

A timber bulkhead may be built extending about northeast-
erly 136 feet, more or less, in extension of a timber bulkhead
to be built by the southwesterly abutter under License No. 5849

successors. This condition permitting modification or revocation of the license shall also apply in the event of failure of the licensee, its successors and assigns, to secure approval under all other applicable laws, ordinances or regulations or failure to adhere to the conditions of such approvals upon receipt of evidence of such failure provided by an agency having jurisdiction. Revocation or modification of this license as provided herein shall be without liability to the Commonwealth or claim for compensation by the licensee, its successors and assigns.-----

The plan of said work, numbered -----5 9 8 8,----- is on file in the office of said Department, and duplicate of said plan accompanies this License, and is to be referred to as a part hereof.

The amount of tide-water displaced by the work hereby authorized ^{has been} ~~shall be~~ ascertained by said Department, and compensation therefor ^{has been} ~~shall be~~ made by the said -----
Goose Hummock Shop, Inc.----- ~~heirs, successors~~



of the Department of Public Works; thence making a return shoreward of the northeasterly property line of the licensee and extending 20 feet, more or less, to the mean high water line, in the location shown on said plan and in accordance with the details there indicated.

The area enclosed by said bulkhead, the mean high water line and the fill to be placed to southwestward under said License No. 5849 may be filled solid, as indicated on said plan.

In the event that the fill proposed by the southwesterly abutter and authorized by said License No. 5849 is not placed, the Goose Hummock Shop, Inc. may construct a bulkhead return running shoreward along its southwesterly property line.

Construction of the bulkhead shall be completed prior to any backfill being placed.

Nothing in this license shall be construed as authorizing encroachment on property not owned or controlled by the licensee except with the consent of the owner or owners thereof.

Any drainage pipe in the area to be filled shall be extended through said bulkhead to the satisfaction of the town or towns involved, by and at the expense of the licensee.

An existing concrete ramp extending into tidewater shall be removed as part of the proposed construction.

Acceptance of this license shall constitute an agreement by the licensee to conform to all terms and conditions herein stated.

This license is granted subject to all applicable Federal, State, County and Municipal laws, ordinances and regulations, and upon the express condition that use by boats or otherwise of the structures hereby licensed shall involve no discharge of sewage or other polluting matter into the adjacent tidewaters except in strict conformity with the requirements of the local and State health departments and the Division of Water Pollution Control; and upon the further express condition that any other authorizations necessitated due to the provisions hereof shall be secured prior to the commencement of any work under this license.

This license is granted upon the further express condition that the authorization contained herein may be modified or may be revoked in whole or in part in the event of the licensee, its successors and assigns, failing to comply with said authorization or any provisions of the license or failing to maintain all authorized structures and installations in good condition, to the satisfaction of the Department of Public Works, or its

~~and assigns~~, by paying into the treasury of the Commonwealth thirty-seven and one-half ($37\frac{1}{2}$) cents for each cubic yard so displaced, being the amount hereby assessed by said Department.

Nothing in this License shall be so construed as to impair the legal rights of any person.

This License shall be void unless the same and the accompanying plan are recorded within one year from the date hereof, in the Registry ----- of Deeds for the -----
~~District of the County of~~ Barnstable.

In Witness Whereof, said Department of Public Works have hereunto set their hands this -----nineteenth-----day of -----April,-----in the year nineteen hundred and seventy-two.

F.C.S.

Thomas G. Barlow

Peter E. Donadio

John P. King

} Department of
Public Works

~~THE COMMONWEALTH OF MASSACHUSETTS~~

~~This license is approved in consideration of the payment into the treasury of the Commonwealth by the said~~
of the further sum of

the amount determined by the Governor and council as a just and equitable charge for
~~rights and privileges hereby granted in land of the Commonwealth.~~

~~Boston,~~ _____

~~Approved by the Governor and Council.~~

~~Executive Secretary.~~

A true copy. Attest: Edward F. Rogers Secretary.

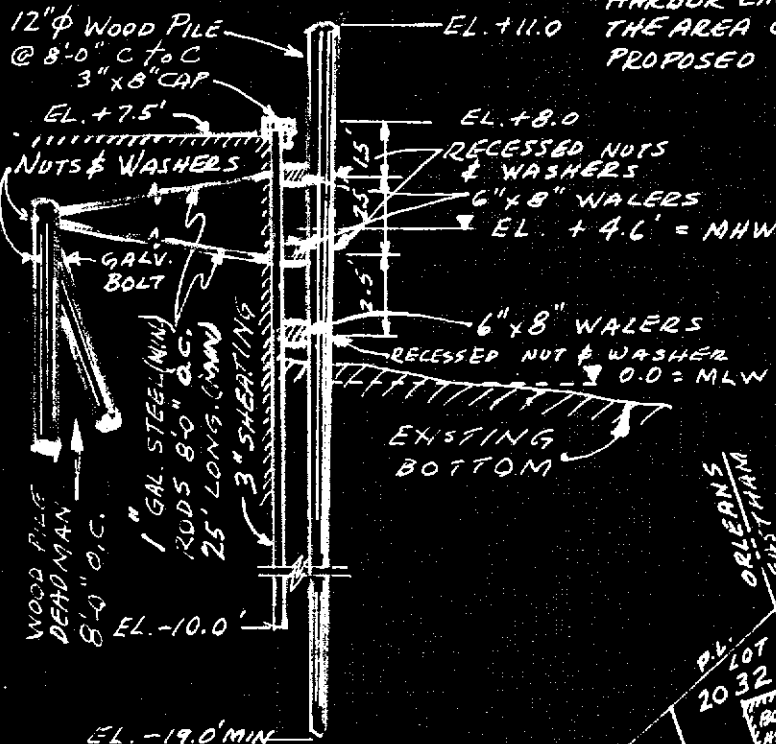
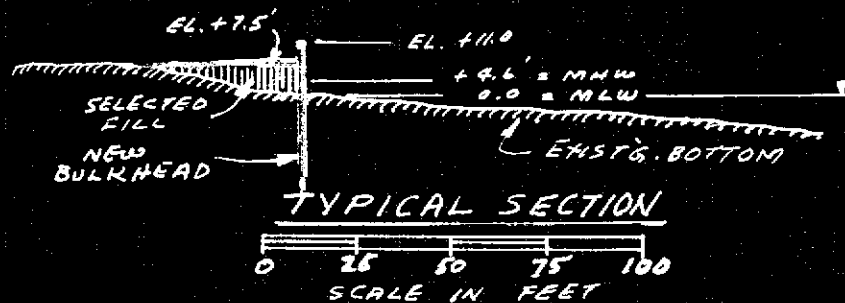
License No. _____

DEPARTMENT OF PUBLIC WORKS

TO

To _____

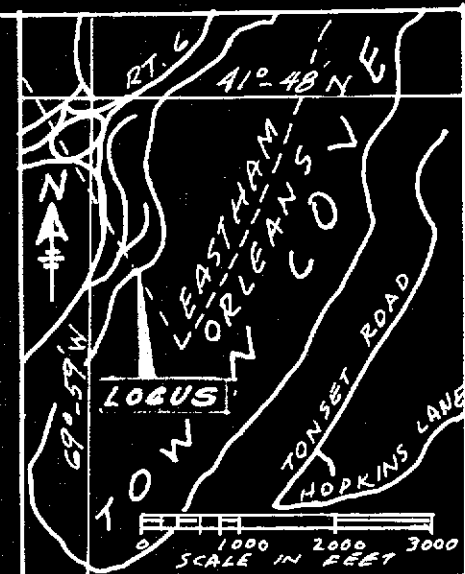
Dated _____



BULKHEAD DETAIL



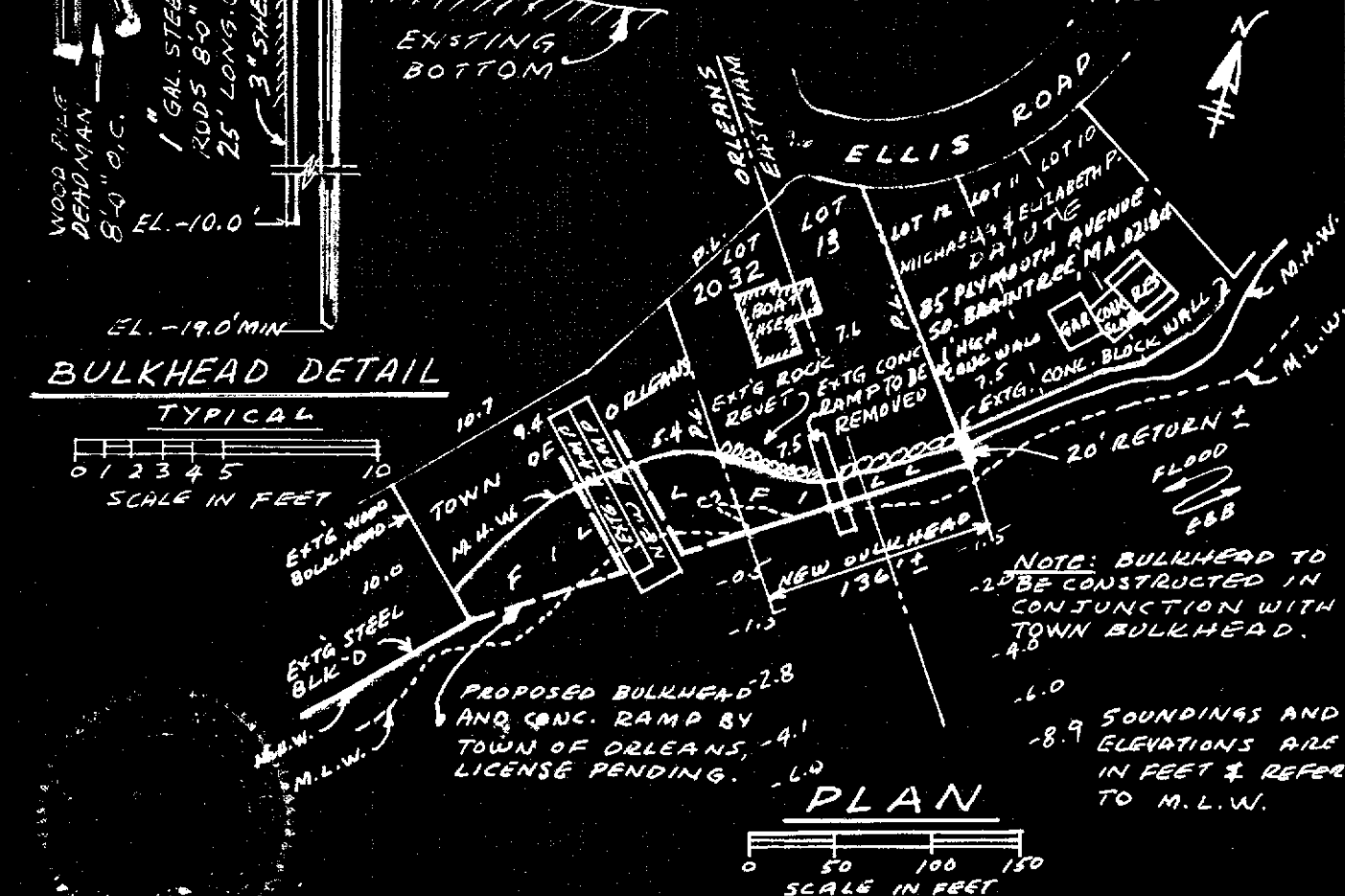
THERE ARE NO HARBOR LINES IN THE AREA OF THE PROPOSED WORK



LOCATION MAP

FROM U.S.G.S. MAP-7.5 MIN. SERIES-ORLEANS QUADRANGLE

TIDRANGE OF 4.6 FT. RECORDED IN TOWN COVE BY CORPS OF ENGINEERS - 1968



PLAN

PLAN TO ACCOMPANY PETITION OF
GOOSE HUMMOCK SHOP, INC.
TO CONSTRUCT AND MAINTAIN A
TIMBER BULKHEAD AND BACKFILL
IN
TOWN COVE
ORLEANS & EASTHAM, MASSACHUSETTS
SHEET 1 of 1 31 MARCH 1972

LICENSE PLAN NO. 5988
APPROVED BY DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
APRIL 19, 1972
COMMISSIONER DEPT. OF PUBLIC WORKS
ASSOCIATE COMMISSIONER

The Commonwealth of Massachusetts

No. 6256



Sherras, The Town of Orleans -----

of-----, in the County of Barnstable ----- and Commonwealth
aforesaid, has applied to the Department of Public Works for license to construct and
maintain a timber bulkhead, additional concrete ramp, and to dredge and to
fill in the Town Cove in the town of Orleans, -----

and has submitted plans of the same; and whereas due notice of said application, and of
the time and place fixed for a hearing thereon, has been given, as required by law, to the
Selectmen ----- of the Town ----- of Orleans -----;

Now said Department, having heard all parties desiring to be heard, and having fully
considered said application, hereby, ~~subject to the approval of the Governor,~~ authorizes
and licenses the said The Town of Orleans -----

-----, subject to the provisions of the ninety-
first chapter of the General Laws, and of all laws which are or may be in force applicable
thereto, to construct and maintain a timber bulkhead, additional concrete ramp,
to dredge and to fill in Town Cove in the town of Orleans, in conformity with
the accompanying plan no. 6256.

An existing concrete boat launching ramp may be maintained and extended in
length and width so as to extend into the tidewater a total distance of 65
feet, more or less, from the present mean high water line, with a total width
of 25 feet, in the location shown on said plan, 100 feet more or less, from the
southwesterly property line and in accordance with the details there indicated.

Timber bulkheads, may be built, one section extending about northeasterly 90
feet, more or less, from the corner of an existing steel bulkhead of the
westerly abuttor, thence making a return shoreward at the location of said boat

Page 34
Book 2087-
See plan

ramp and extending 50 feet more or less to the mean high water line; and the second section extending about southwesterly 40 feet, more or less, from and in extension of the bulkhead authorized to be built by the easterly abuttor under License No. 5853 of this Department, thence making a return shoreward at the location of said boat ramp, and extending 50 feet more or less to the mean high water line; in the locations shown on said plan and in accordance with the details there indicated. The areas enclosed by said bulkheads, the mean high water line and fill to be placed to northeastward under License No. 5853 may be filled solid, as indicated on said plans. The area extending off said bulkhead for a distance of 100 feet, more or less, may be dredged to a depth of 4 feet below mean low water, as indicated on said plan.

BOOK 2087 PAGE 050

The dredged material may be deposited as fill under the authorization contained in this license and otherwise shall be placed in such location and manner shoreward of the mean high water line as will ensure against its return into tidewater. In the event that the fill proposed by the northeasterly abuttor and authorized by License No. 5853 is not placed, the town of Orleans may construct a bulkhead return running shoreward along its northeasterly property line. Utilities and services appurtenant to a marina-type installation may be carried on the floats authorized hereby.

Nothing in this license shall be construed as authorizing encroachment on property not owned or controlled by the licensee, except with the consent of the owner or owners thereof. Acceptance of this license shall constitute an agreement by the licensee to conform to all terms and conditions herein stated. Any drainage pipes in the area are to be filled shall be extended through said bulkhead by and at the expense of the licensee.

This license is granted subject to all applicable Federal, State, County and Municipal laws, ordinances and regulations, and upon the express condition that use by boats or otherwise of the structures hereby licensed shall involve no discharge of sewage or other polluting matter into the adjacent tidewaters except in strict conformity with the requirements of the local and State health departments and the Division of Water Pollution Control; and upon the further express condition that any other authorizations necessitated due to the provisions hereof shall be secured prior to the commencement of any work under this license.

This license is granted upon the further express condition that the authorization contained herein may be modified or may be revoked in whole or in part in the event of the licensee, its successors and assigns, failing to comply with said authorization or any provisions of the license, or failing to maintain all authorized structures and installations in good condition, to the satisfaction of the Department of Public Works, or its successors. This condition permitting modification or revocation of the license shall also apply in the event of failure of the licensee, its successors and assigns, to secure approval under all other applicable laws, ordinances and regulations or failure to adhere to the conditions of such approvals upon receipt of evidence of such failure provided by an agency having jurisdiction. Revocation or modification of this license as provided herein shall be without liability to the Commonwealth or claim for compensation by the licensee, its successors and assigns.

The plan of said work, numbered -----6 2 5 6----- is on file in the office of said Department, and duplicate of said plan accompanies this License, and is to be referred to as a part hereof.

— The amount of tide-water displaced by the work hereby authorized shall be ascertained by said Department, and compensation therefor shall be made by the said

heirs, successors

and assigns, by paying into the treasury of the Commonwealth
cents for each cubic yard so displaced, being the amount hereby assessed by
said Department.

Nothing in this License shall be so construed as to impair the legal rights of any person.

This License shall be void unless the same and the accompanying plan are recorded
within one year from the date hereof, in the Registry----- of Deeds for the -----
District of the County of Barnstable.

In Witness Whereof, said Department of Public Works have hereunto set their hands
this first ----- day of August ----- in the
year nineteen hundred and seventy-four.

7.18

James Campbell
Malcolm E. May
Thomas J. Nelson
Alfred C. Sanborn

Department of
Public Works

THE COMMONWEALTH OF MASSACHUSETTS

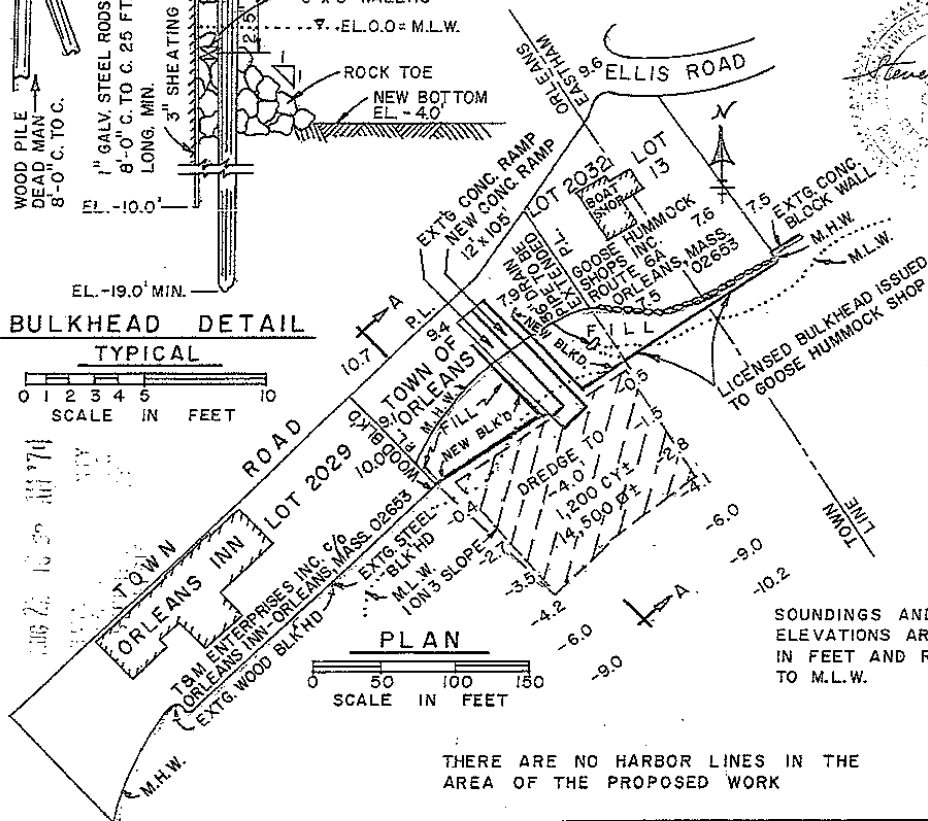
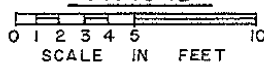
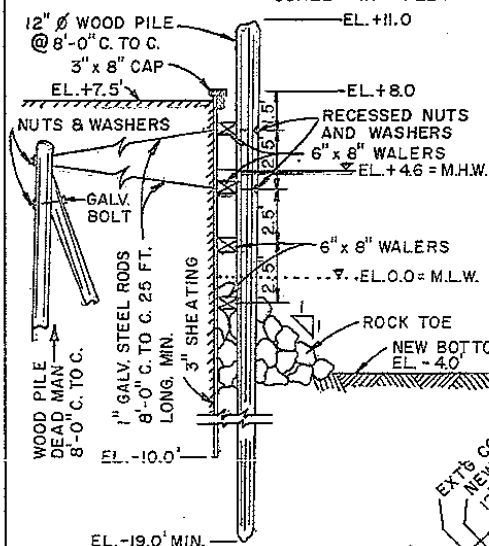
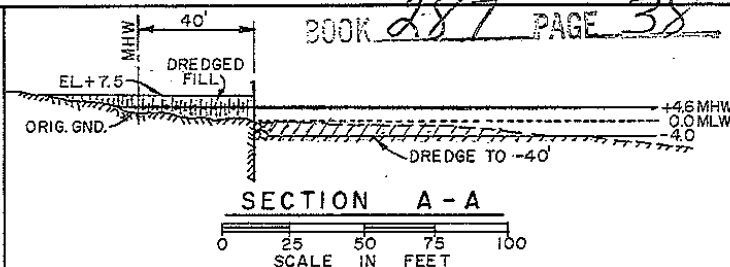
This license is approved in consideration of the payment into the treasury of the Com-
monwealth by the said
of the further sum of

the amount determined by the Governor as a just and equitable charge for rights and
Privileges hereby granted in land of the Commonwealth.

~~Boston,~~

Approved by the Governor,

Governor



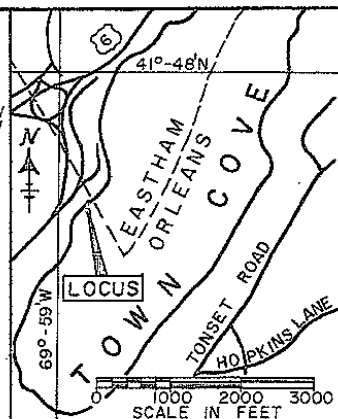
THERE ARE NO HARBOR LINES IN THE
AREA OF THE PROPOSED WORK

PLAN TO ACCOMPANY PETITION OF THE
TOWN OF ORLEANS
TO CONSTRUCT AND MAINTAIN A TIMBER
BULKHEAD, ADDITIONAL CONCRETE RAMP,
DREDGING AND FILL IN
TOWN COVE

ORLEANS, MASSACHUSETTS

SHEET 1 OF 1

15 DEC. 1973



LOCATION MAP
FROM U.S.G.S. MAP - 7.5 MIN.
SERIES - ORLEANS QUADRANGLE



SOUNDINGS AND
ELEVATIONS ARE
IN FEET AND REFER
TO M.L.W.

LICENSE PLATE NO. **6256**
 APPROVED BY DEPARTMENT OF PUBLIC WORKS OF
 MASSACHUSETTS. **AUGUST 1, 1974**
Rose Campbell COMMISSIONER, DEPT.
Malcolm E. Frost OF PUBLIC WORKS
Thomas J. Bolot
Ed Edwards
 ASSOCIATE
 COMMISSIONERS

The Commonwealth of Massachusetts

No. 11890



Whereas, Goose Hummock Marine
Michael D. Macaskill, Trustee, Sherwood Realty Trust

of -- Orleans -- in the County of -- Barnstable -- and Commonwealth aforesaid, has applied to the Department of Environmental Protection for license to -- construct and maintain a platform, ramp and floats --

and has submitted plans of the same; and whereas due notice of said application, ~~and of the time and place fixed for a hearing thereon,~~ has been given, as required by law, to the -- Board of Selectmen -- of the Town of -- Orleans. --

NOW, said Department, having heard all parties desiring to be heard, and having fully considered said application, hereby, subject to the approval of the Governor, authorizes and licenses the said

-- Goose Hummock Marine, Michael D. Macaskill, Trustee, Sherwood Realty Trust --, subject to the provisions of the ninety-first chapter of the General Laws, and of all laws which are or may be in force applicable thereto, to -- construct and maintain a platform, ramp and floats --

in and over the waters of -- Town Cove -- in the -- Town -- of -- Orleans -- and in accordance with the locations shown and details indicated on the accompanying DEP License Plan No. 11890, (3 sheets).

The structures hereby authorized shall be limited to the following use(s): commercial docking and boating access to navigable waters.

This license will expire thirty (30) years from the date of license issuance. By written request of the licensee for an amendment, the Department may grant a renewal for the term of years not to exceed that authorized in the original license.

Existing structures previously authorized under Department of Public Works License No. 5988 shall be maintained in accordance with the terms and conditions of said license and plan.

Special Waterways Conditions:

In accordance with any license condition, easement, or other public right of lateral passage that exists in the area of the subject property lying between the high and low water marks, the Licensee shall allow the public in the exercise of such rights to pass freely around all structures within such intertidal area. Accordingly, the Licensee shall place and maintain, in good repair, a public access sign at each property line, adjacent to the mean high water shoreline. Said signs, provided by the Department, shall be posted immediately upon receipt. Nothing in this condition shall be construed as preventing the Licensee from excluding the public from portions of said structure(s) or property not intended for lateral passage.

In partial compensation for private use of structures on tidelands of the Commonwealth, which interferes with the rights of the public to use such lands, the Licensee shall allow the public to pass on foot, for any purpose and from dawn to dusk, within the area of the subject property lying seaward of the high water mark. This condition shall not be construed to prevent the Licensee from taking reasonable measures to discourage unlawful activities by users of the area(s) intended for public passage, including but not limited to trespassing on the adjacent private areas and deposit of refuse of any kind or nature in the water or on the shore. Further, the exercise by the public of free on-foot passage in accordance with this condition shall be considered a permitted use to which the limited liability provisions of M.G.L. c.21, s.17c apply.

No dredging (including, but not limited to the effects of prop wash) is permitted herein.

Vessels shall be moored such that they do not become grounded at any tide.

When removed, all seasonal structures shall be stored landward of the mean high water shoreline and outside of wetland resource areas. Said storage shall be in conformance with any applicable local, state or federal requirements.

All work authorized herein shall be completed within five (5) years of the date of license issuance. Said construction period may be extended by the Department for one or more one year periods without public notice, provided that the Applicant submits to the Department, thirty (30) days prior to the expiration of said construction period, a written request to extend the period and provides an adequate justification for said extension.

Within sixty (60) days of completion of the licensed project, the Licensee shall request, in writing, that the Department issue a Certificate of Compliance in accordance with 310 CMR 9.19. That request shall be accompanied by a certification by registered professional engineer licensed in the Commonwealth that the project was completed in accordance with the License.

Please see page 3 for additional conditions to this license.

Duplicate of said plan, number 11890 is on file in the office of said Department, and original of said plan accompanies this License, and is to be referred to as a part hereof.

STANDARD WATERWAYS LICENSE CONDITIONS

1. Acceptance of this Waterways License shall constitute an agreement by the Licensee to conform with all terms and conditions stated herein.
2. This License is granted upon the express condition that any and all other applicable authorizations necessitated due to the provisions hereof shall be secured by the Licensee prior to the commencement of any activity or use authorized pursuant to this License.
3. Any change in use or any substantial structural alteration of any structure or fill authorized herein shall require the issuance by the Department of a new Waterways License in accordance with the provisions and procedures established in Chapter 91 of the Massachusetts General Laws. Any unauthorized substantial change in use or unauthorized substantial structural alteration of any structure or fill authorized herein shall render this Waterways License void.
4. This Waterways License shall be revocable by the Department for noncompliance with the terms and conditions set forth herein. This license may be revoked after the Department has given written notice of the alleged noncompliance to the Licensee and those persons who have filed a written request for such notice with the Department and afforded them a reasonable opportunity to correct said noncompliance. Failure to correct said noncompliance after the issuance of a written notice by the Department shall render this Waterways License void and the Commonwealth may proceed to remove or cause removal of any structure or fill authorized herein at the expense of the Licensee, its successors and assigns as an unauthorized and unlawful structure and/or fill.
5. The structures and/or fill authorized herein shall be maintained in good repair and in accordance with the terms and conditions stated herein and the details indicated on the accompanying license plans.
6. Nothing in this Waterways License shall be construed as authorizing encroachment in, on or over property not owned or controlled by the Licensee, except with the written consent of the owner or owners thereof.
7. This Waterways License is granted subject to all applicable Federal, State, County, and Municipal laws, ordinances and regulations including but not limited to a valid final Order of Conditions issued pursuant to the Wetlands Protection Act, G.L. Chapter 131, s.40.
8. This Waterways License is granted upon the express condition that the use of the structures and/or fill authorized hereby shall be in strict conformance with all applicable requirements and authorizations of the DEP, Division of Water Pollution Control.
9. This License authorizes structure(s) and/or fill on:

 ___ Private Tidelands. In accordance with the public easement that exists by law on private tidelands, the licensee shall allow the public to use and to pass freely upon the area of the subject property lying between the high and low water marks, for the purposes of fishing, fowling, navigation, and the natural derivatives thereof.

 ___ X Commonwealth Tidelands. The Licensee shall not restrict the public's right to use and to pass freely, for any lawful purpose, upon lands lying seaward of the low water mark. Said lands are held in trust by the Commonwealth for the benefit of the public.

 ___ a Great Pond of the Commonwealth. The Licensee shall not restrict the public's right to use and to pass freely upon lands lying seaward of the high water mark for any lawful purpose.

 ___ Navigable River and Streams. The Licensee shall not restrict the public's right to use and to pass freely, for any lawful purpose, in the waterway.

No restriction on the exercise of these public rights shall be imposed unless otherwise expressly provided in this license.
10. Unless otherwise expressly provided by this license, the licensee shall not limit the hours of availability of any areas of the subject property designated for public passage, nor place any gates, fences, or other structures on such areas in a manner that would impede or discourage the free flow of pedestrian movement thereon.

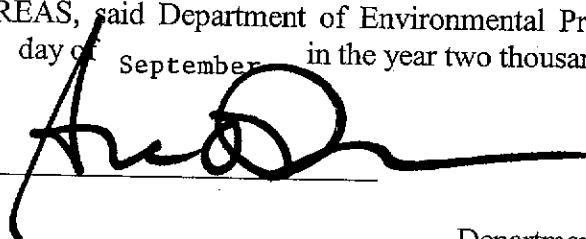
The amount of tide-water displaced by the work hereby authorized has been ascertained by said Department, and compensation thereof has been made by the said -- Goose Hummock Marine, Michael D. Macaskill, Trustee, Sherwood Realty Trust -- by paying into the Treasury of the Commonwealth -- two dollars and zero cents (\$2.00) -- for each cubic yard so displaced, being the amount hereby assessed by said Department. (0 cy = \$0.00)

Nothing in this License shall be so construed as to impair the legal rights of any person.

This License shall be void unless the same and the accompanying plan are recorded within 60 days from the date hereof, in the Registry of Deeds for the County of Barnstable.

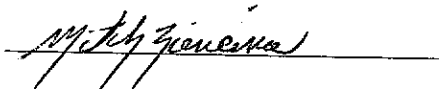
IN WITNESS WHEREAS, said Department of Environmental Protection have hereunto set their hands this 13th day of September in the year two thousand seven.

Commissioner



Department of Environmental Protection

Program Chief



THE COMMONWEALTH OF MASSACHUSETTS

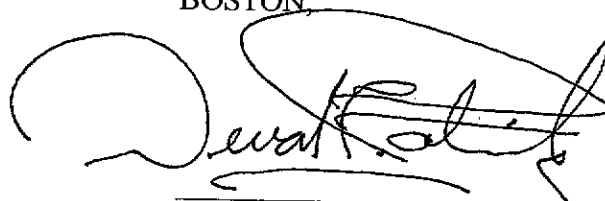
This license is approved in consideration of the payment into the treasury of the Commonwealth by the said -- Goose Hummock Marine, Michael D. Macaskill, Trustee, Sherwood Realty Trust --

of the further sum of -- five thousand eighty-five dollars and zero cents (\$ 5,085.00) --

the amount determined by the Governor as a just and equitable charge for rights and privileges hereby granted in the land of the Commonwealth.

Approved by the Governor.

BOSTON



Governor

FORMER
JEREMIAH'S GUTTER
PLAN BOOK 182
PAGE 39

ELLIS ROAD

OLD COUNTY ROAD
88.66'

AREA
12,700 S.F.±

GRAVEL

PAVED BOAT RAMP

EXISTING
BUILDING

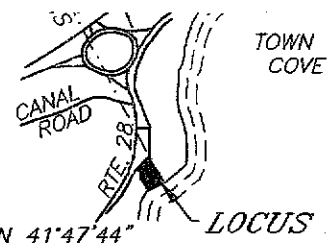
PAVEMENT

ADJACENT FLOATS
TOWN OF ORLEANS

75.5'±

TOWN COVE
(TIDAL)

2,000± FEET TO OPPOSITE SHORE



LAT N 41°47'44"
LONG W 69°58'58"

LOCATION MAP
1:25,000

REFERENCE:

PLAN BOOK 493 PAGE 57
DEED BOOK 13381 PAGE 62
ORLEANS ASSESSORS' MAP 18
PARCEL 49

- ① MICHAEL D. MACASKILL, TRUSTEE
SHERWOOD REALTY TRUST
P. O. BOX 57
ORLEANS, MA 02653
- ② TOWN OF ORLEANS
19 SCHOOL ROAD
ORLEANS, MA 02653

PLAN ACCOMPANYING PETITION OF
GOOSE HUMMOCK MARINE
MICHAEL D. MACASKILL, TRUSTEE
SHERWOOD REALTY TRUST
13 OLD COUNTY ROAD ORLEANS, MA
TO LICENSE AND MAINTAIN A
PLATFORM, RAMP AND FLOATS IN
TOWN COVE ORLEANS, MA

Sheet 1 of 3
Job No. 9966

0 60 120 180

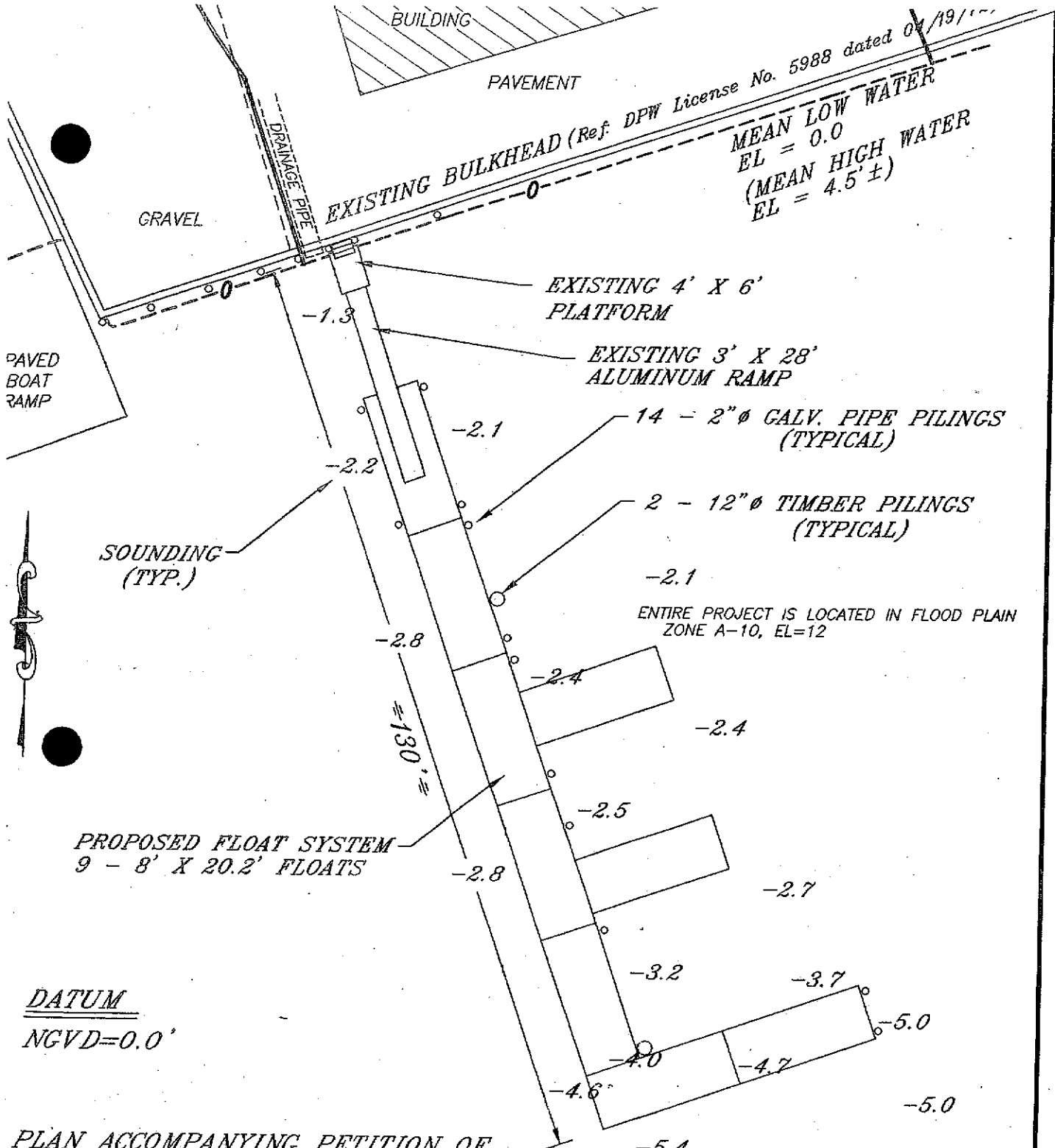
OCTOBER 30, 2006 SCALE: 1" = 60'
REVISED: 2/01/07

RYDER & WILCOX, INC., P.E. & P.L.S.
PO BOX 439 SO. ORLEANS, MA 02662
508-255-8312

LICENSE PLAN NO. 11890

Approved by Department of Environmental Protection
of Massachusetts
SEP 13 2007

Mitch Zancina
Amelia D.



DATUM
NGVD=0.0'

PLAN ACCOMPANYING PETITION OF
GOOSE HUMMOCK MARINE
MICHAEL D. MACASKILL, TRUSTEE
SHERWOOD REALTY TRUST
3 OLD COUNTY ROAD ORLEANS, MA
TO LICENSE AND MAINTAIN A
PLATFORM, RAMP AND FLOATS IN
TOWN COVE ORLEANS, MA



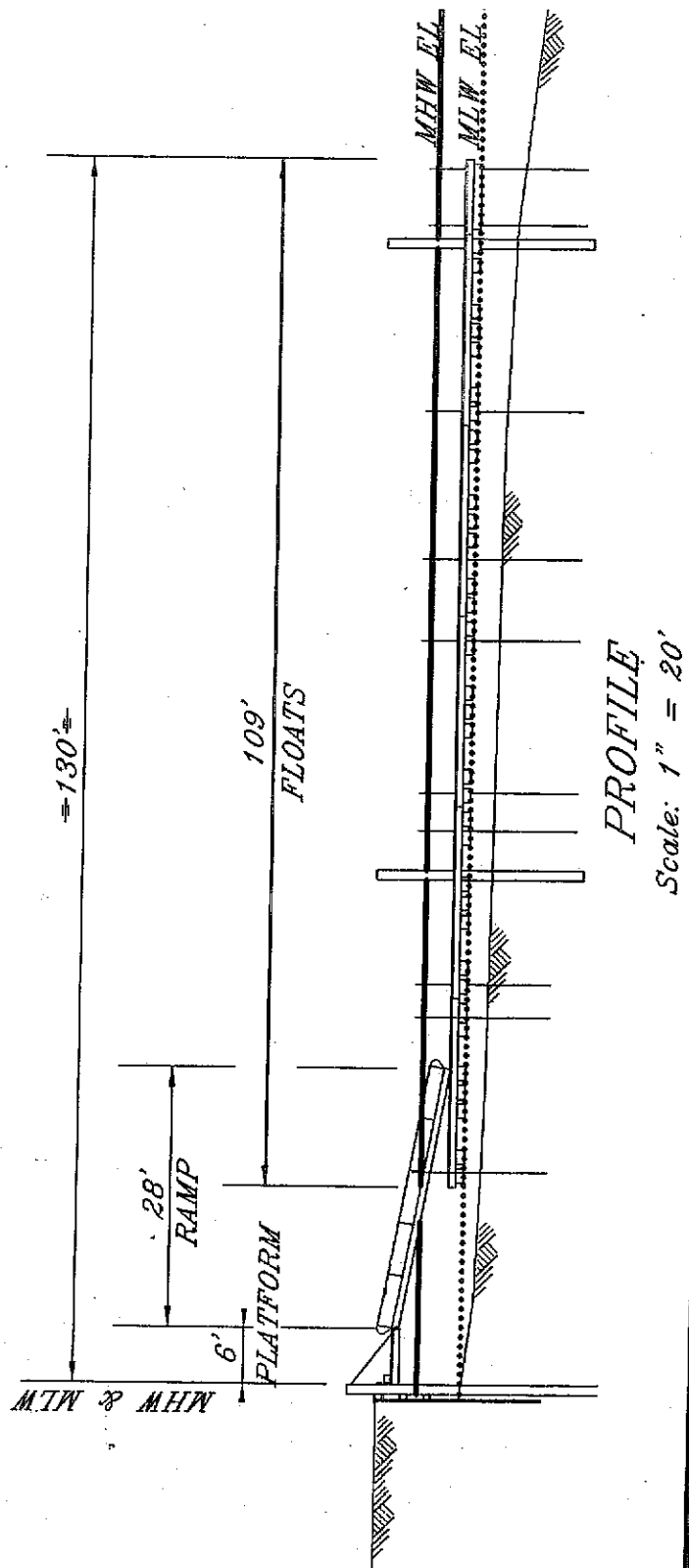
OCTOBER 30, 2006 SCALE: 1" = 20'
REVISED: 2/01/07

RYDER & WILCOX, INC., P.E. & P.L.S.
PO BOX 439 SO. ORLEANS, MA 02662
508-255-8312

LICENSE PLAN NO. 11890
Approved by Department of Environmental Protection
Date:

SEP 13 2007

Sheet 2 of 3
Job No. 9966



PLAN ACCOMPANYING PETITION OF
GOOSE HUMMOCK MARINE
MICHAEL D. MACASKILL, TRUSTEE
SHERWOOD REALTY TRUST
13 OLD COUNTY ROAD ORLEANS, MA
TO LICENSE AND MAINTAIN A
PLATFORM, RAMP AND FLOATS IN
TOWN COVE ORLEANS, MA

0 20 40 60

OCTOBER 30, 2006 SCALE: 1"=20'
REVISED: 2/01/07

RYDER & WILCOX, INC., P.E. & P.L.S.
PO BOX 439 SO. ORLEANS, MA 02662
508-255-8312

LICENSE PLAN NO. 11890

Approved by Department of Environmental Protection
Date:

SEP 13 2006

Sheet 3 of 3
Job No. 9966

Page Intentionally Blank