

**TOWN OF FALMOUTH, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS**

BID DOCUMENTS AND CONTRACT FORMS

FOR

Chapoquoit Road Stabilization Project 2026

TOWN MANAGER

Michael Renshaw

SELECT BOARD

Robert P. Mascali, Chair

Heather M. H. Goldstone, Vice Chair

Douglas C. Brown

Colin W. Reed

Jack Richardson

DIRECTOR PUBLIC WORKS

Peter M. McConarty, P.E., PLS.

Engineering Division

416 Gifford Street

Falmouth, MA 02540

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SECTION I
NOTICE TO BIDDERS

The Town of Falmouth, Department of Public Works, will accept sealed bids for:

Chapoquoit Road Stabilization Project 2026

Bids will be received in the Office of the Town Engineer, 416 Gifford Street, Falmouth, MA 02540 on or before the following time and date: **2:00 P.M. on Friday, January 23rd, 2026** at which time and place the Bids will be publicly opened and read.

The project consists of road stabilization work and revetment construction in Falmouth, MA.

Bidding Documents will be available after **8:00 A.M on Wednesday, December 31st, 2025** and may be examined and/or obtained at the town website <https://www.falmouthma.gov/bids>.

Bidders requesting Contract Documents by mail shall include an additional non-refundable check payable to the Town of Falmouth in the amount of \$15.00 per set, to cover costs of handling and mailing.

A Mandatory Pre-Bid meeting will occur at **10:00 A.M. on Tuesday, January 13th, 2026**. Interested Contractors shall meet at 104 Chapoquoit Road. Parking is available in the municipal beach parking lot.

General Bids must be accompanied by a bid deposit. The amount of the bid deposit shall be an amount of 5 percent (5%) of the Bidder's maximum total bid price, payable to the Town of Falmouth, MA. The bid security will be retained until the successful bidder has executed the contract with the Town, whereupon it will be returned. If the bidder fails to execute the contract within 30 calendar days of the Notice of Award, the Town may annul the award and the bid security will be forfeited.

Bidders may not withdraw their Bids for a period of 120 calendar days, after the actual date of the opening of the Bids.

The successful Bidder must furnish a 100 percent (100%) Construction Performance Bond and a 100 percent (100%) Construction Payment Bond with a surety company licensed to do business in the Commonwealth of Massachusetts.

Wage rates for this Project are subject to the minimum wage rates as per M.G.L. Chapter 149, Section 26 to 27D inclusive.

The bidding and award of this Contract will be under the provisions of M.G.L. Chapter 30, Section 39M.

Any questions should be sent to Jim McLoughlin, Town Engineer, at james.mcloughlin@falmouthma.gov by January 16th, 2026.

Bidders shall indicate their intent to comply with the Town of Falmouth's Supplemental Equal Employment Opportunity, Anti-Discrimination and Affirmative Action Program.

The Town reserves the right to waive any informality in or reject any and all Bids, or to accept the Bid deemed to be in the best interest of the Town of Falmouth.

Bids are welcome from minority and female businesses.

Advertised:
Central Register 12/31/25
Falmouth Enterprise 1/02/26

DEPARTMENT OF PUBLIC WORKS
Peter M. McConarty
Director of Public Works

SECTION II

INFORMATION TO BIDDERS / GENERAL CONDITIONS

1. Attention of all bidders is directed to Massachusetts General Laws and to all applicable Sections of the General Laws as most recently amended which govern the award of this Contract.
2. The bidder shall submit his proposal upon forms furnished by the Department of Public Works.

The bidder shall specify the price in figures and in words in Section IV, if space for words is provided. All words and figures shall be typewritten or in ink. In case of discrepancy, the amount shown in words will govern.

3. All proposals shall be signed correctly in ink by the individual or in case of a firm, partnership or corporation; it shall be signed by a person having a legal authority from said firm, partnership or corporation.
4. All proposals shall be submitted to the Office of the Town Engineer, 416 Gifford Street, Falmouth, Massachusetts 02540 on or before the date stated in the Notice to Bidders. Each proposal shall be in a sealed envelope, clearly marked to indicate the contents, together with the name and address of the bidder and the time and date of bid opening.
5. Proposals will be publicly opened and read at the time and place indicated in the Notice to Bidders. Bidders or their authorized agents are invited to be present.
6. Bid forms shall be completely filled in. Bids which are incomplete, conditional, or obscure, or which contain additions not called for will be rejected. Use the pages of this Document when submitting Bid and submit Agreement Document intact. All bids along with the qualifying statements shall be considered firm prices for the period of the Proposal as submitted by the bidder. Any Bid received after the time and date of opening stated in the "Notice" shall not be opened. Unopened Bids will be returned to the respective Bidders. No award will be made to any bidder who cannot satisfy the Town of Falmouth, Department of Public Works that he has sufficient ability and experience in this class of work and sufficient capital and plant to enable him to prosecute and complete the work successfully within the time named. The Owner's decision or judgment on these matters will be final, conclusive and binding.
7. The Town may make such investigations as it deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Town all such information and data for this purpose as the Town may request. The Town reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Town, that such bidder is properly qualified to carry out the obligations of the Agreement and to complete the work contemplated therein within the time period set forth in the Bid Proposal.

8. All applicable Federal, State and Local Laws, ordinance and rules, regulations (including but not limited to any laws, ordinances or regulations relating to the Town of Falmouth, or the Massachusetts Department of Environmental Protection) of any authorities shall be binding upon the bidder throughout the pendency of this Contract. The bidder shall be responsible for compliance with any such law, ordinance rule, or regulation, and shall hold the Town harmless and indemnify same in the event of non-compliance during the pendency of this Contract.

9. Examination of Contract Documents and Site

Before submitting a Bid, each Bidder must examine the Contract Documents thoroughly, visit the site to become familiar with local conditions that may in any manner affect cost, progress or performance of the Work and become familiar with Federal, State, and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of the Work.

Before submitting a Bid, Bidders may, at their own expense, make such additional investigations and test as they may deem necessary to determine their Bid for performance of the Work in accordance with the time, price and other terms and conditions of the Contract Documents.

On request, the Owner will provide each Bidder access to the site to conduct such investigations and tests, as each Bidder deems necessary for the submission of a Bid.

The submission of a bid will constitute an incontrovertible representation that the Bidder has complied with every requirement of the Contract Documents which are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the work.

At the time of the opening of bids, each bidder will be presumed to have read and to be thoroughly familiar with the Contract Documents (including all addendum). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve the bidder from any obligation with respect to his bid.

10. Interpretations

In any case, where there is a matter of opinion concerning any portion of the Specifications, work methods, work to be accomplished or any other matter concerning this Contract, the final decision shall be that of the Town.

All questions about the meaning or intent of the Contract Documents shall be received in writing by the Town of Falmouth, Department of Public Works, Engineering Division, 416 Gifford Street, Falmouth, MA 02540 at least ten (10) days before the date set herein for the opening of bids.

Written clarifications or interpretations will be issued by Addenda not later than five (5) days before the bid opening date. Only questions answered by formal written Addenda will be binding. Oral and other clarifications or interpretations will be without legal effect. Addenda will be sent by mail, E-mail or fax to all parties recorded as having received the Contract Documents. Bidders are responsible for determining that they have received all addenda issued. Each bidder shall acknowledge receipt of any and all the addendum issued

to the invitation for bids by so indicating on the Bid Sheet. Failure to do so shall be cause to reject the bid as being non-responsive.

11. Quantities and Prices

All quantities are approximate and the Department does not expressly or by implication agree that the actual quantities will correspond therewith, but the Department reserves the right to increase or decrease the quantity. An increase or decrease in the quantity for any item shall not be regarded as cause for an increase or decrease in the unit prices.

Where applicable, all bid prices shall include the cost of mobilization of equipment to the job site.

12. Bid Security

Each Bid must be accompanied by a bid bond, a certified check, or a treasurer's or a cashier's check issued by a responsible bank or trust company, payable to Owner. The Bid Security shall be in the amount stated in the Notice to Bidders and shall be sealed in a separate envelope from the Bid and then attached to the envelope containing the Bid. All Bid Securities will be returned on the execution of the Agreement or if no award is made, within one hundred twenty (120) calendar days after the actual date of opening of the Bids, unless forfeited under the conditions herein stipulated.

In case a party to whom a Contract is awarded shall fail or neglect to execute the Agreement and furnish the satisfactory bonds within the time specified. Owner may determine that the Bidder has abandoned the Contract, thereupon the proposal Bid Forms and acceptance shall be null and void and the Bid Security accompanying the Bid Form shall be forfeited to Owner as liquidated damages for such failure or neglect and to indemnify said Owner for any loss which may be sustained by failure of the Bidder to execute the Agreement and furnish the bonds as aforesaid, provided that the amount forfeited to Owner shall not exceed the difference between the Bid Price of said Bidder and that of the next lowest responsible and eligible bidder and provided further that, in case of death, disability, or other unforeseen circumstances affecting the bidder, such Bid Security may be returned to the Bidder. After execution of the agreement and acceptance of the bonds by Owner, the Bid Security accompanying the Proposal Bid Form of the Successful Bidder will be returned.

13. Execution of Bid Documents

Bids by corporations shall be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

Bids by partnerships shall be executed in the partnership name and signed by a partner, whose title shall appear under this signature. The official address of the partnership shall be shown below the signature.

14. Modifications and Withdrawal of Bids

Bids may be modified only by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time

prior to the opening of Bids.

Bids may be withdrawn prior to the scheduled time (or authorized postponement thereof) for the opening of Bids. Any Bid received after the time and date specified shall not be considered.

15. No Bid may be withdrawn for a period of one hundred twenty calendar (120) days after the actual date of the opening of the Bids. Should there be reasons why the Contract cannot be awarded within the specified period the time may be extended by mutual agreement between the Town and the bidder.
16. Once the bidder has submitted his bid, and said bid is properly received by the Town for consideration and comparison with other bids similarly submitted, the bidder agrees that he may not and will not withdraw it for a period of one hundred twenty (120) consecutive calendar days after the actual date of the opening bids.

17. Competitive Bidding

The bidding and award of the Contract shall be in full compliance with Section 39M inclusive of Chapter 30 of the General Laws of the Commonwealth of Massachusetts as last revised.

The Town may waive any formalities or minor defects or reject any and all bids.

18. Non-Collusive Resolution EEO/AA Certification and State Tax Certification Clause

Each bidder must sign and submit the "Non-Collusive Resolution" "EEO/AA Certification", and a "State Tax Certification Clause" with the bid sheet.

Signature of the Bidder is required on the Proposal Form regarding the Non-Collusive resolution which states: "The Bidder certifies under the provisions of Chapter 701 of the Acts of 1983 and under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person". As used in this Section, the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

19. The Contractor shall comply with any and all requirements set out in the following:

- I. Notice to Bidders
- II. Information for Bidders/General Conditions
- III. Special Conditions
- IV. Proposal
- V. Certificate of Vote
- VI. Non-Collusive Resolution
- VII. Non-Debarment Certificate
- VIII. EEO/AA Certificate
- IX. References
- X. State Taxes Certificate Clause
- XI. Contractors Certification
- XII. Statement of Compliance
- XIII. Bankruptcy Statement
- XIV. Prevailing Wage Rates

- XV. Agreement
 - XVI. Order of Conditions (if Applicable)
 - XVII. Specifications
 - XVIII. Plans
20. Environmental Regulations

The Contractor shall comply with all Rules and Regulations of the Massachusetts Department of Environmental Protection (MA DEP) as apply to the maintenance and management of the site. In addition, the Contractor shall comply with the Falmouth Conservation Commission Regulations and Order of Conditions for the project and site.

The Contractor must provide all necessary equipment to perform the required work in the time allowed as per the terms of this Bid. The Contractor shall furnish and pay the cost of all the necessary materials and furnish and pay for all superintendence, labor, tools equipment and transportation and perform all work required for and the restoration of the property in strict accordance with this Contract, and any amendments thereto and such supplemental plans and Specifications which may hereafter be approved.

21. Bonds and Insurance

- a. A Performance and Payment Bond in the amount of One Hundred (100%) percent of the annual contract price will be required for the faithful performance of the Contract. The Contractor shall obtain and submit the bond within ten (10) days after notification of the bid award. The successful bidder's Bid Bond shall not be released until such time the Performance and Labor and Materials Bonds have been posted. Within seven (7) working days of receipt of acceptable Payment Bond and Agreement signed by the party to whom the Agreement was awarded, the Town shall sign the Agreement and return to such party an executed duplicate of the Agreement.
- b. Certificate of Insurance acceptable to the Town shall be filed with the Town prior to execution of any contractual Agreement. These Certificates shall contain a provision that coverage afforded under the policies will not be reduced or canceled unless at least fifteen (15) days prior written notice has been given to the Town. Awarded Contractor shall maintain all applicable insurances and bonds.
- c. The Contractor shall procure and maintain, at the Contractor's own expense, during the Contract time, liability insurance as herein-after specified:
- d. Contractor's General Public Liability and Property Damage Insurance including vehicle coverage issued to the Contractor and protecting the Contractor from all claims for personal injury, including death, and all claims for destruction of or damage to property arising out of or in connection with any operations under this Agreement, whether such operations be by the Contractor or a Sub-contractor employed by the Contractor. Insurance shall be written with a limit of liability of not less than \$1,000,000 for all damages arising out of bodily injury including death, at any time resulting therefrom, sustained by any one person in any accident; and a limit of liability of not less than \$3,000,000 aggregate for any such damages sustained by two or more persons in any one accident.
- e. The Contractor shall procure and maintain, at the Contractor's own expense, during the duration of the Agreement, in accordance with the provisions of the Laws of the

Commonwealth of Massachusetts, G. L. Chapter 149, Section 34A, Workman's Compensation Insurance, including occupational disease provisions, for all the Contractor's employees, and in case any work is sublet, the Contractor shall require such sub-contractor similarly to provide Workman's Compensation Insurance, including occupational disease provision for all of the latter's employees unless such employees are covered by the protection offered by the Contractor. In case any class of employees engaged in hazardous work under this Agreement is not protected under the Workman's Compensation Law, the Contractor shall provide and shall use each sub-contractor to provide adequate and suitable insurance for the protection of its employee not otherwise protected.

- f. The Contractor shall indemnify and save harmless the Town and the Town's agents and employees from and against all losses and all claims, demands, payments suits, actions recoveries, and judgments of every nature and description brought or recovered against them by reason of any act or omission of the said Contractor, its agent, or employees, in the execution of the work or in guarding the same.
- g. Contractor shall not allow any other business interest or operation to interfere with or diminish his ability to perform services required under this Contract with maximum efficiency.
- h. The actual performance of work and superintendence shall be performed by the Contractor, but the Town shall, at all times, have access to the premises for the purpose of observing or inspecting the work performed by the Contractor. Town's approval to allow Contractor to assign, sub-contract or sublet any portion or all of this work shall not diminish or reduce Contractor's responsibility to perform under this Contract. Contractor shall have full responsibility for all sub-contractors or assignments under this Contract. In the event the Town is dissatisfied with the progress or performance of the Work in accordance with the Standard of Work or time of completion set forth in the Agreement, the Town shall give the Contractor or his representative written notice in which the Town shall state the cause of dissatisfaction; provided however, no written notice or opportunity for remedy shall be provided, if Town finds the site unattended at any time or is violating any major operating conditions established by Occupational Safety and Health Administration (OSHA). Should the Contractor fail to remedy the matters complained of within one (1) day after the written notice is received by the Contractor or his representatives, the Contractor shall be deemed in default of this Agreement, and shall be paid only for such work as has been completed prior to default. Again, the Contractor shall not be provided a one (1) day remedy period if site is found unattended at any time and the Town shall be entitled to automatically terminate the Contract without notice if afore-said circumstances occurs.

22. Wage Rates Prevailing Wage Rates as determined by the Commissioner of Department of Labor and Industries under the provision of the Massachusetts General Laws, Chapter 149, Section 26 to 27D, as amended, apply to this project. It is the responsibility of the Contractor, before bid opening, to request if necessary, any additional information on Prevailing Wage Rates for those trades people who may be employed for the proposed work under this Contract. The schedules of prevailing wage rates are included in Section XI.

23. Payroll Records, Labor, Maximum Hours of Employment.

- a. Every employee in public work shall lodge, board and trade where and with whom he elects; and no persons or his agents or employees under Contract with the Commonwealth, a county, city or town or with a department, board, commission or officer acting therefore, for the doing of public work, shall directly or indirectly require as a condition of employment therein, that the employee shall lodge, board or trade at a particular place or with a particular person (Chapter 49, Section 25 of the MA General Laws).
- b. Commissioner of Labor and Industries, public necessity so require (Chapter 149, Section 34 of the General Laws, as no laborer, workman, mechanic, foreman or inspector working within this Commonwealth, in the employee of the Contractor, Sub-contractor or other persons doing or contracting to do the whole or a part of the work contemplated by this Contract, shall be required or permitted to work no more than eight (8) hours in any one day or no more than 48 hours in any one week, or no more than six (6) days in any one week, except in cases of emergency, or in case any town subject to Section 149 of the General Laws is a party to such a Contract, more than eight (8) hours in any one day, except as aforesaid. The Department or the Contract or any Sub-contractor may employ laborers, workmen, mechanics, foreman and inspectors for more than eight (8) hours in any one day in the work to be done or under Contract when in the opinion of the Commissioner of Labor and Industries, public necessity so requires (Chapter 149, Section 34 of the General Laws, as amended).
- c. Attention of Bidders is called to Section 148 of Chapter 149 of the General Laws and Amendments thereof requiring the weekly payment of employees.
- d. Upon request of the Engineer of the Massachusetts Department of Labor and Industries, the Contractor shall furnish certified copies of any or all payrolls for the Contract, showing the name, address, and occupational classification of each employee on said works, and the hours worked by, and the wages paid each such employee. Such payroll shall also include the rates paid for rented trucks or rental equipment of any kind used on the work. This requirement shall also apply to the work of any Sub-contractor having a Sub-contract for any of the work performed on the project. Such records shall be kept in such manner as the Commissioner of Labor and Industries shall prescribe, and shall be open to inspection by the Engineer or any authorized representative of the Department of Labor and Industries at any reasonable time and as often as may be necessary. In the case the work covered by this Contract is financed from Federal Funds the above provisions relative to the hours of employment shall be subject to such revisions and amendment as are required by the Rules and Regulations controlling the expenditures of such Federal Funds.

24. Buy American. The Contractor agrees that the Contractor, Sub-contractor, material men, and suppliers in the performance of this Contract will give preference to domestic construction material.

25. Compliance with Laws. The Contractor shall keep himself fully informed of all existing and future Federal, State, and Local Laws, ordinances, rules, and regulations affecting those engaged or employed on the Work, the materials and equipment used in the Work or the

conduct of the Work, and of all orders, decrees and other requirements of bodies or tribunals having any jurisdiction or authority over the same. If any discrepancy or inconsistency is discovered in the Drawings, Specifications or other Contract Documents in relation to any such law, ordinance, rule, regulation, order, decree or other requirement, the Contractor shall forthwith report to the Administrator in writing. The Contractor shall at all times observe and comply with, and cause all his agents, servants and employees to observe and comply with all such existing and future laws, ordinances, rules, regulations, orders, decrees and other requirements and he shall protect, indemnify and save harmless the Owners, its officers, agents, servants and employees from and against any and all claims, demands, suits, liabilities, judgments, penalties, losses, damages, costs and expenses, including attorney's fee, arising from or based upon any violation or claimed violation of any such law, ordinance, rule, regulation, order, decree or other requirements, whether committed by the Contractor or any of his agents, servants, or employees.

26. Provisions Required by Law Deemed Inserted. Each and every provision of Law and clause required by Law to be inserted in the Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though they were included herein. If through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.
27. Massachusetts Sales and Use Tax. Materials and equipment purchased for permanent installation in this project will be exempt from the Massachusetts Sales and Use Tax. The exemption certificate number is E-046-001-148. Each Bidder shall take this exemption into account in calculating his Bid for the Work.
28. Utilities. Any temporary utility of the Contractor's convenience, other than as stated in the Contract, shall be the Contractor's responsibility and at his own expense.
29. Method of Payment to Contractor: The Town, so long as the Contractor continues to carry on the work, shall make monthly payments therefore as follows: Each month prior to the completion of the work done to date of the estimate and thereupon the Town shall deduct such estimate five percent (5%) thereof, and shall pay the balance of such estimate to the Contractor. Thirty (30) days after the satisfactory completion of the Work as determined by the Engineer, the Town shall pay the Contractor the final amount due and remaining to be paid under this Contract, deducting from said amount and keeping for its own, any expense incurred by the Town on account of defects, omissions or mistakes of the Contractor in his Work, provided, however, that no final payment shall be made until all liens and claims against the Town and its officers, due to the work, are satisfied.
30. Open Excavations: All open excavations shall be adequately safe guarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons, and damage to property. The length of open trench will be controlled by the particular surrounding conditions, but shall always be confined to the limits prescribed by the Owner. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, special construction procedures shall be taken, such as limiting the length of open trench or requiring that the trench shall not remain open overnight.
31. Work During Inclement Weather: No work shall be done under these Specifications except by permission of the Engineer when the weather is unfit for good and careful work to be

performed. Should the severity of the weather continue, the Contractor upon the direction of the Owner, shall suspend all work until instructed to resume operations by the Owner and the Contractor time shall be extended to cover the duration of the order. Work damaged during periods of suspension due to inclement weather shall be repaired and/or replaced by the Contractor. No earth fill or embankment shall be placed upon frozen material. If there is a delay in the Work due to the weather conditions, the necessary precautions must be taken to bond new Work to old.

32. A contact person must be designated by the Contractor upon award of the Contract who will be accessible on a twenty-four-hour per day basis.

33. Notice to Utilities

Written notice shall be given by the Contractor to all public service corporations or officials owning or having charge of publicly or privately owned utilities of his intention to commence operations affecting such utilities at least one (1) week in advance of the commencement of such operations that may affect their utilities and the Contractor shall at the same time file a copy of such notice with the Owner.

Following are the names and addresses of the utilities presumed to be affected, but the completeness of the list is not guaranteed.

NSTAR
484 Willow Street
Yarmouth, MA 02675
Attn. Bob Monteiro
(508) 957-4637

Falmouth Water
416 Gifford Street
Falmouth, MA 02540
Attn. Matt Lanen
(508) 457-2543

National Grid
157 Whites Path
South Yarmouth, MA 02664
Attn. Peter Nagle
(508) 760-7500

Falmouth Fire Dept.
399 Main Street
Falmouth, MA 02540
Attn. Timothy Smith, Chief
(508) 457-2538

Verizon
44 Old Town House Road
So. Yarmouth, MA 02664
Attn. Daryl Crossman
(508) 884-4991

Falmouth Police Dept.
750 Main Street
Falmouth, MA 02540
Attn. Jeff Lourie, Chief
(508) 457-2529

Xfinity
35 Resnik Rd.
Plymouth, MA 02360
Attn. Gene Lyczynski
(508) 732-0649

Falmouth Wastewater
416 Gifford Street
Falmouth MA 02540
Attn. Amy Lowell
(508) 457-2543

Falmouth Engineering Division
416 Gifford Street
Falmouth, MA 02540
Attn: James McLoughlin
(508) 457-2543

Falmouth Highway Division
416 Gifford Street
Falmouth, MA 02540
Attn: James Grady
(508) 457-2543

34. Extra Work.

Extra work shall be defined as follows: Work which was not originally anticipated and/or contained in the contract; and therefore is determined by the Owner to be necessary for the proper completion of the project.

The Contractor shall do any work not herein otherwise provided for when and as ordered in writing by the Owner, such written order shall be prior to the Contractor performing the work and shall set forth the Extra Work to be done, the basis of payment time adjustments, if any.

35. Payment for Extra Work will be made as follows:

- A. Where the Contract contains a unit price for work and the Engineer orders extra work for work of the same kind as other work contained in the Contract and is performed under similar physical conditions, the Contractor shall accept full and final payment at the Contract unit prices for the accepted quantities of extra work done.
- B. An agreed upon lump sum payment offer to do the extra work as specified by the Engineer. The Contractor shall submit the lump sum offer in writing.
- C. Unless an agreed lump sum and/or unit price is obtained from above, the Contractor shall accept as full payment for work or materials for which no price agreement is contained in the Contract, an amount equal to the following:
 - 1. The actual cost for direct labor, material and equipment plus ten percent (10%) of this total for overhead;
 - 2. Plus actual cost of Workmen's Compensation and Liability Insurance, Health, Welfare and Pension benefits, Social Security deductions and Employment Security Benefits;
 - 3. Plus ten percent (10%) of the total of one (1) and two (2);
 - 4. Plus the estimated proportionate cost of surety bonds. For work performed by a sub-contractor, the Contractor shall accept full payment therefore an amount equal to the cost to the Contractor of such work as determined by the Engineer, plus ten percent of such cost. No allowance shall be made for general superintendence and the use of small tools and manual equipment.

36. Guarantee

The Contractor guarantees that the Work and Services to be performed under the Contract, and all workmanship, materials, and equipment performed, furnished, used or installed in the construction of the same shall be free from defects and flaws, and shall be performed and furnished in strict accordance with the Drawings, Specifications, and other Contract

documents, that the strength of all parts of all manufactured equipment shall be adequate and as specified and that the performance test requirements of the Contract shall be fulfilled. This guarantee shall be for a period of one year from and after the date of completion and acceptance of the Work as stated in the final estimate. If part of the Work is accepted in accordance with that sub-section of this AGREEMENT titled "Partial Acceptance", the guarantee for that part of the Work shall be for a period of one (1) year from the date fixed for such acceptance.

If at any time within the said period of guarantee any part of the Work requires repairing, correction, or replacement, the Owner may notify the Contractor in writing to make the required repairs, correction, or replacements. If the Contractor neglects to commence making such repairs, corrections, or replacements to the satisfaction of the Owner within ten (10) days from the date of receipt of such notice, or having commenced fails to prosecute such Work with diligence, the Owner may employ other persons to make said repairs, correction, or replacements, including compensation for additional professional services, shall be paid by the Contractor.

Any settling of backfilled trenches that may occur during the guaranty-warranty period shall be repaired by Contractor at no additional expense to Owner, including the complete restoration of all plantings, paving, or other improvements of any kind, damaged as a result thereof.

37. Boycott

The Contractor shall not participate in or cooperate with an international boycott, as defined in Section 999 (b) (3) and (4) of the Internal Revenue Code of 1954, as amended, or engage in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws.

38. Safety and Health Regulations

This project is subject to the Safety and Health regulations of the U.S. Department of Labor set forth in 29 CFR, Part 1926, and to the Massachusetts Department of Labor and Industries, Division of Industrial Safety "Rules and Regulations for the Prevention of Accidents in Construction Operations" (Chapter 454 CMR 10.00 et seq.). Contractors shall be familiar with the requirements of these regulations.

The Successful Bidder shall comply with the Department of Labor Safety and Health Regulations for Construction promulgated under the Occupational Safety and Health Act of 1970 (PL-91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL-91-54).

The Successful Bidder shall have a competent person or persons, as required under the Occupational Safety Health Act on the Site to inspect the Work and to supervise the conformance of the Work with the regulations of the Act.

39. Manufacturer's Experience

Wherever it is written that an equipment manufacturer must have a specified period of experience with its product, equipment which does not meet the specified experience period can be considered if the equipment supplier or manufacturer is willing to provide a bond or

cash deposit for the duration of the specified time period which will guarantee replacement of that equipment in the event of failure. Such bond shall be an Efficiency Guarantee Bond executed on a form to be approved by the Owner.

40. Access to Work

Representatives of the Commonwealth and any local agencies having a direct interest in the Work shall have access to the Work under this contract wherever it is in preparation or progress and the Contractor shall provide proper facilities for such access and inspection.

41. Laws and Regulations

Applicable provisions of Massachusetts General Laws and Regulations and/or the United States Code and Code of Federal Regulations Govern this Contract and any provision violation of the foregoing shall be deemed null, void and of no effect. Where conflict between Code of Federal Regulations and State Laws and Regulations exist, the more stringent requirement shall apply.

42. Daily Cleanup

- a. The Contractor shall clean up, at least daily, all refuse, rubbish, scrap and surplus material, debris and unneeded construction equipment resulting from the construction operations and sweep the area. The site of the work and the adjacent areas affected there shall at all times present a neat, orderly and workmanlike appearance.
- b. Upon written notification by the Owner, the Contractor shall within 24 hours clean up those areas, which in the Owner's opinion are in violation of this section and the above referenced sections of the specifications.
- c. If in the opinion of the Owner, the referenced areas are not satisfactorily cleaned up, all other work on the project shall stop until the cleanup is satisfactory.

43. Sequence of Work

The Contractor shall submit to the Owner a proposed construction schedule ten (10) days after receipt of Notice to Proceed and shall provide revised schedules should progress of the work vary from the proposed schedule. The schedule shall indicate all important construction activities and milestones indicate all important construction activities and milestones and shall provide for the proper sequence of construction giving consideration for purchasing time, submittal approval process, material delivery, and other similar time consuming factors. The schedule shall include start and finish times and it shall be updated at least every month and submitted with the periodic payment estimates. The schedule items developed shall correspond to all of the items of the schedule of values and payments estimates.

44. Final Cleanup

Before acceptance by the Owner, the Contractor shall perform a final cleanup to bring the construction site to its original or specified condition. This cleanup shall include removing all trash and debris off of the premises. Before acceptance, the Owner shall approve the condition of the site.

45. Hours of Construction Activity

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Contractor shall conduct all construction activity between 7:00 A.M. and 6:00 P.M., Monday through Friday. No construction work shall be allowed on Saturdays, Sundays, or Holidays without written authorization from the Town.

46. Project Record Documents

Keep accurate record documents for all additions, substitution of material, variations in work, and any other revisions to the Contract Documents.

47. Contractor's Representative

The Contractor shall designate a representative who will be available to respond to emergency calls by the Town at any time day and night and on weekends and holidays should such a situation arise.

48. Pre-construction Conference

The Owner will schedule the pre-construction conference after the Town issues the Notice of Award. Representatives of the Town, the Consultant, and the Contractor shall attend. The agenda shall include, but not be limited to, the following:

- a. Distribution of extra sets of contract documents.
- b. Submission of list of Subcontractors, list of products, schedule of values, and the progress schedule.
- c. Designation of personnel representing the parties of the Contractor and the Town.
- d. Procedures and processing of submittal, substitutions, applications for payments, change orders and contract closeout procedures.

49. Coordination of Work

The General Contractor shall be responsible for coordinating his own work as well as that of any subcontractors. He shall be responsible for notification of the Consultant when each phase of work is expected to begin and the approximate completion date.

50. Time for Completion of Contract

The time for completion of this contract is stipulated in Section IV, PROPOSAL-BID SHEET. The Bidder shall base his bid on completing the proposed work by the completion date stipulated.

- a. Work will be substantially complete by April 24, 2026.
- b. The final inspection by the Owner and Consultant, resulting in a punch list of non-compliant items, will be conducted no later than May 1st, 2026.
- c. The issues listed in the punch list must be resolved by contractor to the Owner's satisfaction by May 15th, 2026.
- d. After receiving the Notice to Proceed the Contractor shall submit for approval, the construction schedule that states the dates on which each task will be started and

51. Site Security

The Contractor shall be responsible for site security to prevent vandalism and accidents by unauthorized access to the site prior to completion of the work.

52. Construction Permits

The Contractor shall obtain, pay, and be responsible for necessary construction permits from those authorities having jurisdiction over the land, utilities, or structures which are located within the limits of work which will be impacted by the Contractor's operations.

53. Award of Contract

The Contract will be awarded within 120 calendar days after the actual date of the opening of the bids to the lowest responsible and eligible Bidder (Successful Bidder). Such a Bidder shall possess the skill, ability, and integrity necessary for the faithful performance of the work. The term "lowest responsible and eligible Bidder" as used herein shall mean the Bidder whose Bid is the lowest of those Bidders possessing the skill, ability, and integrity necessary to the faithful performance of the Work.

Owner reserves the right to reject any and all Bids; to waive any and all informalities if it is in the Owner's best interest to do so, and the right to disregard all non-conforming, non-responsive or conditional Bids.

The award of all bids shall be made by the Board of Selectmen at a regular meeting.

54. Notice to Proceed

The Town, after the execution of the Contract, will send the "Notice to Proceed" to the Contractor within 30 calendar days.

SECTION III

SPECIAL CONDITIONS

Since it may be necessary for the Contractor to respond to an emergency situation where immediate response is necessary, a 4 hour maximum response timeframe is required. The Contractor is required to provide the Department the names and telephone numbers of a person or persons who can be contacted 24 hours a day, and who has the authority to provide whatever labor, materials, and equipment which may be necessary to address the emergency.

Emergency Town contacts are listed below:

DIRECTOR OF PUBLIC WORKS

Peter M. McConarty, P.E., P.L.S.
416 Gifford Street
Falmouth, MA 02540
Work: 508-457-2543

TOWN ENGINEER

James McLoughlin, P.E.
416 Gifford Street
Falmouth, MA 02540
Work: 508-457-2543

HIGHWAY SUPERINTENDENT

James Grady
416 Gifford Street
Falmouth, MA 02540
Work: 508-457-2543

ASST. HIGHWAY SUPERINTENDENT

Michael Souza
416 Gifford Street
Falmouth, MA 02540
Work: 508-457-2543

CONTRACTOR NOTIFICATION

Emergency work is defined as the work required replacing a culvert that is of an **EMERGENCY NATURE** and **REQUIRES IMMEDIATE ATTENTION** as determined by the **Town Engineer or Authorized Representative**. The Contractor will be required to commence this emergency work within four (4) hours, unless otherwise directed, after notification by the Department. The Department will determine the work schedule for emergency work.

Payments for emergency repair work will be made under the various contract items for substructure repair work that apply. In addition to the regular substructure repair items, payment for emergency work will include Emergency Response described in the Special Conditions Section.

PERSONAL PROTECTIVE SAFETY EQUIPMENT FOR CONTRACTOR PERSONNEL

The Contractor is responsible to ensure that all personnel, including all subcontractors, working on the project are issued and are wearing all necessary personal protective safety equipment while working within the project limits. This equipment shall include, as a minimum, a hardhat and a safety vest, regardless of the type of work being performed. Other safety equipment shall be added as required to perform the work in which they are engaged and in accordance with all local, state and federal requirements in effect. Safety equipment shall be provided at no additional cost to the Massachusetts Highway Department.

PROVISIONS FOR TRAVEL AND PROSECUTION OF WORK

The Contractor shall schedule and execute his work in such a manner to present the least interference and impedance to traffic. The Contractor shall maintain all traffic control devices in

satisfactory condition; signs are to be kept clean at all times; legends shall be distinctive and unmarred.

Signs and sign supports located on or near the traveled way must pass the criteria set forth in the NCHRP 350 report.

Attention is directed to the fact that these work areas may be heavily traveled, high-speed roads. Operations that will affect the flow of traffic on such roads within the project limits are restricted to the hours of least volume. The hours of all work operations will be as authorized by the Town Engineer. The Town Engineer may direct the Contractor to cease any operation that is deemed to be unsafe, or which unduly impedes traffic, with no additional expense to the Commonwealth.

The Contractor shall properly cover any existing signs having messages that conflict with the construction traffic conditions for the duration of each work period. The Contractor shall properly cover or remove all temporary construction signs that have messages irrelevant to normal traffic conditions after each work period.

These work hour restrictions do not apply to emergency conditions, as determined by the Department, in which case the work shall begin as soon as possible or during the time frame directed by the Town Engineer.

All automotive equipment not protected by traffic cones or plastic drums shall have one amber flashing warning light mounted on the cab roof or on the highest practical point of the machinery. These lights shall be in operation whenever the equipment is working on the highway and/or traveling in the work area at a speed less than 40 mph. Amber flashers must be visible to both oncoming and overtaking vehicular traffic and shall have a minimum of 32 candle power and a flashing frequency of 50-60 times per minute.

Flaggers, when required, shall be located at a sufficient distance in advance of the work area so that they can warn oncoming motorists of the work.

In general, work areas on this project shall not be left overnight without adequate safety precautions. A sufficient number of traffic cones, drums, barricades and hazard warning lighting devices shall be placed and maintained as necessary and as directed by the Engineer.

TRAFFIC MANAGEMENT

Traffic control shall comply with the applicable sections of Part VI of the Manual on Uniform Traffic Control Devices. Sign placement shall conform to the applicable sketches (reference MHD Traffic Manual) at: www.mhd.state.ma.us/default.asp?pgid=content/traffic/TMP_Manual&sid=about and/or as shown in said Part VI. The Contractor shall bring three (3) (or more if requested) sets of the appropriate sketches for the work site to the pre-construction or work order assignment meeting. The purpose for is to ensure that all concerned parties (i.e. Contractor, Sub Contractors, and the Engineer) have and agree on the required traffic management for the working conditions.

Traffic police detail, when required, shall be located at a sufficient distance in advance of the work area so that they can warn oncoming motorists of the work. The Police Chief or his representative, in consultation with Owner's representative, will determine the number of officers required.

The Contractor shall provide and use the necessary (as directed) warning devices, barricades, drums, signs, special lighting units, special apparel, etc., in accordance with the provisions of Section 850, Traffic Controls for Construction and Maintenance Operations in the performance of the work.

The Contractor will provide a detailed traffic control plan to the Engineer for approval showing control signs, barrels, and cones, traffic officers, including detour signs, meeting the approval of the Engineer, Owner and local Police Department in accordance with the Manual of Uniform Traffic Control Devices.

The Contractor shall hand deliver written notice to individual houses affected by road closings or detours a minimum 24 hours in advance.

NON-RESPONSE PENALTIES

When, following notification by the Department, the Contractor fails to meet the four (4) hour time limit to start emergency work; the contract payment will be reduced \$1000.00 for each day or portion of day that repair work is delayed.

When, following notification by the Department, the Contractor fails to meet the five (5) day limits for scheduled repairs, the contract payment will be assessed a non-response penalty in the amount of \$100.00 for each day or portion of a day that repair work is delayed.

It is the intent of this provision to ensure prompt response to work orders.

DISPOSAL OF EXCAVATED MATERIALS AND SITE CLEANING

Surplus materials obtained from any type of excavation, and not needed for further use, as determined by the Engineer shall become the property of the Contractor and shall be disposed of by the Contractor outside the location subject to the regulations and requirements of all authorities governing the disposal of such materials, at no additional compensation.

The Contractor is required to broom clean all work site areas after the removal of excavated debris regardless of preexisting conditions. Removal of debris, site cleaning, and disposal of debris is incidental to the Contract and no additional payment will be made.

PROTECTION OF UTILITIES AND PROPERTY

The Contractor is responsible for the protection of vehicular and pedestrian areas surrounding the work site. The Contractor shall take all necessary precautions, including the use of shielding, to protect vehicles and pedestrians from debris.

NOTICE TO OWNERS OF UTILITIES

To locate the appropriate utility and contact person go to the following web site:

<http://www.mhd.state.ma.us/WebApps/utilities/select.asp>

The list is not necessarily complete. The Contractor shall investigate to determine the existence of other utilities that may be affected by the Contractor's operations.

The Contractor shall also be responsible for informing the following officials in each area that he is assigned to work in:

Superintendent, Department of Public Works or Town Engineer
 Superintendent, Water Department, Superintendent, Sewer Departments Police
 Department, Fire Department

The culvert plans indicate the location of the existing known utility in the vicinity of the work. Bidders are cautioned to verify this information. The accuracy and completeness of the plans are not guaranteed in any manner.

The Contractor shall notify Massachusetts DIG SAFE and procure a Dig Safe Number for each location prior to disturbing existing ground in any way. The telephone number of the Dig Safe Call Center is 1-888-344-7233.

Water for Construction Purposes: The Contractor shall furnish water required for all purposes at his own expense.

Property Corners: The Contractor shall replace any and all existing property corners and markers (i.e., iron pins, stone monuments, etc.) that are moved during the Contract. Replacement of these corners and markers shall be done at the Contractor's own expense.

Underground Utilities: The Contractor shall be responsible for any damage that occurs to the underground utilities (i.e., sanitary sewer lines etc.). Caution is to be exercised when the Contractor is crossing these lines.

The Contractor's attention is directed to the necessity of making his own investigation in order to assure that no damage to existing structures, drainage lines, traffic signal conduits, etc., will occur.

The Contractor shall notify "Mass. DIG SAFE" and procure a DIG SAFE number for each location prior to disturbing existing ground.

Uniformed Police Officers for Traffic Control. This item does include costs for flagmen employed by the Contractor. When in the opinion of the Engineer and the Chief of Police, uniformed police officers are needed for traffic control; they shall be put on by the Engineer and Chief of Police and all cost shall be borne by the Contractor.

Dust Control. The Contractor shall take all necessary precautions to prevent and abate nuisance caused by dust arising from his operations. Approved methods applicable to various parts of the work such as application of water spray, oils, tars, emulsions, or calcium shall be employed.

Final Payment Constitutes Release. The acceptance by the Contractor of the final payment of the five percent (5%) withheld shall operate as a release to the Town of all claims and all liabilities to the Contractor for all work done or materials furnished in connection with the Work. The payment to the Contractor of said final payment does not, however, release him or his sureties from any obligation under this Contract.

Existing Pavement Cuts. All existing pavement (cement concrete and bituminous concrete) shall be saw cut for its entire thickness. Pavement breaker or other means of cutting joints will not be allowed.

Cutting, Fitting and Patching. Workmanship and materials of patching and repair work shall match

the adjacent similar work, and shall conform to the applicable sections of the specifications. Patches and joints with existing work shall provide, as applicable in each case, visual, structural, and waterproofing continuity.

Hauling, Handling and Storage of Materials. The Contractor, shall, at his own expense, handle and haul all material furnished by him and shall remove any of his surplus materials at the completion of the Work. The Contractor shall provide suitable and adequate storage for equipment and materials furnished by him that are liable to injury and shall be responsible for any loss of or damage to any equipment or materials by theft breakage or otherwise. The Contractor shall be responsible for all damage to the work under construction during its progress and until final completion and acceptance even though partial payments have been made under the Contract.

Adjust Gas Gate Boxes or Telephone Co. M.H. cover to Grade. The Contractor shall be responsible for notifying Keyspan Gas Co. or Verizon to adjust gate boxes or M.H. cover to grade when calling Dig Safe.

Steel Plate in Construction Zone. At the end of each working day where trenches in areas of public travel are covered with steel plates, each edge of such plates shall either be beveled or protected by a slope of two (2) feet horizontally to one (1) inch vertically. Any temporary patching material may be used to construct the ramps. The cost of necessary patching materials, and their maintenance and removal, will be considered incidental to the item involved with no separate payment.

It shall also be a requirement of this Contract that all structures in traveled ways or deemed hazardous by the Engineer be protected with suitable covers (steel plates or equal) capable of withstanding a 36.5 ton load with impact until the castings are available.

Buried Warning and Identification Tape. Polyethylene plastic warning tape manufactured specifically for warning and identification of buried utility lines. Provide tape on rolls, three (3) inches minimum width, color coded as stated below for the intended utility with warning and identification imprinted in bold black letters continuously over the entire tape length. Warning and identification to read, "CAUTION, BURIED (intended service) LINE BELOW" or similar wording. Color and printing is to be permanent, unaffected by moisture soil.

Warning Tape Color Codes

RED:	Electric
YELLOW:	Gas, Oil, and Dangerous Materials
ORANGE:	Telephone and Other Communications
BLUE:	Water Systems
GREEN:	Sewer Systems

Warning Tape for Metallic Piping: Acid and alkali-resistant polyethylene plastic tape conforming to the width, color and printing requirements indicated above. Minimum thickness of the tape shall be 0.003 inch. Tape shall have a minimum strength of 1500 PSI lengthwise and 1250 PSI crosswise. The tape shall be manufactured with integral wires, foil backing, or other means of enabling detection by a metal detector when the tape is buried up to three (3) feet deep. Encase the metallic element of the tape in a protective jacket or provide with other means of corrosion protection.

For the purpose of this Contract, "Engineer" shall refer to the Director of Public Works acting for the

Standard Specifications. The term "Standard Specifications" shall refer to the "Commonwealth of Massachusetts, Department of public works, Standard Specifications for Highway and Bridges", latest edition.

Abbreviations are used in these Specifications. Current Amendments apply, except where date is indicated.

AASHTO	- The American Association of State Highway and Transportation
Officials ACI	- American Concrete Institute
AGA	- American Gas Association
AGMA	- American Gear Manufacturers Association
AIEE	- American Institute of Electrical Engineers
AISC	- American Institute of Steel Construction
AISI	- American Iron and Steel Institute
ANSI	- American National Standards Institute
ASCE	- American Society of Civil Engineers
ASME	- American Society of Mechanical Engineers
ASTM	- American Society of Testing Materials
AWPA	- American Wood Preservers Association
AWS	- American Welding Society
AWWA	- American Water Works Association
Fed. Spec.	- Federal Specifications
DIPRA	- Ductile Iron Pipe Research Association
NCPI	- National Clay Pipe Institute
EMA	- National Electrical Manufacturers Association
NFPA	- National Fire Protection Association
NEWWA	- New England Water Works Association
PCA	- Portland Cement Association
PCI	- Pre-Stressed Concrete Institute

Insufficiency of Safety Precautions. If, at any time, in the judgment of the Engineer, the Work is not properly made safe in regard to public travel, persons on or about the Work, or public or private property, the Engineer shall have the right to order such safeguards to be erected and such safeguards to be erected and such precautions to be taken as he deems advisable, and the Contractor shall comply promptly with such precautions to be taken as he deems advisable, and the Contractor shall comply promptly with such orders. If, under such circumstances, the Contractor does not or cannot immediately put the work and the safeguard into proper and approved condition or if the Contractor or his representative is not upon the site so that he can be notified immediately of the insufficiency of safety precautions, the Engineer may put the work into such condition that it shall be in his opinion, in all respects safe. The Contractor shall pay all costs and expenses incurred by the Engineer or Owner in so shall pay all costs and expenses, losses liability, claims, suits, proceedings, judgments, awards or damages resulting from, by reason of, or in connection with any failure to take safety precautions or the insufficiency of the safety precautions taken by him or by the Engineer acting under authority of this subsection.

Lines, Grades, and Measurements. The Owner will establish all lines, elevations, reference marks, batter boards, etc., needed by the Contractor during the progress of the Work from time to time will verify such marks by instrument or other appropriate means. The Contractor shall make, check, and be responsible for all measurements and dimensions necessary for the proper construction of and the

The Town will provide the Contractor with reference points and reference lines from which the Contractor may proceed. Once the initial points are provided, the Contractor will be expected to provide his own engineering help as needed.

Work to Conform. During its progress and on its completion, the Work shall conform to the lines, levels, and grades indicated on the Drawings or given by the Engineer and shall be built in a workman like manner, in strict accordance with the Drawings, Specifications, and other Contract documents and the directions given from time to time by the Engineer.

Electrical Energy. The Contractor shall make all necessary applications and arrangements and pay all fees and charges for electrical energy for power and light necessary for the proper completion of the work and during its entire progress. The Contractor shall provide and pay for all temporary wiring, switches connections and meters.

The Contractor shall provide sufficient electric lighting so that all Work may be done in a workman like manner when there is not sufficient daylight.

Sanitary Regulations. Sanitary conveniences for the use of all persons employed on the work, properly screened from public observation, shall be provided in sufficient numbers in such manner and at such locations as may be approved. The contents shall be removed and disposed of in a satisfactory manner, as the occasion requires. The Contractor shall rigorously prohibit the committal of nuisances within, on or about the work. Any employees found violating these provisions shall be discharged and not again employed on the work without the written consent of the Owner. The sanitary conveniences specified above shall be the obligation and responsibility of the Contractor.

Coordination with Utility Companies. The Contractor shall notify all utility companies at least fourteen (14) days in advance of his proposed date of start of work in any area where utilities may be affected.

The Contractor shall coordinate with the utility companies and shall allow the utility companies unhampered access to the construction site. The Contractor shall satisfy himself as to the existing conditions of the areas in which he is to perform his work. He shall conduct and arrange his work so as not to impede or interfere with the work of other contractors working in the same or adjacent areas.

Adjacent Contracts. The Contractor's attention is directed to the fact that work by utility companies and departments so the Town may be carried on concurrently within and adjacent to the limits of this Contract, and will require access over the site and the Contractor shall do his work in cooperation with them.

Control of Material. Only new materials and equipment shall be incorporated in the work. All materials and equipment furnished by the Contractor shall be subject to the inspection and approval of the Engineer. No material shall be delivered to the Work without prior approval of the Engineer.

As soon as possible after the Contract has been executed, the Contractor shall submit to the Engineer, data relating to materials and equipment he proposes to furnish for the work. Such data shall be in sufficient detail to enable the Engineer to identify the particular product and to form an opinion as to its conformity to the Specifications.

The Contractor shall submit shop drawings to the Engineer in accordance with the requirements stated in the General Conditions as supplemented.

The Contractor shall furnish facilities and labor for handling and inspection of all materials and equipment. If the Engineer requires, either prior to beginning or during the progress of the work, the Contractor shall submit samples of materials for such special tests as may be necessary to demonstrate that they conform to the Specifications. Such samples shall be furnished, stored, packed, and shipped as directed at the Contractor's expense.

The Contractor shall submit data and samples sufficiently early to permit consideration and approval before materials are necessary for incorporation in the work. Any delay of approval resulting from the Contractor's failure to submit samples or data promptly shall not be used as a basis of a claim against the Owner of the Engineer.

The materials and equipment used on the Work shall correspond to the approved samples or other data.

All materials and equipment to be incorporated in the Work shall be handled and stored by the Contractor before, during and after shipment in a manner to prevent warping, twisting, bending, breaking, chipping, rusting and any injury, theft or damage of any kind whatsoever to the material or equipment.

Cement, sand and lime shall be stored under a roof and off the ground and shall be kept completely dry at all times. All miscellaneous and reinforcing steel shall be stored off the ground or otherwise to prevent accumulations of dirt or grease, and in a position to prevent accumulations of standing water and to minimize rusting.

All materials, which, in the opinion of the Engineer, have become so damaged as to be unfit for the use intended or specified shall be promptly removed from the site of the work, and the Contractor shall receive no compensation for the damaged material or its removal. All pipe and other materials delivered to the job shall be unloaded and placed in manner, which will not interfere with the flow of necessary traffic.

Care shall be taken when unloading materials, including but not limited to pipe, fittings, valves, and hydrants at the site. Materials shall not be dropped when unloaded. The Contractor shall use adequate equipment fitted with slings, chairs, etc., subject to the approval of the Engineer, for unloading the material. Chains and cables shall not be used. Materials damaged during unloading shall not be used in the Work and shall be removed from the site.

Protection of Utilities and Properties. In case of damages of utilities, the Contractor shall promptly notify the Owner and shall, if requested, furnish manpower at the Owner's direction in getting access to the utility. The Owner, either the municipality or the utility company, may repair pipes or other structures damaged by the operation of the Contractor. The cost of such repair shall be borne by the Contractor without compensation.

Any temporary utility for the Contractor's convenience, other than as stated in the Contract, shall be the Contractor's responsibility and at his own expense.

SECTION IV**PROPOSAL- BID SHEET**

BIDDER and his surety, where appropriate, have completed and executed the attached documents, which are identified below.

TO: Town of Falmouth, Massachusetts represented by the Department of Public Works.

A. The undersigned hereby proposes to furnish all labor, materials, equipment and tools incidental thereto; for constructing the **Chapaquoit Road Stabilization Project 2026** and to do and complete all work in its entirety in the manner and under the conditions required and stated in the Specifications and at the prices listed below and for the time period set forth.

B. This Bid includes Addenda Number _____

C. Contractor is prepared to begin work on: _____

and shall be completed by: _____

Base Bid: **Chapoquoit Road stabilization Project 2026**

Price in dollars \$ _____

(In Figures)

(In Words)

D. The Undersigned agrees that, if he is selected as General Contractor, he will, within ten (10) calendar days after presentation thereof by the Awarding Authority, execute a Contract in accordance with the terms of this General Bid and furnish a performance Bond and also a Labor and Material or Payment Bond, each of a surety company qualified to do business

under the laws of the Commonwealth and satisfactory to the Awarding Authority, and each in the sum of 100% of the Contract Price, the premiums for which are to be paid by the General Contractor and are included in the Contract Price.

- E. The Undersigned Agrees to complete the work within One Hundred Twenty (120) calendar days after the date of the "Notice to Proceed". The Contract will be awarded within 30 calendar days after the actual date of the opening of the Bids. A "Notice" to proceed will be issued within thirty (30) calendar days after both parties sign the agreement.
- F. If the Bidder is a Corporation, indicate State of Incorporation under the signature and affix corporate seal; if a partnership, give full names and residential address of all partners; and if an individual, give residential address if different from business address.
- G. If the Bidder to whom the Contract is awarded is a corporation; an affidavit giving the Principal the right to sign the Contract must accompany the executed Contract.

Company Name

Authorized Signature

Contractor's Federal Tax ID No.

Name & Title (type or print)

Mailing Address

Telephone #

City

State

Zip

Date

NOTE: The following forms must be filled out in their entirety by the Bidder and submitted with the Bid.

1. Proposal Bid Sheets (Section IV) (including a 5% Bid Bond).
2. Bidding Contractors must submit three references capable of verifying the Bidding Contractors' qualifications.
3. Certificate of Vote (if applicable, Section V).
4. Non-Collusive Resolution (Section VI)
5. Non-Debarment Certification (Section VII)
6. EEO/AA Certification and References (Section VIII)
7. References (Section IX)
8. State Taxes Certificate Clause (Section X)
9. Contractor's Certification (Section XI)
9. Statement of Compliance (Section XII)
10. Bankruptcy Statement (Section XIII)

Failure to complete this form will result in the Bid being declared Non-Responsive and not eligible for award consideration.

SECTION V

CERTIFICATE OF VOTE

(to be filed if Service Contractor is a Corporation)

I, _____, hereby certify that I am a duly qualified and
(Secretary of the Corporation)

acting Secretary of _____
(Name of Corporation)

and I further certify that a meeting of the Directors of said company, duly called and held on

_____, at which time all Directors were present and voting, the
(Date of Meeting)

following vote was unanimously passed:

VOTED: To authorize and empower anyone acting singly, to execute Forms of General Bid, Contracts or bonds on behalf of the Corporation.

I further certify that the above is still in effect and has not been changed or modified in any respect.

By: _____
(Secretary of Corporation)

True Copy:

Attest: _____
(Notary Public)

My commission expires: _____

SECTION VI

NON-COLLUSIVE RESOLUTION

The undersigned certifies, under the provisions of Chapter 701 of the Acts of 1983 and under the penalties of perjury, that this is in all respects bona fide, fair and made without collusion of fraud with any other person. As used in this Section, the word "person" shall mean any natural person, joint venture, partnership, corporation, or other business or legal entity.

DATE: _____

SIGNATURE: _____

The required names, address, and telephone numbers of all persons interested in the foregoing Bid, as Principals, are as follows:

SECTION VII**NON-DEBARMENT CERTIFICATE**

"The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of Section Twenty-Nine F of Chapter Twenty-Nine, or any other applicable debarment provisions of any other Chapter of the General Laws of any rule or regulation promulgated hereunder".

NAME: _____

TITLE: _____

SIGNATURE: _____

DATE: _____

SECTION VIII**EEO/AA CERTIFICATE**

The Bidder hereby certifies he/she shall comply with all State and Federal Equal Opportunity and Affirmative Action laws. The Contractor receiving the award of the Contract shall be required to obtain from each of his sub-contractors and submit to the Contracting or Administering Agency prior to the performance of any work under this Contract, a Certification by said sub-contractor, regardless of tier, that he will comply with the minority manpower and specific Affirmative Action steps as outlined in the State and Federal Laws.

NAME: _____

TITLE: _____

SIGNATURE: _____

DATE: _____

SECTION IX

REFERENCES

The Bidder is requested to state below what work is of a similar character to that included in the proposed Contract he has done and to give references that will enable the Owner to judge his experience, skill and business standing. List Name, Title and Telephone Numbers of references:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

SECTION X**STATE TAXES CERTIFICATE CLAUSE**

I Certify under the penalties of perjury that I, to my best knowledge and belief, have filed all State (Commonwealth of Massachusetts) tax returns and paid all State (Commonwealth of Massachusetts) taxes under law.

*Signature of Individual or Corporate Name (Mandatory)

By: _____
Corporate Officer (Mandatory, if applicable)

**Social Security No. or Federal I.D. No.

*Approval of a Contract or other agreement will not be granted unless the applicant signs this Certificate Clause.

** Your Social Security Number will be furnished to the Massachusetts Department of Revenue to determine whether you have met tax filing or tax payment obligations. Providers who fail to correct their non-filing or delinquency will not have a Contract or other Agreement issued, renewed or extended. This request is made under the authority of Massachusetts General Laws, Chapter 62C, Section 49A.

SECTION XI

CONTRACTOR'S CERTIFICATION

A. Name of Project: _____

A Contractor will not be eligible for award of a Contract unless such contractor has submitted the following Certification, which is deemed a part of the resulting contract:

CONTRACTOR'S CERTIFICATION

_____ certifies that

1. It tends to use the following listed construction trades in the work under the Contract.

and

2. Will comply with the minority manpower ratio and specific Affirmative Action steps contained in Section VIII.

(Signature of Authorized Representative or Contractor)

SUB-CONTRACTOR'S CERTIFICATION

A. Name of Project: _____

_____ certifies that

1. It tends to use the following listed construction trades in the work under the Contract.

and

2. Will comply with the minority manpower ratio and specific Affirmative Action steps contained herein in Section VIII

(Signature of Authorized Representative or Sub-Contractor)

SECTION XII

STATEMENT OF COMPLIANCE

DATE: _____

I, _____
(Name of Signatory Party) (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by

_____ on the

_____ (Contractor, sub-contractor of public body) Building Project,

And that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of Section Twenty-seven (27) and Twenty-Seven A (27A) of Chapter One Hundred and Forty Nine (149) of the General Laws.

Signature: _____

Title: _____

(Signed under penalties of perjury as provided for under Section 27B of Chapter 149, General Laws.)

SECTION XIII

BANKRUPTCY STATEMENT

I/We certify that (name of firm) _____
*is NOT currently under any bankruptcy law or proceeding.

Signature of individual: _____
(or Corporate name)

By (Corporate Officer): _____
(mandatory, if applicable)

*If the firm is under any bankruptcy law or proceeding, a statement must be included which specifies any details of the proceeding which would affect the ability of the firm to carry out the provisions of this bid during the term of any contract resulting from this bid.

SECTION XIV

PREVAILING WAGE RATES



**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: Falmouth - Department of Public Works

City/Town: FALMOUTH

Contract Number:

Description of Work: Road stabilization and revetment construction work.

Job Location: 214 Chapoquoit Road

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	12/1/2025	\$40.95	\$15.57	\$21.78	\$0.00	\$0.00	\$78.30
TEAMSTERS JOINT COUNCIL NO. 10	1/1/2026	\$40.95	\$16.17	\$21.78	\$0.00	\$0.00	\$78.90
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	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	12/1/2025	\$41.02	\$15.57	\$21.78	\$0.00	\$0.00	\$78.37
TEAMSTERS JOINT COUNCIL NO. 10	1/1/2026	\$41.02	\$16.17	\$21.78	\$0.00	\$0.00	\$78.97
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	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	12/1/2025	\$41.14	\$15.57	\$21.78	\$0.00	\$0.00	\$78.49
TEAMSTERS JOINT COUNCIL NO. 10	1/1/2026	\$41.14	\$16.17	\$21.78	\$0.00	\$0.00	\$79.09
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	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	12/1/2025	\$41.97	\$10.15	\$9.50	\$9.11	\$0.00	\$70.73
LABORERS	6/1/2026	\$43.41	\$10.15	\$9.50	\$9.11	\$0.00	\$72.17
LABORERS - ZONE 2	12/1/2026	\$44.85	\$10.15	\$9.50	\$9.11	\$0.00	\$73.61
	6/1/2027	\$46.30	\$10.15	\$9.50	\$9.11	\$0.00	\$75.06
	12/1/2027	\$47.75	\$10.15	\$9.50	\$9.11	\$0.00	\$76.51
	6/1/2028	\$49.25	\$10.15	\$9.50	\$9.11	\$0.00	\$78.01
	12/1/2028	\$50.75	\$10.15	\$9.50	\$9.11	\$0.00	\$79.51
For apprentice rates see "Apprentice- LABORER"							
AIR TRACK OPERATOR (HEAVY & HIGHWAY)	12/1/2025	\$41.97	\$10.15	\$9.50	\$9.21	\$0.00	\$70.83
LABORERS	6/1/2026	\$43.41	\$10.15	\$9.50	\$9.21	\$0.00	\$72.27
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$44.85	\$10.15	\$9.50	\$9.21	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASBESTOS WORKER (PIPES & TANKS)	12/1/2025	\$44.80	\$14.50	\$4.30	\$6.75	\$0.00	\$70.35
HEAT & FROST INSULATORS LOCAL 6							
HEAT & FROST INSULATORS LOCAL 6 (SOUTHERN MASS)							
ASPHALT RAKER	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.11	\$0.00	\$70.23
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.11	\$0.00	\$71.67
LABORERS - ZONE 2	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.11	\$0.00	\$73.11
	6/1/2027	\$45.80	\$10.15	\$9.50	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.25	\$10.15	\$9.50	\$9.11	\$0.00	\$76.01
	6/1/2028	\$48.75	\$10.15	\$9.50	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.25	\$10.15	\$9.50	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ASPHALT RAKER (HEAVY & HIGHWAY)	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.21	\$0.00	\$70.33
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.21	\$0.00	\$71.77
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE	12/1/2025	\$59.28	\$16.05	\$13.25	\$3.25	\$0.00	\$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.58	\$16.05	\$13.25	\$3.25	\$0.00	\$93.13
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$62.03	\$16.05	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BACKHOE/FRONT-END LOADER	12/1/2025	\$59.28	\$16.05	\$13.25	\$3.25	\$0.00	\$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.58	\$16.05	\$13.25	\$3.25	\$0.00	\$93.13
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$62.03	\$16.05	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BARCO-TYPE JUMPING TAMPER	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.11	\$0.00	\$70.23
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.11	\$0.00	\$71.67
LABORERS - ZONE 2	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.11	\$0.00	\$73.11
	6/1/2027	\$45.80	\$10.15	\$9.50	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.25	\$10.15	\$9.50	\$9.11	\$0.00	\$76.01
	6/1/2028	\$48.75	\$10.15	\$9.50	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.25	\$10.15	\$9.50	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER	12/1/2025	\$41.97	\$10.15	\$9.50	\$9.11	\$0.00	\$70.73
LABORERS	6/1/2026	\$43.41	\$10.15	\$9.50	\$9.11	\$0.00	\$72.17
LABORERS - ZONE 2	12/1/2026	\$44.85	\$10.15	\$9.50	\$9.11	\$0.00	\$73.61
	6/1/2027	\$46.30	\$10.15	\$9.50	\$9.11	\$0.00	\$75.06
	12/1/2027	\$47.75	\$10.15	\$9.50	\$9.11	\$0.00	\$76.51
	6/1/2028	\$49.25	\$10.15	\$9.50	\$9.11	\$0.00	\$78.01
	12/1/2028	\$50.75	\$10.15	\$9.50	\$9.11	\$0.00	\$79.51
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)	12/1/2025	\$41.97	\$10.15	\$9.50	\$9.21	\$0.00	\$70.83
LABORERS	6/1/2026	\$43.41	\$10.15	\$9.50	\$9.21	\$0.00	\$72.27
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$44.85	\$10.15	\$9.50	\$9.21	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: BOILER MAKER							
Effective Date: 1/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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
Apprentice to Journeyworker Ratio: 1:4							
BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	8/1/2025	\$67.95	\$11.49	\$15.57	\$8.02	\$0.00	\$103.03
BRICKLAYERS LOCAL 3	2/1/2026	\$69.30	\$11.49	\$15.57	\$8.02	\$0.00	\$104.38
BRICKLAYERS LOCAL 3 (NEW BEDFORD)	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: 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
Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)							
Effective Date: 2/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$34.65	\$11.49	\$15.57	\$8.02	\$0.00	\$69.73
2	60.00	\$41.58	\$11.49	\$15.57	\$8.02	\$0.00	\$76.66
3	70.00	\$48.51	\$11.49	\$15.57	\$8.02	\$0.00	\$83.59
4	80.00	\$55.44	\$11.49	\$15.57	\$8.02	\$0.00	\$90.52
5	90.00	\$62.37	\$11.49	\$15.57	\$8.02	\$0.00	\$97.45
Apprentice to Journeyworker Ratio: 1:5							
BULLDOZER/GRADER/SCRAPER	12/1/2025	\$58.62	\$16.05	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$59.90	\$16.05	\$13.25	\$3.25	\$0.00	\$92.45
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$61.34	\$16.05	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
CAISSON & UNDERPINNING BOTTOM MAN	12/1/2025	\$49.85	\$10.15	\$9.50	\$9.80	\$0.00	\$79.30
LABORERS	6/1/2026	\$51.40	\$10.15	\$9.50	\$9.80	\$0.00	\$80.85
LABORERS - FOUNDATION AND MARINE	12/1/2026	\$52.90	\$10.15	\$9.50	\$9.80	\$0.00	\$82.35

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING LABORER	12/1/2025	\$48.70	\$10.15	\$9.50	\$9.80	\$0.00	\$78.15
LABORERS	6/1/2026	\$50.25	\$10.15	\$9.50	\$9.80	\$0.00	\$79.70
LABORERS - FOUNDATION AND MARINE	12/1/2026	\$51.75	\$10.15	\$9.50	\$9.80	\$0.00	\$81.20
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING TOP MAN	12/1/2025	\$49.03	\$10.15	\$9.50	\$9.80	\$0.00	\$78.48
LABORERS	6/1/2026	\$50.58	\$10.15	\$9.50	\$9.80	\$0.00	\$80.03
LABORERS - FOUNDATION AND MARINE	12/1/2026	\$52.08	\$10.15	\$9.50	\$9.80	\$0.00	\$81.53
For apprentice rates see "Apprentice- LABORER"							
CARBIDE CORE DRILL OPERATOR	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.11	\$0.00	\$70.23
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.11	\$0.00	\$71.67
LABORERS - ZONE 2	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.11	\$0.00	\$73.11
	6/1/2027	\$45.80	\$10.15	\$9.50	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.25	\$10.15	\$9.50	\$9.11	\$0.00	\$76.01
	6/1/2028	\$48.75	\$10.15	\$9.50	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.25	\$10.15	\$9.50	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
CARPENTER	9/1/2025	\$50.35	\$10.33	\$11.47	\$8.50	\$0.00	\$80.65
CARPENTERS	3/1/2026	\$51.60	\$10.33	\$11.47	\$8.50	\$0.00	\$81.90
CARPENTERS -ZONE 2 (Eastern Massachusetts)	9/1/2026	\$52.85	\$10.33	\$11.47	\$8.50	\$0.00	\$83.15
	3/1/2027	\$54.10	\$10.33	\$11.47	\$8.50	\$0.00	\$84.40

Apprentice: CARPENTER**Effective Date: 9/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$22.66	\$10.33	\$0.00	\$1.73	\$0.00	\$34.72
2	45.00	\$22.66	\$10.33	\$0.00	\$1.73	\$0.00	\$34.72
3	55.00	\$27.69	\$10.33	\$0.00	\$3.40	\$0.00	\$41.42
4	55.00	\$27.69	\$10.33	\$0.00	\$3.40	\$0.00	\$41.42
5	70.00	\$35.25	\$10.33	\$11.41	\$5.10	\$0.00	\$62.09
6	70.00	\$35.25	\$10.33	\$11.41	\$5.10	\$0.00	\$62.09
7	80.00	\$40.28	\$10.33	\$11.44	\$6.80	\$0.00	\$68.85
8	80.00	\$40.28	\$10.33	\$11.44	\$6.80	\$0.00	\$68.85

Apprentice: CARPENTER**Effective Date: 3/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$23.22	\$10.33	\$0.00	\$1.73	\$0.00	\$35.28
2	45.00	\$23.22	\$10.33	\$0.00	\$1.73	\$0.00	\$35.28
3	55.00	\$28.38	\$10.33	\$0.00	\$3.40	\$0.00	\$42.11
4	55.00	\$28.38	\$10.33	\$0.00	\$3.40	\$0.00	\$42.11

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: CARPENTER							
Effective Date: 3/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
5	70.00	\$36.12	\$10.33	\$11.41	\$5.10	\$0.00	\$62.96
6	70.00	\$36.12	\$10.33	\$11.41	\$5.10	\$0.00	\$62.96
7	80.00	\$41.28	\$10.33	\$11.44	\$6.80	\$0.00	\$69.85
8	80.00	\$41.28	\$10.33	\$11.44	\$6.80	\$0.00	\$69.85
Apprentice to Journeyworker Ratio: 1:5							
CARPENTER WOOD FRAME	10/1/2025	\$27.75	\$7.02	\$3.80	\$1.00	\$0.00	\$39.57
CARPENTERS	10/1/2026	\$28.85	\$7.02	\$3.80	\$1.00	\$0.00	\$40.67
CARPENTERS-ZONE 3 (Wood Frame)							
All Aspects of New Wood Frame Work							

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

Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$17.31	\$7.02	\$0.00	\$0.00	\$0.00	\$24.33
2	60.00	\$17.31	\$7.02	\$0.00	\$0.00	\$0.00	\$24.33
3	65.00	\$18.75	\$7.02	\$0.00	\$1.00	\$0.00	\$26.77
4	70.00	\$20.20	\$7.02	\$0.00	\$1.00	\$0.00	\$28.22
5	75.00	\$21.64	\$7.02	\$3.80	\$1.00	\$0.00	\$33.46
6	80.00	\$23.08	\$7.02	\$3.80	\$1.00	\$0.00	\$34.90
7	85.00	\$24.52	\$7.02	\$3.80	\$1.00	\$0.00	\$36.34
8	90.00	\$25.97	\$7.02	\$3.80	\$1.00	\$0.00	\$37.79

Apprentice to Journeyworker Ratio: 1:5

CEMENT MASONRY/PLASTERING	7/1/2024	\$49.19	\$13.35	\$16.43	\$7.78	\$1.80	\$88.55
BRICKLAYERS LOCAL 3							
BRICKLAYERS LOCAL 3 (NEW BEDFORD)							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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
Apprentice to Journeyworker Ratio: 1:3							
CHAIN SAW OPERATOR	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.11	\$0.00	\$70.23
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.11	\$0.00	\$71.67
LABORERS - ZONE 2	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.11	\$0.00	\$73.11
	6/1/2027	\$45.80	\$10.15	\$9.50	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.25	\$10.15	\$9.50	\$9.11	\$0.00	\$76.01
	6/1/2028	\$48.75	\$10.15	\$9.50	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.25	\$10.15	\$9.50	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES	12/1/2025	\$60.48	\$16.05	\$13.25	\$3.25	\$0.00	\$93.03
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$61.81	\$16.05	\$13.25	\$3.25	\$0.00	\$94.36
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$63.29	\$16.05	\$13.25	\$3.25	\$0.00	\$95.84
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
COMPRESSOR OPERATOR	12/1/2025	\$37.97	\$16.05	\$13.25	\$3.25	\$0.00	\$70.52
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$38.83	\$16.05	\$13.25	\$3.25	\$0.00	\$71.38
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$39.78	\$16.05	\$13.25	\$3.25	\$0.00	\$72.33
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
DELEADER (BRIDGE)	7/1/2025	\$58.51	\$10.30	\$11.95	\$12.50	\$0.00	\$93.26
PAINTERS LOCAL 35	1/1/2026	\$59.56	\$10.35	\$12.00	\$12.60	\$0.00	\$94.51
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: DELEADER (BRIDGE)**Effective Date: 7/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$29.26	\$10.30	\$0.00	\$0.00	\$0.00	\$39.56
2	55.00	\$32.18	\$10.30	\$0.00	\$6.88	\$0.00	\$49.36
3	60.00	\$35.11	\$10.30	\$0.00	\$7.50	\$0.00	\$52.91
4	65.00	\$38.03	\$10.30	\$0.00	\$8.13	\$0.00	\$56.46
5	70.00	\$40.96	\$10.30	\$11.95	\$8.75	\$0.00	\$71.96
6	75.00	\$43.88	\$10.30	\$11.95	\$9.38	\$0.00	\$75.51

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: DELEADER (BRIDGE)							
Effective Date: 7/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
7	80.00	\$46.81	\$10.30	\$11.95	\$10.00	\$0.00	\$79.06
8	90.00	\$52.66	\$10.30	\$11.95	\$11.25	\$0.00	\$86.16
Apprentice: DELEADER (BRIDGE)							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$29.78	\$10.35	\$0.00	\$0.00	\$0.00	\$40.13
2	55.00	\$32.76	\$10.35	\$0.00	\$6.93	\$0.00	\$50.04
3	60.00	\$35.74	\$10.35	\$0.00	\$7.56	\$0.00	\$53.65
4	65.00	\$38.71	\$10.35	\$0.00	\$8.19	\$0.00	\$57.25
5	70.00	\$41.69	\$10.35	\$12.00	\$8.82	\$0.00	\$72.86
6	75.00	\$44.67	\$10.35	\$12.00	\$9.45	\$0.00	\$76.47
7	80.00	\$47.65	\$10.35	\$12.00	\$10.08	\$0.00	\$80.08
8	90.00	\$53.60	\$10.35	\$12.00	\$11.34	\$0.00	\$87.29
Apprentice to Journeyworker Ratio: 1:1							
DEMO: ADZEMAN	12/1/2025	\$48.75	\$10.15	\$9.50	\$9.65	\$0.00	\$78.05
LABORERS	6/1/2026	\$50.30	\$10.15	\$9.50	\$9.65	\$0.00	\$79.60
LABORERS - ZONE 2	12/7/2026	\$51.80	\$10.15	\$9.50	\$9.65	\$0.00	\$81.10
	6/7/2027	\$53.40	\$10.15	\$9.50	\$9.65	\$0.00	\$82.70
	12/6/2027	\$55.00	\$10.15	\$9.50	\$9.65	\$0.00	\$84.30
	6/5/2028	\$56.68	\$10.15	\$9.50	\$9.65	\$0.00	\$85.98
	12/4/2028	\$58.35	\$10.15	\$9.50	\$9.65	\$0.00	\$87.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BACKHOE/LOADER/HAMMER OPERATOR	12/1/2025	\$49.75	\$10.15	\$9.50	\$9.65	\$0.00	\$79.05
LABORERS	6/1/2026	\$51.30	\$10.15	\$9.50	\$9.65	\$0.00	\$80.60
LABORERS - ZONE 2	12/7/2026	\$52.80	\$10.15	\$9.50	\$9.65	\$0.00	\$82.10
	6/7/2027	\$54.40	\$10.15	\$9.50	\$9.65	\$0.00	\$83.70
	12/6/2027	\$56.00	\$10.15	\$9.50	\$9.65	\$0.00	\$85.30
	6/5/2028	\$57.68	\$10.15	\$9.50	\$9.65	\$0.00	\$86.98
	12/4/2028	\$59.35	\$10.15	\$9.50	\$9.65	\$0.00	\$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BURNERS	12/1/2025	\$49.50	\$10.15	\$9.50	\$9.65	\$0.00	\$78.80
LABORERS	6/1/2026	\$51.05	\$10.15	\$9.50	\$9.65	\$0.00	\$80.35
LABORERS - ZONE 2	12/7/2026	\$52.55	\$10.15	\$9.50	\$9.65	\$0.00	\$81.85
	6/7/2027	\$54.15	\$10.15	\$9.50	\$9.65	\$0.00	\$83.45
	12/6/2027	\$55.75	\$10.15	\$9.50	\$9.65	\$0.00	\$85.05
	6/5/2028	\$57.43	\$10.15	\$9.50	\$9.65	\$0.00	\$86.73
	12/4/2028	\$59.10	\$10.15	\$9.50	\$9.65	\$0.00	\$88.40
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
DEMO: CONCRETE CUTTER/SAWYER LABORERS	12/1/2025	\$49.75	\$10.15	\$9.50	\$9.65	\$0.00	\$79.05
LABORERS - ZONE 2	6/1/2026	\$51.30	\$10.15	\$9.50	\$9.65	\$0.00	\$80.60
	12/7/2026	\$52.80	\$10.15	\$9.50	\$9.65	\$0.00	\$82.10
	6/7/2027	\$54.40	\$10.15	\$9.50	\$9.65	\$0.00	\$83.70
	12/6/2027	\$56.00	\$10.15	\$9.50	\$9.65	\$0.00	\$85.30
	6/5/2028	\$57.68	\$10.15	\$9.50	\$9.65	\$0.00	\$86.98
	12/4/2028	\$59.35	\$10.15	\$9.50	\$9.65	\$0.00	\$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: JACKHAMMER OPERATOR LABORERS	12/1/2025	\$49.50	\$10.15	\$9.50	\$9.65	\$0.00	\$78.80
LABORERS - ZONE 2	6/1/2026	\$51.05	\$10.15	\$9.50	\$9.65	\$0.00	\$80.35
	12/7/2026	\$52.55	\$10.15	\$9.50	\$9.65	\$0.00	\$81.85
	6/7/2027	\$54.15	\$10.15	\$9.50	\$9.65	\$0.00	\$83.45
	12/6/2027	\$55.75	\$10.15	\$9.50	\$9.65	\$0.00	\$85.05
	6/5/2028	\$57.43	\$10.15	\$9.50	\$9.65	\$0.00	\$86.73
	12/4/2028	\$59.10	\$10.15	\$9.50	\$9.65	\$0.00	\$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: WRECKING LABORER LABORERS	12/1/2025	\$48.75	\$10.15	\$9.50	\$9.65	\$0.00	\$78.05
LABORERS - ZONE 2	6/1/2026	\$50.30	\$10.15	\$9.50	\$9.65	\$0.00	\$79.60
	12/7/2026	\$51.80	\$10.15	\$9.50	\$9.65	\$0.00	\$81.10
	6/7/2027	\$53.40	\$10.15	\$9.50	\$9.65	\$0.00	\$82.70
	12/6/2027	\$55.00	\$10.15	\$9.50	\$9.65	\$0.00	\$84.30
	6/5/2028	\$56.68	\$10.15	\$9.50	\$9.65	\$0.00	\$85.98
	12/4/2028	\$58.35	\$10.15	\$9.50	\$9.65	\$0.00	\$87.65
For apprentice rates see "Apprentice- LABORER"							
DIRECTIONAL DRILL MACHINE OPERATOR OPERATING ENGINEERS LOCAL 4	12/1/2025	\$58.62	\$16.05	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$59.90	\$16.05	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.34	\$16.05	\$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"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
DRAWBRIDGE OPERATOR (Construction)	7/1/2020	\$26.77	\$6.67	\$3.93	\$0.00	\$0.16	\$37.53
DRAWBRIDGE - SEIU LOCAL 888							
DRAWBRIDGE - SEIU LOCAL 888							
ELECTRICIAN	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
ELECTRICIANS LOCAL 223							

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

Apprentice: ELECTRICIAN**Effective Date: 9/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$21.89	\$12.50	\$0.66	\$0.00	\$0.00	\$35.05
2	45.00	\$24.62	\$12.50	\$0.74	\$0.00	\$0.00	\$37.86
3	50.00	\$27.36	\$12.50	\$0.82	\$0.00	\$0.00	\$40.68
4	55.00	\$30.10	\$12.50	\$6.92	\$2.75	\$0.00	\$52.27
5	60.00	\$32.83	\$12.50	\$7.54	\$2.75	\$0.00	\$55.62
6	65.00	\$35.57	\$12.50	\$8.18	\$2.75	\$0.00	\$59.00
7	70.00	\$38.30	\$12.50	\$8.81	\$2.75	\$0.00	\$62.36
8	75.00	\$41.04	\$12.50	\$9.43	\$2.75	\$0.00	\$65.72

Apprentice to Journeyworker Ratio: 2:3

ELEVATOR CONSTRUCTOR	1/1/2025	\$74.17	\$16.28	\$10.96	\$10.40	\$0.00	\$111.81
ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2026	\$77.26	\$16.38	\$11.06	\$10.70	\$0.00	\$115.40
ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2027	\$80.55	\$16.48	\$11.16	\$11.00	\$0.00	\$119.19

Apprentice: ELEVATOR CONSTRUCTOR**Effective Date: 1/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$37.09	\$0.00	\$0.00	\$0.00	\$0.00	\$37.09
2	55.00	\$40.79	\$16.28	\$10.96	\$10.40	\$0.00	\$78.43
3	65.00	\$48.21	\$16.28	\$10.96	\$10.40	\$0.00	\$85.85

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: ELEVATOR CONSTRUCTOR							
Effective Date: 1/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
4	70.00	\$51.92	\$16.28	\$10.96	\$10.40	\$0.00	\$89.56
5	80.00	\$59.34	\$16.28	\$10.96	\$10.40	\$0.00	\$96.98
Apprentice: ELEVATOR CONSTRUCTOR							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$38.63	\$0.00	\$0.00	\$0.00	\$0.00	\$38.63
2	55.00	\$42.49	\$16.38	\$11.06	\$10.70	\$0.00	\$80.63
3	65.00	\$50.22	\$16.38	\$11.06	\$10.70	\$0.00	\$88.36
4	70.00	\$54.08	\$16.38	\$11.06	\$10.70	\$0.00	\$92.22
5	80.00	\$61.81	\$16.38	\$11.06	\$10.70	\$0.00	\$99.95
Apprentice to Journeyworker Ratio: 1:1							
ELEVATOR CONSTRUCTOR HELPER	1/1/2025	\$51.92	\$16.28	\$10.96	\$10.40	\$0.00	\$89.56
ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2026	\$54.08	\$16.38	\$11.06	\$10.07	\$0.00	\$91.59
ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2027	\$56.39	\$16.48	\$11.16	\$11.00	\$0.00	\$95.03
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"							
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY)	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.21	\$0.00	\$70.33
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.21	\$0.00	\$71.77
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY	11/1/2025	\$53.56	\$16.05	\$13.25	\$3.25	\$0.00	\$86.11
OPERATING ENGINEERS LOCAL 4	5/1/2026	\$55.00	\$16.05	\$13.25	\$3.25	\$0.00	\$87.55
OPERATING ENGINEERS LOCAL 4	11/1/2026	\$56.29	\$16.05	\$13.25	\$3.25	\$0.00	\$88.84
	5/1/2027	\$57.72	\$16.05	\$13.25	\$3.25	\$0.00	\$90.27
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY	11/1/2025	\$55.17	\$16.05	\$13.25	\$3.25	\$0.00	\$87.72
OPERATING ENGINEERS LOCAL 4	5/1/2026	\$56.62	\$16.05	\$13.25	\$3.25	\$0.00	\$89.17
OPERATING ENGINEERS LOCAL 4	11/1/2026	\$57.92	\$16.05	\$13.25	\$3.25	\$0.00	\$90.47
	5/1/2027	\$59.37	\$16.05	\$13.25	\$3.25	\$0.00	\$91.92
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY	11/1/2025	\$26.03	\$16.05	\$13.25	\$3.25	\$0.00	\$58.58
OPERATING ENGINEERS LOCAL 4	5/1/2026	\$26.88	\$16.05	\$13.25	\$3.25	\$0.00	\$59.43
OPERATING ENGINEERS LOCAL 4	11/1/2026	\$27.64	\$16.05	\$13.25	\$3.25	\$0.00	\$60.19
	5/1/2027	\$28.49	\$16.05	\$13.25	\$3.25	\$0.00	\$61.04
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIRE ALARM INSTALLER	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
ELECTRICIANS LOCAL 223	9/1/2026	\$54.72	\$12.50	\$15.56	\$4.00	\$0.00	\$86.78
ELECTRICIANS LOCAL 223							
For apprentice rates see "Apprentice- ELECTRICIAN"							
FIRE ALARM REPAIR / MAINTENANCE	9/1/2025	\$52.25	\$12.25	\$14.86	\$3.75	\$0.00	\$83.11
/ COMMISSIONING	9/1/2026	\$54.72	\$12.50	\$15.56	\$4.00	\$0.00	\$86.78
ELECTRICIANS LOCAL 223							
ELECTRICIANS LOCAL 223							
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"							
FIREMAN (ASST. ENGINEER)	12/1/2025	\$47.69	\$16.05	\$13.25	\$3.25	\$0.00	\$80.24
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$48.75	\$16.05	\$13.25	\$3.25	\$0.00	\$81.30
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$49.93	\$16.05	\$13.25	\$3.25	\$0.00	\$82.48
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FLAGGER & SIGNALER (HEAVY & HIGHWAY)	12/1/2025	\$28.09	\$10.15	\$9.50	\$9.21	\$0.00	\$56.95
LABORERS	6/1/2026	\$29.21	\$10.15	\$9.50	\$9.21	\$0.00	\$58.07
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$29.21	\$10.15	\$9.50	\$9.21	\$0.00	\$58.07
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
FLOORCOVERER	3/1/2024	\$48.93	\$10.33	\$11.47	\$8.80	\$0.00	\$79.53
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	\$24.47	\$10.33	\$0.00	\$1.76	\$0.00	\$36.56
2	55.00	\$26.91	\$10.33	\$0.00	\$1.76	\$0.00	\$39.00
3	60.00	\$29.36	\$10.33	\$0.00	\$3.52	\$0.00	\$43.21
4	65.00	\$31.80	\$10.33	\$0.00	\$3.52	\$0.00	\$45.65
5	70.00	\$34.25	\$10.33	\$11.47	\$5.28	\$0.00	\$61.33
6	75.00	\$36.70	\$10.33	\$11.47	\$5.28	\$0.00	\$63.78
7	80.00	\$39.14	\$10.33	\$11.47	\$7.04	\$0.00	\$67.98
8	85.00	\$41.59	\$10.33	\$11.47	\$7.04	\$0.00	\$70.43

Apprentice Notes

Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

FORK LIFT/CHERRY PICKER	12/1/2025	\$59.28	\$16.05	\$13.25	\$3.25	\$0.00	\$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.58	\$16.05	\$13.25	\$3.25	\$0.00	\$93.13
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$62.03	\$16.05	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
GENERATOR/LIGHTING PLANT/HEATERS	12/1/2025	\$37.97	\$16.05	\$13.25	\$3.25	\$0.00	\$70.52
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$38.83	\$16.05	\$13.25	\$3.25	\$0.00	\$71.38
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$39.78	\$16.05	\$13.25	\$3.25	\$0.00	\$72.33

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	6/1/2025	\$43.13	\$10.80	\$8.25	\$5.50	\$0.00	\$67.68
GLAZIERS LOCAL 1333	6/1/2026	\$44.73	\$11.20	\$8.40	\$6.05	\$0.00	\$70.38
GLAZIERS LOCAL 1333	6/1/2027	\$46.73	\$11.60	\$8.55	\$6.60	\$0.00	\$73.48
	6/1/2028	\$48.73	\$12.00	\$8.70	\$7.20	\$0.00	\$76.63

Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)**Effective Date: 6/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$21.57	\$10.80	\$8.25	\$5.50	\$0.00	\$46.12
2	56.25	\$24.26	\$10.80	\$8.25	\$5.50	\$0.00	\$48.81
3	62.50	\$26.96	\$10.80	\$8.25	\$5.50	\$0.00	\$51.51
4	68.75	\$29.65	\$10.80	\$8.25	\$5.50	\$0.00	\$54.20
5	75.00	\$32.35	\$10.80	\$8.25	\$5.50	\$0.00	\$56.90
6	81.25	\$35.04	\$10.80	\$8.25	\$5.50	\$0.00	\$59.59
7	87.50	\$37.74	\$10.80	\$8.25	\$5.50	\$0.00	\$62.29
8	93.75	\$40.43	\$10.80	\$8.25	\$5.50	\$0.00	\$64.98

Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)**Effective Date: 6/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$22.37	\$11.20	\$8.40	\$6.05	\$0.00	\$48.02
2	56.25	\$25.16	\$11.20	\$8.40	\$6.05	\$0.00	\$50.81
3	62.50	\$27.96	\$11.20	\$8.40	\$6.05	\$0.00	\$53.61
4	68.75	\$30.75	\$11.20	\$8.40	\$6.05	\$0.00	\$56.40
5	75.00	\$33.55	\$11.20	\$8.40	\$6.05	\$0.00	\$59.20
6	81.25	\$36.34	\$11.20	\$8.40	\$6.05	\$0.00	\$61.99
7	87.50	\$39.14	\$11.20	\$8.40	\$6.05	\$0.00	\$64.79
8	93.75	\$41.93	\$11.20	\$8.40	\$6.05	\$0.00	\$67.58

Apprentice to Journeyworker Ratio: 3:1

HOISTING ENGINEER/CRANES/GRADALLS	12/1/2025	\$59.28	\$16.05	\$13.25	\$3.25	\$0.00	\$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.58	\$16.05	\$13.25	\$3.25	\$0.00	\$93.13
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$62.03	\$16.05	\$13.25	\$3.25	\$0.00	\$94.58

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	\$16.05	\$13.25	\$3.25	\$0.00	\$68.42
3	65.00	\$38.86	\$16.05	\$13.25	\$3.25	\$0.00	\$71.41
4	70.00	\$41.85	\$16.05	\$13.25	\$3.25	\$0.00	\$74.40

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: HOISTING ENGINEER/CRANES/GRADALLS							
Effective Date: 12/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
5	75.00	\$44.84	\$16.05	\$13.25	\$3.25	\$0.00	\$77.39
6	80.00	\$47.82	\$16.05	\$13.25	\$3.25	\$0.00	\$80.37
7	85.00	\$50.81	\$16.05	\$13.25	\$3.25	\$0.00	\$83.36
8	90.00	\$53.80	\$16.05	\$13.25	\$3.25	\$0.00	\$86.35
Apprentice: HOISTING ENGINEER/CRANES/GRADALLS							
Effective Date: 6/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$33.32	\$0.00	\$0.00	\$0.00	\$0.00	\$33.32
2	60.00	\$36.35	\$16.05	\$13.25	\$3.25	\$0.00	\$68.90
3	65.00	\$39.38	\$16.05	\$13.25	\$3.25	\$0.00	\$71.93
4	70.00	\$42.41	\$16.50	\$13.25	\$3.25	\$0.00	\$75.41
5	75.00	\$45.44	\$16.50	\$13.25	\$3.25	\$0.00	\$78.44
6	80.00	\$48.46	\$16.50	\$13.25	\$3.25	\$0.00	\$81.46
7	85.00	\$51.49	\$16.50	\$13.25	\$3.25	\$0.00	\$84.49
8	90.00	\$54.52	\$16.50	\$13.25	\$3.25	\$0.00	\$87.52
Apprentice to Journeyworker Ratio: 1:6							
HVAC (DUCTWORK)	10/1/2025	\$44.05	\$14.91	\$13.35	\$6.15	\$2.24	\$80.70
SHEETMETAL WORKERS LOCAL 17	4/1/2026	\$45.55	\$14.91	\$13.35	\$6.15	\$2.24	\$82.20
SHEETMETAL WORKERS LOCAL 17 - B							
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (ELECTRICAL CONTROLS)	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
ELECTRICIANS LOCAL 223							
For apprentice rates see "Apprentice- ELECTRICIAN"							
HVAC (TESTING AND BALANCING - AIR)	10/1/2025	\$44.05	\$14.91	\$13.35	\$6.15	\$2.24	\$80.70
SHEETMETAL WORKERS LOCAL 17	4/1/2026	\$45.55	\$14.91	\$13.35	\$6.15	\$2.24	\$82.20
SHEETMETAL WORKERS LOCAL 17 - B							
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (TESTING AND BALANCING -WATER)	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							
PLUMBERS & PIPEFITTERS LOCAL 51							
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HVAC MECHANIC	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							
PLUMBERS & PIPEFITTERS LOCAL 51							
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HYDRAULIC DRILLS	12/1/2025	\$41.97	\$10.15	\$9.50	\$9.11	\$0.00	\$70.73

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS	6/1/2026	\$43.41	\$10.15	\$9.50	\$9.11	\$0.00	\$72.17
LABORERS - ZONE 2	12/1/2026	\$44.85	\$10.15	\$9.50	\$9.11	\$0.00	\$73.61
	6/1/2027	\$46.30	\$10.15	\$9.50	\$9.11	\$0.00	\$75.06
	12/1/2027	\$47.75	\$10.15	\$9.50	\$9.11	\$0.00	\$76.51
	6/1/2028	\$49.25	\$10.15	\$9.50	\$9.11	\$0.00	\$78.01
	12/1/2028	\$50.75	\$10.15	\$9.50	\$9.11	\$0.00	\$79.51

For apprentice rates see "Apprentice- LABORER"

HYDRAULIC DRILLS (HEAVY & HIGHWAY)	12/1/2025	\$41.97	\$10.15	\$9.50	\$9.21	\$0.00	\$70.83
LABORERS	6/1/2026	\$43.41	\$10.15	\$9.50	\$9.21	\$0.00	\$72.27
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$44.85	\$10.15	\$9.50	\$9.21	\$0.00	\$73.71

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

INSULATOR (PIPES & TANKS)	9/1/2025	\$54.31	\$14.75	\$9.52	\$10.09	\$0.00	\$88.67
HEAT & FROST INSULATORS LOCAL 6	9/1/2026	\$57.38	\$14.75	\$9.52	\$10.09	\$0.00	\$91.74
HEAT & FROST INSULATORS LOCAL 6 (SOUTHERN MASS)							

Apprentice: INSULATOR (PIPES & TANKS)**Effective Date: 9/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$27.16	\$14.75	\$9.27	\$5.05	\$0.00	\$56.23
2	60.00	\$32.59	\$14.75	\$9.32	\$6.05	\$0.00	\$62.71
3	70.00	\$38.02	\$14.75	\$9.37	\$7.06	\$0.00	\$69.20
4	80.00	\$43.45	\$14.75	\$9.42	\$8.07	\$0.00	\$75.69

Apprentice: INSULATOR (PIPES & TANKS)**Effective Date: 9/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$28.69	\$14.75	\$9.27	\$5.05	\$0.00	\$57.76
2	60.00	\$34.43	\$14.75	\$9.32	\$6.05	\$0.00	\$64.55
3	70.00	\$40.17	\$14.75	\$9.37	\$7.06	\$0.00	\$71.35
4	80.00	\$45.90	\$14.75	\$9.42	\$8.07	\$0.00	\$78.14

Apprentice to Journeyworker Ratio: 1:4

IRONWORKER/WELDER	3/16/2021	\$42.46	\$7.70	\$12.10	\$5.00	\$0.00	\$67.26
IRONWORKERS LOCAL 37							
IRONWORKERS LOCAL 37							

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

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
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
Apprentice to Journeyworker Ratio: 1:4							
JACKHAMMER & PAVING BREAKER OPERATOR	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.11	\$0.00	\$70.23
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.11	\$0.00	\$71.67
LABORERS - ZONE 2	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.11	\$0.00	\$73.11
	6/1/2027	\$45.80	\$10.15	\$9.50	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.25	\$10.15	\$9.50	\$9.11	\$0.00	\$76.01
	6/1/2028	\$48.75	\$10.15	\$9.50	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.25	\$10.15	\$9.50	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
LABORER	12/1/2025	\$41.22	\$10.15	\$9.50	\$9.11	\$0.00	\$69.98
LABORERS	6/1/2026	\$42.66	\$10.15	\$9.50	\$9.11	\$0.00	\$71.42
LABORERS - ZONE 2	12/1/2026	\$44.10	\$10.15	\$9.50	\$9.11	\$0.00	\$72.86
	6/1/2027	\$45.55	\$10.15	\$9.50	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.00	\$10.15	\$9.50	\$9.11	\$0.00	\$75.76
	6/1/2028	\$48.50	\$10.15	\$9.50	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.00	\$10.15	\$9.50	\$9.11	\$0.00	\$78.76
Apprentice: LABORER							
Effective Date: 12/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$25.03	\$10.15	\$9.50	\$9.11	\$0.00	\$53.79
2	70.00	\$29.20	\$10.15	\$9.50	\$9.11	\$0.00	\$57.96
3	80.00	\$33.38	\$10.15	\$9.50	\$9.11	\$0.00	\$62.14
4	90.00	\$37.55	\$10.15	\$9.50	\$9.11	\$0.00	\$66.31
Apprentice: LABORER							
Effective Date: 6/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$25.60	\$10.15	\$9.50	\$9.11	\$0.00	\$54.36
2	70.00	\$29.86	\$10.15	\$9.50	\$9.11	\$0.00	\$58.62
3	80.00	\$34.13	\$10.15	\$9.50	\$9.11	\$0.00	\$62.89
4	90.00	\$38.39	\$10.15	\$9.50	\$9.11	\$0.00	\$67.15
Apprentice to Journeyworker Ratio: 1:5							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORER (HEAVY & HIGHWAY)	12/1/2025	\$41.22	\$10.15	\$9.50	\$9.21	\$0.00	\$70.08
LABORERS	6/1/2026	\$42.66	\$10.15	\$9.50	\$9.21	\$0.00	\$71.52
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$44.10	\$10.15	\$9.50	\$9.21	\$0.00	\$72.96

Apprentice: LABORER (HEAVY & HIGHWAY)**Effective Date: 12/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$25.03	\$10.15	\$9.50	\$9.21	\$0.00	\$53.89
2	70.00	\$29.20	\$10.15	\$9.50	\$9.21	\$0.00	\$58.06
3	80.00	\$33.38	\$10.15	\$9.50	\$9.21	\$0.00	\$62.24
4	90.00	\$37.55	\$10.15	\$9.50	\$9.21	\$0.00	\$66.41

Apprentice: LABORER (HEAVY & HIGHWAY)**Effective Date: 6/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$25.60	\$10.15	\$9.50	\$9.21	\$0.00	\$54.46
2	70.00	\$29.86	\$10.15	\$9.50	\$9.21	\$0.00	\$58.72
3	80.00	\$34.13	\$10.15	\$9.50	\$9.21	\$0.00	\$62.99
4	90.00	\$38.39	\$10.15	\$9.50	\$9.10	\$0.00	\$67.14

Apprentice to Journeyworker Ratio: 1:5

LABORER: CARPENTER TENDER	12/1/2025	\$41.22	\$10.15	\$9.50	\$9.11	\$0.00	\$69.98
LABORERS	6/1/2026	\$42.66	\$10.15	\$9.50	\$9.11	\$0.00	\$71.42
LABORERS - ZONE 2	12/1/2026	\$44.10	\$10.15	\$9.50	\$9.11	\$0.00	\$72.86
	6/1/2027	\$45.55	\$10.15	\$9.50	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.00	\$10.15	\$9.50	\$9.11	\$0.00	\$75.76
	6/1/2028	\$48.50	\$10.15	\$9.50	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.00	\$10.15	\$9.50	\$9.11	\$0.00	\$78.76

For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER	12/1/2025	\$41.22	\$10.15	\$9.50	\$9.11	\$0.00	\$69.98
LABORERS	6/1/2026	\$42.66	\$10.15	\$9.50	\$9.11	\$0.00	\$71.42
LABORERS - ZONE 2	12/1/2026	\$44.10	\$10.15	\$9.50	\$9.11	\$0.00	\$72.86
	6/1/2027	\$45.55	\$10.15	\$9.50	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.00	\$10.15	\$9.50	\$9.11	\$0.00	\$75.76
	6/1/2028	\$48.50	\$10.15	\$9.50	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.00	\$10.15	\$9.50	\$9.11	\$0.00	\$78.76

For apprentice rates see "Apprentice- LABORER"

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER	12/1/2025	\$41.31	\$10.15	\$9.50	\$9.65	\$0.00	\$70.61
LABORERS	6/1/2026	\$42.75	\$10.15	\$9.50	\$9.65	\$0.00	\$72.05
LABORERS - ZONE 2	12/7/2026	\$44.19	\$10.15	\$9.50	\$9.65	\$0.00	\$73.49
	6/7/2027	\$45.64	\$10.15	\$9.50	\$9.65	\$0.00	\$74.94
	12/6/2027	\$47.09	\$10.15	\$9.50	\$9.65	\$0.00	\$76.39
	6/5/2028	\$48.59	\$10.15	\$9.50	\$9.65	\$0.00	\$77.89

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/4/2028	\$50.09	\$10.15	\$9.50	\$9.65	\$0.00	\$79.39
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.11	\$0.00	\$70.23
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.11	\$0.00	\$71.67
LABORERS - ZONE 2	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.11	\$0.00	\$73.11
	6/1/2027	\$45.80	\$10.15	\$9.50	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.25	\$10.15	\$9.50	\$9.11	\$0.00	\$76.01
	6/1/2028	\$48.75	\$10.15	\$9.50	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.25	\$10.15	\$9.50	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER (HEAVY & HIGHWAY)	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.21	\$0.00	\$70.33
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.21	\$0.00	\$71.77
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
LABORER: MULTI-TRADE TENDER	12/1/2025	\$41.22	\$10.15	\$9.50	\$9.11	\$0.00	\$69.98
LABORERS	6/1/2026	\$42.66	\$10.15	\$9.50	\$9.11	\$0.00	\$71.42
LABORERS - ZONE 2	12/1/2026	\$44.10	\$10.15	\$9.50	\$9.11	\$0.00	\$72.86
	6/1/2027	\$45.55	\$10.15	\$9.50	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.00	\$10.15	\$9.50	\$9.11	\$0.00	\$75.76
	6/1/2028	\$48.50	\$10.15	\$9.50	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.00	\$10.15	\$9.50	\$9.11	\$0.00	\$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: TREE REMOVER	12/1/2025	\$41.22	\$10.15	\$9.50	\$9.11	\$0.00	\$69.98
LABORERS	6/1/2026	\$42.66	\$10.15	\$9.50	\$9.11	\$0.00	\$71.42
LABORERS - ZONE 2	12/1/2026	\$44.10	\$10.15	\$9.50	\$9.11	\$0.00	\$72.86
	6/1/2027	\$45.55	\$10.15	\$9.50	\$9.11	\$0.00	\$74.31
	12/1/2027	\$47.00	\$10.15	\$9.50	\$9.11	\$0.00	\$75.76
	6/1/2028	\$48.50	\$10.15	\$9.50	\$9.11	\$0.00	\$77.26
	12/1/2028	\$50.00	\$10.15	\$9.50	\$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"							
LASER BEAM OPERATOR	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.11	\$0.00	\$70.23
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.11	\$0.00	\$71.67
LABORERS - ZONE 2	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.11	\$0.00	\$73.11
	6/1/2027	\$45.80	\$10.15	\$9.50	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.25	\$10.15	\$9.50	\$9.11	\$0.00	\$76.01
	6/1/2028	\$48.75	\$10.15	\$9.50	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.25	\$10.15	\$9.50	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR (HEAVY & HIGHWAY)	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.21	\$0.00	\$70.33
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.21	\$0.00	\$71.77
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
MARBLE & TILE FINISHERS	8/1/2025	\$52.08	\$11.49	\$15.57	\$6.05	\$0.00	\$85.19

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BRICKLAYERS LOCAL 3	2/1/2026	\$53.16	\$11.49	\$15.57	\$6.05	\$0.00	\$86.27
BRICKLAYERS LOCAL 3 - MARBLE & TILE	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: 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

Apprentice: MARBLE & TILE FINISHERS**Effective Date: 2/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$26.58	\$11.49	\$15.57	\$6.05	\$0.00	\$59.69
2	60.00	\$31.90	\$11.49	\$15.57	\$6.05	\$0.00	\$65.01
3	70.00	\$37.21	\$11.49	\$15.57	\$6.05	\$0.00	\$70.32
4	80.00	\$42.53	\$11.49	\$15.57	\$6.05	\$0.00	\$75.64
5	90.00	\$47.84	\$11.49	\$15.57	\$6.05	\$0.00	\$80.95

Apprentice to Journeyworker Ratio: 1:5

MARBLE MASONS,TILELAYERS & TERRAZZO MECH	8/1/2025	\$67.97	\$11.49	\$15.57	\$7.99	\$0.00	\$103.02
BRICKLAYERS LOCAL 3	2/1/2026	\$69.32	\$11.49	\$15.57	\$7.99	\$0.00	\$104.37
BRICKLAYERS LOCAL 3 - MARBLE & TILE	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

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

Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH**Effective Date: 2/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: MARBLE MASONS, TILELAYERS & TERRAZZO MECH							
Effective Date: 2/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$34.66	\$11.49	\$15.57	\$7.99	\$0.00	\$69.71
2	60.00	\$41.59	\$11.49	\$15.57	\$7.99	\$0.00	\$76.64
3	70.00	\$48.52	\$11.49	\$15.57	\$7.99	\$0.00	\$83.57
4	80.00	\$55.46	\$11.49	\$15.57	\$7.99	\$0.00	\$90.51
5	90.00	\$62.39	\$11.49	\$15.57	\$7.99	\$0.00	\$97.44
Apprentice to Journeyworker Ratio: 1:5							
MECH. SWEEPER OPERATOR (ON CONST. SITES)	12/1/2025	\$58.62	\$16.05	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$59.90	\$16.05	\$13.25	\$3.25	\$0.00	\$92.45
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$61.34	\$16.05	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MECHANICS MAINTENANCE	12/1/2025	\$58.62	\$16.05	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$59.90	\$16.05	\$13.25	\$3.25	\$0.00	\$92.45
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$61.34	\$16.05	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MILLWRIGHT (Zone 2)	1/6/2025	\$45.03	\$10.08	\$11.47	\$10.00	\$0.00	\$76.58
MILLWRIGHTS LOCAL 1121	1/5/2026	\$47.36	\$10.08	\$11.47	\$10.00	\$0.00	\$78.91
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	\$24.77	\$10.08	\$0.00	\$5.50	\$0.00	\$40.35
2	65.00	\$29.27	\$10.08	\$0.00	\$6.50	\$0.00	\$45.85
3	75.00	\$33.77	\$10.08	\$11.47	\$7.50	\$0.00	\$62.82
4	85.00	\$38.28	\$10.08	\$11.47	\$8.50	\$0.00	\$68.33

Apprentice: MILLWRIGHT (Zone 2)**Effective Date: 1/5/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$26.05	\$10.08	\$0.00	\$5.50	\$0.00	\$41.63
2	65.00	\$30.78	\$10.08	\$0.00	\$6.50	\$0.00	\$47.36
3	75.00	\$35.52	\$10.08	\$11.47	\$7.50	\$0.00	\$64.57
4	85.00	\$40.26	\$10.08	\$11.47	\$8.50	\$0.00	\$70.31

Apprentice Notes

Step 1&2 Appr. indentured after 1/6/2020 receive no pension,

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice to Journeyworker Ratio: 1:4							
MORTAR MIXER	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.11	\$0.00	\$70.23
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.11	\$0.00	\$71.67
LABORERS - ZONE 2	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.11	\$0.00	\$73.11
	6/1/2027	\$45.80	\$10.15	\$9.50	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.25	\$10.15	\$9.50	\$9.11	\$0.00	\$76.01
	6/1/2028	\$48.75	\$10.15	\$9.50	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.25	\$10.15	\$9.50	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
OILER (OTHER THAN TRUCK CRANES,GRADALLS)	12/1/2025	\$25.68	\$16.05	\$13.25	\$3.25	\$0.00	\$58.23
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$26.27	\$16.05	\$13.25	\$3.25	\$0.00	\$58.82
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$26.94	\$16.05	\$13.25	\$3.25	\$0.00	\$59.49
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OILER (TRUCK CRANES, GRADALLS)	12/1/2025	\$31.65	\$16.05	\$13.25	\$3.25	\$0.00	\$64.20
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$32.37	\$16.05	\$13.25	\$3.25	\$0.00	\$64.92
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$33.17	\$16.05	\$13.25	\$3.25	\$0.00	\$65.72
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OTHER POWER DRIVEN EQUIPMENT - CLASS II	12/1/2025	\$58.62	\$16.05	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$59.90	\$16.05	\$13.25	\$3.25	\$0.00	\$92.45
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$61.34	\$16.05	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PAINTER (BRIDGES/TANKS)	7/1/2025	\$58.51	\$10.30	\$11.95	\$12.50	\$0.00	\$93.26
PAINTERS LOCAL 35	1/1/2026	\$59.56	\$10.35	\$12.00	\$12.50	\$0.00	\$94.41
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: PAINTER (BRIDGES/TANKS)**Effective Date: 7/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$29.26	\$10.30	\$0.00	\$0.00	\$0.00	\$39.56
2	55.00	\$32.18	\$10.30	\$0.00	\$6.88	\$0.00	\$49.36
3	60.00	\$35.11	\$10.30	\$0.00	\$7.50	\$0.00	\$52.91
4	65.00	\$38.03	\$10.30	\$0.00	\$8.13	\$0.00	\$56.46
5	70.00	\$40.96	\$10.30	\$11.95	\$8.75	\$0.00	\$71.96
6	75.00	\$43.88	\$10.30	\$11.95	\$9.38	\$0.00	\$75.51
7	80.00	\$46.81	\$10.30	\$11.95	\$10.00	\$0.00	\$79.06
8	90.00	\$52.66	\$10.30	\$11.95	\$11.25	\$0.00	\$86.16

Apprentice: PAINTER (BRIDGES/TANKS)**Effective Date: 1/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PAINTER (BRIDGES/TANKS)							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$29.78	\$10.35	\$0.00	\$0.00	\$0.00	\$40.13
2	55.00	\$32.76	\$10.35	\$0.00	\$6.93	\$0.00	\$50.04
3	60.00	\$35.74	\$10.35	\$0.00	\$7.56	\$0.00	\$53.65
4	65.00	\$38.71	\$10.35	\$0.00	\$8.19	\$0.00	\$57.25
5	70.00	\$41.69	\$10.35	\$12.00	\$8.82	\$0.00	\$72.86
6	75.00	\$44.67	\$10.35	\$12.00	\$9.45	\$0.00	\$76.47
7	80.00	\$47.65	\$10.35	\$12.00	\$10.08	\$0.00	\$80.08
8	90.00	\$53.60	\$10.35	\$12.00	\$11.34	\$0.00	\$87.29

Apprentice to Journeyworker Ratio: 1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	7/1/2025	\$49.41	\$10.30	\$11.95	\$12.50	\$0.00	\$84.16
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.	1/1/2026	\$50.46	\$10.35	\$12.00	\$12.60	\$0.00	\$85.41
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) *							
Effective Date: 7/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.71	\$10.30	\$0.00	\$0.00	\$0.00	\$35.01
2	55.00	\$27.18	\$10.30	\$0.00	\$6.88	\$0.00	\$44.36
3	60.00	\$29.65	\$10.30	\$0.00	\$7.50	\$0.00	\$47.45
4	65.00	\$32.12	\$10.30	\$0.00	\$8.13	\$0.00	\$50.55
5	70.00	\$34.59	\$10.30	\$11.95	\$8.75	\$0.00	\$65.59
6	75.00	\$37.06	\$10.30	\$11.95	\$9.38	\$0.00	\$68.69
7	80.00	\$39.53	\$10.30	\$11.95	\$10.00	\$0.00	\$71.78
8	90.00	\$44.47	\$10.30	\$11.95	\$11.25	\$0.00	\$77.97

Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) *							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$25.23	\$10.35	\$0.00	\$0.00	\$0.00	\$35.58
2	55.00	\$27.75	\$10.35	\$0.00	\$6.93	\$0.00	\$45.03
3	60.00	\$30.28	\$10.35	\$0.00	\$7.56	\$0.00	\$48.19
4	65.00	\$32.80	\$10.35	\$0.00	\$8.19	\$0.00	\$51.34
5	70.00	\$35.32	\$10.35	\$12.00	\$8.82	\$0.00	\$66.49
6	75.00	\$37.85	\$10.35	\$12.00	\$9.45	\$0.00	\$69.65
7	80.00	\$40.37	\$10.35	\$12.00	\$10.08	\$0.00	\$72.80
8	90.00	\$45.41	\$10.35	\$12.00	\$11.34	\$0.00	\$79.10

Apprentice to Journeyworker Ratio: 1:1

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PAINTER (SPRAY OR SANDBLAST, REPAINT)	7/1/2025	\$47.47	\$10.30	\$11.95	\$12.50	\$0.00	\$82.22
PAINTERS LOCAL 35	1/1/2026	\$48.52	\$10.35	\$12.00	\$12.60	\$0.00	\$83.47
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT)

Effective Date: 7/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$23.74	\$10.30	\$0.00	\$0.00	\$0.00	\$34.04
2	55.00	\$26.11	\$10.30	\$0.00	\$6.88	\$0.00	\$43.29
3	60.00	\$28.48	\$10.30	\$0.00	\$7.50	\$0.00	\$46.28
4	65.00	\$30.86	\$10.30	\$0.00	\$8.13	\$0.00	\$49.29
5	70.00	\$33.23	\$10.30	\$11.95	\$8.75	\$0.00	\$64.23
6	75.00	\$35.60	\$10.30	\$11.95	\$9.38	\$0.00	\$67.23
7	80.00	\$37.98	\$10.30	\$11.95	\$10.00	\$0.00	\$70.23
8	90.00	\$42.72	\$10.30	\$11.95	\$11.25	\$0.00	\$76.22

Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT)

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.26	\$10.35	\$0.00	\$0.00	\$0.00	\$34.61
2	55.00	\$26.69	\$10.35	\$0.00	\$6.93	\$0.00	\$43.97
3	60.00	\$29.11	\$10.35	\$0.00	\$7.56	\$0.00	\$47.02
4	65.00	\$31.54	\$10.35	\$0.00	\$8.19	\$0.00	\$50.08
5	70.00	\$33.96	\$10.35	\$12.00	\$8.82	\$0.00	\$65.13
6	75.00	\$36.39	\$10.35	\$12.00	\$9.45	\$0.00	\$68.19
7	80.00	\$38.82	\$10.35	\$12.00	\$10.08	\$0.00	\$71.25
8	90.00	\$43.67	\$10.35	\$12.00	\$11.34	\$0.00	\$77.36

Apprentice to Journeyworker Ratio: 1:1

PAINTER / TAPER (BRUSH, NEW) *	7/1/2025	\$48.01	\$10.30	\$11.95	\$12.50	\$0.00	\$82.76
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.	1/1/2026	\$49.06	\$10.35	\$12.00	\$12.60	\$0.00	\$84.01
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: PAINTER / TAPER (BRUSH, NEW) *

Effective Date: 7/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.01	\$10.30	\$0.00	\$0.00	\$0.00	\$34.31
2	55.00	\$26.41	\$10.30	\$0.00	\$6.88	\$0.00	\$43.59
3	60.00	\$28.81	\$10.30	\$0.00	\$7.50	\$0.00	\$46.61
4	65.00	\$31.21	\$10.30	\$0.00	\$8.13	\$0.00	\$49.64
5	70.00	\$33.61	\$10.30	\$11.95	\$8.75	\$0.00	\$64.61
6	75.00	\$36.01	\$10.30	\$11.95	\$9.38	\$0.00	\$67.64

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PAINTER / TAPER (BRUSH, NEW) *							
Effective Date: 7/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
7	80.00	\$38.41	\$10.30	\$11.95	\$10.00	\$0.00	\$70.66
8	90.00	\$43.21	\$10.30	\$11.95	\$11.25	\$0.00	\$76.71
Apprentice: PAINTER / TAPER (BRUSH, NEW) *							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.53	\$10.35	\$0.00	\$0.00	\$0.00	\$34.88
2	55.00	\$26.98	\$10.35	\$0.00	\$6.93	\$0.00	\$44.26
3	60.00	\$29.44	\$10.35	\$0.00	\$7.56	\$0.00	\$47.35
4	65.00	\$31.89	\$10.35	\$0.00	\$8.19	\$0.00	\$50.43
5	70.00	\$34.34	\$10.35	\$12.00	\$8.82	\$0.00	\$65.51
6	75.00	\$36.80	\$10.35	\$12.00	\$9.45	\$0.00	\$68.60
7	80.00	\$39.25	\$10.35	\$12.00	\$10.08	\$0.00	\$71.68
8	90.00	\$44.15	\$10.35	\$12.00	\$11.34	\$0.00	\$77.84
Apprentice to Journeyworker Ratio: 1:1							
PAINTER / TAPER (BRUSH, REPAINT)	7/1/2025	\$46.07	\$10.30	\$11.95	\$12.50	\$0.00	\$80.82
PAINTERS LOCAL 35	1/1/2026	\$47.12	\$10.35	\$12.00	\$12.60	\$0.00	\$82.07
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: PAINTER / TAPER (BRUSH, REPAINT)**Effective Date: 7/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$23.04	\$10.30	\$0.00	\$0.00	\$0.00	\$33.34
2	55.00	\$25.34	\$10.30	\$0.00	\$6.88	\$0.00	\$42.52
3	60.00	\$27.64	\$10.30	\$0.00	\$7.50	\$0.00	\$45.44
4	65.00	\$29.95	\$10.30	\$0.00	\$8.13	\$0.00	\$48.38
5	70.00	\$32.25	\$10.30	\$11.95	\$8.75	\$0.00	\$63.25
6	75.00	\$34.55	\$10.30	\$11.95	\$9.38	\$0.00	\$66.18
7	80.00	\$36.86	\$10.30	\$11.95	\$10.00	\$0.00	\$69.11
8	90.00	\$41.46	\$10.30	\$11.95	\$11.25	\$0.00	\$74.96

Apprentice: PAINTER / TAPER (BRUSH, REPAINT)**Effective Date: 1/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$23.56	\$10.35	\$0.00	\$0.00	\$0.00	\$33.91
2	55.00	\$25.92	\$10.35	\$0.00	\$6.93	\$0.00	\$43.20

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PAINTER / TAPER (BRUSH, REPAINT)							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
3	60.00	\$28.27	\$10.35	\$0.00	\$7.56	\$0.00	\$46.18
4	65.00	\$30.63	\$10.35	\$0.00	\$8.19	\$0.00	\$49.17
5	70.00	\$32.98	\$10.35	\$12.00	\$8.82	\$0.00	\$64.15
6	75.00	\$35.34	\$10.35	\$12.00	\$9.45	\$0.00	\$67.14
7	80.00	\$37.70	\$10.35	\$12.00	\$10.08	\$0.00	\$70.13
8	90.00	\$42.41	\$10.35	\$12.00	\$11.34	\$0.00	\$76.10
Apprentice to Journeyworker Ratio: 1:1							
PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)	12/1/2025	\$41.22	\$10.15	\$9.50	\$9.21	\$0.00	\$70.08
LABORERS	6/1/2026	\$42.66	\$10.15	\$9.50	\$9.21	\$0.00	\$71.52
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$44.10	\$10.15	\$9.50	\$9.21	\$0.00	\$72.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
PANEL & PICKUP TRUCKS DRIVER	12/1/2025	\$40.78	\$15.57	\$21.78	\$0.00	\$0.00	\$78.13
TEAMSTERS JOINT COUNCIL NO. 10	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
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
Apprentice to Journeyworker Ratio: 1:5							
PIPELAYER	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.11	\$0.00	\$70.23
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.11	\$0.00	\$71.67
LABORERS - ZONE 2	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.11	\$0.00	\$73.11
	6/1/2027	\$45.80	\$10.15	\$9.50	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.25	\$10.15	\$9.50	\$9.11	\$0.00	\$76.01

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/1/2028	\$48.75	\$10.15	\$9.50	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.25	\$10.15	\$9.50	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

PIPELAYER (HEAVY & HIGHWAY)	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.21	\$0.00	\$70.33
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.21	\$0.00	\$71.77
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.21	\$0.00	\$73.21

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

PLUMBER & PIPEFITTER	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							
PLUMBERS & PIPEFITTERS LOCAL 51							

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

Apprentice to Journeyworker Ratio: 1:3

PNEUMATIC CONTROLS (TEMP.)	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							
PLUMBERS & PIPEFITTERS LOCAL 51							

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

PNEUMATIC DRILL/TOOL OPERATOR	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.11	\$0.00	\$70.23
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.11	\$0.00	\$71.67
LABORERS - ZONE 2	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.11	\$0.00	\$73.11
	6/1/2027	\$45.80	\$10.15	\$9.50	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.25	\$10.15	\$9.50	\$9.11	\$0.00	\$76.01
	6/1/2028	\$48.75	\$10.15	\$9.50	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.25	\$10.15	\$9.50	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY)	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.21	\$0.00	\$70.33
LABORERS	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.21	\$0.00	\$71.77
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.21	\$0.00	\$73.21

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

POWDERMAN & BLASTER	12/1/2025	\$42.22	\$10.15	\$9.50	\$9.11	\$0.00	\$70.98
LABORERS	6/1/2026	\$43.66	\$10.15	\$9.50	\$9.11	\$0.00	\$72.42
LABORERS - ZONE 2	12/1/2026	\$45.10	\$10.15	\$9.50	\$9.11	\$0.00	\$73.86
	6/1/2027	\$46.55	\$10.15	\$9.50	\$9.11	\$0.00	\$75.31
	12/1/2027	\$48.00	\$10.15	\$9.50	\$9.11	\$0.00	\$76.76
	6/1/2028	\$49.50	\$10.15	\$9.50	\$9.11	\$0.00	\$78.26

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2028	\$51.00	\$10.15	\$9.50	\$9.11	\$0.00	\$79.76
For apprentice rates see "Apprentice- LABORER"							
POWDERMAN & BLASTER (HEAVY & HIGHWAY) LABORERS	12/1/2025	\$42.22	\$9.90	\$9.50	\$9.21	\$0.00	\$70.83
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$43.66	\$9.90	\$9.50	\$9.21	\$0.00	\$72.27
	12/1/2026	\$45.10	\$9.90	\$9.50	\$9.21	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
POWER SHOVEL/DERRICK/TRENCHING MACHINE OPERATING ENGINEERS LOCAL 4	12/1/2025	\$59.28	\$16.05	\$13.25	\$3.25	\$0.00	\$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.58	\$16.05	\$13.25	\$3.25	\$0.00	\$93.13
	12/1/2026	\$62.03	\$16.05	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (CONCRETE) OPERATING ENGINEERS LOCAL 4	12/1/2025	\$58.62	\$16.05	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$59.90	\$16.05	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.34	\$16.05	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (DEWATERING, OTHER) OPERATING ENGINEERS LOCAL 4	12/1/2025	\$37.97	\$16.05	\$13.25	\$3.25	\$0.00	\$70.52
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$38.83	\$16.05	\$13.25	\$3.25	\$0.00	\$71.38
	12/1/2026	\$39.78	\$16.05	\$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 OPERATING ENGINEERS LOCAL 4	12/1/2025	\$58.62	\$16.05	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$59.90	\$16.05	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.34	\$16.05	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
RIDE-ON MOTORIZED BUGGY OPERATOR LABORERS	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.11	\$0.00	\$70.23
LABORERS - ZONE 2	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.11	\$0.00	\$73.11
	6/1/2027	\$45.80	\$10.15	\$9.50	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.25	\$10.15	\$9.50	\$9.11	\$0.00	\$76.01
	6/1/2028	\$48.75	\$10.15	\$9.50	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.25	\$10.15	\$9.50	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
ROLLER/SPREADER/MULCHING MACHINE OPERATING ENGINEERS LOCAL 4	12/1/2025	\$58.62	\$16.05	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$59.90	\$16.05	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.34	\$16.05	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
ROOFER (Inc.Roofer Waterproofing &Roofer Damproofg) 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: 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
Apprentice: ROOFER (Inc.Roofers Waterproofing &Roofers Damproofg)							
Effective Date: 2/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$27.39	\$13.28	\$6.52	\$9.03	\$0.00	\$56.22
2	60.00	\$32.87	\$13.28	\$12.67	\$9.03	\$0.00	\$67.85
3	65.00	\$35.61	\$13.28	\$12.67	\$9.03	\$0.00	\$70.59
4	75.00	\$41.09	\$13.28	\$12.67	\$9.03	\$0.00	\$76.07
5	85.00	\$46.56	\$13.28	\$12.67	\$9.03	\$0.00	\$81.54
Apprentice Notes							
** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1							
Apprentice to Journeyworker Ratio: 1:5							
ROOFER SLATE / TILE / PRECAST CONCRETE	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	10/1/2025	\$44.05	\$14.91	\$13.35	\$6.15	\$2.24	\$80.70
SHEETMETAL WORKERS LOCAL 17	4/1/2026	\$45.55	\$14.91	\$13.35	\$6.15	\$2.24	\$82.20
SHEETMETAL WORKERS LOCAL 17 - B							

Apprentice: SHEETMETAL WORKER							
Effective Date: 10/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$17.62	\$14.91	\$4.27	\$0.00	\$1.09	\$37.89
2	45.00	\$19.82	\$14.91	\$4.80	\$0.00	\$1.17	\$40.70
3	50.00	\$22.03	\$14.91	\$12.28	\$0.00	\$1.45	\$50.67
4	55.00	\$24.23	\$14.91	\$12.28	\$0.00	\$1.52	\$52.94
5	60.00	\$26.43	\$14.91	\$12.28	\$3.69	\$1.64	\$58.95
6	65.00	\$28.63	\$14.91	\$12.28	\$4.00	\$1.71	\$61.53
7	70.00	\$30.84	\$14.91	\$12.28	\$4.31	\$1.78	\$64.12
8	75.00	\$33.04	\$14.91	\$12.28	\$4.61	\$1.86	\$66.70

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
9	80.00	\$35.24	\$14.91	\$12.28	\$4.92	\$1.93	\$69.28
10	85.00	\$37.44	\$14.91	\$12.28	\$5.23	\$2.00	\$71.86
Apprentice: SHEETMETAL WORKER							
Effective Date: 4/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$18.22	\$14.91	\$4.27	\$0.00	\$1.09	\$38.49
2	45.00	\$20.50	\$14.91	\$4.80	\$0.00	\$1.17	\$41.38
3	50.00	\$22.78	\$14.91	\$12.28	\$0.00	\$1.45	\$51.42
4	55.00	\$25.05	\$14.91	\$12.28	\$0.00	\$1.52	\$53.76
5	60.00	\$27.33	\$14.91	\$12.28	\$3.69	\$1.64	\$59.85
6	65.00	\$29.61	\$14.91	\$12.28	\$4.00	\$1.71	\$62.51
7	70.00	\$31.89	\$14.91	\$12.28	\$4.31	\$1.78	\$65.17
8	75.00	\$34.16	\$14.91	\$12.28	\$4.61	\$1.86	\$67.82
9	80.00	\$36.44	\$14.91	\$12.28	\$4.92	\$1.93	\$70.48
10	85.00	\$38.72	\$14.91	\$12.28	\$5.23	\$2.00	\$73.14
Apprentice to Journeyworker Ratio: 1:4							
SPECIALIZED EARTH MOVING EQUIP < 35 TONS	12/1/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$0.00	\$78.59
TEAMSTERS JOINT COUNCIL NO. 10	1/1/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$0.00	\$79.19
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	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	12/1/2025	\$41.53	\$15.57	\$21.78	\$0.00	\$0.00	\$78.88
TEAMSTERS JOINT COUNCIL NO. 10	1/1/2026	\$41.53	\$16.17	\$21.78	\$0.00	\$0.00	\$79.48
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	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	10/1/2025	\$64.85	\$12.25	\$7.40	\$19.50	\$0.00	\$104.00
SPRINKLER FITTERS LOCAL 550	1/1/2026	\$64.85	\$13.45	\$7.45	\$18.25	\$0.00	\$104.00
SPRINKLER FITTERS LOCAL 550 - (Section B) Zone 2							
Apprentice: SPRINKLER FITTER							
Effective Date: 10/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	35.00	\$22.70	\$12.25	\$14.22	\$0.00	\$0.00	\$49.17
2	0.00	\$25.94	\$12.25	\$15.20	\$0.00	\$0.00	\$53.39
3	0.00	\$29.18	\$12.25	\$16.18	\$0.00	\$0.00	\$57.61

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: SPRINKLER FITTER							
Effective Date: 10/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
4	0.00	\$32.43	\$12.25	\$17.15	\$0.00	\$0.00	\$61.83
5	0.00	\$35.67	\$12.25	\$18.12	\$0.00	\$0.00	\$66.04
6	0.00	\$38.91	\$12.25	\$19.10	\$0.00	\$0.00	\$70.26
7	65.00	\$42.15	\$12.25	\$20.08	\$0.00	\$0.00	\$74.48
8	0.00	\$45.40	\$12.25	\$21.05	\$0.00	\$0.00	\$78.70
9	0.00	\$48.64	\$12.25	\$22.02	\$0.00	\$0.00	\$82.91
10	0.00	\$51.88	\$12.25	\$23.00	\$0.00	\$0.00	\$87.13
Apprentice: SPRINKLER FITTER							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	\$22.70	\$13.45	\$13.84	\$0.00	\$0.00	\$49.99
2	0.00	\$25.94	\$13.45	\$14.75	\$0.00	\$0.00	\$54.14
3	0.00	\$29.18	\$13.45	\$15.67	\$0.00	\$0.00	\$58.30
4	0.00	\$32.43	\$13.45	\$16.57	\$0.00	\$0.00	\$62.45
5	0.00	\$35.67	\$13.45	\$17.49	\$0.00	\$0.00	\$66.61
6	0.00	\$38.91	\$13.45	\$18.40	\$0.00	\$0.00	\$70.76
7	0.00	\$42.15	\$13.45	\$19.32	\$0.00	\$0.00	\$74.92
8	0.00	\$45.40	\$13.45	\$20.22	\$0.00	\$0.00	\$79.07
9	0.00	\$48.64	\$13.45	\$21.15	\$0.00	\$0.00	\$83.24
10	0.00	\$51.88	\$13.45	\$22.05	\$0.00	\$0.00	\$87.38
Apprentice Notes							
Apprentice entered prior 9/30/10:							
Apprentice to Journeyworker Ratio: 1:3							
STEAM BOILER OPERATOR	12/1/2025	\$58.62	\$16.05	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$59.90	\$16.05	\$13.25	\$3.25	\$0.00	\$92.45
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$61.34	\$16.05	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN	12/1/2025	\$58.62	\$16.05	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$59.90	\$16.05	\$13.25	\$3.25	\$0.00	\$92.45
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$61.34	\$16.05	\$13.25	\$3.25	\$0.00	\$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TELECOMMUNICATION TECHNICIAN	9/1/2025	\$42.52	\$12.00	\$12.05	\$3.25	\$0.00	\$69.82
TELECOMMUNICATION TECHNICIAN	9/1/2026	\$44.41	\$12.25	\$12.59	\$3.50	\$0.00	\$72.75
ELECTRICIANS LOCAL 223	9/1/2027	\$46.51	\$12.50	\$13.18	\$3.75	\$0.00	\$75.94
ELECTRICIANS LOCAL 223							
For apprentice rates and ratios see "Apprentice- ELECTRICIAN"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
TERRAZZO FINISHERS	8/1/2025	\$66.89	\$11.49	\$15.57	\$8.02	\$0.00	\$101.97
BRICKLAYERS LOCAL 3	2/1/2026	\$68.24	\$11.49	\$15.57	\$8.02	\$0.00	\$103.32
BRICKLAYERS LOCAL 3 - MARBLE & TILE	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: 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
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

Apprentice: TERRAZZO FINISHERS**Effective Date: 2/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$34.12	\$11.49	\$15.57	\$8.02	\$0.00	\$69.20
2	60.00	\$40.94	\$11.49	\$15.57	\$8.02	\$0.00	\$76.02
3	70.00	\$47.77	\$11.49	\$15.57	\$8.02	\$0.00	\$82.85
4	80.00	\$54.59	\$11.49	\$15.57	\$8.02	\$0.00	\$89.67
5	90.00	\$61.42	\$11.49	\$15.57	\$8.02	\$0.00	\$96.50

Apprentice to Journeyworker Ratio: 1:5

TEST BORING DRILLER LABORERS	12/1/2025	\$52.70	\$10.15	\$9.50	\$9.80	\$0.00	\$82.15
LABORERS - FOUNDATION AND MARINE	6/1/2026	\$54.25	\$10.15	\$9.50	\$9.80	\$0.00	\$83.70
	12/1/2026	\$55.75	\$10.15	\$9.50	\$9.80	\$0.00	\$85.20

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER LABORERS	12/1/2025	\$48.82	\$10.15	\$9.50	\$9.80	\$0.00	\$78.27
LABORERS - FOUNDATION AND MARINE	6/1/2026	\$50.37	\$10.15	\$9.50	\$9.80	\$0.00	\$79.82
	12/1/2026	\$51.87	\$10.15	\$9.50	\$9.80	\$0.00	\$81.32

For apprentice rates see "Apprentice- LABORER"

TEST BORING LABORER LABORERS	12/1/2025	\$48.70	\$10.15	\$9.50	\$9.80	\$0.00	\$78.15
LABORERS - FOUNDATION AND MARINE	6/1/2026	\$50.25	\$10.15	\$9.50	\$9.80	\$0.00	\$79.70
	12/1/2026	\$51.75	\$10.15	\$9.50	\$9.80	\$0.00	\$81.20

For apprentice rates see "Apprentice- LABORER"

TRACTORS/PORTABLE STEAM GENERATORS OPERATING ENGINEERS LOCAL 4	12/1/2025	\$58.62	\$16.05	\$13.25	\$3.25	\$0.00	\$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$59.90	\$16.05	\$13.25	\$3.25	\$0.00	\$92.45
	12/1/2026	\$61.34	\$16.05	\$13.25	\$3.25	\$0.00	\$93.89

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TRAILERS FOR EARTH MOVING EQUIPMENT	12/1/2025	\$41.82	\$15.57	\$21.78	\$0.00	\$0.00	\$79.17
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Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
TEAMSTERS JOINT COUNCIL NO. 10	1/1/2026	\$41.82	\$16.17	\$21.78	\$0.00	\$0.00	\$79.77
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	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
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TUNNEL WORK - COMPRESSED AIR LABORERS	12/1/2025	\$60.93	\$10.15	\$9.50	\$10.25	\$0.00	\$90.83
LABORERS (COMPRESSED AIR)	6/1/2026	\$62.48	\$10.15	\$9.50	\$10.25	\$0.00	\$92.38
	12/1/2026	\$63.98	\$10.15	\$9.50	\$10.25	\$0.00	\$93.88
For apprentice rates see "Apprentice- LABORER"							
<hr/>							
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) LABORERS	12/1/2025	\$62.93	\$10.15	\$9.50	\$10.25	\$0.00	\$92.83
LABORERS (COMPRESSED AIR)	6/1/2026	\$64.48	\$10.15	\$9.50	\$10.25	\$0.00	\$94.38
	12/1/2026	\$65.98	\$10.15	\$9.50	\$10.25	\$0.00	\$95.88
For apprentice rates see "Apprentice- LABORER"							
<hr/>							
TUNNEL WORK - FREE AIR LABORERS	12/1/2025	\$53.00	\$10.15	\$9.50	\$10.25	\$0.00	\$82.90
LABORERS (FREE AIR TUNNEL)	6/1/2026	\$54.55	\$10.15	\$9.50	\$10.25	\$0.00	\$84.45
	12/1/2026	\$56.05	\$10.15	\$9.50	\$10.25	\$0.00	\$85.95
For apprentice rates see "Apprentice- LABORER"							
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TUNNEL WORK - FREE AIR (HAZ. WASTE) LABORERS	12/1/2025	\$55.00	\$10.15	\$9.50	\$10.25	\$0.00	\$84.90
LABORERS (FREE AIR TUNNEL)	6/1/2026	\$56.55	\$10.15	\$9.50	\$10.25	\$0.00	\$86.45
	12/1/2026	\$58.05	\$10.15	\$9.50	\$10.25	\$0.00	\$87.95
For apprentice rates see "Apprentice- LABORER"							
<hr/>							
VAC-HAUL	12/1/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$0.00	\$78.59
TEAMSTERS JOINT COUNCIL NO. 10	1/1/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$0.00	\$79.19
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	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
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WAGON DRILL OPERATOR LABORERS	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.11	\$0.00	\$70.23
LABORERS - ZONE 2	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.11	\$0.00	\$71.67
	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.11	\$0.00	\$73.11
	6/1/2027	\$45.80	\$10.15	\$9.50	\$9.11	\$0.00	\$74.56
	12/1/2027	\$47.25	\$10.15	\$9.50	\$9.11	\$0.00	\$76.01
	6/1/2028	\$48.75	\$10.15	\$9.50	\$9.11	\$0.00	\$77.51
	12/1/2028	\$50.25	\$10.15	\$9.50	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
<hr/>							
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) LABORERS	12/1/2025	\$41.47	\$10.15	\$9.50	\$9.21	\$0.00	\$70.33
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	\$42.91	\$10.15	\$9.50	\$9.21	\$0.00	\$71.77
	12/1/2026	\$44.35	\$10.15	\$9.50	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
<hr/>							
WASTE WATER PUMP OPERATOR	12/1/2025	\$59.28	\$16.05	\$13.25	\$3.25	\$0.00	\$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	\$60.58	\$16.05	\$13.25	\$3.25	\$0.00	\$93.13
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$62.03	\$16.05	\$13.25	\$3.25	\$0.00	\$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
<hr/>							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
WATER METER INSTALLER	8/25/2025	\$55.24	\$10.80	\$16.80	\$4.60	\$0.00	\$87.44
PLUMBERS & PIPEFITTERS LOCAL 51							
PLUMBERS & PIPEFITTERS LOCAL 51							

For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"

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.

SECTION XV

AGREEMENT

This AGREEMENT executed this ____ day of _____ in the year Two Thousand and Twenty Four (herein referred to as the Agreement), by and between the Town of Falmouth, Massachusetts, acting by and through its Select Board, duly authorized therefore, who act herein solely for said Town and without personal liability to themselves, Party of the First Part, and _____ Party of the Second Part.

Witnessed, that for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Owner, the Service Contractor hereby agrees with the Owner to commence and complete **Chapoquoit Road stabilization Project 2026**, hereinafter called the Project, for the consideration set forth in the Bid package and all extra work in connection therewith, under the terms stated in the General Conditions of the Contract; and at his own proper costs and expense to furnish all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance bonds, and other accessories and services necessary to complete the said Project in accordance with the Conditions and Prices stated in the Contract Documents.

The Contractor hereby agrees to commence work under this Contract on the time specified in the Bid Package and to fully complete the Project within the time stated therein.

The Owner agrees to pay the Contractor for the performance of the Contract, subject to additions and deductions, as provided in the General Conditions of the Contract.

IN WITNESS WHEREOF, the parties of this AGREEMENT have hereunder set their names and seals as to the day and year first written.

TOWN OF FALMOUTH, MASSACHUSETTS

APPROVED FOR
(CONTRACTOR)

APPROVED FOR TOWN OF FALMOUTH
(OWNER)

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

APPROVED AS TO FORM

APPROVED AS TO AVAILABILITY OF FUNDS

By: _____
Town Counsel

By: _____
Town Accountant

SECTION XVI

Order of Conditions

Bk 37076 Pg133 #27864
07-14-2025 @ 09:54a



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:
25-5078

MassDEP File #

eDEP Transaction #

Falmouth

City/Town

A. General Information

Please note:
this form has
been modified
with added
space to
accommodate
the Registry
of Deeds
Requirements

1. From: Falmouth
Conservation Commission
2. This issuance is for (check one):
a. ☒ Order of Conditions b. ☐ Amended Order of Conditions

3. To: Applicant:

Jim

a. First Name

McCloughlin

b. Last Name

Town of Falmouth, Department of Public Works

c. Organization

416 Gifford Street

d. Mailing Address

Falmouth

e. City/Town

MA

f. State

02540

g. Zip Code

4. Property Owner (if different from applicant):

Town of Falmouth

c. Organization

59 Town Hall Square

d. Mailing Address

Falmouth

e. City/Town

Town of Falmouth

b. Last Name

MA

f. State

02540

g. Zip Code

5. Project Location:

Chapoquoit Road

a. Street Address

Falmouth

b. City/Town

c. Assessors Map/Plat Number

d. Parcel/Lot Number

Latitude and Longitude, if known:

d

m

s

d. Latitude

d

m

s

e. Longitude





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:
 25-5078
 MassDEP File #

eDEP Transaction #
 Falmouth
 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 974 b. Certificate Number (if registered land) 175
 c. Book d. Page
7. Dates: 4/23/2025 5/14/2025 6/17/2025
 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):
CHAPOQUOIT ROAD PROPOSED BULKHEAD
 a. Plan Title
Sustainable Coastal Solutions and Foth John S. Ramsey, PE
 b. Prepared by c. Signed and Stamped by
April 2025
 d. Final Revision Date e. Scale
 f. Additional Plan or Document Title g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

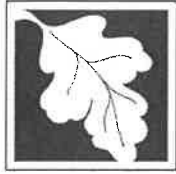
Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- a. ☐ Public Water Supply b. ☒ Land Containing Shellfish c. ☐ Prevention of Pollution
 d. ☐ Private Water Supply e. ☒ Fisheries f. ☒ Protection of Wildlife Habitat
 g. ☐ Groundwater Supply h. ☒ Storm Damage Prevention 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
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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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Falmouth
City/Town

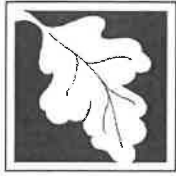
B. Findings (cont.)

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)(a) 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
4. <input type="checkbox"/> Bank	<u> </u> a. linear feet	<u> </u> b. linear feet	<u> </u> c. linear feet	<u> </u> d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
	<u> </u> e. c/y dredged	<u> </u> f. c/y dredged		
7. <input type="checkbox"/> 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
8. <input type="checkbox"/> 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
9. <input type="checkbox"/> 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



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:
 25-5078

MassDEP File #

eDEP Transaction #

Falmouth

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
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. <input checked="" type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
14. <input checked="" type="checkbox"/> Coastal Dunes	6,595 a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
15. <input checked="" type="checkbox"/> Coastal Banks	265 a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. <input checked="" type="checkbox"/> Land Subject to Coastal Storm Flowage	6,595 a. square feet	b. square feet		
22. <input type="checkbox"/> Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	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:

25-5078

MassDEP File #

eDEP Transaction #

Falmouth

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 _____ 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:

25-5078

MassDEP File #

eDEP Transaction #

Falmouth

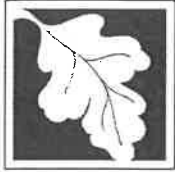
City/Town

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 25-5078 "
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
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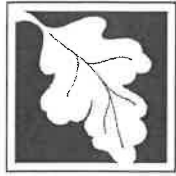
City/Town

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;



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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 19(f) through 19(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 19(f) through 19(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.



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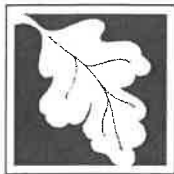
City/Town

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):

- 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.



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D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No
2. The Falmouth Conservation Commission hereby finds (check one that applies):
 - 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:

Falmouth Wetlands Bylaw / Regulations	CH 235 /
1. Municipal Ordinance or Bylaw	FWR 10.00
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):

See Attached



Falmouth Conservation Commission

59 Town Hall Square, Falmouth, Massachusetts 02540
(508) 495-7445

Jim McLoughin, Town Engineer
Town of Falmouth Department of Public Works
Chapoquoit Road, Falmouth
DEP # 25-5078

FINDINGS

1. The applicant proposes to repair the sinkhole that has formed in the roadway, due to significant erosion exposing the toe of the seawall and scouring behind the seawall.
2. An under-sheeting to the seawall will be installed to stabilize 265 feet of roadway and minimize the formation of additional sinkholes, once completed the road will be backfilled and wooden guardrails will be added to the seaward side of the road.
3. Resource areas onsite and within 100 feet of the proposed project include Land Under Ocean, Coastal Beach, Barrier Beach, Coastal Dune, Coastal Bank, Land Subject to Coastal Storm Flowage (LSCSF), and Resource Area Buffer.

INTERESTS

1. Storm Damage Prevention
2. Flood Control
3. Protection of fisheries
4. Protection of land containing shellfish
5. Protection of wildlife habitat

STANDARD CONDITIONS

1. Permission is granted to Jim McLoughin, Town Engineer, Town of Falmouth Department of Public Works, Chapoquoit Road, Falmouth, MA, to repair 265 linear feet of roadway by installing a under sheet to the seawall according to the narrative by Sustainable Coastal Solutions, Inc., (SCS) dated April 16, 2025 and the plan set prepared by SCS and Foth Infrastructure & Environment, LLC., dated April 2025 and entitled "Chapoquoit Road Proposed Bulkhead" and subject to the following Standard and Special Conditions.
2. This Order is issued pursuant to Mass. General Laws, Chapter 131, sec. 40, the Wetlands Protection Act and Chapter 235 of the Code of Falmouth the Wetlands Bylaw. The Wetlands By-law is more stringent

than the Wetlands Protection Act as permitted by that Act. The Conservation Commission reserves the right to impose additional or other conditions to protect the Interests of the Massachusetts Wetlands Protection Act and Falmouth Wetlands Bylaw.

3. The determinations of the Falmouth Conservation Commission are made solely to determine issues arising under the Massachusetts Wetlands Protection Act and the Town of Falmouth Wetlands By-Law, and are therefore concerned exclusively with the question whether any proposed activity will have an adverse effect on the wetlands resource interests listed in the applicable statutes, regulations, by-laws and rules. Nothing contained in this determination is intended in any way to grant to any person any title, easement or other interest in lands, public or private, and the Falmouth Conservation Commission is without legal authority to make any grant of title, easement or other property interest, or to make any determination of property interests. See Tindley v. D.E.Q.E. 10 Mass. App. Ct. 623 (1980).
4. Any work taking place prior to all administrative and legal appeal periods expiring or during the pendency of any such appeal is at the risk of the applicant and/or owner of the property. At the risk of means that should an administrative agency or court find this order and permit were granted in error, all work will have to be restored to its original condition (at the time work was instituted) at the expense of the applicant and/or owner.
5. Issuance of the Order of Conditions does not relieve the permittee from obtaining all other necessary municipal, county, state or federal permits, permission or other approvals required.
6. By the acceptance and recording of this Order, the applicant hereby grants the commission and its duly authorized agents the right to enter onto the land governed by this Order to examine the project and ensure Compliance. Such visits shall be made in a reasonable manner. The Conservation Commission as well as its staff and agents have the authority to issue an Enforcement Order if work does not comply with the terms or intent of the conditions contained herein or the plans herein referenced.
7. The Order of Conditions expires three (3) years from the original date of issuance. Any Amendments to the Order of Conditions **do not** extend the Original Order. You may request an Extension to the original Order of Conditions, in writing, at least 30 days prior to the expiration. Unless otherwise specified, all Conditions cited herein will apply to any and all Amendments to this Order of Conditions.
8. Prior to any work commencing:
 - a. Proof of recording of this Order of Conditions at the Barnstable County Registry of Deeds must be received by the Conservation Commission.
 - b. At least 10 days advance **written** notification shall be provided to the Conservation Commission.
 - c. Copies of any other permits and licenses including building permit, special permit, variances, and Chapter 91 license shall be submitted to Conservation Commission.
 - d. The DEP File Number shall be posted on a sign on the street side of the lot and maintained in a visible condition throughout the project. A copy of this Order of Conditions is to be posted onsite, to be maintained in a visible location and condition throughout the project. Copies of this Order of Conditions are also to be provided to all outside contractors, to be kept onsite during work at all times.
 - e. The Limit of Work must be installed prior to any work, excavation, construction or clearing of vegetation, in order to prevent damage to the Interests of the Act and Bylaw. The Limit of Work shall consist of a single row of staked strawbale/silt fencing.

9. The Limit of Work strawbales/silt fencing shall be replaced as necessary and should to be maintained in good condition throughout the entire construction period. Upon completion of all construction and stabilization of the site, strawbales/silt fencing is to be removed and properly disposed of. No fill is allowed to be placed against or outside the Limit of Work at any time. There shall be no work or storage of materials outside the Limit of Work.
10. The construction site is to be cleaned daily to remove any loose debris and permitted cuttings offsite. Any fill or excavated material not required to backfill and grade to the approved plan of reference shall be immediately removed offsite or to an appropriate upland location noted on the plans.
11. The applicant shall use all means to effectively prevent erosion into the wetland or other Resource Area and to encourage the growth of protective vegetation.
12. Any other proposed activities (alteration, fill, excavation or removal of vegetation) within any Resource Area or within 100 feet of any Resource Area will require that the applicant obtain all necessary permits from the Conservation Commission.
13. Before work can begin (i.e. clearing or construction) the Town of Falmouth Contractor Form is to be submitted to the Conservation Department, identifying the General Contractor (GC) and other responsible parties and signed by the GC and all other responsible parties confirming that the signatories thereto have read and understand the Order of Conditions and that they jointly and severally take responsibility for compliance with the OOC on site during the life of the project. The document shall be submitted with the ten (10) day start work notification required by Standard Condition #8(b).
14. Any changes to the plan of record noted in Standard Condition 1 above, no matter how minor in scope, including, but not restricted to, changes in the building footprint and appendages such as decks, addition and/or modification of accessory structures, changes in landscape features such as patios, retaining walls, plantings, removal of vegetation, the modification of finished grades, etc. require that the applicant obtain the permission of the Conservation Commission *before* undertaking the modified work. Depending on the scope of the change, said permission may be obtained by filing for an Administrative Approval, an amended Order of Conditions, or entirely new Notice of Intent. Failure to comply with this condition may subject the applicant to an enforcement order and/or fines.
15. This Order of Conditions will not be fully complied with unless and until a duly executed Certificate of Compliance is recorded or registered, as appropriate, in Barnstable Registry of Deeds. If this Order is based on a professionally rendered drawing then a letter must be submitted from an engineer or architect certifying full compliance and any deviation from the approved plans, as well as, an "Existing Conditions" plan. This plan shall include ALL structure and landscape features including patios, retaining walls, ornamental plantings, native plantings, AC units, steps, outdoor showers, walkways, etc. Any mitigation trees for the project shall be located and identified to species. Any mitigation shrubs for the project shall be delineated on the plan, labeled as "native buffer shrubs" and the final square footage noted. A request for a Certificate of Compliance shall be made in writing immediately following completion of all work including permanently stabilizing the site with vegetation.

SPECIAL CONDITIONS

1. Prior to work a preconstruction meeting shall be held with Conservation staff to review the construction methodology.

2. Prior to conducting any work on the property, pre-construction photos shall be taken and submitted to the Conservation department for review. Photos shall be submitted with the 10 day start work notification required by Standard Condition #8(b).
3. The construction site is to be cleaned daily to remove any loose debris.
4. No Certificate of Compliance will be issued until the entire project is completed and the site is permanently stabilized with vegetation.

VOTE AUTHORIZING SIGNATURES OF COMMISSIONERS

In accordance with the unanimous vote of the Falmouth Conservation Commission, Jennifer L. Lincoln, Conservation Administrator, is authorized to sign on behalf of each individual Commissioner as reflected in the recorded Land Court Document: 1,523,709 dated 05 27 2025 1:44 Barnstable Land Court Registry



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:

25-5078

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Falmouth

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.

6/17/2025

1. Date of Issuance

4

2. Number of Signers

Falmouth Conservation Commission

Jennifer L. Lincoln

Signature

Jennifer L. Lincoln, Conservation Administrator

Signature

Jamie Mathews, Chair

Signature

Printed Name

Courtney Bird, Vice Chair

Signature

Printed Name

Ronald Driscoll

Signature

Printed Name

Russell Robbins

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

☒ by hand delivery on

☐ by certified mail, return receipt requested, on

Date

6/23/2025

Date

Dylan Macarthy
 Dylan Macarthy



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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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.

BARNSTABLE REGISTRY OF DEEDS
John F. Meade, Register

SECTION XVII
SPECIFICATIONS

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, in a designated area, 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 work men and women 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 specification.

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 (NOT USED)

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 their 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 neat cast-in-place concrete for all aspects of the project, all in strict accordance with the Contract Documents.

1.2 SUBMITTALS

A. 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. Entrained air content.
10. Strength test data of the proposed mix design as specified herein.

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

- B. 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.
- C. Construction Joints: Submit proposed construction and control joint details and locations for Engineer's review.
- D. Curing and protection procedures: including product data on materials proposed for use.

23S002.00

E. Hot and/or cold weather construction procedures if anticipated and/or required by Engineer.

F. Test Reports

1. Concrete Temperature
2. Concrete Slump
3. Concrete Air Content
4. Compressive Strength Tests

G. Testing Agency Qualifications

1.3 QUALITY ASSURANCE

A. Field Testing Technician and Testing Agency

1. Unless noted otherwise, field testing shall be paid for by the Contractor.
2. Submit data on qualifications of proposed testing agency and technicians for approval prior to performing testing on concrete.
3. Work on concrete must be performed by an ACI Concrete Field Testing Technician Grade 1 qualified in accordance with ACI SP-2 or equivalent. Equivalent certification programs must include requirements for written and performance examinations as stipulated in ACI SP-2.
 - a. Testing agencies that perform testing services on reinforcing steel must meet the requirements of ASTM E329.
 - b. Testing agencies that perform testing services on concrete materials must meet the requirements of ASTM C1077.

B. Laboratory Qualifications for Concrete Qualification Testing

1. The concrete testing laboratory must have the necessary equipment experience to accomplish required testing. The laboratory must meet the requirements of ASTM C1077 and be Cement and Concrete Reference Laboratory (CCRL) inspected.

C. Laboratory Accreditation

1. Laboratory and testing facilities must be provided by and at the expense of the Contractor unless noted otherwise. The laboratories performing the tests must be accredited in accordance with ASTM C1077, including ASTM C78/C78M and ASTM C1260. The accreditation must be current and must include the required test methods, as specified.

D. 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.

- E. 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 documented successful experience in performing work of a similar nature.
- F. Cast-in-Place Concrete work shall conform to all requirements of ACI 301, "Specifications for Structural Concrete for Buildings".
- G. Ready mix plant equipment and facilities shall conform to the "Check List for Certification of Ready Mixed Concrete Production Facilities" of the NRMCA.

1.4 DELIVERY, STORAGE AND HANDLING

Delivery, storage and handling of concrete components shall conform to recommended practices of ACI 301, ACI 304 and manufacturer's instructions.

PART 2 - PRODUCTS

2.1 MATERIALS

A. 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, ASTM C 989, Grade 100 or Grade 120 at a minimum of 40 percent / maximum of 50 percent of total cementitious material.
 - b. ASTM C 618, Class F Fly Ash or natural pozzolan at a minimum of 20 percent / maximum of 25 percent of total cementitious material.
 - c. Silica fume, ASTM C 1240, at a minimum of 7 percent / maximum of 10 percent of total cementitious material.
 - d. Total of fly ash or natural pozzolans and silica fume at a maximum of 35 percent of the total cementitious material by mass.
 - e. Total of fly ash or natural pozzolans, slag cement, and silica fume at a maximum of 50 percent of the total cementitious material by mass.
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 3/8".

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.
8. Corrosion Inhibitor Admixture shall conform to ASTM C1582 "Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete. The addition of calcium nitrate to the concrete mix shall not adversely affect the properties of fresh and hardened concrete.
9. High Range Water Reducer (HRWR) shall be ASTM C494 Type F and ASTM C1017 and shall be used as needed to normalize the set time in concrete mixes containing corrosion inhibitor admixtures.

B. 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 3,000 psi at 28 days, unless noted otherwise (UNO).
3. Concrete shall have a maximum water to cement ratio of 0.58, UNO.
4. Concrete shall be proportioned to have a slump of 4 inches, + 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 the site will not be permitted.**
5. Concrete shall contain 7.5%±1.5% entrained air (based on 3/8" coarse aggregate).

C. 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.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Product Delivery, Storage, and Handling shall conform to the recommendations of ACI 304, "Guide for Measuring, Mixing, Transporting, and Placing Concrete."
- 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. Contractor shall be responsible for design of formwork, shores, reshores, and backshores to support loads transmitted to them and to comply with applicable building code requirements
 - 3. 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.
 - 4. Construct formwork for openings to facilitate removal and to produce opening dimensions as specified and within tolerances.
 - 5. Formwork release agent or water shall be applied to all forms to inhibit bond with concrete. If release agent is used, it shall be applied prior to placement of reinforcing steel. Do not allow formwork release agent to contact reinforcement.
 - 6. Form ties and spreaders shall be of such type as to leave no metal closer than 3 inches from any exposed concrete surface.
 - a. Form ties shall be of a non-corrosive material.
 - b. Form ties and accessories must not reduce the effective cover of the reinforcement.
 - c. Use form ties with ends or end fasteners that can be removed without damage to concrete.
- C. 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.
- D. 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. Addition of water at the site will not be permitted.

E. 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 8 feet is prohibited. The Contractor shall place concrete with a tremie tube for drops greater than 8 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. Depositing Concrete Under Water
 - a. ACI 301 methods and equipment used shall prevent the washing of the cement from the mixture, minimize the formation of laitance, prevent the flow of water through the concrete before it has hardened, and minimize disturbance to the previously placed concrete.
 - b. Deposit concrete through water by a tremie or concrete pump. Submit the methods and equipment used in advance of placement for review. Submittal shall include methods for preparation of the underwater surface, such as

cleaning, dewatering, and surface roughening. Concrete buckets may be used only to charge the hopper on top of the tremie. Do not lower concrete buckets under water and discharge the concrete sub aqueously. Ensure tremie is watertight and sufficiently large to permit a free flow of concrete. Keep discharge end of the pump line or tremie pipe submerged continuously in the concrete after placement starts. Effect underwater seal in a manner that will not produce undue contamination of the concrete or turbulence in the water. Placement must proceed without interruption until the concrete has been brought to the required height. Do not move tremie or pump lines horizontally during a placing operation, unless removed, moved, and properly restarted, and provide a sufficient number of tremies or pump lines so that the maximum horizontal flow will be limited to 15 feet.

7. Construction Joints

- a. Do not use horizontal construction joints without engineer approval.
- b. Secure the Engineer's review of joint design and location prior to start of concrete placement.

F. 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 Cold Weather Concreting Plan shall be submitted, and a preconstruction meeting should be held to define how cold weather concreting methods will be used. When the mean daily ambient temperature is 40 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 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 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 (wind < 5 mph), 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 (4 to 7 mph).
 - 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.

G. 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 Surface Finishes shall comply with ACI 301M ACI 301. Place, consolidate, and immediately strike off concrete to obtain proper contour, grade, and elevation before bleedwater appears. Permit concrete to attain a set sufficient for floating and supporting the weight of the finisher and equipment. If bleedwater is present prior to floating the surface, drag excess water off or remove by absorption with porous materials. Do not use dry cement to absorb bleedwater. Unless noted otherwise, exposed surfaces of concrete shall receive broomed finish as follows:
 - a. Broomed: Perform a floated finish, then draw a broom or burlap belt across the surface to produce a coarse scored texture. Permit surface to harden sufficiently to retain the scoring or ridges. Broom transverse to traffic or at right angles to the slope of the slab.
 - b. Vertical Surfaces: Rough form finish for concrete surfaces not exposed to view. Smooth rubbed finish for exterior surfaces exposed to view.
4. Tolerances in accordance with ACI 117.

3.2 QUALITY CONTROL TESTING DURING CONSTRUCTION

Unless noted otherwise, Concrete Testing during construction shall be the responsibility of the Contractor. Concrete testing shall comply with ACI-301. Test reports shall be submitted to the Engineer for review. Tests required include slump, temperature, air content, and compressive strength. The frequency of tests shall be as follows. Perform tests minimum once per day or for every 50 cubic yards of concrete placed.

A. Slump Tests

1. ASTM C143/C143M. Take concrete samples during concrete placement at point of placement/discharge. Perform additional tests when concrete consistency appears to change.

B. Temperature Tests

1. ASTM C1064/C1064M; One test hourly at point of placement when air temperature is 40 deg F and below or 80 deg F and above, and one test for each sample.

C. Air Content.

1. ASTM C173/C173M or ASTM C231/C231M for normal weight concrete.

D. Compressive Strength Tests

1. ASTM C39/C39M. Make a minimum of five (5) 6-inch by 12-inch test cylinders for each sample in accordance with ASTM C31/C31M, ASTM C172/C172M and applicable requirements of ACI 305R and ACI 306R. Take precautions to prevent evaporation and loss of water from the specimen.
2. Test one (1) specimen at 7 days, three (3) specimens at 28 days and reserve one (1) cylinder for contingency testing at 56 days.
3. Concrete compressive tests must meet the requirements of the Contract Document, and ACI 301. Retest locations represented by low concrete compressive strengths by coring as directed by the Engineer. Where retest does not meet concrete compressive strength requirements, submit a mitigation or remediation plan for review and approval. Repair core holes with non-shrink grout. Match color and finish of adjacent concrete.

- E. Test results shall be reported to the Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength and type of break for both 7- and 28-day tests.

3.3 REPAIR, REHABILITATION AND REMOVAL**A. Crack Repair**

1. All concrete cracks in excess of 0.02 inches (0.50 mm) wide must be documented and repaired. The proposed method and materials to repair the cracks must be submitted for approval.

END OF SECTION

SECTION 06 13 33

HEAVY TIMBER

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 work men and women 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 the event of changes in the Work of this Section.
- C. Comply with the requirements of the "Wood Engineering Handbook" by U.S. 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

No later than the time of delivery of materials to the site, the Contractor shall 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 24 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 timber in accordance with AWPAs Service Condition Use Category UC4B for Micronized Copper Azole (MCA) to the following retentions:
 - 1. Guardrail posts and rails shall have a minimum retention of 0.23 pound per cubic foot.
- C. 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.
- D. Pieces of exceptionally lightweight will not be accepted.
- E. Lumber shall be surfaced four sides unless otherwise noted.
- F. Alternate preservative treatment shall be submitted for review and acceptance by Engineer.

2.2 HARDWARE

- A. All hardware, 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. The finish of all hardware and metal fittings shall be hot dipped galvanized after fabrication.
- C. 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 to specified requirements, and that the galvanizing is in full conformance with these Specifications.
- D. 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 AWP A 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 Tnemec-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 31 00 00

EARTHWORK

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The work covered by this specification consists of furnishing all plant, labor, equipment, and materials; and performing all operations in connection with excavation, excavation of unsuitable organic soils, subgrade preparation, and placement; and compaction of fill materials required for the backfill for the installation of the new steel sheet pile bulkhead and restoration of Chapoquoit Road.
- B. Refer to Contract Drawings for final grades.

1.2 SUBMITTALS

- A. Earthwork Operation and Sequence Plan
 - 1. Submit an earthwork plan outlining types of equipment, daily volumes, and grading, excavation, subgrade preparation, proof-compacting, backfilling, and compaction sequence to the Owner's Representative for review at least 10 working days prior to commencement of construction.
 - 2. Where excavation to design subgrade elevation results in generation of suitable granular fill, indicate proposed location (in plan and elevation) where granular fill will be reused on site.

- B. Shoring and Bracing Plan

If the Contractor selects to use shoring and bracing, submit the support of excavation plan to the Owner for review at least 10 working days prior to commencement of construction. The support of the excavation system shall be prepared by a Professional Engineer, registered in the Commonwealth of Massachusetts.

1.3 DEFINITIONS

- A. SOURCE shall mean those areas from which any material brought to the site is derived. All material brought to the site shall be certified in writing as clean and free from environmental contaminants. The sources and test results shall meet with the approval of the Owner's Representative before any material is delivered to the project. The following tests shall be performed on a sample of material from each source from which the material is derived: Sieve Analysis, VOCs, SVOCs, TPH, PCBs and total and TCLP RCRA 8 metals.

- B. SUITABLE MATERIALS, for reuse on-site, shall generally consist of predominantly granular (sand, gravel, silt, and rock) material free of organic material, peat, dredge debris, organic silt, and other objectionable material. Suitable materials shall be reused on-site as compacted or densified fill as designated on the drawings.
- C. ORGANIC MATERIAL shall mean fibrous mats of roots, decaying vegetation, organic silt, peat, timber piles, planks, wharf or fendering, garbage and sanitary wastes.
- D. UNSTABLE MATERIAL shall mean organic debris, frozen materials, topsoil, and organic silts.
- E. SUITABLE CONSTRUCTION DEBRIS shall mean on-site concrete, brick, or asphalt debris, processed to be less than 6 inches in size that is suitable for compaction when mixed with granular material.
- F. UNSUITABLE CONSTRUCTION DEBRIS shall mean on-site organic debris such as wood, stumps, organic material, roofing debris, or other miscellaneous debris that is unsuitable for compaction when mixed with granular material.

1.5 PREPARATION

- A. Examine the site thoroughly and determine the existing conditions and difficulty of work to be performed.
- B. Before commencing earthwork operations, determine that preparatory work has been completed.
- C. Perform field surveys required to accomplish the work.

1.6 DEGREE OF COMPACTION

- A. Expressed as a percentage of the maximum dry density obtained by the test procedure presented in ASTM D1557 Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft³ (2700 kN-m/m³)).
- B. Abbreviated in this Specification as a percent of laboratory maximum dry density.

1.7 FIELD QUALITY CONTROL

- A. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements. Testing of materials for compliance with specifications shall be the responsibility of the Contractor.

1. Material Source Testing – Contractor shall perform all source sampling and testing of soil materials used for construction. Testing shall be performed by a certified laboratory approved by the Owner. All test results shall be forwarded to Owner in an electronic format (PDF) upon receipt.
2. Confirmation Testing (In-situ) – Contractor shall coordinate with a 3rd party testing service approved by the Owner to perform all in-situ confirmation sampling and testing of installed soil layers. Sample locations to be determined by the Owner's Representative.
3. Retesting – The Contractor is responsible for retesting fees required due to failed testing where results of inspections, tests, or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Document requirements, regardless of whether the original test was Contractor's responsibility. The cost of retesting construction, revised or replaced by the Contractor, is the Contractor's responsibility where required tests performed on original construction indicated noncompliance with Contract Document requirements.

B. Source Testing

1. The Contractor shall provide source testing for the following materials using the testing methods and frequencies specified below, or elsewhere in the Contract Documents for qualification of material.
 - a. Structural Fill
 - i. One Unified Soil Classification System (USCS) soil description (ASTM D2487), one Grain Size Analysis w/ Hydrometer (ASTM D6913), and one Lab Compaction (Modified Proctor) ASTM D1557 shall be performed per 2,500 cy per soil type. Structural fill shall have no organic matter, debris, sticks, roots, sharp objects, boulders or weed growth. Imported fill must be sampled before import and approved for use by the Engineer.

C. In-situ Testing

1. The Contractor shall provide in-situ testing for the following materials using the testing methods and frequencies specified below, or elsewhere in the Contract Documents for qualification of material.

In-situ Testing for Structural Fill

Test Description	ASTM Method	Frequency	Material Quantity	Total Number of Tests	Passing Criteria
In-place moisture density	D6938	1 per	500 cy	24	≥ 95% maximum dry density

2. Permit the Owner's Representative to observe all subgrades for each layer of fill or backfill. Additional fill or backfill should not be placed unless the Owner's Representative has approved the subgrade and/or previous layer of fill.
 3. When required or requested by the Owner's Representative, the Contractor shall provide field elevations of the compacted subgrade or fill layer.
- D. Compacted materials that are below specified density shall be re-compacted at no additional expense to the Owner.
- E. The Contractor shall bear the cost of removal of all unsuitable material placed without approval by the Owner's Representative that fail to conform to the specifications.

1.8 RESPONSIBILITY OF THE CONTRACTOR

- A. The Contractor is responsible for adhering to regulations, Specifications, and recognized standard practices related to the management of contaminated and potentially contaminated material during excavation and removal activities. The Owner and Owner's Representative will not be responsible at any time for the Contractor's violation of pertinent State or Federal regulations or endangerment of laborers, passers-by, or any others.
- B. The Owner will not be held negligent or liable for any inadequacies or deficiencies in the Contractor's site-specific worker Health and Safety Plan or for any oversight or inadequacies in the Contractor's implementation of the safety plan.
- C. Provide labor, materials, and equipment necessary to complete the work including:
1. Excavation, backfilling, on-site transportation, stockpiling, and maintenance of excavated material.
 2. The Contractor is responsible for all construction, protection, and maintenance of soil stockpiles from excavation through chemical testing and on-site re-use or off-site disposal (if required). The Contractor shall stockpile material only in areas designated by the Owner.
 3. The Contractor is responsible for providing all documentation to track potentially contaminated material from the time of excavation until it is accepted by and disposed of at the disposal facility.
 4. The Contractor shall backfill excavations with suitable materials in accordance with this section and the limits and elevations shown on the Contract Drawings.
- D. The Contractor is responsible for all disposal costs at the disposal facility.

PART 2 – PRODUCTS

2.1 IMPORTED GRANULAR FILL (Structural Fill)

IMPORTED GRANULAR FILL shall be free from ice and snow, roots, sod, rubbish, and other deleterious or organic matter. It shall conform to the following gradation requirements:

SIEVE SIZE	PERCENT FINER BY WEIGHT
2/3 of the loose lift thickness	100
No. 10	30-95
No. 40	10-70
No. 200	0-10

Granular Fill if placed 4 feet below finish grade, at the discretion of the Owner's Representative, provided it is properly moisture controlled and can meet the required compaction. It should be noted, however, that these materials are very sensitive to changes in moisture content and may be difficult to properly compact using ordinary means and equipment.

2.2 DENSE GRADED AGGREGATE

DENSE GRADED AGGREGATE shall meet M2.01.7 in the Massachusetts Highway Department, Standard Specifications for Highways and Bridges, and shall conform to the following gradation requirements:

SIEVE SIZE	PERCENT FINER BY WEIGHT
2 inches	100
1 1/2 inch	70-100
3/4 inch	50-85
No. 4	30-55
No. 50	8-24
No. 200	3-10

2.3 CRUSHED STONE

A. CRUSHED STONE shall consist of one or the other of the following material:

1. Durable crushed rock consisting of the granular fragments obtained by breaking and crushing solid or shattered natural rock, and free from a detrimental quantity of thin, flat, elongated*, or other objectionable pieces.
 - a. Thin or elongated pieces are defined as follows: Thin stones shall be stones whose average width exceeds four (4) times their average thickness. Elongated stones shall be such stones whose average length is in excess four (4) times their average width.
2. Durable crushed gravel stone obtained by artificial crushing of cobbles, boulders, or field stone with a minimum diameter before crushing of 8 inches.

3. The crushed stone shall be reasonably free from clay, loam or deleterious material and not more than 1.0% of satisfactory material passing a #200 sieve will be allowed to adhere to the crushed stone.
4. Crushed stone shall be uniformly blended according to the following grading requirements:

SIEVE SIZE	PERCENT FINER BY WEIGHT	
	3/4" INCH CRUSHED STONE	1-1/2" CRUSHED STONE
1 1/2-inch	--	100
1 1/4-inch	--	85-100
1-inch	100	--
3/4-inch	90-100	10-40
1/2-inch	10-50	0-8
3/8-inch	0-20	--
No. 4	0-5	--
No. 200	<1	<1

5. All crushed stone referred to on the Contract Drawings shall be 3/4-inch crushed stone unless otherwise specified.
6. "1-1/2-inch crushed rock aggregate," referred to on the Contract Drawings, shall be 1-1/2-inch crushed stone.

2.4 COMMON FILL

Common fill shall consist of sand, silt, gravel, or similar materials free from trash, topsoil, organic or compressible material, roots, and vegetation. Stones, rock, brick, and concrete fragments not exceeding 6 inches in their largest dimension are acceptable provided they are not nested when placed for compaction and can be readily spread and compacted during filling. Common fill may be acceptable for use as Granular Fill at the discretion of the Owner's Representative, provided it can be placed and properly compacted.

2.5 SAND FILL

Sand fill shall be free from ice and snow, roots, sod, rubbish and other deleterious or organic material. Sand fill shall be a well-graded, medium to coarse sand with a maximum diameter of 1/4 inch and less than 10% passing the #200 sieve by weight.

2.6 SAND BEDDING FOR UTILITIES

Sand Bedding shall be free from ice and snow, roots, sod, rubbish and other deleterious or organic material. Sand Fill shall be a well-graded, medium to coarse sand with a maximum diameter of 1/4 inch and less than 10% passing the #200 sieve by weight.

2.7 LOAM AND SEEDING

- A. Loam and seeding shall be free from ice and snow, roots, sod, rubbish, and other deleterious or organic material.
 - 1. The loam grassed areas shall be 6 inches thick. Fertilizer shall be applied to the loam at a rate of 0.2 pounds per square yard and worked into the seed bed with an application of lime, if needed to 2021 Edition Roadway Construction Standards 5-6 achieve the required pH range. As soon as the seed is sown, it shall be covered with a thin layer of loam, rolled and watered. The grass strip shall be seeded at the rate of 3.6 pounds per 100 square yards. Grass shall grow to a satisfactory cover before being accepted by the New Bedford Port Authority.
 - 2. In locations where erosion is possible, erosion controls shall be in place until the vegetation has substantially rooted. Erosion, gullies and other damage will need to be reseeded as necessary until an adequate growth of grass is achieved.
 - 3. Loam Borrow shall conform to MassDOT Standard Spec. M1.05.0 or shall be the product of a commercial sand and gravel processing facility. It shall be uncontaminated by saltwater, foreign matter, or substances harmful to plant growth. The acidity range of the Loam Borrow shall be pH 5.5 to 7.0.
 - 4. Fertilizer shall be of a 10-6-4 composition.
 - 5. Seed composition shall be 60% Red Fescue, 20% Red Top, 20% Kentucky Blue. Seed shall be of the previous year's crop and in no case shall the weed seed content exceed 1% by weight.

PART 3 - EXECUTION

3.1 UTILITY PROTECTION

- A. Contact all utility companies and property owners which might have installations in the area to determine location of all utilities and structures.
- B. Protect above and below grade utilities which are to remain.
- C. Protect plant life, trees, lawns, and other features remaining as a portion of final landscaping.
- D. Protect benchmarks, existing structures, fences, sidewalks, paving, and curbs from excavation equipment and vehicular traffic.
- E. Implement temporary erosion control measures such as silt fencing, hay bales, sediment traps, etc. as required to minimize the effects of erosion and sedimentation in excavations.
- F. Excavation cuts shall be sloped sufficiently to prevent material from sliding into the excavation and to comply with local, state and Federal codes and regulations. Sheet piling and bracing shall be placed as dictated by conditions.

- G. Slope Side of excavations to comply with OSHA requirements and local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible either because of space restrictions, stability of material excavated, or where shoring and bracing is more economical than sloping. Shoring and bracing shall be designed by a Professional Engineer, Registered in the Commonwealth of Massachusetts. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

3.2 DISPOSAL

Remove all unsuitable and organic materials (as determined by the Owner's Representative) from the property and dispose offsite as required by local, State and Federal codes, rules and regulations. Remove existing foundations, demolition debris, abandoned utility piping, slabs, pavements, and other debris encountered in areas of construction. Dispose of excess or unsuitable material as part of the Contract price.

3.3 DRAINAGE

- A. Direct surface water away from excavations, existing buildings, roadways and construction sites to prevent erosion and undermining of foundations.
- B. Protect excavated slopes and backfill surfaces to prevent erosion and sloughing.
- C. Perform excavation so that the site and the area immediately surrounding the site shall be continually and effectively drained.

3.4 DUST SUPPRESSION

- A. Dust suppression shall require application of water by the Contractor. The Contractor shall at all times keep machinery, and a sufficient supply of water onsite to suppress dust generated at the site, as necessary.
- B. The Contractor shall suppress dust as necessary throughout construction, and until vegetation or other surface treatments have been established, if necessary.
- C. Uniformly apply water to surface, subgrade or layer of soil material requiring dust suppression.

3.5 PLACEMENT AND COMPACTION

- A. The Contractor is responsible for building and maintaining their own access within the site for their operations. Neither the Owner nor the Project Engineer warrants that construction equipment will be able to operate on the site without preparation. Neither the Owner nor the Project Engineer warrant that any type or size of equipment can operate at the site. The Contractor will be responsible for determining what type and size equipment the existing site and roads will support and will plan their operations

and pricing accordingly. None of the above shall be considered as grounds for any claims for extra or additional cost.

- B. Ground Surface Preparation: Generally, all filling is to be accomplished in the dry, under dewatered conditions. Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills.
- C. Place backfill and fill materials in layers not more than 12 inches in loose depth for material compacted by heavy compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.
- D. Before compaction, moisten or aerate each layer as necessary to provide optimum moisture content. Compact each layer to required percentage of maximum dry density or relative dry density for each area classification. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
- E. Place backfill and fill materials evenly adjacent to structures, piping, or conduit to required elevations. Prevent wedging action of backfill against structures or displacement of piping or conduit by carrying material uniformly around structure, piping, or conduit to approximately same elevation in each lift.
- F. Control soil and fill compaction, providing minimum percentage of density specified for each area classification indicated below. Correct improperly compacted areas or lifts as directed by Project Engineer if soil density tests indicate inadequate compaction.
 - 1. Percentage of Maximum Density Requirements: Compact soil materials to not less than the 90% of maximum density, in accordance with ASTM D1557.
- G. Correct improperly compacted areas or lifts as directed by Project Engineer, if soil density tests indicate inadequate compaction.

3.6 FILLING AND BACKFILLING IN-THE-DRY OR ABOVE MEAN HIGH WATER

- A. Material placement shall begin after approval of the subgrade by the Owner's Representative.
- B. Use satisfactory materials to replace unsatisfactory materials.
- C. Place satisfactory materials in horizontal layers not exceeding 12 inches in loose thickness where self-propelled or towed mechanical compaction equipment is used, or 9-inch loose lift thickness when hand-operated compactors are used.
- D. Do not begin backfilling until construction below finish grade has been approved and the excavation is clean of trash and debris.

- E. Place and compact fill and backfill to indicated finish grade within a tolerance of one foot horizontally and 1 inch vertically.
 - F. Do not place successive layers of earth fill material until the compaction requirements of the previous layer have been satisfied.
 - G. Maintain positive drainage on the surface of unfinished earth fills. Blade the unfinished surfaces smooth to a crown at the conclusion of each day's work.
 - H. Uniformly grade the finished earth fill surfaces such that they are smooth, compacted, and free from irregular surface changes.
 - I. Unless otherwise noted compact fill and backfill material to a minimum of 95% of the maximum dry density per ASTM D1557.
 - J. Moisture control:
 - 1. Where subgrade or layer of soil material must be moisture-conditioned before compaction, uniformly apply water to surface of subgrade or layer of soil material as needed to obtain optimum moisture content.
 - 2. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
 - K. The Contractor shall use extra care when compacting adjacent to walls. Where walls are buried on both sides, backfill and compaction shall proceed on both sides of the wall so that the difference in top of fill level on either side of the wall shall not exceed 2 feet at any stage of construction. Where backfill of a buried wall is only on one side, only hand-operated roller or plate compactor shall be used within a lateral distance of 5 feet of back of wall.
 - L. In freezing weather, a layer of fill shall not be left in an uncompacted state at the close of a day's operations. Prior to terminating operations for the day, the final layer of fill, after compaction, shall be rolled with a smooth-wheeled roller to eliminate ridges of soil left by tractors, trucks, and compaction equipment.
 - M. The Contractor shall not place a layer of compacted fill on snow, ice or soil that was permitted to freeze prior to compaction. Removal of these unsatisfactory materials will be required as directed by the Owner.
- 3.7 DENSE GRADED AGGREGATE PLACEMENT, SPREADING, AND COMPACTION
- A. Spread Dense Graded Aggregate over prepared subgrade.

- B. Compact to a dry density of not less than 95% of the maximum density as determined by the Modified Proctor ASTM D1557, unless otherwise noted. Alternate blading and rolling will be required to obtain a smooth, even, and uniformly compacted course.
- C. The final surface compaction shall be with a smooth wheeled power roller to obtain a firm and smooth surface finish.
- D. Level and contour surfaces to elevation and gradients indicated.
- E. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.
- F. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.8 MAINTENANCE

- A. Protect newly graded areas from traffic and erosion and keep free of trash and debris. Repair and reestablish grades in settled, eroded, and rutted areas to specified tolerances.
- B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, remove to sound material, reshape, and compact to required density prior to further construction.

3.9 EROSION CONTROL

Protect disturbed areas from erosion.

3.10 DAMAGE

Any damage to utilities, buildings, personal property or anything else that is not proposed to be disturbed resulting from excavation, backfill and compaction shall be repaired by the Contractor to the satisfaction of the Owner's Representative and at the Contractor's expense.

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. 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.

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

1. Establish benchmarks necessary for accurate elevations of finished grades.
2. Check elevations of finished surfaces and similar items.

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 governmental 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

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 40 00

SHORING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

Work included: Provide shoring, temporary or permanent, at excavations and elsewhere as required to protect work men and women, materials, other properties, and the public.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled work men and women 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 specification.
- B. Retain a qualified Engineer, properly licensed in the project state, to provide such services at the location of the Work; to design the shoring system; and to inspect and report on the quality of its construction.
- C. Comply with pertinent requirements of governmental agencies having jurisdiction.
- D. Coordinate the shoring design and construction with:
 - 1. Soil Investigation Report prepared for this Work.
 - 2. Structural systems and sequence of construction established for the Work.

1.3 SUBMITTALS

- A. Prior to submitting shoring design for approval of governmental agencies having jurisdiction, submit the design to the Engineer for review. Include supporting calculations.
 - 1. The Engineer's review will not relieve the Contractor of their responsibilities under the Contract.
 - 2. Should changes in the shoring design be required, subsequent to the Engineer's review, coordinate all such changes with the Engineer.
- B. Upon completion of construction of this portion of the Work, submit to the Engineer two copies of a letter signed by the approved shoring design engineer stating that, to the best of the shoring design engineer's knowledge, the shoring system was constructed in accordance with the arrangement reviewed by the Engineer.

PART 2 - PRODUCTS

2.1 DESIGN

- A. Design a shoring system which will safely and adequately prevent collapse of new and existing structures, and parts thereof, which will permit construction of the Work to the arrangement and tolerances required under the Contract Documents.
- B. Secure all needed approvals, including those of governmental agencies having jurisdiction and of adjacent property owners if required, at no additional cost to the Owner.

2.2 MATERIALS

Provide materials of all kinds as required for execution of the approved shoring system.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

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

3.2 INSTALLATION

Construct and install the shoring system in strict accordance with the design approved by the governmental agencies having jurisdiction, and in strict accordance with the space arrangement reviewed by the Engineer.

3.3 TEMPORARY SHORING

All shoring shall be considered temporary, unless specifically designated as permanent by the Contract Documents or the Engineer.

3.4 PERMANENT SHORING

In some cases, shoring may remain in place, as designated in the Contract Documents or by the Engineer. Permanent shoring shall not negatively affect the performance of the completed Work or anticipated future work. The Contractor shall secure the Engineer's review prior to covering permanent shoring. Permanent shoring shall become concealed upon the completed Work.

END OF SECTION

SECTION 31 41 16

STEEL SHEET PILES

PART 1 - GENERAL

1.01 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 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.

1.02 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.
 - 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.

1.03 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.

1.04 PRODUCT DELIVERY AND STORAGE

- A. 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.
- B. 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 corrosion protection prior to installation.
- C. 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.
- D. 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

2.01 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”) 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.

PART 3 - EXECUTION

3.01 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. 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.

3.02 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, 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. 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.
- G. OBSTRUCTIONS ENCOUNTERED IN SHEET PILE LOCATIONS
 1. All rocks, timbers, pile stubs, or other obstructions at the ground surface to within 10 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.
 2. In the case of Z-Pile installations an apparent obstruction below the ground surface but above anticipated full depth, which prevents appreciable penetration

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of a sheet pile, the problematic condition will receive further consideration by the Project Engineer. Depending on the depth and resistance of the obstruction, the Project Engineer will decide whether to consider the sheet pile acceptable or order the obstruction removed or drill a pile pin. The decision may be deferred until the driving of adjacent sheets indicates the obstruction to be isolated or extending over the area of several sheets.

END OF SECTION

SECTION 32 10 00

BITUMINOUS PAVING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This work shall consist of producing and placing hot mix asphalt (HMA) pavement and striping. The HMA pavement shall consist of an aggregate or asphalt base course and asphalt surface course constructed in conformity with the lines, grades, thickness, and cross sections as shown on the plans and as directed on the prepared or existing base in accordance with these specifications. Work under this section shall cover the milling of existing asphalt, composition, mixing, construction upon the prepared subgrade, and the protection of hot asphalt pavement. Each course shall be constructed to the depth, section, or elevation required by the Contract Drawings and shall be rolled, finished, and approved before the placement of the next course.

1.2 RELATED DOCUMENTS

- A. Section 31 00 00, Earthwork
- B. Drawings and general provisions of Contract, including General and Special Conditions and Specification sections, apply to work of this section.
- C. Material and construction standards per Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges 1988 Edition, and all amendments or latest version.
- D. Massachusetts Department of Transportation (MassDOT) Subsection 860 Reflectorized Pavement Markings to be utilized by the Contractor for roadway markings as shown on the Contract Drawing.

1.3 ALIGNMENT AND GRADE CONTROL

The contractor's surveyor shall establish and control the pavement (aggregate or asphalt base course and asphalt surface course), alignments, grades, elevations, and cross sections as shown on the Contract Drawings.

1.4 SUBMITTALS

- A. Data and Test Reports
 - 1. Aggregate Base Course: Sources, gradation, liquid limit, plasticity index, percentage of wear, and other tests required by State Highway Department.

2. Asphalt Base/Surface Course: Aggregate source, gradation, soundness loss, percentage of wear, and other tests required by State Highway Department.
3. Job mix formula.
4. SDS (Safety Data Sheets) for all chemicals used on ground.
5. Certifications:
 - a. Asphalt prime and tack coat material certificate of conformance to MassDOT requirements.
 - b. Asphalt cement certificate of conformance to MassDOT requirements.
 - c. Job mix certification - Submit plant mix certification that mix equals or exceeds the MassDOT Specification.
6. Contractor Quality Control Plan.
7. Road Closure & Traffic Management Plan.

B. Pavement Markings

1. Method of Placement Plan
2. List of material properties.
3. Quality control certificate for the Pavement Markings, upon request.

C. Curbing Data Sheets & Test Reports

1.5 GENERAL

- A. The Contractor shall be responsible for notification to “Dig Safe” (888-344-7233) at locations where excavation is scheduled.
- B. All work shall be performed in accordance with the Contract Documents and MassDOT Section 450 – Hot Mix Asphalt Pavement.
- C. The Contractor must notify the Owner’s Representative for pre-inspection of the site 24 hours before placing the bituminous pavement.
- D. HMA shall only be placed on dry, unfrozen surfaces and only when the temperature requirements per MassDOT are met. If the temperature requirements are not met at any point throughout the paving shift, HMA placement shall cease, except as determined and directed in writing by the Engineer depending upon the necessity and emergency of attendant conditions, and weather conditions.
- E. The Contractor may continue HMA placement when overtaken by sudden rain, but only with material which is in transit from the HMA production facility at the time, and then only when the temperature of the HMA mixture is within the temperature limits specified and when the existing surface on the roadway is free of standing moisture. The Engineer is not obligated to accept any material that was not already in transit prior to the onset of rain, and the Contractor shall suspend operations for the day when the requirements of this specification cannot be met.

- F. The construction of HMA pavement shall terminate November 15 and shall not be resumed prior to April 1 except as determined and directed in writing by the Engineer depending upon the necessity and emergency of attendant conditions, weather conditions, and location of the project. Only in extreme cases will the placement of Surface Courses be permitted between November 15 and April 1. Regardless of any temperature requirements, open-grade friction course (OGFC) mixtures shall not be placed after October 31 or before May 1 without the written permission of the Engineer.

Temperature Limitations for HMA Placement

HMA Pavement Course	Lift Thickness (in.)	Min. Air Temperature (d F)	Min. Surface Temperature (d F)
Friction Course	1	50	55
Surface Course	<1 ¾	45	50
Surface Course	>1 ¾	35 (see Note #1)	40
Intermediate Course	All	35 (see Note #1)	40
Base Course	All	35 (see Note #1)	40
Leveling Course	As Specified	45	50
Note 1: When the air temperature falls below 50°F, extra precautions shall be taken in drying the aggregates, controlling the temperatures of the materials, and in placing and compacting the mixtures.			

- G. The Contractor shall supply the Engineer with two approved dial type thermometers with a temperature range of -50°F to 500°F and two infrared pistol thermometers for each paving machine in operation on the project. The thermometers will remain the property of the Contractor upon completion of the project. The infrared pistol thermometers shall read in Fahrenheit and conform to the following requirements:

1. Portable and battery operated.
2. LCD Display to nearest 1°F
3. Temperature operating range of 0°F to 750°F
4. Accuracy of ± 2%
5. Repeatability of ± 5°F
6. Emissivity preset at 0.95

- H. All markings shall follow the line of reference without deviation. Any line deviating from the establishing control of incorrect width shall be reapplied, as directed by the Engineer.

1.6 PROTECTION

During the procedure of the work, the Contractor shall be held entirely responsible for the protection and result of the work and damage to the work that may occur through any cause and shall be repaired by the Contractor at their expense.

1.7 PROTECTION OF PERSONS AND PROPERTY

- A. Contractors are to erect such structures around the locations as may become necessary to allow pedestrians to travel by the locations and to fence in any danger area or other place adjoining the streets where the work is performed constituting a hazard to persons or property, and to properly light and maintain lights at night around the locations in question.
- B. Contractor must notify the Owner's Representative 24 hours before starting the project.
- C. The Contractor must obtain street obstruction and disturbance permits before work commences.

1.8 QUALITY ASSURANCE

- A. The Contractor is responsible for providing an appropriate Quality Control System to ensure that all materials and workmanship meet the required quality levels for each specified Quality Characteristic. The Contractor will perform all required Quality Control inspection, sampling, and testing in accordance with these specifications and the Contractor's Quality Control Plan.
- B. The lines and grades shall be established by the Contractor, in conformity with the drawings and shall be maintained by means of grade stakes, placed in lines parallel to the centerline of the areas to be paved, and spaced a minimum of 50 feet on center and at other locations deemed appropriate so that string lines may be stretched between the stakes.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Material standards per MassDOT "Standard Specifications for Highways and Bridges", 1988 or the latest subsequent revision.
- B. Aggregates
 - 1. Provide aggregates consisting of crushed stone, gravel, sand, or other sound, durable mineral materials processed and blended, and naturally combined.
 - 2. The gravel base course shall consist of an 8-inch total compacted thickness for sidewalks and a 12-inch total compacted thickness for roadway pavements. The gravel base course shall be placed only on a sub grade approved, in writing, by the Engineer.
 - 3. Sub-base Section – Gravel Borrow Type "B": (Massachusetts Highway Division [MHD] M1.03.0): 12"

4. Compacted Processed Gravel Base Section (MHD M1.03.1): 12"
5. The use of Processed Glass Aggregate is not allowed. Gradation requirements shall conform to AASHTO T11 and T27.

C. Asphalts

1. Hot Mix Asphalt Intermediate Course (SIC – 19.0): 2.50"
2. Hot Mix Asphalt Finish Course (SSC – 12.5): 1.75"
3. Standard binder for HMA surfaces shall be a PGAB meeting the requirements of AASHTO M320. The standard PGAB Grade of PG64-28 shall be used.

D. Sealer

1. Provide a sealer consisting of suitable fibrated chemical type asphalt base binders and fillers having a container consistency suitable for troweling after thorough stirring and containing no clay or other deleterious substance.

E. Tack Coat

1. Tack coat (RS-1) shall conform to the MassDOT Standards meeting M3.03. Tack coat shall be applied per the requirements of Section 450.43.G.

F. Pavement Markings

1. Pavement Markings shall conform to the MassDOT Specifications listed in Section 2.5 below or approved equivalent.
2. The raw materials used in the following specifications for paints and protective coatings shall conform to the specification designed by ASTM, Federal serial number or AASHTO unless specified otherwise in the individual specification. Subsequent amendments to the specifications quoted shall apply to all raw materials and finished products. No "or equal" substitution for any specified material shall be made without written consent of the Engineer.
3. Glass Beads (Pre-Mix) used in the manufacture of thermoplastic shall be uncoated and meet the requirements of AASHTO M 247, Type I and M7.01.07 and have a minimum of 80% true spheres.
4. The resin shall be alkyd or hydrocarbon and meet the requirements of Table M7.01.3-1.

Table M7.01.3-1 Thermoplastic Resin Requirements

Properties	Hydrocarbon	Alkyd
% Binder, Minimum	22	20
Indentation Resistance @ 115°F, ASTM D7735	--	40-75 units (Type A)
Bond Strength, Minimum, psi	180	200

2.2 CONDITION IN THE CONTAINER

Paint and protective coatings shall be homogenous, free of contaminant and of a consistency suitable for use in the capacity for which it is specified. The finished product shall be well ground and the pigment shall be properly dispersed and suspended in the vehicle according to the requirements of the paint or protective coating. The dispersion shall be of such nature that the pigment does not settle badly, does not cake or thicken in the container, and does not become granular, jelled or curdled. Any settlement of pigment in the paint or protective coating shall be a thoroughly wetted soft mushy mass permitting the complete and easy vertical penetration of a paddle. Settled pigment shall be easily dispersed, with a minimum resistance to the sidewise manual motion of the paddle across the bottom of the container, to form a smooth uniform product of the proper consistency. The manufacturer shall include in the paint the necessary additives for control of sagging, pigment settling, leveling, and other qualities of a satisfactory working material. The paint shall possess satisfactory properties in all respects which affect its application and curing.

2.3 PACKAGING

- A. The finished paint or protective coating shall be furnished in new 20-liter, round, non-tapered containers no thinner than 0.60 millimeter unless otherwise specified. The containers shall have the lug type crimp lids with ring seals and be equipped with ears and bails. The containers shall meet U.S. Department of Transportation Hazardous Materials Shipping Regulations. The container must be lined, if necessary, so as to prevent attack by the paint. The lining must not come off the can as skins.
- B. The following information shall be labeled on each can in a clear legible manner:
 - 1. Name of Manufacturer
 - 2. Place of Manufacture
 - 3. Manufacturer's Batch Number
 - 4. MassDOT Specification Number
 - 5. Date of Manufacture
 - 6. Precautions concerning the handling and the application of the paint or protective coating shall be shown on the label.

2.4 SAMPLING AND TESTING

- A. Sampling
 - 1. At least one sample, not less than one liter, shall be taken for each batch or less of each kind of paint to be used. Samples must be taken in clean, dry, airtight, wide mouth metal cans and the sample must fill the can to within 25 millimeters from the top. Each sample forwarded to the Owner's Representative shall be accompanied by the name of the manufacturer, the batch number, the specification number and the quantity of paint represented.

2. Before the Contractor will be permitted to use any paint, the material proposed to be used shall have been sampled, tested and approved
3. The manufacturer, as may be required by the Engineer, shall permit access to an inspection of his/her paint and all operations involved in the manufacture of these materials, shall permit sampling of raw materials and shall furnish such reasonable facilities as the Engineer may require for such inspection.

B. Testing

1. Testing of paints may be completed by the Owner's Representative in accordance with the latest methods of Federal Test Method Standard Number 141, ASTM and Methods in use by the MassDOT Research and Materials Section. In addition, the Owner reserves the right to make use of any information or methods of testing to determine the quality of paint and paint materials.
2. The manufacturer may submit a wet sample of the paint which he/she proposes to furnish. If the color of the wet sample is approved, paints matching the wet sample will, as regards to color, be accepted.
3. The Contractor shall assume all costs arising from the use of patented materials, equipment, devices or processes used or incorporated in the work and agrees to indemnify and save harmless the Owner or the Owner's Representative from all suits at law or action of every nature for or on account of the use of any patented materials, equipment, device or processes.

2.5 PAVEMENT MARKINGS

A. Paints shall be in accordance with MassDOT Specifications. A listing of the paint is as follows:

1. M7.01.05 White Traffic Paint
2. M7.01.06 Yellow Traffic Paint
3. M7.01.08 White High Heat Rapid Drying Traffic Marking Material
4. M7.01.09 Yellow High Heat Rapid Drying Traffic Marking Material
5. M7.01.10 Fast Drying White Traffic Paint
6. M7.01.11 Fast Drying Yellow Traffic Paint
7. M7.01.12 Striping Powder
8. M7.01.16 White and Yellow Temporary Reflective Lane Tape
9. M7.01.18 Preformed Permanent Plastic Pavement Markings or Legends
10. M7.01.23 Fast Drying White Water-borne Traffic Paint
11. M7.01.24 Fast Drying Yellow Water-borne Traffic Paint

PART 3 - EXECUTION

3.1 GENERAL

The Asphalt Paving equipment, weather limitations, job mix formula, mixing, construction methods, compaction, finishing, tolerance, and protection shall conform to the requirements of

the appropriate sections of the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges 1988 Edition, and all amendments or latest version, for the type of material specified.

3.2 SAWCUTTING

- A. The pavement shall be sawcut through its full depth at all joints between existing and proposed pavements, and at all utility trenches, to provide a uniform, smooth vertical surface. Existing pavements shall be sawcut at the limits of work as shown on the plans and as required by the Engineer.
- B. Sawcut edges which become broken, ragged or undermined as a result of the Contractor's operations shall be re-cut prior to the placement of abutting proposed pavement at no additional cost to the Department.
- C. Sawcut surfaces in asphalt pavements shall be sprayed or painted with a uniform, thin coat of asphalt emulsion tack coat immediately before placement of HMA against the cut surfaces.

3.3 SUBGRADE PREPARATION

- A. Work shall conform to the relevant provisions of Section 170 of the MHD Standards, supplemented by the following:
 - 1. The subgrade shall be prepared to the full width of the road right-of-way and any adjacent bank easements, in conformity with the lines, grades, slopes and cross-section of the approved plans. Grades under paved areas shall be held to a tolerance of plus or minus 1/10 foot. The shoulders shall be shaped and landscaped so that the entire right-of-way presents a neat and pleasant appearance, but shoulder loaming and seeding shall be postponed until all paving work has been done.
 - 2. Soft or otherwise unsuitable material in the sub grade, under paved areas, shall be removed and replaced with approved material. All low sections, holes or other depressions shall be brought to grade. After the sub grade is properly shaped, it shall be thoroughly compacted with an approved roller weighing not less than 10 tons. Wetting or settling the sub grade by blading, required along with the rolling of the sub grade, shall be included to obtain proper compaction.
 - 3. The top 6 inches of sub grade in paved areas shall be compacted to a minimum of 95% of maximum density as defined and measured in ASTM D1557.
 - 4. The finished sub grade shall pitch from the centerline of road to the edge of pavement at a rate of 1/4 inch per foot as shown on the typical road cross-section.

3.4 SWEEPING UNDERLYING SURFACE

- A. The Contractor shall provide a mechanical sweeper equipped with a water tank, spray assembly to control dust, a pick-up broom, a dual gutter broom, and a dirt hopper. The sweeper shall be capable of removing millings and loose debris from the underlying surface.
- B. Prior to opening a milled area to traffic, all milled pavement surfaces shall be thoroughly swept in accordance with the applicable milling specification required by the contract to remove all remaining millings and dust. All pavement surfaces shall be swept clean, free of dust, fines, and slurry immediately prior to application of the tack coat. Any new HMA pavement course that has been open to traffic, or that was placed 30 days prior to placement of the subsequent pavement course, shall also be swept immediately prior to application of the tack coat.

3.5 MIXING ASPHALTIC CONCRETE MATERIALS

- A. Provide hot plant-mixed asphaltic concrete paving materials.
 - 1. Temperature leaving the plant: 290 degrees F minimum, 320 degrees F maximum.
 - 2. Temperature at time of placing: 280 degrees F minimum.

3.6 CONSTRUCTION METHODS

- A. Subgrade
 - 1. Shape to line and grade and compact with self-propelled rollers.
 - 2. All depressions that develop under rolling shall be filled with acceptable material and the area re-rolled.
 - 3. Soft areas shall be removed and filled with acceptable materials and the area re-rolled.
 - 4. Should the subgrade become rutted or displaced prior to the placing of the subbase, it shall be reworked to bring to line and grade.
 - 5. Proof-roll the subgrade with maximum 45 tonne (50 ton) gross weight dump truck as directed by Project Engineer. If pumping, pushing, or other movement is observed, rework the area to provide a stable and compacted subgrade.
- B. Base Course
 - 1. Base:
 - a. Spread and compact to the thickness shown on the Contract Drawings.
 - b. Rolling shall begin at the sides and continue toward the center and shall continue until there is no movement ahead of the roller.
 - c. After completion of the base rolling there shall be no hauling over the base other than the delivery of material for the top course.

2. Thickness tolerance: Provide the compacted thicknesses shown on the Contract Drawings within a tolerance of minus 0.0 inch to plus 0.5 inch.
3. Smoothness tolerance: Provide the lines and grades shown on the Contract Drawings within a tolerance of 3/16 inch in 10 feet.
4. Moisture content: Use only the amount of moisture needed to achieve the specified compaction.
5. Gravel base courses shall be placed and spread uniformly in layers not exceeding 6 inches after compaction. Care shall be taken while spreading the gravel to rake forward and distribute the largest stones so that they will be at the bottom of the gravel course and be evenly distributed, but under no circumstances will stones larger than 3 inches be permitted.

C. Surface shall be pitched to provide proper drainage.

3.7 PLACEMENT OF ASPHALTIC PAVING

A. Remove all loose materials from the compacted base.

B. Apply the specified prime coat, and tack coat where required, and allow to dry in accordance with the manufacturer's recommendations as approved by Engineer.

C. Receipt of asphaltic concrete materials

1. Do not accept material unless it is covered with a tarpaulin until unloaded, and unless the material has a temperature of not less than 280 degrees F.
2. Do not commence placement of asphaltic concrete materials when the atmospheric temperature is below 50 degrees F, not during fog, rain, or other unsuitable conditions.

D. Spreading

1. Spread material in a manner that requires the least handling.
2. Where thickness of finished paving will be 4 inches or less, spread in one layer.
3. Avoid overhandling of materials that can cause separation for fines.

E. Rolling

1. After the material has been spread to the proper depth, roll until the surface is hard, smooth, unyielding, and true to the thickness and elevations shown on the Contract Drawings.
2. Roll in at least two directions until no roller marks are visible.
3. Finished paving smoothness tolerance:
4. No depressions which will retain standing water.
5. No deviation greater than 1/8 inch in 6 feet.

3.8 BITUMINOUS CONCRETE DRIVEWAYS

- A. No forms are required.
- B. Placing Bituminous Concrete – The Bituminous Concrete driveway surface shall be laid in 2 courses to a depth, after rolling of 4 inches unless otherwise designated on the plans. The Bottom Course shall be 2.25 inches in thickness, and its surface after rolling, shall be 1.75 inches below and parallel to the proposed grade of the finished surface. The top course shall be 1.75 inches in thickness after rolling.
- C. Spreading Mixture – The mixture shall be spread with an approved spreader. In areas not accessible to a spreader, the mix shall be placed as specified for bituminous concrete sidewalks (Section 701.62B-1).
- D. Rolling – The surface shall be rolled with a self-propelled tandem roller weighing not less than 3 tons nor more than 5 tons, or an approved roller as designated by the Engineer.
- E. Testing Surface – When tested with a 10-foot straightedge placed parallel to the centerline of the courses, there shall be no deviation from a free surface in excess of 1/4 inch.

3.9 MILLING EXISTING HMA PAVEMENT

- A. When specified on the plans, existing HMA pavement courses shall be milled and removed from the project by the Contractor.
- B. Adjustments to milling depth shall be approved by the Engineer and shall be used for consideration of the HMA pavement thickness measurements.
- C. Each vertical face of the milled pavement that will be abutted by new pavement shall be thoroughly coated with a hot poured joint sealer prior to placing new HMA mixture adjacent to the vertical face.

3.10 PATCHING EXISTING PAVEMENT COURSES

- A. Areas of existing HMA pavement courses that are significantly distressed or unsound shall be removed and replaced with patches using new HMA. The location and limits of patching will be as identified in the plans or as directed by the Engineer.
- B. Each existing pavement course determined to be unsound shall be removed to the full depth of the pavement course within a rectangular area. For each patch location equal to or greater than 50 ft² in area (and having a minimum dimension of 4 feet) where the existing pavement courses are removed down to subbase, the subbase shall be compacted by mechanical means to not less than 95% of the maximum dry density of the subbase material as determined by AASHTO T 99 Method C at optimum moisture

content. Each edge of the patch area shall be sawcut or otherwise neatly cut by mechanical means to provide a clean and sound vertical face. The vertical face of each edge shall be thoroughly coated with a hot poured joint sealer immediately prior to placing the HMA patching mixture.

- C. Delaminated areas of existing pavement courses resulting from pavement milling shall be cut back neatly by mechanical means to the limits of any unsound material. After removing all unsound material, the underlying pavement surface within the patch limits shall receive a thorough tack coat.
- D. HMA patching mixture shall be the same mixture type as the existing pavement course being patched or as specified on the plans or as directed by the Engineer.
- E. All material for backfilling the trench shall be suitable and free from organic substances, large stones, frost and other deleterious material. Twelve (12) inches of Gravel Borrow Type B conforming to M1.03 shall be compacted to a minimum of 95% of modify proctor density (ASTM D1557) for roadway and sidewalk trenches, before permanent patch is applied.
- F. Pavement repairs shall be made by the contractor in accordance with "HMA Pavement Restoration Detail". All trenches running parallel to roadway must be paved from gutter line to centerline. Perpendicular patches (services) must be paved from gutter to centerline and span 2 feet beyond the width of the excavation trench on both sides. All patches shall be of a rectangular shape and not traverse diagonal nor jogged in any way. No material shall be placed over Flowable Fill that has not yet firmly set.
- G. Temporary Patches
 1. It is the responsibility of the Contractor to maintain the patch.
 2. The patch shall be installed within 5 days of backfilling the trench.
 3. Before placing the patch, the edges of the existing pavement shall be saw cut or blade-cut to a smooth, straight edge, back from the edge of the trench far enough to expose a minimum of 12 inches of undisturbed gravel sub-base.
 4. In warm weather, the temporary patch shall be regular HMA base course. In cold weather, the temporary patch shall be "Cold Patch" HMA or cement concrete as specified in Section III – A, with a minimum thickness of 6 inches, poured flush with the wearing surface of the adjacent paving.
 5. In either case, the temporary patch shall be replaced with a permanent HMA repair, not less than 30 or more than 60 days following the original backfilling or upon the opening of the asphalt plant, whichever occurs first.
 6. The Contractor shall have 150 days from start date of Disturbance Permit to finish all site restoration work.

H. Permanent Patches

1. Patch paving shall be rolled flush with the surface of the existing pavement. No “feathered” overlap of paving will be allowed.
2. When installing a permanent patch to a pavement cut, the edges of the existing cut shall be “tack” coated to ensure a water-proof seal with the new patch and existing pavement. Tack coat shall conform to and be installed as specified above.
3. The patch paving shall be a minimum thickness of 4 inches, installed in 2.50 inches HMA intermediate course and 1.75 inches HMA surface over asphalt emulsion for tack coat cover, compacting thoroughly between layers. Must match existing pavement conditions if greater than 4 inches in depth.
4. Seams shall be sealed with HMA joint sealer after the patch is placed.
5. Emphasis is also placed, on the requirement calling for compacted Gravel Borrow Type B (M1.03) as shown in accordance with “HMA Pavement Restoration” detail.

3.11 HMA JOINTS

- A. The Contractor shall plan the sequence of HMA placement to minimize transverse and longitudinal joints in each pavement course. Paving operations should employ long pulls or tandem pavers, whenever practicable, to reduce the number and length of joints. Finished joint surfaces, including joints in the roadway and bridge joints, shall be uniform and true to the required grade and cross slope without deviations exceeding $\frac{1}{4}$ inch, both transversely and parallel to the joint, when measured with a 10-foot standard straightedge.

B. Transverse Joints

1. Where the start or end of a new HMA pavement course meets existing HMA pavement, the existing pavement shall be sawcut to form a transverse butt joint for the full depth of all new pavement courses. The sawcut shall follow a straight line and provide a clean and sound vertical face. Material at any intermediate transverse joint resulting from suspension of placement of a new HMA pavement course shall also be sawcut and removed to provide a clean vertical face before continuing placement of the pavement course.
2. When traffic is to be carried over any transverse joint before completion of an HMA pavement course, the Contractor shall provide a temporary tapered joint with a maximum 12:1 slope. The HMA mixture forming the taper shall be placed on heavy wrapping paper or other suitable material to serve as a bond breaker. The temporary tapered joint shall be sawcut to reveal the full depth of the pavement course and form a transverse butt joint with a clean vertical face. The temporary tapered joint material shall be completely removed before resuming placement of the HMA pavement course.
3. Prior to the start of HMA placement at each transverse joint, the vertical joint face shall be thoroughly coated with a hot applied pavement joint adhesive meeting the

requirements of 450.30: General. The asphalt sealer temperature and application rate for each pavement course shall be established in the Contractor's Quality Control Plan and shall follow the manufacturer's recommendation. No reheating of the joint face shall be permitted. Equipment used to apply the hot applied pavement joint adhesive shall be capable of maintaining the sealer at the established temperature and application rate sufficient to uniformly coat the vertical joint face without runoff or accumulation of the asphalt sealer.

C. Longitudinal Joints

1. All longitudinal joints in HMA Surface Courses shall be located on the roadway centerline or on a lane line or edge line of the traveled way. The longitudinal joints in each pavement course below the Surface Course shall be successively offset from the joint in the Surface Course by no more than 12 inches and no less than 6 inches. Joints shall be straight and parallel to the lane line of the roadway.

3.12 STONE BOUND, MANHOLES, SHUT-OFFS, WATERGATES, STOPS, GAS SHUT-OFFS, MANHOLES AND CATCH BASIN FRAMES AND COVERS

- A. All shall be carefully set to the proposed finished grade, with 3 inches of concrete to underside of flange where applicable.
- B. Utility shut-offs must be covered with plastic to prevent concrete from adhering to the covers. The plastic must be removed when the cleanup is performed the following day.

3.13 BOUNDSTONES

Prior to excavation, the Owner's Representative will mark approximate locations where records indicate boundstones may exist. The Contractor shall use extra caution when excavating these areas and uncover the boundstone without damaging or displacing. Should boundstones be found that are damaged or require resetting to grade, the Contractor will notify the Owner's Representative for direction. Exposed boundstones or street line property bounds destroyed, displaced, damaged, or buried by the Contractor, will be replaced by the Owner's Representative at the Contractor's expense.

3.14 LEVELING COURSES

HMA Leveling Courses shall only be used when specified in the Contract. The HMA mixture used for a Leveling Course shall be as specified in the Contract and shall conform to the relevant materials requirements of this specification.

3.15 PREPARATION OF CURBS, EDGING, & UTILITIES

All curbs or edging shall be installed or reset to the line and grade established on the plans. The surface elevation of all catch basin frames and grates, manholes, utility valve boxes, or other utility structures located in the pavement shall uniformly match the grade and cross-slope of the

final pavement riding surface. Adjustment of all curbs, edging, and utilities shall be completed prior to the placement of the HMA Surface Course. Hand placement of HMA along curbs and edging or around utilities after placement and compaction of the Surface Course shall not be permitted.

3.16 APPLICATION OF SEAL COAT

- A. Prepare the surfaces, mix the seal coat material, and apply in accordance with the manufacturer's recommendations as approved by the Project Engineer.
- B. Apply one coat of the specified sealer.
- C. Achieve a finished surface seal which, when dry and thoroughly set, is smooth, tough, resilient, of uniform black color, and free from coarse textured areas, lap marks, ridges, and other surface irregularities.

3.17 APPLICATION OF PAVEMENT MARKINGS

- A. Requirements:
 - 1. Lines shall be a minimum of 4-inches wide.
 - 2. Reflective beads shall conform to MHD standard.
 - 3. Material application temperature shall conform to MHD standard.

Table 860.62-1
Pavement Marking Application Requirements

Material	Material Application Temperature (°C)	Line Thickness Above Roadway Surface	Glass Bead Application
M7.01.3	400°F to 425°F	125 to 188 mils	Drop-on 1 lb per 10 ft ²
M7.01.23	135°F to 150°F	15 mils	6 lb per gal
M7.01.24	135°F to 150°F	15 mils	6 lb per gal

- B. No thinners shall be used for the above listed pavement marking applications except in accordance with the manufacturer's specifications at the direction of the Owner's Representative.
- C. No paint or pavement marking material shall be heated above the temperature marked on the container.
- D. Markings shall be applied only in seasonable weather and in accordance with good painting practices. The surface shall be dry and free of sand, grease, oil or other foreign substances prior to the application. The Contractor shall prepare the surface to accept the application as part of this item, with no additional compensation. The Owner's Representative will make the final determination for all of the foregoing.

- E. Bituminous aggregate surface shall have been in place for 48 hours prior to the applications of pavement markings except preformed permanent plastic pavement markings which can be applied immediately.
- F. Line thickness above the roadway surface shall meet the minimum requirements regardless of the type of surface on which it is applied.

3.18 RECESSED MARKINGS

- A. Prior to cutting out the grooves for recessed markings, the Contractor shall layout the proposed pavement markings. Once the Engineer has inspected and approved the proposed striping layout, the grooves for the proposed pavement markings may be cut. No pavement grooving shall be done without the prior approval of the Engineer.
- B. Groove position shall be a minimum of 4 inches from the edge of the pavement marking to any longitudinal pavement joints. The groove shall not be installed on bridge joints, on drainage structures, or in other areas identified by the Engineer. The groove shall not be installed continuously for intermittent pavement markings, but only where markings are to be applied.
- C. The use of gang stacked diamond cutting blades to grind a smooth square slot is required for producing all grooves. The spacers between blade cuts shall be such that there will be less than a 10 mil rise in the finished groove between the blades. The acceptability of the surface texture will be determined by the Engineer.
- D. The diamond grinder shall have an articulating head so that the slots are installed correctly on grades and super elevated sections.
- E. Grooves that are ground deeper or wider than the specified allowable limits shall be repaired per the direction of the Engineer at no additional cost. Grooves that are ground too shallow, too narrow, or with unacceptable rises between blade cuts shall be reground to the correct size, depth, and surface finished at no additional cost. Slots ground out of alignment shall be patched using an approved method and materials.
- F. Grooves shall be 1 inch \pm 1/4 inch wider than the pavement marking width. Groove depth is dependent upon pavement marking material type and shall be per Table 860.65-1:

Table 860.65-1
Groove Depth for Recessed Pavement Markings

Pavement Marking Material Type	Groove Depth
Multi-Component (i.e., Epoxy, Polyurea, Urethane)	80 mil
Performed	150 mil
Thermoplastic	Proposed wet thickness of line + 40 mil
Water-borne Paint	80 mil

- G. The Contractor may propose an alternate groove depth based upon recommendations of the pavement marking material manufacturer. An alternate depth shall be approved by the Engineer prior to installation.
- H. Groove depth shall be consistent across the full width of the groove. Depth plates shall be provided by the Contractor to the Engineer to assure that the specified groove depth is achieved.
- I. Grooves shall be clean, dry and free of laitance, oil, dirt, grease, paint or other foreign contaminants. Shrouds and a vacuum apparatus shall be included as part of the grinder to remove larger pieces of pavement that are ground out. If water is used to clean the groove or the grooving process takes place during rainfall, a minimum of 24 hours of dry time is required prior to the placement of pavement markings. The grooves shall be dry for 24 hours prior to placement of the pavement markings.
- J. After the depth, width, length, and surface condition has been approved by the Engineer, an air lance shall be used to remove fine particles from the groove. Air compressors shall initially be blown out and away from the application area to prevent compressor condensation build-up from entering the groove. The Contractor shall prevent traffic from traversing the grooves per 860.63: Protection of Markings and re-clean grooves, as necessary, prior to application of pavement markings at no additional cost.
- K. All grooves must be approved by the Engineer prior to the placement of pavement markings.

3.19 EQUIPMENT

- A. All equipment used for the application of pavement markings shall be of standard commercial manufacture. All other equipment and devices necessary for the application of the pavement markings shall be as usually required for work of this type and shall be furnished by the Contractor.
- B. The pavement marking equipment shall be operated at the speed and in accordance with other requirements of the manufacturer, unless otherwise directed by the Owner's Representative.

- C. Truck mounted equipment is approved for the application of pavement markings except in such cases where in the Owner's Representative's judgment travel will be unreasonably delayed and/or the quality of the work performed by the machine is unsatisfactory.

3.20 LAYOUT OF WORK

A schedule of pavement marking operations shall be furnished by the Contractor for the approval of the Owner's Representative prior to the application of any pavement markings. This schedule must be in the office of the Owner's Representative seven days prior to the proposed date of application of any pavement markings.

3.21 PROTECTION

- A. Protect the asphaltic concrete paved areas from traffic until the sealer is set and cured and does not pick up under foot or wheeled traffic.
- B. Markings shall remain protected until sufficiently dry to bear traffic. Markings shall be protected by traffic cones of not less; than 700 millimeters in height except in the case of markings which cure to a no track condition in 180 seconds or less.

3.22 OPENING TO TRAFFIC

No vehicular traffic or loads shall be permitted on the newly completed HMA pavement until adequate stability has been attained and the material has cooled sufficiently to a temperature of 140°F or less as indicated by an infrared thermometer. The Contractor shall clearly outline, in the Quality Control Plan, the specific criteria related to opening new pavement to traffic. The final determination to open the pavement to traffic shall be made by the Engineer and the Construction Quality Control Manager.

3.23 FINAL CLEAN UP

Remove all debris, rubbish, and excess material from the work area.

END OF SECTION

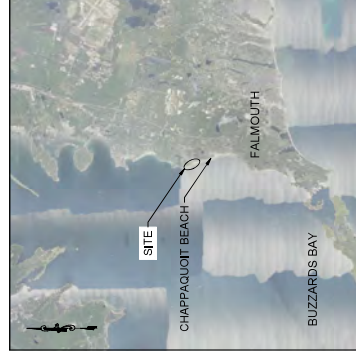
SECTION XVIII

PLANS

Prepared by:
Sustainable Coastal Solutions &
Foth Infrastructure & Environment, LLC



DRAWING INDEX	
SHEET NUMBER	TITLE
G-001	COVER SHEET
G-002	PROJECT NOTES
B-001	SOIL BORING LOGS
C-101	EXISTING SITE PLAN
C-102	GENERAL SITE PLAN
S-101	STEEL SHEET PILE PARTIAL PLANS
S-301	EXISTING AND DEMOLITION BULKHEAD SECTIONS
S-302	BULKHEAD REPAIR SECTIONS
S-501	TYPICAL DETAILS



VICINITY MAP



LOCATION MAP

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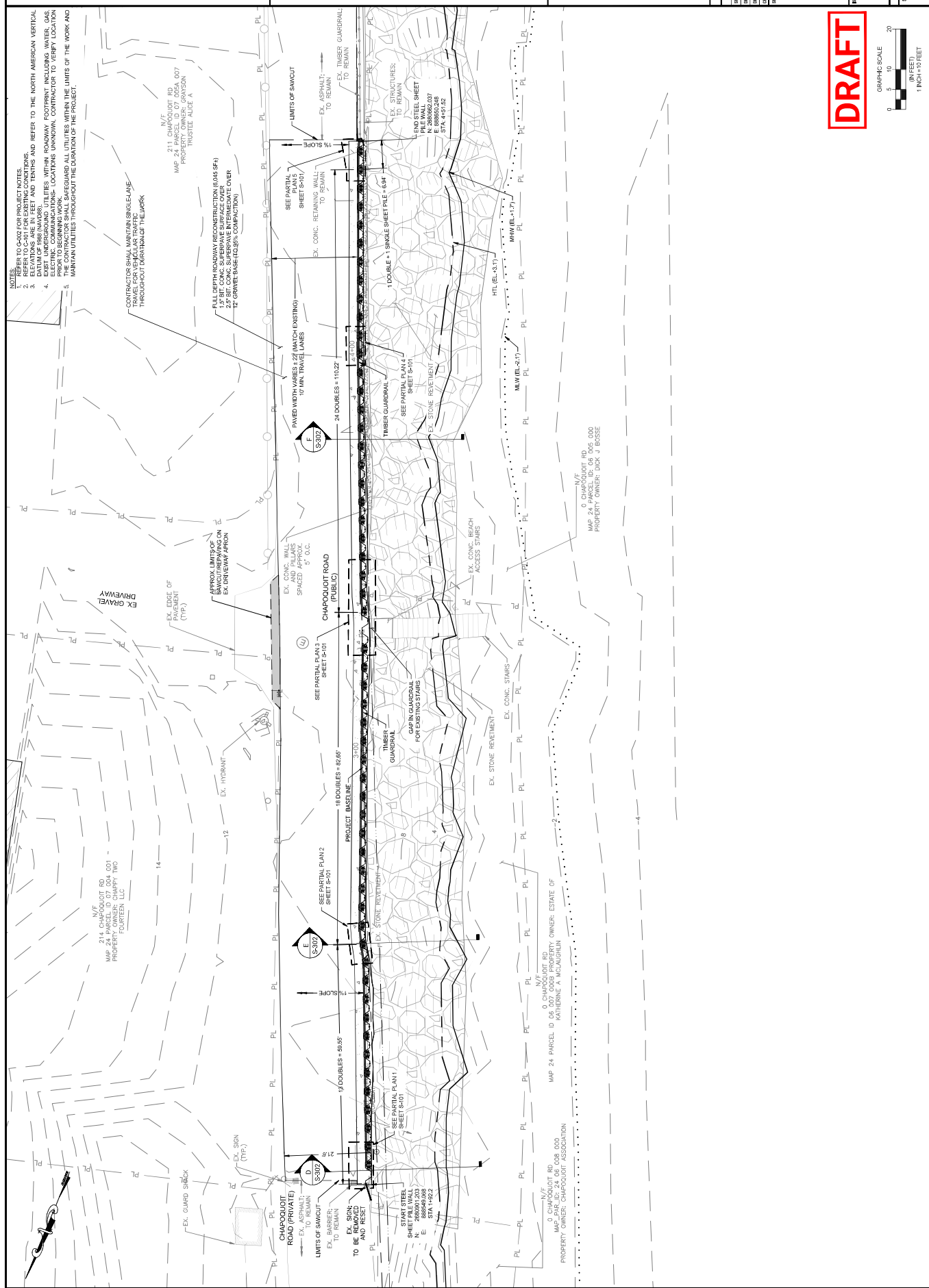
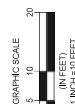
GENERAL SITE PLAN

ISSUANCE: ISSUED FOR BID

0801ECT NO: 00288072 00

C-102

DRAFT

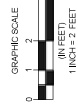


[illegible]STEEL SHEET
PILE PARTIAL
PLANS

ISSUANCE: ISSUED FOR BID

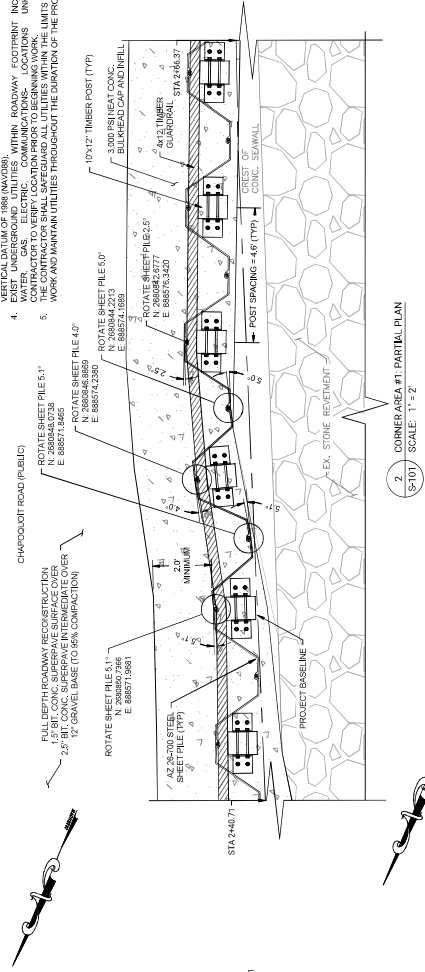
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SHEET NUMBER
S-101

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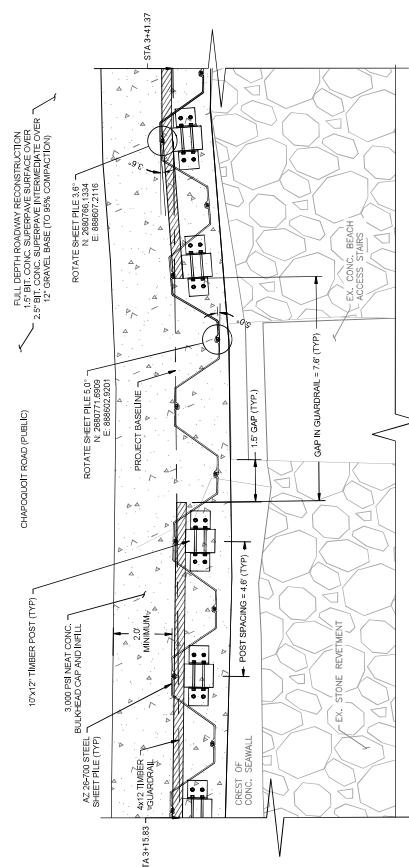


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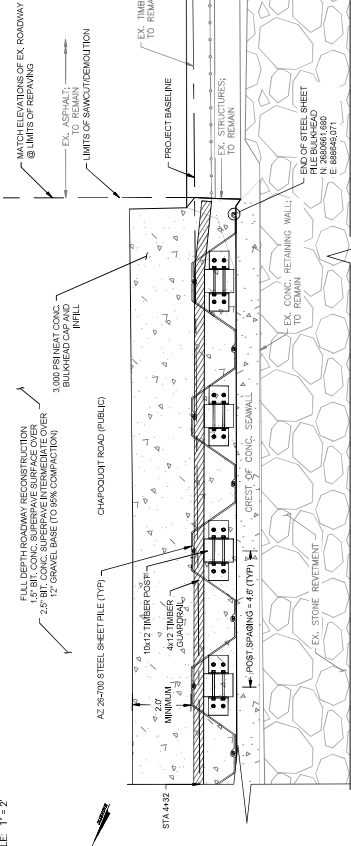
1. REFER TO G-002 FOR PROJECT NOTES.
2. REFER TO C-01 FOR EXISTING CONDITIONS.
3. ELEVATIONS ARE IN FEET AND TENTHS.
4. EXIST UNDERGROUND UTILITIES, WITHIN ROADWAY FOOTPRINT INCLUDING WATER, GAS, ELECTRIC, COMMUNICATIONS, LOCATIONS UNKNOWN.
5. THE CONTRACTOR SHALL SAFEGUARD ALL UTILITIES WITHIN THE LIMITS OF THE WORK AND MAINTAIN UTILITIES THROUGHOUT THE DURATION OF PROJECT.



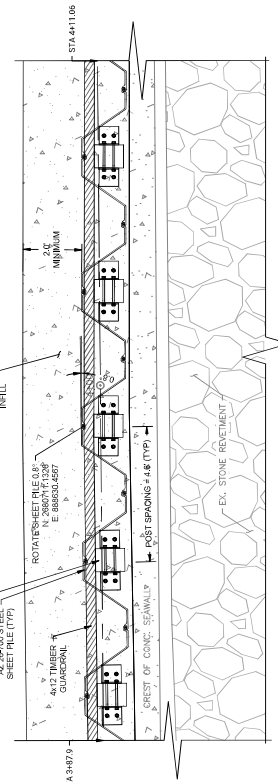
1 BULKEHEAD NORTH END: PARTIAL PLAN
S-101 SCALE: 1" = 2'



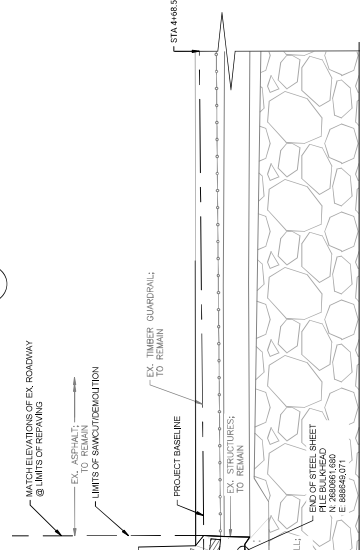
3 SHEET PILE CORNER #2: PARTIAL PLAN
S-101 SCALE: 1" = 2'



5 BULKHEAD SOUTH END: PARTIAL PLAN
S-101 SCALE: 1" = 2'



4 SHEET PILE CORNER #3: PARTIAL PLAN
S-101 SCALE: 1" = 2'



REVIEWS		DATE	BY	DATE
UNFINISHED	REC	01-02-2023		
AWAY	NEW COM	02-04-2025		
FINISHED	REVISE	02-04-2025		
LOCKED	AWAY/REVISE	02-02-2025		

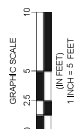
EXISTING AND DEMOLITION BULKHEAD SECTIONS

...SILVER FOR BID

PROJECT NO: 0023S002.00

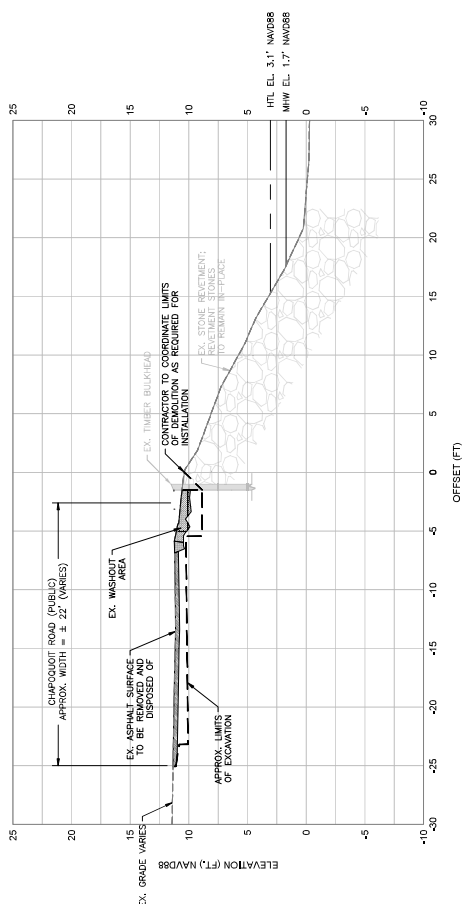
S-301

DRAFT

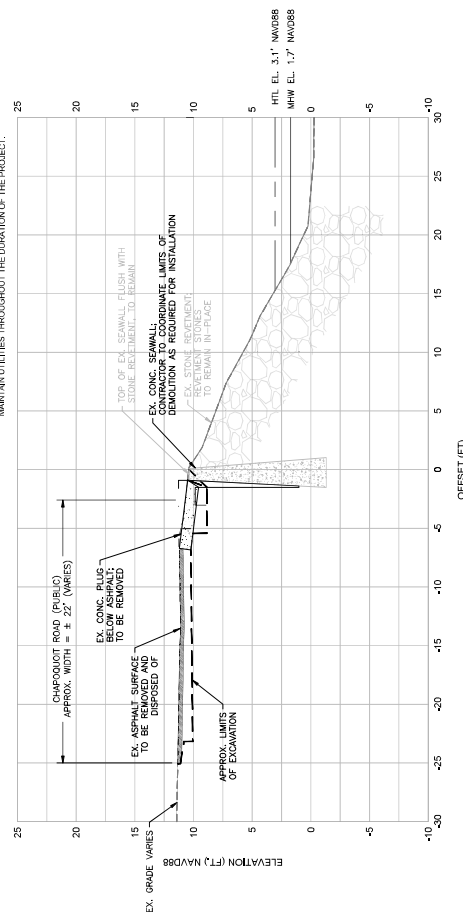


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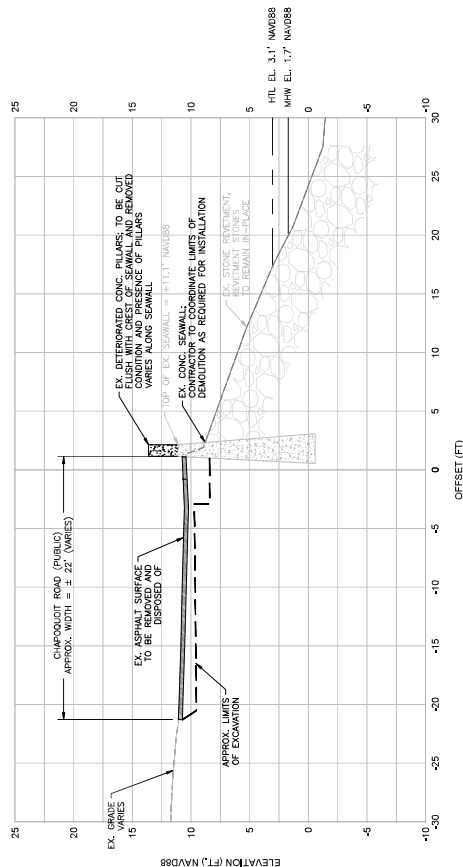
2. REFER TO C-02 FOR PROJECT NOTES.
3. REFER TO C-01 FOR EXISTING CONDITIONS.
4. EXIST UNDERGROUND UTILITIES WITHIN ROADWAY FOOTPRINT INCLUDING WATER, GAS, ELECTRIC, COMMUNICATIONS- LOCATIONS UNKNOWN. CONTRACTOR TO VERIFY LOCATION PRIOR TO BEGINNING WORK.
5. MAINTAIN EXISTING STREET AND TENTS AND REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1985 FOR ELEVATIONS.
6. THE CONTRACTOR SHALL SAFEGUARD ALL UTILITIES WITHIN THE LIMITS OF THE WORK AND MAINTAIN UTILITIES THROUGHOUT THE DURATION OF THE PROJECT.



A EXISTING SECTION AT TIMBER SHEETING
C-101 SCALE: 1" = 5'



B EXISTING SECTION AT STONE REVETMENT



C EXISTING SECTION AT CONC. SEAWALL
101 SCALE: 1" = 5'

- SECTIONS A-C NOTES:
1. LIMITS OF EXCAVATION AND DEVOLITION SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
 2. THE CONTRACTOR SHALL REMOVE EXISTING REVETMENT STONES AS REQUIRED FOR BULK-HEAD INSTALLATION.
 3. ALL REVETMENT STONES REMOVED FOR INSTALLATION SHALL BE REINSTALLED IN-KIND UPON BULK-HEAD INSTALLATION.

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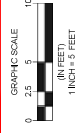
BULKHEAD REPAIR SECTIONS

ISSUANCE: ISSUED FOR BID

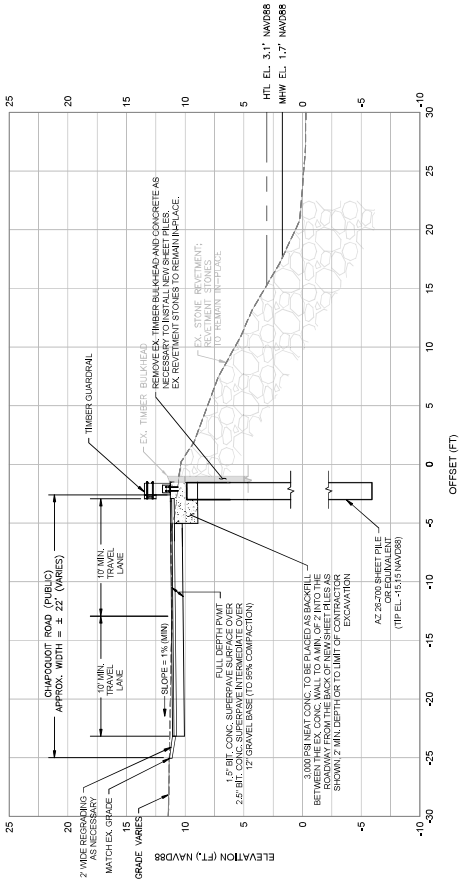
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S-302

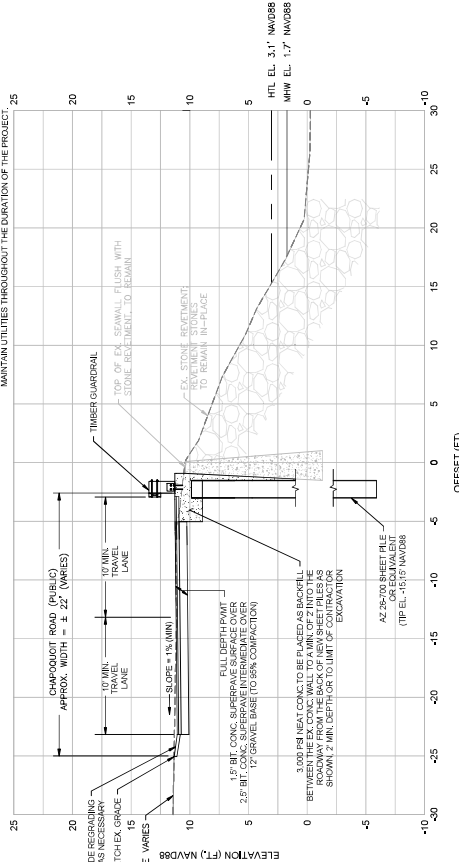
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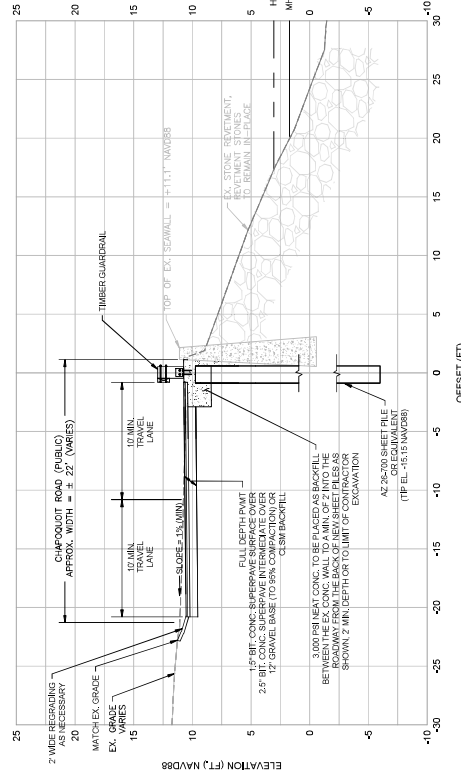
1. REFER TO G-002 FOR PROJECT NOTES.
2. REFER TO C-101 FOR EXISTING CONDITIONS.
3. EXIST UNDERGROUND UTILITIES WITHIN ROADWAY FOOTPRINT INCLUDING WATER, GAS, ELECTRIC, COMMUNICATIONS- LOCATIONS UNKNOWN, CONTRACTOR TO VERIFY LOCATION PRIOR TO BEGINNING WORK.
4. CONTRACTOR SHALL GUARANTEE AND TENTHLY AND REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 FOR ELEVATIONS.
5. THE CONTRACTOR SHALL SAFEGUARD ALL UTILITIES WITHIN THE LIMITS OF THE WORK AND MAINTAIN UTILITIES THROUGHOUT THE DURATION OF THE PROJECT.



D BULKHEAD SECTION AT TIMBER SHEETING
C-102 SCALE: 1" = 5'



E BULKHEAD SECTION AT STONE REVETMENT
C-102 SCALE: 1" = 5'



F BULKHEAD SECTION AT CONC. SEAWALL
C-102 SCALE: 1" = 5'

NO.	AB	DATE	DESCRIPTION
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DATE OF PREPARATION		
	BY	DATE
SURVEYED	MEC	01-30-2023
DRAWN	MOM/CEM	02-04-2025
DESIGNED	AM/SCS	02-04-2025
CHECKED	JMM/SCS	02-07-2025

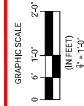
TYPICAL DETAILS

ISSUANCE:
ISSUED FOR BID

PROJECT NO: 0023S002J00

SHEET NUMBER
S-501

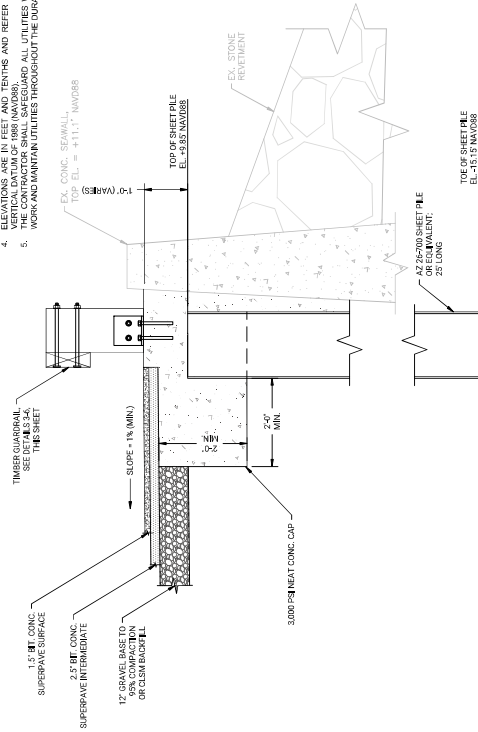
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D6 TYPICAL TIMBER GUARDRAIL SECTION
S-501 SCALE: 3/4" = 1'-0"

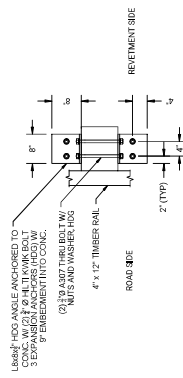
D4 TYPICAL TIMBER GUARDRAIL ELEVATION
S-501 SCALE: 3/4" = 1'-0"

- NOTES:
1. REFER TO C-002 FOR PROJECT NOTES.
 2. REFER TO C-001 FOR EXISTING CONDITIONS.
 3. EXIST UNDERGROUND UTILITIES WITHIN ROADWAY FOOTPRINT INCLUDING WATER, GAS, ELECTRIC, COMMUNICATIONS- LOCATIONS UNKNOWN, CONTRACTOR TO VERIFY LOCATION PRIOR TO BEGINNING WORK.
 4. ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1989 (NAVD89).
 5. THE CONTRACTOR SHALL SAFEGUARD ALL UTILITIES WITHIN THE LIMITS OF THE WORK AND MAINTAIN UTILITIES THROUGHOUT THE DURATION OF THE PROJECT.

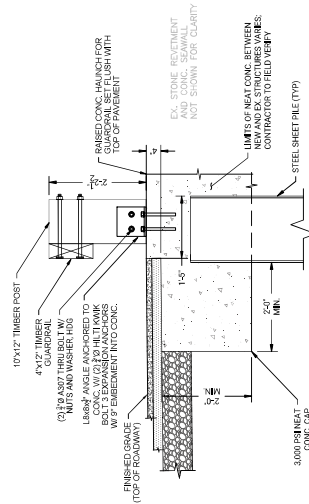


D2 DETAIL OF SSP BULKHEAD AT EX. CONC. SEAWALL
SCALE: 3/4" = 1'-0"

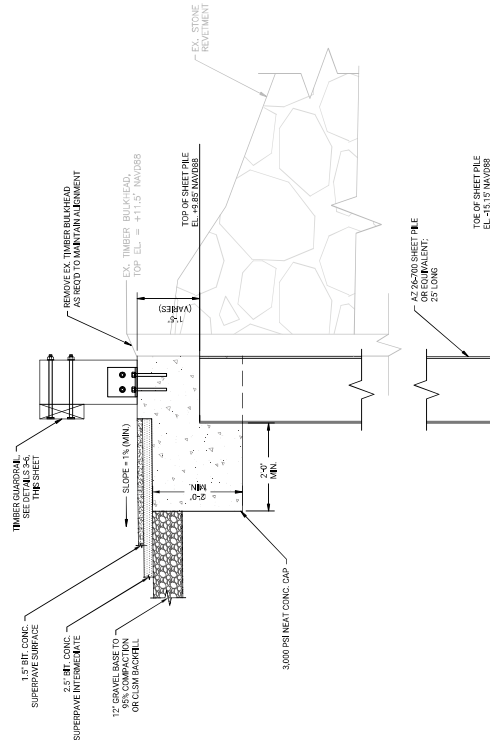
- NOTE:
1. TIMBER POST AND GUARDRAIL SHALL BE SOUTHERN YELLOW PINE, GRADE NO. 1 OR BETTER AND TREATED WITH 0.23 PCF MCA.



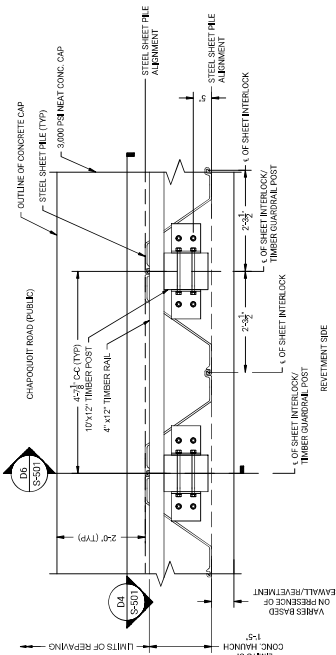
D5 TYPICAL GUARDRAIL BASE PLATE DETAIL
S-501 SCALE: 3/4" = 1'-0"



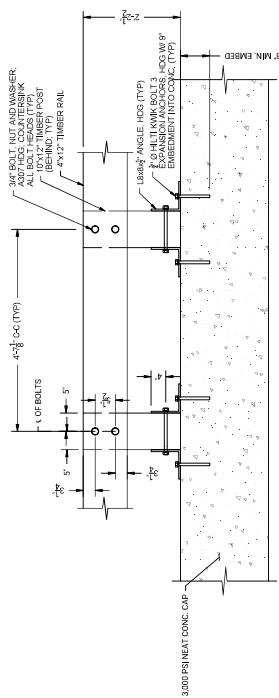
D6 TYPICAL TIMBER GUARDRAIL SECTION
S-501 SCALE: 3/4" = 1'-0"



D1 DETAIL OF SSP BULKHEAD AT EX. TIMBER BULKHEAD



D3 TYPICAL TIMBER GUARDRAIL MOUNTING PLAN



D4 TYPICAL TIMBER GUARDRAIL ELEVATION
S-501 SC41 F 3/4" = 1'-0"

End of Bid Document for Shivericks Pond Timber Pier