COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH AND GAME
OFFICE OF FISHING AND BOATING ACCESS

PROJECT NO. PA-425

ITEMIZED PROPOSAL
WITH
SPECIAL PROVISIONS
FOR

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

185 WATER STREET, PLYMOUTH, MA

THIS PROPOSAL TO BE OPENED AND READ

November 17, 2026

11:00 AM

TABLE OF CONTENTS

CONTRACT NO. PA-425	PAGE
Division 1:	
Table of Contents	1-1
Notice to Contractors	1-3
Instructions to Bidders	1-4
Signatures Required	1-6
Special Provisions	1-7
Build America, Buy America Submittal Certification	1-16
Division 2:	
Technical Specifications	2-1
Division 3:	
Participation by Minority or Women's Business Enterprises	3-1
Right-To-Know Act	3-9
Supplemental Equal Opportunity Antidiscrimination and Affirmative Action Program	3-10
Public Employment Laws	3-15
Division 4:	
MA Prevailing Wage Rates	4-1
Massachusetts Weekly Certified Payroll Form	4-30
Weekly Payroll Records Report & Statement of Compliance	4-31
Division 5:	
Proposal (Bid Schedule)	5-1
Board of Directors Vote	5-11
Non-Collusive Affidavit	5-12
Statement of Tax Compliance (REAP)	5-13
Certificate of Compliance with Massachusetts Employment Security Law	5-14
Contract Form	5-15
Schedule of Participation by Minority or Women Business Enterprises	5-17
Letter of Intent Minority or Women's Enterprise Participation Letter of Intent	5-18
Minority or Women's Business Enterprise Participation	5-19
Commonwealth Terms and Conditions	5-20
Request for Verification of Taxation Reporting Information	5-22
Electronic Fund Transfer Form	5-28

Attachments:

Permits: Plymouth Conservation Commission - Order of Conditions SE57-3495
Plymouth Planning Board Decision
MA DEP Chapter 91 License No. WW01-0000825
USACE Permit

Contract Plans:
Bid Issue: Project No. PA-425, Plymouth Harbor Boat Ramp Improvements & Coastal Resiliency Project, Plymouth, MA, dated October 2026, consisting of 31 sheets

THE COMMONWEALTH OF MASSACHUSETTS: NOTICE TO CONTRACTORS:

The Department of Fish and Game, Office of Fishing and Boating Access, invites sealed bids for the Plymouth Harbor Boat Ramp Improvements & Coastal Resiliency Project, in the Town of Plymouth, MA, in accordance with plans and specifications prepared by Collins Engineers, Inc. This project consists of concrete seawall reconstruction, drainage improvements, re-paving, boat ramp extension, aluminum gangway, floating dock and support pilings, and miscellaneous work in accordance with the above referenced documents. The estimated project value is $4,210,000.00. Bids will be submitted on the forms furnished by the Department, in the bid package and will be received at the Office of Fishing and Boating Access, 1 Rabbit Hill Road, Suite 200, Westborough, MA 01581, until 11:00 AM, local time, Tuesday, **November 17, 2026**, at which time they will be publicly opened and read. A **mandatory** pre-bid meeting will be held at the project site on Thursday **October 29, 2026 at 11:00 AM**. All plan holder questions must be submitted in writing no later than Thursday **November 5, 2026 at 4:00 PM**. All bids must be submitted in accordance with the Contract Documents and shall be accompanied by a bid deposit in the amount of 5% of the value of the bid. Bid deposits, payable to the Commonwealth of Massachusetts, Department of Fish and Game, shall be in the form of a bid bond, certified, cashier's or treasurer's check issued by a responsible bank or trust company. Contract Documents will be available after Thursday **October 15, 2026**, from the Office of Fishing and Boating Access, 1 Rabbit Hill Road, Westborough, MA 01581. Copies of the Contract Documents may be obtained from the Office of Fishing and Boating Access, in electronic .pdf form, by making a formal written request via email to: michael.e.count@mass.gov. Minimum wage rates for this project have been predetermined by M.G.L. under Chapter 149, Section 26 to 27D, inclusive. Proposals that do not have the Affidavit (of non-collusion, etc.) properly completed will be declared informal. Bids are subject to provisions M.G.L. Chapter 30, Sections 39F, 39G, 39H, 39K and 39M and Chapter 149, Sections 44A to 44H, inclusive. This contract is subject to all State Laws and Regulations concerning Minority Business Enterprises including Executive Order 237. The right is reserved to waive any informality in or reject any or all proposals. An award will not be made to any Contractor who is not able to complete the work no later than **April 15, 2028.**

Also,

1. This project shall comply with Build America, Buy America (BABA) provisions. The Contractor shall complete the BABA Submittal Certification for all products used on this project.

2. Bids received from any Contractor who does not attend the **mandatory** pre-bid meeting shall be declared informal, and an award shall not be made to any such Contractor.

By: Thomas K. O' Shea, Commissioner of Department of Fish and Game.

INSTRUCTION TO BIDDERS

1.0 BIDDING REQUIREMENTS

1.1 Deadline

The Department of Fish and Game, Office of Fishing and Boating Access will be accepting bids for the Plymouth Harbor Boat Ramp Improvements & Coastal Resiliency Project. All bids must be received by 11:00 AM on Tuesday, **November 17, 2026**, at the Office of Fishing and Boating Access, 1 Rabbit Hill Road, Suite 200, Westborough, MA 01581. Bids for all items must be received in sealed envelopes clearly marked: **"BID: PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS & COASTAL RESILIENCY PROJECT, PLYMOUTH, MA"**. All questions concerning this bid or the plans should be directed to Michael Count, Civil Engineer, DF&G, OFBA, Michael.e.count@mass.gov, 1 Rabbit Hill Road, Suite 200, Westborough, MA 01581, (508)614-5725.

1.2 Bid Deposit

All bids must be accompanied by a bid deposit equal to 5% of the total contract value. The deposit may be in the form of a certified check, bank, treasures or cashier's check, cash or a bid bond from a licensed surety company.

This bid deposit shall become the property of the Commonwealth of Massachusetts as liquidated damages if, after an award is made, said bidder shall fail to enter into the required contract within seven (7) days, after notice of said award.

All bid deposits of unsuccessful bidders, except those of the lowest responsible and eligible general bidders, shall be returned after the opening of the general bids. The bid deposits of the lowest responsible and eligible bidders shall be returned upon the execution and delivery of the general contract, or if no award is made, upon the expiration of thirty (30) days after the opening of the general bids. A bid may not be withdrawn by the bidder for a period of sixty (60) days excluding Saturdays, Sundays and legal holidays, after the day of bid opening.

1.3 Performance Bond & Labor and Materials Payment Bond

Prior to the signing of the contract the successful bidder must provide continuous bonds, each in an amount equal to one hundred percent (100%) of the total contract value. Such surety must be in accordance with the laws of the Commonwealth of Massachusetts governing public work, to cover faithful performance of the contract and payment of all obligations arising there under. Further, said surety must be current, and shall remain with the Department for the duration of the contract.

2.0 BIDDER"S REQUIREMENTS

2.1 General Insurance

The successful bidder must be prepared to provide evidence of insurance in the form of a Certificate of Insurance, and in amounts as indicated in the Specifications under the heading Insurance, including proof of Workman's Compensation coverage and Automobile and Vehicular coverage.

3.0 BID REQUIREMENTS

3.1 General Requirements

All bids for consideration must fulfill bidding requirements and bidder's requirements, as outlined in Section 1.0 and 2.0 above. Failure to adhere to any of those, and all additional requirements herein, may invalidate

your bid and eliminate it from consideration. The Department will not accept responsibility for inconsistencies in the bid or bidder's problems, based on the bidder's failure to view the site, and inform him/herself of general site conditions.

This project shall comply with Build America, Buy America (BABA) provisions. The Contractor shall complete the BABA Submittal Certification for all products used on this project.

Bids received from any Contractor who does not attend the **mandatory** pre-bid meeting shall be declared informal, and an award shall not be made to any such Contractor.

3.2 Permits, Fees and Notices
The Contractor shall obtain all permits, licenses, certificates inspection and other legal documents required, both permanent and temporary.

3.3 Applications for Progress Payments
All requests for payment must be itemized and submitted to the Engineer for approval. The procedure for payments shall be as follows:

1. The Contractor and OFBA Field Engineer shall prepare a draft pay estimate and submit to the Engineer for review and comment.

2. The Engineer prepares the pay estimate and submits to the Contractor for signatures.

3. Contractor shall sign and return the pay estimate to the OFBA for payment.

4. Progress payments shall be no more frequent than biweekly.

3.4 Manpower Utilization
Weekly manpower utilization reports, as included in the specifications, shall be submitted.

CONTRACT NO. PA-425

SIGNATURES REQUIRED

Signatures Required	**Page #**	**Penalty for to Sign**
Proposal Form Signatures	5-1 – 5-10	Informal Bid
Board of Director's Vote	5-11	
Affidavit	5-12	Informal Bid
Statement of Tax Compliance (REAP)	5-13	Informal Bid
Certificate of Compliance with Massachusetts Employment Security Law	5-14	Informal Bid
Contract Form	5-15 – 5-16	
Schedule of Participation by Minority or Women Business Enterprises	5-17	
Letter of Intent Minority or Women's Enterprise Participation Letter of Intent	5-18	
Minority or Women's Business Enterprise Participation	5-19	
Request for Verification of Taxation Reporting Information	5-22	
Electronic Fund Transfer Form	5-28	

Special Provisions
(No. PA-425)

SPECIAL PROVISIONS FOR PLYMOUTH PUBLIC ACCESS FACILITY, PLYMOUTH, MA

THE GENERAL CONTRACTOR'S MINORITY EMPLOYEE PERCENTAGE FOR THIS JOB WILL NOT BE LESS THAN 5%

Work to be Done

This project consists of concrete seawall reconstruction, drainage improvements, re-paving, boat ramp extension, aluminum gangway, floating dock and support pilings, and miscellaneous work. The work required shall be completed as shown on the plans, as specified herein and as directed.

Plans

The location and details of the work to be done are shown on plans entitled "***Plymouth Harbor Boat Ramp Improvements & Coastal Resiliency Project, Plymouth, MA***" dated October 2026, consisting of 31 sheets, and hereby referred to and made part of these Specifications. These plans are attached hereto.

Physical Data

The information and data furnished herein are provided for the Contractor's information, however, it is expressly understood that the Engineer will not be held responsible for any interpretation or conclusion drawn there from by the Contractor. Contractor shall adhere to time of year restrictions, if applicable.

The location and storage of the Contractor's and sub-contractor's trailers and equipment shall be restricted to areas outside the work limits so as to not interfere with traffic in the adjacent roadways and must be submitted to and approved by the Engineer. Two lanes of traffic shall remain open through the duration of construction.

General

The Contractor must satisfy himself, by his own investigation and research, regarding conditions affecting the work to be done and the plant equipment, labor and materials needed, and make his bid sole reliance thereon.

Wherever the term "Standard Specifications" is used hereinafter in these Special Provisions, it shall mean the Standard Specifications for Highways and Bridges of the Department of Public Works of Massachusetts, 1988 Edition and any and all addenda and revisions thereto, with the following exceptions: Section 1.17 "Department" shall be defined as the Commonwealth of Massachusetts, Department of Fish and Game, Office of Fishing and Boating Access, Section 1.19 "engineer" shall be defined as the Chief Engineer of the Department of Fish and Game, Office of Fishing and Boating Access or his designee. Where not specified, referred hereto or superseded by these Special Provisions, all applicable sections of the "Standard Specifications" shall apply.

In addition, on pg. 35, paragraph 1, eliminate the second sentence, eliminate all of paragraph 2, and eliminate all of paragraph 3. Appeals to agency decisions shall be made through courts of law.

The Contractor shall furnish all labor and materials, tools, plant and equipment and do all the work necessary to furnish and install and complete the work in accordance with these Special Provisions and the Standard Specifications.

During construction, the Contractor shall secure all necessary permits from owners, and all releases from the owners of record to trespass on their property in the transportation of materials and equipment to the work site. The Contractor shall repair at his own expense any damage caused by him to lawns,

driveways, structures, etc. Upon completion of the work, the Contractor shall remove from the site all debris, excess materials, tools and equipment, and shall leave the premises in a neat and orderly condition, to the satisfaction of the Engineer.

At all times, the Contractor shall be required to conform to all local, State and Federal regulations as to proper use of highways, bridges, etc. The Contractor shall at all times, while conducting water based construction activities, comply with all navigational safety rules and regulations including the proper approved navigation lighting.

The award of the contract is subject to available funding. The Department reserves the right to eliminate any portion of the work under this contract in order to bring the total expenditure within the amount available for this project and to limit prosecution of the work to such points and in such as may be directed.

It is estimated that the quantity of materials mentioned in the proposal will be required, but this amount shall not control the performance of this contract and the Contractor shall be bound hereunder whether or not such estimate is approximately correct.

No equipment or machinery having caterpillar or heavy treads that would mar or damage pavements shall be permitted to move or to operate from existing pavements unless such equipment or machinery is moved on suitable pontoons or trailers. Any damages caused by the Contractor for his operations shall be repaired by Contractor.

The Contractor shall so limit his operations and carry on his work in such manner and sequence as to insure the least possible interference with navigation, traffic and normal use of the adjacent areas. Special attention is called to the requirements of Section 7.09, 7.10 and 7.11 of the "Standard Specifications", which refer to "Public Safety and Convenience", "Barricades and Warning Signs", and "Traffic Officers".

Particular attention of all bidders is called to Section
8.01, 8.03, 8.10, 8.11 and 8.12 and 8.13 of the "Standard Specifications", which refer to "Subletting or Assignment of Contract", "Prosecution of Work", "Determination and Extension of Contract Time for Completion", "Failure to Complete Work on Time", "Default Termination", and "Convenience Termination".

The Department reserves the right to reject any bid it deems unbalanced. The Department reserves the right to require a Contractor to submit a breakdown of any unbalanced or lump sum bid with dollar amounts, said breakdown subject to the approval of the Engineer. An unbalanced bid or item may be subject to payment of only the actual labor and material plus reasonable profit at the Engineers decision. The Contractors attention is called to Section 2.09 of the Standard Specifications.

In the event that the work described in the contract is not physically completed within the time stipulated therein, the Contractor shall pay to the party of the first part a designated sum per day for the entire period of overrun in accordance with the Schedule of Deductions listed below

Supplementing Subsection 8.11
SCHEDULE OF DEDUCTIONS

Project Value			Deductions/$/day
0	to	100,000	575.00
100,000	to	500,000	850.00
500,000	to	1,000,000	975.00
1,000,000	to	2,000,000	1,250.00
2,000,000	to	3,000,000	1,550.00
3,000,000	to	4,000,000	1,800.00
4,000,000	to	5,000,000	2,200.00
5,000,000	to	10,000,000	2,400.00
10,000,000	to	15,000,000	2,700.00
over 15,000,000			3,500.00

The work limits shown on the plans, shall be laid out in the field by the Contractor and any damage to structures caused by his operations shall be satisfactorily remedied at the sole expense of the Contractor.

The Contractor's use of the site for work is subject to the regulations of the Town and must be restricted to the limits of work shown on the contract drawings or as directed by the Engineer. Should the Contractor require areas for storage of construction materials or equipment, additional to those areas provided, such additional areas must be arranged by the Contractor at no additional cost to the Department.

The Contractor's attention is drawn to Section 7.05 in the "Standard Specifications" which refers to "Insurance Requirements".

The Contractor shall construct such temporary access roads as may be necessary for his equipment, men and materials to reach the sites of the work and to carry out the terms of this contract. Upon completion of the work, all temporary access roads shall be removed and the areas restored to their original conditions to the satisfaction of the Engineer.

The Contractor's attention is called to the Section 7.14 of the "Standard Specifications", "Responsibility for Damage Claims".

Applicable Laws, Regulations and Permits
The bidders attention is directed to the fact that all applicable State Laws, Municipal Ordinances, permits and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the CONTRACT throughout, and they will be deemed to be included in the CONTRACT the same as though herein.

The U.S. Army Corps of Engineers Permit; Massachusetts Department of Environmental Protection Chapter 91 License; Town of Plymouth Order of Conditions; Town of Plymouth Planning Board Decision is attached to and hereby made a part of this contract. The Contractor must adhere to the conditions of the permits and licenses issued for the project.

All other necessary permits are the responsibility of and shall be obtained and paid for by the Contractor.

Surveying Control
Survey baselines and benchmarks are shown on the plans. These reference marks will be recovered by the

Contractor prior to the start of the work. The Contractor's plan for project control shall be submitted to the Engineer for approval prior to starting any work.

The Contractor shall provide at his own expense all materials and labor as may be required to establish all project control range lines, tide boards, additional reference marks and line and grade stakes.

If the Contractor, through willfulness or carelessness, removes or permits to be removed such reference marks before the prosecution of the work requires it, they shall be replaced at his own expense. All work shall conform during its progress and on its completion truly to the lines and grades given by the Engineer. The work shall be done in a thoroughly substantial and workmanlike manner, in accordance with the plans and specifications.

The Engineer shall be permitted at all times to check the lines, elevations, reference marks, batter boards, etc., set by the Contractor. Any errors or discrepancies in lines, elevations, shall be corrected. Such a check shall not be construed as to be an approval of the Contractor's work and shall not relieve or diminish in any way the responsibility of the Contractor for the accurate and satisfactory completion of the entire work. The Contractor shall be available to assist the Engineer with these checks as needed.

The Contractor shall make, check, and be responsible for all measurements and dimensions necessary for proper construction.

The level of the water referred to in these Special Provisions and shown on the plans is that established by the Engineer during the preliminary surveys for the work herein described. The elevations are based on the datum as shown as on the plans.

Inspection of Project Work

Inspectors will be assigned to the project by the Engineer on a full-time or part-time basis, as required to cover the work to be performed under the contract. An Inspector, appointed by the Engineer, will be present whenever materials are being placed, and if for any reason the work of placing materials is not carried on continuously, the Contractor shall give the Engineer timely written notice of the expected arrival of materials in order that the Inspector shall be present when they arrive. No materials shall be paid for under this contract which have not been examined and passed by the Inspector, or which for any reason are placed outside the prescribed limits of the work unless approved in writing by the engineer.

Manuals and Certificates

Maintenance and/or Operation Manuals, Material Specifications, Certificates of Testing and Treatment, shall be provided for items manufactured off-site upon delivery of material to the site as required by the Engineer. Retainage will not be released until all literature mentioned above is submitted to the Engineer.

Clean Air and Water Pollution Control Acts (Supplementing Sec. 7.01)

The Contractor is subject to the provisions of the Clean Air Act of 1970 (42 U.S.C. 1857 et. seq.) and the Federal Water Pollution Control Act (33 U.S.C. 1251 et. seq., as amended), and the Contractor agrees to comply with said Acts, and all applicable standards, orders, or regulations issued there under. The Contractor agrees it will insert the provisions of this paragraph in any subcontract arising from this Contract.

Prevention of Water Pollution-Sanitary Provisions (Supplementing Section 7.02)

During the performance of all work under this contract, the Contractor shall adopt such precautions in the conduct of his operations as may be necessary to avoid contaminating water in adjacent streams or pond areas. All moving of equipment, water control in foundations areas, and other operations likely to create

silting, shall be so planned and conducted as to minimize pollution in adjacent streams or pond areas. Water used for any purpose whatsoever by the Contractor, which has been contaminated with soil, bitumen, salt or other pollutants shall be so discharged as to avoid affecting nearby waters. Under no circumstances shall the Contractor discharge pollutants directly into any adjacent streams or pond areas.

When the Contractor uses water from natural sources for any of his operations, intake methods shall be such as to avoid contaminating the source of supply and maintain adequate downstream flow when the source is a stream.

Photographs

The Contractor shall furnish the Engineer, upon request, photographs of the project area. A USB thumb hard drive containing digital photographs shall be furnished. Two (2) views will be required as directed by the Engineer, and shall be taken as follows:

1. Before construction operations have started;
2. After construction has been completed;

The areas to be photographed and approximate points from which they are to be taken will be designated by the Engineer.

Eash photograph shall be organized to include a legible description or title indicating date, location, direction from which taken, project title and item of work photographed.

Upon completion of all work under this contract, the Contractor shall deliver all photographs on the USB thumb hard drive, clearly identified, to the Engineer.

The cost of furnishing photographs and thumb drive shall be included in the prices bid for the various items scheduled in the Proposal.

Insurance

The Contractor shall carry and maintain in effect during the entire currency of the contract, at his own expense, the following kinds and amounts of insurance in a company or companies approved by the Department. Such insurance shall cover claims and suits which arise out of or result from the Contractor's execution of the contract work whether such execution is by the Contractor himself or by any Subcontractor, or by any other entity representing the Contractor:

Worker's Compensation as required by the Worker's
Compensation Laws of the Commonwealth of Massachusetts and, in conjunction therewith, Employer's Liability with a minimum limit of $500,000.

"Broad Form" Comprehensive General Liability including, but not limited to, Bodily Injury, Personal Injury and Property Damage Liability, Full Contractual Liability and liability arising from Explosion, Collapse and Underground Damage, Minimum limit of liability - $1,000,000.

Automobile Bodily Injury and Property Damage Liability for all owned, non-owned and hired automobiles operated in connection with the performance of the contract. Minimum limits of liability:

Bodily Injury	-$1,000,000
Property Damage	-$ 250,000

Pollution Prevention Liability, Mimnimum limits of liability -$1,000,000

Certificate of Insurance, Prior to beginning work under the contract, the Contractor shall furnish the Department a Certificate of Insurance acceptable to said Department evidencing the existence of the forgoing insurance coverage. Such Certificate also shall provide that the Department will be notified at least thirty (30) days in advance of the cancellation of non-renewal of any insurance covered by the Certificate.

Certificates of Insurance shall name Owner being Commonwealth of Massachusetts, Department of Fish and Game, Office of Fishing and Boating Access and Town of Plymouth as "additional insured" for this project.

Compliance with the Wetlands Protection Act

An Order of Conditions has been obtained under the Commonwealth of Massachusetts Wetland Protection Act, General Laws, Chapter 131, Section 40. The Order is hereby made part of these Specifications, and is attached hereto.

DEP Sign

The Contractor shall furnish and erect at a suitable location, a sign 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 SE57-3495, PCC Number PCC-26-41"

The sign will remain posted on the site for three (3) months after the completion of the project, after which time the Contractor will remove the sign and it then becomes the property of the Contractor for his use.

Cleaning Site and Periodical Cleaning

The Contractor shall at all times prevent the accumulation of waste materials or rubbish in the construction and storage area, including interiors of buildings. Cleaning will be carried out day by day as may be necessary for the work area utilized by the Contractor. Waste materials and rubbish shall be removed from the site at each cleaning.

The Contractor shall at the completion of his work remove all temporary structures, utilities and services which have been installed for the prosecution of his work.

Minimum Wage Rates

Attention is called to the fact that Minimum Wage Rates are established for the project and are set forth herein.

Overloaded Trucks

The Department will not accept any materials delivered to any project in motor vehicles or semi-trailer units that exceed the legal maximum gross weight allowed for the particular class as specified in Section 19A of Chapter 90 of the General Laws of Massachusetts. The provisions of sub-section 7.03 of the "Standard Specifications" shall still apply.

Massachusetts General Laws, Chapter 62C, Section 49A (REAP)

The Attention of all Bidders is drawn to the provisions of Massachusetts General Law 62C, Section 49A which requires Contractors to certify that they have filed all state tax returns and have paid all required state

taxes.

The Department will furnish a blank certification form which, will be completed by the Contractor, signed and incorporated into the Contract. This attestation must be provided at the time of issuing, renewing or extending the contract. It is to be noted that submission of the social security or federal identification number is strictly voluntary and no contract may be denied because this information was not provided.

Executive Order 130 (Anti-Boycott Covenant)

The Contractor warrants, represents and agrees that during the time this contract is in effect, neither it nor any affiliated company, as hereafter defined, participates in or cooperates with an international boycott, as defined in Section 999 (b),(3) and (4) of the Internal Revenue Code of 1954, as amended, or engages in conduct declared to be unlawful by Section 2 of Chapter 151E, Massachusetts General Law. If there shall be a breach in the warranty, representation and agreement contained in this paragraph, then without limiting such other rights as it may have, the Commonwealth shall be entitled to rescind this contract.

As used herein, an affiliated company shall be any business entity of which at least 51% of the ownership interests are directly or indirectly owned by the Contractor or by a person or persons or business entity or entities directly or indirectly owning at least 51% of the ownership interests of the Contractor.

Executive Order No. 213
Employment Opportunities through State Contracts

WHEREAS, the Commonwealth administers and funds various programs of public assistance; and

WHEREAS, it is in the interest of the Commonwealth and the recipients of public assistance that such recipients secure employment and thereby become economically self-sufficient; and

WHEREAS, the Commonwealth spends hundreds of millions of dollars annually to contract with private providers for a vast array of health, social and other services; and

WHEREAS, these private contractors hire thousands of employees to provide these critical services; and

WHEREAS, it is the policy of the Commonwealth to provide as many job opportunities as possible to recipients of public assistance;

NOW, THEREFORE, I, EDWARD J. KING, Governor of the Commonwealth, by virtue of the authority vested in me as Supreme Executive Magistrate by the Constitution and the statutes of the Commonwealth, do hereby order as follows:

(I) Subject to regulations to be promulgated by the
Commissioner of Administration, as hereunder provided, every agency, bureau, board, commission, institution, and department of the Executive Branch of the Commonwealth shall include the following requirement in solicitations of bids, contracts, or agreements, having an effective date on or after July 1,1982 or solicitations of bids, contracts, or agreements, entered into subsequent to the effective date of said regulations for the provision of paid services entered into with a private contractor who employs under contract(s) with the Commonwealth a total of twenty (20) or more persons: (1) at least 5 percent of the total number of the contractor's employees working under all of its contract(s) with the Commonwealth must have been recipients of public assistance program(s) administered by the Department of Public Welfare.

(II) In complying with the above clause, however, no contractor shall be required to lay-off or release existing

employees to meet the 5 percent requirements. It is expected that expansion and normal attrition will provide the vacancies necessary to meet the 5 percent requirement.

(III) The Commissioner of Administration shall promulgate regulations to carry out the purposes of this Executive Order. Such regulations may include Provisions: (1) Specifying the procedures by which the Department of Public Welfare will refer qualified recipients to the contractor; (2) Creating exemptions for those specific positions requiring skills or professional levels not available in the public assistance recipient groups; (3) Specifying the method by which a contractor not meeting the 5 percent requirement upon initial performance will achieve compliance, and establishing time limits therefore; (4)
Specifying the method by which the contractor shall report on its compliance with this Order; (5) Specifying the conditions under which the contract may be terminated for non-compliance; and (6) Specifying any other conditions or procedures necessary to carry out the purpose of this Executive Order; (7) In specified cases, the Commissioner of Administration may grant provider waivers.

(IV) All contracting state agencies are hereby directed to cooperate fully with the Commissioner of Administration in the implementation of this Order, and to provide all information requested by the Commissioner.

(V) All contracting state agencies shall file a report with their executive offices as well as the Commissioner of Administration six months after promulgation of the regulations under this Executive Order, and then annually thereafter, stating the degree of compliance with the Order, whether the purpose of the Order has been accomplished, and any recommendations for change.

(VI) The Commissioner of Administration shall report to the Governor on the degree of compliance with this Executive Order, whether the purpose of the Order has been accomplished, and any recommendations for change.

EXECUTIVE ORDER 195

Right to Examine Records
Executive Order 195, signed by Governor Edward J. King, on April 27, 1981: "The Governor or his designee, the secretary of administration and finance, and the state auditor or his designee shall have the right at reasonable times and upon reasonable notice to examine the books, records and other compilations of data of (vendor) which pertain to the performance of the provisions and requirements of this contract."

Compliance to Executive Order No. 281
Your attention is drawn to the publication entitled "South Africa & Nambia Lists" which identifies vendors that are doing business with these two governments. In accordance with Executive Order No. 281, no business will be done with these vendors unless exempt as stipulated in the above referenced publication.

Additional Bond Security (M.G.L., Ch. 149, Sec. 29) and
Additional Legal Requirements (M.G.L., 39O, and 39R):
In addition to the five (5%) percent Bid Bond required to accompany the bid, the successful bidder will be required to furnish a Performance Bond in an amount equal to one hundred percent (100%) of the Contract Sum as security for the faithful performance of this contract and also Material and Payment Bond in an amount not less than one hundred percent (100%) of the Contract Sum or in a penal sum not less than that prescribed by the State, Territorial or Local Law, as security for payment of persons performing labor on the project under this contract. The Performance Bond and the Labor and Materials Payment Bond may be in one or in separate instruments in accordance with local law and shall be delivered to the Owner not later than

PA-425

Build America, Buy America Submittal Certification

BUILD AMERICA, BUY AMERICA ACT. The Contractor will not expend any funds appropriated by Congress without complying with the Build America, Buy America (BABA) Act. The BABA Act requires the use of domestic end products and domestic construction materials.

This is certification that, for each item included in this submittal, the materials were manufactured, mined, or produced in the U.S.:

Submittal Number: _____

Title: _____

Contractor/Supplier Signature: _____

Date: _____

What Is Build America, Buy America?

When Congress passed the Bipartisan Infrastructure Law—also known as the Infrastructure Investment and Jobs Act—it not only made a once-in-a-generation investment in our nation's infrastructure, it also created a historic opportunity to increase domestic manufacturing in communities across the country. With this game-changing law, we are rebuilding America's roads, bridges and rails, expanding access to clean drinking water, ensuring every American has access to high-speed internet, tackling the climate crisis, advancing environmental justice, and investing in communities that have too often been left behind, all while maximizing the use of American iron and steel, manufactured goods and construction materials.

We are building a national network of 500,000 electric vehicle chargers across the country. We are making sure that every child—and every American—has clean water to drink. We are creating good-paying union jobs, helping to revitalize American manufacturing, and positioning the United States to lead the 21st century.

By requiring the use of Made in America content, the Build America, Buy America provisions in the Bipartisan Infrastructure Law will help stimulate private sector investments in domestic manufacturing, bolster critical supply chains, and support the creation of good-paying union jobs so that America's workers and firms can compete and lead globally for years to come.

As we've learned from the pandemic, America's critical supply chains have gaps. Manufacturers will need time to find on-shore suppliers and scale up production to meet demand. Agencies have the authority to issue waivers from Build America, Buy America requirements, but will do so judiciously—only as needed—and strategically, with an aim toward ensuring that Made in America goods will be used once firms make needed investments to expand domestic production. Waivers will be limited, targeted, and, where appropriate, conditional. They will cover specific items or specific periods of time to enable agencies, recipients, and the private market to build capacity and respond to the new conditions.

Waivers will not be an ***alternative*** to increasing domestic production, but a ***tool*** to promote investment in our domestic manufacturing base, strengthen critical supply chains, and position U.S. workers and businesses to compete and lead globally in the 21st century. Unlike in the past, Build America, Buy America waivers will not foreclose American manufacturing, but send clear market signals, creating an incentive for American firms to invest in America and create good jobs in our communities.

Importantly, Build America, Buy America applies to Federal financial assistance programs for infrastructure, *whether or not those programs received funding in the Bipartisan Infrastructure Law*. These new, across-the-board domestic content requirements present an unprecedented opportunity to support good-paying construction *and* manufacturing jobs while strengthening our industrial base and promoting American innovation for years to come.

Successful Build America, Buy America implementation will create an opportunity for a "virtuous cycle" in which infrastructure investment, critical supply chain efforts, and other Biden-Harris Administration priorities, including sustainability and equity, align and support each other.

What Do Federal Financial Assistance Recipients Need to Know About Build America, Buy America?

Q. What are the requirements of Build America, Buy America?

(1) All iron and steel items used in covered projects must be produced in the United States. This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

(2) All manufactured products used in covered projects must be produced in the United States. This means the manufactured product was manufactured in the United States, and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product.

(3) All construction materials used in covered projects must be manufactured in the United States. This means that all manufacturing processes for the construction material occurred in the United States.

Q. What Federal financial assistance awards are covered by Build America, Buy America?

Build America, Buy America provisions apply to Federal financial assistance awards (e.g., grants and loans) made after May 14, 2022 that will be used to construct, alter, maintain, or repair infrastructure in the United States. Note that these provisions are not limited to infrastructure projects funded by the Bipartisan Infrastructure Law. **Assistance recipients who have questions about whether their particular project is covered by Build America, Buy America should contact the funding agency.**

Q. Can Build America, Buy America requirements be waived?

Yes, when necessary. Agencies may waive Build America, Buy America requirements on the basis of (1) nonavailability, (2) unreasonable cost, or (3) public interest. All waivers must be in writing, published for public comment, and approved judiciously. Waivers should also be limited to specific projects or time periods, targeted to only the products necessary, and when appropriate, conditional, to maximize the use of American-made items. **Assistance recipients who have questions about waivers should contact the funding agency.**

Q. What types of infrastructure are covered by Build America, Buy America?

Infrastructure includes projects with public functions, such as roads, highways, bridges, public transportation facilities, dams, ports, harbors, railroads, freight and intermodal facilities, airports, water systems, electrical transmission facilities and systems (including structures, facilities, and equipment that generate, transport, and distribute energy, including electric vehicle charging facilities), broadband infrastructure, and buildings. **Assistance recipients who have questions about whether their particular project is considered infrastructure should contact the funding agency.**

Q. When and how do I apply for a waiver?

Waivers should be used judiciously. Federal financial assistance recipients must first take proactive steps to identify qualifying Made in America articles, materials, and supplies for their projects. **Recipients who have worked diligently to identify qualifying items, but concluded a waiver may still be necessary, should contact the funding agency to learn how to apply for a waiver.**

Q. When do Build America, Buy America requirements expire?

Build America, Buy America has no expiration date. We encourage and welcome stakeholder input about how we can support recipients in the application of Build America, Buy America as we work to bolster America's manufacturing base and create good manufacturing and construction jobs in communities across the country.

Overview of Build America, Buy America Guidance

Build America, Buy America Sourcing Requirements

The following conditions apply to Federal financial assistance obligations for infrastructure made after May 14, 2022:

- for iron and steel items, all manufacturing processes, from the initial melting stage through the application of coatings, must occur in the United States
- for manufactured products, the final manufacturing process must occur in the United States and the cost of components mined, produced, or manufactured in the United States must be greater than 55 percent
- for construction materials, all manufacturing processes must occur in the United States

An article, material, or supply should only be classified into one of the categories above.

Covered Federal Financial Assistance Programs and Projects[1]

- Federal financial assistance means assistance that non-Federal entities receive or administer in the form of grants, cooperative agreements, non-cash contributions or donations of property, direct assistance, loans and loan guarantees.
- A Federal financial assistance program for infrastructure is a program in which funds are used for an infrastructure project, regardless of whether infrastructure is the primary purpose of an award. The Build America, Buy America conditions only apply to infrastructure portions of an award and apply even if Federal funds are not paying for the entire project.
- "Project" means the construction, alteration, maintenance, or repair of infrastructure in the United States.
- "Infrastructure" includes roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure; buildings and real property. The generation, transportation, and distribution of energy—including electric vehicle charging facilities—are considered infrastructure. Private homes for personal use are not.
- Build America, Buy America conditions do not apply to tools, equipment, and supplies brought to a construction site and removed at or before the completion of the project or to equipment and furnishings (such as chairs) used at or within the finished infrastructure project, but which are not an integral part of the structure or otherwise affixed to the project. For example, Build America, Buy America conditions would apply to the funds used to construct a library, but not to funds used to buy books or furniture for the library.

Waiver Types

With the concurrence of the Made in America Office, a Federal agency may waive the application of a Buy America Preference when the agency finds that:

(continued on next page)

[1] Some programs or projects may not be covered by Build America, Buy America due to exclusions or the operation of waivers. Assistance recipients who have questions about whether their particular project is covered by Build America, Buy America should contact the funding agency.

- one or more iron or steel items, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality (a "**nonavailability waiver**"),
- the inclusion of one or more iron or steel items, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent (an "**unreasonable cost waiver**"), or
- applying the domestic content procurement preference for one or more iron or steel items, manufactured products, or construction materials would be inconsistent with the public interest (a "**public interest waiver**")—public interest waivers are the most flexible type of waiver, but, like all waivers, must be necessary and appropriately justified.

Waiver Principles

Federal agencies must be judicious in their use of waivers. They should apply the following principles when developing waiver proposals:

- **Limited:** Waivers should be project- or award-specific whenever possible, and time-limited when not limited to certain projects or awards.
- **Targeted**: Waivers should cover only the products or category of products necessary (rather than covering broad sectors such as "all manufactured products").
- **Conditional**: Agencies should consider including conditions on the waiver, when appropriate and consistent with law, that advance the goal of Buy America policies.

Waiver Process Requirements

- Agencies must post waivers for at least 15 days for public comment
- Agencies should consult with MIAO prior to posting a waiver with broader applicability (e.g., program-level waiver) to ensure it covers no more than necessary
- Agencies must submit waivers to MIAO for review after public comment to determine if it is consistent with policy
- MIAO, working with GSA, is working to build functionality on the existing waiver transparency website
- Agencies with existing general applicability waivers that are more than five years old (unless those waivers are product-specific) must begin reviewing those waivers by November 15, 2022. In the meantime, those waivers remain in force.

Construction Materials

- Construction materials include an article, material, or supply that is or consists primarily of non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber; and drywall.
- The Build America, Buy America Guidance establishes a preliminary standard for construction materials, requiring the last two steps in the manufacturing process of the construction material be completed in the United States. OMB is seeking stakeholder input as it works to update this preliminary standard with a final standard, consistent with Build America, Buy America.

###

DIVISION 2

Technical Specifications

ITEM 101.1 MISCELLANEOUS AND SITE PREPARATION LUMP SUM

Description

The Contractor shall prepare the site for the various items of work described herein. The work shall include all costs for mobilization and demobilization and all miscellaneous work to complete the project as specified, as shown on the plans, and as directed by the Engineer. This item includes but is not limited to: mobilization and demobilization, signage, safety fencing, clearing, removal and disposal of all vegetation and debris within the limits of the project site, removal, temporary storage, and reinstallation of the rock monument, decorative anchor, flag poles, decorative bollards, boat ramp pay kiosk, electric, water and sanitary sewer services, and pedestrian benches as indicated on the drawings, identification, protection, and/or relocation of existing utilities within the project site, traffic control, site security, survey and baseline control, as-built plans and miscellaneous work, and conformance with all permit requirements.

All other miscellaneous work as required to complete the project, but not covered by individual items in the contract shall be paid for under this Item.

Where applicable, locate and identify existing underground and overhead service and utilities within the Contract limits. Provide adequate means of protection of utilities, abutting structures, roadways, sidewalks and services designated to remain. Repair utilities, public structures and services damaged by the Contractor's equipment and/or work force during the Contract work operations, to the satisfaction of the Owner, at the sole expense of the Contractor. The Contractor shall be responsible for maintaining uninterrupted service to the Harbormaster's Office and other abutting structures. The Contractor shall notify the Owner a minimum of 15 days in advance of any outages.

Where applicable, the Contractor shall arrange for the disconnection, disconnect, and seal all utilities and services designated to be removed before the start of site work operations. All work shall be performed in accordance with the requirements of applicable utility companies or agencies involved.

If uncharted or incorrectly charted underground or underwater piping of utilities and services are encountered during the progression of work, the Contractor shall notify the applicable utility company or agency to obtain procedure directions. The Contractor shall cooperate with the applicable utility company or agency in maintaining active services in operation.

Survey Control

The Contractor shall locate, protect, and maintain benchmarks, monuments, control points and project engineering reference points. The Contractor shall re-establish disturbed or destroyed items.

The Contractor shall recover these reference marks prior to the start of work.

The Contractor shall provide, at his own expense, all materials and labor as may be required to establish all project control for layout and grading and additional reference marks.

If the Contractor, through willfulness or carelessness, removes or permits the removal of such reference marks before prosecution of the work requires it, they shall be replaced at the Contractor's own expense.

All work shall conform during its progress and on its completion truly to the lines and grades given by OFBA. The work shall be done in a thoroughly substantial and workmanlike manner, in accordance with the Contract Drawings, these Specifications and as directed by OFBA.

The plane of North American Datum of 1983 (NAD83/2011) and the North American Vertical Datum of 1988 (NAVD88) is referred to in these Specifications and on the Contract Drawings.

The Contractor shall make, check, and be responsible for all measurements and dimensions necessary for proper construction. The contractor shall submit method of construction layout including type and model numbers of survey equipment to be used.

Materials
Materials shall be as selected by the Contractor and approved by OFBA, in accordance with the Contract Drawings and/or in the Specifications.

Inspections
OFBA will assign a Resident Engineer to this project on either a full time or part-time basis, as required to cover the work under this Contract, as justified by OFBA. The Resident Engineer shall be OFBA's representative for this project.

OFBA must be notified at least 48 hours in advance of site activities in order make arrangements for inspections.

If during the course of work, it is deemed necessary to remove debris from the project site, the Contractor will submit to OFBA written confirmation of proper disposal for all debris removed from the project site. No payment shall be made under this contract for improperly disposed material or debris.

OFBA shall be permitted at all times to check the lines, grades, elevations, reference marks, batter boards, etc. set by the Contractor. The Contractor shall correct any errors or discrepancies in these items discovered by checks. Such checks shall not be construed as to be an approval of the Contractor's work and shall not relieve or diminish in any way the responsibilities of the Contractor for the accurate and satisfactory completion of the entire work. The Contractor shall be available to assist OFBA with these checks as needed.

Construction Methods The work to be done under this item is described below; however, it shall be the responsibility of the Contractor to prepare the site for work contemplated and described in the subsequent items:

All work shall be done in a workmanlike manner to cause the least interference with traffic and the use of the facility. Work shall be performed, including storage of materials, waste, and debris, to allow for boat ramp, parking, and harbormaster building access during construction in accordance with the phasing plan provided in the Contract Drawings.

The Contractor shall submit a complete schedule of values for all items that shall be paid for under this Contract. This schedule of values shall show all relative costs to the item as bid, such as the cost of material, labor, mobilization and demobilization, survey and all incidentals to the item.

The Contractor shall also provide a complete breakdown of all items that shall be paid for under this Contract, including Lump Sum items.

The Contractor shall submit a work plan procedure detailing sequences of operations including position of equipment and materials.

The Contractor shall submit a list of equipment to be used on the site, including but not limited today, work skiffs, pile driving hammer, excavator, backhoe, and other land-based equipment required to complete the work.

The Contractor shall submit a construction project schedule within ten (10) calendar days before the

start of construction. The construction schedule shall be maintained on site for review during site meetings. If a major change is made to the schedule, the updated schedule shall be submitted to the OFBA immediately. Should the Contractor find that they cannot maintain the schedule as originally intended, Contractor shall immediately submit a revised schedule without being requested to do so by the OFBA or Engineer.

All work and trucking shall occur from 7:00 AM to 5:00 PM, Monday through Friday. No work will be permitted on weekends or Holidays, except as approved or required by the OFBA.

If the existing ground in the area is disturbed by any of the work or equipment, the Contractor shall rough-grade and loam and seed, if necessary, the disturbed areas, if directed, without additional compensation.

All areas within and surrounding the project site damaged during the course of the construction shall be repaired and restored at the Contractor's expense.

The Contractor shall locate, identify, and protect any utilities within the work site prior to breaking ground, unless the utilities are specifically call out to be removed. The Contractor shall exercise care to protect the utilities, and coordinate and cooperate with the utility companies during the process of the work. Any utilities damaged by the Contractor during the work shall be replaced by the Contractor at no additional cost to the Owner. The Contractor shall notify Dig-Safe and shall follow all Dig-Safe procedures prior to commencing any work. Any utility outages shall be approved by the Engineer, Owner, and the authorities having jurisdiction. A minimum of seven (7) days' notification is required in advance of any utility outages. Temporary utilities shall be provided for utilities servicing the Harbormaster Building, if more than four (4) hours is required for an outage.

The Contractor shall obtain governing authorities' written permission, when required, to close or obstruct street, walks and adjacent facilities. The Contractor shall provide alternate routes around closed or obstructed traffic ways, when required by governing authorities.

The Contractor shall obtain written permission from property owners to trespass and/or transgress their properties where an easement has not been granted.

The Contractor shall control dust caused by the work and dampen surfaces as required. The Contractor shall comply with pollution control regulations of governing authorities.

The Contractor shall protect existing buildings, paving, walls, utilities, access paths and all other structures and facilities that are adjacent to the work area, from damage caused by the project operations. The Contractor shall repair all damage caused to any structures, facilities, or site features to the satisfaction of OFBA, at the sole expense of the Contractor.

All testing, when required within a technical specification, shall be performed by the Contractor at his expense. The Contractor shall employ certified testing companies and laboratories to meet the testing requirements.

The Contractor shall clearly mark the proposed limits of work for each phase and provide fencing around the work phase area throughout the construction for each respective phase. Markers and fencing shall be inspected and approved by OFBA. Such markers shall be maintained until all construction on the site is complete. Fencing shall be maintained until all work in each respective phase is complete. No construction activity shall occur beyond the fence line at any time.

The Contractor shall furnish and install the project sign required by the Department of Fish and Game, Office of Fishing and Boating Access and the DEP File # sign required by the Conservation Commission prior to beginning any work.

The project sign shall be erected at the start of work at a suitable location, approved by the Engineer. The sign shall have dimensions of at least five (5) feet wide by three (3) feet high, bearing the words:

PLYMOUTH HARBOR BOAT RAMP
IMPROVEMENTS AND COASTAL RESILIENCE PROJECT
PLYMOUTH, MA
A PROJECT OF THE MASSACHUSETTS DEPARTMENT OF FISH AND GAME
OFFICE OF FISHING AND BOATING ACCESS AND
THE TOWN OF PLYMOUTH
DEP File No. 057-3495

Maura T. Healey, Governor

Rebecca L. Tepper, Secretary, Executive Office of Energy and Environmental Affairs

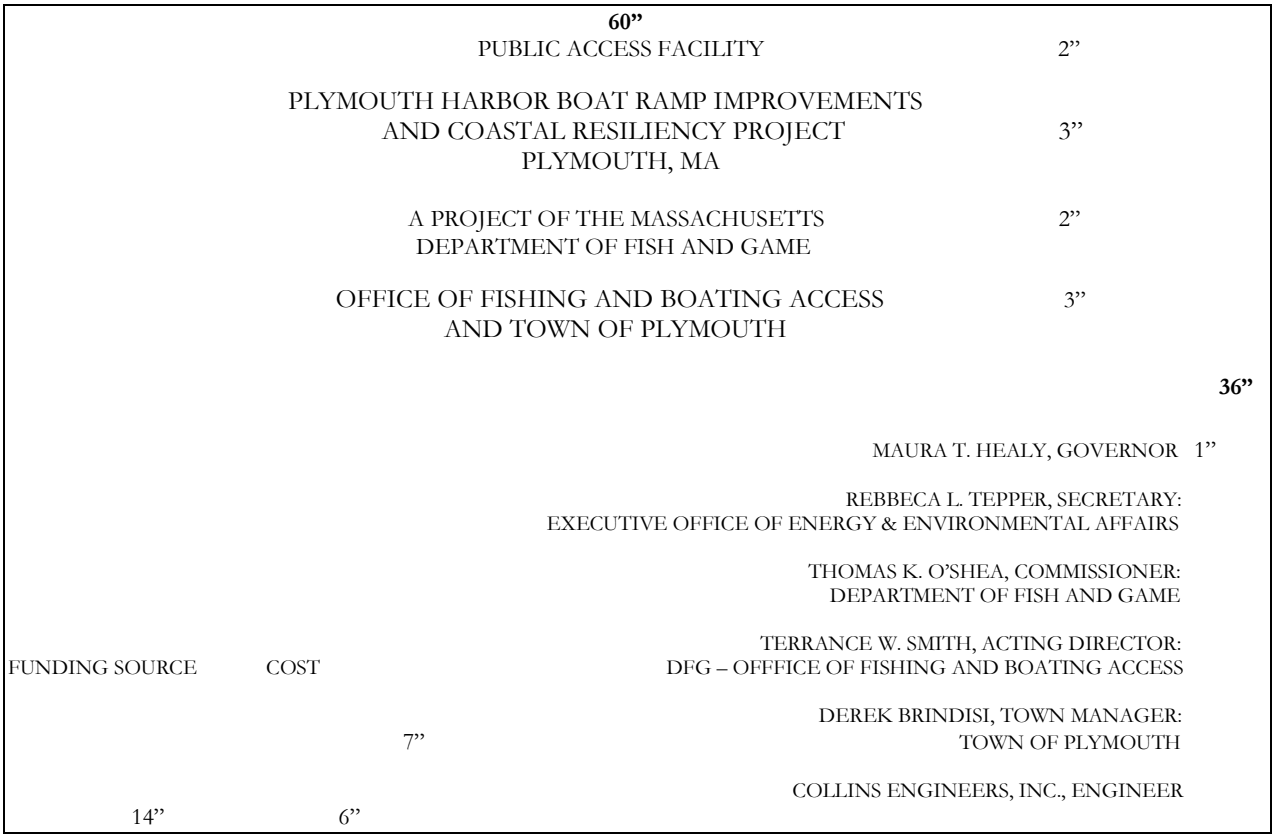
Thomas K. O'Shea, Commissioner, Department of Fish and Game

Terrance W. Smith, Acting Director, DFG, Office of Fishing and Boating Access

Derek Brindisi, Town Manager, Town of Plymouth

Collins Engineers, Inc., Engineer

In addition to the above, a block will be provided for the amount of funding and the funding source. Lettering will be dark green on a white background. The size of the lettering and general arrangement of the information shall be as shown herein, and as directed by the Engineer.



The Contractor shall supply adequate supports for the sign and must keep the sign a proper distance above the ground to provide public viewing. The material of the sign shall be exterior, high density, overlaid plywood, 3/4" thick or approved materials suitable for the sign. The sign shall remain posted on-site for three (3) months after completion of the project, after which time the Contractor will remove the sign and it becomes the property of the Contractor for his use.

The Contractor's attention is directed to the Conservation Commission's Order of Conditions.

The conditions of all permits, approvals, and licenses shall be adhered to at all times. The Contractor shall maintain a copy of the Final Approved Plans, the Plymouth Conservation Commission Order of Conditions, the United States Army Corps of Engineers General Permit, the Massachusetts Department of Environmental Protection, Department of Waterways (Chapter 91) License, and all other licenses and permits issued for the project onsite at all times during construction.

The contractor shall submit final as-built plans, including drainage pipe inverts, stamped and signed by a registered professional engineer.

Storage Area

It shall be the Contractor's sole responsibility to procure and maintain a suitable storage area for tools, materials and equipment necessary to perform the work. The Contractor shall coordinate with the Owner and Engineer for access and specific limits and approved location of the staging and laydown area.

1. The storage area maintained by the Contractor shall not obstruct or interfere with pedestrian or vehicular movement, and shall not occupy any space within the public right-of-way outside of the project site, except with specific permission from the Owner.
2. The storage/staging areas shall be kept neat at all times.

3. To prevent erosion of materials, sedimentation control shall be installed around the base of any stockpiles and shall be covered with poly tarps as necessary.

Equipment

Contractor shall transport all equipment to the site, assemble the equipment, disassemble equipment and remove as needed to proceed with the work. During construction, all equipment and materials shall be maintained as needed during the work.

Storage of fuel shall be located outside of the resource areas, in areas that are in compliance with applicable environmental regulations. Fuel shall be in approved containers and a spill kit shall be provided within the fuel storage area.

This price and payment shall constitute full compensation for all supervision, labor, materials, equipment, disposal and any incidentals necessary as specified herein, as shown on the contract drawings and as directed

All work done under this contract shall be in conformance with The Massachusetts Highway Department Standard Specifications for Highways and Bridges Dated 1988, as amended (Standard Specifications), the Supplement Specifications dated July 1, 2015, the December 2018 Construction Standard Details, and the 1990 Standard Drawings for Signs and Supports.

The cost of mobilization and demobilization shall be included in the unit costs for each individual item of work and will not be paid for under this item.

Any item of work not covered by an individual item shown on the plans, specifications, or permits shall be performed and paid for under **Item 101.1 - Miscellaneous and Site Preparation.**

Method of Measurement and Basis of Payment

Under **Item 101.1** of the Contract, the Contractor will be paid the lump sum price for all work under **Miscellaneous and Site Preparation**, for tools, labor, excavation, materials, equipment and all incidental work necessary to complete the work under this item, as shown on the plans, as specified herein, and as directed.

The contractor shall submit a lump sum breakdown for this work along with the submitted Schedule of Operations.

-END OF SECTION-

Description

The work to be done consists of the removal of the existing structures as are necessary to reconstruct the facility. The work shall include but not be limited to the removal of the existing concrete seawall, signs, grassed areas, pavement, concrete sidewalk, curbing, connections, stormwater system within the project limits, utilities designated for removal, timber piles, timber pier, riprap/armor stone, benches, miscellaneous site features and appurtenances, and other incidental components as required for the implementation of new work described herein.

Items that are designated to be reused, reinstalled, reclaimed, or salvaged shall be removed, stored and protected during work, and reinstalled where indicated. Items designated to be salvaged or reused but not reinstalled, shall be turned over to the Owner, unless noted otherwise. Items that are not reused, reinstalled, reclaimed, or salvaged shall be disposed of offsite by the Contractor, in accordance with local, state, and federal regulations.

The Contractor shall follow proper Dig-Safe procedures prior to any demolition or excavation of materials. The Contractor shall be solely responsible for making all necessary arrangements for performing any necessary work to the satisfaction of the municipal departments and utility companies involved in connection with the discontinuous or interruption of public utilities or services such as gas, electric, water, sewer, telephone, etc., which will be affected by work to be done under this item of work.

By submitting a bid, the Contractor affirms that the site and all conditions affecting the work under this section have been carefully examined. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions as indicated in the Contract Drawings or obvious from observation of the site. The Contractor shall protect adjacent property, public utilities, and structure, and completed work, from damage associated with the removal and demolition work. Damage due to removal and demolition shall be repaired by the Contractor at their own expense.

The Contractor shall obtain a permit from the Town of Plymouth Fire Department for welding, torch cutting, or hot work performed at the site. New reinforcing steel shall not be cut by torch.

Construction Methods

Environmental controls including floating silt curtains (turbidity booms), silt fences, silt socks, and silt sacks shall be installed as indicated on the Contract Drawings prior to starting any demolition or excavation work.

The Contractor shall remove and dispose of the existing concrete, curbing, timber piles, timber pier components, connection hardware, designated drainage pipes and structures, other utilities, miscellaneous site features and appurtenances, and other incidental components within the work area that are not designated for reuse, salvage, or reinstallation.

Armor stones removed under this item shall be reinstalled with the new construction, as indicated on the drawings and directed by the Engineer. Payment for removal, salvaging, and reinstallation of armor stones shall be included under Item 112. Such removing, salvaging, and reinstalling/resetting shall contain no additional compensation under any other item of this contract but shall be considered as incidental work. Installation of salvaged armor stone shall provide a walking surface for the public matching the existing pre-construction surface slope/elevation and size stones in the direction of egress. Additional stones required to facilitate the work shall meet the same specifications as required under Item 983 with the exception of sizing to match existing.

The Contractor shall employ the services of a spotter at the site of the armor stone placement to ensure that each stone is placed in accordance with the contract requirements. Armor stone shall be placed so that every part of the face of the stone shall be within three (3) inches (above or below) of the slope/elevation indicated on the Drawings, and no more than 6 inches (above or below) the top surface of any new or existing adjacent crest stone . Armor stones shall be placed individually by equipment suitable for lifting, manipulating, rotating, and placing stone of the size specified to the lines and grades as shown on the contract drawings, including allowance for tolerances. The equipment used in placing the armor stones shall also have the ability to hydraulically rotate the armor stone 180 degrees in one motion while suspended, place the stone, and if necessary pick up and reposition the stone. Dragline buckets and skips shall not be used in placement. Moving stone by drifting or manipulating down the slope will not be permitted.. Armor stones shall be placed in a manner to avoid displacing underlayer stone or placing undue impact force on underlayer stone that would cause the breaking of stones. Unless otherwise specified, armor stone shall not be dropped from a height greater than one foot.

Armor stone shall be placed to form an interlocking, compact mass with minimum voids. All faces of the set armor stone shall be touching adjacent armor stones including the bottom face (face closest to the structure with no bridging of gaps). The maximum dimension for void space between adjacent stones shall be 10" in any dimension in a horizontal plane, and no greater than the diameter of the underlying bedding stone or depth of one armor stone layer measured vertically.. The use of crushed stone, chinking stones, or other materials for filling voids will not be allowed. All stone shall be firmly set to prevent movement. Continuous joints, where the vertical joints are not staggered and is continuous from the lower stone layers to the upper stone layers, are not allowed. The armor stones shall first be placed from the toe-most point, then the Contractor shall continue placing armor stone up the slope towards the crest. In general, the long axis of each stone shall be placed perpendicular to the axis of the structure and slope downward toward the center of the structure. During transitions between work and non-work areas, the Contractor shall interlock newly placed armor stone with adjacent non-work area armor stone.

The Contractor shall regrade the subbase as needed.

Stones, boulders, and rock-fill that are removed under this item that are suitable for reuse shall be incorporated into the reconstruction of the facility. Suitability of material for reuse shall be determined by the Engineer. Such removing and reinstallation shall contain no additional compensation under any item of this contract but shall be considered as incidental work. If encountered during demolition or excavation, unsatisfactory materials (cement concrete, rubble debris, deleterious material, etc.) shall be removed and disposed of by the Contractor in a location selected by him, subject to the approval of the Engineer and regulations and requirements of applicable local, state, and federal authorities governing the disposal of such materials.

Any bituminous pavement to be removed to facilitate the phasing of the project work and public access to the boat ramp and parking facility shall be saw-cut in a neat straight line to limits approved by the Engineer prior to work.

Bituminous pavement shall be reclaimed and incorporated into the reconstruction of the facility as specified in Item 403 Reclaimed Base Course and be paid for thereunder. Unsatisfactory deleterious materials (cement concrete, rubble debris, unsuitable fill, etc.) shall be removed and disposed of by the Contractor in a location selected by him, subject to the approval of the Engineer and regulations and requirements of applicable local, state, and federal authorities governing the disposal of such materials.

Floating docks, gangways, benches, monuments, the decorative anchor and other miscellaneous items indicated to be reinstalled shall be salvaged and incorporated into the reconstruction of the facility. Such removal and reinstallation shall contain no additional compensation under any item of this contract but shall be considered as incidental work.

The existing timber pier shall be removed and legally disposed of off-site. Removal shall be undertaken as to minimize disturbances to the water column. Timber piles shall be removed utilizing a vibratory hammer to the extent practical; where full removal is not possible, and as approved by the Engineer, piles are to be cut a minimum of 2 feet below the mudline. Contractor is advised that the timber elements may contain creosote and/or other timber preservatives and shall handle and dispose of accordingly.

If excess suitable material exists after construction of the boat ramp, the Contractor shall remove and dispose of such excess materials at his own expense, and in a manner satisfactory to the Engineer.

The existing drainage lines that are scheduled for removal shall be visually inspected or scoped with a camera to verify that there are no other connections or inlets prior to removal.

If the Contractor, during excavation or demolition, uncovers or otherwise encounters any artifacts, whether historic or prehistoric, he shall bring them to the immediate attention of OFBA, and stop all work in the vicinity of said artifacts until direction is received by OFBA.

If the Contractor, during excavation or demolition, uncovers or otherwise encounters any suspected hazardous or unidentified substances, he shall bring them to the immediate attention of OFBA, and stop all work in the vicinity of said hazardous or unidentified substances until direction is received by OFBA.

The Contractor shall use traffic barricades with flashing lights as required to maintain pedestrian and driver safety in the area of removal work. The Contractor shall notify the Owner and applicable site facility personnel prior to implementing such barricades.

Method of Measurement and Basis of Payment

Under **Item 112** of the Contract, the Contractor will be paid the contract lump sum price for **Demolition** which price shall include full compensation for all labor, tools, equipment, transportation, disposal, fees and all incidental work necessary to complete the work under this item.

The Contractor shall submit a breakdown of the lump sum price for his work along with the Schedule of Operations.

-END OF SECTION-

Description

This work consists of excavation, compaction, backfilling, and disposal of all materials not being removed under some other item of work. All excavation to be paid for under this section shall be classified as "Earth Excavation." Under this Contract, "Earth Excavation" shall include the work area described on the plans where it is required to excavate the existing earth material to the level of the sub-base so that gravel, stone, utilities, geotextile, pavement, concrete, or other fill for raising grades may be placed.

Earth excavation shall also include the removal, temporary storage, and reinstallation of existing fill beneath the sidewalk, along the proposed precast retaining walls, riprap, and debris of every nature not otherwise included under **Item 112 - Demolition**.

Excavation of muck shall consist of the removal and disposal of saturated or unsaturated mixtures of soils and organic matter not suitable for foundation materials regardless of moisture content.

No excavation below mean low water is anticipated as part of this contract. If deemed appropriate, it shall consist of the removal and disposal of materials below the low water level of the waterbody. The material shall be removed by mechanical methods and disposed of properly as herein specified and as directed by the Engineer.

Construction Methods

Environmental controls including floating silt curtains (turbidity booms), silt fences, silt socks, and silt sacks shall be installed as indicated on the Contract Drawings prior to starting any demolition or excavation work.

Methods of construction for excavation shall conform to Sections 120.60, 120.61,120.65, and 120.67 of the Standard Specifications.

Suitable excavated material shall be used in the reconstruction prior to the placement of new materials.

Excess unsuitable material shall be properly disposed of by the Contractor, at the Contractor's expense, in the manner described under Section 120.60 of the Standard Specifications.

At least 14 calendar days prior to the start of work, the Contractor shall notify Digsafe and shall have any and all underground utilities located and marked. Utility services shall be protected from damage and shall be plotted on the Record Drawings by the Contractor. Utilities that are not active shall be protected or properly removed as directed by the Engineer. Do not interrupt existing utilities except when authorized in writing by both the Engineers and the authorities having jurisdiction.

Excavated areas shall be kept free from water, snow and ice during construction. Pumping and dewatering operations shall be performed if necessary to keep excavations dry and prevent erosion and/or loss of material. Such pumping and dewatering shall contain no additional compensation under any item of this contract but shall be considered as incidental work. Any surface rain or groundwater pumped from excavations shall be released in accordance with the discharge requirements for dewatering activities as specified in the Order of Conditions.

Suitable excavated material conforming to Section M1.01.0 of the Standard Specifications shall be reused on site for site fill and grading. Placement and compaction requirements for this material shall conform to the applicable provisions of Section 150 of the Standard Specifications.

Suitable pavement sub-base which is removed under this item, shall be reclaimed and incorporated into the reconstruction of the facility as specified in Item 403. Such reclaiming shall contain no additional compensation under any item of this contract but shall be considered as incidental work.

Method of Measurement and Basis of Payment

Under **Item 120.2** of the Contract, the Contractor will be paid the lump sum price for **Excavation**, which price shall include full compensation for all tools, materials, equipment, labor, transportation and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer.

Where excavated materials are to be used for embankments or reused onsite, and no additional filling material is required, the following will govern:

1. Excavation materials used as gravel borrow will only be paid for under Item 120.2 as excavation.
2. Excavation material including gravel, sand, special borrow, or impervious borrow, will only be paid for under item 120.2 as excavation.

The Contractor shall submit a breakdown of the lump sum item along with the Schedule of Operations.

-END OF SECTION-

ITEM 141.1 TEST PIT CUBIC YARD

Description

Work under this item shall conform to the relevant provisions of Section 140 of the Standard Specifications, and the following:

The work to be done consists of test pit excavation to determine the existing sub-base material at a total of six (6) proposed exploratory test hole locations as requested by the Engineer, to a minimum 5-foot depth, established by the Engineer. Test pit holes shall be backfilled and compacted in lifts not exceeding 8 inches.

The Contractor is advised that materials shall be disposed of in accordance with the provisions written herein before under the heading "Excavation".

Method of Measurement and Basis of Payment

Under **Item 141.1** of the Contract, the Contractor will be paid the contract unit price per cubic yard of **Test Pit**, which price shall include full compensation for all materials, tools, equipment, labor, and all incidental work in conformance with the plans, as specified, as directed by the Engineer, to the satisfaction of the Engineer.

-END OF SECTION-

Description

The work to be done consists of preparing an area for the placement of gravel borrow (structural fill), furnishing, placing, compacting and grading this material as shown on the plans, as herein specified, and as directed by the Engineer.

Materials and Construction Methods

The spreading and compacting of the gravel borrow shall be to the lines and grades as indicated on the project plans and as approved by the Engineer. Gravel borrow shall be placed within the limits of the parking lot and beneath the sidewalk and pedestrian landing slabs.

Gravel borrow shall be placed to depths as shown on the plans.

All applicable specifications of Section 151 and Section 400 of the Standard Specifications shall be complied with.

Weight slips for this item must be presented for payment under this item.

Gravel borrow shall conform to subsection M1.03.0, material shall be compacted to not less than 95 percent as determined by AASHO T99, Method C test procedure.

Work on this course shall be prohibited when the moisture content is greater than optimum moisture content as determined by the Engineer. The Contractor shall place this course so as to ensure proper drainage and protection of the base course and sub-grade, to the satisfaction of the Engineer.

Method of Measurement and Basis of Payment

Under **Item 151.1** of the contract, the Contractor will be paid the contract unit price per ton for **Gravel Borrow**, furnished and in place, which price shall include full compensation for all materials, tools, equipment, grading, labor, testing and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer.

The quantity to be so paid for shall be based upon the weight of material as shown on weight slips attested to by a sworn weigher. The weight slips shall be delivered to the site of work and shall be countersigned by the Engineer, and only such material as is actually accepted and placed as herein specified shall be paid for.

-END OF SECTION-

ITEM 156.1	**3/4" CRUSHED STONE**	**TON**
ITEM 156.2	**1 - 1/2" CRUSHED STONE**	**TON**

Description

The Contractor shall prepare, furnish, place, compact, and grade crushed stone for the sub-base beneath the splash wall, precast block walls, pedestrian landing, concrete boat ramp extension, and bedding stone beneath the base of the revetment extension, as shown on the plans, as herein specified, and as directed by the Engineer.

Materials and Construction Methods

Crushed stone shall conform to the requirements of Section M2.01.0, M2.01.1, M2.02.2 and M2.01.4 for crushed stone.

Crushed stone used for the splash wall, precast block walls, seawalls, concrete retaining walls, base of drainage pipes, catch basin bases, precast drain manhole bases, and infill of permeable paver units and shall conform to the requirements of Section M2.01.4 of the Standard Specifications for 3/4 in. crushed stone.

Crushed stone used for below the concrete boat ramp extension and the base of the permeable paver units shall conform to the requirements of Section M2.01.1 and M2.01.2 of the Standard Specifications for 1-1/2 in. crushed stone

The crushed stone shall be placed and compacted. Compaction will be accomplished by means of mechanical or pneumatical tampers. Crushed stone shall be placed in maximum 4" depth compacted lifts. Compaction effort shall continue until the stones are firmly interlocked and the surface is unyielding and as approved by the Engineer. Methods of construction for crushed stone shall conform to Section 150.60 of the Standard Specifications.

Method of Measurement and Basis of Payment

Under **Item 156.1** of the Contract, the Contractor will be paid the contract unit price per ton, complete in place, for **3/4" Crushed Stone**, which price shall include all materials, labor, tools, equipment, transportation, and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer and as shown on the plan, as herein specified, and as directed.

Under **Item 156.2** of the Contract, the Contractor will be paid the contract unit price per ton, complete in place, for **1 1/2" Crushed Stone**, which price shall include all materials, labor, tools, equipment, transportation, and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer and as shown on the plan, as herein specified, and as directed.

The quantity to be so paid for shall be based upon the weight of material as shown on weight slips attested to by a sworn weigher. The weight slips shall be delivered to the site of work, and only such material as is actually accepted and placed as herein specified shall be paid for.

-END OF SECTION-

ITEM 180.01 ENVIRONMENTAL HEALTH AND SAFETY PLAN LUMP SUM

Description

The work shall consist of ensuring the health and safety of the Owner, the public, the Contractor's employees and subcontracting personnel, the Engineer, their representatives, and the environment, from any on-site oil and/or hazardous materials present in air, soil, water and sediment.

The Contractor shall prepare and implement a site-specific Environmental Health and Safety Plan (EHASP). The EHASP shall include appropriate components required by OSHA Standard 29 CFR 1910.120(b) and must comply with all applicable state and federal laws, regulations, standards and guidelines, and provide a degree of protection and training appropriate for implementation on the project. The EHASP shall be a dynamic document with provision for change to reflect new information, new practices or procedures, changing site environmental conditions or other situations which may affect site workers and the public. The EHASP shall be developed and implemented independently from the standard construction HASP.

Health and safety procedures provided by the Contractor shall comply with all the appropriate regulations that address employee working conditions, including but not limited to standards established by OSHA and National Institute for Occupational Safety and Health (NIOSH). Equipment used for the purpose of health and safety shall be approved by and meet pertinent standards and specifications of the appropriate regulatory agencies.

A copy of the most up-to-date version of the EHASP shall be maintained on-site at all times by the Contractor. The on-site copy shall contain the signature of the Contractor, and Subcontractors involved with on-site activities. The employee's signature on the EHASP shall be deemed prima facie evidence that the employee has read and understands the plan. Updated copies of signature sheets shall be submitted to the Engineer.

The EHASP shall specify a Contractor Site Safety and Health Officer responsible for implementation of the EHASP and to oversee all construction activities, including handling, storage, sampling and transport, which require contact with or exposure to potentially hazardous materials.

The level of protection and training required to ensure the health and safety of on-site personnel will be stipulated in the EHASP. The Site Safety and Health Officer shall implement the EHASP based on changing site and weather conditions, type of operation or activity, chemical compounds identified on-site, concentration of the chemicals, air monitoring data, physical state of the hazardous materials, potential duration of exposure to hazardous materials, dexterity required to perform work, decontamination procedures, necessary personnel and type of equipment to be utilized. The EHASP will specify that workers in contact with contaminated soil, if encountered, must hold current OSHA 40-Hour HAZWOPER training certificates, at a minimum.

During implementation of the EHASP, a daily log shall be kept by the Site Safety and Health Officer and a copy shall be provided weekly to the Engineer. This log shall be used to record a description of the weather conditions, levels of personal protection being employed, screening data and any other information relevant to on-site environmental safety conditions. The Site Safety and Health Officer shall sign and date the daily log.

Method of Measurement and Basis of Payment

Under **Item 180.01** of the Contract, the Contractor will be paid the contract unit price lump sum, for **Environmental Health and Safety Plan**, which price shall include preparation and implementation

of the Environmental Health and Safety Plan, including the monitoring, protection and storage of all surplus soil, as well as subsequent modifications to the EHASP.

Payment of 50% of the Environmental Health and Safety Plan contract price will be made upon the initial acceptance of the EHASP by the Engineer. Payment of the remaining 50% of the Environmental Health and Safety Plan contract price will be made upon completion of the work. The bid price shall include preparation and implementation of the EHASP as well as the cost for its enforcement by the Site Safety and Health Officer along with any necessary revisions and updates. The work of implementing the Environmental Health and Safety Plan includes work involving, but not limited to, the monitoring, protection, and storage of all surplus soils.

-END OF SECTION-

ITEM 201 CATCH BASIN, 4-FT DIA. EACH
CATCH BASIN, 5-FT DIA.

Description
The Contractor shall furnish and install precast concrete catch basins in the locations shown on the plans, as herein specified and as directed by the Engineer.

Materials and Construction Methods
Installation of the special catch basins shall be completed in accordance with all applicable provisions of Subsection 201 of the "Standard Specifications". Catch basins shall be deep sump with diameters, inverts, oil/water separator hoods and dimensions including brick masonry work shown and detailed on the plans.

Crushed stone shall conform to Subsection M2.01.4 of the Standard Specifications and **Item 156.1 – 3/4" Crushed Stone**.

Excavation, dewatering, and ballast / anti-floatation measures for installation of the catch basin and crushed stone base shall be included in this item of work.

The Contractor shall prevent debris and sediment from entering the catch basins during construction or until the frame and cover have been installed to final grade.

Method of Measurement and Basis of Payment
Under **Item 201** of the Contract, the Contractor will be paid the unit price per each **Catch Basin, 4-ft dia. or Catch Basin, 5-ft dia.**, which price shall include payment for all materials, labor, equipment, excavation, crushed stone and other incidental and appurtenant work, as shown on the Drawings, as specified herein, and as directed by the Engineer. The quantity to be so paid for shall be based upon the actual number of catch basins authorized by the Engineer.

-END OF SECTION-

Description

The Contractor shall furnish and install a precast drain manhole with standard access covers in the location shown on the plans, as herein specified and as directed.

Materials and Construction Methods

Installation of the standard manhole shall be completed in accordance with all applicable provisions of Subsection 201 of the "Standard Specifications".

All materials shall conform to Subsection 201.60 of the Standard Specifications.

Crushed stone shall conform to Subsection M2.01.4 of the Standard Specifications and **Item 156.1 – 3/4" Crushed Stone**.

The frame and access cover shall be paid for separately – see **Item 221 – Frame and Cover**.

Excavation, dewatering, and ballast / anti-floatation measures for installation of the manhole and the crushed stone base shall be included in this item of work.

The Contractor shall prevent debris and sediment from entering the manhole during construction or until the frame and cover have been installed to final grade.

Method of Measurement and Basis of Payment

Under **Item 202** of the Contract, the Contractor will be paid the unit price per each **Standard Manhole**, which price shall include payment for all materials, labor, equipment, excavation, crushed stone and other incidental and appurtenant work, as shown on the Drawings, as specified herein, and as directed by the Engineer. The quantity to be so paid for shall be based upon the actual number of standard manholes authorized by the Engineer.

-END OF SECTION-

Description

The Contractor shall furnish and install a precast deep sump drain manhole with oil and grit separators, internal piping and tees, and specialty access covers in the location shown on the plans, as herein specified and as directed.

Materials and Construction Methods

Installation of the special manhole shall be completed in accordance with all applicable provisions of Subsection 201 of the Standard Specifications.

All materials shall conform to Subsection 201.60 of the Standard Specifications.

Crushed stone shall conform to Subsection M2.01.4 of the Standard Specifications and **Item 156.1 – 3/4" Crushed Stone**.

The oil and grit separators, internal piping and tees, and specialty access covers shall be included in this item of work. Basis of design: STORMCEPTOR or approved equal, certified or accepted by MassDEP for water quality treatment. Design peak flow rates: DMH-1 - 7 cfs (cubic feet per second) treated, 15 cfs bypass; DMH-3 – 1 cfs treated, 4 cfs bypass.

Excavation, dewatering, and ballast / anti-floatation measures for installation of the manhole and the crushed stone base shall be included in this item of work.

The Contractor shall prevent debris and sediment from entering the manhole during construction or until the frame and cover have been installed to final grade.

Method of Measurement and Basis of Payment

Under **Item 203** of the Contract, the Contractor will be paid the unit price per each **Special Manhole**, which price shall include payment for all materials, labor, equipment, excavation, crushed stone and other incidental and appurtenant work, as shown on the Drawings, as specified herein, and as directed by the Engineer. The quantity to be so paid for shall be based upon the actual number of special manholes authorized by the Engineer.

-END OF SECTION-

Description

The Contractor shall furnish and install a yard drain with cast iron grate in the locations shown on the plans, as herein specified, and as directed.

Materials and Construction Methods

Installation of the yard drain shall be completed in accordance with all applicable provisions of Subsection 201 of the "Standard Specifications".

Inlet grate shall be ductile iron designed for installation in the bell end of a 24"-diameter RCP sewer pipe, such as East Jordan 6024M1 or approved equal.

All materials shall conform to Subsection 201.60 of the Standard Specifications.

Crushed stone shall conform to Subsection M2.01.4 of the Standard Specifications and **Item 156.1 – 3/4" Crushed Stone**.

The inlet grate shall be included in this Item of work.

Excavation and dewatering measures for installation of the yard inlet and crushed stone base shall be included in this item of work.

The Contractor shall prevent debris and sediment from entering the yard inlet during construction or until final stabilization of the surrounding area has been achieved.

Method of Measurement and Basis of Payment

Under **Item 205** of the Contract, the Contractor will be paid the unit price per each **Yard Inlet**, which price shall include payment for all materials, labor, equipment excavation, crushed stone, inlet grate, and other incidental and appurtenant work, as shown on the Drawings, as specified herein, and as directed by the Engineer. The quantity to be so paid shall be based upon the actual number of yard drains authorized by the Engineer.

-END OF SECTION-

ITEM 221	**FRAME AND COVER**	**EACH**
ITEM 222	**FRAME AND GRATE, MASSDOT BAR TYPE**	**EACH**

Description

The Contractor shall furnish and install cast iron frames and covers for manholes, and cast iron frames and grates for catch basins, as shown on the plans, as herein specified and as directed.

Materials and Construction Methods

Installation of the frames, grates, and covers shall be completed in accordance with all applicable provisions of Subsection 140 and 220 of the Standard Specifications.

Frame and Cover shall be 24" diameter cast iron, rated for HS-20 loading. Provide LeBaron / East Jordan Foundry, Inc. model series V1358 or approved equivalent.

Frame and Grate shall be 24" square cast iron, rated for HS-20 loading. Provide LeBaron / East Jordan Foundry, Inc. model series 5520 or approved equivalent, in either single (four-flange) or double (two each three-flange) configurations as depicted on the plans.

Iron castings shall conform to Subsection M8.03.0 of the Standard Specifications.

Frame and cover shall be set at final line and grade.

Excavation and brick masonry work to set the frame and cover to final line and grade shall be included in this item of work.

Method of Measurement and Basis of Payment

Under **Item 221 or Item 222** of the Contract, the Contractor will be paid the unit price per each **Frame and Cover or Frame and Grate, MassDOT Bar Type**, respectively, which price shall include payment for all materials, labor, equipment, excavation, hardware, and other incidental and appurtenant work, as shown on the Drawings, as specified herein, and as directed by the Engineer. The quantity to be so paid for shall be based upon the actual number of frame and covers or frame and grates, MassDOT bar type installed and approved by the Engineer.

-END OF SECTION-

ITEM 241.12	**12" REINFORCED CONCRETE PIPE CLASS III**	**LINEAR FOOT**
ITEM 241.15	**15" REINFORCED CONCRETE PIPE CLASS III**	**LINEAR FOOT**
ITEM 241.24	**24" REINFORCED CONCRETE PIPE CLASS III**	**LINEAR FOOT**

Description

The Contractor shall furnish, install Reinforced Concrete Pipe (RCP) Class III of the size(s) shown on the plans, as herein specified, and as directed.

Materials and Construction Methods

Installation of the RCP shall be completed in accordance with all applicable provisions of Subsection 140 and 230 of the Standard Specifications.

The pipe shall be Class III reinforced concrete and shall conform to the Subsection M5.02.1 of the Standard Specifications.

All fittings shall be in accordance with manufacturer's recommendations.

Excavation for installation of the pipe shall be included in this item of work.

Pipe shall be laid on grade on a bed of crushed stone that shall conform to Subsection M2.01.4 of the Standard Specifications and **Item 156.1 – 3/4" Crushed Stone** compacted to 85% standard Proctor to spring line of the pipe then encased with crushed stone over top of pipe to the dimensions shown on plan details.

Method of Measurement and Basis of Payment

Under **Item 241.12, 241.15, or 214.24** of the Contract, the Contractor will be paid the unit price per linear foot of **12", 15", or 24" RCP Pipe**, which price shall include payment for all materials, labor, equipment, excavation, crushed stone, and other incidental and appurtenant work, as shown on the Drawings, as specified herein, and as directed by the Engineer. The quantity to be so paid for shall be based upon the actual number of linear footage installed, measured and approved by the Engineer.

-END OF SECTION-

Description

The Contractor shall scarify and pulverize the in-place bituminous concrete pavement and underlying base material, mixing and blending the material and spreading and compacting the resultant mixture to the line and grades of the crushed gravel base course beneath the bituminous asphalt shown on the plans and as directed by the Engineer.

Materials and Construction Methods

Pulverization of the existing bituminous concrete pavement shall be completed in accordance with all applicable provisions of Subsection 403 and Subsection 403.40 and 403.60 of the Standard Specifications.

The minimum pulverization depth to blend existing pavements and gravel base material shall not be less than **12-inches** deep. Contractor to test pit six (6) locations established by the Engineer to verify material types prior to reclamation work, per Item 141.1.

Reclaimed material for the crushed gravel base course shall consist of crushed asphalt pavement, cement concrete, and gravel borrow (meeting M1.03.1 of the Standard Specifications) free from loam, clay, and deleterious materials such as brick, reinforcing steel, glass, wood, paper, plastic, plaster, lathing, and building rubble, etc. Reclaimed material shall be mechanically processed and blended uniformly consistent so that 100% passes the 3-inch sieve, conforming to Subsection M1.11.0 gradation requirements.

Any stones larger than 3-inches shall be removed by hand or mechanical means from the base layer underlying any pavement area. This work shall be included as part of Item 403, no additional payments shall be made.

Method of Measurement and Basis for Payment

Under **Item 403** of the Contract, the Contractor will be paid the contract unit price per square yard for **Reclaimed Base Course**, which price shall include payment for all materials, labor, equipment, and other items necessary to complete the work as shown on the Drawings, as specified herein, and as directed by the Engineer.

Reclaimed base course shall be measured in place to the limits shown on the plan or as directed by the Engineer.

-END OF SECTION-

ITEM 460 CLASS I, BITUMINOUS CONCRETE PAVEMENT TON

Description

The Contractor shall prepare and construct bituminous pavement to the thickness, lines and grades of the bituminous asphalt as shown on the Drawings, as specified, and as directed by the Engineer.

Materials and Construction Methods

Bituminous concrete pavement shall be placed in accordance with applicable provisions of Subsection 450 and 460 of the Standard Specifications.

Bituminous concrete supplied for the intermediate course and surface course shall meet the requirements in Subsection M3.11.00, except that NO Reclaimed Asphalt Products (RAP) shall be included in the job mix formulas. The job mix formulas for this project shall contain 100% virgin aggregate and liquid asphalt.

Where specified on the plans, reclamation of the existing bituminous concrete pavement shall be completed in accordance with applicable provisions of Section 403 of the Standard Specifications. Completion of the work and payment for reclamation of existing pavement shall be included as part of **Item 403 – Reclaimed Base Course**.

Where new pavement meets existing, edges of the existing pavement shall be neatly saw cut or milled to form an approximately 12" wide by 1½" deep beveled joint to blend the new pavement surface into the existing. The entire joint shall be cleaned of all foreign matter and loose material then tack coated in accordance with Section 460.43 of the Standard Specifications. This work shall be included in this Item of work; no additional payments shall be made.

The Contractor shall prepare a stakeout plan with proposed base grades on a 30'x30' grid for approval by the Engineer prior to installation of stakes in the field for acceptance prior to paving.

Paving preparation work shall include obtaining and staking required grades as part of the work included herein, and pulverization of the existing bituminous concrete pavement and placement of the base course which is paid for under Item 403. This includes initial placement and where fine grading and compacting of the base surface is required in deficient areas determined by the Engineer, or otherwise necessary.

Gravel borrow and the gravel sub-base course for roadways, walkways and parking areas shall be compacted to not less than 95 percent, as determined by AASHO T99, Method C, test procedure in accordance with Section 151 of the Standard Specifications.

No bituminous concrete shall be installed until the Engineer has inspected and approved the sub-base onto which the bituminous concrete will be placed.

The general composition and limits of the materials for the surface course and base course shall conform to subsection M3.06.4 of the Standard Specifications. No Bituminous concrete will be installed until the Engineer approves all job mix formulas.

New bituminous concrete pavement surfacing shall be laid in two courses consisting of a **2½ -inch minimum compacted intermediate course (3/4" nominal max aggregate size) and a 1½-inch minimum compacted surface (finish) course (3/8" nominal max aggregate size)**. Each course shall be rolled and compacted to form a smooth dense surface. The finished elevation of the top

course shall match the proposed finish grades shown on the plans and those adjoining existing paved or concrete surfaces.

The Contractor shall apply a bituminous tack coat before placement of the hot mix asphalt binder course and between courses of hot mix asphalt as specified in Section 460.43 of the Standard Specifications. The rate of application shall be placed in accordance with the rate specified in Section 460.43.G.2 of the Standard Specifications. The Bitumen for the tack coat shall meet the requirements of Section M3.03.0 of the Standard Specifications.

Method of Measurement and Basis of Payment

Under **Item 460** of the Contract, the Contractor will be paid the unit price per Ton of **Class I, Bituminous Concrete Pavement** placed, which price shall include payment for all materials, labor, equipment, and other incidental and appurtenant work to properly install the bituminous concrete to the line and grades shown on the Drawings, as specified herein, and as directed by the Engineer. The quantity to be so paid for shall be based upon measurement taken in the field by the Engineer.

There will be no additional payments or adjustments made to the Contract Unit Price of Item 460 due to fluctuations in the oil market following the bid opening.

The quantity to be so paid for shall be based upon the weight of material as shown on weight slips attested to by a sworn weigher. The weight slips shall be delivered to the site of work, and only such material as is actually accepted and placed as herein specified shall be paid for.

-END OF SECTION-

ITEM 504	GRANITE CURB, VA4, STRAIGHT	LINEAR FOOT
ITEM 504.1	GRANITE CURB, VA4, CURVED	LINEAR FOOT

Description

The Contractor shall furnish and install granite curb to the lines and grades shown on Drawings, as herein specified, and in accordance with Section 500 of the Standard Specifications.

Materials and Construction Methods

The granite curb shall be type VA4 conforming to Section of M9.04.1 of the Standard Specifications.

Construction methods shall conform to Section 501.60 through 501.62 of the Standard Specifications.

Excavation shall be included as part of the work of the Item, conforming to Section 501.60. Over excavation shall not be acceptable.

Following excavation, the foundation of the curb (below and around concrete curb-lock) shall consist of gravel spread upon the subgrade to not less 6 inches in depth and compacted a minimum of 95 percent, as determined by AASHO T99, Method C, test procedure.

The curb shall be set in a concrete curb-lock with concrete placed and consolidated 3 inches under stone centers and 6 inches wide x 8 inches deep along the front and back sides of each curb stone. The concrete necessary for completing this work shall be included as part of Items 504 and 504.1.

100% of horizontal and butt joints shall be mortared and pointed, full depth, using a 1:1 blend of Sand Mortar Mix and Portland Cement mixed stiff using potable water.

All curbing shall be backfilled using frost free, gravel conforming to Section M1.03.0, Type b, placed and compacted to the satisfaction of the Engineer. Gravel for the foundation and backfilling of curbs shall be included as part of this work, no additional payments shall be made.

Method of Measurement and Basis of Payment

Under **Item 504** of the Contract, the Contractor will be paid the unit price per Linear Foot for **Granite Curb, VA4, Straight**, furnished and in place, which price shall include full compensation for all materials, tools, equipment, grading, labor, testing and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer.

Under **Item 504.1** of the Contract, the Contractor will be paid the unit price per Linear Foot for **Granite Curb, VA4, Curved**, furnished and in place, which price shall include full compensation for all materials, tools, equipment, grading, labor, testing and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer.

ITEM 620.13 GUARDRAIL, W-BEAM (SINGLE FACED) LINEAR FOOT

Description

The Contractor shall furnish and install a single-faced, W-Beam steel guardrail in place, including all materials, labor, equipment, tools and miscellaneous work necessary to complete the work to the satisfaction of the Engineer as described herein and along the edge of the concrete sidewalk as shown on the drawings.

Materials and Construction Methods

Steel guardrails shall be furnished and installed in accordance with applicable provisions of Subsection 601 of the Standard Specifications.

The guardrail and appurtenant components shall conform to the requirements described in Subsection M8.07.0 of the Standard Specifications.

The guardrail posts shall be installed to the depths indicated on the drawings prior to installation of the concrete sidewalk. Guardrail posts shall be isolated by the concrete sidewalk with an isolation joint and annular space filled with non-shrink grout as shown on the drawings. The concrete sidewalk shall be cast around the guardrail isolation joints and installed in accordance with Subsection 701 of the Standard Specifications.

Steel guardrail posts shall be wrapped in 1/4" x 6" polyethylene DECK-O-FOAM as manufactured by W.R. Meadows or approved equivalent to form a bond breaker. Foam bond breaker shall extend the full depth of the non-shrink grout around the posts.

End treatments shall be installed in accordance with manufacturers' specifications and recommendations and shall be included in the contract unit price of this work.

Method of Measurement and Basis of Payment

Under **Item 620.13** of the Contract, the Contractor will be paid the contract unit price per linear foot for **Guardrail, W-Beam (Single Faced)**, furnished, and installed, complete in place, including all materials, labor, equipment, tools, and miscellaneous work necessary to complete the work to the satisfaction of the Engineer.

The quantity to be paid for shall be measured in the field by the Engineer by the linear foot and shall be the actual amount installed in accordance with these specifications.

-END OF SECTION-

Description

The Contractor shall furnish, install and remove the silt sock in accordance with these specifications and in close conformity with the lines and grades shown on the plans and specifications or as established by the Engineer.

Materials and Construction Methods

All work shall conform to Section 670 of the Standard Specifications.

Silt socks are to be twelve-inch in diameter (after installation) with biodegradable natural fabric (i.e., cotton, jute, burlap) and are intended to be the primary sedimentation control barrier. Photo-biodegradable fabric shall not be used. No straw wattles may be used. Compost material inside the silt sock shall meet M1.06.0, except for the following: no peat, manure or bio-solids shall be used; no kiln-dried wood or construction debris shall be allowed; material shall pass through a 2-inch sieve; and the C:N ratio shall be disregarded.

Outer sock fabric shall be made of 100% biodegradable materials (i.e., cotton, hemp or jute) and shall have a knitted mesh with openings that allow for sufficient water flow and effective sediment capture.

Silt sock shall be tamped, but not trenched, to ensure good contact with soil. When reinforcement is necessary, tubes shall be stacked as shown on the detail plans.

Prior to initial placement of silt sock, the Contractor and the Engineer shall review locations specified on the plans and in the permit requirements, and adjust placement to ensure that the placement will provide maximum effectiveness.

Barriers shall be staked, trenched, and/or wedged as specified herein and according to the Manufacturer's instructions. Barriers shall be securely in contact with existing soil such that there is no flow beneath the barrier.

Maintenance

The installed silt sock shall be inspected daily by the Contractor and restored as necessary to its approved, newly installed condition. Accumulations of debris and/or silt shall be removed by hand and properly disposed of as necessary at no additional cost. In no case shall accumulations of more than 4 inches above the original ground line be permitted to remain. If a breach or other failure of the silt sock occurs, the silt sock shall be immediately restored. Any delay in maintaining the silt sock shall be cause to immediately suspend the work as provided for in Subsection 8.09 of the Standard Specifications. The Contractor shall be advised that the Plymouth Conservation Commission recommends maintaining a minimum of 100 linear feet of sediment control materials onsite for emergency repairs.

Maintenance of the silt sock shall be per Section 670.60.B of the Standard Specifications or per the Stormwater Pollution Prevention Plan (SWPPP), whichever is more restrictive as determined by the Engineer.

Removal

Following completion of the work phase and stabilization of adjacent soil and upon approval from the Engineer, removal of the silt sock shall be per Section 670.60.C of the Standard Specifications.

Method of Measurement and Basis of Payment

Under **Item 697** of the Contract, the Contractor will be paid the contract unit price per linear foot for **Silt Sock**, supplied, installed, maintained, accepted, and removed, to the satisfaction of the Engineer. Price shall include payment for all materials, labor, and equipment. There will be no separate measurement for maintenance or replacement associated with this item

The quantity to be so paid for under each item will be measured in the field by the Engineer and shall be the actual amount installed in accordance with these specifications.

-END OF SECTION-

Description

The work under this item shall conform to the relevant provisions of Subsection 200 of the Standard Specifications and the following:

The work under this item shall consist of furnishing, installing, cleaning, maintaining, replacing, and removing silt sacks at catch basins at the locations and as shown on plans and as directed by the Engineer.

Materials and Construction Methods

Sack shall be manufactured from a specially designed woven polypropylene geotextile sewn by a double needle machine, using a high strength nylon thread. Sack shall be manufactured by one of the following or an approved equivalent:

Siltsack®
SI Geosolutions:
www.sigeosolutions.com
(800) 621-044

Dandy Sack™
Dandy Products, Inc.
P.O. Box 1980
Westerville, Ohio 43086
Phone: (800) 591-2284
Fax: (740) 881-2791
Email: dlc@dandyproducts.com
www.dandyproducts.com

FLeXstorm Inlet Filters
Inlet & Pipe Protection
24137 W. 111th St - Unit A
Naperville, IL 60564
Telephone: (866) 287-8655
Fax: (630) 355-3477

The sack will be manufactured to fit the opening of the catch basin or drop inlet. Sack will have the following features: two dump straps attached at the bottom to facilitate the emptying of sack and lifting loops as an integral part of the system to be used to lift sack from the basin. The sack shall have a restraint cord approximately halfway up the sack to keep the sides away from the catch basin walls, this cord is also a visual means of indicating when the sack should be emptied. Once the strap is covered with sediment, the sack should be emptied, cleaned and placed back into the basin.

Installation, removal, and maintenance shall be per manufacturer instructions and recommendations.

Method of Measurement and Basis of Payment

Under **Item 697.1** of the Contract, the Contractor will be paid the unit price per each **Silt Sack** supplied, installed, maintained, accepted, and removed, to the satisfaction of the Engineer. Price shall include payment for all materials, labor, and equipment. There will be no separate measurement for maintenance or replacement associated with this item.

The quantity to be so paid for under each item will be measured in the field by the Engineer and shall be the actual amount installed in accordance with these specifications.

-END OF SECTION-

Description

The Contractor shall furnish and install the floating silt curtain (turbidity boom) complete in place, including all materials, labor, equipment, tools, maintenance, and miscellaneous work necessary to complete the work to the satisfaction of the Engineer.

Materials and Construction Methods

The flotation unit shall be closed cell foam; 12" diameter covered with 22 oz/square yard PVC coated polyester providing a gross buoyancy of at least 50 lbs/ft.

The silt curtain shall be a woven monofilament filter fabric with the following specification;

Weight	5.0 oz/square yard
Tensile Strength	200-220 lbs
Elongation @ Break	20%
Mullen Burst	480 psi
Puncture Strength	120 lbs
Tear Strength	80 lbs
Abrasion Resistance	NA
EOS US Std. Sieve	40-50
	425-300 microns
Flow Rate	8 gpm/square foot

The curtain shall be designed to prevent the migration of silt and turbidity from the work site. The curtain length shall be designed to be in contact with the bottom throughout the entire tidal cycle. The curtain shall be equipped with ballast to ensure contact with the bottom.

The Contractor shall provide an anchoring system, including mooring buoys to prevent the anchoring from submerging the boom.

The Contractor shall maintain the siltation boom in proper working order. The Contractor shall remove the complete siltation boom system upon completion of all work within the waterway.

Method of Measurement and Basis of Payment

Under **Item 697.2** of the Contract, the Contractor will be paid the contract unit price per lump sum for **Floating Silt Curtain**, supplied, installed, maintained, accepted, and removed, to the satisfaction of the engineer. Price shall include payment for all materials, labor, and equipment. There will be no separate measurement for maintenance or replacement associated with this item.

The quantity to be so paid for under each item will be measured in the field by the Engineer and shall be the actual amount installed in accordance with these specifications.

-END OF SECTION-

ITEM 698 GEOTEXTILE FABRIC FOR STABILIZATION SQUARE YARD

Description

The Contractor shall prepare, furnish, place, and install a non-woven polypropylene geotextile fabric around crushed stone, borrow, structural fill, and for separation of soil layers, and install a woven polypropylene geotextile fabric beneath the new armor stone revetment extension adjacent to the boat ramp as shown on the plans, as herein specified, and as directed by the Engineer.

Materials and Construction Methods

The work under this Item shall conform to the requirements of Subsection M9.50.0, of the Standard Specifications of for the intended application, and the following:

The work under this Item includes the furnishing and installation of geotextile fabric beneath crushed stone and gravel borrow sub-bases, in accordance with the details shown on the Plans at the locations shown on the Plans, and as required by the Engineer. Non-woven geotextile fabric shall be Mirafi 180N or approved equal. Woven geotextile fabric for beneath the armor stone revetment shall be Mirafi 600X or approved equal.

The geotextile fabric shall be handled and installed per the manufacturer's recommendations and shall be from the MassDOT Qualified Construction Materials List and approved for the intended application. The geotextile fabric shall be installed below the layer of crushed stone as shown on the plans.

Excavation and shall conform to the relevant provisions of Subsections 120 and 150 of the Standard Specifications.

If during construction, including any time prior to final acceptance of the Project, the grade of the site exhibits signs of failure, including settlement, the geotextile fabric shall be reinstalled or replaced by the Contractor, as required by the Engineer, at no additional compensation.

Method of Measurement and Basis of Payment

Under **Item 698** of the contract, the Contractor will be paid the contract unit price per square yard for **Geotextile Fabric**, furnished and in place, which price shall include full compensation for all materials, tools, equipment, grading, labor, testing and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer.

The quantity to be so paid for under each item will be measured in the field by the Engineer and shall be the actual amount installed in accordance with these specifications.

-END OF SECTION-

Description

The work to be done under this section consists of all work related to cement concrete placement for the concrete sidewalk, including but not limited to installation of forms and furnishing and placing cement concrete, furnishing and placing welded wire fabric, and furnishing and placing joint fillers and sealants as shown on the plans, and as specified herein.

Materials and Construction Methods

The Contractor shall refer to **Item 904 – 4,000 PSI Reinforced Concrete** and the manufacturer's recommendations for all mixing, placement, and curing methods for the concrete used for the sidewalks.

Cement concrete materials and construction methods shall conform to all the applicable provisions of Section 701 Cement Concrete Masonry of the Standard Specifications, and with the additional requirements included herein.

Concrete mix designs proposed for the project shall be submitted for review prior to construction. A certificate of compliance shall be delivered to the Engineer for each truckload of cement concrete delivered to the site. The certificate of compliance shall state that the mix delivered conforms to the approved mix design.

Reinforcement shall be stored in a location suitable to the Engineer, which will protect the steel from rusting and exposure to the elements prior to being used in the construction.

Welded wire fabric shall be epoxy coated and conform to Section M8.01.2 and M8.01.7 of the Standard Specifications and AASHTO-M366 and ASTM1064, epoxy coated in accordance with ASTM A884, Class A, Type 1. Welded wire fabric shall be free of imperfections, dirt, loose scale, paint, oil, or other foreign substances that might tend to prevent bonding with concrete. Surfaces shall be brushed to remove loose material. Support chairs shall be installed as indicated on the drawings to prevent sagging of the welded wire fabric.

Where called out on the drawings, dowels at expansion joints shall be epoxy coated speed dowels as manufactured by Sika or approved equivalent. Dowels shall be installed in accordance with the manufacturer's recommendations. Dowels for sidewalks shall be paid for under this Item.

Concrete construction during cold weather shall be subject to the provisions of the Standard Specifications Subsection 901.33.B. Any concrete placed during cold weather shall be placed at the Contractor's risk and any damage or unsatisfactory concrete, in the Engineer's opinion, shall be removed and replaced at the Contractor's expense.

Base material for the concrete sidewalk shall be Gravel Borrow, Type B in accordance with Section M1.03.0 of the Standard Specifications, and as described in **Item 151 – Gravel Borrow**.

Concrete joints shall be a 3-inch wide tooled finish as indicated on the drawings.

TESTING OF CONCRETE

1. Test Specimens: The Contractor will be required to make, cure and have tested, a minimum of one set of four test specimens from the concrete of each day's pour and for each fifty cubic yards of concrete cast in accordance with ASTM Designation C172, C31 and C39. One cylinder shall

be broken after seven and fourteen days and two cylinders after twenty-eight days. Concrete that fails to meet strength requirements will be grounds for rejection.

2. Slump: A slump test shall be made for each truckload of concrete in accordance with ASTM Designation C143. Slumps greater than design mix limit will be grounds for rejection of the concrete.
3. Air Content: The Contractor shall make an air content test a minimum of once each day and from each fifty cubic yards of concrete by the pressure method in accordance with ASTM Designation C231. Air contents above or below the limits specified will be grounds for rejection.
4. Testing: All personnel and laboratories testing concrete shall be licensed by the Commonwealth of Massachusetts. The Contractor shall provide the Engineer with the name, address and a copy of applicable licenses of the testing company.

The Contractor shall coordinate the date and location of tests with the Engineer before any concrete work is started.

Results of concrete testing shall be delivered to the Engineer within three (3) working days of the tests.

Method of Measurement and Basis of Payment

Under **Item 701** of the Contract, the Contractor will be paid the unit price per Square Yard for **Concrete Sidewalk**, as shown on the plans, or as directed, complete in place, as accepted, which price shall include full compensation for shop drawings, construction and removal of forms, furnishing and placing bonding agent, furnishing and installing epoxy coated steel welded wire fabric, support chairs, connectors, spacers, fasteners, bracing and placing concrete, testing, curing and finishing, all equipment, machinery, tools and labor, and such other incidental work not otherwise provided for which may be required to execute the work properly in accordance with these provisions.

The quantity to be so paid for under each item will be measured in the field by the Engineer and shall be the actual amount installed in accordance with these specifications.

-END OF SECTION –

Description

Satisfactory office space, trailer, or the utilization of a suitable existing building having a minimum 300 square feet of private office space shall be provided in an approved location on the project site for the exclusive use of the Engineers and Inspectors of the Owner for the duration of project work. Such facilities shall be separate from buildings used by the Contractor and Plymouth Harbormaster.

Materials

Field office shall be equipped with internet capability, two outside doors, 4 windows, smoke and CO2 alarms, contain 2 desks, 4 desk chairs, electric sanitary hot and cold water cooler supplied with cups and drinking water, a 3 cu ft refrigerator, 1 cu ft microwave oven, fire extinguishers at each doorway, and first aid kit.

Field office shall have a thermostat controlled climate control system for heating and colling the office space and to maintain 70 degree Fahrenheit ambient air temperature on-demand, year-round.

The contractor shall be responsible for coordinating with the utility companies for temporary electric and internet service installations, pay all connection and disconnection fees and pay all monthly electric and internet service bills for the field office for the duration of the project.

Method of Measurement and Basis of Payment

Under **Item 740** of the Contract, the Contractor will be paid the lump sum price for **Engineers Field Office** furnished and installed which price shall include payment for all materials, labor, transportation, equipment, testing, design, and all incidental work necessary to complete the work under this item, as shown on Plans, as specified herein, and as directed by the Engineer.

- END OF SECTION -

Description

The Contractor shall furnish, place, spread, and grade loam, prepare the area for plant material, and furnish and place seed mix within following completion of ground disturbance, as shown on the Drawings, as specified herein, and as directed by the Engineer. All disturbed areas shall be loamed, seeded, and restored to existing conditions as indicated on the project drawings or as directed by the Engineer.

Materials and Construction Methods

The loam shall conform to the gradation and material requirements specified in Section M1.05.0 of the Standard Specifications. The Contractor shall submit certified test results of the proposed loam material at least 30 days prior to ordering.

Construction methods for placing loam shall be in accordance with Subsections 751.60 and 751.61 of the Standard Specifications.

Fertilizer and grass seed mix shall conform to Section M6.02.0 and M6.03.0 of the Standard Specifications.

Construction methods for seeding shall be in accordance with Sections 765.63 and 765.65 of the Standard Specifications. The contractor shall submit details of the hydroseed machine to the Engineer for approval prior to seeding if hydroseeding is proposed.

The contractor shall be responsible for monitoring and watering all seeded and grassed areas which shall be kept moist until final completion. Care during construction shall be in accordance with Section 765.66 of the Standard Specifications.

The Contractor shall supply additional loam as necessary so that following finish the grading and compaction operations, the placed loam shall conform to a minimum required depth of 4".

The Contractor shall ensure that a satisfactory stand of grass, as determined by the Engineer is developed in all loamed and seeded areas, which must consist of a uniform stand of at least 60% established permanent grass species, with a uniform count of at least 100 plants per square foot.

The OFBA may retain a percentage beyond completion, equal to up to 100% of the 5% retainage amount specified until the contractor has received written confirmation from the engineer that conditions of the maintenance and warranty period have been met.

If necessary, suitable signage and barricades, or other means shall be placed to protect the seeded and planted areas.

Method of Measurement and Basis of Payment

Under **Item 751** of the Contract, the Contractor will be paid the unit price per Square Yard for **Loam and Seed** furnished and in place, which price shall include full compensation for all materials, tools, equipment, grading, labor, testing and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer.

- END OF SECTION -

ITEM 756 NPDES STORMWATER POLLUTION PREVENTION PLAN LUMP SUM

Description

This Item addresses the preparation and implementation of a Storm Water Pollution Prevention Plan required by the National Pollutant Discharge Elimination System (NPDES) and applicable Construction General Permit (CGP) issued by the U.S. Environmental Protection Agency (EPA).

Pursuant to the Federal Clean Water Act, construction activities which disturb one acre or more are required to apply to the EPA for coverage under the NPDES General Permit for Storm Water Discharges from Construction Activities. The Contractor shall be fully responsible for compliance with the most recently issued CGP and any subsequent revisions. Should a fine or penalty be assessed against it, or the Town, as a result of a local, state, or federal enforcement action due to non-compliance with the CGP, the Contractor shall take full responsibility.

The NPDES CGP requires the submission of a Notice of Intent (NOI) to the EPA prior to the start of construction (defined as any activity which disturbs land, including clearing and grubbing). There is a fourteen (14) day review period commencing from the date on which EPA enters the Notice into their database. Based on the review of the NOI, EPA may require additional information, including but not limited to, the submission of the Storm Water Pollution Prevention Plan (SWPPP) for review. Work may not commence on the project until final authorization has been granted by EPA. Any additional time required by EPA for review of submittals will not constitute a basis for claim of delay.

In addition, if the project discharges to an Outstanding Resource Water, vernal pool, or is within a coastal ACEC as identified by the Massachusetts Department of Environmental Protection (DEP), a separate notification to DEP is required. DEP may also require submission of the Storm Water Pollution Prevention Plan for review and approval. Filing fees associated with the notification to DEP and, if required, the SWPPP filing to DEP shall be paid by the Contractor.

The CGP also requires the preparation and implementation of a SWPPP in accordance with the aforementioned statutes and regulations. The Plan will include the CGP conditions and detailed descriptions of controls of erosion and sedimentation to be implemented during construction. The contractor shall prepare the SWPPP and update it as necessary. The Contractor shall submit the Plan to the Engineer for approval at least fourteen (14) days prior to any site activities. It is the responsibility of the Contractor to comply with the CGP conditions and the conditions of any state Wetlands Protection Act Order, Water Quality Certification, Corps of Engineers Section 404 Permit and other environmental permits applicable to the project and to include in the SWPPP the methods and means necessary to comply with applicable conditions of said permits.

It is the responsibility of the Contractor to complete the SWPPP in accordance with the EPA CGP, provide all information required, and obtain any and all certifications as required by the CGP. Any amendments to the SWPPP required by site conditions, schedule changes, revised work, regulations, construction methodologies, and the like are the responsibility of the Contractor. Amendments will require the approval of the Engineer prior to implementation.

Included in the CGP conditions is the requirement for inspection of all erosion controls and site conditions on a weekly basis as well as after each incidence of rainfall exceeding 0.25 inches in twenty-four hours. For multi-day storms, EPA requires that an inspection must be performed during or after the first day of the event and after the end of the event. The CGP requires that inspections be performed by a qualified individual as outlined in the CGP. MassDOT requires proof of completion of a 4 hour minimum sedimentation and erosion control training class current to the latest CGP. This

individual can be, but not limited to, someone that is either a certified inspector, certified professional, or certified storm water inspector. The documentation shall be included as an appendix in the SWPPP. The inspector's qualifications shall be submitted to the Engineer for approval prior to beginning any work. This individual shall be on-site during construction to perform these inspections. In addition, if the Engineer determines at any time that the inspector's performance is inadequate, the Contractor shall provide an alternate inspector. Written weekly inspection forms, storm event inspection forms, and Monthly Summary Reports must be completed and provided to the Engineer. Monthly Summary Reports must include a summary of construction activities undertaken during the reporting period, general site conditions, erosion control maintenance and corrective actions taken, the anticipated schedule of construction activities for the next reporting period, any SWPPP amendments, and representative photographs.

The Contractor is responsible for preparation of the Plan, all SWPPP certifications, inspections, reports and any and all corrective actions necessary to comply with the provisions of the CGP. The Standard Specifications require adequate erosion control for the duration of the Contract. All control measures must be properly selected, installed, and maintained in accordance with manufacturer specifications and good engineering practices. If periodic inspections or other information indicates a control has been used inappropriately or is no longer adequate, it is the responsibility of the Contractor to replace or modify the control for site conditions at no additional cost to the Department. Contractor must maintain all control measures and other protective measures in effective operating condition and shall consider replacement of erosion controls for each construction season.

This Item addresses acceptable completion of the SWPPP, any revisions/amendments required during construction, and preparation of monthly reports. In addition, any erosion controls beyond those specified in bid items which are selected by the Contractor to facilitate and/or address the Contractor's schedule, methods and prosecution of the work shall be considered incidental to this item.

The CGP provides specific requirements for temporary and final stabilization. This shall be incorporated into the project schedule. The permit defines specific deadline requirements for Initial Stabilization ("immediately", i.e., no later than the end of the next workday following the day when earth-disturbing activities have temporarily or permanently ceased) and for Complete Stabilization Activities (no later than 14 calendar days after the initiation of stabilization). Stabilization criteria for vegetative and non-vegetative measures are provided in the CGP.

The CGP requires the submission of a Notice of Termination (NOT) from all operators when final stabilization has been achieved, as well as removal and proper disposal of all construction materials, waste and waste handling devices, removal of all equipment and construction vehicles, removal of all temporary stormwater controls, etc. Approval of final stabilization by the Engineer and confirmation of submission of the NOT will be required prior to submission of the Resident Engineer's Final Estimate. The permittee shall use EPA's website to prepare and submit the NOT.

Method of Measurement and Basis of Payment

Under **Item 756** of the Contract, the Contractor will be paid the unit price per Lump Sum for **NPDES Stormwater Pollution Prevention Plan**, which shall include all work detailed above, including plan preparation, required revisions, revisions/addenda during construction, monthly reports and filing fees.

Payment of fifty (50) % of the contract price shall be made upon acceptance of the NPDES Stormwater Pollution Prevention plan. Payment of forty (40) % of the contract price shall be made in equal installments over the expected duration of stormwater pollution prevention measures.

Payment of the final ten (10) % of the contract price shall be paid upon satisfactory submissions of a Notice of termination (NOT) when final stabilization has been achieved.

-END OF SECTION-

ITEM 866.106 REFLECTORIZED PAVEMENT MARKINGS LUMP SUM

Description

The Contractor shall furnish and install reflectorized pavement markings to the lines, no parking, one way, handicap symbols, arrows, and painted islands as shown on the Drawings as specified, and as directed by the Engineer.

Materials and Construction Methods

Reflectorized paint shall be white liquid thermoplastic striping material conforming to Subsection M7.01.03 of the Standard Specifications.

Pavement marking materials shall conform to the general requirements of Section M7 of the Standard Specifications. Individual reflectorized pavement markings (Thermoplastic) shall meet the requirements of M7.01.03 and M7.01.04

Construction methods shall be in accordance with Subsection 860 of the Standard Specifications and application shall be in accordance with the manufacturer's recommendations. Layout shall be the responsibility of the Contractor and completed in accordance with the "Site Civil and Restoration Plan" drawing. Markings shall remain protected by barriers, cones, or other suitable devices until cured and dry to bear traffic with no tracking.

Painting shall consist of single 4" wide lines, arrows, crosswalk striping, stop lines, and the symbols and lines as shown on the drawings.

Colors for pavement marking symbols or lines shall be "White". Colors for handicap accessibility symbol shall be "Blue" and "White", as shown on the Drawings.

Method of Measurement and Basis of Payment

Under **Item 866.106** of the Contract, the Contractor will be paid the lump sum price for **Reflectorized Pavement Markings**, furnished and in place, which price shall include full compensation for all materials, tools, equipment, grading, labor, testing and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer.

- END OF SECTION -

ITEM 904 4,000 PSI REINFORCED CONCRETE CUBIC YARD
ITEM 904.1 5,000 PSI REINFORCED CONCRETE CUBIC YARD

Description

The work to be done under this section consists of all work related to cement concrete placement for the boat ramp, splash wall, seawalls, outfall encasement, boat ramp retaining wall extension, and boat ramp retaining wall, and slabs, including but not limited to installation of forms, shoring and falsework, furnishing and installing epoxy coated reinforcing steel, furnishing and installing PVC waterstops, furnishing and installing joint fillers, furnishing and placing concrete, removing formwork, finishing, curing concrete, and applying joint sealants for the structures as shown on the plans, and as specified herein.

Note: The concrete work for sidewalks is specified and paid for under **Item 701- Concrete Sidewalk**.

Materials and Construction Methods

Cement concrete materials and construction methods shall conform to all the applicable provisions of Section 901.10 through 901.65 of the Standard Specifications, applicable provisions of ACI 301 and 308, and with the additional requirements included herein.

CONCRETE MIX DESIGNS

Concrete mix designs proposed for the project shall be submitted for review prior to construction. A certificate of compliance shall be delivered to the Engineer for each truckload of cement concrete delivered to the site. The certificate of compliance shall state that the mix delivered conforms to the approved mix design.

Cement concrete materials shall conform to the requirements of the Standard Specification Section M4 for 4,000 psi concrete and 5,000 psi concrete:

1. 4,000 psi concrete shall be used for slabs, retaining wall footings, and safety bollards. 4,000 psi concrete shall be in accordance with the following:
    a. Minimum three-eighths inch (3/8") coarse aggregate, and maximum 3/4" coarse aggregate.
    b. Air entrained content shall be 7.5% +/- 1% if 3/8" coarse aggregate is used, 6% +/-1% if 3/4" coarse aggregate is used.
    c. Minimum cement content shall be 660 pounds per cubic yard, if 3/8" coarse aggregate is used, and 610 pounds per cubic yard if 3/4" coarse aggregate is used. Cement shall be Type II or IIA.
    d. Maximum water-cement ratio shall be 0.45.
    e. Target slump: 4 inches.
2. 5,000 psi concrete shall be used for seawalls, splash walls, boat ramp, outfall encasement, boat ramp retaining wall extension, boat ramp retaining walls, and pedestrian landing retaining walls. 5,000 psi concrete shall be in accordance with the following:
    a. Minimum three-eighths inch (3/8") coarse aggregate, and maximum 3/4" coarse aggregate.
    b. Air entrained content shall be 7.5% +/- 1% if 3/8" coarse aggregate is used, 6% +/-1% if 3/4" coarse aggregate is used.
    c. Minimum cement content shall be 760 pounds per cubic yard, if 3/8" coarse aggregate is used, and 705 pounds per cubic yard if 3/4" coarse aggregate is used. Cement shall be Type II or IIA.
    d. Maximum water-cement ratio shall be 0.40.
    e. Target slump: 4 inches.

FORMWORK

Attention is directed to the provisions of Section 901.34 of the Standard Specifications concerning formwork. The Contractor shall construct forms to the exact sizes, shapes, lines and dimensions shown on the plans to obtain accurate alignment, location, grades, and level and plumb work in the finished structure. All exposed edges shall have a 3/4" chamfer unless indicated otherwise on the drawings. After concrete placement and immediately after the forms are removed, all exposed concrete surfaces shall be rubbed with a carborundum brick to remove fins, bellies, projections, joint marks, etc. to obtain a smooth, dense surface, free from honeycombing, grain markings, bulges or depressions.

Where concrete formwork and placement occurs below water, the Contractor shall take the necessary steps to protect the concrete during construction.

REINFORCING STEEL

Reinforcing bars shall be epoxy coated and conform to Sections M8.01.0, and M8.01.7 of the Standard Specifications and AASHTO-M31, Grade 60, in accordance with ASTM A615 and ASTM A775. Welded wire fabric shall be epoxy coated and conform to Section M8.01.2 and M8.01.7 of the Standard Specifications and AASHTO-M366 and ASTM1064, epoxy coated in accordance with ASTM A884, Class A, Type 1.

Reinforcing bars and welded wire fabric shall be free of imperfections, dirt, loose scale, paint, oil, or other foreign substances that might tend to prevent bonding with concrete. Surfaces shall be brushed to remove loose material. Support chairs shall be installed to prevent sagging of the reinforcing steel and maintain cover.

Reinforcement shall be stored in a location suitable to the Engineer, which will protect the steel from rusting and exposure to the elements prior to being used in the construction.

Dowels installed into the existing revetment stones and other reinforcement called out on the drawings as stainless steel shall be in accordance with ASTM A955, Grade 304.

SPEED DOWELS

Where called out on the drawings, stainless steel speed dowels at joints shall be speed dowels as manufactured by Sika or approved equivalent. Dowels shall be installed in accordance with the manufacturer's recommendations.

WATERSTOPS

Where specified on the drawings, waterstops shall be a 6" tall flexible PVC bulb type embedded in concrete along the joints of footings and cast-in-place concrete wall stems to maintain a continuous watertight seal at the interface of pours. Waterstops shall be Greenstreak PVC Waterstop as manufactured by Sika or approved equal.

Waterstop shall be installed prior to concrete placement to ensure proper positioning and concrete consolidation around the waterstop. All transitions, intersections, and splices shall be heat welded with a waterstop welding iron to achieve a minimum of 1/8" melted bead of PVC around the entire perimeter of the waterstop, and continuity tested for seal of all butt ends. Installation and splicing of the waterstop shall be in accordance with the manufacturer's recommendations as part of the work of Item 904 and 904.1.

BONDING AGENTS

Bonding agents shall be applied on all surfaces where new concrete will interface with concrete already set and surface preparation and material placement shall conform to all applicable provisions of Section 901.37.F of the Standard Specifications. The Contractor shall remove marine growth and other bond inhibiting substances from all surfaces in contact with the work.

Bonding agents shall conform to the requirements as specified in M4.10.1: Base Bonding System for Concrete of the Standard Specifications and shall meet Type V of AASHTO M235. Bonding agent shall be Armatec 1C as manufactured by Sika or approved equal. The Contractor shall install the bonding agent in accordance with the manufacturer's instructions and shall take care to ensure that the bonding agent does not set prior to placement of fresh plastic concrete as part of the work of Items 904 and 904.1. Concrete that is placed against bonding agents that has already set will be grounds for rejection.

HIGH-BUILD PACKING MORTAR

A cementitious dry-pack or high-build mortar shall be installed between the joints of the existing revetment stones at the location of the base of the cast-in-place concrete seawall along the eastern and southern faces of the site, as necessary to prevent loss of concrete through the joints during placement of the concrete seawall footing. The packing mortar shall consist of Type II or IIA Portland cement, fine aggregate, and potable water, with mix proportions developed by the contractor as necessary for placing and filling horizontal gaps and voids in the top of existing revetment up to 6 inches wide. Means and methods for mixing and placing the packing mortar to ensure the top of the revetment is sealed, prior to concrete forming and placement, shall be the responsibility of the Contractor. High-build packing mortar shall be included as part of the work of Item 904 and 904.1. No separate payment shall be made.

EPOXY ADHESIVE

Epoxy grout to anchor reinforcing steel into revetment stones and existing concrete shall be HIT-RE 500 V3 as manufactured by Hilti, or an approved equivalent that conforms to those listed on the MassDOT Qualified Materials List for chemically curing anchoring materials and shall be suitable for marine and submerged applications. Epoxy adhesive shall be installed in accordance with the manufacturer's recommendations as part of the work of Item 904 and 904.1.

SHOP DRAWINGS

1. Shop drawings shall be of such detail and completeness that all fabrication and placement at the site can be accomplished.
2. Shop drawings shall include rebar and welded wire fabric layout, number of pieces, sizes, and grade of reinforcing steel, accessories, and any additional information required for fabrication and placement.

CONCRETE TESTING

1. Test Specimens: The Contractor will be required to make, cure and have tested, a minimum of one set of four test specimens from the concrete of each day's pour and for each fifty cubic yards of concrete cast in accordance with ASTM Designation C172, C31 and C39. One cylinder shall be broken after seven and fourteen days and two cylinders after twenty-eight days. Concrete that fails to meet strength requirements will be grounds for rejection.
2. Slump: A slump test shall be made for each truckload of concrete in accordance with ASTM Designation C143. Slumps greater than design mix limit will be grounds for rejection of the concrete.
3. Air Content: The Contractor shall make an air content test a minimum of once each day and from each fifty cubic yards of concrete by the pressure method in accordance

with ASTM Designation C231. Air contents above or below the limits specified will be grounds for rejection.

4. Testing: All personnel and laboratories testing concrete shall be licensed by the Commonwealth of Massachusetts. The Contractor shall provide the Engineer with the name, address and a copy of applicable licenses of the testing company.

The Contractor shall coordinate the date and location of tests with the Engineer before any concrete work is started.

Results of concrete testing shall be delivered to the Engineer within three (3) working days of the tests.

CURING

Curing and protection shall be in accordance with ACI 301 Section 5. Begin curing immediately after placement. Avoid damage to placed concrete from vibration created by blasting, pile driving, movement of equipment in the vicinity, disturbance of formwork or protruding reinforcement, and any other activity resulting in ground vibrations. Protect concrete from injurious action by sun, rain, flowing water, frost, mechanical injury, tire marks, oil stains, and footprints. Do not allow concrete to dry out from time of placement until the expiration of the specified curing period. Do not use membrane-forming compound on surfaces where appearance would be objectionable, on any surface to be painted, where coverings are to be bonded to the concrete, or on concrete to which other concrete is to be bonded. If forms are removed prior to the expiration of the curing period, provide another curing procedure in accordance with ACI 301 Section 5.

Curing duration shall be in accordance with ACI 301 Section 5, except increase total curing duration to 10 days for all concrete except footings and bollard fill. Protect concrete from premature drying, excessively hot temperatures, and mechanical injury; and maintain minimal moisture loss at a relatively constant temperature for the period necessary for hydration of the cement and hardening of the concrete. Curing products shall be listed on the MassDOT Qualified Construction Materials List.

FINISHING AND CLEANUP

The concrete boat ramp extension surface shall receive a "V" groove finish as shown on the drawings.

All walking surfaces shall be broomed textured perpendicular to the direction of walk in accordance with Section 901.37.G.2.e.1 of the Standard Specifications.

Contractor to provide suitable means for concrete truck washout in an area that will prevent impact to wetland resources.

Submittals

The Contractor shall submit the following for review and approval:

1. Concrete mix design conforming to the requirements specified herein.
2. Concrete material certifications
    a. Cement certifications
    b. Aggregate test reports
    c. Fly ash certifications
3. Shop drawings for reinforcing steel stamped by a Professional Engineer licensed in the Commonwealth of Massachusetts showing the following:
    a. Reinforcing steel layout

b. Welded wire fabric layout and schedule
c. Bar schedule
d. Bending details
e. Connection details
f. Lap splice distances and locations.

4. Reinforcing steel material certifications:
   a. Mill certifications

b. Epoxy coating certifications

5. Manufacturer's product data sheets and installation instructions:
   a. Speed Dowels
   b. Waterstop
   c. Joint sealants
   d. Bonding agents
   e. Epoxy adhesive
   f. Curing products
6. Concrete installation procedures and joint layout.
7. Field test results including:
   a. Slump and air entrainment tests.
   b. Cylinder break test reports.
8. Certificate of compliance for each concrete delivery.
9. Cold and hot weather concrete work and curing procedures.

Method of Measurement

The volume of cement concrete to be paid for under this item will be measured by the cubic yard, and the quantity shall be determined in accordance with the dimensions shown on the plans and such alterations of the plans as are specifically ordered in writing by the Engineer, and no allowance will be made for concrete placed beyond such limits.

Basis of Payment

Under **Item 904** of the Contract, the Contractor will be paid the unit price per Cubic Yard for **4,000 PSI Reinforced Concrete**, furnished and in place, which price shall include full compensation for all materials, tools, equipment, grading, labor, testing and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer. Note that the 4,000 psi concrete installed within the limits of the concrete sidewalk shall be paid for under Item 701 and the 4,000 psi concrete installed for the traffic bollards shall be paid for under Item 1000.12.

Under **Item 904.1** of the Contract, the Contractor will be paid the unit price per Cubic Yard for **5,000 PSI Reinforced Concrete**, furnished and in place, which price shall include full compensation for all materials, tools, equipment, grading, labor, testing and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer.

-END OF SECTION-

Description

The work under this item shall consist of the design, fabrication, delivery, and installation of a complete timber floating dock system, including floats, flotation units, decking, framing, fendering, pile guides, hardware, and all associated appurtenances, as shown on the Drawings and as specified herein, and as directed by the Engineer.

The work shall include all labor, materials, equipment, transportation, supervision, and incidentals necessary to provide a fully functional floating dock system. Pile guides securing the four (4) existing floats to remain shall be replaced in kind.

Materials and Construction Methods

The Contractor shall fabricate and install floating dock in accordance with the Contract Drawings and accepted shop drawings. The float system shall be designed for marine service conditions at Plymouth Harbor and shall provide safe, stable access throughout the tidal cycle.

Floating dock will be exposed to wind and waves during erection and while in service, and contractor shall analyze, design and construct accordingly. Contractor shall use bracketed connections and sufficient hardware to accommodate design loads and freeboard requirements as outlined above, and to withstand environmental wave and vessel wake action normal to the site. The following is minimum design criteria that shall be used for the dock system:

1. Uniform live load (for structural components): 60 psf
2. Uniform live load (for buoyancy and freeboard): 40 psf
3. Maximum concentrated load: 400 lb
4. Current velocity: < 1 knot
5. Significant wave height (hs): 2 ft
6. Wind load: 16 psf on a 40-ft moored vessel, and exposed float areas.
7. Maximum cross slope and longitudinal slope shall not exceed 2% (1:50), under static deadload conditions.

The Contractor shall provide experienced personnel from the float manufacturer to assist with installation and adjustment of the system.

Floating dock system shall be in accordance with the following:

TIMBER MATERIALS

1. Structural framing shall consist of pressure-treated Southern Yellow Pine.
2. Framing members shall be No. 1 grade or better.
3. Decking shall be IPE. Coordinate type with the owner. Deck thickness shall be as appropriate to span the joists under structural live load conditions, meeting allowable bending and l/360 deflection criteria.
4. All treatment shall be appropriate for saltwater marine exposure, in accordance with accordance with the latest AWPA standards for marine exposure in northern waters (use category uc5a).
5. Skids shall be provided on the bottom of the floats, as shown on the drawings. Skids shall be securely fastened to the float framing using thru-bolts, between float units.

FLOTATION UNITS

1. Flotation shall consist of encapsulated, foam-filled polyethylene float drums.

2. Units shall be resistant to marine exposure and meet U.S. Army Corps of Engineers absorption standards.
3. Drums shall be securely through-bolted to the timber frame.
4. Flotation shall provide sufficient buoyancy and freeboard under the specified design loading conditions. Freeboard requirements shall be as shown on the drawings, with the intent to match the existing float system under dead load conditions. Dead load conditions shall account for pile guide assemblies and the gangway.
5. Freeboard under full live load conditions on the float shall not be less than 8 inches.
6. List under dead load conditions shall not be more than 2% slope (1:50).

HARDWARE AND FASTENERS

1. All hardware shall be hot-dip galvanized unless otherwise noted.
2. Stainless steel fasteners shall be used for decking – 3"-#12 placed 2 screws per support at each point of contact. Pre-drill and countersink prior to placement of screw.
3. Bolts shall be a minimum of ½-inch diameter and installed with washers and backing plates as required.
4. All exposed fasteners shall be flush or countersunk to prevent damage to vessels.

CONNECTIONS AND FITTINGS

1. Floating dock module connections shall be compatible with the existing floating dock system they will be attached to.
2. Float sections shall be connected using heavy-duty hinge and pin systems.
3. Connections shall allow for tidal movement and seasonal removal.
4. Cleats shall be heavy-duty galvanized units, through-bolted with backing plates.
5. Cleats shall be hot-dipped galvanized cast steel and installed in accordance with the manufacturer's recommendations, using thru-bolted connections. All hardware shall be hot-dip galvanized.
6. Dock fenders shall be from extruded, non-marring, EPDM conforming to the requirements of ASTM D-2000, 3BA, 712, A14, B13, C12, F17, and G21. The fenders shall be grey with a min. width of 3-1/8", height of 2-7/8" and wall thickness of 11/16". Fenders shall be weather resistant to ensure they will not warp, crack or deteriorate. Dock fenders shall be fastened to the floats with ½"x4" A316 stainless steel lag bolts with ¼"x1-1/2" aluminum flat bar. Stainless steel lag bolts shall be isolated from Aluminum with 1/8" thick HDPE spacer and bolt sleeves. Aluminum bar shall be series 6016 aluminum. Fenders shall be placed on all exposed sides of the float system. New pile guides (2 total) for the 12.75" diameter steel landing float piles shall contain 4 urethane rollers to prevent abrasion of pile coating.

FABRICATION REQUIREMENTS

1. Floats shall include integral skids to allow seasonal removal from the water.
2. All structural steel components shall conform to ASTM A36 and shall be hot-dip galvanized in accordance with ASTM A123.
3. All fabrication shall be completed prior to delivery to the site unless otherwise approved.

INSTALLATION

Floats shall be assembled, launched, and installed in accordance with manufacturer recommendations and the Contract Drawings. The Contractor shall:

1. Align floats properly throughout one full tidal cycle
2. Adjust connections and mooring restraints to minimize movement
3. Install all components without damage to adjacent structures
4. All field cuts to treated timber shall receive preservative treatment.

ADJUSTMENT AND PERFORMANCE

The completed float system shall:

1. Maintain proper alignment and performance throughout tidal fluctuations
2. Provide stable and safe access throughout the complete tidal range
3. Be adjustable for seasonal removal and installation
4. The Contractor shall make any required adjustments during the first season of use at no additional cost.

Submittals

The Contractor shall submit the following for review and approval:

1. Shop drawings showing layout, framing, connections, and flotation
2. Design calculations, stamped by a Professional Engineer licensed in the Commonwealth of Massachusetts.
3. Product data for float drums and hardware
4. Timber treatment certification
5. Manufacturer warranty documentation

Quality Control

The manufacturer shall have a minimum of five (5) years of experience producing similar floating dock systems. All materials and workmanship shall be subject to inspection by the Engineer.

Method of Measurement and Basis of Payment

Under **Item 921** of the Contract, the Contractor will be paid the contract lump sum price for the **Timber Floating Dock System**, which shall include full compensation for:

1. Design and fabrication
2. All materials, including timber, flotation, hardware, and fittings
3. Delivery and installation
4. Manufacturer support during installation
5. Adjustments and commissioning
6. All labor, tools, equipment, and incidentals

No separate payment will be made for any component of this work, all of which shall be considered incidental to this item.

- END OF SECTION -

Description

The Contractor shall provide all labor, equipment, materials, tools and accessories to complete the work in this section. This work includes, but is not necessarily limited to the supply and installation of timber piles to the locations and elevations as shown on the Contract Drawings for the work of the proposed timber guide piles.

The Contractor shall furnish and install greenheart timber piles for the existing floating docks, as shown on the plans, as herein directed and as specified. The Contractor is directed to the permit authorizations for any "soft start" driving requirements to mitigate impacts to marine life.

Materials and Construction Methods

Timber pile materials and construction methods shall conform to all the applicable provisions of Subsection 940 of the Standard Specifications and with the additional requirements included herein.

TIMBER PILE MATERIAL

1. Timber piles shall be new, clean peeled greenheart piles with sizes, lengths, and locations as indicated on the Contract Drawings.
2. All piles shall conform to the requirements of Subsection M9.05.6 of the Standard Specifications and shall be free of excessive checks, splits, or other defects that may impair strength or durability. Piles shall be subject to review and approval by the Engineer prior to installation.
3. Piles shall be supplied by the Contractor and shall meet all specified material requirements prior to delivery to the site.
4. Piles shall meet the requirements for ASTM D25-12R22 for friction piles with 44" (14" diameter) circumferences measured 3 feet from the butt and have a minimum 9" tip diameter.

GENERAL INSTALLATION AND PILE DRIVING

1. Construction methods shall conform to the applicable provisions of Section 940 of MassDOT Standard Specification (for Highways and Bridges, 2026 Edition) and any and all addenda and revisions thereto, except as herein specified.
2. The Contractor shall be responsible for furnishing and installing all piles at the locations shown on the Drawings.
3. All pile driving operations shall be conducted from the Contractor's barge.
4. The Contractor shall take all necessary precautions to prevent damage to piles during handling, positioning, and installation.
5. The Contractor is directed to the Order of Conditions for "soft start" driving requirements to mitigate impacts to marine life.

PILE DRIVING METHODS

1. Piles shall be installed using a vibratory hammer, followed by impact driving as necessary to achieve required tip elevations.
2. Vibratory driving shall utilize a "soft start" method.
3. Piles shall be continuously driven using equipment of sufficient capacity to achieve required penetration.
4. Piles shall be driven to:
    a. Tip elevation shown on the Drawings, as approved by the Engineer.
    b. If practical refusal is reached before the minimum tip elevation is achieved, stop driving and contact the Engineer for further direction.

5. Practical refusal shall be defined as:
    a. Penetration not exceeding 1/2 inch per blow for five consecutive blows
    b. Based on a hammer energy of 15,000 ft-lbs, with hammer weight approximately equal to pile weight.

ALIGNMENT AND TOLERANCES

1. Piles must be driven within tolerances not exceeding 2 inches out of horizontal alignment, 1 inch out of vertical cutoff elevation, and a maximum batter of 1-inch over a length of 20 feet. Use templates to accurately locate and install piles plumb. Adjust guide pile locations accordingly. If pile misalignment is greater than the tolerances stated, notify the Engineer for approved action before advancing the work at that location.
2. Piles that do not meet tolerance requirements shall be removed and re-driven at no additional cost to the owner.
3. Piles shall not be pulled into position after driving.

OBSTRUCTIONS AND DRIVING CONDITIONS

The Contractor shall:

1. Remove or relocate stones and obstructions prior to driving.
    a. Provide methods such as spudding to break or clear obstructions.
    b. Care shall be taken to avoid pile damage due to abrupt changes in subsurface conditions.
2. Jetting of piles will not be permitted.
3. Any pile which may be driven in the wrong position, or which may not be long enough for fitting after driving, or which may be split or otherwise damaged, shall be pulled and another pile of suitable length shall be substituted for it (without additional compensation therefore).

PILE PROTECTION

1. Provide protection at pile tips and butts during driving.
2. Take appropriate measures to prevent splitting or damage of pile.
3. Piles damaged during fabrication, transport, storage, handling or driving shall be replaced at no additional cost to the owner.
4. Care shall be used in handling timber piles to prevent damage. All timber piles shall be handled and installed in a manner that will avoid damage to the surfaces.
5. Cant hooks, peavies, picaroons, and end hooks shall not be used on side surfaces and the use of pointed tools shall be confined to end grains.

CUTOFF AND TREATMENT

1. Piles shall be cut off at elevations shown on the Drawings. Pile cut-offs shall remain the property of the Contractor and shall be removed from the site.
2. A minimum of 3 feet shall be removed from the pile top after installation.
3. Each timber pile shall be furnished with an approved pile cap and banded at the top of the pile with two ¾" thick x 1" wide stainless steel straps/bands.

Submittals

The Contractor shall submit the following for review and approval:

1. Manufacturer's cut sheets for timber piles indicating material type and properties prior to purchase and installation.
2. Material certificates for pile products and preservative treatment.
3. Manufacturer information for pile driving equipment to be used for the work.

4. Pile driving log for each pile, documenting installation details for each pile, including:
    a. Driving time
    b. Driving equipment
    c. Location and pile designation
    d. Tip elevation
    e. Cutoff elevation

Method of Measurement and Basis of Payment

Under **Item 941** of the contract, the Contractor will be paid the contract unit price per linear foot of **Greenheart Timber Piles** furnished and placed as herein specified, as shown on the plans, and as directed, which unit price shall include full compensation for all materials, tools, equipment, cutting off timber piles, and incidental work necessary to complete the work under this item. No separate payment will be made for portions of piles cut off after driving or for pile shoes, bands and other appurtenances.

- END OF SECTION –

Description

The Contractor shall provide all labor, equipment, materials, tools and accessories to complete the work in this section. This work includes, but is not necessarily limited to the supply and installation of steel pipe piles to the locations and elevations as shown on the Contract Drawings for the work of the proposed steel gangway hoist/guide piles.

The gangway hoist shall be furnished as specified and paid for as part of the work of Item 954.

Materials and Construction Methods

Steel pipe pile materials and construction methods shall conform to all the applicable provisions of Subsection 940 of the Standard Specifications and with the additional requirements included herein.

STEEL PILE MATERIAL

1. Piles shall be ASTM A252, Grade 3 (45 ksi) steel pipe.
2. Size and length shall be as shown on the drawings.
3. Piles shall be shop coated as specified in the Coatings section.
4. All materials shall be new and free from defects affecting strength or durability.
5. Up to one pile splice is acceptable for steel pipe piles. Splices shall be shop-welded and develop the full structural capacity of the piles. Splice shall be located a minimum of 20 feet below the mudline. Splices shall be designed by a Professional Engineer and welded per AWS D1.1

COATING MATERIALS

1. Coating for steel pipe piles shall be a fusion bonded epoxy powder coating system. The coating shall be Scotchkote #206N Fusion Bonded Epoxy Coating as manufactured by 3M Company, Electro-Products Division, St. Paul, MN; or equivalent by Armstrong Products Corporation of Warsaw, Indiana; or equivalent by Dupont Powder Coatings of Houston, Texas or approved equal.
2. Coating shall be factory-applied.
3. All surfaces shall be thoroughly prepared for coating application in strict accordance with the coating manufacturer's recommendation and these specifications. All cleaning and coating work must be performed in a heated building. Preceding grit blasting, steel must be heated to at least 100 degrees F. to eliminate possibility of moisture on the surfaces to be cleaned and coated.
4. Grit blasting shall be to clean grey metal, at least equivalent to a Near White as defined by SSPC Specification SP-10. All work blasted in one day must be coated on that day.
5. Any areas of the surface which show traces of oil, grease, or other organic matter shall be removed prior to coating. The contamination shall be removed by using either a solvent or spot blasting.
6. All surfaces to be coated must be completely dry, free of moisture, soil, dust and grit and the time the coating is applied.
7. Pile shall be shop coated full length. The fusion bonded epoxy coating shall be applied in an environmentally controlled plant that is fully enclosed. The coating system shall be fully automatic with the capabilities of preheating and post baking. The grit blast cleaning machine shall be fully automatic and fully enclosed in an environmentally controlled plant.
8. The finished minimum coating thickness (dry-film) shall be 14 mils nominal as tested in accordance with ASTM-G12.

9. The coating material shall be applied strictly in accordance with the coating manufacturer's recommendation as to coating application procedure and curing schedule. In no case shall the oven temperatures or temperature of the piling during any part of the curing process, exceed 260 C. (500 F.).
10. The cured coating shall be of uniform color, gloss and thickness, and shall be free of blisters, pinholes, fish eyes, sags, runs, and any other irregularities.
11. The coater shall be responsible for all quality control checking including visual inspection, thickness measurements, and holiday testing, and shall keep records on the results of all such inspections in a form suitable to the Engineer.
12. The Engineer shall have access to each part of the process and shall have the right and opportunity to witness any of the quality control test and/or perform such test himself on a random sampling basis.

WELDING MATERIALS

1. Welding shall conform to AWS D1.1 requirements.
2. Electrodes shall be low hydrogen E70XX series or compatible with base metals.

HANDLING AND STORAGE

1. Store piles to prevent distortion and excessive camber.
2. Support piles at intervals not exceeding 10 feet.
3. Do not drag piles on the ground.
4. Inspect piles prior to installation for defects.

PILE DRIVING EQUIPMENT

1. Use impact or vibratory hammers sized to achieve required capacity.
2. Equipment shall be capable of achieving required penetration without damaging piles or adjacent structures.

GENERAL INSTALLATION AND PILE DRIVING

1. The Contractor shall be responsible for furnishing and installing all piles at the locations shown on the Drawings.
2. All pile driving operations shall be conducted from the Contractor's barge.
3. Maintain alignment of hammer and pile during driving.
4. Install piles continuously until required penetration is achieved,
5. Avoid excessive stresses during driving
6. The Contractor shall take all necessary precautions to prevent damage to piles during transportation, handling, positioning, and installation.

PILE INSTALLATION

1. Piles shall be installed using a vibratory hammer, followed by impact driving as necessary to achieve required tip elevations.
2. Driving shall utilize a "soft start" method.
3. Piles shall be driven using equipment of sufficient capacity to achieve required penetration.
4. Piles shall be driven to:
    a. Tip elevation shown on the Drawings, as approved by the Engineer.
    b. If practical refusal is reached before the minimum tip elevation is achieved, stop driving and contact the Engineer for further direction.
5. Practical refusal shall be defined as:
    a. Penetration not exceeding 1/2 inch per blow for five consecutive blows.

b. Based on a hammer energy of 15,000 ft-lbs, with hammer weight approximately equal to pile weight.

ALIGNMENT AND TOLERANCES

1. Piles must be driven within tolerances not exceeding 2 inches out of horizontal alignment, 1 inch out of vertical cutoff elevation, and a maximum batter of 1-inch over a length of 20 feet. Use templates to accurately locate and install piles plumb. Adjust guide pile locations accordingly. If pile misalignment is greater than the tolerances stated, notify the Engineer for approved action before advancing the work at that location.
2. Piles that do not meet tolerance requirements shall be removed and re-driven at no additional cost to the owner.
3. Piles shall not be pulled into position after driving.

OBSTRUCTIONS AND DRIVING CONDITIONS

The Contractor shall:

1. Remove or relocate stones and obstructions prior to driving
2. Provide methods such as:
    a. Spudding
    b. Excavation up to 5 feet depth
    c. Care shall be taken to avoid pile damage due to abrupt changes in subsurface conditions.
3. Jetting of piles will not be permitted.

PILE PROTECTION

1. Provide protection at pile tips and butts during driving
2. Take appropriate measures to prevent damage to the pile coating.

COATING REPAIR

1. Field touch-up of damaged coating or welded areas shall be in accordance with the following:
2. Field surface preparation and coating shall only take place on items requiring field assembly or touch up including:
    a. Grind, wire brush, or, otherwise clean to grey metal. Work to be at least equivalent to Power Tool Cleaning as defined by SSPC specification SP-3. All work cleaned must be coated on that day.
    b. Traces of oil, grease, or other organic matter on areas of the surface shall be removed prior to coating. The contamination shall be removed by using either a solvent or spot blasting.
    c. All surfaces to be coated must be completely dry, free of moisture, soil, dust and grit at the time the coating is applied.
    d. The touch up epoxy material shall be 3M Scotchkote 323/323i Liquid Epoxy Coating or an approved equivalent two-part epoxy system designed and color-matched for patching the epoxy coating utilized during shop coating and with the same manufacturer.
    e. Mixing: Mix ratio of Part A to Part B shall be 1:1 by volume. The two parts must be thoroughly mixed until a uniform color is achieved. If thinning is required, thin each part separately to minimize loss of pot life with thinner recommended by the producer. Pot life should be approximately 8 hours.
    f. Application: Material should be capable of being applied with ordinary brush or roller at a temperature of 55 degrees F. and above. Prepare surface to be

touched up in strict accordance with manufacturer's recommendations, to provide an equivalent service life as the initially installed coating. A tack-free surface should be achieved in 2 to 3 hours at 72 degrees F. Full cure should be achieved in 3 to 5 days at 72 degrees F. Care should be exercised in handling parts before they are fully cured.

CUTOFF AND TREATMENT

1. Piles shall be cut off at elevations shown on the Drawings, using saw cutting to provide a neat and level surface.
2. Exposed pile tops shall be field coated, in accordance with the Coating Repair section.
3. Pile tops shall be capped with plastic conical pile caps, secured with four (4) self tapping screws with pilot holes.
4. Lifting holes shall be above the final cutoff elevation and any small holes or rigging points shall be sealed.

Submittals

The Contractor shall submit the following for review and approval:

1. Written pile installation plan.
2. Manufacturer's cut sheets for steel pipe piles indicating material type and properties prior to purchase and installation.
3. WEAP analysis, completed by a Geotechnical Engineer, licensed in the Commonwealth of Massachusetts.
4. Material certificates for pile products and coating system.
5. Weld detail and welder qualifications for pile splices, if required.
6. Manufacturer information for pile driving equipment to be used for the work
7. Pile driving log for each pile, documenting installation details for each pile, including:
    a. Driving time
    b. Driving equipment
    c. Location and pile designation
    d. Tip elevation
    e. Cutoff elevation

Method of Measurement and Basis of Payment

Under **Item 943.1** of the Contract, the Contractor will be paid the unit price per Linear Foot for **Steel Pipe Piles**, furnished and in place, which price shall include full compensation for all materials, tools, equipment, labor, testing and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer.

- END OF SECTION -

ITEM 954 ALUMINUM GANGWAY AND GANGWAY HOIST LUMP SUM

Description

The work under this item shall consist of the design, fabrication, delivery, and installation of aluminum gangways and associated components, including hinge assemblies, roller systems, transition plates, guide channels, turntable assemblies, gangway hoist, and all required hardware, as shown on the Drawings and as specified herein, and as directed by the Engineer.

The work shall include all labor, materials, equipment, transportation, supervision, and incidentals necessary to provide a complete and fully functional gangway system connecting the upland structure to the floating dock system.

The Contractor shall obtain a permit from the Town of Plymouth Fire Department for welding, torch cutting, or hot work performed at the site.

Materials and Construction Methods

The gangway system shall be designed and constructed to function over the full tidal range at the site without damage to the gangway or supporting structures. Gangway system shall be ADA compliant.

Design and fabrication shall conform to the following, unless noted otherwise:

Aluminum Association Specifications for Aluminum Structures
AWS D1.2 Structural Welding Code – Aluminum
AASHTO Guide Specifications for Design of Pedestrian Bridges
ADA Accessibility Guidelines.
ASCE 7 latest editions

The following is minimum design criteria that shall be used for the gangway system:

1. Uniform live load: 100 psf.
2. Wind load based on 130 mph wind speed.
3. Maximum allowable deflection of L/360 under live load.
4. Gangway shall be cambered to accommodate dead load deflection.
5. All components of the handrail including mounting brackets and welds, shall be designed for the following minimum load cases:
   i. A continuous uniform load of 50 plf applied along the full length of the handrail in any direction.
   ii. A concentrated point load of 300 lbs acting at any point in any direction.
   iii. Infill areas shall be capable of supporting a 200 lb concentrated load over a one square foot area.

The Contractor shall provide experienced personnel from the gangway manufacturer to assist with installation and adjustment of the system.

The aluminum gangway system shall be in accordance with the following:

STRUCTURAL ALUMINUM - GANGWAY

1. All structural components shall be fabricated from Aluminum Alloy 6061-T6.
2. Members shall be designed to resist all applied loads without failure or excessive deformation.
3. All fabrication shall be completed in accordance with AWS welding standards.

DECKING – ALUMINUM GANGWAY

1. Decking shall be non-skid aluminum decking.
2. Acceptable surfaces include:
3. Raised rib decking (max ¼-inch rib height, perpendicular to traffic), or
4. Carborundum-coated surface.
5. Slip resistance shall meet:
    a. 0.8 coefficient of friction (wet) for slopes ≥ 1:33.
    b. 0.5 coefficient of friction (wet) for slopes < 1:22.

CONNECTIONS AND APPURTENANCES – ALUMINUM GANGWAY

1. Hinge Assembly (Shore Connection): Provide top link arm hinge assembly capable of accommodating out-of-plane movement due to float motion through the extreme tidal range, and coordinated with the connection at the seawall interface, complying with ADA requirements.
2. Roller Assembly (Float Interface): Provide gangway roller system at float connection to allow free vertical movement. Rollers shall be UHMW polyurethane, with UV inhibitors added. Roller axles shall be solid stainless steel rod Type 316.
3. Include non-skid transition plates and a floating dock wear plate with counter sunk holes to prevent abrasion and wear. Wear plate shall be stainless steel.
4. Guide Channels: Provide guide channels to prevent lateral movement ("walking") of the gangway on the float. Guide channels shall be stainless steel.

HARDWARE AND FASTENERS – ALUMINUM GANGWAY

1. All fasteners shall be Type 316 stainless steel (ASTM 300 Series).
2. Nuts shall be self-locking or double-nutted.
3. Pins and sleeves shall be 316 stainless steel.
4. Dissimilar metals shall be isolated using Nylatron-GS or approved equal, minimum 1/16-inch thick separation material

FABRICATION REQUIREMENTS – ALUMINUM GANGWAY

1. Gangways shall be fabricated as continuous members (no splices).
2. All welds shall be:
    a. Full-strength welds.
    b. Free from contaminants prior to welding.
    c. Sized to develop full strength of connected member.

The wide flange beam gangway shall be in accordance with the following:

BEAM MATERIALS

1. Beam shall be ASTM A572, Grade 50 steel.
2. Size and length shall be as shown on the drawings.
3. Beam shall be shop coated as specified in the Coatings section.
4. All materials shall be new and free from defects affecting strength or durability.

COATING MATERIALS –BEAM

1. Coating for wide flange beam and plate shall be a coal tar epoxy powder coating system. The coating shall be Targuard Coal Tar Epoxy Coating as manufactured by Sherwin Williams; Bitumastic 300 M as manufactured by Carboline; or approved equal.
2. Coating shall be factory-applied.

3. All surfaces shall be thoroughly prepared for coating application in strict accordance with the coating manufacturer's recommendation and these specifications. All cleaning and coating work must be performed in a heated building. Preceding grit blasting, steel must be heated to at least 100 degrees F. to eliminate possibility of moisture on the surfaces to be cleaned and coated.
4. Grit blasting shall be to clean grey metal, at least equivalent to a Near White as defined by SSPC Specification SP-10. All work blasted in one day must be coated on that day.
5. Any areas of the surface which show traces of oil, grease, or other organic matter shall be removed prior to coating. The contamination shall be removed by using either a solvent or spot blasting.
6. All surfaces to be coated must be completely dry, free of moisture, soil, dust and grit and the time the coating is applied.
7. Beam shall be coated full length. The coal tar epoxy coating shall be applied in an environmentally controlled plant that is fully enclosed. The coating system shall be fully automatic with the capabilities of preheating and post baking. The grit blast cleaning machine shall be fully automatic and fully enclosed in an environmentally controlled plant.
8. Apply coating 8 mils each first and second coatings. The finished minimum coating thickness (dry-film) shall be 16 mils nominal as tested in accordance with ASTM-G12.
9. The coating material shall be applied strictly in accordance with the coating manufacturer's recommendation as to coating application procedure and curing schedule. In no case shall the oven temperatures or temperature of the piling during any part of the curing process, exceed 260 C. (500 F.).
10. The cured coating shall be of uniform color, gloss and thickness, and shall be free of blisters, pinholes, fish eyes, sags, runs, and any other irregularities.
11. The coater shall be responsible for all quality control checking including visual inspection, thickness measurements, and holiday testing, and shall keep records on the results of all such inspections in a form suitable to the Engineer.
12. The Engineer shall have access to each part of the process and shall have the right and opportunity to witness any of the quality control test and/or perform such test himself on a random sampling basis.
13. For field coatings, work coating thoroughly into all joints, crevices, and open spaces. Pay special attention to welds, cutouts, sharp edges, rivets, crevices, and bolts to ensure proper coverage and thickness.

COATING REPAIR

1. Field touch-up of damaged coating or welded areas shall be in accordance with the following:
2. Field surface preparation and coating shall only take place on items requiring field assembly or touch up including:
    a. Grind, wire brush, or, otherwise clean to grey metal. Work to be at least equivalent to Power Tool Cleaning as defined by SSPC specification SP-3. All work cleaned must be coated on that day.
    b. Traces of oil, grease, or other organic matter on areas of the surface shall be removed prior to coating. The contamination shall be removed by using either a solvent or spot blasting.
    c. All surfaces to be coated must be completely dry, free of moisture, soil, dust and grit at the time the coating is applied.

d. The touch up epoxy material shall be the same material used for the shop-coating, or an approved equivalent two-part epoxy system designed and color-matched for patching the epoxy coating utilized during shop-coating and with the same manufacturer.
e. Mix and apply the coating in accordance with manufacturer's recommendations.

Welding and inspection of welded connections shall be as follows:

WELDING AND INSPECTION

1. All welding shall conform to AWS D1.1 for steel members, D1.2 for aluminum members, and AWS D1.6 for stainless steel members.
2. Electrodes shall be low hydrogen E70XX series or compatible with base metals.
3. Welders shall be properly certified.
4. Independent weld inspection shall be performed by an AWS Certified Welding Inspector (CWI).
5. Inspection requirements include:
    a. Visual and/or ultrasonic testing.
    b. In-process and final inspections.
    c. Inspection of 100% of welds.
6. All deficiencies shall be corrected at no additional cost.

INSTALLATION

The Contractor shall:

1. Fabricate and install the wide flange beam, gangway, and hoists in accordance with approved shop drawings.
2. Ensure compatibility with proposed timber float system and applicable upland structures.
3. Install all hinges, rollers, and bearing elements to accommodate movement over the full extreme tidal range.
4. Installation shall ensure smooth, safe operation without binding over the full extreme tidal range.

Submittals

The Contractor shall submit the following for review and approval:

1. Manufacturer qualifications
2. Welding inspector qualifications
3. Design calculations stamped by a Professional Engineer, licensed in the Commonwealth of Massachusetts
4. Material property data and certificates for steel beam and coating system
5. Shop drawings showing all members, connections, and welds
6. Welding procedures and certifications
7. Weld inspection reports (in-process and final)

Quality Control

The Contractor shall provide gangways and gangway hoists fabricated by a manufacturer with a minimum of five (5) years of experience in similar marine structures. All work shall be subject to inspection and approval by the Engineer.

Method of Measurement and Basis of Payment

Under **Item 954** of the Contract, the Contractor will be paid the contract lump sum price for the **Aluminum Gangway System**, which shall include full compensation for:

1. Structural design and engineering
2. Fabrication of gangway and gangway hoist and all components
3. All materials, hardware, and appurtenances
4. Delivery and installation
5. Welding, inspection, and testing
6. Adjustment and commissioning
7. All labor, tools, equipment, and incidentals

No separate payment will be made for any component required to complete this work.

- END OF SECTION -

Description

The work under this item shall consist of the design, fabrication, delivery, and installation of aluminum railings, base plates, and all required hardware, as shown on the Drawings and as specified herein, and as directed by the Engineer.

The work shall include all labor, materials, equipment, transportation, supervision, and incidentals necessary to provide a complete and fully functional railing system secured to the seawall, retaining wall, and other structures as indicated.

Materials and Construction Methods

The railing system shall consist of a complete aluminum handrail system including rails, posts, pickets, connectors, anchorages, and all associated components.

Be designed to meet structural performance requirements of the International Building Code (IBC), a minimum of 42 inches above the walking surface, and include at a minimum a top and bottom rail, posts, pickets, base plates, and connection hardware. Railing shall be base-plate mounted.

Design and fabrication shall conform to the following, unless noted otherwise:

Aluminum Association Specifications for Aluminum Structures
AWS D1.2 Structural Welding Code – Aluminum

Railing shall be capable of resisting the following loads:

1. Top rail:
   a. 200 lb concentrated load applied in any direction
   b. 50 lb/ft uniform load applied in any direction.
2. Intermediate rails and pickets:
   a. 50 lb concentrated load over 1 square foot area.

Railing system shall be in accordance with the following:

STRUCTURAL ALUMINUM

1. All structural components shall be fabricated from Aluminum Alloy 6061-T6.
2. Members shall be designed to resist all applied loads without failure or deformation beyond allowable limits.
3. All fabrication shall be completed in accordance with AWS welding standards.

MEMBER SIZES

1. Posts: 1-1/2 inch IPS Schedule 80 (aluminum)
2. Rails: 1-1/2 inch IPS Schedule 40 (aluminum)
3. Pickets: 1/2 inch minimum, maximum 4-inch spacing
4. Base Plates: 4-inch by 6-inch minimum
5. Anchor Bolts: minimum 3/8-inch diameter anchor bolts, with minimum 4-inch nominal embedment.

HARDWARE AND FASTENERS

1. All fasteners shall be Type 304 stainless steel (ASTM 300 Series).
2. Nuts shall be self-locking or double-nutted.
3. Anchor bolts:
   a. Expansion anchors per FF-S-325

b. Adhesive anchors with resin system
4. No sheet metal screws or pop rivets permitted
5. Dissimilar metals shall be isolated using Nylatron-GS or approved equal, minimum 1/16-inch thick separation material.

FLANGES AND CONNECTORS
1. Aluminum-magnesium alloy castings (ASTM B26 or B179)
2. Anodized finish (minimum 0.7 mil thickness)
3. Internal locking connector system required

GROUT
1. Non-shrink, nonmetallic (ASTM C1107)

The Contractor shall furnish and install the handrail system in accordance with the Contract Drawings and approved shop drawings. Installation shall ensure Proper alignment and secure anchorage, Compliance with structural loading requirements, and a clean and uniform appearance. Installation shall requirements shall include but not be limited to the following:

ASSEMBLY
1. Install posts plumb and aligned.
2. Assemble rails using specified internal connector systems.
3. Tighten all fasteners securely.

ANCHORAGE
1. Install anchor bolts and embedments in accordance with manufacturer recommendations.
2. Ensure proper embedment depth and alignment.
3. Use grout as needed for secure and level installation.

QUALITY AND PROTECTION
1. Protect installed components from damage during construction.
2. Ensure all finishes are intact and free of defects.
3. Replace damaged components at no additional cost.

Submittals

The Contractor shall submit the following for review and approval:
1. Manufacturer qualifications.
2. Design calculations stamped by a Professional Engineer, licensed in the Commonwealth of Massachusetts.
3. Product data for all handrail system components, including: Rails, posts, connectors, anchors, grouts, and coatings.
4. Shop drawings showing:
    a. Layout, elevations, and sections
    b. Connection details and anchorage methods
    c. Installation details and hardware requirements

Quality Control

The Contractor shall provide railings fabricated by a manufacturer with a minimum of five (5) years of experience in similar railing systems. All work shall be subject to inspection and approval by the Engineer.

Method of Measurement and Basis of Payment

Under **Item 975.5** of the Contract, the Contractor will be paid the unit bid price per Linear Foot for **Aluminum Railings**, which shall include full compensation for:

1. Structural design and engineering
2. Fabrication of railings and all components
3. All aluminum railing materials, including base plates and anchorage hardware
4. Delivery and installation
5. Adjustment and commissioning
6. All labor, tools, equipment, and incidentals.

No separate payment will be made for any component required to complete this work.

- END OF SECTION -

Description

The Contractor shall provide all labor, equipment, materials, tools and accessories to complete the work in this section. This work includes, but is not necessarily limited to, the supply and installation of additional armor stone to the lines and elevations as shown on the Contract Drawings for the work of extending the revetment along the existing boat ramp and seawalls as shown on the Project Drawings.

Materials and Construction Methods

The work shall be performed by a qualified Contractor having experience in constructing stone slope protection of similar type.

Provide stone with the physical properties required by ASTM Standard C33 for quarry stone for producing coarse aggregate for concrete. Conform to ASTM C88 and C131 for the testing for soundness and resistance to abrasion. Conform to the requirements of the abrasion test for stone and provide the requirements of soundness test for all stone. Use representative chips, one inch in size, taken from the stone as furnished.

All stone shall consist of sound, hard, dense, durable rock which has been separated from bedrock by quarrying.

Unit weight of stone shall not be less than 165 pounds per cubic foot, dry in air, unless otherwise noted.

The stone shall be free from open or incipient cracks, seams and fissures, and from porous structure, solution cavities, planes of weakness, and from component minerals and cementing or bonding materials that may contribute to spalling or breakdown during handling and placing and from wave action and chemical action from air and water.

Gradation of imported stone shall meet the requirements as specified in the following sections. The Contractor shall coordinate with his supplier as necessary to provide material in accordance with these specifications.

Stone used for riprap shall be hard, durable, angular in shape, resistant to weathering and shall meet the gradation requirement specified. Neither breadth nor thickness of a single stone should be less than one-third its length. Rounded stone or boulders will not be accepted unless authorized by special provisions.

Stone shall be free from overburden, spoil, shale, and organic material.

Each load of stone shall be graded as specified by the Engineer from the smallest to the maximum size specified. Stones smaller than the specified size and spalls will not be permitted in an amount exceeding 10% by weight of each load.

All new stone shall conform to the stone type, dimensions, and quantity as indicated on the Drawings, and shall conform to the Massachusetts Standard Specifications M2.02.0.

The Contractor shall conform to all applicable requirements of the State of Massachusetts regarding handling, delivery, and installation of stone.

The intent of the stone size and gradation is to provide a durable and stable slope protection system, that is aesthetically similar to the adjacent armor stone. The Contractor shall submit stone sizing/gradation for each stone type listed below to the Engineer for approval prior to ordering materials.

	Average Stone Weight	Average Stone Size (D_{50})	Layer Thickness
Armor Stone	1-2 Ton	2.3'-2.9'	30"±
Bedding Layer	10 lb.	4"-6"	12"

Any stone not meeting the requirements of these specifications will be rejected at the discretion of the Engineer and shall be removed from the site and replaced with suitable stone at the sole expense of the Contractor.

Placement of stone shall be from the base of the repair area upward.

Height of freefall of stones shall be determined by the Engineer, but in no case shall this height exceed 1-foot.

An excavator thumb or clamshell bucket shall be used where appropriate to prevent damage of surrounding structures and earth.

During construction, the Contractor shall take all necessary precautions to prevent displacement of coastal bank stabilization structures by waves, current, or any other causes. Any stone misplaced by the waves, current, ice, flooding, or by other causes during the progress of work shall be replaced by the Contractor at no additional cost to the Owner.

The Contractor is advised that waves, currents, and water levels may vary substantially due to climatic and seasonal conditions and the Contractor shall be responsible for controlling and handling ground and/or surface water regardless of the volume of water and regardless of whether this flow is due to flood waters from storms.

Revetment foundation surfaces shall be cleared of all loose material not conforming to the specifications for the stone material or bedding stone. Bedding stone shall be placed on and covered with geotextile fabric for stabilization in accordance with Item 698 prior to placement of armor stone.

No compaction is required for armor stone beyond that resulting from the placing and spreading operations.

Armor stone shall be placed so that every part of the face of the stone shall be within three (3) inches (above or below) of the slope indicated on the drawings.

New stone shall be placed to form an interlocking, compact mass with minimum voids. Voids shall be chinked with stones of approximately the same size as the voids. All stone shall be properly sized and firmly set to prevent movement. Armor stone shall be placed manually such that a flat surface is provided on top in alignment with the existing adjacent revetment slope.

Removal and resetting of existing armor stone as required for construction of seawalls, retaining walls, drainage infrastructure, and other proposed structures shall be covered under Item 112.

Submittals

The Contractor shall submit the following for review and approval:

1. Gradation Report
2. Material Certificates.

Method of Measurement and Basis of Payment

Under **Item 983** of the Contract, the Contractor will be paid the unit price per Ton for **Armor Stone**, furnished and in place, which price shall include full compensation for all materials, tools, equipment, grading, labor, testing and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer.

Note that that measurement and payment for removing, salvaging, and reinstalling armor stone from along the existing revetment for seawall, splash wall, retaining wall, and drainage infrastructure work is not included in this section, and is to be included with **Item 112 - Demolition**.

- END OF SECTION -

ITEM 1000.1 PRECAST CONCRETE BLOCK WALLS LINEAR FOOT

Description

The work under this item shall consist of the design, fabrication, delivery, and installation of precast concrete block walls, as shown on the Drawings and as specified herein, and as directed by the Engineer.

The work shall include all labor, materials, equipment, transportation, supervision, and incidentals necessary to provide the precast concrete block walls.

Materials and Construction Methods

PRECAST BLOCK WALL MATERIALS

1. Precast modular retaining wall units shall be wet-cast retaining wall block system, produced by a single manufacturer, and suitable for use for earth retaining walls and flood wall systems.
2. Units shall conform to ASTM C1776.
3. Minimum compressive strength: 4,000 psi at 28 days.
4. Units shall be manufactured with Type II or IIA Portland Cement and shall be air-entrained concrete in accordance with ASTM C94.
5. Finish shall be coordinated with the Owner and approved by the Engineer.
6. Units shall be free of cracking, excessive chipping, or defects affecting structural performance or appearance.
7. Full block length: 48 inches minimum.
8. Half block length: 24 inches minimum.
9. Other dimensions: as shown on the Contract Drawings
10. Precast concrete blocks shall be a solid-block wall system.
11. Provide end blocks and transition blocks that are compatible and produced for intended transitions and wall intersections, per the manufacturer's recommendations.
12. Precast block walls shall be Reinforced Concrete blocks as manufactured by Redi-Rock or approved equal.

LEVELLING BASES

1. The levelling base for the precast block wall shall be 3/4" crushed stone, meeting the requirements and paid for under Item 156.1.

SEALANTS

1. Sealant shall be applied between the horizontal and vertical joints of the western and southern precast concrete walls.
2. Sealant shall be installed and surfaces shall be prepared in accordance with the manufacturer's instructions.
3. Sealant shall be a polyurethane-based, elastomeric sealant and shall be Sikaflex-2c NS EZ Mix as manufactured by Sika or approved equal.

DELIVERY, STORAGE, AND HANDLING

1. Inspect materials upon delivery for compliance and damage.
2. Store units to prevent damage and excessive weathering.
3. Protect exposed faces from staining or contamination.
4. Do not install damaged units.

EXCAVATION AND FOUNDATION PREPARATION

1. Excavate to lines and grades shown on the Drawings. Avoid disturbance of subgrade.
2. Over-excavated areas shall be backfilled with borrow and compacted to 95% Standard Proctor.
3. Foundation soils shall be reviewed by a qualified representative.
4. Compact foundation soils to 95% Standard Proctor.
5. Install crushed stone base below Precast Block Retaining Wall as shown on Drawings.

INSTALLATION

The Contractor shall furnish all labor, materials, and equipment necessary to construct the precast retaining wall in accordance with the Contract Drawings and manufacturer requirements.

1. Verify site conditions prior to construction. Notify the Engineer of any conditions that may affect wall performance.
2. Use appropriate lifting devices designed for unit weights. Avoid impact loading or improper lifting stresses. Use cables rather than chains for extended handling when appropriate
3. Place base units in full contact with leveling pad
4. Check units for:
    a. Level (side-to-side and front-to-back)
    b. Proper batter
    c. Maintain tight joints with gaps not exceeding 1/2 inch
5. Tolerances shall be in accordance with the following:
    a. Vertical alignment: ±1.5 inches over 12 feet. ±3 inches overall.
    b. Horizontal alignment: Corners: ±1 foot, Radii: ±2 feet.
    c. Wall batter: ±2 degrees from design; minimum 2 degrees.
6. Clean each course before installing sealant and placing subsequent course.
7. Ensure proper engagement of unit connection features.
8. Maintain running bond pattern where applicable.
9. Use approved shims as necessary to maintain alignment.

BACKFILL AND DRAINAGE

1. Backfill behind units to the elevations shown on the Contract Drawings.
2. Fill voids between Precast Block Retaining Wall units with drainage aggregate.
3. Compact backfill in accordance with project specifications.

CLEANING AND RESTORATION

1. Remove debris and restore surrounding areas.
2. Clean wall face of dirt and staining.
3. Do not use chemicals that may damage the surface finish.

Submittals

The Contractor shall submit the following for review and approval:

1. Shop drawings showing layout, block units, transitions, connections, and seals.
2. Manufacturer's product data and installation instructions.
3. Manufacturer's test reports verifying compliance with specification and design requirements.
4. Sealant product data sheets.

Quality Control

The manufacturer shall have a minimum of five (5) years of experience producing similar earth retention and flood wall systems. All materials and workmanship shall be subject to inspection by the Engineer.

Method of Measurement and Basis of Payment

Under **Item 1000.1** of the Contract, the Contractor will be paid the unit price per Linear Foot for **Precast Block Retaining Walls**, furnished and in place, which price shall include full compensation for all materials, tools, equipment, grading, labor, testing and all incidental work necessary to complete the work under this item to the satisfaction of the Engineer.

- END OF SECTION -

ITEM 1000.2 DEPLOYABLE FLOOD BARRIERS LUMP SUM

Description

The Contractor shall provide all labor, equipment, materials, tools and accessories to complete the work in this section. This work includes, but is not necessarily limited to the design, fabrication, supply, and installation of the deployable flood barrier systems to the locations and elevations as shown on the Contract Drawings.

Following construction, the use of the flood barrier during a flood event shall be the responsibility of the Owner. The flood wall system shall include the following components: gasketed aluminum flood logs, aluminum removable jamb support brackets, aluminum mid-span posts, fasteners, accessories, hold down clamps and rods, gaskets, hardware or any other appurtenance necessary to provide a complete flood wall system.

Materials, Design, and Construction Methods

MATERIALS

1. Deployable flood barriers shall consist of removable aluminum flood logs, jamb supports, intermediate posts, anchors, seals, and all hardware required to provide a complete flood protection system. Flood barrier assemblies shall be FM Approved and tested in accordance with ANSI/FM 2510 for flood mitigation equipment. The system shall be Floodproofing.com Mega Flood Log System or approved equivalent.

PERFORMANCE REQUIREMENTS

1. Engineering and Design Code Practices: Flood barrier system shall be designed by a Professional Engineer licensed in the Commonwealth of Massachusetts and shall comply with ASCE 24, ASCE 7, and applicable Massachusetts State building code requirements. Deployable flood barrier system manufacturer to ensure that proposed system complies with relevant design criteria for V and AE zones as established by the FEMA National Flood Insurance Program (NFIP).

2. Product Criteria:
    a. Flood Log Overview: Flood barrier system shall consist of 12-inch-high x 3-inch-deep removeable flood logs, posts, supports, anchors, seals, and hardware necessary to provide a complete removeable flood protection system. The top and bottom flood logs shall be clearly labeled.
        i. Embed wall plates may be required at jambs based on the condition at the opening and the loads imposed on the system.
        ii. Jamb supports to be continuous structural aluminum or steel channels and are to be anchored and sealed to the condition with embeds or mechanical anchors.
        iii. Frames and posts to provide mounting holes for connecting anchors and bolts. Anchor type, size, and method dependent on load capabilities of the structure.

    b. Flood Log Testing: System shall be American National Standard for Flood Mitigation Equipment, ANSI/FM 2510 Standards tested and FM approved in accordance with Section 4.3 Performance Testing – Flood Barriers for Opening Barrier Applications.

QUALITY CONTROL

The Contractor shall provide deployable flood barriers fabricated by a manufacturer with a minimum of five (5) years of experience in similar deployable flood barrier systems. All work shall be subject to inspection and approval by the Engineer.

Construction Methods

1. Verify that substrates are plumb, level and suitable before installation can begin.

2. Install flood barriers in accordance with manufacturer's instructions and approved shop drawings.

3. Install embedded plates using an immersible sealant or waterproof grout at back of support covering full height and width of support and producing squeeze out on all sides to ensure a proper seal.

4. Provide bituminous paint between finished aluminum supports and concrete to seal all joints.

5. Perform operational testing after installation.

Submittals

The Contractor shall submit the following for review and approval:

1. Product Data: Provide manufacturer's information on each material and component of the flood barrier.
2. Shop Drawings: Provide dimensioned plans, sections, connections, and anchorage details.
   a. Shop drawings to be signed and sealed by a professional engineer if required by the authorities having jurisdiction.
3. Calculations: Provide calculations, signed and sealed by a qualified professional engineer licensed in the Commonwealth of Massachusetts, verifying the barrier's ability to withstand the design pressure loading, based on building code and specified load combinations.
4. Design Submittals: Design for installation system, including supports and anchorage to substrate.
5. Test and Evaluation Reports: Manufacturer test results showing resistance to flood water pressures.
6. Manufacturer's instructions.
7. FEMA Submittals:
   a. Flood Emergency Operation Plan per FEMA TB 3, latest edition.
   b. Inspection and Maintenance Plan per FEMA TB 3, latest edition.
8. Operation and Maintenance Manual.

Method of Measurement and Basis of Payment

Under **Item 1000.2** of the Contract, the Contractor will be paid the lump sum price for **Deployable Flood Barriers** furnished and installed which price shall include payment for all materials, labor, transportation, equipment, testing, design, and all incidental work necessary to complete the work under this item, as shown on Plans, as specified herein, and as directed by the Engineer.

-END OF SECTION-

ITEM 1000.3A ELASTOMERIC (DUCKBILL) TIDE GATE EACH
ITEM 1000.3B IN-LINE CHECK VALVE TIDE GATE EACH

Description

The Contractor shall provide all labor, equipment, materials, tools and accessories to complete the work in this section. This work includes, but is not necessarily limited to furnishing and installation of the elastomeric duckbill check valve tide gates and in-line check valve tide gates at the locations and elevations as shown on the Contract Drawings for the work of the proposed storm sewer system.

Materials and Construction Methods

Duckbill and in-line check valve tide gates shall both be constructed of flexible elastomeric materials such as natural rubber, EPDM, NBR, FKM, CR, CSM, and CIIR, with 316 stainless steel mounting clamps or flanges. Gates shall be securely mounted to the outfalls indicated on the plans or to cast in place concrete headwalls.

In-line check valve tide gates shall be affixed to the outlet pipes within the interior of catch basins/manholes in accordance with the manufacturer's instructions.

DESIGN

1. Valve
    a. Valves to be flow operated.
    b. Valves shall be designed to slip over specified outside pipe diameter and attach by vendor furnished stainless steel compression clamp(s).
    c. The compression clamp(s) shall be supplied with holes to allow valve to be pinned to the pipe.
    d. The port area shall contour down to a duckbill to allow passage of flow in one direction while preventing reverse flow.
    e. The duckbill is eccentric with the bottom of the valve flat and top is flared to form a duckbill shape, keeping invert of pipe parallel with invert of valve.
    f. The manufacturer's name, location, model, and serial number shall be bonded onto the exterior of the valve.
2. Bill
    a. The bill shall be thinner, formed into a curved shape and more flexible than the valve body.
    b. The bill slit must be at least 1.57 times the nominal pipe diameter
    c. The bill shall be curved at a minimum of 90 degrees from the direction of flow and permanently set through vulcanization.
    d. The curvature shall be integral to the valve body to provide closure of the bill opening under static conditions as well as dynamic backpressure conditions during periods of zero flow.

MATERIALS

1. Valve
    a. One-piece rubber construction with nylon reinforcement
    b. Compression Clamps and Bolting Hardware
        i. 316 Stainless Steel
        ii. Provided clamp type and quantities per valve size:

Valve Size	Clamp Type	Quantity
1-12"	Worm Gear – Hose Clamp	1
14-18"	Bolted – Fabricated Band Clamp	1
20-54"	Bolted – Fabricated Band Clamp	2

INSTALLATION

1. Install valves as specified in the manufacturer's instructions.
    a. Valve bill opening shall be installed exactly vertical to maintain equal loads on each side of the valve under static and dynamic operation.

Submittals

The Contractor shall submit the following for review and approval:

1. Valve dimensional shop drawing including orientation of valve on pipe.
    a. The drawing shall be a scaled version of the actual valve, generic drawings with listed dimensions will not be accepted. Dimensions required in the drawing include the following:
        i. Overall length
        ii. Cuff diameter
        iii. Cuff seating depth
        iv. Overall height at the bill
        v. Length of opening at the bill
        vi. Orientation of the curvature at the bill
        vii. Elastomer material used in construction
        viii. Metallic material used for clamps
2. Manufacturer's Certification Document
3. Verification of Independent Laboratory Testing for Head Loss and Velocity tests and Backpressure Capacity of duckbill check valves
4. Hydraulic Curve for each size valve showing head loss versus flow and backpressure rating
5. Installation, Operation, and Maintenance Manual.

Method of Measurement and Basis of Payment

Under **Item 1000.3A** of the Contract, the Contractor will be paid the unit price per each for **Elastomeric (Duckbill) Tide Gates** furnished and installed which price shall include all tools, equipment, material, labor, and all incidental work necessary to complete this item to the satisfaction of the Engineer.

Under **Item 1000.3B** of the Contract, the Contractor will be paid the unit price per each for **In-Line Check Valve Tide Gates** furnished and installed which price shall include all tools, equipment, material, labor, and all incidental work necessary to complete this item to the satisfaction of the Engineer.

-END OF SECTION-

Description

The Contractor shall install four (4) traffic bollards at the west side of the pedestrian landing in the locations shown on the Plans and as herein specified.

Materials and Construction Methods

The bollards shall be comprised of a 6-inch diameter Schedule 80 steel pipe measuring 7 feet in length. The bollards shall be powder coated yellow in accordance with ASTM D7803 standards.

The bollards shall be embedded a minimum of 3 feet into the ground in a 12-inch diameter concrete collar with a minimum compressive strength of 4,000 psi after 28 days in accordance with **Item 904**.

All mixing, placement, and curing methods for the concrete used for the embedment collar and interior of the pipe shall be in accordance with the manufacturer's recommendations and as described in **Item 904**.

Method of Measurement and Basis of Payment

Under **Item 1000.4** of the Contract, the Contractor will be paid the per each price for the **Traffic Bollards**, which price shall include payment for all materials, labor, transportation, equipment, and all incidental work necessary to complete the work under this item, as shown on Plans, as specified herein, and as directed by the Engineer.

- END OF SECTION –

Description

The Contractor shall provide all labor, equipment, materials, tools and accessories to complete the work in this section. This work includes, but is not necessarily limited to, the design, fabrication, supply, delivery, and installation of the permeable plastic pavers system to the locations and elevations as shown on the Contract Drawings.

The permeable paver system shall include the following components: permeable paver units, gravel base material, angular stone filler material, geotextile fabric, parking delineators, and all connection hardware and other appurtenance necessary to provide a complete permeable paver system.

Materials and Design

MATERIALS

The permeable paver system shall consist of plastic manufactured units rated for AASHTO HS-20 loading and shall include parking delineators as part of the units. Permeable pavers shall be TrueGrid Pro Plus 24"x24"x1.8" as manufactured by TrueGrid Paver or approved equal.

The angular filler stone shall be a uniform size, clean, washed, angular stone measuring 1/2" to 3/4" in diameter in accordance with **Item 156.1 – 3/4" Crushed Stone** and placed between the void spaces in the permeable paver units filled flush to the top. The filler stone shall be included as part of the work of **Item 1000.5**, no separate payment shall be made for 3/4" Crushed Stone.

The base material shall be 1-1/2" diameter crushed stone in accordance with **Item 156.2 – 1-1/2" Crushed Stone** and included as part of the work of **Item 1000.5**, no separate payment shall be made for 1 ½" base material. The base material shall be installed to a minimum depth of 6 inches below the permeable paver units.

Geotextile fabric shall be placed beneath the base stone material and shall be in accordance with **Item 698 – Geotextile Fabric**. Geotextile fabric installed as part of the permeable plastic pavers system shall be included as part of the work of **Item 1000.5**, no separate payment shall be made.

Materials shall include the following:

- Permeable plastic paver units
- Parking delineators - "color" shall be selected and approved by the Owner
- Gravel base material
- Angular stone filler material
- Geotextile fabric

QUALITY CONTROL

The Contractor shall provide a permeable plastic paver system fabricated by a manufacturer with a minimum of five (5) years of experience in similar permeable paver systems. All work shall be subject to inspection and approval by the Engineer.

Construction Methods

1. Verify field dimensions and existing conditions prior to fabrication and installation.
2. Prepare subgrade in accordance with manufacturer's recommendations.
3. Install geotextile fabric in accordance with manufacturer's recommendations.

4. Install base material as indicated on the drawings and compact in maximum 4" lifts. Level base course in preparation for permeable pavers.
5. Install permeable paver units in accordance with the manufacturer's recommendations.
6. Install parking delineators as shown on the approved shop drawings.
7. Place fill material within the void spaces of the permeable paver units so material is flush with top of plastic units. Compact in accordance with manufacturer's recommendations.

Submittals

The Contractor shall submit the following for review and approval:

1. Product Data: For each type of product referenced above. Include construction details, material descriptions, and dimensions of individual components and profiles.
2. Installation procedure.
3. Shop drawings: Submit manufacturer's shop drawings including laying pattern and locations of parking delineators.
4. Manufacturer Instructions
5. Manufacturer Certificates: proof of AASHTO HS-20 rating.
6. Operation and Maintenance Manual.

Method of Measurement and Basis of Payment

Under **Item 1000.5** of the Contract, the Contractor will be paid the contract unit bid price per Square Yard for **Permeable Plastic Pavers** furnished and installed which price shall include payment for all materials, including geotextile fabric, stone base and stone filler, labor, transportation, equipment, testing, design, and all incidental work necessary to complete the work under this item, as shown on Plans, as specified herein, and as directed by the Engineer.

- END OF SECTION -

ITEM 1000.6 GLASS FLOOD WALL EXTENSION (BID ALT. 1) LINEAR FOOT

Description

The Contractor shall provide all labor, equipment, materials, tools and accessories to complete the work in this section. This work includes, but is not necessarily limited to, the design, fabrication, supply, delivery, and installation of the glass flood wall extension system to the locations and elevations as shown on the Contract Drawings.

The glass flood wall extension system shall include the following components: aluminum fixed framing, laminated glazed glass window panels, the steel anchorage system, watertight sealants, and all connection hardware and other appurtenance necessary to provide a complete glass flood wall extension system.

Materials and Design

MATERIALS

Glass floodwall extension shall consist of an aluminum framing system with impact-resistant laminated glazing, anchors, sealants, hardware, and all appurtenances necessary to provide a complete flood protection system. Glass shall be heat-strengthened (H.S.) or fully tempered (F.T.) Materials shall be compatible with the marine environment. Coatings, material specifications, and suppliers shall be as recommended by the designer/manufacturer of the glass flood wall system.

Materials shall include the following:

- Aluminum framing
- Laminated glazing
- Anchorage system
- Sealants
- Connection hardware

PERFORMANCE REQUIREMENTS

1. Engineering and Design Code Practices: Glass flood wall extension system shall be designed by a Professional Engineer licensed in the Commonwealth Massachusetts and shall comply with ASCE 24, ASCE 7, and applicable Massachusetts State building code requirements. Glass flood wall extension system manufacturer to ensure that proposed system complies with relevant design criteria for V zones as established by the FEMA National Flood Insurance Program (NFIP).

2. Basis of Design: Floodproofing.com Floodproof Glass Floodwall or approved equal.

3. Flood Log Testing: System shall be American National Standard for Flood Mitigation Equipment, ANSI/FM 2510 Standards tested and FM approved.

QUALITY CONTROL

The Contractor shall provide a glass flood wall fabricated by a manufacturer with a minimum of five (5) years of experience in similar glass flood wall extension systems. All work shall be subject to inspection and approval by the Engineer.

Construction Methods

1. Verify field dimensions and existing conditions prior to fabrication and installation.

2. Install the floodwall extension in accordance with the Contract Drawings, approved shop drawings, and the manufacturer's recommendations.
3. Install framing plumb, level, and true to line in accordance with the tolerances provided by the glass floodwall extension system designer/manufacturer.
4. Anchor the system using anchors and hardware designed by the Contractor's Professional Engineer.
5. Provide isolation between aluminum and dissimilar materials to prevent galvanic corrosion. Apply sealant tape or spacers as required.
6. Install glazing, gaskets, sealants, and hardware to provide a complete watertight flood protection system.
7. Replace damaged materials and components.
8. Adjust and align the completed system to ensure proper performance and operation.
9. Clean all exposed surfaces following installation.

Submittals

The Contractor shall submit the following for review and approval:

1. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
2. Installation procedure
3. Shop Drawings: Provide site-specific drawings with product elevations, connection details, anchorage designs, and dimensions.
    a. Include details of provisions for assembly expansion and contraction. The system shall be a face seal barrier wall designed system that shall preclude the entry of water within the framing system.
    b. All shop drawings shall bear the seal of a Professional Engineer currently licensed in the Commonwealth of Massachusetts.
4. Engineering Calculations: For glazed window walls indicated to comply with performance requirements and design criteria, including any required data signed and sealed by the qualified structural engineer responsible for their preparation.
5. Manufacturer Instructions
6. Manufacturer Test and Evaluation Reports: test results showing resistance to flood water pressures.
7. FEMA Submittals:
    a. Flood Emergency Operation Plan per FEMA TB 3, latest edition.
    b. Inspection and Maintenance Plan per FEMA TB 3, latest edition.
8. Operation and Maintenance Manual

Method of Measurement and Basis of Payment

Under **Item 1000.6** of the Contract, the Contractor will be paid the unit price per linear foot for **Glass Flood Wall Extension** furnished and installed which price shall include payment for all materials, labor, transportation, equipment, testing, design, and all incidental work necessary to complete the work under this item, as shown on Plans, as specified herein, and as directed by the Engineer.

- END OF SECTION -

Division 3

Minority and Women Business Requirements

Participation by minority or Women's Business Enterprises

Right-to-Know Act

Supplemental Equal Opportunity Antidiscrimination and Affirmative Action Program

Public Employment Laws

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH & GAME
OFFICE OF FISHING AND BOATING ACCESS

SPECIAL PROVISION FOR PARTICIPATION BY MINORITY OR WOMEN'S BUSINESS ENTERPRISES
(Implementing Chapter 102, Section 24 and
Chapter 273, Section 124, of the Acts of 1994)

Revised: July 22, 1996, February 2010

I. M/WBE PARTICIPATION GOAL

On this contract, the Department of Fish and Game has established a goal for participation by Minority or Women Business Enterprise(s). One half of the goal shall be met in the form of contractor activity. This goal shall remain in effect throughout the life of the contract.

Minority or Women Business Enterprises 11.4 % MBE 7.4% WBE 4%

II. POLICY

It is the policy of the Department of Fish and Game that Minority and Women Business Enterprises (M/WBEs) shall have the maximum opportunity to participate in the performance of its state funded contracts.

III. M/WBE OBLIGATION

The contractor agrees to take all necessary and reasonable steps to ensure that MBE and WBEs have the maximum opportunity to compete for, and to perform, Department contracts.

IV. FAILURE TO COMPLY WITH M/WBE REQUIREMENTS

All contractors and subcontractors are hereby advised that failure to carry out the requirements of these provisions constitutes a breach of contract which may result in termination of the contract, a determination that the contractor or subcontractor be barred from bidding on Department contracts for up to three (3) years, or any other remedy as the Department may impose under section XI of these special provisions.

V. REQUIRED SUBCONTRACT PROVISIONS

The Prime Contractor shall include the provisions of sections II, III, and IV above in every subcontract making those provisions binding on each subcontractor, supplier, manufacturer, consultant or service provider.

VI. DEFINITIONS

For the purpose of these special provisions, the terms listed below are defined as follows:

"Minority Business Enterprise or MBE means any individual, business organization, or non-profit corporation certified as an MBE or as a Portuguese owned firm by the State Office of Minority and Women Business Assistance (SOMWBA), or by the Department for the purposes of a particular bid or proposal to be submitted to the Department.

Women Business Enterprise or WBE means any individual, business or organization, or non-profit corporation certified as a WBE by SOMWBA, or by the Department for the purposes of a particular bid or proposal to be submitted to the Department.

"Contractor activity" means any work, including but not limited to, construction, demolition, renovation, survey, test boring services, or maintenance work performed under the contract.

"Approved Joint Venture" means a joint venture between a M/WBE(s) and a non-M/WBE(s), which has been established for the purpose of participation on a particular contract, where:

1. The M/WBE partner(s) shares in the ownership, control, management responsibilities, risks and profits of the joint venture; and

2. The joint venture has been approved by the Department for M/WBE participation on the particular contract.

"Equipment Rental Firm" means a firm that owns equipment and assumes actual and contractual responsibility to rent said equipment to perform a useful function of the work of the contract consistent with normal industry practice.

"Material Supplier" means a vendor engaged in sales to the highway construction industry from an established place of business or source of supply, which:

1. Manufactures goods from raw materials or substantially alters them before resale, or

2. Provides and maintains a storage facility for materials used in the work, consistent with normal industry practice.

"SOMWBA" means the Massachusetts State Office of Minority and Women Business Assistance.

VII. ELIGIBILITY of M/WBEs

Only firms, other than the Prime Contractor, which have been certified by SOMWBA and/or the Department as eligible to participate on state funded contracts as MBEs, Portuguese owned businesses or WBEs may be used on this contract for credit toward the M/WBE participation goal.

1. SOMWBA Directory of Certified M/WBEs: The State Office of Minority and Women Business Assistance publishes a Directory of certified MBE and WBEs. This Directory can be obtained from SOMWBA. It lists those firms which have been certified as minority or Portuguese owned (MBEs) or women owned (WBEs) in accordance with the criteria of 425 CMR 2.00 et seq to participate as M/WBEs on state funded contracts. It also lists the kinds of work in which each firm engages but does not constitute an endorsement of the quality or performance of any business and does not represent Department subcontractor approval.

2. Application for Certification by the Department for a Particular Project: A firm which has (1) submitted a fully completed M/WBE application to SOMWBA at least 30 days previously, (2) has provided in a timely manner, any additional information which may have been requested by SOMWBA, and (3) can provide evidence, satisfactory to the Department, of a bidder's conditional commitment to subcontract with the firm, if certified, may apply directly to the Department to be certified for participation on the particular contract.

3. Joint Venture Approval: To obtain recognition as an approved joint venture between a M/WBE(s) and a non-/M/WBE(s), the joint venture must provide to the DF&G
Office of Civil Rights, at least 14 business days before the bid opening date, an application for joint venture participation approval, and a copy of the joint venture agreement, which shall include a detailed breakdown of the following:

(a) Capital participation by the M/WBE,

(b) Specific equipment to be provided to the joint venture by the M/WBE,

(c) Specific responsibilities of the M/WBE in the management of the joint venture,

(d) Workforce and specific skills to be provided to the joint venture by the M/WBE, and

(e) Percentage distribution to the M/WBE of the projected profit or loss incurred by the joint venture.

(f) The joint venture shall provide all such additional information as may be requested by the Department for the purpose of determining joint venture eligibility.

VIII. COUNTING M/WBE PARTICIPATION TOWARDS M/WBE GOALS

In order for M/WBE participation to count toward the contract goal, the M/WBE must have independently managed, supervised and performed the contract work with its own workforce, equipment and resources. M/WBE participation which fulfills these requirements shall be counted toward meeting the M/WBE goal in accordance with the following rules:

1. If a firm has been determined to be an eligible MBE or WBE, the total dollar value of the contract performed by the M/WBE is counted toward the applicable goal as follows:

a. Except as provided below, in section VIII (1)(g), work performed by a M/WBE prime contractor shall not be counted toward the M/WBE goal, and all prime contractors, including M/WBE prime contractors, must comply with the M/WBE requirements of this contract.

b. For a M/WBE material supplier, sixty percent (60%) of the amount to be paid for materials and supplies required under this contract shall be credited toward the goal.

c. For a M/WBE who provides a bonafide service such as professional, technical, consultant or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for performance of the contract, reasonable fees or commissions charged for the service shall be listed, but the cost of items themselves shall not be credited.

d. For a M/WBE hauler, trucker, or delivery service, which is not also the manufacturer of or a regular dealer in the materials and supplies, reasonable fees charged for delivery of materials and supplies required on the job site shall be credited; the cost of the materials and supplies themselves shall not be credited.

e. For a M/WBE who provides any bonds or insurance specifically required for the performance of the contract, reasonable fees or commissions charged for such service shall be listed, but the face amount or actual premium paid for the bond or insurance shall not be credited.

f. The Department shall determine if the fees or commissions listed in accordance with paragraphs (c), (d), and (e) are not excessive as compared with fees or commissions customarily allowed for similar services.

g. That portion of the contract total dollar value equal to the percentage of ownership and control of the M/WBE partner(s) in an approved joint venture shall be counted toward the contract goal, except that credit for M/WBE participation in an approved prime joint venture shall not exceed one half of the contract goal.

IX. AWARD DOCUMENTATION AND PROCEDURES

1. The two lowest bidders, including any M/WBE bidder, shall submit, by the close of business on the seventh day after the bid opening, a completed Schedule of M/WBE participation, in the form attached, which shall list:

a. The full company name, address and telephone number of each M/WBE with whom the bidder intends to make a commitment;

b. The contract item(s), by number(s) and quantity(ies), if applicable, or specific description of other business activity to be performed by each M/WBE as set forth in the Letters of Intent. The bidder shall list only firms which have the capacity to perform, manage and supervise the work proposed in accordance with the requirements of section X of these special provisions.

c. The total dollar amount to be paid to each M/WBE. (Bidders are cautioned that at least one half of the participation goal must be met with contract work.)

d. The total dollar amount to be paid to each M/WBE which is eligible for credit toward the M/WBE goal under the crediting rules set out in section VIII.

e. The total creditable M/WBE participation as a percentage of the total bid price.

2. All firms listed on the Schedule must be currently certified. The bidder may list a newly certified firm which is not yet listed in the SOMWBA Directory, but is urged to obtain a copy of the SOMWBA certification letter from the M/WBE and attach it to the Schedule of Participation.

3. The two lowest bidders shall submit with their Schedules of Participation, fully completed, signed Letters of Intent from each of the M/WBEs listed on the Schedule. The Letters of Intent shall be in the form attached and shall identify specifically the contract activity the M/WBE proposes to perform, expressed as contract item number, if applicable, description of the activity, quantity, unit price and total price. In the event of discrepancy between the Schedule and the Letter of Intent, the Letter of Intent shall govern.

4. Failure to meet, or to demonstrate good faith efforts to meet, the requirements of these special provisions shall render a bid non-responsive. Therefore, in order to be eligible for award, the bidder (1) must list on the Schedule of Participation, and provide the required Letters of Intent for, M/WBE participation which meets or exceeds the contract goal in accordance with the terms of these special provisions or (2) must demonstrate, to the satisfaction of the Department, that good faith efforts were made to achieve the goal. If the Commission finds that the percentage of M/WBE participation submitted by the bidder on its Schedule does not meet the contract goal, or that the Letters of Intent were not timely filed, and that the bidder has not demonstrated good faith efforts to comply with these requirements, it shall reject the bidder's proposal and may retain the proposal guaranty.

5. Evidence of good faith efforts will be evaluated by the Department in the selection of the lowest responsible bidder.

All information requested by the Department for the purpose of evaluating the bidder's efforts to achieve the goal must be provided within seven days after the bid opening date and must be accurate and complete in every detail. The apparent low bidder's attainment of the M/WBE goal or a satisfactory demonstration of good faith efforts, is a prerequisite for award of the contract. Actions which constitute evidence of good faith efforts to meet a M/WBE goal include, but are not limited to, all of the following:

a. Efforts made to select portions of the work proposed to be performed by M/WBE's in order to increase the likelihood of achieving the stated goal, including, where appropriate, but not limited to, breaking down contracts into economically feasible units to facilitate M/WBE participation. The value of such work is required to at least equal the M/WBE goal.

b. Reasonable written notification prior to the opening of bids soliciting individual M/WBEs interested in participation in the contract as subcontractors, regular dealers, manufacturers, consultants, or service providers and identifying the specific items or type of work being solicited.

c. Written notification to M/WBE economic development assistance agencies and organizations which provide assistance in recruitment and placement of M/WBEs, describing the type of work, supplies or services being considered for M/WBE subcontracting on this contract.

d. Efforts made to negotiate with M/WBEs for specific items of work including evidence of:

(1) The names, addresses, telephone numbers of M/WBEs who were contacted, the dates of initial contact and whether initial solicitations of interest were followed up by contacts with M/WBEs to determine with certainty whether the M/WBEs were interested. Personal or phone contacts are expected.

(2) A description of the information provided the M/WBEs regarding the plans and specifications and estimated quantities for portions of the work to be performed.

(3) A statement of why additional agreements with M/WBEs were not reached.

(4) Documentation of each M/WBE contacted but rejected and the reasons for the rejection.

e. Absence of any agreements between the contractor and the M/WBE in which M/WBE promises not to provide subcontracting quotations to other bidders.

f. Efforts made to assist the M/WBEs that need assistance in obtaining bonding, insurance, or lines of credit required by the contractor.

g. Documentation that qualified M/WBEs are not available, or are not interested.

h. Attendance at any meeting scheduled by the Department to encourage better contractor-M/WBE relationships and/or to inform M/WBEs of forthcoming M/WBE utilization opportunities.

i. Advertisement, in general circulation media, in trade association publications and in disadvantaged business enterprise-focused media, of interest in utilizing M/WBEs and the area of interest.

j. Efforts to effectively use the services of available minority community organizations; women organizations, minority, women and disadvantaged contractor's groups; local, state and federal disadvantaged business assistance offices; and other organizations that provides assistance in recruitment and placement of M/WBEs.

6. The demonstration of good faith efforts must establish that the contractor has actively and aggressively sought out M/WBEs to participate in the project and has taken all actions which could be reasonably expected to achieve the goal. Examples of circumstances or actions not acceptable as reasons for failure to meet the M/WBE goal, include, but are not limited to:

a. The M/WBE was unable to provide performance and/or payment bonds.

b. The M/WBE's commercially reasonable bid was rejected based on price.

c. The M/WBE would not agree to perform items of work at the unit bid price.

d. The Contractor does not want to subcontract a percentage of the work sufficient to meet the goal.

e. Solicitation by mail or fax only.

X. COMPLIANCE

1. All activity performed by an M/WBE for credit toward the contract goal must be performed, managed and supervised by the M/WBE. Prime Contractor shall not enter into, or condone, any other arrangement.

2. The Prime Contractor shall not perform with its own organization, or assign to any other business, any activity designated for the M/WBE(s) named on the Schedule submitted by the Prime Contractor under section IX, or under section X(6), without the approval of the Department in accordance with the requirements of sections X(6) and (10).

3. The Department may (1) suspend payment for any activity which was not performed by the M/WBE to whom the activity was committed on the approved Schedule of Participation, or which was not performed in accordance with the requirements of subsection X(1).

4. The Department retains the right to approve or disapprove all subcontractors. Requests by the Prime Contractor for approval of participation by a M/WBE subcontractor for credit toward the contract goal must include, in addition to any other requirements for subcontractor approval, the following:

a. A copy of the proposed subcontract. The subcontract must be for at least the dollar amount, and for the work described, in the Prime Contractor's Schedule of Participation.

b. A resume stating the qualifications and experience of the M/WBE superintendent and/or foreperson who will supervise the on-site work. A new resume will be required for any change in supervisory personnel during the progress of the work.

c. A Schedule of Operations indicating when the M/WBE is expected perform the work.

d. A list of (1) equipment owned by the M/WBE to be used on the project, and (2) equipment to be leased by the M/WBE for use on the project.

e. A list of: (1) all projects (public and private) which the M/WBE is currently performing, (2) all projects (public and private) to which the M/WBE is committed, (3) all projects (public and private) to which the M/WBE intends to make a commitment. For each contract, list the contracting organization, the name and telephone number of a contact person for the contracting organization, the dollar value of the work, a description of the work, and the M/WBE's work schedule for each project.

5. If, pursuant to the subcontractor approval process, the Department finds that a M/WBE subcontractor does not have sufficient experience or resources to perform, manage and supervise work of the kind proposed in accordance with the requirements of section X(1), approval of the M/WBE subcontractor may be denied. In the event of such denial, the Prime Contractor shall proceed in accordance with the requirements of sections X(6) and (10).

6. If, for reasons beyond its control, the Prime Contractor cannot comply with its M/WBE commitment in accordance with the Schedule of participation submitted under section IX and the terms of these special provisions, the Prime Contractor shall submit to the Department the reasons for its inability to comply with its obligations under section I and shall submit, and request approval for, a revised Schedule of Participation. If approved by the Department, the revised Schedule shall govern the Prime Contractor's performance in meeting its obligations under these special provisions.

7. A Prime Contractor's compliance with the participation goal in section I shall be determined by reference to the required percentage of the total contract price, including any additions and modifications thereto, provided, however, that no decrease in the dollar amount of a bidder's commitment to any M/WBE shall be allowed without the approval of the Department.

8. If the contract amount is increased, the Prime Contractor shall submit a revised Schedule of Participation in accordance with sections X(6) and (10).

9. In the event of the decertification of a M/WBE participating or scheduled to participate on the contract for credit toward the goal, the Contractor shall proceed in accordance with sections X(6) and (10).

10. The Prime Contractor shall notify the Department immediately of any facts which come to its attention indicating that it may or will be unable to comply with any aspect of its M/WBE obligation under this contract.

11. Any notice required by these special provisions shall be given in writing to the Engineer with a copy to the DF&G, Office of Fishing and Boating Access, 1 Rabbit Hill Road, Westborough, MA 01581.

12. The Prime Contractor shall submit to the Department in the form attached, and in accordance with the directions thereon, a Record of Payment to Minority/Women/Disadvantaged Business Enterprises.

13. The Contractor shall pay each M/WBE for satisfactory performance of its contract no later than 10 days from receipt of payment for the work from the Department. Any delay or postponement of payment to the M/WBE(s) must be for good cause and only with the prior approval of the Department.

14. The Department may withhold the Contractor's next periodic payment if each M/WBE is not paid in accordance with subsection X(13).

15. The Department may require specific performance of the Prime Contractor's commitment under the contract by requiring the Prime Contractor to subcontract with a M/WBE for any contract or specialty item.

XI. SANCTIONS

If the Prime Contractor does not comply with the terms of these special provisions and cannot demonstrate to the satisfaction of the Department that good faith efforts were made to achieve such compliance, the Department may, in addition to any other remedy provided for in the contract, and notwithstanding any other provision in the contract:

1. Retain, in connection with final acceptance and final payment, an amount determined by multiplying the total contract amount by the percentage in section I, less the amount paid to approve M/WBE(s) for work performed under the contract in accordance with the provisions of section X. The Prime Contractor shall have the right to appeal such retention of funds in accordance with the provisions of M.G.L. c.30A.

2. Suspend, terminate or cancel this contract, in whole or in part, and call upon the Prime Contractor's surety to perform all terms and conditions in the contract.

3. In accordance with 720 CMR 5.05(1)(f), modify or revoke the Prime Contractor's Prequalification status or recommend that the Prime Contractor not receive award of a pending contract. The Prime Contractor may appeal the determination of the Prequalification Committee in accordance with the provisions of 720 CMR 5.06.

4. Initiate debarment proceedings under M.G.L. c.29 §29F.

XII. FURTHER INFORMATION

Any proposed M/WBE, bidder, contractor or subcontractor shall provide such information as is necessary in the judgement of the Department to ascertain its compliance with the terms of these special provisions.

END OF DOCUMENT

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH & GAME
OFFICE OF FISHING AND BOATING ACCESS

SPECIAL PROVISIONS FOR RIGHT-TO-KNOW ACT REQUIREMENTS

January, 1986

The Contractor's attention is directed to Massachusetts General Laws, Chapter 111F, commonly known as the Right-To-Know Act, and to the regulations promulgated pursuant thereto. Among the provisions of the Right-To-Know Act is a requirement that employers make available to employees Materials Safety Data Sheets (MSDS) for any substance on the Massachusetts Substance List (MSL) to which employees are, have been, or may be exposed.

To ensure prompt compliance with these regulations and legislation, the Contractor shall:

1. Deliver to the Department, prior to the start of any work under this contract, copies of MSDS for all MSL substances to be used, stored, processed or manufactured at the worksite by the Contractor.

2. Train employees of the Department, who may be exposed to MSL substances as a result of the Contractor's work under this contract, with regard to those specific substances in accordance with requirements of the Right-To-Know Act.

3. Observe all safety precautions recommended on the MSDS for any MSL substance to be used, stored, processed, or manufactured at the worksite by the Contractor.

4. Inform the Department in writing regarding specific protective equipment recommended in the MSDS for MSL substances to which employees of the Department may be exposed as a result of the Contractor's work under this contract.

The Department shall not be liable for any delay or suspension of work caused by the refusal of its employees to perform any work due to the Contractor's failure to comply with the Right-To-Know Act. The Contractor agrees to hold the Department or the Commissioner of the Department harmless and fully indemnified for any and all claims, demands, fines, actions, complaints, and causes of action resulting from or arising out of the Contractor's failure to comply with the requirements of the Right-To-Know Act.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH & GAME
OFFICE OF FISHING AND BOATING ACCESS

THE COMMONWEALTH OF MASSACHUSETTS SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY ANTIDISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM

I. Definitions

For purposes of this contract, "minority" refers to Asian-Americans, Blacks, Spanish Surname Americans, North American Indians, and Cape Verdeans. "Commission" refers to the Massachusetts Commission Against Discrimination.

II. Contractor's Agreement

During the performance of this Contract, the Contractor and all subcontractors (hereinafter collectively referred to as the Contractor), for him/herself, his/her assignees and successors in interest, agree as follows:

In connection with the performance of work under this contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national original, age or sex. The aforesaid provision shall include, but not be limited to, the following: employment upgrading, demotion, or transfer; recruitment advertising, layoff or termination: rates of pay or other forms of compensation; conditions or privileges of employment; and selection for apprenticeship.

The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Commission setting forth the provisions of the Fair Employment Practices Law of the Commonwealth (Massachusetts General Laws Chapter 151B).

In connection with the performance of work under this contract, the Contractor, shall undertake in good faith affirmative action measures designed to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national original, age or sex, and to eliminate and remedy any effects of such discrimination in the past. Such affirmative action shall entail positive and aggressive measures to ensure equal opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, layoff or termination, rate of compensation, and in-service or apprenticeship training programs. This affirmative action shall include all action required to guarantee equal employment opportunity for all persons, regardless of race, color, religious creed, national origin, age or sex. A purpose of this provision is to ensure to the fullest extent possible an adequate supply of skilled tradesmen for this and future Commonwealth public construction projects.

III. Remedial Action

As part of his/her obligation of remedial action under foregoing section, the Contractor shall maintain on this project not less than the percent ratio of minority employee man hours to total man hours in each job category including but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers, and those "classes of work" enumerated in Section 44C of Chapter 149 of the Massachusetts General Laws. The percentage ratio for this project is found on page 1 of the Special Provisions.

In the hiring of minority journeymen, apprentices, trainees and advanced trainees, the Contractor shall rely on referrals from a multi-employer affirmative action program approved by the Commission, traditional referral methods utilized by the construction industry, and referrals from agencies, not more than three in number at any one time, designated by the Liaison Committee or the Commission.

IV. Records

At the discretion of the Commission there may be established for the life of the contract a body to be known as the Liaison Committee. The Liaison Committee shall be composed of one representative each from the agency or agencies administering this project, hereinafter called the administering agency, the Commission and such other representatives as may be designated by the Commission in conjunction with the administering agency.

The Contractor (or his/her agent, if any, designated by him/her as the on-site equal employment opportunity officer) shall recognize the Liaison Committee as an affirmative action body, and shall establish a continuing working relationship with the Liaison Committee, consulting with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.

The Contractor shall prepare projected manning tables on a quarterly basis. These shall be broken down into projections, by week, or workers required in each trade. Copies shall be furnished one week in advance of the commencement of the period covered, and also, when updated, to the Commission and Liaison Committee.

Records of employment referral orders, prepared by the Contractor, shall be made available to the Commission and to the Liaison Committee on request.

The Contractor shall prepare weekly reports in a form approved by the Commission of hours worked in each trade by each employee, identified as minority or non-minority. Copies of these shall be provided at the end of each such week to the Commission and to the Liaison Committee.

V. Affirmative Action in Negotiating with Minority Subcontractors

If the Contractor shall use any subcontractor for any work performed under this contract, he/she shall take affirmative action to negotiate with qualified minority subcontractors. This affirmative action shall cover both pre-bid and post-bid periods. It shall include notification to the Office of Minority Business Assistance (within the Executive Office of Communities and Development) or its designee, while bids are in preparation, of all products, work or services for which the Contractor intends to negotiate bids.

VI. Preference in Hiring

In the employment of journeymen, apprentices, trainees and advanced trainees, the Contractor shall give preference, first to citizens of the Commonwealth who have served in the armed forces of the United States in time of war and have been honorably discharged therefrom or released from active duty therein, and who are qualified to perform the work to which the employment relates, and, secondly, to citizens of the Commonwealth generally, and, if such cannot be obtained in sufficient numbers, then to citizens of the United States.

The requirements of the above paragraph do not apply to any project or part thereof, financed in whole or in part with Federal Funds.

VII. Access During Construction

A designee of the Commission and a designee of the Liaison Committee shall each have right of access to the construction site.

VIII. Compliance with Requirements

The Contractor shall comply with the provisions of Executive Order No. 74, as amended by Executive Order No. 116 dated May 1, 1975, and of Chapter 151B as amended, of the Massachusetts General Laws, both of which are herein incorporated and made a part of this contract.

IX. Non-Discrimination

The Contractor, in the performance of all work after award, and prior to completion of the contract work, will not discriminate on grounds of race, color, religious creed, national origin, age or sex in employment practices, in the selection or retention of subcontractors, or in the procurement of materials and rentals of equipment.

X. Solicitations for Subcontracts, and for the Procurement of Materials and Equipment

In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or equipment, each potential subcontract or supplier shall be notified in writing by the Contractor of the Contractor's obligations under this contract relative to non-discrimination and affirmative action.

XI. Compliance - Information, Reports and Sanctions

1. The Contractor will provide all information and reports required by the administering agency or the Commission on instructions issued by either of them and will permit access to its facilities and any books, records, accounts and other sources of information which may be determined by the Commission to effect the employment of personnel. This provision shall apply only to information pertinent to the Commonwealth's supplementary affirmative action contract requirements. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the administering agency or the Commission as appropriate and shall set forth what efforts he has made to obtain the information.

2. Whenever the administering agency, the Commission, or the Liaison Committee believes the General Contractor or any subcontractor may not be operating in compliance with the terms of this Section, the Commission directly, or through is designated agent, shall conduct an appropriate investigation, and may confer with the parties, to determine if such Contractor is operating in compliance with the terms of this Section. If the Commission or its agent finds the General Contractor or any subcontractor not in compliance, it shall make a preliminary report on noncompliance, and notify such Contractor in writing of such steps, as will in the judgement of the Commission or its agent bring such Contractor into compliance. In the event that such Contractor fails or refuses to fully perform such steps, the Commission shall make a final report of non-compliance, and recommend to the administering agency the imposition of one or more of the sanctions listed below If, however, the Commission believes the General Contractor or any subcontractor has taken or is taking every possible measure to achieve compliance, it shall not make a final report of non-compliance. Within fourteen days of the receipt of the recommendations of the Commission, the administering agency shall move to impose one or more of the following sanctions, as it may deem appropriate to attain full and effective enforcement:

a. The recovery by the administering agency from the General Contractor of 1/100 of 1% of the contract award price or $ 1000, whichever sum is greater, in the nature of liquidated damages or, if a subcontractor is in non-compliance, the recovery by the administering agency from the General Contractor, to be assessed by the General Contractor as a back charge against the subcontractor, of 1/10 of 1% of the subcontractor price, or $ 400 whichever sum is greater, in the nature of liquidated damages, for each week that such party fails or refuses to comply;

b. The suspension of any payment or part thereof due under the contract until such time as the General Contractor or any subcontractor is able to demonstrate his/her compliance with the terms of the contract;

c. The termination, or cancellation, of the contract, in whole or in part, unless the General Contractor or any subcontractor is able to demonstrate within a specified time his/her compliance with the terms of the contract;

d. The denial to the General Contractor or any subcontractor of the right to participate in any future contracts awarded by the administering agency for a period of up to three years.

3. If at any time after the imposition of one or more of the above sanctions a Contractor is able to demonstrate that he/she is in compliance with this Section, he/she may request the administering agency, in consultation with the Commission, to suspend the sanctions conditionally, pending a final determination by the Commission as to whether the Contractor is in compliance. Upon final determination of the Commission, the administering agency, based on

the recommendation of the Commission, shall either lift the sanctions or reimpose them.

4. Sanctions enumerated under Sections XI-2 shall not be imposed by the administering agency except after an adjudicatory proceeding, as that term is used, under Massachusetts General Laws Chapter 30A, has been conducted. No investigation by the Commission or its agent shall be initiated without prior notice to the Contractor.

XII. Severability

The provisions of this section are severable, and if any of these provisions shall be held unconstitutional by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions.

XIII. Bidders' Requirements (Revised: March 1977)

The bidder will comply with the minority manpower ratio and specific affirmative action steps contained herein; and obtain from each of its subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this contract the subcontractor certification required by these bid conditions.

XIV. Subcontractor's Certification

Prior to the award of any subcontract under this Invitation for Bids, regardless of tier, the prospective subcontractor must execute and submit to the Prime Contractor the following certification, which will be deemed a part of the resulting subcontract:

SPECIMEN COPY

SUBCONTRACTOR'S CERTIFICATION

_____ certifies that:
(Subcontractor)

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

   _____

   _____; and

2. will comply with the minority manpower ratio and specific affirmative action steps contained herein.

   _____
   (Signature of authorized representative of subcontractor)

In order to ensure that the said subcontractor's certification becomes a part of all subcontracts under the prime contract, no subcontract shall be executed until an authorized representative of the Public Access Board has determined, in writing, that the said certification has been incorporated in such subcontract, regardless of tier. Any subcontract executed without such written approval shall be void.

XV. Materiality

The requirements made of the bidder pursuant to these bid conditions are material, and will govern the bidders performance on the project and will be made a part of his/her bid.

MINIMUM MINORITY PERCENTAGES TO BE APPLIED TO
STATE AND STATE-ASSISTED CONTRACTS WITHIN THE
COMMONWEALTH OF MASSACHUSETTS

The following percentages shall apply:

Area:	Not Less Than
Boston: Impact Area (Jamaica Plain (part), Mattapan, South Cove, Chinatown, Bay Village, Roxbury, Dorchester, South End)	30%
Other Areas	10%
Cambridge:	12%
New Bedford:	18%
Springfield:	10%
All other cities and towns:	5%

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH & GAME
OFFICE OF FISHING AND BOATING ACCESS

COMMONWEALTH OF MASSACHUSETTS PUBLIC EMPLOYMENT LAWS

The Contractor's attention is directed to Massachusetts General Laws, Chapter 149, Sections 25 through 27H, and 150A. This contract is considered to fall within the ambit of that law, which provides that in general, the Prevailing Rate or Total Rate must be paid to employees working on projects funded by the Commonwealth of Massachusetts or any political subdivision including Massachusetts Highway Department.

A Federal Aid project is also subject to the Federal Minimum Wage Rate law for construction. When comparing a state minimum wage rate, monitored by the Massachusetts' Attorney General, versus federal minimum wage rate, monitored by the U.S. Department of Labor's Wage and Hour Division, for a particular job classification the higher wage is at all times to be paid to the affected employee.

Every contractor or subcontractor engaged in this contract to which sections twenty-seven and twenty-seven A apply will keep a true and accurate record of all mechanics and apprentices, teamsters, chauffeurs and laborers employed thereon, showing the name, address and occupational classification of each such employee on this contract, and the hours worked by, and the wages paid to, each such employee, and shall furnish to the PAB's Resident Engineer, on a weekly basis, a copy of said record, in a form approved by PAB and in accordance with M.G.L. c. 149, § 27B, signed by the employer or his/her authorized agent under the penalties of perjury.

Each such contractor or subcontractor shall preserve its payroll records for a period of three years from the date of completion of the contract.

The Prevailing Wage Rate generally includes the following:

Minimum Hourly Wage + Employer Contributions to Benefit Plans = Prevailing Wage Rate or Total Rate

Any employer who does not make contributions to Benefit Plans must pay the total Prevailing Wage Rate directly to the employee.

Any deduction from the Prevailing Wage Rate or Total Rate for contributions to benefit plans can only be for a Health & Welfare, Pension, or Supplementary Unemployment plan meeting the requirements of the Employee Retirement Income Security Act (ERISA) of 1974. The maximum allowable deduction for these benefits from the prevailing wage rate cannot be greater than the amount allowed by Executive Office of Labor (EOL) for the specified benefits. Any additional expense of providing benefits to the employees is to be borne by the employer and cannot be deducted from the Minimum Hourly Wage. If the employer's benefit expense is less than that so provided by EOL the difference will be paid directly to the employee. The rate established must be paid to all employees who perform work on the project.

When an employer makes deductions from the Minimum Hourly Wage for an employee's contribution to social security, state taxes, federal taxes, and/or other contribution programs, allowed by law, the employer shall furnish each employee a suitable pay slip, check stub or envelope notifying the employee of the amount of the deductions.

No contractor or subcontractor contracting for any part of the contract week shall require or permit any laborer or mechanic to be employed on such work in excess of eight hours in any calendar day or in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any calendar day or in excess of forty hours in such workweek, whichever is the greater number of overtime hours.

Apprentice Rates are permitted only when there is an Apprentice Agreement registered with the Massachusetts Division of Apprentice Training in accordance with M.G.L. c. 23, § 11E-11L.

The Prevailing Wage Rates issued for each project shall be the rates paid for the entire project. The Prevailing Wage Rates must be posted on the job site at all times and be visible from a public way.

In addition, each such contractor and subcontractor shall furnish to the PAB's Resident Engineer, within fifteen days after completion of its portion of the work, a statement, executed by the contractor or subcontractor or by any authorized officer or employee of the contractor or subcontractor who supervises the payment of wages, in the following form:

STATEMENT OF COMPLIANCE

Date: _____, 20_____

I , _____do hereby state:
(Name of signatory party) (Title)

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

_____
(Contractor or Subcontractor)

on the _____
(Project Location and Contract Number)

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 sections twenty-six and twenty-seven of chapter one hundred and forty-nine of the General Law.

Signature _____

Title _____

The above-mentioned copies of payroll records and statements of compliance shall be available for inspection by any interested party filing a written request to the Office of Fishing and Boating Access Resident Engineer for such inspection.

All bidders are cautioned that the aforementioned laws require that employers pay to covered employees no less than the applicable minimum wages. In addition, the same laws require that the applicable prevailing wages become incorporated as part of this contract. The prevailing minimum wage law establishes serious civil and criminal penalties for violations, including imprisonment and exclusion from future public contracts. Bidders are cautioned to carefully read the relevant sections of the Massachusetts General Laws (most recently amended July, 1993).

DIVISION 4

MA Prevailing Wage Rates

Weekly Payroll Records Report & Statement of Compliance

Massachusetts Weekly Certified Payroll Report Form

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS
Prevailing Wage Rates

MAURA HEALEY
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:	Department of Fish and Game - Fishing and Boating Access	**City/Town:**	PLYMOUTH
Contract Number:	PA-425		
Description of Work:	Project consists of seawall reconstruction, drainage improvements, re-paving, boat ramp extension, sidewalks, gangway, floating dock, pile driving, and miscellaneous work.		
Job Location:	19 Town Wharf, Plymouth, MA		

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 form 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 TEAMSTERS JOINT COUNCIL NO. 10 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 TEAMSTERS JOINT COUNCIL NO. 10 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 TEAMSTERS JOINT COUNCIL NO. 10 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 PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1) For apprentice rates see "Apprentice- PILE DRIVER"	1/1/2024	$117.16	$10.08	$11.62	$12.67	$0.00	$151.53
AIR TRACK OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$42.41	$10.90	$9.75	$9.11	$0.00	$72.17
	12/1/2026	$43.85	$10.90	$9.75	$9.11	$0.00	$73.61
	6/1/2027	$45.30	$10.90	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$46.75	$10.90	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.25	$10.90	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$49.75	$10.90	$9.75	$9.11	$0.00	$79.51
For apprentice rates see "Apprentice- LABORER"							
AIR TRACK OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY) For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"	6/1/2026	$42.41	$10.90	$9.75	$9.21	$0.00	$72.27
	12/1/2026	$43.85	$10.90	$9.75	$9.21	$0.00	$73.71
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. HEAT & FROST INSULATORS LOCAL 6 HEAT & FROST INSULATORS LOCAL 6 (BOSTON)	12/1/2025	$44.80	$14.50	$4.30	$6.75	$0.00	$70.35
ASPHALT RAKER LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
ASPHALT RAKER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY) For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BACKHOE/FRONT-END LOADER	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BARCO-TYPE JUMPING TAMPER	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER	6/1/2026	$42.41	$10.90	$9.75	$9.11	$0.00	$72.17
LABORERS	12/1/2026	$43.85	$10.90	$9.75	$9.11	$0.00	$73.61
LABORERS - ZONE 2	6/1/2027	$45.30	$10.90	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$46.75	$10.90	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.25	$10.90	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$49.75	$10.90	$9.75	$9.11	$0.00	$79.51
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)	6/1/2026	$42.41	$10.90	$9.75	$9.21	$0.00	$72.27
LABORERS	12/1/2026	$43.85	$10.90	$9.75	$9.21	$0.00	$73.71
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
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
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)	2/1/2026	$67.95	$12.84	$15.57	$8.02	$0.00	$104.38
BRICKLAYERS LOCAL 3	8/1/2026	$70.15	$12.84	$15.57	$8.02	$0.00	$106.58
BRICKLAYERS LOCAL 3 (QUINCY)	2/1/2027	$71.55	$12.84	$15.57	$8.02	$0.00	$107.98

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

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	$33.98	$12.84	$15.57	$8.02	$0.00	$70.41
2	60.00	$40.77	$12.84	$15.57	$8.02	$0.00	$77.20
3	70.00	$47.57	$12.84	$15.57	$8.02	$0.00	$84.00
4	80.00	$54.36	$12.84	$15.57	$8.02	$0.00	$90.79
5	90.00	$61.16	$12.84	$15.57	$8.02	$0.00	$97.59

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.08	$12.84	$15.57	$8.02	$0.00	$71.51
2	60.00	$42.09	$12.84	$15.57	$8.02	$0.00	$78.52
3	70.00	$49.11	$12.84	$15.57	$8.02	$0.00	$85.54
4	80.00	$56.12	$12.84	$15.57	$8.02	$0.00	$92.55
5	90.00	$63.14	$12.84	$15.57	$8.02	$0.00	$99.57

Apprentice to Journeyworker Ratio: 1:5

BULLDOZER/GRADER/SCRAPER OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
CAISSON & UNDERPINNING BOTTOM MAN LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2026	$50.40	$10.90	$9.75	$9.80	$0.00	$80.85
	12/1/2026	$51.90	$10.90	$9.75	$9.80	$0.00	$82.35
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING LABORER LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2026	$49.25	$10.90	$9.75	$9.80	$0.00	$79.70
	12/1/2026	$50.75	$10.90	$9.75	$9.80	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING TOP MAN LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2026	$49.58	$10.90	$9.75	$9.80	$0.00	$80.03
	12/1/2026	$51.08	$10.90	$9.75	$9.80	$0.00	$81.53
For apprentice rates see "Apprentice- LABORER"							
CARBIDE CORE DRILL OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$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
CARPENTER	3/1/2026	$50.85	$11.08	$11.47	$8.50	$0.00	$81.90
CARPENTERS	9/1/2026	$52.10	$11.08	$11.47	$8.50	$0.00	$83.15
CARPENTERS -ZONE 2 (Eastern Massachusetts)	3/1/2027	$53.35	$11.08	$11.47	$8.50	$0.00	$84.40

Apprentice: CARPENTER

Effective Date: 3/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$22.88	$11.08	$0.00	$1.73	$0.00	$35.69
2	45.00	$22.88	$11.08	$0.00	$1.73	$0.00	$35.69
3	55.00	$27.97	$11.08	$0.00	$3.40	$0.00	$42.45
4	55.00	$27.97	$11.08	$0.00	$3.40	$0.00	$42.45
5	70.00	$35.60	$11.08	$11.41	$5.10	$0.00	$63.19
6	70.00	$35.60	$11.08	$11.41	$5.10	$0.00	$63.19
7	80.00	$40.68	$11.08	$11.44	$6.80	$0.00	$70.00
8	80.00	$40.68	$11.08	$11.44	$6.80	$0.00	$70.00

Apprentice: CARPENTER

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$23.45	$11.08	$0.00	$1.73	$0.00	$36.26
2	45.00	$23.45	$11.08	$0.00	$1.73	$0.00	$36.26
3	55.00	$28.66	$11.08	$0.00	$3.40	$0.00	$43.14
4	55.00	$28.66	$11.08	$0.00	$3.40	$0.00	$43.14
5	70.00	$36.47	$11.08	$11.41	$5.10	$0.00	$64.06
6	70.00	$36.47	$11.08	$11.41	$5.10	$0.00	$64.06
7	80.00	$41.68	$11.08	$11.44	$6.80	$0.00	$71.00
8	80.00	$41.68	$11.08	$11.44	$6.80	$0.00	$71.00

Apprentice to Journeyworker Ratio: 1:5

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CARPENTER WOOD FRAME	10/1/2025	$27.37	$7.38	$4.47	$1.00	$0.00	$40.22
CARPENTERS	10/1/2026	$28.47	$7.38	$4.47	$1.00	$0.00	$41.32
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	$16.42	$7.38	$0.00	$0.00	$0.00	$23.80
2	60.00	$16.42	$7.38	$0.00	$0.00	$0.00	$23.80
3	65.00	$17.79	$7.38	$0.00	$1.00	$0.00	$26.17
4	70.00	$19.16	$7.38	$0.00	$1.00	$0.00	$27.54
5	75.00	$20.53	$7.38	$3.80	$1.00	$0.00	$32.71
6	80.00	$21.90	$7.38	$3.80	$1.00	$0.00	$34.08

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: CARPENTER WOOD FRAME

Effective Date: 10/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
7	85.00	$23.26	$7.38	$3.80	$1.00	$0.00	$35.44
8	90.00	$24.63	$7.38	$3.80	$1.00	$0.00	$36.81

Apprentice: CARPENTER WOOD FRAME

Effective Date: 10/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$17.08	$7.38	$0.00	$0.00	$0.00	$24.46
2	60.00	$17.08	$7.38	$0.00	$0.00	$0.00	$24.46
3	65.00	$18.51	$7.38	$0.00	$1.00	$0.00	$26.89
4	70.00	$19.93	$7.38	$0.00	$1.00	$0.00	$28.31
5	75.00	$21.35	$7.38	$3.80	$1.00	$0.00	$33.53
6	80.00	$22.78	$7.38	$3.80	$1.00	$0.00	$34.96
7	85.00	$24.20	$7.38	$3.80	$1.00	$0.00	$36.38
8	90.00	$25.62	$7.38	$3.80	$1.00	$0.00	$37.80

Apprentice to Journeyworker Ratio: 1:5

CEMENT MASONRY/PLASTERING PLASTERERS AND CEMENT MASONS LOCAL 534 Plasterers and Cement Masons - Zone 1	7/1/2026	$54.49	$13.35	$16.43	$7.78	$1.80	$93.85
	1/1/2027	$55.94	$13.35	$16.43	$7.78	$1.80	$95.30
	7/1/2027	$57.29	$13.35	$16.43	$7.78	$1.80	$96.65
	1/1/2028	$58.64	$13.35	$16.43	$7.78	$1.80	$98.00

Apprentice: CEMENT MASONRY/PLASTERING

Effective Date: 7/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$27.25	$13.35	$16.43	$0.00	$0.00	$57.03
2	60.00	$32.69	$13.35	$16.43	$7.78	$1.80	$72.05
3	65.00	$35.42	$13.35	$16.43	$7.78	$1.80	$74.78
4	70.00	$38.14	$13.35	$16.43	$7.78	$1.80	$77.50
5	75.00	$40.87	$13.35	$16.43	$7.78	$1.80	$80.23
6	80.00	$43.59	$13.35	$16.43	$7.78	$1.80	$82.95
7	90.00	$49.04	$13.35	$0.00	$7.78	$0.00	$70.17

Apprentice: CEMENT MASONRY/PLASTERING

Effective Date: 1/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$27.97	$13.35	$16.43	$0.00	$0.00	$57.75
2	60.00	$33.56	$13.35	$16.43	$7.78	$1.80	$72.92

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: CEMENT MASONRY/PLASTERING

Effective Date: 1/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
3	65.00	$36.36	$13.35	$16.43	$7.78	$1.80	$75.72
4	70.00	$39.16	$13.35	$16.43	$7.78	$1.80	$78.52
5	75.00	$41.96	$13.35	$16.43	$7.78	$1.80	$81.32
6	80.00	$44.75	$13.35	$16.43	$7.78	$1.80	$84.11
7	90.00	$50.35	$0.00	$16.43	$0.00	$0.00	$66.78

Apprentice to Journeyworker Ratio: 1:5

CHAIN SAW OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$60.61	$17.05	$13.35	$3.25	$0.00	$94.26
	12/1/2026	$62.09	$17.05	$13.35	$3.25	$0.00	$95.74
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$37.63	$17.05	$13.35	$3.25	$0.00	$71.28
	12/1/2026	$38.58	$17.05	$13.35	$3.25	$0.00	$72.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
DELEADER (BRIDGE) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$59.56	$10.35	$12.00	$12.60	$0.00	$94.51

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	6/1/2026	$49.30	$10.90	$9.75	$9.65	$0.00	$79.60

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS LABORERS - ZONE 2	12/7/2026	$50.80	$10.90	$9.75	$9.65	$0.00	$81.10
	6/7/2027	$52.40	$10.90	$9.75	$9.65	$0.00	$82.70
	12/6/2027	$54.00	$10.90	$9.75	$9.65	$0.00	$84.30
	6/5/2028	$55.68	$10.90	$9.75	$9.65	$0.00	$85.98
	12/4/2028	$57.35	$10.90	$9.75	$9.65	$0.00	$87.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$50.30	$10.90	$9.75	$9.65	$0.00	$80.60
	12/7/2026	$51.80	$10.90	$9.75	$9.65	$0.00	$82.10
	6/7/2027	$53.40	$10.90	$9.75	$9.65	$0.00	$83.70
	12/6/2027	$55.00	$10.90	$9.75	$9.65	$0.00	$85.30
	6/5/2028	$56.68	$10.90	$9.75	$9.65	$0.00	$86.98
	12/4/2028	$58.35	$10.90	$9.75	$9.65	$0.00	$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BURNERS LABORERS LABORERS - ZONE 2	6/1/2026	$50.05	$10.90	$9.75	$9.65	$0.00	$80.35
	12/7/2026	$51.55	$10.90	$9.75	$9.65	$0.00	$81.85
	6/7/2027	$53.15	$10.90	$9.75	$9.65	$0.00	$83.45
	12/6/2027	$54.75	$10.90	$9.75	$9.65	$0.00	$85.05
	6/5/2028	$56.43	$10.90	$9.75	$9.65	$0.00	$86.73
	12/4/2028	$58.10	$10.90	$9.75	$9.65	$0.00	$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: CONCRETE CUTTER/SAWYER LABORERS LABORERS - ZONE 2	6/1/2026	$50.30	$10.90	$9.75	$9.65	$0.00	$80.60
	12/7/2026	$51.80	$10.90	$9.75	$9.65	$0.00	$82.10
	6/7/2027	$53.40	$10.90	$9.75	$9.65	$0.00	$83.70
	12/6/2027	$55.00	$10.90	$9.75	$9.65	$0.00	$85.30
	6/5/2028	$56.68	$10.90	$9.75	$9.65	$0.00	$86.98
	12/4/2028	$58.35	$10.90	$9.75	$9.65	$0.00	$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: JACKHAMMER OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$50.05	$10.90	$9.75	$9.65	$0.00	$80.35
	12/7/2026	$51.55	$10.90	$9.75	$9.65	$0.00	$81.85
	6/7/2027	$53.15	$10.90	$9.75	$9.65	$0.00	$83.45
	12/6/2027	$54.75	$10.90	$9.75	$9.65	$0.00	$85.05
	6/5/2028	$56.43	$10.90	$9.75	$9.65	$0.00	$86.73
	12/4/2028	$58.10	$10.90	$9.75	$9.65	$0.00	$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: WRECKING LABORER LABORERS LABORERS - ZONE 2	6/1/2026	$49.30	$10.90	$9.75	$9.65	$0.00	$79.60
	12/7/2026	$50.80	$10.90	$9.75	$9.65	$0.00	$81.10
	6/7/2027	$52.40	$10.90	$9.75	$9.65	$0.00	$82.70
	12/6/2027	$54.00	$10.90	$9.75	$9.65	$0.00	$84.30
	6/5/2028	$55.68	$10.90	$9.75	$9.65	$0.00	$85.98
	12/4/2028	$57.35	$10.90	$9.75	$9.65	$0.00	$87.65
For apprentice rates see "Apprentice- LABORER"							
DIRECTIONAL DRILL MACHINE OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
DIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$78.11	$10.08	$11.62	$10.04	$0.00	$109.85
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 1)	8/1/2024	$55.79	$10.08	$11.62	$12.67	$0.00	$90.16
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 1)	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 1)	8/1/2024	$117.16	$10.08	$11.62	$12.67	$0.00	$151.53
For apprentice rates see "Apprentice- PILE DRIVER"							
DRAWBRIDGE OPERATOR (Construction) DRAWBRIDGE - SEIU LOCAL 888 DRAWBRIDGE - SEIU LOCAL 888	7/1/2020	$26.77	$6.67	$3.93	$0.00	$0.16	$37.53
ELECTRICIAN ELECTRICIANS LOCAL 223 ELECTRICIANS LOCAL 223	9/1/2025	$52.25	$12.25	$14.86	$3.75	$0.00	$83.11
	9/1/2026	$54.72	$12.50	$15.56	$4.00	$0.00	$86.78

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ELEVATOR CONSTRUCTOR	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
ELEVATOR CONSTRUCTORS LOCAL 4							

Apprentice: ELECTRICIAN

Effective Date: 9/1/2026

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

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: ELEVATOR CONSTRUCTOR

Effective Date: 1/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$40.28	$0.00	$0.00	$0.00	$0.00	$40.28
2	55.00	$44.30	$16.48	$11.16	$11.00	$0.00	$82.94
3	65.00	$52.36	$16.48	$11.16	$11.00	$0.00	$91.00
4	70.00	$56.39	$16.48	$11.16	$11.00	$0.00	$95.03
5	80.00	$64.44	$16.48	$11.16	$11.00	$0.00	$103.08

Apprentice to Journeyworker Ratio: 1:1

ELEVATOR CONSTRUCTOR HELPER	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
ELEVATOR CONSTRUCTORS LOCAL 4							

For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"

FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							

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

FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY	5/1/2026	$54.40	$16.55	$13.35	$3.25	$0.00	$87.55
OPERATING ENGINEERS LOCAL 4	11/1/2026	$55.69	$16.55	$13.35	$3.25	$0.00	$88.84
OPERATING ENGINEERS LOCAL 4							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	5/1/2027	$57.12	$16.55	$13.35	$3.25	$0.00	$90.27
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY	5/1/2026	$56.02	$16.55	$13.35	$3.25	$0.00	$89.17
OPERATING ENGINEERS LOCAL 4	11/1/2026	$57.32	$16.55	$13.35	$3.25	$0.00	$90.47
OPERATING ENGINEERS LOCAL 4	5/1/2027	$58.77	$16.55	$13.35	$3.25	$0.00	$91.92
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY	5/1/2026	$26.28	$16.55	$13.35	$3.25	$0.00	$59.43
OPERATING ENGINEERS LOCAL 4	11/1/2026	$27.04	$16.55	$13.35	$3.25	$0.00	$60.19
OPERATING ENGINEERS LOCAL 4	5/1/2027	$27.89	$16.55	$13.35	$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
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)	6/1/2026	$47.55	$17.05	$13.35	$3.25	$0.00	$81.20
OPERATING ENGINEERS LOCAL 4	12/1/2026	$48.73	$17.05	$13.35	$3.25	$0.00	$82.38
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FLAGGER & SIGNALER (HEAVY & HIGHWAY)	6/1/2026	$29.21	$10.90	$9.75	$9.21	$0.00	$59.07
LABORERS	12/1/2026	$29.21	$10.90	$9.75	$9.21	$0.00	$59.07
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
FLOORCOVERER	3/1/2026	$59.24	$10.33	$11.47	$8.80	$0.00	$89.84
FLOORCOVERERS LOCAL 2168	9/1/2026	$60.74	$10.33	$11.47	$8.80	$0.00	$91.34
FLOORCOVERERS LOCAL 2168 ZONE I	3/1/2027	$62.24	$10.33	$11.47	$8.80	$0.00	$92.84

Apprentice: FLOORCOVERER

Effective Date: 3/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$26.66	$10.33	$0.00	$1.76	$0.00	$38.75
2	45.00	$26.66	$10.33	$0.00	$1.76	$0.00	$38.75
3	55.00	$32.58	$10.33	$0.00	$3.52	$0.00	$46.43
4	55.00	$32.58	$10.33	$0.00	$3.52	$0.00	$46.43
5	70.00	$41.47	$10.33	$11.47	$5.28	$0.00	$68.55
6	70.00	$41.47	$10.33	$11.47	$5.28	$0.00	$68.55
7	80.00	$47.39	$10.33	$11.47	$7.04	$0.00	$76.23
8	80.00	$47.39	$10.33	$11.47	$7.04	$0.00	$76.23

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: FLOORCOVERER

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$27.33	$10.33	$0.00	$1.76	$0.00	$39.42
2	45.00	$27.33	$10.33	$0.00	$1.76	$0.00	$39.42
3	55.00	$33.41	$10.33	$0.00	$3.52	$0.00	$47.26
4	55.00	$33.41	$10.33	$0.00	$3.52	$0.00	$47.26
5	70.00	$42.52	$10.33	$11.47	$5.28	$0.00	$69.60
6	70.00	$42.52	$10.33	$11.47	$5.28	$0.00	$69.60
7	80.00	$48.59	$10.33	$11.47	$7.04	$0.00	$77.43
8	80.00	$48.59	$10.33	$11.47	$7.04	$0.00	$77.43

Apprentice Notes

Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

FORK LIFT/CHERRY PICKER	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
GENERATOR/LIGHTING PLANT/HEATERS	6/1/2026	$37.63	$17.05	$13.35	$3.25	$0.00	$71.28
OPERATING ENGINEERS LOCAL 4	12/1/2026	$38.58	$17.05	$13.35	$3.25	$0.00	$72.23
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	1/1/2026	$49.06	$10.35	$12.00	$12.60	$0.00	$84.01
GLAZIERS LOCAL 35							
GLAZIERS LOCAL 35 (ZONE 2)							

Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)

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	$6.88	$0.00	$44.21
3	60.00	$29.44	$10.35	$0.00	$7.50	$0.00	$47.29
4	65.00	$31.89	$10.35	$0.00	$8.13	$0.00	$50.37
5	70.00	$34.34	$10.35	$12.00	$8.75	$0.00	$65.44
6	75.00	$36.80	$10.35	$12.00	$9.38	$0.00	$68.53
7	80.00	$39.25	$10.35	$12.00	$10.00	$0.00	$71.60
8	90.00	$44.15	$10.35	$12.00	$11.25	$0.00	$77.75

Apprentice to Journeyworker Ratio: 1:1

HOISTING ENGINEER/CRANES/GRADALLS	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48

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	$32.66	$0.00	$0.00	$0.00	$0.00	$32.66
2	60.00	$35.63	$17.05	$13.35	$3.25	$0.00	$69.28
3	65.00	$38.60	$17.05	$13.35	$3.25	$0.00	$72.25
4	70.00	$41.57	$17.05	$13.35	$3.25	$0.00	$75.22
5	75.00	$44.54	$17.05	$13.35	$3.25	$0.00	$78.19
6	80.00	$47.50	$17.05	$13.35	$3.25	$0.00	$81.15
7	85.00	$50.47	$17.05	$13.35	$3.25	$0.00	$84.12
8	90.00	$53.44	$17.05	$13.35	$3.25	$0.00	$87.09

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS

Effective Date: 12/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	$33.46	$0.00	$0.00	$0.00	$0.00	$33.46
2	60.00	$36.50	$17.05	$13.35	$3.25	$0.00	$70.15
3	65.00	$39.54	$17.05	$13.35	$3.25	$0.00	$73.19
4	70.00	$42.58	$17.05	$13.35	$3.25	$0.00	$76.23
5	75.00	$45.62	$17.05	$13.35	$3.25	$0.00	$79.27
6	80.00	$48.66	$17.05	$13.35	$3.25	$0.00	$82.31
7	85.00	$51.71	$17.05	$13.35	$3.25	$0.00	$85.36
8	90.00	$54.75	$17.05	$13.35	$3.25	$0.00	$88.40

Apprentice to Journeyworker Ratio: 1:6

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 17 SHEETMETAL WORKERS LOCAL 17 - A	2/1/2026	$62.93	$14.91	$18.74	$9.53	$2.98	$109.09

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 223	9/1/2025	$52.25	$12.25	$14.86	$3.75	$0.00	$83.11
ELECTRICIANS LOCAL 223	9/1/2026	$54.72	$12.50	$15.56	$4.00	$0.00	$86.78

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 17 SHEETMETAL WORKERS LOCAL 17 - A	2/1/2026	$62.93	$14.91	$18.74	$9.53	$2.98	$109.09

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (TESTING AND BALANCING -WATER) PLUMBERS & PIPEFITTERS LOCAL 51 PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	$55.24	$10.80	$16.80	$4.60	$0.00	$87.44

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
HVAC MECHANIC PLUMBERS & PIPEFITTERS LOCAL 51 PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	$55.24	$10.80	$16.80	$4.60	$0.00	$87.44
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HYDRAULIC DRILLS LABORERS LABORERS - ZONE 2	6/1/2026	$42.41	$10.90	$9.75	$9.11	$0.00	$72.17
	12/1/2026	$43.85	$10.90	$9.75	$9.11	$0.00	$73.61
	6/1/2027	$45.30	$10.90	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$46.75	$10.90	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.25	$10.90	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$49.75	$10.90	$9.75	$9.11	$0.00	$79.51
For apprentice rates see "Apprentice- LABORER"							
HYDRAULIC DRILLS (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$42.41	$10.90	$9.75	$9.21	$0.00	$72.27
	12/1/2026	$43.85	$10.90	$9.75	$9.21	$0.00	$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
INSULATOR (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6 HEAT & FROST INSULATORS LOCAL 6 (BOSTON)	9/1/2025	$60.34	$14.75	$9.52	$10.09	$0.00	$94.70
	9/1/2026	$63.76	$14.75	$9.52	$10.09	$0.00	$98.12

Apprentice: INSULATOR (PIPES & TANKS)

Effective Date: 9/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$30.17	$14.75	$9.27	$5.05	$0.00	$59.24
2	60.00	$36.20	$14.75	$9.32	$6.05	$0.00	$66.32
3	70.00	$42.24	$14.75	$9.37	$7.06	$0.00	$73.42
4	80.00	$48.27	$14.75	$9.42	$8.07	$0.00	$80.51

Apprentice: INSULATOR (PIPES & TANKS)

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$31.88	$14.75	$9.27	$5.05	$0.00	$60.95
2	60.00	$38.26	$14.75	$9.32	$6.05	$0.00	$68.38
3	70.00	$44.63	$14.75	$9.37	$7.06	$0.00	$75.81
4	80.00	$51.01	$14.75	$9.42	$8.07	$0.00	$83.25

Apprentice to Journeyworker Ratio: 1:4

IRONWORKER/WELDER IRONWORKERS LOCAL 7 IRONWORKERS LOCAL 7 (BOSTON AREA)	3/16/2026	$58.65	$9.25	$12.75	$15.00	$0.00	$95.65

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: IRONWORKER/WELDER							
Effective Date: 3/16/2026							

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	70.00	$41.06	$9.25	$12.75	$5.00	$0.00	$68.06
2	80.00	$46.92	$9.25	$12.75	$5.00	$0.00	$73.92
3	90.00	$52.79	$9.25	$12.75	$5.00	$0.00	$79.79
4	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
5	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
6	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Apprentice to Journeyworker Ratio: 1:4

JACKHAMMER & PAVING BREAKER OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01

For apprentice rates see "Apprentice- LABORER"

LABORER	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
LABORERS	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
LABORERS - ZONE 2	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76

Apprentice: LABORER

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.00	$10.90	$9.75	$9.11	$0.00	$54.76
2	70.00	$29.16	$10.90	$9.75	$9.11	$0.00	$58.92
3	80.00	$33.33	$10.90	$9.75	$9.11	$0.00	$63.09
4	90.00	$37.49	$10.90	$9.75	$9.11	$0.00	$67.25

Apprentice: LABORER

Effective Date: 12/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.86	$10.90	$9.75	$9.11	$0.00	$55.62
2	70.00	$30.17	$10.90	$9.75	$9.11	$0.00	$59.93
3	80.00	$34.48	$10.90	$9.75	$9.11	$0.00	$64.24
4	90.00	$38.79	$10.90	$9.75	$9.11	$0.00	$68.55

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice to Journeyworker Ratio: 1:5							
LABORER (HEAVY & HIGHWAY)	6/1/2026	$41.66	$10.90	$9.75	$9.21	$0.00	$71.52
LABORERS	12/1/2026	$43.10	$10.90	$9.75	$9.21	$0.00	$72.96
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.00	$10.90	$9.75	$9.21	$0.00	$54.86
2	70.00	$29.16	$10.90	$9.75	$9.21	$0.00	$59.02
3	80.00	$33.33	$10.90	$9.75	$9.21	$0.00	$63.19
4	90.00	$37.49	$10.90	$9.75	$9.10	$0.00	$67.24

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 12/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.86	$10.90	$9.75	$9.21	$0.00	$55.72
2	70.00	$30.17	$10.90	$9.75	$9.21	$0.00	$60.03
3	80.00	$34.48	$10.90	$9.75	$9.21	$0.00	$64.34
4	90.00	$38.79	$10.90	$9.75	$9.21	$0.00	$68.65

Apprentice to Journeyworker Ratio: 1:5							
LABORER: CARPENTER TENDER	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
LABORERS	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
LABORERS - ZONE 2	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: CEMENT FINISHER TENDER	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
LABORERS	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
LABORERS - ZONE 2	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER	6/1/2026	$41.75	$10.90	$9.75	$9.65	$0.00	$72.05
LABORERS	12/7/2026	$43.19	$10.90	$9.75	$9.65	$0.00	$73.49
LABORERS - ZONE 2	6/7/2027	$44.64	$10.90	$9.75	$9.65	$0.00	$74.94
	12/6/2027	$46.09	$10.90	$9.75	$9.65	$0.00	$76.39
	6/5/2028	$47.59	$10.90	$9.75	$9.65	$0.00	$77.89
	12/4/2028	$49.09	$10.90	$9.75	$9.65	$0.00	$79.39

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
LABORER: MULTI-TRADE TENDER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: TREE REMOVER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$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 LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
MARBLE & TILE FINISHERS BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 - MARBLE & TILE	2/1/2026	$52.08	$12.84	$15.57	$5.78	$0.00	$86.27
	8/1/2026	$53.84	$12.84	$15.57	$5.78	$0.00	$88.03
	2/1/2027	$54.96	$12.84	$15.57	$5.78	$0.00	$89.15

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$26.04	$12.84	$15.57	$5.78	$0.00	$60.23
2	60.00	$31.25	$12.84	$15.57	$5.78	$0.00	$65.44
3	70.00	$36.46	$12.84	$15.57	$5.78	$0.00	$70.65
4	80.00	$41.66	$12.84	$15.57	$5.78	$0.00	$75.85
5	90.00	$46.87	$12.84	$15.57	$5.78	$0.00	$81.06

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$26.92	$12.84	$15.57	$5.78	$0.00	$61.11
2	60.00	$32.30	$12.84	$15.57	$5.78	$0.00	$66.49
3	70.00	$37.69	$12.84	$15.57	$5.78	$0.00	$71.88
4	80.00	$43.07	$12.84	$15.57	$5.78	$0.00	$77.26
5	90.00	$48.46	$12.84	$15.57	$5.78	$0.00	$82.65

Apprentice to Journeyworker Ratio: 1:5

MARBLE MASONS,TILELAYERS & TERRAZZO MECH BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 - MARBLE & TILE	2/1/2026	$67.97	$12.84	$15.57	$7.99	$0.00	$104.37
	8/1/2026	$70.17	$12.84	$15.57	$7.99	$0.00	$106.57
	2/1/2027	$71.57	$12.84	$15.57	$7.99	$0.00	$107.97

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	$33.99	$12.84	$15.57	$7.99	$0.00	$70.39
2	60.00	$40.78	$12.84	$15.57	$7.99	$0.00	$77.18
3	70.00	$47.58	$12.84	$15.57	$7.99	$0.00	$83.98
4	80.00	$54.38	$12.84	$15.57	$7.99	$0.00	$90.78
5	90.00	$61.17	$12.84	$15.57	$7.99	$0.00	$97.57

Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.09	$12.84	$15.57	$7.99	$0.00	$71.49
2	60.00	$42.10	$12.84	$15.57	$7.99	$0.00	$78.50
3	70.00	$49.12	$12.84	$15.57	$7.99	$0.00	$85.52
4	80.00	$56.14	$12.84	$15.57	$7.99	$0.00	$92.54

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH							
Effective Date: 8/1/2026							
Step **Percent**		**Apprentice Base Wage**	**Health**	**Pension**	**Annuity**	**Supplemental Unemployment**	**Total Rate**
5 90.00		$63.15	$12.84	$15.57	$7.99	$0.00	$99.55
Apprentice to Journeyworker Ratio: 1:5							
MECH. SWEEPER OPERATOR (ON CONST. SITES)	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MECHANICS MAINTENANCE	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MILLWRIGHT (Zone 2)	1/5/2026	$46.86	$10.58	$11.47	$10.00	$0.00	$78.91
MILLWRIGHTS LOCAL 1121							
MILLWRIGHTS LOCAL 1121 - Zone 2							
Apprentice: MILLWRIGHT (Zone 2)							
Effective Date: 1/5/2026							
Step **Percent**		**Apprentice Base Wage**	**Health**	**Pension**	**Annuity**	**Supplemental Unemployment**	**Total Rate**
1 55.00		$25.77	$10.58	$0.00	$5.50	$0.00	$41.85
2 65.00		$30.46	$10.58	$0.00	$6.50	$0.00	$47.54
3 75.00		$35.15	$10.58	$11.47	$7.50	$0.00	$64.70
4 85.00		$39.83	$10.58	$11.47	$8.50	$0.00	$70.38
Apprentice Notes							
Step 1&2 Appr. indentured after 1/6/2020 receive no pension,							
Apprentice to Journeyworker Ratio: 1:4							
MORTAR MIXER	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
OILER (OTHER THAN TRUCK CRANES,GRADALLS)	6/1/2026	$25.07	$17.05	$13.35	$3.25	$0.00	$58.72
OPERATING ENGINEERS LOCAL 4	12/1/2026	$25.74	$17.05	$13.35	$3.25	$0.00	$59.39
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OILER (TRUCK CRANES, GRADALLS)	6/1/2026	$31.17	$17.05	$13.35	$3.25	$0.00	$64.82

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$31.97	$17.05	$13.35	$3.25	$0.00	$65.62
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OTHER POWER DRIVEN EQUIPMENT - CLASS II	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PAINTER (BRIDGES/TANKS) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$59.56	$10.35	$12.00	$12.50	$0.00	$94.41

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) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$50.46	$10.35	$12.00	$12.60	$0.00	$85.41

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

PAINTER (SPRAY OR SANDBLAST, REPAINT) PAINTERS LOCAL 35	1/1/2026	$48.52	$10.35	$12.00	$12.60	$0.00	$83.47

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

PAINTERS LOCAL 35 - ZONE 2

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) *	1/1/2026	$49.06	$10.35	$12.00	$12.60	$0.00	$84.01

* If 30% or more of surfaces to be painted are new construction,
NEW paint rate shall be used.
PAINTERS LOCAL 35
PAINTERS LOCAL 35 - ZONE 2

Apprentice: PAINTER / TAPER (BRUSH, NEW) *

Effective Date: 1/1/2026

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)	1/1/2026	$47.12	$10.35	$12.00	$12.60	$0.00	$82.07

PAINTERS LOCAL 35
PAINTERS LOCAL 35 - ZONE 2

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**					
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) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.66	$10.90	$9.75	$9.21	$0.00	$71.52
	12/1/2026	$43.10	$10.90	$9.75	$9.21	$0.00	$72.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10 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) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$55.79	$10.08	$11.62	$12.67	$0.00	$90.16
For apprentice rates see "Apprentice- PILE DRIVER"							
PILE DRIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$55.79	$10.08	$11.62	$12.67	$0.00	$90.16
Apprentice: PILE DRIVER							
Effective Date: 8/1/2024							
Step / Percent		**Apprentice Base Wage**					
1 / 45.00		$25.11	$10.08	$0.00	$2.53	$0.00	$37.72
2 / 55.00		$30.68	$10.08	$0.00	$5.07	$0.00	$45.83
3 / 70.00		$39.05	$10.08	$11.62	$7.60	$0.00	$68.35
4 / 80.00		$44.63	$10.08	$11.62	$10.14	$0.00	$76.47
Apprentice to Journeyworker Ratio: 1:5							
PIPELAYER LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$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
PIPELAYER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
PLUMBER & PIPEFITTER PLUMBERS & PIPEFITTERS LOCAL 51 PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	$55.24	$10.80	$16.80	$4.60	$0.00	$87.44

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.) PLUMBERS & PIPEFITTERS LOCAL 51 PLUMBERS & PIPEFITTERS LOCAL 51	8/25/2025	$55.24	$10.80	$16.80	$4.60	$0.00	$87.44
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
PNEUMATIC DRILL/TOOL OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
POWDERMAN & BLASTER LABORERS LABORERS - ZONE 2	6/1/2026	$42.66	$10.90	$9.75	$9.11	$0.00	$72.42
	12/1/2026	$44.10	$10.90	$9.75	$9.11	$0.00	$73.86
	6/1/2027	$45.55	$10.90	$9.75	$9.11	$0.00	$75.31
	12/1/2027	$47.00	$10.90	$9.75	$9.11	$0.00	$76.76
	6/1/2028	$48.50	$10.90	$9.75	$9.11	$0.00	$78.26
	12/1/2028	$50.00	$10.90	$9.75	$9.11	$0.00	$79.76
For apprentice rates see "Apprentice- LABORER"							
POWDERMAN & BLASTER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$42.66	$10.90	$9.75	$9.21	$0.00	$72.52
	12/1/2026	$44.10	$10.90	$9.75	$9.21	$0.00	$73.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
POWER SHOVEL/DERRICK/TRENCHING MACHINE	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (CONCRETE)	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (DEWATERING, OTHER)	6/1/2026	$37.63	$17.05	$13.35	$3.25	$0.00	$71.28
OPERATING ENGINEERS LOCAL 4	12/1/2026	$38.58	$17.05	$13.35	$3.25	$0.00	$72.23
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
READY-MIX CONCRETE DRIVER	8/1/2023	$25.00	$13.91	$6.90	$0.00	$0.00	$45.81
TEAMSTERS 653							
TEAMSTERS 653 - Southeastern Concrete (Weymouth)							
RECLAIMERS	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
RIDE-ON MOTORIZED BUGGY OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
ROLLER/SPREADER/MULCHING MACHINE	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg)	2/1/2026	$53.53	$14.53	$12.67	$9.03	$0.00	$89.76
ROOFERS LOCAL 33							
ROOFERS LOCAL 33							

Apprentice: ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg)

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$26.77	$14.53	$6.52	$9.03	$0.00	$56.85
2	60.00	$32.12	$14.53	$12.67	$9.03	$0.00	$68.35
3	65.00	$34.79	$14.53	$12.67	$9.03	$0.00	$71.02
4	75.00	$40.15	$14.53	$12.67	$9.03	$0.00	$76.38
5	85.00	$45.50	$14.53	$12.67	$9.03	$0.00	$81.73

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

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 ROOFERS LOCAL 33 ROOFERS LOCAL 33 For apprentice rates see "Apprentice- ROOFER"	2/1/2026	$53.78	$14.53	$12.67	$9.03	$0.00	$90.01
SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 17 SHEETMETAL WORKERS LOCAL 17 - A	2/1/2026	$62.93	$14.91	$18.74	$9.53	$2.98	$109.09

Apprentice: SHEETMETAL WORKER

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	42.00	$26.43	$14.91	$6.19	$0.00	$0.00	$47.53
2	42.00	$26.43	$14.91	$6.19	$0.00	$0.00	$47.53
3	47.00	$29.58	$14.91	$10.93	$1.25	$1.62	$58.29
4	47.00	$29.58	$14.91	$10.93	$1.25	$1.62	$58.29
5	52.00	$32.72	$14.91	$11.66	$1.50	$1.74	$62.53
6	52.00	$32.72	$14.91	$11.66	$1.75	$1.75	$62.79
7	60.00	$37.76	$14.91	$12.84	$2.00	$1.93	$69.44
8	65.00	$40.90	$14.91	$13.58	$2.25	$2.04	$73.68
9	75.00	$47.20	$14.91	$15.06	$2.75	$2.28	$82.20
10	85.00	$53.49	$14.91	$16.53	$2.75	$2.49	$90.17

Apprentice to Journeyworker Ratio: 1:4

SPECIALIZED EARTH MOVING EQUIP < 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 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 TEAMSTERS JOINT COUNCIL NO. 10 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 SPRINKLER FITTERS LOCAL 550 SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1	1/1/2026	$72.05	$13.45	$7.45	$18.25	$0.00	$111.20

Apprentice: SPRINKLER FITTER

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	35.00	$25.22	$13.45	$13.84	$0.00	$0.00	$52.51

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: SPRINKLER FITTER

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
2	40.00	$28.82	$13.45	$14.75	$0.00	$0.00	$57.02
3	45.00	$32.42	$13.45	$15.67	$0.00	$0.00	$61.54
4	50.00	$36.03	$13.45	$16.57	$0.00	$0.00	$66.05
5	55.00	$39.63	$13.45	$17.49	$0.00	$0.00	$70.57
6	60.00	$43.23	$13.45	$18.40	$0.00	$0.00	$75.08
7	65.00	$46.83	$13.45	$19.32	$0.00	$0.00	$79.60
8	70.00	$50.44	$13.45	$20.22	$0.00	$0.00	$84.11
9	75.00	$54.04	$13.45	$21.15	$0.00	$0.00	$88.64
10	80.00	$57.64	$13.45	$22.05	$0.00	$0.00	$93.14

Apprentice Notes

Apprentice entered prior 9/30/10:

Apprentice to Journeyworker Ratio: 1:3

STEAM BOILER OPERATOR	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
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"							
TERRAZZO FINISHERS	2/1/2026	$66.89	$12.84	$15.57	$8.02	$0.00	$103.32
BRICKLAYERS LOCAL 3	8/1/2026	$69.09	$12.84	$15.57	$8.02	$0.00	$105.52
BRICKLAYERS LOCAL 3 - MARBLE & TILE	2/1/2027	$70.49	$12.84	$15.57	$8.02	$0.00	$106.92

Apprentice: TERRAZZO FINISHERS

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$33.45	$12.84	$15.57	$8.02	$0.00	$69.88
2	60.00	$40.13	$12.84	$15.57	$8.02	$0.00	$76.56
3	70.00	$46.82	$12.84	$15.57	$8.02	$0.00	$83.25
4	80.00	$53.51	$12.84	$15.57	$8.02	$0.00	$89.94
5	90.00	$60.20	$12.84	$15.57	$8.02	$0.00	$96.63

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: TERRAZZO FINISHERS

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$34.55	$12.84	$15.57	$8.02	$0.00	$70.98
2	60.00	$41.45	$12.84	$15.57	$8.02	$0.00	$77.88
3	70.00	$48.36	$12.84	$15.57	$8.02	$0.00	$84.79
4	80.00	$55.27	$12.84	$15.57	$8.02	$0.00	$91.70
5	90.00	$62.18	$12.84	$15.57	$8.02	$0.00	$98.61

Apprentice to Journeyworker Ratio: 1:5

TEST BORING DRILLER	6/1/2026	$53.25	$10.90	$9.75	$9.80	$0.00	$83.70
LABORERS LABORERS - FOUNDATION AND MARINE	12/1/2026	$54.75	$10.90	$9.75	$9.80	$0.00	$85.20
For apprentice rates see "Apprentice- LABORER"							
TEST BORING DRILLER HELPER	6/1/2026	$49.37	$10.90	$9.75	$9.80	$0.00	$79.82
LABORERS LABORERS - FOUNDATION AND MARINE	12/1/2026	$50.87	$10.90	$9.75	$9.80	$0.00	$81.32
For apprentice rates see "Apprentice- LABORER"							
TEST BORING LABORER	6/1/2026	$49.25	$10.90	$9.75	$9.80	$0.00	$79.70
LABORERS LABORERS - FOUNDATION AND MARINE	12/1/2026	$50.75	$10.90	$9.75	$9.80	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"							
TRACTORS/PORTABLE STEAM GENERATORS	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TRAILERS FOR EARTH MOVING EQUIPMENT	6/1/2026	$42.82	$16.17	$21.78	$0.00	$0.00	$80.77
TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	12/1/2026	$42.82	$16.17	$23.52	$0.00	$0.00	$82.51
	1/1/2027	$42.82	$16.77	$23.52	$0.00	$0.00	$83.11
TUNNEL WORK - COMPRESSED AIR	6/1/2026	$61.48	$10.90	$9.75	$10.25	$0.00	$92.38
LABORERS LABORERS (COMPRESSED AIR)	12/1/2026	$62.98	$10.90	$9.75	$10.25	$0.00	$93.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)	6/1/2026	$63.48	$10.90	$9.75	$10.25	$0.00	$94.38
LABORERS LABORERS (COMPRESSED AIR)	12/1/2026	$64.98	$10.90	$9.75	$10.25	$0.00	$95.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR	6/1/2026	$53.55	$10.90	$9.75	$10.25	$0.00	$84.45
LABORERS LABORERS (FREE AIR TUNNEL)	12/1/2026	$55.05	$10.90	$9.75	$10.25	$0.00	$85.95
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR (HAZ. WASTE)	6/1/2026	$55.55	$10.90	$9.75	$10.25	$0.00	$86.45
LABORERS LABORERS (FREE AIR TUNNEL)	12/1/2026	$57.05	$10.90	$9.75	$10.25	$0.00	$87.95
For apprentice rates see "Apprentice- LABORER"							
VAC-HAUL	6/1/2026	$42.24	$16.17	$21.78	$0.00	$0.00	$80.19
TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	12/1/2026	$42.24	$16.17	$23.52	$0.00	$0.00	$81.93
	1/1/2027	$42.24	$16.77	$23.52	$0.00	$0.00	$82.53
WAGON DRILL OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS LABORERS - ZONE 2	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
WAGON DRILL OPERATOR (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
WASTE WATER PUMP OPERATOR	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
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.

MASSACHUSETTS WEEKLY CERTIFIED PAYROLL REPORT FORM

Company's Name:	Address:	Phone No.:	Payroll No.:

Employer's Signature:	Title:	Contract No:	Tax Payer ID Number	Work Week Ending:

Awarding Authority's Name:	Public Works Project Name:	Public Works Project Location:	Min. Wage Rate Sheet Number

General / Prime Contractor's Name:	Subcontractor's Name:		"Employer" Hourly Fringe Benefit Contributions				
						(B+C+D+E)	(A x F)

Employee Name & Complete Address	Work Classification:	Employee is OSHA 10 certified (?)	Appr. Rate (%)	Hours Worked Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.	Project Hours (A) All Other Hours	Hourly Base Wage (B)	Health & Welfare Insurance (C)	ERISA Pension Plan (D)	Supp. Unemp. (E)	Total Hourly Prev. Wage (F)	Project Gross Wages / Total Gross Wages	Check No. (H)

Are all apprentice employees identified above currently registered with the MA DLS's Division of Apprentice Standards? YES ☐ NO ☐

For all apprentices performing work during the reporting period, attach a copy of the apprentice identification card issued by the Massachusetts Department of Labor Standards / Division of Apprentice Standards. No apprentices are identified above ☐

NOTE: Pursuant to MGL c. 149, s. 27B, every contractor and subcontractor is required to submit a **true and accurate** copy of their certified weekly payroll records to the awarding authority by first-class mail or e-mail. In addition, each weekly payroll must be accompanied by a statement of compliance signed by the employer. Failure to comply may result in the commencement of a criminal action or the issuance of a civil citation.

Date Received by Awarding Authority
/ /

WEEKLY PAYROLL RECORDS REPORT
& STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c. 149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided. A Payroll Form is available from the Department of Labor Standards (DLS) at www.mass.gov/dols/pw and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

On a weekly basis, every contractor and subcontractor is required to submit a certified copy of their weekly payroll records to the awarding authority; this includes the payroll forms and the Statement of Compliance form. The certified payroll records must be submitted either by regular mail or by e-mail to the awarding authority. Once collected, the awarding authority is required to preserve those records for three years from the date of completion of the project.

Each such contractor and subcontractor shall furnish weekly **and** within 15 days after completion of its portion of the work, to the awarding authority directly by first-class mail or e-mail, a statement, executed by the contractor, subcontractor or by any authorized officer thereof who supervised the payment of wages, this form, accompanied by their payroll:

STATEMENT OF COMPLIANCE

_____, 20_____

I,_____,_____
(Name of signatory party) (Title)

do hereby state:

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

_____ on the _____
(Contractor, subcontractor or public body) (Building or 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 sections twenty-six and twenty-seven of chapter one hundred and forty nine of the General Laws.

Signature _____

Title _____

DIVISION 5

Proposal (Bid Schedule)

Board of Directors Vote

Non-Collusive Affidavit

Statement of Tax Compliance (REAP)

Certificate of Compliance with Massachusetts Employment Security Law

Contract Form

Schedule of Participation by Minority or Women Business Enterprises

Letter of Intent Minority or Women's Enterprise Participation Letter of Intent

Minority or Women's Business Enterprise Participation

Commonwealth Terms and Conditions

Request for Verification of Taxation Reporting Information

Electronic Fund Transfer Form

PROPOSAL

FOR Plymouth Public Access Facility, Plymouth Harbor Boat Ramp Improvements & Coastal Resiliency Project; COMMONWEALTH OF MASSACHUSETTS, (Department of Fish and Game, Office of Fishing and Boating Access);

LOCATION

The work referred to herein is in the Town of Plymouth, County of Plymouth, Commonwealth of Massachusetts, and as shown by a set of plans on file in the office of the Department of Fish and Game, Office of Fishing and Boating Access entitled:

"Plymouth Harbor Boat Ramp Improvements & Coastal Resiliency Project, Plymouth, MA" dated October 2026, consisting of 31 sheets

This Proposal includes Addendum numbered _____.

To the Party of the First Part:

The undersigned, as bidder, declares that the only persons or parties interested in this proposal as principals are those named herein, that this proposal is made without collusion with any other person, firm or corporation, that has carefully examined the location of the proposed work, the proposed form of contract, the standard specifications and plans therein referred to and the Special Provisions hereto annexed; and he proposes and agrees, if this proposal is accepted, that he will contract with the Party of the First Part, in the form of the contract referred to herein and to be annexed hereto, to provide all necessary machinery, tools apparatus and other means of construction and to do all the work and furnish all the materials specified in the contract, in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth, and that he will take in payment therefore the following unit prices:

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS (DOLLARS)	UNIT PRICE	AMOUNT
101.1	1 LS	**Miscellaneous Site Preparation** the unit price of (in words) _____ per Lump Sum		
112	1 LS	**Demolition** the unit price of (in words) _____ per Lump Sum		
120.2	1 LS	**Excavation** the unit price of (in words) _____ per Lump Sum		
141.1	60 CY	**Test Pit** the unit price of (in words) _____ per Cubic Yard		
151.1	6,600 TON	**Gravel Borrow** the unit price of (in words) _____ per Ton		
156.1	360 TON	**3/4" Crushed Stone** the unit price of (in words) _____ per Ton		
156.2	205 TON	**1-1/2" Crushed Stone** the unit price of (in words) _____ per Ton		
			AMOUNT CARRIED FORWARD	

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS (DOLLARS)	UNIT PRICE	AMOUNT
			AMOUNT BROUGHT FORWARD	
180.01	1 LS	**Enviromental Health & Safety Program** the unit price of (in words) _____ per Lump Sum		
201	5 EA	**Catch Basin** the unit price of (in words) _____ per Each		
202	2 EA	**Standard Manhole** the unit price of (in words) _____ per Each		
203	1 EA	**Special Manhole** the unit price of (in words) _____ per Each		
205	5 EA	**Yard Drain** the unit price of (in words) _____ per Each		
221	3 EA	**Frame and Cover** the unit price of (in words) _____ per Each		
222	3 EA	**Frame and Grate, MassDOT Bar Type** the unit price of (in words) _____ per Each		
			AMOUNT CARRIED FORWARD	

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS (DOLLARS)	UNIT PRICE	AMOUNT
			AMOUNT BROUGHT FORWARD	
222.1	2 EA	**Double Frame and Grate** the unit price of (in words) _____ per Each		
241.12	577 LF	**12" Reinforced Concrete Pipe Class III** the unit price of (in words) _____ per Linear Foot		
241.15	234 LF	**15" Reinforced Concrete Pipe Class III** the unit price of (in words) _____ per Linear Foot		
241.24	187 LF	**24" Reinforced Concrete Pipe Class III** the unit price of (in words) _____ per Linear Foot		
403	9,800 SY	**Reclaimed Base Course** the unit price of (in words) _____ per Square Yard		
460	2,670 TON	**Class I, Bituminous Concrete Pavement** the unit price of (in words) _____ per Ton		
504	900 LF	**Granite Curb, VA4, Straight** the unit price of (in words) _____ per Linear Foot		
			AMOUNT CARRIED FORWARD	

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS (DOLLARS)	UNIT PRICE	AMOUNT
			AMOUNT BROUGHT FORWARD	
504.1	100 LF	**Granite Curb, VA4, Curved** the unit price of (in words) _____ per Linear Foot		
620.13	125 LF	**Guardrail, W-Beam (Single Faced)** the unit price of (in words) _____ per Linear Foot		
697	1,700 LF	**Silt Sock** the unit price of (in words) _____ per Linear Foot		
697.1	10 EA	**Silt Sack** the unit price of (in words) _____ per Each		
697.2	1 LS	**Floating Silt Curtain** the unit price of (in words) _____ per Lump Sum		
698	2,225 SY	**Geotextile Fabric for Stabilization** the unit price of (in words) _____ per Square Yard		
701	825 SY	**Concrete Sidewalk** the unit price of (in words) _____ per Square Yard		
			AMOUNT CARRIED FORWARD	

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS (DOLLARS)	UNIT PRICE	AMOUNT
			AMOUNT BROUGHT FORWARD	
740	1 LS	**Engineers Field Office** the unit price of (in words) _____ per Lump Sum		
751	360 SY	**Loam and Seed** the unit price of (in words) _____ per Square Yard		
756	1 LS	**NPDES SWPPP** the unit price of (in words) _____ per Lump Sum		
866.106	1 LS	**Reflectorized Pavement Markings** the unit price of (in words) _____ per Lump Sum		
904	100 CY	**4,000 PSI Reinforced Concrete** the unit price of (in words) _____ per Cubic Yard		
904.1	410 CY	**5,000 PSI Reinforced Concrete** the unit price of (in words) _____ per Cubic Yard		
921	1 LS	**Timber Floating Dock System** the unit price of (in words) _____ per Lump Sum		
			AMOUNT CARRIED FORWARD	

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS (DOLLARS)	UNIT PRICE	AMOUNT
			AMOUNT BROUGHT FORWARD	
941	272 LF	**Greenheart Timber Piles** the unit price of (in words) _____ per Linear Foot		
943.1	156 LF	**Steel Pipe Piles** the unit price of (in words) _____ per Linear Foot		
954	1 LS	**Aluminum Gangway & Gangway Hoist** the unit price of (in words) _____ per Lump Sum		
975.5	466 LF	**Aluminum Railing** the unit price of (in words) _____ per Linear Foot		
983	60 TON	**Armor Stone** the unit price of (in words) _____ per Ton		
1000.1	465 LF	**Precast Concrete Block Walls** the unit price of (in words) _____ per Linear Foot		
1000.2	1 LS	**Deployable Flood Barriers** the unit price of (in words) _____ per Lump Sum		
			AMOUNT CARRIED FORWARD	

ITEM NO.	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS (DOLLARS)	UNIT PRICE	AMOUNT
			AMOUNT BROUGHT FORWARD	
1000.3A	1 LS	**Elastomeric Duckbill Tide Gate** the unit price of (in words) _____ per Lump Sum		
1000.3B	1 LS	**In-Line Check Valve Tide Gate** the unit price of (in words) _____ per Lump Sum		
1000.4	4 EA	**Traffic Bollards** the unit price of (in words) _____ per Each		
1000.5	350 SY	**Permeable Pavers** the unit price of (in words) _____ per Square Yard		
TOTAL AMOUNT OF BASE BID: (WRITTEN IN WORDS) _____ _____ _____			**TOTAL AMOUNT OF BASE BID**	
1000.6	100 LF	**Bid Alternate #1: Glass Flood Wall Extension** the unit price of (in words) _____ per Linear Foot		
TOTAL AMOUNT OF BID ALTERNATE #1: (WRITTEN IN WORDS) _____ _____ _____			**TOTAL AMOUNT OF BID ALTERNATE #1**	
TOTAL AMOUNT OF BASE BID + BID ALT. #1: (WRITTEN IN WORDS) _____ _____ _____			**TOTAL AMOUNT OF BASE BID + BID ALTERNATE #1**	

The foregoing prices shall include the furnishing of all materials (except as herein otherwise specified) the performing of all the labor requisite or proper, and the providing of all the necessary machinery, tools, apparatus and other means of construction, the doing of all the above mentioned work in the manner set forth, described and shown in the specification and on the drawings for the work and in the form of the contract, and the completion thereof by **April 15, 2028**. The period of work shall begin from the day when the Contractor's copy of the contract will have been delivered.

If this proposal shall be accepted and the undersigned shall fail to contract as aforesaid mentioned and to give bond in the sum to be determined as aforesaid with surety satisfactory to the Department within seven (7) calendar days from the date of the mailing of a notice from the Department to him according to the address herewith given; that the contract is ready for signature, the Department may at its option, determine that the bidder has abandoned the contract, thereupon this proposal and the acceptance thereof shall be null and void, and the proposal guaranty submitted, covering this proposal shall become the property of the Department otherwise the said proposal guaranty shall be returned to the undersigned.

Full name and address of individual, firm, partnership or corporation submitting this bid:

_____

_____

Signed by: _____ Title: _____

Federal Employers Identification No. or
Social Security No. _____

NOTICE: Bid shall be signed in Black by person having proper legal authority, and the person's title should be given, such as "owner" in the case of an individual, "partner" in the case of a general partnership. "president", "treasurer," or "clerk" in the case of a corporation.

If a bidder is an individual or individuals doing business as a firm, give the full name and address of each individual:

_____

Owner or Partner Address

If the bidder is a corporation, give the State in which incorporated and the name and business address of the following officers:

_____

President

_____

Treasurer

_____

Clerk

State here if bid is submitted by joint venture:_____

_____

and if any of the joint ventures is a corporation, a copy of the vote of the corporation authorizing the joint venture should be attached hereto,

The proposed surety on the bond to be given is:

SAMPLE

At a meeting of the Board of Directors of the _____
(Name of Corporation)

_____ held on _____ at which
(Date)

all the Directors were present or waived notice, it was

or

At a regularly called meeting of the Board of Directors of the

_____held on _____
(Name of Corporation) (Date)

at which a quorum was present, it was voted that _____,
(Name)

officer _____ of

this company, be and he hereby is authorized to execute contracts and bonds in the name and behalf of said company, and affix its corporate seal thereto; and such execution of any contract or obligation in this company's name on behalf by such officer_____

_____ under seal of this company shall be valid and binding upon this company.

A true copy
ATTEST: _____
(Clerk)

Place of business_____

Date of this contract _____

I hereby certify that I am the Clerk of the _____

_____ that
(Name of Corporation)

_____ is the duly elected officer
(Name)

_____ of said company, and that the above vote has not been amended or rescinded and remains in full force and as of this date.

_____
(Clerk) Corporate Seal

FORM OF NON-COLLUSIVE AFFIDAVIT

State of _____

) ss.

County of _____)

_____

being first sworn, depose and says:

That he is _____

(a partner or officer of the firm of, etc.)

the party making the foregoing proposal bid, that such proposal or bid is genuine and non-collusive or sham: that said has not colluded, conspired, connived or agreed directly or indirectly with any bidder or person to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or of any bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the Department of Fish and Game or any person interested in the contract; and that all statements in said proposal or bid are true.

Signature of:

_____

Bidder, if bidder is an individual

_____

Partner, if the bidder is a corporation

Subscribed and sworn to before

me this_____day of _____, 20____

_____ Seal

Notary Public

My commission expires_____

REVENUE ENFORCEMENT AND PROTECTION CERTIFICATION (REAP)

Pursuant to Section 36 of Chapter 233 of the Acts of 1983, Amending Section of 49A (b), of Chapter 62c, General Laws,

I,_____

authorized signatory for_____

whose principal place of business is at_____

_____

do hereby certify under the penalties of perjury that to the best of my knowledge and belief_____

has complied with any and all applicable state tax laws.

Name of Corporation _____
Or Company

Title of Person signing _____

Signature _____ Date _____

The bidder must demonstrate compliance with Commonwealth tax laws, including M.G.L. C. 62C, s49A. The bidder must submit an original or photocopy of a Certificate of Good Standing, which has been issued by the Massachusetts Department of Revenue within the past year. To obtain a Certificate of Good Standing, the bidder must submit the request to:

Department of Revenue, Tax Payer Division, Certificate Unit
P.O. Box 7066, Boston, MA 02204
(617)887-6550 (617)887-6262 FAX

Include the following information:
Name, address and telephone number of the corporation.
Reason for request. Be sure to mark your request with the word "**BID".** Types of taxes to which the corporation is subject and the corresponding Massachusetts identification number (if any).
Power of Attorney Form M-2848, if applicable.
Signature of a major officer of the corporation.

The Certificate of Good Standing must be provided prior to final execution of the Contract Form.

CERTIFICATE OF COMPLIANCE WITH
MASSACHUSETTS EMPLOYMENT SECURITY LAW

Pursuant to G.L. c. 151A, s. 19A(b), I, _____ ,
(Name and Title)

signing on behalf of _____ ,
(Name and Title)

hereby certify that the aforementioned employer has complied with all employment security laws of the Commonwealth of Massachusetts relating to contributions and payments in lieu of contributions.

Signed under the penalties of perjury this _____ day of _____, 20____.

_____
(Signature)

CONTRACT

THE COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF FISH AND GAME
OFFICE OF FISHING AND BOATING ACCESS

Clause 1. This agreement made this day of , 20 , between the Commonwealth of Massachusetts, by the Department of Fish and Game, Office of Fishing and Boating Access, for the said Commonwealth and _____ , **a corporation duly organized under the laws of the Commonwealth of Massachusetts and having a usual place of business in _____, Massachusetts,** herein called the Contractor.

Clause 2. Witnesses, The parties to this agreement, each in consideration of the agreements on the part of the other herein contained, do hereby agree, the Commonwealth of Massachusetts for itself, and said Contractor for itself and its successors and assigns as follows:
The Contractor agrees to furnish all equipment, machinery, tools and labor and furnish and deliver all materials required to be furnished and delivered in and about the improvement and to do and perform all work in

Project No.: PA-425
Itemized Proposal with Special Provisions for Plymouth Public Access Facility, Plymouth Harbor Boat Ramp Improvements & Coastal Resiliency Project
Bid Amount: $
Construction Completion Date: ***by no later than April 15, 2028***

In strict conformity with the provisions herein contained and of the Notice to Contractors, Proposal and Special Provisions hereto attached, and all applicable Standard Specifications for Highways and Bridges with the plans referred to herein. All said plans, Standard Specifications, Supplemental Specifications, Special Provisions, Notice to Contractors and Proposal are hereby made part of this contract.

Clause 3. In consideration of the foregoing premises the Commonwealth agrees to pay and the Contractor agrees to receive as full compensation for everything furnished and done by the Contractor under this contract, including all work required but not shown on the plans for the items herein mentioned, and also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any delay or from any unforeseen obstruction or difficulty encountered in the prosecution of the work, and for all risks of every description connected with the work, and for all expenses incurred by or in consequence of the suspension or discontinuance of the work as herein specified, and for well and faithfully completing the work, and the whole thereof, as herein provided, such unit prices are set out in the accompanying proposal, and for all work required, for which there is no item in the proposal, such compensation as is provided for in the aforesaid specifications.

In witness whereof, the said Contractor has caused these presents to be signed in its name and behalf and its corporate seal to be affixed by

_____Its_____

and _____Its_____

thereto duly authorized, and the said Commonwealth has executed these presents by its Department of Fish & Game on the year and day above written

_____
Thomas K. O'Shea, Commissioner, Department of Fish and Game

_____
Terrance W. Smith, P.E., Acting Director, Office of Fishing and Boating Access

_____

BY _____ Contractor

_____ Corporate Seal

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH AND GAME
Office of Fishing and Boating Access

SCHEDULE OF PARTICIPATION BY MINORITY OR WOMEN BUSINESS ENTERPRISES (M/WBE)

PROJECT NUMBER: PA-425
PROJECTION LOCATION: Plymouth Public Access Facility, Plymouth, MA
DATE OF BID OPENING:_____

Name, Address and Phone Number of M/WBE	Name of Activity	(a.) M/WBE Contractor Activity Amount	(b.) M/WBE Other Business Amount	(c.) Total Amount eligible for credit under rules in Section VIII of the Special Provisions
Total Bid Amount $	Totals	$		$
	M/WBE Percentage of Total bid:	%		%

Column (a.) must be at least one-half of the M/WBE percentage goals.

SIGNATURE:_____ DATE:_____ Tel. No._____

NAME AND TITLE (PRINT):_____
MBE _____ WBE _____

Bidders are cautioned to read the Special Provision for Participation by Minority, Women, Veteran & Service-Disabled Veteran Owned Business Enterprises.

To be submitted within seven days after the bid opening date

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH AND GAME
Office of Fishing and Boating Access

MINORITY/ WOMEN'S BUSINESS ENTERPRISE PARTICIPATION
LETTER OF INTENT

PROJECT NUMBER: PA-425
PROJECTION LOCATION: Plymouth Public Access Facility, Plymouth, MA
DATE OF BID OPENING:_____

FROM: _____
(Minority or Women's Business Enterprise)

TO: _____
(Name of Prime Contractor)

1. My company is currently certified as an MBE or WBE by the Supplier Diversity Program. There have been no changes affecting the ownership, control or independence of my since my last certification review.
2. If any such change occurs prior to my company's completion of this proposed work, I will give written notification to your firm and to the DF&G-Division of Marine Fisheries.
3. (For contractor activity only.) My firm will provide to you, upon request, for the purpose of obtaining subcontractor approval from DMF; (1) a resume stating the qualifications and experience of the superintendent or foreperson who will supervise on site-work; (2) a list of equipment owned or leased by my firm for use on the project; (3) a list of all projects (public or private) which my firm is currently performing, is committed to perform, or intends to make a commitment to perform. I shall include, for each project, the name, telephone number of a contact person for the contracting organization, the dollar value of the work, description of the work, and my firm's work schedule for the project.
4. If you are awarded the contract, my company intends to enter into an agreement with your firm to perform the items of work or other activity described on the following sheet for the prices indicated.
5. My firm has the ability to manage, supervise and perform the activity described on the following page.

SIGNATURE: _____ DATE: _____
(M/WBE)

NAME AND TITLE (PRINT):_____
MBE _____ WBE _____

To be submitted within seven days after the bid opening date

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH AND GAME
Office of Fishing and Boating Access
MINORITY/WOMEN'S BUSINESS ENTERPRISE PARTICIPATION

PROJECT NUMBER: PA-425
PROJECTION LOCATION: Plymouth Public Access Facility, Plymouth, MA
DATE OF BID OPENING:_____

Item Number if applicable	**Description of Activity** with notifications such as Labor Only, or Complete	**Quantity**	**Unit Price**	**Amount**
		TOTAL:		

SIGNATURE: _____ DATE: _____
(M/WBE)

NAME AND TITLE (PRINT):_____
MBE _____ WBE _____

To be submitted within seven days after the bid opening date

COMMONWEALTH TERMS AND CONDITIONS

This Commonwealth Terms and Conditions form is jointly issued by the Executive Office for Administration and Finance (ANF), the Office of the Comptroller (CTR) and the Operational Services Division (OSD) for use by all Commonwealth of Massachusetts ("State") Departments and Contractors. ***Any changes or electronic alterations by either the Department or the Contractor to the official version of this form, as jointly published by ANF, CTR and OSD, shall be void.*** Upon execution of the Standard Contract Form these Commonwealth Terms and Conditions will be incorporated by reference. Performance shall include services rendered, obligations due, costs incurred, commodities and deliverables provided and accepted by the Department, programs provided or other commitments authorized under a Contract. A deliverable shall include any tangible product to be delivered as an element of performance under a Contract**.** The Commonwealth is entitled to ownership and possession of all deliverables purchased or developed with State funds. Contract shall mean the Standard Contract Form issued jointly by ANF, CTR and OSD.

1. *Contract Effective Start Date.* Notwithstanding verbal or other representations by the parties, the effective start date of performance under a Contract shall be the later of the date the Contract was executed by an authorized signatory of the Contractor, the date the Contract was executed by an authorized signatory of the Department, the date specified in the Contract, or the date of any approvals required by law or regulation.

2. *Payments And Compensation.* The Contractor shall only be compensated for performance delivered and accepted by the Department in accordance with the specific terms and conditions of a Contract. All Contract payments are subject to appropriation pursuant to M.G.L. c. 29, § 26, or the availability of sufficient non-appropriated funds for the purposes of a Contract, and shall be subject to intercept pursuant to M.G.L. c. 7A, § 3 and 815 CMR 9.00. Overpayments shall be reimbursed by the Contractor or may be offset by the Department from future payments in accordance with state finance law. Acceptance by the Contractor of any payment or partial payment, without any written objection by the Contractor, shall in each instance operate as a release and discharge of the State from all claims, liabilities or other obligations relating to the performance of a Contract.

3. *Contractor Payment Mechanism*. All Contractors will be paid using the Comptroller's payment system unless a different payment mechanism is required. The Contractor shall timely submit invoices and supporting documentation as prescribed in a Contract. The Department shall review and return rejected invoices within fifteen (15) days of receipt with a written explanation for rejection. Payments shall be made in accordance with the bill paying policy issued by the Office of the Comptroller and 815 CMR 4.00, provided that payment periods listed in a Contract of less than forty-five (45) days from the date of receipt of an invoice shall be effective only to enable a Department to take advantage of early payment incentives and shall not subject any payment made within the forty-five (45) day period to a penalty. The Contractor Payroll System shall be used only for Individual Contractors who have been determined to be Contract Employees as a result of the Department's completion of an Internal Revenue Service SS-8 form in accordance with the Omnibus Budget Reconciliation Act (OBRA) 1990, and shall automatically process all state and federal mandated payroll, tax and retirement deductions.

4. *Contract Termination Or Suspension*. A Contract shall terminate on the date specified in a Contract, unless this date is properly amended in accordance with all applicable laws and regulations prior to this date, or unless terminated or suspended under this Section upon prior written notice to the Contractor. The Department may terminate a Contract without cause and without penalty, or may terminate or suspend a Contract if the Contractor breaches any material term or condition or fails to perform or fulfill any material obligation required by a Contract, or in the event of an elimination of an appropriation or availability of sufficient funds for the purposes of a Contract, or in the event of an unforeseen public emergency mandating immediate Department action. Upon immediate notification to the other party, neither the Department nor the Contractor shall be deemed to be in breach for failure or delay in performance due to Acts of God or other causes factually beyond their control and without their fault or negligence. Subcontractor failure to perform or price increases due to market fluctuations or product availability will not be deemed factually beyond the Contractor's control.

5. *Written Notice*. Any notice shall be deemed delivered and received when submitted in writing in person or when delivered by any other appropriate method evidencing actual receipt by the Department or the Contractor. Any written notice of termination or suspension delivered to the Contractor shall state the effective date and period of the notice, the reasons for the termination or suspension, if applicable, any alleged breach or failure to perform, a reasonable period to cure any alleged breach or failure to perform, if applicable, and any instructions or restrictions concerning allowable activities, costs or expenditures by the Contractor during the notice period.

6. *Confidentiality*. The Contractor shall comply with M.G.L. c. 66A if the Contractor becomes a "holder" of "personal data". The Contractor shall also protect the physical security and restrict any access to personal or other Department data in the Contractor's possession, or used by the Contractor in the performance of a Contract, which shall include, but is not limited to, the Department's public records, documents, files, software, equipment or systems.

7. *Record-keeping And Retention, Inspection Of Records.* The Contractor shall maintain records, books, files and other data as specified in a Contract and in such detail as shall properly substantiate claims for payment under a Contract, for a minimum retention period of six (6) years beginning on the first day after the final payment under a Contract, or such longer period as is necessary for the resolution of any litigation, claim, negotiation, audit or other inquiry involving a Contract. The Department shall have access, as well as any parties identified under Executive Order 195, during the Contractor's regular business hours and upon reasonable prior notice, to such records, including on-site reviews and reproduction of such records at a reasonable expense.

8. *Assignment*. The Contractor may not assign or delegate, in whole or in part, or otherwise transfer any liability, responsibility, obligation, duty or interest under a Contract, with the exception that the Contractor shall be authorized to assign present and prospective claims for money due to the Contractor pursuant to a Contract in accordance with M.G.L. c. 106, § 9-318. The Contractor must provide sufficient notice of assignment and supporting documentation to enable the Department to verify and implement the assignment. Payments to third party assignees will be processed as if such payments were being made directly to the Contractor and these payments will be subject to intercept, offset, counter claims or any other Department rights which are available to the Department or the State against the Contractor.

9. *Subcontracting By Contractor.* Any subcontract entered into by the Contractor for the purposes of fulfilling the obligations under a Contract must be in writing, authorized in advance by the Department and shall be consistent with and subject to the provisions of these Commonwealth Terms and Conditions and a Contract. Subcontracts will not relieve or discharge the Contractor from any duty, obligation, responsibility or liability arising under a Contract. The Department is entitled to copies of all subcontracts and shall not be bound by any provisions contained in a subcontract to which it is not a party.

10. *Affirmative Action, Non-Discrimination In Hiring And Employment.* The Contractor shall comply with all federal and state laws, rules and regulations promoting fair employment practices or prohibiting employment discrimination and unfair labor practices and shall not discriminate in the hiring of any applicant for employment nor shall any qualified employee be demoted, discharged or otherwise subject to discrimination in the tenure, position, promotional opportunities, wages, benefits or terms and conditions of their employment because of race, color, national origin, ancestry, age, sex, religion, disability,

handicap, sexual orientation or for exercising any rights afforded by law. The Contractor commits to purchasing supplies and services from certified minority or women-owned businesses, small businesses or businesses owned by socially or economically disadvantaged persons or persons with disabilities.

11. *Indemnification.* Unless otherwise exempted by law, the Contractor shall indemnify and hold harmless the State, including the Department, its agents, officers and employees against any and all claims, liabilities and costs for any personal injury or property damages, patent or copyright infringement or other damages that the State may sustain which arise out of or in connection with the Contractor's performance of a Contract, including but not limited to the negligence, reckless or intentional conduct of the Contractor, its agents, officers, employees or subcontractors. The Contractor shall at no time be considered an agent or representative of the Department or the State. After prompt notification of a claim by the State, the Contractor shall have an opportunity to participate in the defense of such claim and any negotiated settlement agreement or judgment. The State shall not be liable for any costs incurred by the Contractor arising under this paragraph. Any indemnification of the Contractor shall be subject to appropriation and applicable law.

12. *Waivers.* Forbearance or indulgence in any form or manner by a party shall not be construed as a waiver, nor in any way limit the legal or equitable remedies available to that party. No waiver by either party of any default or breach shall constitute a waiver of any subsequent default or breach.

13. *Risk Of Loss.* The Contractor shall bear the risk of loss for any Contractor materials used for a Contract and for all deliverables, Department personal or other data which is in the possession of the Contractor or used by the Contractor in the performance of a Contract, until possession, ownership and full legal title to the deliverables are transferred to and accepted by the Department.

14. *Forum, Choice of Law And Mediation.* Any actions arising out of a Contract shall be governed by the laws of Massachusetts, and shall be brought and maintained in a state or federal court in Massachusetts which shall have exclusive jurisdiction thereof. The Department, with the approval of the Attorney General's Office, and the Contractor may agree to voluntary mediation through the Massachusetts Office of Dispute Resolution (MODR) of any Contract dispute and will share the costs of such mediation. No legal or equitable rights of the parties shall be limited by this Section.

15. *Contract Boilerplate Interpretation, Severability, Conflicts With Law, Integration.* Any amendment or attachment to any Contract which contains conflicting language or has the effect of a deleting, replacing or modifying any printed language of these Commonwealth Terms and Conditions, as officially published by ANF, CTR and OSD, shall be interpreted as superseded by the official printed language. If any provision of a Contract is found to be superseded by state or federal law or regulation, in whole or in part, then both parties shall be relieved of all obligations under that provision only to the extent necessary to comply with the superseding law; provided however, that the remaining provisions of the Contract, or portions thereof, shall be enforced to the fullest extent permitted by law. All amendments must be executed by the parties in accordance with Section 1 of these Commonwealth Terms and Conditions and filed with the original record copy of a Contract as prescribed by CTR. The printed language of the Standard Contract Form, as officially published by ANF, CTR and OSD, which incorporates by reference these Commonwealth Terms and Conditions, shall supersede any conflicting verbal or written agreements relating to the performance of a Contract, or attached thereto, including contract forms, purchase orders or invoices of the Contractor. The order of priority of documents to interpret a Contract shall be as follows: the printed language of the Commonwealth Terms and Conditions, the Standard Contract Form, the Department's Request for Response (RFR) solicitation document and the Contractor's Response to the RFR solicitation, excluding any language stricken by a Department as unacceptable and including any negotiated terms and conditions allowable pursuant to law or regulation.

IN WITNESS WHEREOF, the Contractor certifies under the pains and penalties of perjury that it shall comply with these Commonwealth Terms and Conditions for any applicable Contract executed with the Commonwealth as certified by their authorized signatory signing the Standard Contract Form.

Form **W-9**
(Revised April 2022)
Massachusetts
Substitute Form W-9

Request for Taxpayer Identification Number and Certification

▶ **Online instructions at: macomptroller.org/wp-content/uploads/instructions_w-9.pdf**

Give this Form to the requestor or the department you are doing business with.

Print or type.
See **Specific Instructions** on page 3.

1 Business name/Taxpayer (as shown on your income tax return). Name is required on this line; do not leave this line blank.

2 Business name/disregarded entity name/dba, if different from above.

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do **not** check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on Page 4):

Exempt payee code (if any): _____

Exemption from FATCA reporting code (if any): _____

(Applies to accounts maintained outside the U.S.)

5 Legal Address (number, street, and apt. or suite no.) See instructions.

Requester's name and address (optional)

6 City, state, and ZIP code

7 Remittance Address (if different from Legal Address)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, on Page 5. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN,* on Page 5.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number to Give the Requester* for guidelines on whose number to enter.

Social security number

___ - ___ - ____

or

Employer identification number

__ - _____

DUNS Number
Please confirm with the state agency if this is required for vendors receiving federal funds.

Unique Entity Identifier (SAM)
As of April 4, 2022, all vendors that receive federal grant funds must submit their Unique Entity Identifier registered in the System of Awards Management (SAM).

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You check the following box if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, on Page 5.

☐ Item 2 does not apply.

5. I am an active Commonwealth of Massachusetts state employee: (check one) ☐ Yes ☐ No

   If yes, I certify compliance with the Massachusetts State Ethics Commission requirements at https://www.mass.gov/ethics.

Sign Here	**Signature of U.S. person** ▶	**Date** ▶

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9.*

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number

SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *on Page 3.*

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting,* on Page 3, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your
U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form
W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the instructions for Part II for details),
3. The IRS tells the requester that you furnished an incorrect TIN,
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code,* on Page 4, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships,* on Page 2.

What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code,* on Page 4, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of $50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a $500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

b. **Note: ITIN applicant:** Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

c. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

d. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

e. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

f. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual • Sole proprietorship, or • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single-member LLC
• LLC treated as a partnership for U.S. federal tax purposes, • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• Partnership	Partnership
• Trust/estate	Trust/estate

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)

2—The United States or any of its agencies or instrumentalities

3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

4—A foreign government or any of its political subdivisions, agencies, or instrumentalities

5—A corporation

6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession

7—A futures commission merchant registered with the Commodity Futures Trading Commission

8—A real estate investment trust

9—An entity registered at all times during the tax year under the Investment Company Act of 1940

10—A common trust fund operated by a bank under section 584(a)

11—A financial institution

12—A middleman known in the investment community as a nominee or custodian

13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over $600 required to be reported and direct sales over $5,000[1]	Generally, exempt payees 1 through 5[2]
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

[1] See Form 1099-MISC, Miscellaneous Income, and its instructions.

[2] However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester,* in the next column, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at *www.SSA.gov*. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at *www.irs.gov/Businesses* and clicking on Employer Identification Number (EIN) under Starting a Business. Go to *www.irs.gov/Forms* to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to *www.irs.gov/OrderForms* to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code,* on Page 4.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. **Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.** You must give your correct TIN, but you do not have to sign the certification.
2. **Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983.** You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.
3. **Real estate transactions.** You must sign the certification. You may cross out item 2 of the certification.
4. **Other payments.** You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).
5. **Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions.** You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account[1]
3. Two or more U.S. persons(joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor[2]
5. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee[1] The actual owner[1]
6. Sole proprietorship or disregarded entity owned by an individual	The owner[3]
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor*
For this type of account:	**Give name and EIN of:**
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity[4]
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

[1] List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

[2] Circle the minor's name and furnish the minor's SSN.

[3] You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

[4] List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships,* on Page 2.

***Note:** The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The Commonwealth of Massachusetts does not initiate contacts with taxpayers via emails. Also, the Comonwealth does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the Commonwealth of Massachusetts, forward this message to *CTREmergencyNotification@mass.gov*. If you have been the victim of identity theft, see *www.IdentityTheft.gov* and Pub. 5027. You can contact the Federal Trade Commission at www.ftc.gov/idtheft or 877-IDTHEFT (877-438-4338).

Visit *www.irs.gov/IdentityTheft* to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

COMMONWEALTH OF MASSACHUSETTS

OFFICE OF THE COMPTROLLER

Electronic Funds Transfer Sign Up Form

This form should be sent to a department with whom you do business.

Request type must be checked: ☐ Initial Request ☐ Changing Existing Account ☐ Closing Account

I_____, hereby certify that the account/s indicated on this form is under my direct control and access; therefore, I authorize the State Treasurer as fiscal agent for the State of Massachusetts to initiate, change or cancel credit entries to that account/s as indicated on this form. For ACH debits consistent with the International ACH Transaction (IAT) rules check one:

☐ I affirm that payments authorized hereunder <u>are not</u> to an account that is subject to being transferred to a foreign bank account.

☐ I affirm that payments authorized hereunder <u>are to</u> an account that is subject to being transferred to a foreign bank account.

This authority is to remain in full force and effect until the Office of Comptroller has received written notification, from either me or an authorized officer of organization of the account's termination in such time and in such a manner as to afford CTR a reasonable opportunity to act upon it.

VENDOR BANK INFORMATION

Vendor Bank Name: _____
Vendor Bank Transit Number (ABA): _____
Vendor Bank Account Number: _____
Account Type: _____

Filling out this field is a requirement for changing account number

Vendor Bank Old Account Number: _____
Account Type: _____

VENDOR INFORMATION

Vendor Tax Identification Number (TIN): _____
Vendor/Business Name: _____
Vendor Contact Name: _____
E-mail: _____
Telephone: _____
Address: _____
City: _____ State: _____ Zip: _____

This authorization will remain in effect until either canceled in writing or an updated form changing information is sent to the Department you currently do business with.

AUTHORIZED SIGNATURE: _____
Print Name: _____ Title: _____ Date: _____

Form forwarded to Commonwealth Department: _____
Attached voided check here:



ATTACHMENTS

Permits:

Plymouth Conservation Commission - Order of Conditions SE57-3495

Plymouth Planning Board Decision - Pending

MA DEP Chapter 91 License No. WW01-0000825

USACE General Permit - Pending

Contract Plans:

Bid Issue: Project No. PA-425, Plymouth Harbor Boat Ramp Improvments & Coastal Resiliency Project,

Plymouth, MA, date October 2026, consisting of 31 sheets

Order of Conditions Instructions

☐ This is the "ORIGINAL" Order of Conditions ☒ **Approval** ☐ **Denial**

☐ This is a "COPY" of the Order of Conditions. The 'Original" was mailed to your representative Collins Engineers, Inc.

PRIOR TO COMMENCING WORK

To complete this Order of Conditions and prevent unnecessary delays, please read and follow ALL Conditions. Contact the Conservation Office between 7:30 to 4 PM, Mon, Wed, Thu; 7:30 to 6:30 PM Tue and 7:30 to noon on Friday. 508-747-1620, x10139 or x10140 if clarification or assistance is needed.

BEFORE THE PROJECT CAN BEGIN

- Scheduled your pre-construction meeting with the Conservation Planner, 508-747-1620, x10139.
- If REVISED plans are requested as a condition in the Order, they must be submitted for approval at the pre-construction meeting.
- If a License Agreement with the Town Manager's Office is required, proof of license is to be provided at the pre-construction meeting.
- The Commission must be notified in writing of the start of your project, giving 24-hour notice.
- The "ORIGINAL" Approval Order must be recorded at the Registry of Deeds or at Land Court, located on Obery Street, in Plymouth. The Registry does not accept COPIES of the Order for recording (unless that copy is a "Certified True Copy" attested by the Plymouth Town Clerk). Sign the Order on page (12). After recording the Order, the Registry will stamp page 1 with recording information. You must return a copy of Pg. 12 (signed) to the Conservation Office, 26 Court St., 3rd floor. **We cannot sign off your building permit application until we have proof of recording of this Order.**
- Denial orders do not have to be recorded.
- There is a 10-day (business days) appeal period, from the "Date of Issuance" of the Order. No work may commence until this 10-day appeal period is over.
- If approved a sign must be posted on the site, with the following information:
  DEP Number: SE57-3495 **, PCC Number:** PCC-26-41
  These numbers are located on the top right corner of your Order of Conditions.

ISSUANCE OF A CERTIFICATE OF COMPLIANCE (COC)

When the project is complete, you must request a COC by submitting a letter to the Commission stating that the project has been completed and in accordance with the Order of Conditions and approved plans. **Note: Some projects require engineering certification to be submitted with "as-built" plans.** A fee of $100 is charged for your request for a COC (check payable to Town of Plymouth). Any changes from the Conservation-approved plans must be noted in your request. A COC will be issued once the Agent has inspected and the Commission takes a vote (in a public meeting) that all work has been completed to the satisfaction of the Order. Once the COC is issued, you must record the original "signed" document at the Registry of Deeds on Obery Street in Plymouth. **Recording your COC is a very important final step.**

Rev. Aug. 2020

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

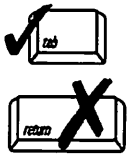
Provided by MassDEP:
SE57-3495
MassDEP File #

eDEP Transaction #
PCC-26-41
City/Town

A. General Information

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

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. From: Town of Plymouth
Conservation Commission

2. This issuance is for (check one): a. ☒ Order of Conditions b. ☐ Amended Order of Conditions

3. To: Applicant:

Michael — a. First Name
Count — b. Last Name
Massachusetts Department of Fish & Game - Office of Fishing & Boating Access — c. Organization
1 Rabbit Hill Road — d. Mailing Address
Westborough — e. City/Town
MA — f. State
01581 — g. Zip Code

4. Property Owner (if different from applicant):

a. First Name
b. Last Name
Town of Plymouth — c. Organization
26 Court Street — d. Mailing Address
Plymouth — e. City/Town
MA — f. State
02360 — g. Zip Code

5. Project Location:

185 Water Street — a. Street Address
Plymouth — b. City/Town
014A — c. Assessors Map/Plat Number
000-021A-000 — d. Parcel/Lot Number
Latitude and Longitude, if known: 41 d 57 m 47.1672 s — d. Latitude
-70 d 40 m 10.4412 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:
SE57-3495
MassDEP File #

eDEP Transaction #
PCC-26-41
City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

a. County	b. Certificate Number (if registered land)
Plymouth	
c. Book	d. Page
N/A	N/A

7. Dates:

a. Date Notice of Intent Filed	b. Date Public Hearing Closed	c. Date of Issuance
April 6, 2026	August 25, 2026	September 24, 2026

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

a. Plan Title	
Plymouth Harbor Boar Ramp Improvements	
b. Prepared By	c. Signed and Stamped by
Collins Engineers, Inc.	Allison P. Gilmore
d. Final Revision Date	e. Scale
March 2026	Varies
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
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
SE57-3495
MassDEP File #

eDEP Transaction #
PCC-26-41
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. ☐ Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. ☐ Bordering Vegetated Wetland	a. square feet	b. square feet	c. square feet	d. square feet
6. ☐ Land Under Waterbodies and Waterways	a. square feet	b. square feet	c. square feet	d. square feet
	e. c/y dredged	f. c/y dredged		
7. ☐ Bordering Land Subject to Flooding	a. square feet	b. square feet	c. square feet	d. square feet
Cubic Feet Flood Storage	e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. ☐ Isolated Land Subject to Flooding	a. square feet	b. square feet		
Cubic Feet Flood Storage	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. ☐ 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:
SE57-3495
MassDEP File #

eDEP Transaction #
PCC-26-41
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. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. ☒ Land Under the Ocean	11,000 (Temp) 34 (Permanent) a. square feet	11,000 (Temp) 34 (Permanent) b. square feet		
	0 c. c/y dredged	d. c/y dredged		
12. ☐ Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. ☒ Coastal Beaches	7,300 (Temporary) a. square feet	7,300 (Temporary) b. square feet	cu yd c. nourishment	cu yd d. nourishment
14. ☐ Coastal Dunes	a. square feet	b. square feet	cu yd c. nourishment	cu yd d. nourishment
15. ☒ Coastal Banks	995 (Permanent) a. linear feet	995 (Permanent) b. linear feet		
16. ☐ Rocky Intertidal Shores	a. square feet	b. square feet		
17. ☐ Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. ☐ Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. ☒ Land Containing Shellfish	0 a. square feet	b. square feet	c. square feet	d. square feet
20. ☐ 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. ☒ Land Subject to Coastal Storm Flowage	10,100 (Temp) 98,600 (Perman a. square feet	10,100 (Temp) 98,600 (Perman b. square feet		
22. ☐ 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:
SE57-3495
MassDEP File #

eDEP Transaction #
PCC-26-41
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 9-24-29 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:
SE57-3495
MassDEP File #

eDEP Transaction #
PCC-26-41
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 then two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]

"File Number SE57-3495 "

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.

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;

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.

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.

C1. Town of Plymouth Conditions – Chapter 196

Findings

☒ Flood storage capacity	☒ Storm damage prevention	☒ Erosion & sedimentation control
☒ Water Pollution	☐ Waste Disposal	☐ Groundwater Aquifers
☐ Public water supplies	☐ Private water supplies	☒ Water Recharge Areas
☐ Fisheries	☐ Shellfish	☒ Wildlife Habitats
☐ Endangered plant species	☐ Agricultural values	☐ Aesthetic Values

☐ Recreational Values
Control of floodwater & runoff, to assure the continuation of the natural flow pattern of watercourses.

The Town of Plymouth Conservation Commission has found it necessary to include these additional General Conditions for all Approved projects.

Project Management

1. All construction must comply with the latest referenced plans and the conditions of this Order. Under this filing, no change in plan is permissible without prior written approval from the Commission. For any proposed change in the approved plans or in the work, the applicant shall inquire in writing of the Commission whether the change is substantial enough to require either an Amended Order of Conditions or a new Notice of Intent.

2. Copies of all required permits, including proof of recording of the Order from the Registry of Deeds (Book and Page No.), shall be submitted to the Commission prior to commencing any work on site.

3. The project engineer(s) and contractor(s) shall be provided with copies of this Order, the submitted Notice of Intent, and the above referenced plans and shall have these documents available on-site during construction.

4. Prior to Commencement of work with Conservation Jurisdiction, a pre-construction meeting shall be held amongst the Applicant's Engineer, Contractor and Conservation Staff to clearly delineate the responsibilities of the parties and clarify any ambiguities in this OOC.

5. The Conservation Commission shall be notified at least twenty-four (24) hours prior to commencement of the work. This notification must be in writing and sent by mail, electronically or hand delivered to the Conservation Office, Town Hall, 26 Court Street, Plymouth, MA 02360. This enables the Commission the opportunity to ensure all pre-construction conditions have been met.

6. This Order shall apply to and become the responsibility of the applicant, owner, their agent, successor or assignee.

7. No additional work shall be allowed in or within 100 feet of the wetland/resource area boundary, including but not limited to the cutting or removing, of vegetation or soil, unless it is specifically allowed by this Order and as is shown on the final approved plan, or unless it is first approved by the Conservation Commission.

8. Copies of all plans and/or other information received by the Commission for this project shall be submitted by the applicant, (via hard copy or email) to the Southeast Regional Office of the Department of Environmental Protection (DEP), 20 Riverside Drive, Route 105, Lakeville, MA 02347.

9. If work associated with this Order is subject to the Massachusetts Stormwater Policy Standards, then General Condition No. 19 (page 7) also becomes a part of this Order under the Town of Plymouth Wetland Bylaw.
10. If any unforeseen problems occur during construction that affect any of the statutory interests identified in MGL c. 13 1 §40 (3 10 CMR 10.00 et seq.) and/or the Town of Plymouth Wetlands By-Law, the Applicant shall notify the Conservation Commission upon discovery, and an immediate meeting shall be held between the Conservation Commission, the Applicant, the Applicant's Engineer, and the Contractor, and any other concerned parties, to determine the corrective measures to be employed. The Applicant shall then implement the agreed-upon corrective measures. In the event of a dispute between the meeting participants, the Commission's view shall prevail.

Sedimentation / Erosion Control

11. Prior to the commencement of any site activity, a Professional Engineer (PE), licensed by the Commonwealth of Massachusetts, shall inspect the installation of the erosion control barriers (ECB) for compliance with the final approved plan referenced (or mandated) by this Order of Conditions. The inspection results shall be submitted to the Conservation Commission in writing, signed and wet stamped by the PE who performed the inspection. No work can commence without this approval.
12. An extra 10% of ECB must be stored on site in the event of an emergency or storm.
13. The Contractor shall install ECB as shown on the plan referenced in this decision. The sedimentation barriers will also serve as the limit of work, and no work, disturbance, or alteration shall occur on the resource area side of the barrier except as described in these Conditions.
14. If siltation, erosion, or other adverse impacts to any resource areas occur, the Commission reserves the right to impose additional conditions as necessary to protect the interests of the Wetlands Protection Act and the Plymouth Wetlands Protection By-Law.
15. To assure the continued effective removal of sediments, the Contractor will inspect the barriers weekly and after each rainfall event to determine its condition. At the time of these inspections, accumulated sediments will be removed from the barriers and damaged barriers will be repaired or replaced as necessary. In no event shall silt be allowed to accumulate to a height greater than half of the height of the ECB. Any removed sediment will be disposed at a suitable location.
16. No ECB may be removed without the approval of the Commission or its staff.
17. All ECBs shall be removed prior to staff/commissioner site inspection of a COC request.

Heavy Equipment

18. All machinery deployed within Conservation jurisdiction shall use biodegradable hydraulic fluid. Documentation shall be submitted to the Conservation Commission prior to initiation of site activity.
19. No vehicles/heavy equipment/machinery shall be stored within wetland resource areas or the 100-foot buffer zone resource areas.
20. There shall be more than a total of 50 gallons of fuel (other than what is in vehicles) or maintenance chemicals relating to this construction stored on the site in an area subject to the Conservation Commission's jurisdiction at any one time. No routine servicing of vehicles used for this project shall be permitted on the site. The Conservation Commission and the Board of Health shall be notified prior to initiating any emergency repair on the site drainage system or wetland resource area.

21. Any leaks or spills of hydraulic fluid, gasoline, or other oils or hazardous material must be cleaned up immediately and disposed of at an appropriate off-site location in accordance with all federal, state, and local requirements and regulations. The Contractor must notify the Conservation Commission and the Board of Health within 24 hours of any spillage or leakage of oil or hazardous material, including appropriate amount of Speedy Dry on site.

Site Maintenance

22. Any fill used in connection with this project shall be clean fill, containing 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.
23. Any stockpiled or similar material must be enclosed within an erosion control barrier to prevent erosion or siltation migrating into resource areas or the undisturbed buffer zone.
24. The Contractor shall be responsible for removing and disposing of debris and excavated material to an off-site disposal area in accordance with all federal, state, and local requirements and regulations. Any excavated asphalt must be placed immediately on trucks and disposed of at an appropriate off-site location.
25. No debris, fill, and excavated material shall be stockpiled within 25 feet (horizontal distance) of the limit of work. At no time shall any debris or other material be buried or disposed of within wetland resource areas or the 100-foot buffer zone resource areas, other than fill that is shown on the above-referenced plans.
26. Any debris, sediment, or other material that falls into or otherwise enters the wetland resource area during the construction period must be immediately removed by hand.

Certificate of Compliance

27. Prior to the final inspection and before issuance of the Certificate of Compliance, the Engineer, or Consultant shall prepare an As-Built plan of the completed project work and attest to the Conservation Commission, in writing, that all the Conditions in this Order have been substantially complied with and the project, as constructed adheres to the approved plans and field changes on file with the Commission and/or any deviations.
28. All ECB's shall be removed from prior to staff / commissioner site inspection of a COC request.

Perpetual Condition

29. The use of fertilizer, herbicides and pesticides (except during initial plantings) is prohibited in or within 100 feet of any wetland resource area.
30. The Conservation Commission requires a compensatory volume of compatible bank sediment be replaced for the anticipated erosion that may occur with the construction of a hard structure, if applicable.

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:
SE57-3495
MassDEP File #

eDEP Transaction #
PCC-26-41
City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No

2. The Town of Plymouth 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:

   1. Municipal Ordinance or Bylaw _____ 2. Citation _____

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.
   The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

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:
SE57-3495
MassDEP File #

eDEP Transaction #
PCC-26-41
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.

9-24-26
1. 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.

4
2. Number of Signers

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.

Signature	Printed Name
Walter E. Morrison, III	Walter Morrison, III, - Chair
	James F. Carpenter - Vice-Chair
	Paul Churchill
	Paul M Denoncourt
Maura Flaherty	Maura Flaherty
	Nicholas Bryant
	Guyton Hampton Watkins, Jr.

☐ by hand delivery on

Date

☒ by certified mail, return receipt requested, on 9-24-26

Date

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:
SE57-3495
MassDEP File #

eDEP Transaction #
PCC-26-41
City/Town

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
SE57-3495
MassDEP File #

eDEP Transaction #
PCC-26-41
City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Plymouth
Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Town of Plymouth
Conservation Commission

Please be advised that the Order of Conditions for the Project at:

185 Water Street
Project Location

SE57-3495
MassDEP File Number

Has been recorded at the Registry of Deeds of:

Plymouth
County

Book

Page

for:
Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

In addition to General Conditions and Additional Conditions, the Commission has found it necessary to include the following Special Conditions pursuant to the Massachusetts Wetlands Protection Act and the Town of Plymouth Wetlands Bylaw. The listed General Conditions, Findings and Additional Special Conditions are automatically part of this Order of Conditions.

FINDINGS:

0 Town Wharf / 185 Water Street
Parcel Id: 014A-000-021A-000
Massachusetts Department of Fish & Game / Office of Fishing & Boating Access
Town of Plymouth
Collins Engineers, Inc
A Notice of Intent of installation of concrete floodwalls, reconstructed seawalls, inland extension existing concrete boat ramp, raising existing parking lot and entrances, improvements existing stormwater conveyance system, and installation of a new 80-foot ADA accessible gangway.

Regulatory References:
The proposed project is located within the following Resource Areas. The analysis provided does address the impacts of the project on the performance standards for the Resource Areas under both the State Act and the Plymouth By-Law/Regulations.

- **NHESP:** 310 CMR 10.37 (Coastal Wetlands)
- **Coastal Beach:** 310 CMR 10.27 & C. 196 Part I Section 10B.
- **Coastal Bank:** 310 CMR 10.30 & C. 196 Part I Section 10E.
- **Land Containing Shellfish:** 310 CMR 10.34 & C.196 Part I Section 10H.
- **Banks of or Land Under the Ocean, Ponds, Streams... That Underlie and Anadromous/Catadromous Fish Run:** 310 CMR 10.35 & C.196 Part I Section 10I.
- **Land Subject to Coastal Storm Flowage:** There are no 310 CMR 10.00 Performance Standards & C. 196 Part I Section 10 J.
- **Buffer Zone (BZ):** C. 196 Part III.
- **Waiver Request:** C.196 Section 12

SPECIAL CONDITIONS:

1. Prior to the pre-construction meeting, the applicant shall submit a copy of the zoning application and an operation and maintenance plan (O&M Plan) for maintenance of the facility to the Conservation Office.

2. The applicant shall use a third-party stormwater pollution prevention plan (SWPP) and submit regularly scheduled copies of these reports to the Conservation Office.

Commonwealth of Massachusetts | Executive Office of Energy and Environmental Affairs

Department of Environmental Protection

Southeast Regional Office

Address: 20 Riverside Drive, Lakeville, MA 02347 | **Phone:** 508-946-2700

Maura T. Healey	Kim Driscoll	Rebecca Tepper	Bonnie Heiple
Governor	Lieutenant Governor	Secretary	Commissioner

October 15, 2026

Massachusetts Department of Fish and Game, Office of Fishing and Boating Access, Terrance Smith
c/o Allison Varanelli, Collins Engineering
1485 South County Trail Suite 103
East Greenwich, RI 02818

RE: ISSUANCE OF CHAPTER 91 LICENSE; Chapter 91 License Application No. 26-WW01-0058-APP, License No. WW01-0000825: Massachusetts Department of Fish and Game, Office of Fishing and Boating Access, Town of Plymouth Boat Ramp, 0 Town Wharf, Plymouth, Plymouth County

Dear Sir or Madam:

The Department of Environmental Protection hereby issues the above-referenced License, enclosed, authorizing you to perform certain activities pursuant to M.G.L. c. 91, the Public Waterfront Act and its regulations 310 CMR 9.00. Any change in use or alteration of any structure or fill not authorized by this license may render this license void.

No work shall be undertaken until the License 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

RECORDING OF THE LICENSE

This License must be recorded at the Registry of Deeds or, if registered land, with the Land Registration Office within sixty (60) days from the date of license issuance. In the case of recorded land, the License shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the project is located. In the case of the registered land, the License shall be noted on the Land Court Certificate of Title of the owner of the land upon which the project is located. **Failure to record this license within sixty (60) days of the date of issuance will render this license void pursuant to 310 CMR 9.18.**

Upon recording the License and Plan, you must notify the Department by accessing your Authorization record at https://eplace.eea.mass.gov/citizenaccess and entering the recording information. Instructions for entering recording information may be found at: https://www.mass.gov/doc/eplace-waterways-recording-information-amendment/download. Failure to notify the Department of the recording of this License is a violation of 310 CMR 9.00.

REQUEST CERTIFICATE OF COMPLIANCE

Pursuant to 310 CMR 9.19, once the proposed project is completed you must file a Request for a Certificate of Compliance form, BRP WW05, within sixty (60) days of completion but in no event later than five (5) years from the License's issuance date. The license for any project for which such a request is not filed and certificate issued may be revoked pursuant to 310 CMR 9.26.

Please contact Vin Manfredi of the Waterways Program, (857) 283-5901 or vin.manfredi@mass.gov, if there are any questions.

Sincerely,

Daniel J. Padien
Program Chief
Waterways Program

cc: w/enc. Office of Coastal Zone Management
Chad Hunter, Plymouth Harbormaster
Plymouth Conservation Commission
Massachusetts Department of Fish and Game, Office of Fishing and Boating Access, Terrance Smith

The Commonwealth of Massachusetts

No. WW01-0000825

Whereas, Massachusetts Department of Fish and Game Office of Fishing and Boating Access

of -- Westborough -- in the County of -- Worcester -- and Commonwealth aforesaid, has applied to the Department of Environmental Protection for license to -- construct and maintain resiliency and functionality improvements to a public waterfront access facility, as further detailed below ----

and has submitted plans of the same; and whereas due notice of said application, ~~and of the time and place fixed for a hearing thereon~~, has been given, as required by law, to the -- Municipal Official -- of the -- Town – of -- Plymouth; ----------

Now, said Department, having heard all parties desiring to be heard, and having fully considered said application, hereby, subject to the approval of the Governor, authorizes and licenses the said

-- Massachusetts Department of Fish and Game Office of Fishing and Boating Access -- subject to the provisions of the ninety-first chapter of the General Laws, and of all laws which are or may be in force applicable thereto, to -- construct and maintain resilience and functionality improvements to the existing public waterfront access facility, including the following activities:

- Removal of a portion of seawall along the south and west sides of the wharf, and removal of the L-shaped dock located north of the boat ramp, including the pier, ramp, and piles;
- Installation of stormwater management infrastructure, including new outfalls,
- Placement of fill within the footprint of the existing wharf to increase the elevation and construction of sidewalks, roadways, parking, and other pedestrian access areas;
- Construction of a new retaining wall along the landward side of the project site;
- Construction of a new floodwall around the Harbormaster building;
- Installation of a new splash wall along the north side of the wharf;
- Installation of a new seawall around the south and west sides of the wharf;
- Replacement of any improvements to the riprap revetment toe and armor stone around the seaward perimeter of the wharf;
- Excavation within the landward area of the boat ramp to create an approximately 800-square foot expansion of the ramp area;
- 1,040-square foot pile-held floating dock and ramp ----------

within Filled and Flowed Tidelands of -- Plymouth Harbor -- located at -- 0 Town Wharf (Property ID: 014A-000-021A-000) -- in the -- Town of Plymouth -- and in accordance with the locations shown and details indicated on the accompanying License Plan No. WW01-0000825 signed and sealed on September 21, 2026 by Allison P. Varanelli, Massachusetts Professional Engineer No. 60378 (15 Sheets).

Specific Legislative Authorizations and Licenses issued previously at the project site include: Department of Environmental Quality Engineering License Contract Nos. 83-PA (1976) and 95-PA (1980), Department of Environmental Protection (DEP) License No. 13645 issued June 13, 2014 and DEP License No. 14775 issued on September 26, 2018. These authorized structures and/or fill shall be maintained in accordance with the terms and conditions of said Licenses and plans, except as may be modified by subsequent licenses or as may be modified herein.

The structures and fill authorized hereby shall be limited to the following uses: flood control, conveyance and discharge of stormwater, shoreline protection and stabilization, and public access to waterfront open space for boating and other recreational uses, including accessory parking.

This license is valid for an unlimited term pursuant to 310 CMR 9.15(1)(c).

This License is subject to the following Special Conditions and Standard Conditions:

Special Chapter 91 License Conditions

1. In accordance with any license condition, easement, or other public right of lateral passage that exists in the area of the subject property lying between the high and low water marks, the Licensee shall allow the public in the exercise of such rights to pass freely over, under, or around all structures within such intertidal area. Accordingly, the Licensee shall place and maintain, in good repair, public access signs on both ends of the property that identify the areas for pedestrian passage. Signs shall be designed in accordance with the signage specifications provided by the Department, attached hereto and shall be installed within 30 days of completion of construction. Nothing in this condition shall be construed as preventing the Licensee from excluding the public from portions of said structure(s) or property not intended for lateral passage.

2. In partial compensation for use of fill and structures on tidelands of the Commonwealth, which interferes with the rights of the public to use such lands, the Licensee shall allow the public to pass on foot, for any purpose and from dawn to dusk, within the area of the subject property lying seaward of the high water mark. This condition shall not be construed to prevent the Licensee from taking reasonable measures to discourage unlawful activities by users of the area(s) intended for public passage, including but not limited to depositing of refuse of any kind or nature in the water or on the shore. Further, the exercise by the public of free on-foot passage in accordance with this condition shall be considered a permitted use to which the limited liability provisions of M.G.L. c.21, s.17c apply.

3. No dredging (including, but not limited to the effects of prop wash) is permitted herein.

4. The use of unencapsulated polystyrene as part of any permanent or temporary component of the structures and/or fill authorized herein is prohibited.
5. Any structural alteration, change in use, or any other modification from that explicitly authorized herein and contained on said License Plans, shall require the prior review of the Department to determine whether additional licensing is required pursuant to M.G.L. Chapter 91 and the Waterways Regulations at 310 CMR 9.00.

6. All structures authorized under this License shall be maintained to meet the Engineering and Construction Standards pursuant to 310 CMR 9.37.

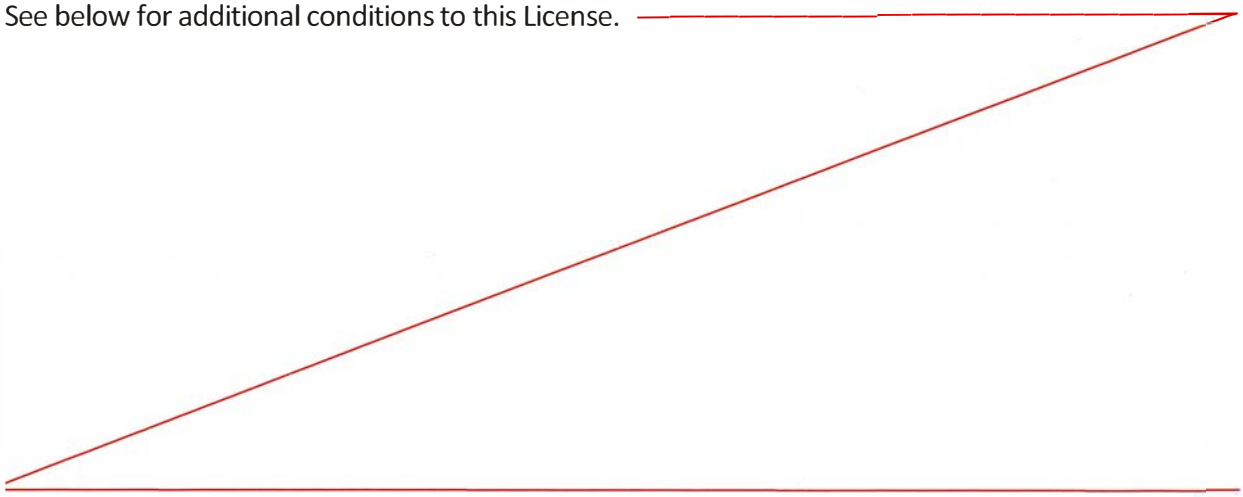
7. The Licensee shall construct and maintain all structures and fill in accordance with the terms and conditions specified herein or this License may expire, pursuant to 310 CMR 9.25(1)(c).

8. The Licensee shall allow agents of the Department to enter the project site to verify compliance with the conditions of this License.

9. All work authorized herein shall be completed within five (5) years of the date of license issuance. Said construction period may be extended by the Department for one or more one year periods without public notice, provided that the Applicant submits to the Department thirty (30) days prior to the end of the construction period, a written request to extend the period and provides adequate justification for said extension.

10. The Licensee shall request in writing that the Department issue a Certificate of Compliance within sixty (60) days completion of the licensed project, but in no event later than five (5) years from the date of License issuance, or any extension thereof, in accordance with 310 CMR 9.19(1). The request shall be accompanied by a certification by a registered professional engineer licensed to do business in the Commonwealth that the project was completed substantially in accordance with the plans, specifications, and conditions of this License.

See below for additional conditions to this License.



Duplicate of the plan for License Number WW01-0000825 is on file in the office of the Department, and original of said plan accompanies this License and is to be referred to as a part hereof.

Standard Chapter 91 License Conditions

1. Acceptance of this License shall constitute an agreement by the Licensee to conform with all terms and conditions stated herein.

2. This License is granted upon the express condition that any and all other applicable authorizations necessitated due to the provisions hereof shall be secured by the Licensee prior to the commencement of any activity or use authorized pursuant to this License.

3. Any change in use or any substantial structural alteration of any structure or fill authorized herein shall require the issuance by the Department of a new License in accordance with the provisions and procedures established in Chapter 91 of the Massachusetts General Laws. Any unauthorized substantial change in use or unauthorized substantial structural alteration of any structure or fill authorized herein shall render this License void.

4. This License shall be revocable by the Department for noncompliance with the terms and conditions set forth herein. This License may be revoked after the Department has given written notice of the alleged noncompliance to the Licensee and those persons who have filed a written request for such notice with the Department and afforded them a reasonable opportunity to correct said noncompliance. Failure to correct said noncompliance after the issuance of a written notice by the Department shall render this License void and the Commonwealth may proceed to remove or cause removal of any structure or fill authorized herein at the expense of the Licensee, its successors and assigns as an unauthorized and unlawful structure and/or fill.

5. The structures and/or fill authorized herein shall be maintained in good repair and in accordance with the terms and conditions stated herein and the details indicated on the accompanying License plans.

6. Nothing in this License shall be construed as authorizing encroachment in, on or over property not owned or controlled by the Licensee, except with the written consent of the owner or owners thereof. The Licensee stated that the Town of Plymouth was the property owner at the time the application was submitted.

7. This License is granted subject to all applicable Federal, State, County, and Municipal laws, ordinances and regulations including but not limited to a valid final Order of Conditions issued pursuant to the Wetlands Protection Act, M.G.L. Chapter 131, §40.

8. This License is granted upon the express condition that the use of the structures and/or fill authorized hereby shall be in strict conformance with all applicable requirements and authorizations of the Department.

9. This License authorizes structure(s) and/or fill on

_____Private Tidelands - In accordance with the public easement that exists by law on Private Tidelands, the Licensee shall allow the public to use and to pass freely upon the area of the subject property lying between the high and low water marks, for the purposes of fishing, fowling, navigation, and the natural derivatives thereof.

__X__Commonwealth Tidelands - The Licensee shall not restrict the public's right to use and to pass freely, for any lawful purpose, upon lands lying seaward of the low water mark and upon any other lands defined as Commonwealth Tidelands. Said lands are held in trust by the Commonwealth for the benefit of the public.

_____Great Pond of the Commonwealth - The Licensee shall not restrict the public's right to use and to pass freely upon lands lying seaward of the high water mark for any lawful purpose.

_____Navigable River or Stream - The Licensee shall not restrict the public's right to use and to pass freely, for any lawful purpose, in the waterway.

No restriction on the exercise of these public rights shall be imposed unless otherwise expressly provided in this License.

10. Unless otherwise expressly provided by this License, the Licensee shall not limit the hours of availability of any areas of the subject property designated for public passage, nor place any gates, fences, or other structures on such areas in a manner that would impede or discourage the free flow of pedestrian movement thereon.

The amount of tidewater displaced by the work hereby authorized has been ascertained by the Department, and compensation thereof has been made by the said -- Town of Plymouth -- by paying into the treasury of the Commonwealth -- two dollars ($2.00) -- for each cubic yard so displaced, being the amount hereby assessed by said Department -- N/A.

Nothing in this License shall be so construed as to impair the legal rights of any person.

This License shall be void unless the same and the accompanying Mylar plans are recorded within the chain of title for all affected properties within sixty (60) days from the date hereof, in the appropriate Registry of Deeds for the -- County of -- Plymouth.

In witness whereas, said Department of Environmental Protection have hereunto set their hand this 15th day of October in the year 2026.

Commissioner _____
Bonnie Heiple

Department of Environmental Protection

Program Chief _____
Daniel J. Padien

THE COMMONWEALTH OF MASSACHUSETTS

This License is approved in consideration of the payment into the treasury of the Commonwealth by the said -- Town of Plymouth -- the further sum of -- N/A -- the amount determined by the Governor as a just and equitable charge for rights and privileges hereby granted in the land of the Commonwealth.

BOSTON,

Approved by the Governor.

_____
Maura T. Healey, Governor

I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Allison P. Varanelli — NAME

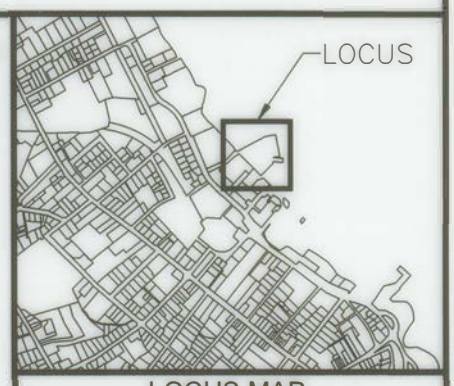
SEPTEMBER 11, 2026 — DATE

DRAWING INDEX

SHEET	TITLE
1	TITLE SHEET
2	EXISTING CONDITIONS PLANS OVERALL
3	EXISTING CONDITIONS PLAN WEST
4	EXISTING CONDITIONS PLAN EAST
5	PROPOSED SITE PLAN WEST
6	PROPOSED SITE PLAN EAST
7	PROPOSED STORMWATER PLAN WEST
8	PROPOSED STORMWATER PLAN EAST
9	PROPOSED SECTIONS 1
10	PROPOSED SECTIONS 2
11	PROPOSED BOAT RAMP PLAN
12	PROPOSED BOAT RAMP DETAILS
13	PROPOSED DETAILS 1
14	PROPOSED DETAILS 2
15	TIMBER PILE RELOCATION SECTION

0 2000' 4000'

SCALE IN FEET
SCALE: 1"= 2000'



LOCUS MAP
SCALE: 1" = 2000'

LEGEND

- HISTORIC LOW WATER (HLWM)
- HISTORIC HIGH WATER (HHWM)
- EXISTING CONTOUR
- MEAN HIGH WATER (MHW, EL. 4.3' NAVD88)
- MEAN LOW WATER (MLW, EL. −5.2' NAVD88)
- PROPOSED CONTOURS
- PROPERTY LINE
- PROJECT SITE
- DRAINAGE LINE
- CHAIN LINK FENCE

PRIOR AUTHORIZATIONS		
AUTHORIZATION	ISSUING AGENCY	DATE
NO. 9983	MASSDEP CH. 91	5/12/2004
NO. 13645	MASSDEP CH. 91	6/13/2014
NO. 14775	MASSDEP CH. 91	9/26/2018
NO. 83−PA	MASSDEQE	10/1976

NOTES:

1. VERTICAL DATUM REFERENCES THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. HORIZONTAL DATUM REFERENCES THE MASSACHUSETTS STATE PLANE, NORTH AMERICAN DATUM OF 1983 (NAD83).
3. TIDAL DATUM IS IN NAVD88 AND REFERENCES NOAA STATION 8446493, PLYMOUTH HARBOR, MA FOR THE 1983−2001 EPOCH.
4. FEMA FLOOD ELEVATIONS REFERENCE FEMA FIRM MAP NUMBER 25023C0358L DATED JULY 6, 2021.
3. HISTORIC HIGH WATER (HHW) REFERENCES PLAN TITLED "U.S. COAST SURVEY PLYMOUTH HARBOR AND VICINITY" BY S.A. GILBERT ASSIST. DATED JULY−SEPT 1853.
4. HISTORIC LOW WATER (HLW) REFERENCES DRAWING TITLED "MAP OF THE MILE AND A HALF TRACT OF PLYMOUTH MASS IN 1701, POPULATION ABOUT 600".
5. PROPERTY INFORMATION OBTAINED FROM THE MASSACHUSETTS TAX ASSESSORS DATABASE ON JANUARY 19, 2026.
6. ALL WORK SHOWN IS LOCATED WITHIN FLOWED AND/OR FILLED TIDELANDS SUBJECT TO MASSACHUSETTS CHAPTER 91 JURISDICTION UNLESS OTHERWISE NOTED.

PLANS ACCOMPANYING PETITION OF THE MASSACHUSETTS DEPARTMENT OF FISH AND GAME − OFFICE OF FISHING AND BOATING ACCESS TO MAINTAIN AN EXISTING REVETMENT, CONSTRUCT A NEW CONCRETE SPLASH WALL, REPLACE CONCRETE RECURVE SEAWALLS WITH NEW CONCRETE RECURVE SEAWALLS AT A HIGHER ELEVATION, RELOCATE EXISTING FLOATING DOCKS, INSTALL NEW TIMBER GUIDE PILES, REMOVE A TIMBER LANDING AND REPLACE WITH AN ALUMINUM GANGWAY, CONSTRUCT RETAINING WALLS, PLACE STRUCTURAL FILL, EXTEND A BOAT RAMP INLAND, INSTALL A 24" STORMWATER OUTFALL WITH DUCKBILL, AND INSTALL BITUMINOUS PAVEMENT WITHIN FILLED TIDELANDS OF PLYMOUTH HARBOR AT THE PLYMOUTH HARBOR BOAT RAMP (0 TOWN WHARF, PLYMOUTH, PLYMOUTH COUNTY, MA)

SHEET 1 OF 15
SEPTEMBER 11, 2026

COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VARANELLI
CIVIL
No. 60378
PROFESSIONAL ENGINEER

Allison P. Varanelli 9/21/26

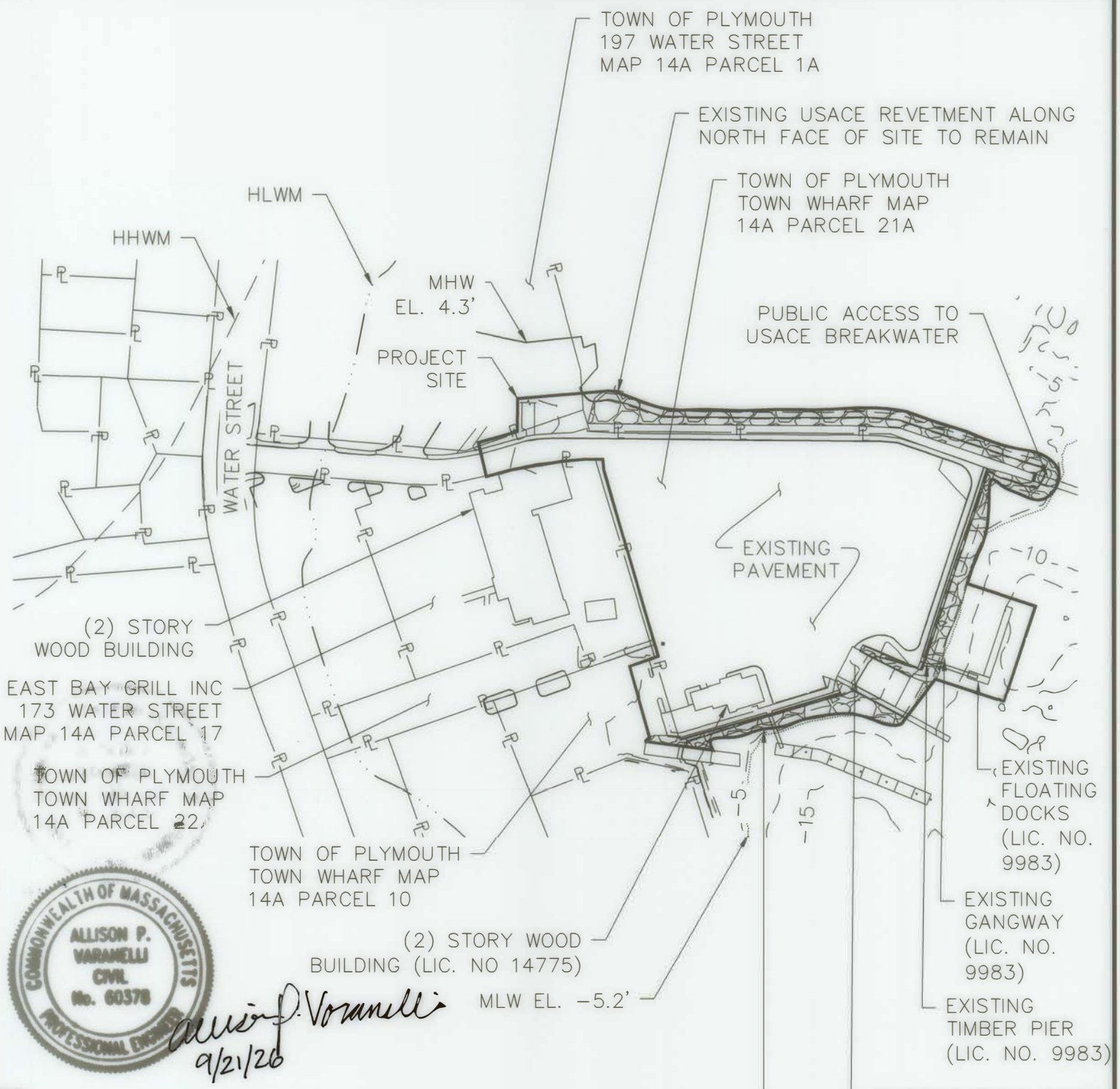
LICENSE PLAN NO. WW01-D0008825
Approved by Department of Environmental Protection of Massachusetts

Daniel A. Pike
October 15, 2026

I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Allison P. Varanelli
NAME

SEPTEMBER 11, 2026
DATE



COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VARANELLI
CIVIL
No. 60378
PROFESSIONAL ENGINEER

Allison P. Varanelli
9/21/26

NOTES:

1. EXISTING CONDITIONS REFERENCE PLANS PREPARED BY DIPRETE ENGINEERING DATED SEPTEMBER 12, 2024, PLANS PREPARED BY CR ENVIRONMENTAL DATED MAY 21, 2024, AND A SITE VISIT BY COLLINS ENGINEERS, INC. ON JULY 26, 2024.
2. FEMA FLOOD ZONES VE 15 AND AE 14 FULLY SUBMERGE PROJECT SITE, AND THEREFORE THE FLOOD ZONE BOUNDARY IS NOT DEPICTED ON THE PLANS.
3. THE ENTIRETY OF THE SITE IS CONSIDERED A WATER DEPENDENT USE ZONE (WDUZ), AND THEREFORE IS NOT DEPICTED ON THE PLANS.

0 150' 300'
SCALE IN FEET
SCALE: 1"= 150'

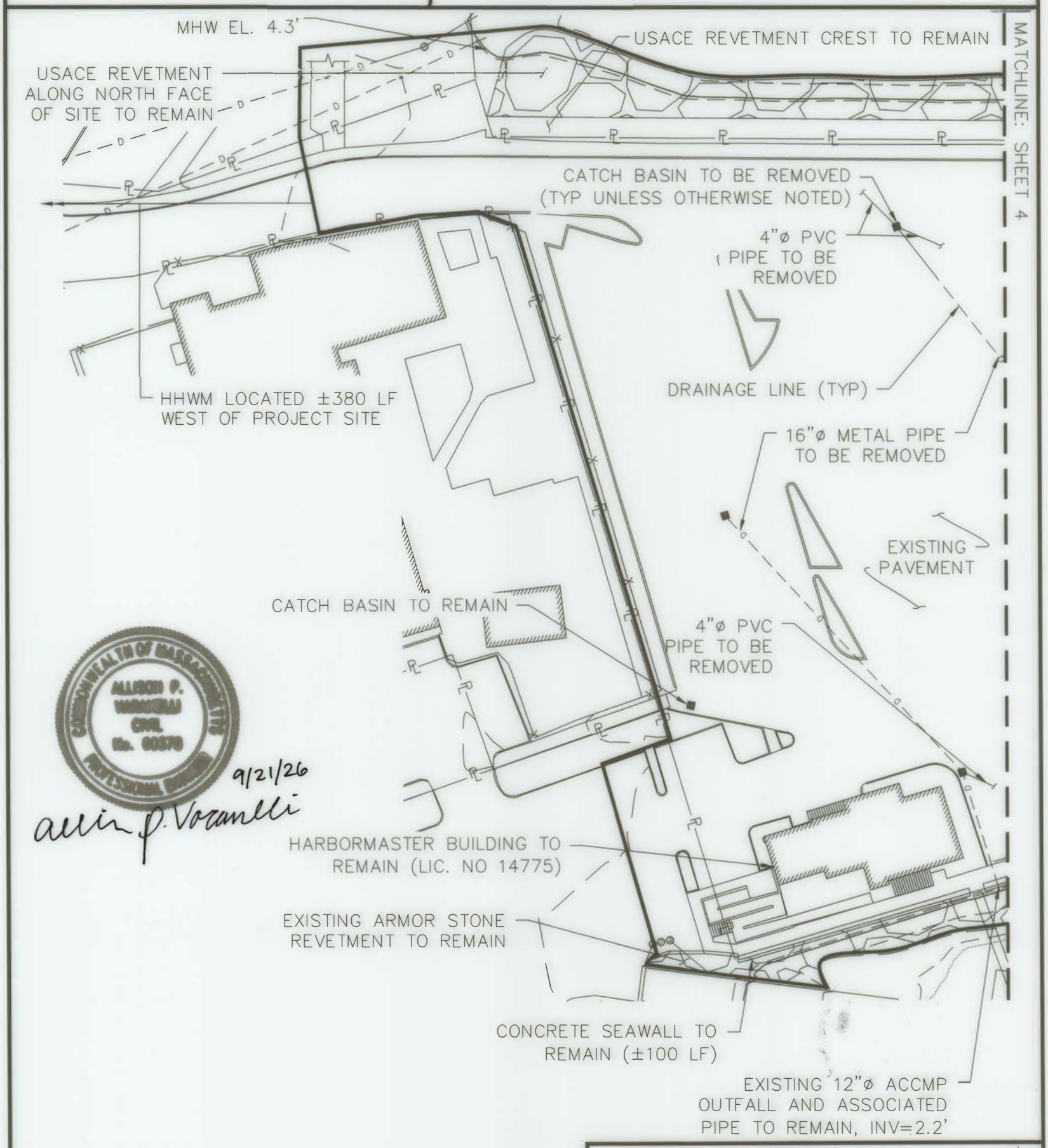
EXISTING CONDITIONS PLAN OVERALL
SHEET 2 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. WW01-0000825
Approved by Department of Environmental Protection
Date; October 15, 2026

I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Allison P. Voranelli — SEPTEMBER 11, 2026

NAME — DATE



COMMONWEALTH OF MASSACHUSETTS — ALLISON P. VORANELLI — CIVIL — No. 60370 — PROFESSIONAL ENGINEER

9/21/26

Allison P. Voranelli

0 — 50' — 100'

SCALE IN FEET
SCALE: 1"= 50'

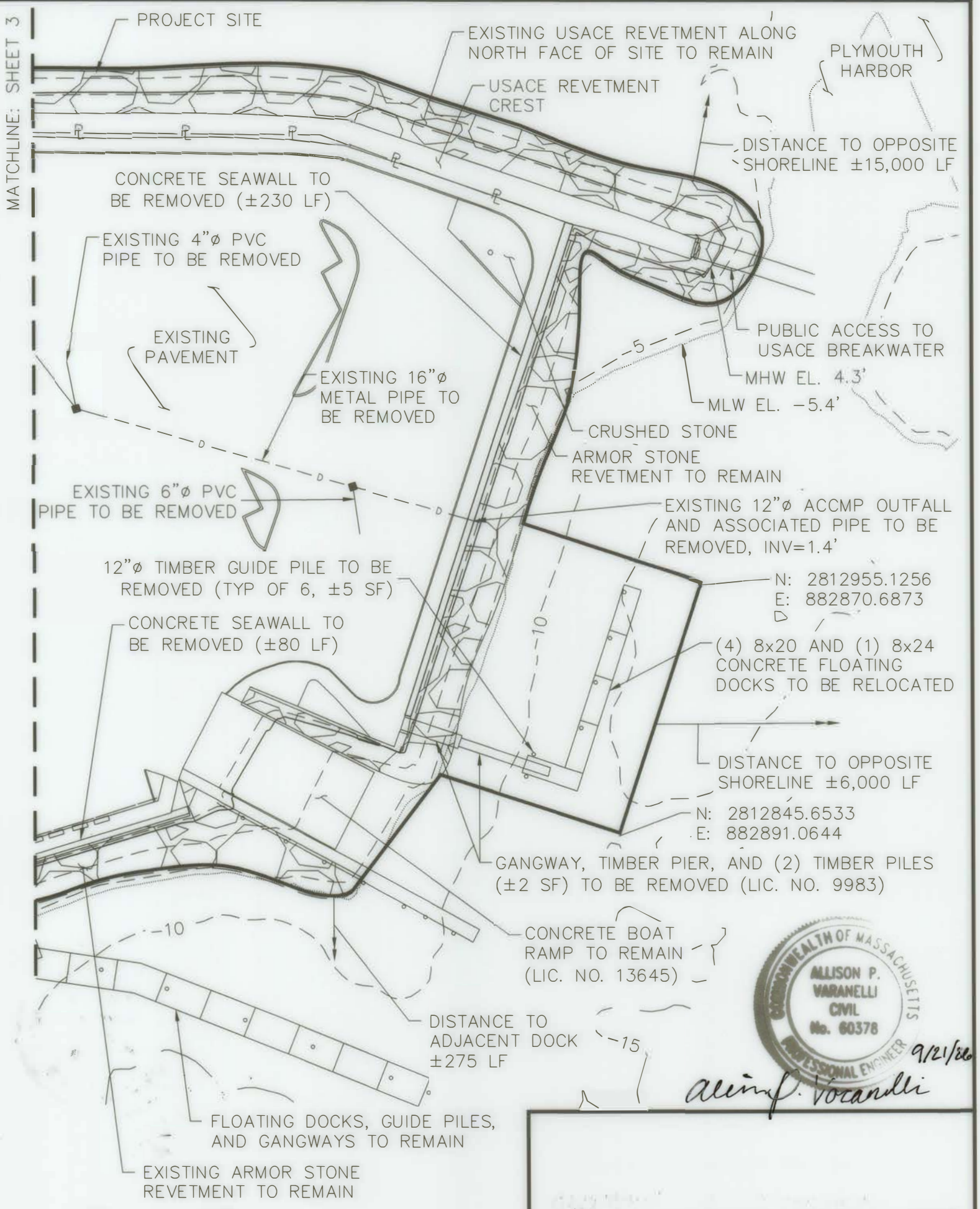
EXISTING CONDITIONS PLAN WEST
SHEET 3 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. WW01-00008825
Approved by Department of Environmental Protection
Date; October 15, 2026

I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Allison P. Varanelli — SEPTEMBER 11, 2026

NAME — DATE



COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VARANELLI
CIVIL
No. 60378
PROFESSIONAL ENGINEER
9/21/26

Allison P. Varanelli

0 50' 100'

SCALE IN FEET
SCALE: 1"= 50'

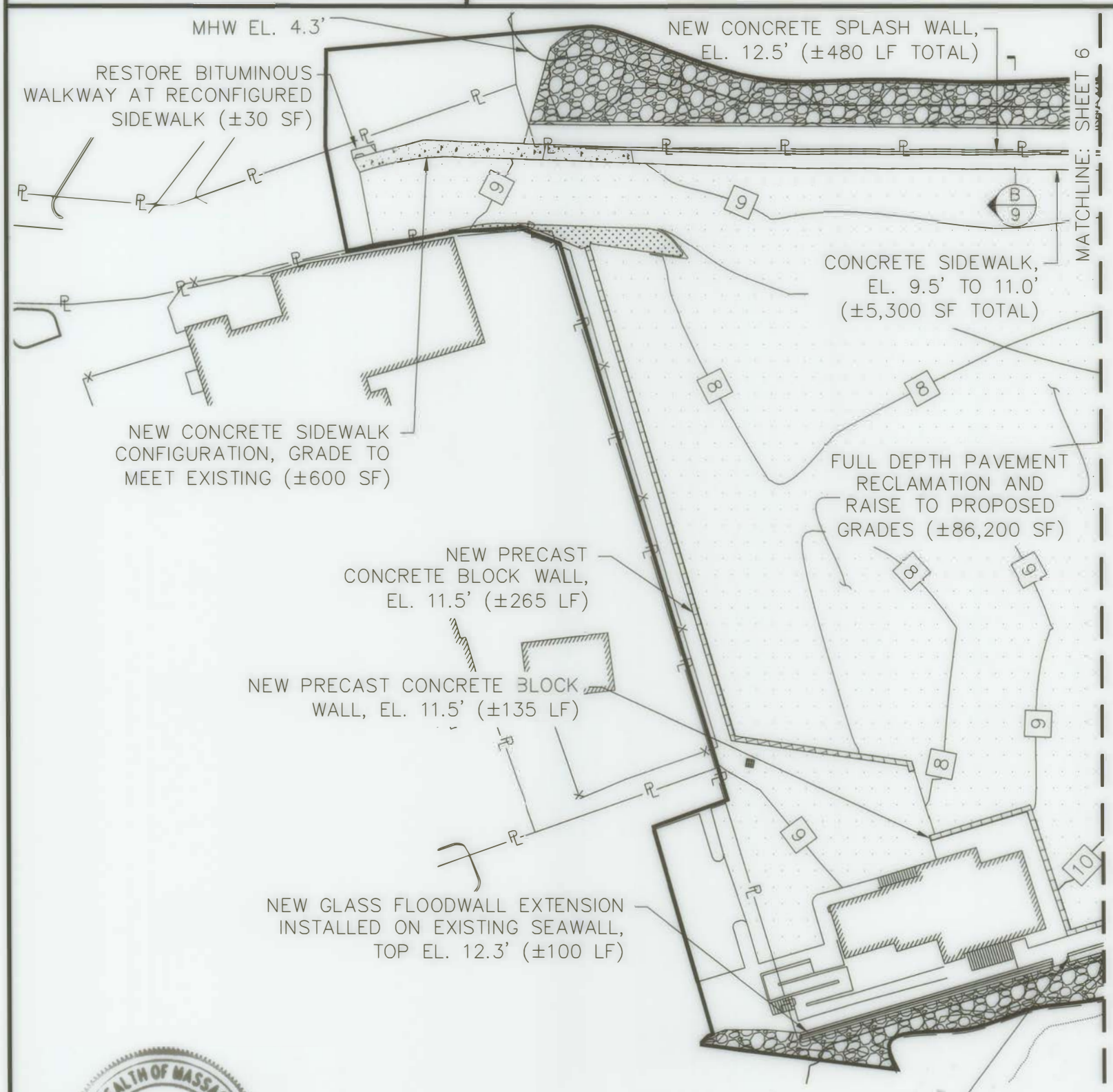
EXISTING CONDITIONS PLAN EAST
SHEET 4 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. WW01-U000825
Approved by Department of Environmental Protection
Date: October 15, 2026

I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Allison P. Voranelli — NAME

SEPTEMBER 11, 2026 — DATE



COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VORANELLI
CIVIL
No. 60378
PROFESSIONAL ENGINEER

9/21/26
Allison P. Voranelli

0 50' 100'

SCALE IN FEET
SCALE: 1"= 50'

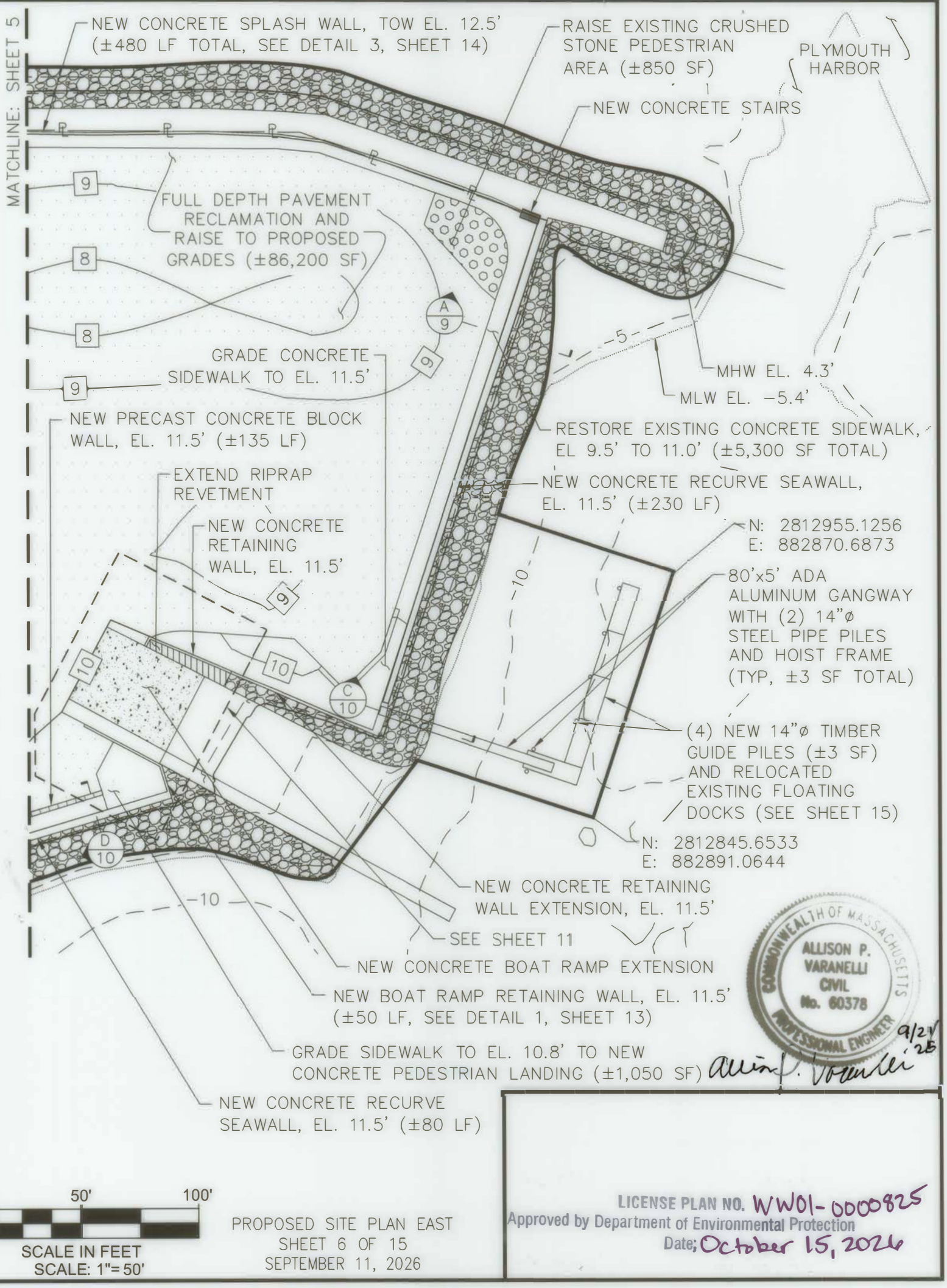
PROPOSED SITE PLAN WEST
SHEET 5 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. NW01-0000825
Approved by Department of Environmental Protection
Date: October 15, 2026

I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Allison P. Varanelli
NAME

SEPTEMBER 11, 2026
DATE



COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VARANELLI
CIVIL
No. 60378
PROFESSIONAL ENGINEER
9/27/25
Allison P. Varanelli

0 50' 100'
SCALE IN FEET
SCALE: 1"= 50'

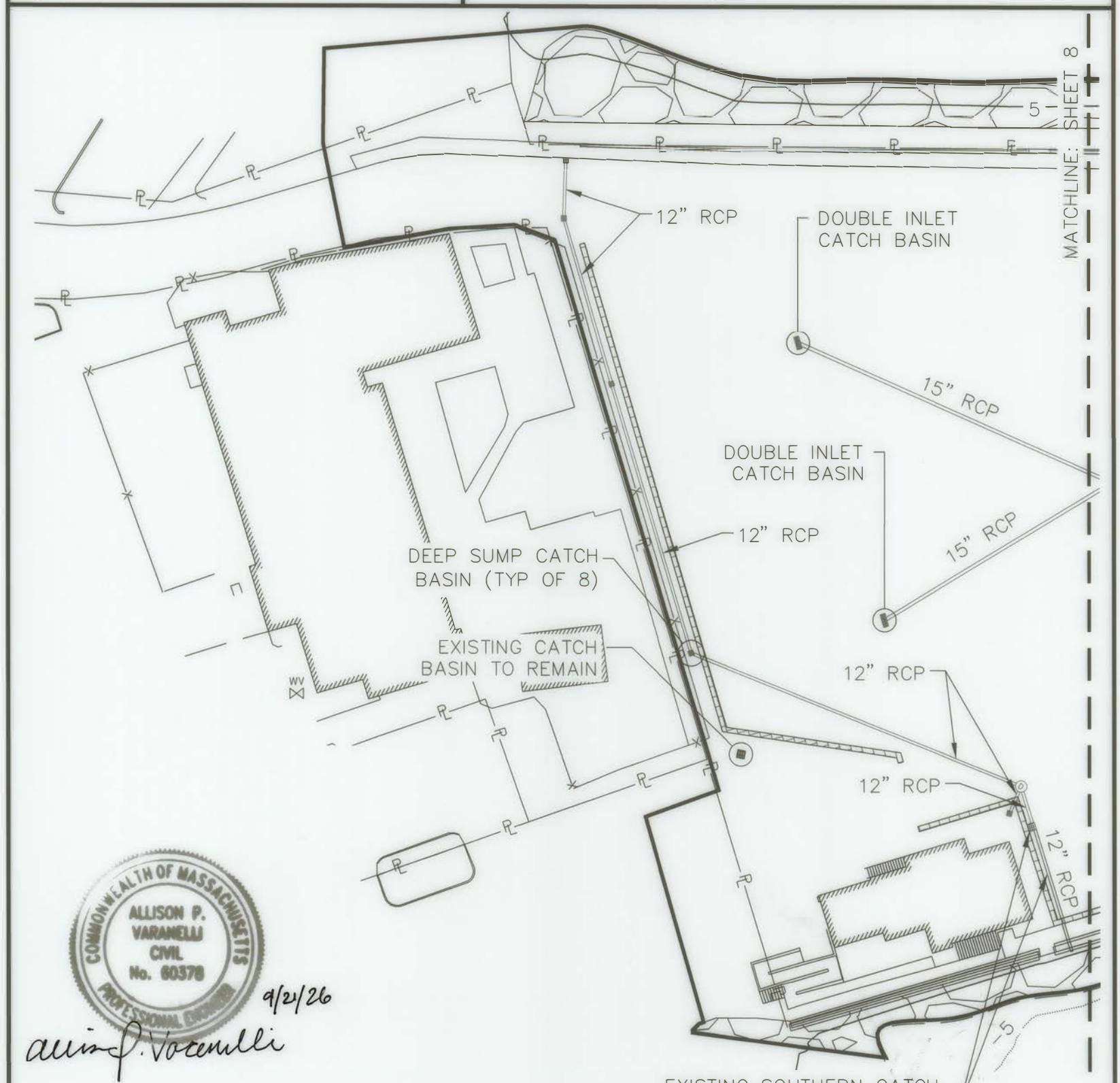
PROPOSED SITE PLAN EAST
SHEET 6 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. WW01-0000825
Approved by Department of Environmental Protection
Date; October 15, 2026

I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

allison P. Varanelli — SEPTEMBER 11, 2026

NAME — DATE



EXISTING SOUTHERN CATCH BASIN AND ASSOCIATED OUTFALL TO REMAIN

COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VARANELLI
CIVIL
No. 60378
PROFESSIONAL ENGINEER

9/21/26

allison P. Varanelli

NOTES:

1. DRAINAGE FEATURES SHOWN FOR LOCATION REFERENCE ONLY; DETAILED HYDRAULIC DESIGN IS OUTSIDE THE SCOPE OF CHAPTER 91 REVIEW.

0 50' 100'

SCALE IN FEET
SCALE: 1"= 50'

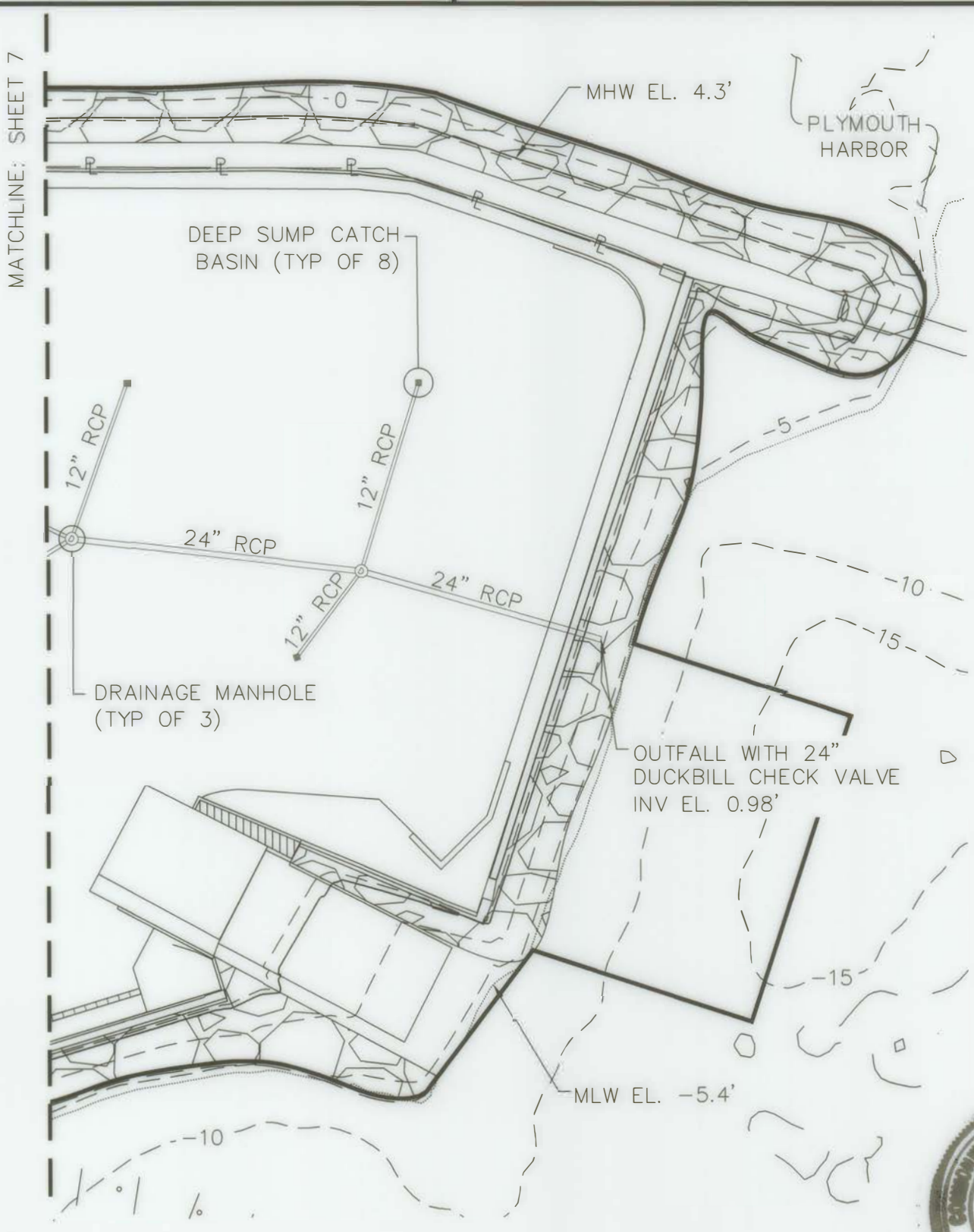
PROPOSED STORMWATER PLAN WEST
SHEET 7 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. WW01-0000825
Approved by Department of Environmental Protection
Date; October 15, 2026

I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Allison P. Varanelli — SEPTEMBER 11, 2026

NAME — DATE



NOTES:

1. DRAINAGE FEATURES SHOWN FOR LOCATION REFERENCE ONLY; DETAILED HYDRAULIC DESIGN IS OUTSIDE THE SCOPE OF CHAPTER 91 REVIEW.
2. FLOATING DOCKS NOT SHOWN FOR CLARITY

COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VARANELLI
CIVIL
No. 60378
PROFESSIONAL ENGINEER

Allison P. Varanelli 9/21/26

0 50' 100'

SCALE IN FEET
SCALE: 1"= 50'

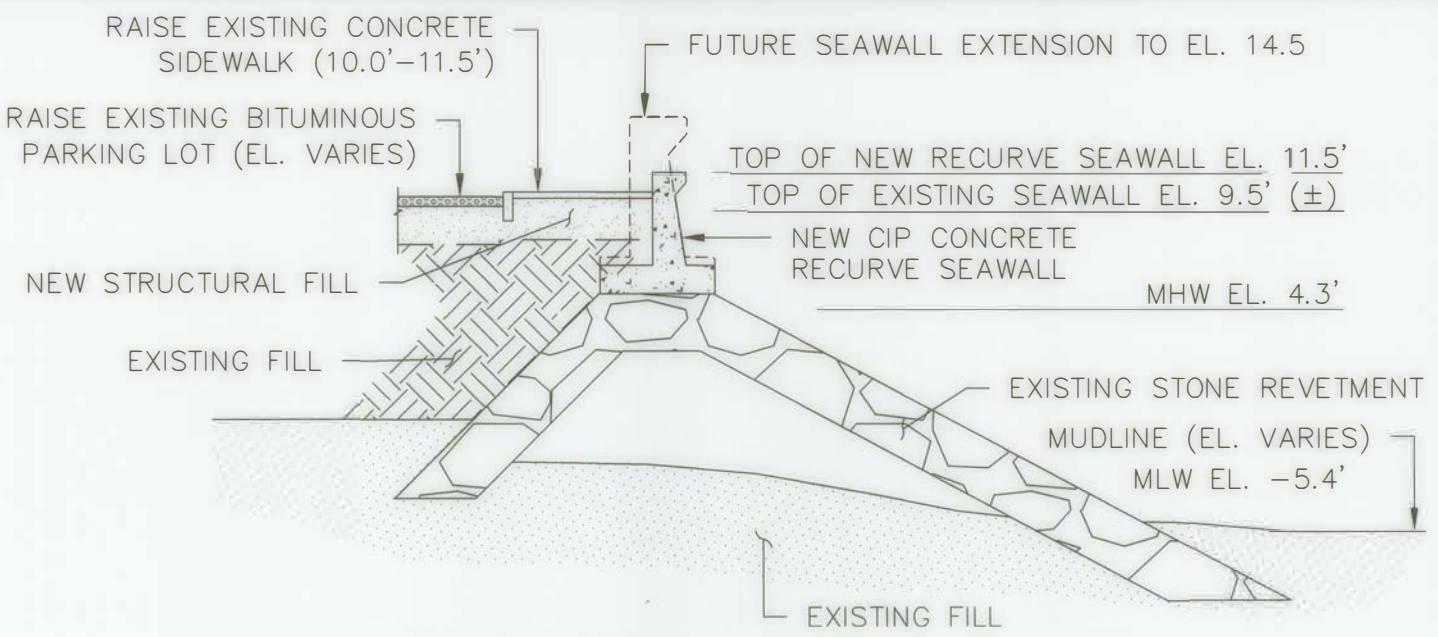
PROPOSED STORMWATER PLAN EAST
SHEET 8 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. WW01-0000825
Approved by Department of Environmental Protection
Date: October 15, 2026

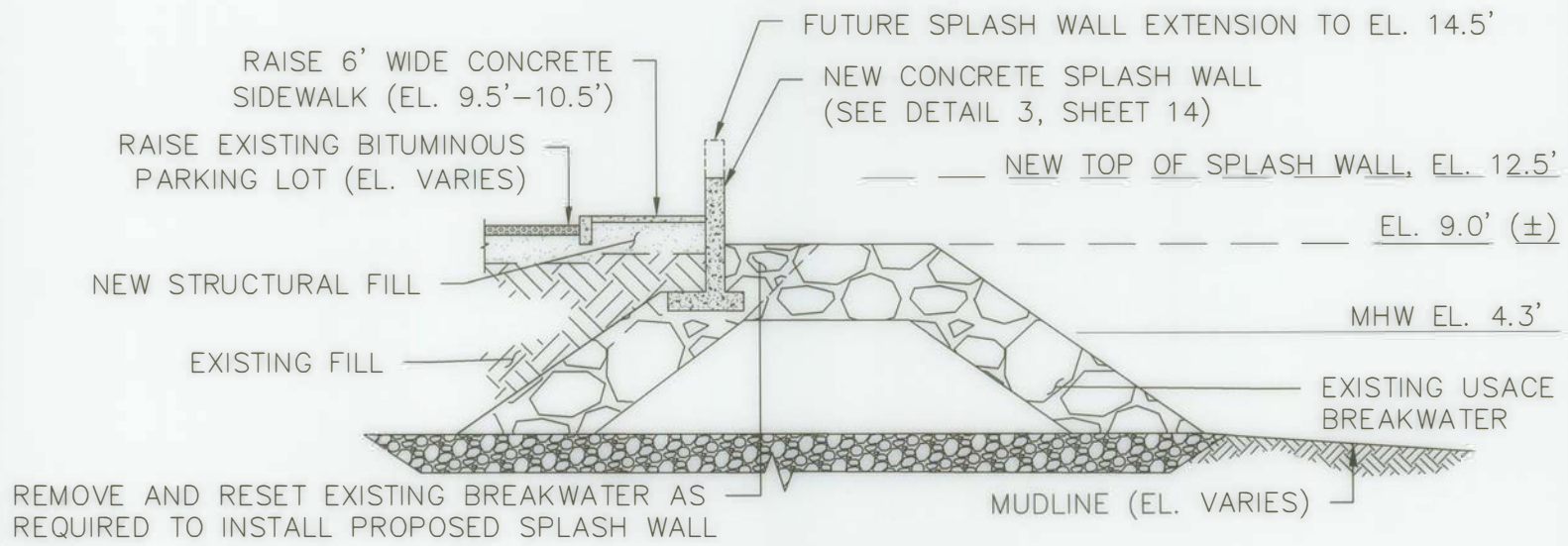
I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Alison P. Vorenelli — NAME

SEPTEMBER 11, 2026 — DATE



A - PROPOSED EAST RECURVE SEAWALL
SCALE: 1"=10'



B - PROPOSED CONCRETE SPLASH WALL
SCALE: 1"=10'

COMMONWEALTH OF MASSACHUSETTS
ALISON P. VORENELLI
CIVIL
No. 60570
PROFESSIONAL ENGINEER

Alison P. Vorenelli 9/21/26

0 10' 20'
SCALE IN FEET
SCALE: 1"= 10'

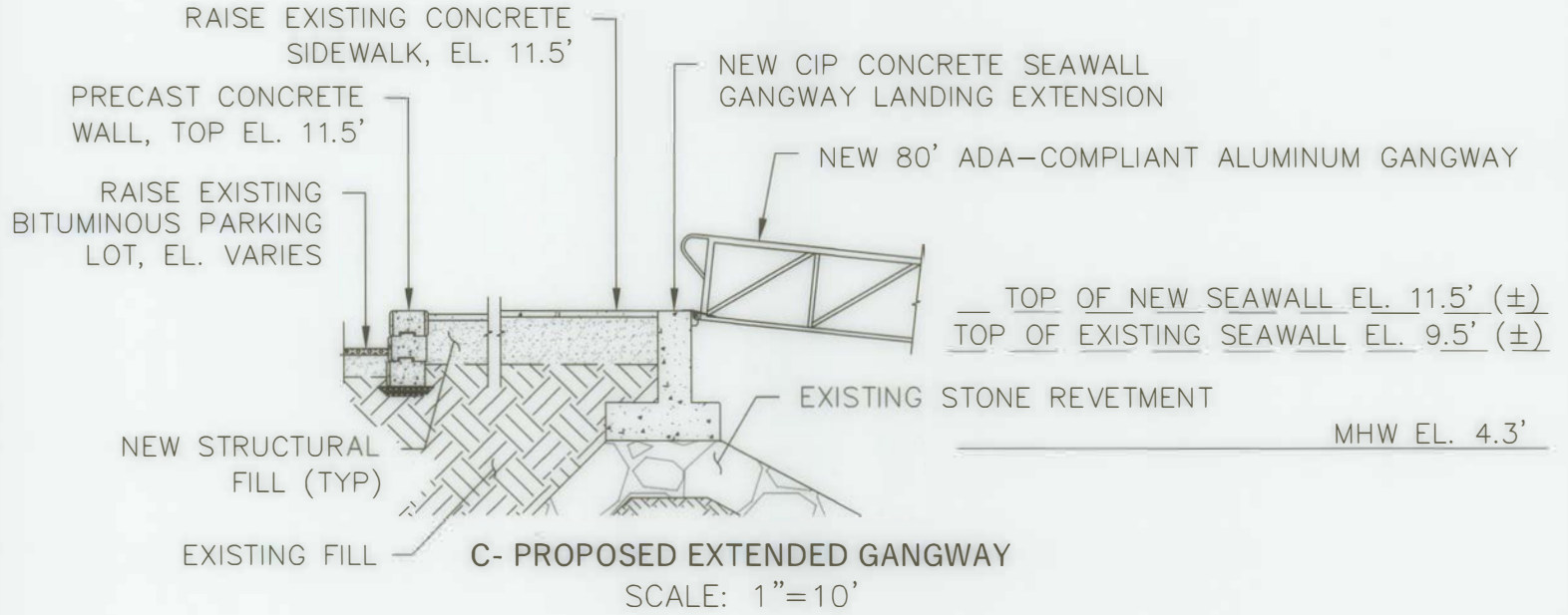
PROPOSED SECTIONS 1
SHEET 9 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. WW01-0000825
Approved by Department of Environmental Protection
Date: October 15, 2026

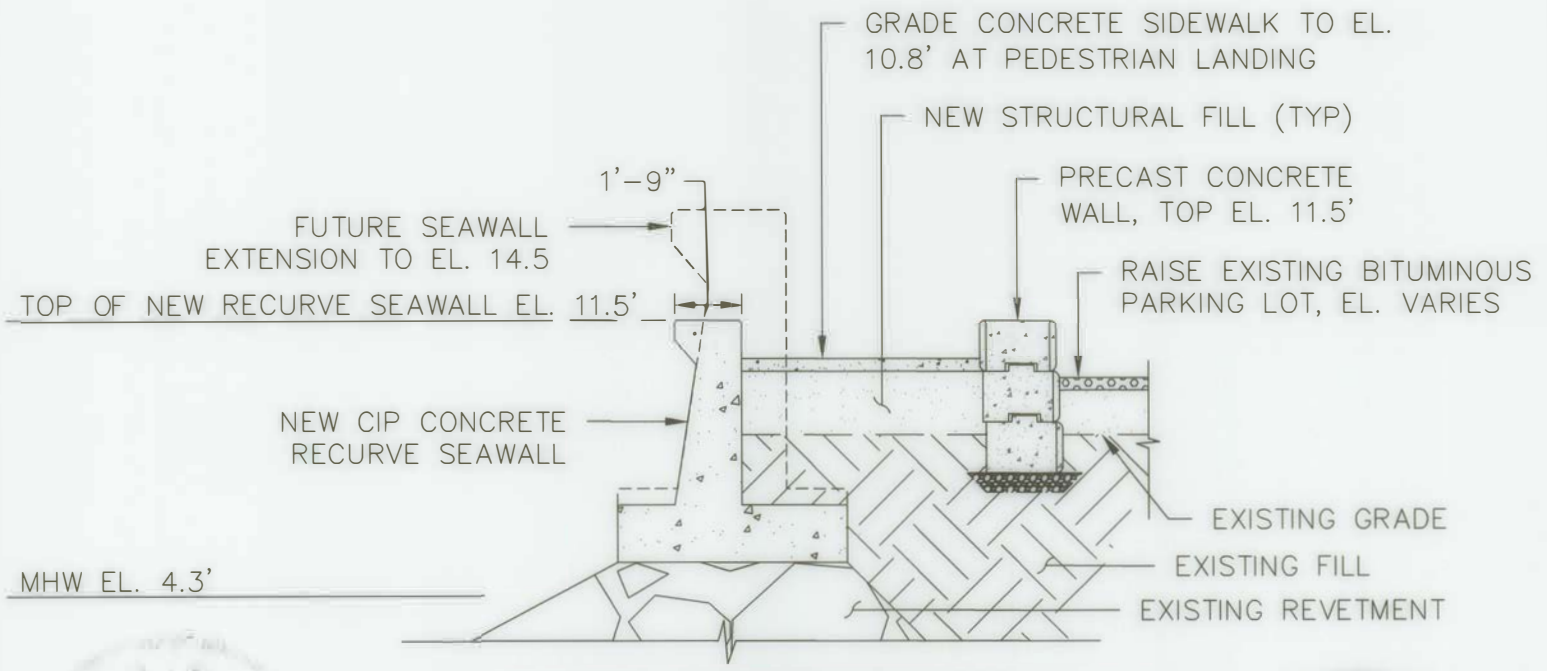
I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Allison P. Varanelli
NAME

SEPTEMBER 11, 2026
DATE



C- PROPOSED EXTENDED GANGWAY
SCALE: 1"=10'



D - PROPOSED SOUTH RECURVE SEAWALL
SCALE: 1"=5'

COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VARANELLI
CIVIL
No. 60578
PROFESSIONAL ENGINEER

Allison P. Varanelli 9/21/26

0 5' 10'
SCALE IN FEET
SCALE: 1"= 5'

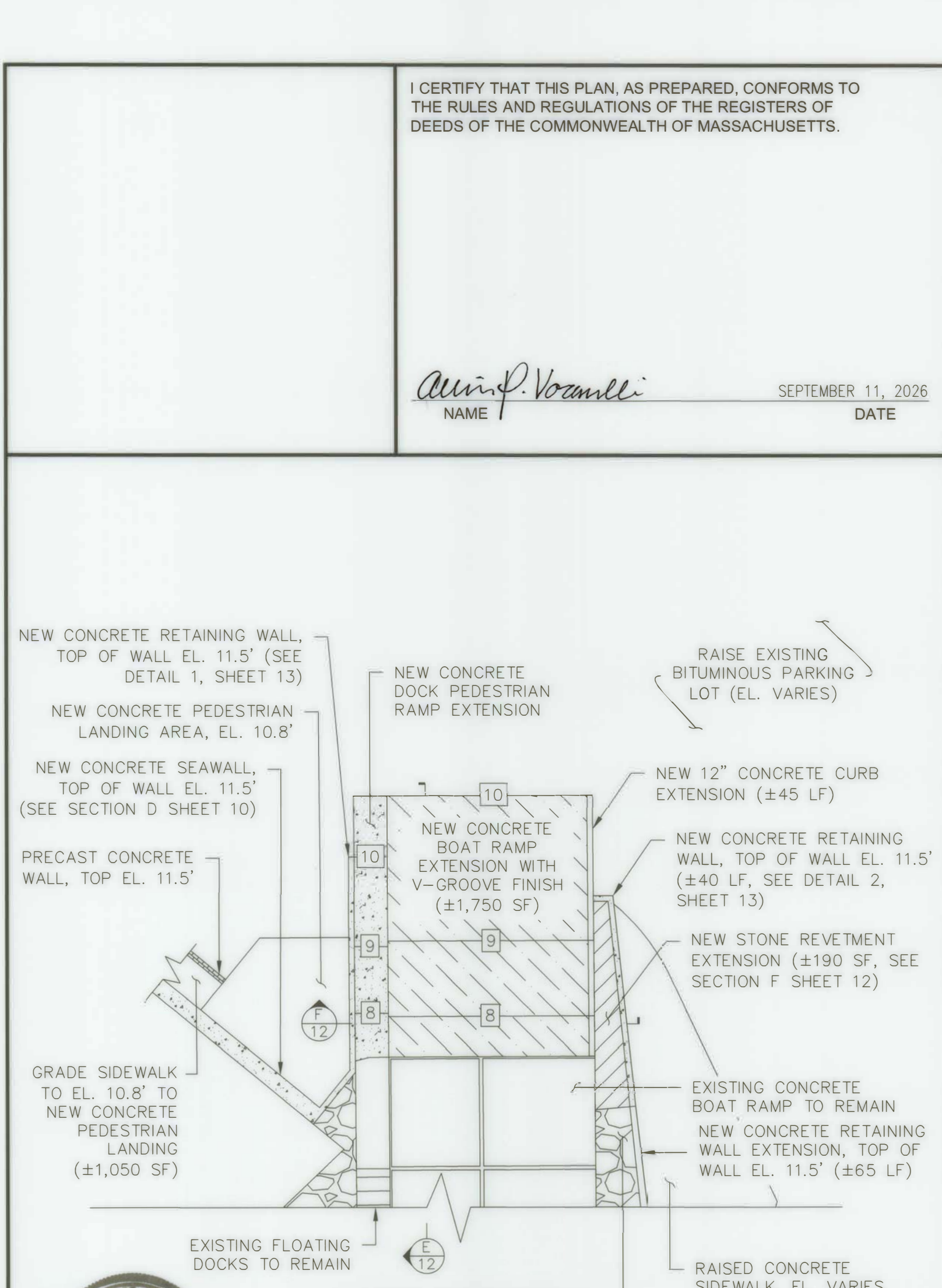
PROPOSED SECTIONS 2
SHEET 10 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. WW01-0000825
Approved by Department of Environmental Protection
Date; October 15, 2026

I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Allison P. Vocanelli — NAME

SEPTEMBER 11, 2026 — DATE



PROPOSED BOAT RAMP PLAN
SCALE: 1"=20'

COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VOCANELLI
CIVIL
No. 60570
PROFESSIONAL ENGINEER

9/21/26

Allison P. Vocanelli

0 20' 40'

SCALE IN FEET
SCALE: 1"= 20'

PROPOSED BOAT RAMP PLAN
SHEET 11 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. W01-0000825
Approved by Department of Environmental Protection
Date; October 15, 2026

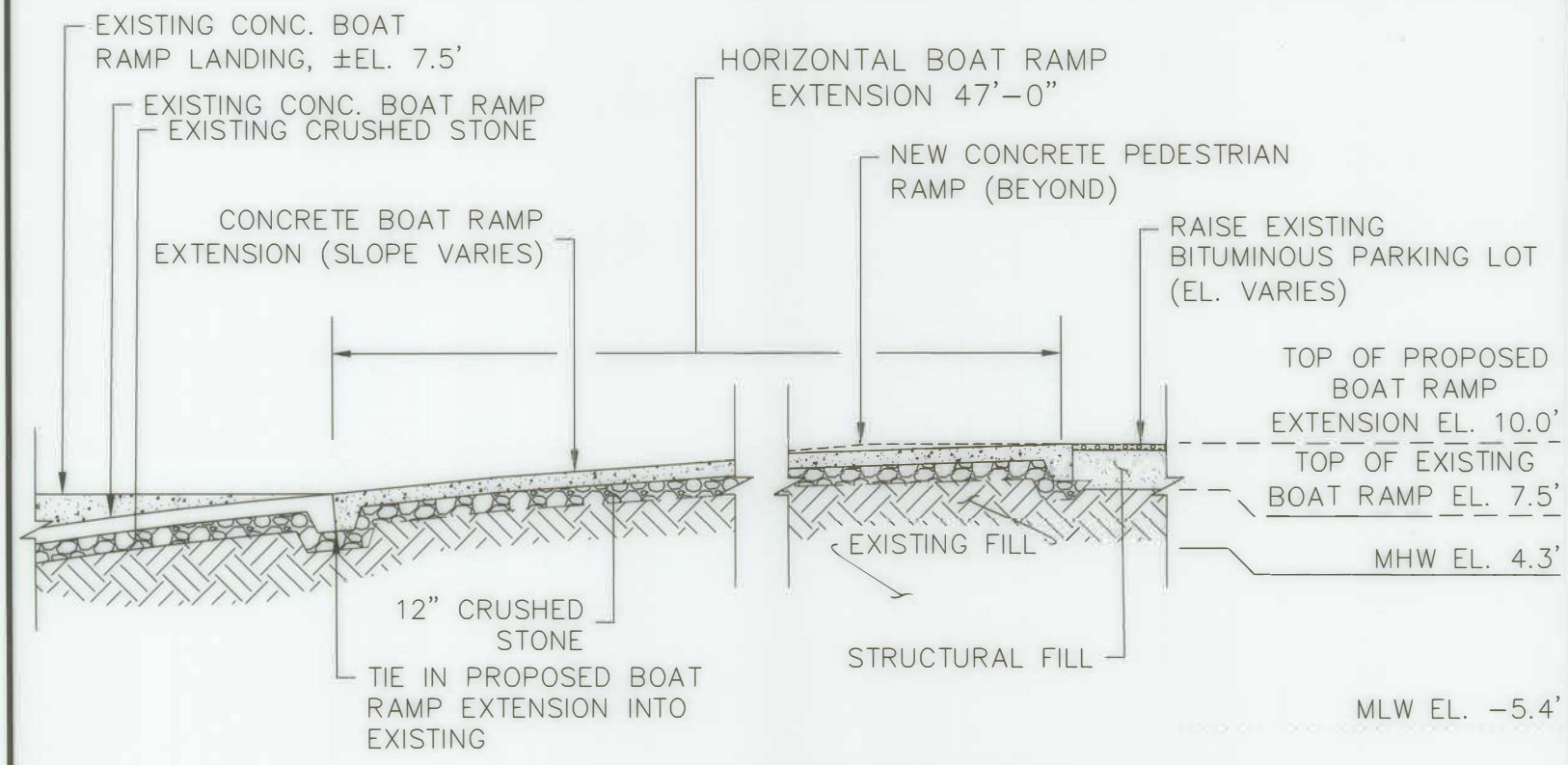
I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

allison P. Varanelli

NAME

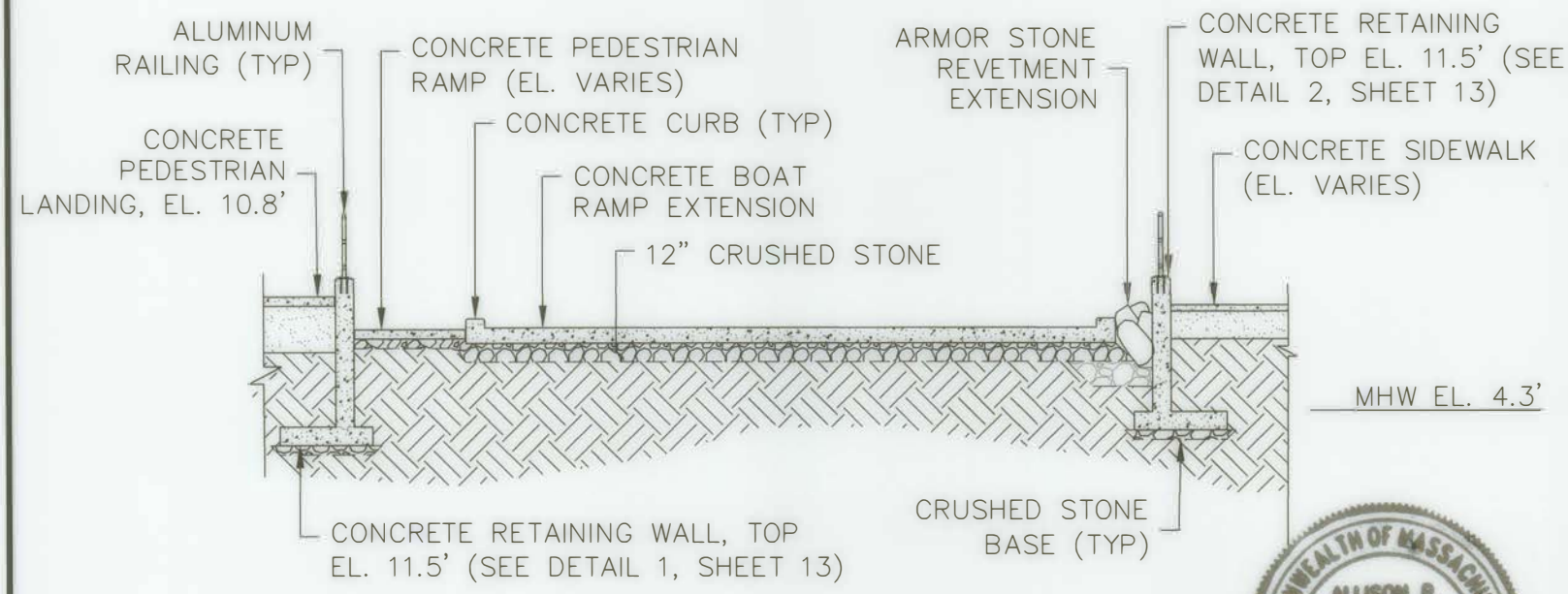
SEPTEMBER 11, 2026

DATE



E - PROPOSED BOAT RAMP ELEVATION

SCALE: 1"=10'



F - PROPOSED BOAT RAMP SECTION

SCALE: 1"=10'

COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VARANELLI
CIVIL
No. 60578
PROFESSIONAL ENGINEER

allison P. Varanelli 9/21/26

0 10' 20'

SCALE IN FEET
SCALE: 1"= 10'

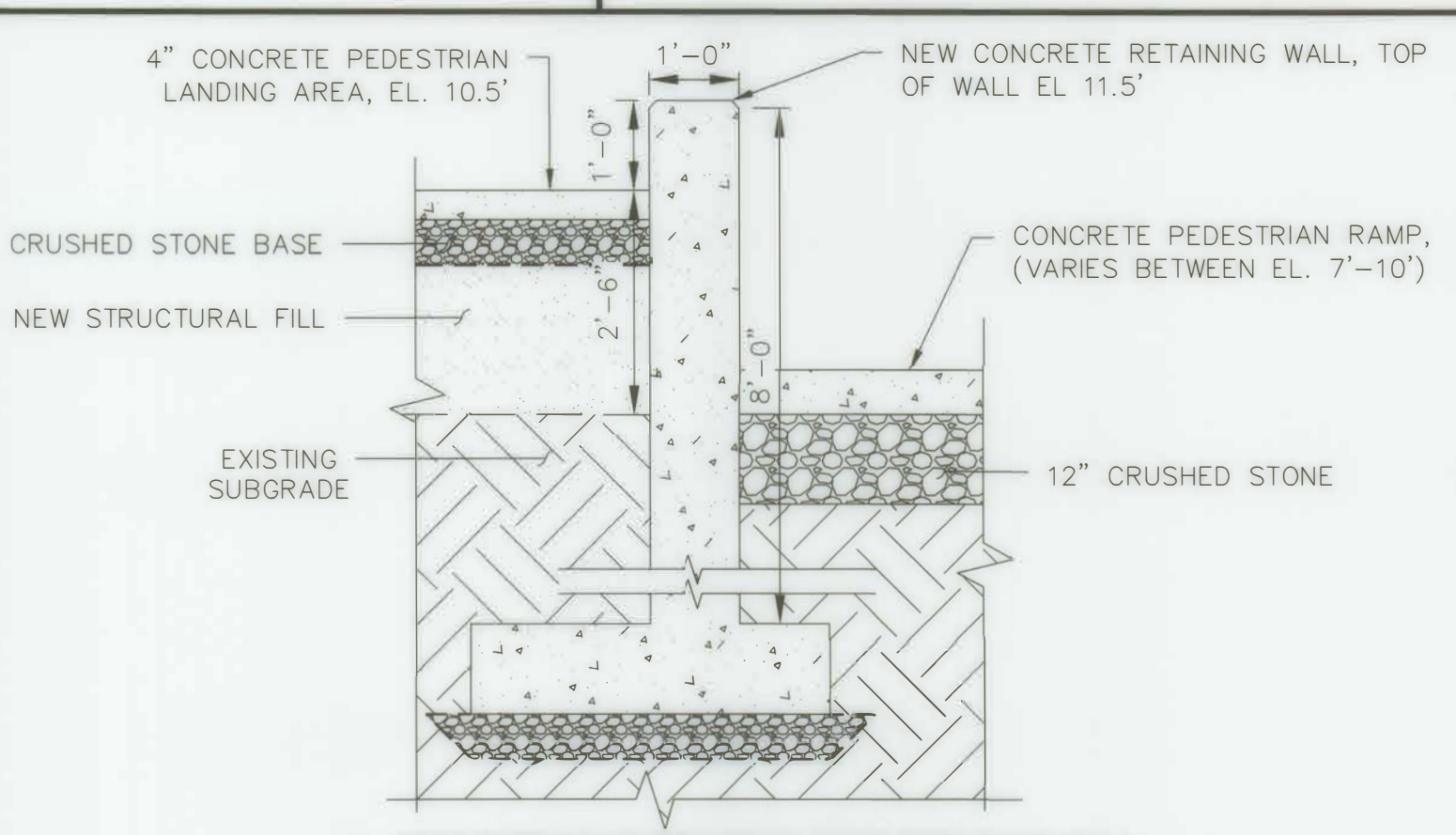
PROPOSED BOAT RAMP DETAILS
SHEET 12 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. WW01-0600825
Approved by Department of Environmental Protection
Date; October 15, 2026

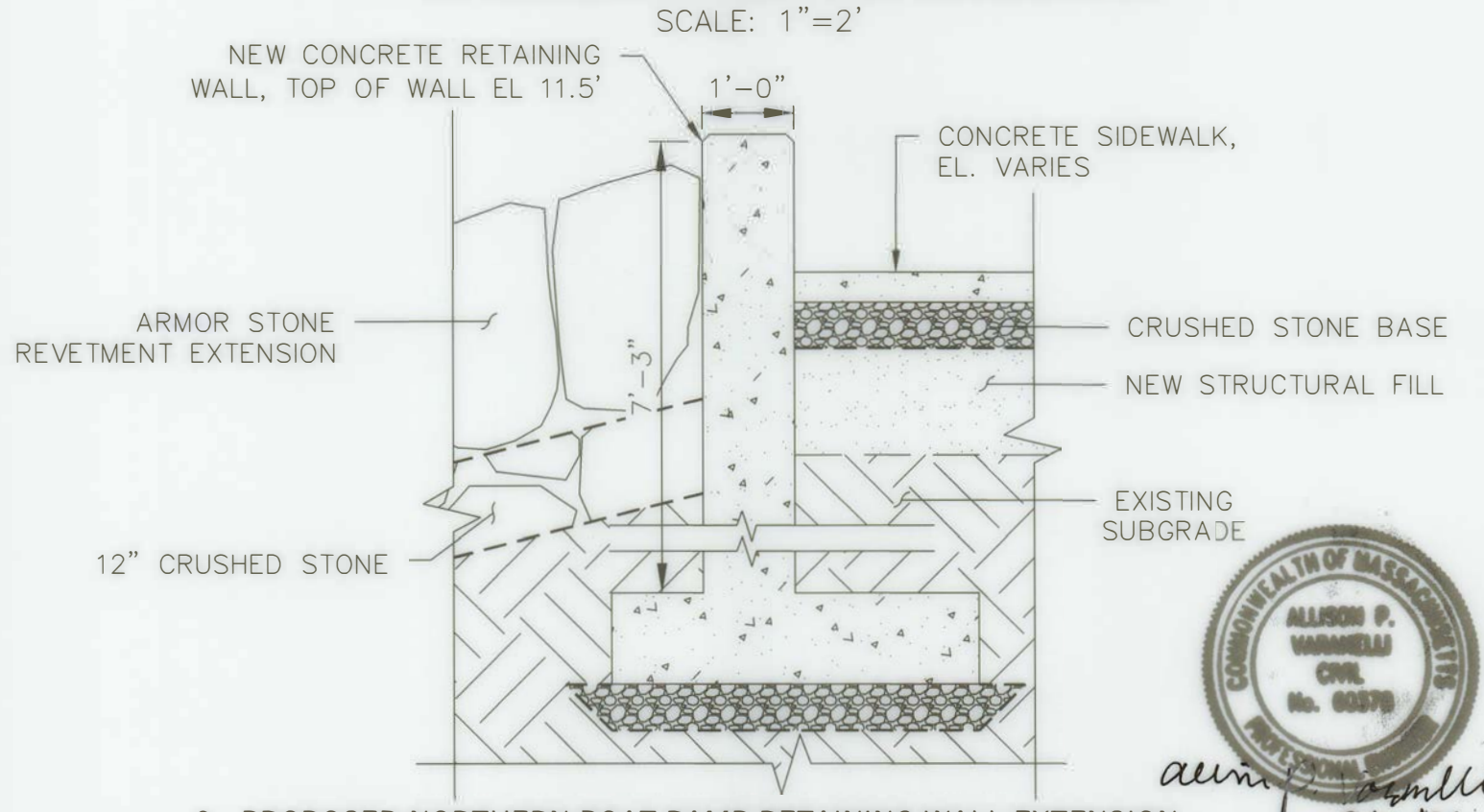
I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Allison P. Varnelli
NAME

SEPTEMBER 11, 2026
DATE



1 - PROPOSED SOUTHERN BOAT RAMP RETAINING WALL
SCALE: 1"=2'



2 - PROPOSED NORTHERN BOAT RAMP RETAINING WALL EXTENSION
SCALE: 1"=2'

COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VARNELLI
CIVIL
No. 60578
PROFESSIONAL ENGINEER

Allison P. Varnelli
9/21/26

0 2' 4'
SCALE IN FEET
SCALE: 1"= 2'

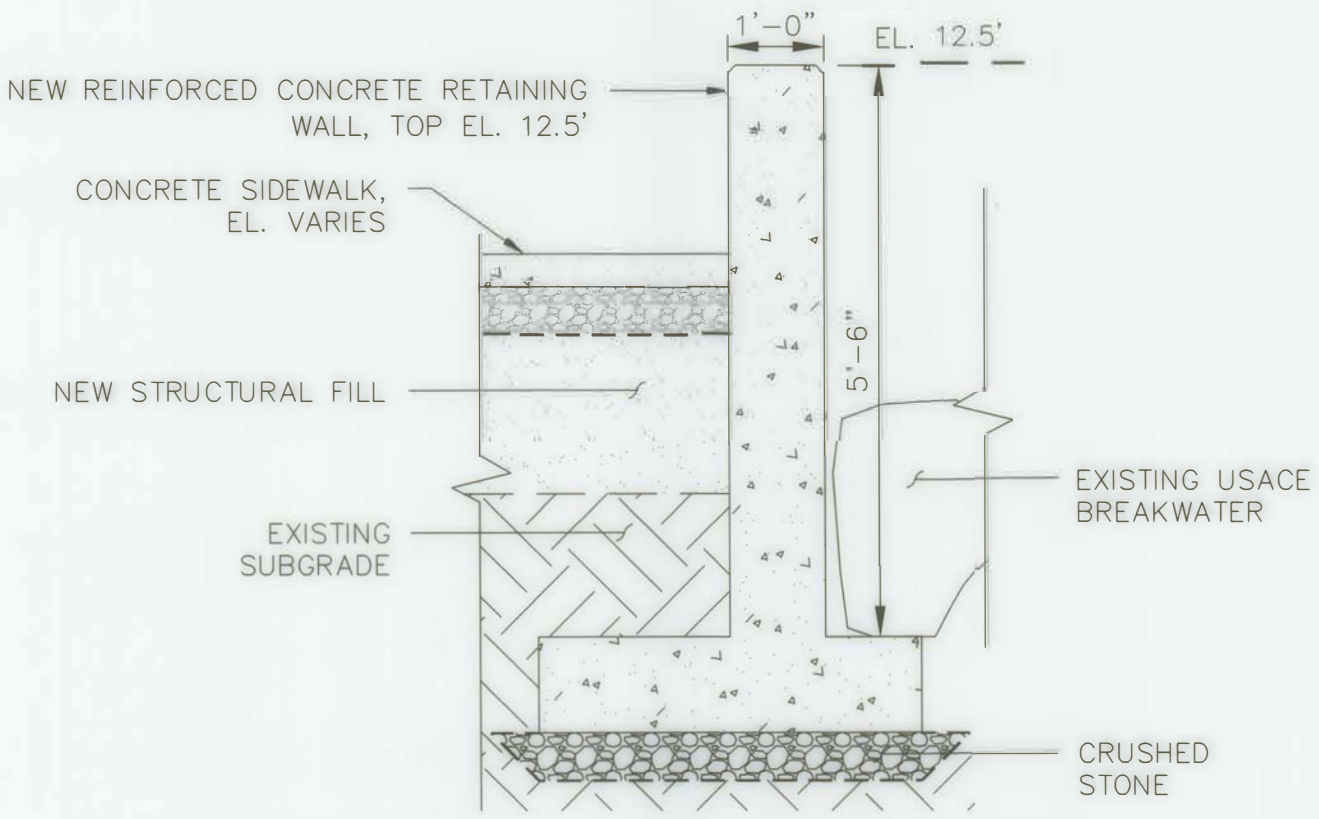
PROPOSED DETAILS 1
SHEET 13 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. WW01-0000825
Approved by Department of Environmental Protection
Date; October 15, 2026

I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

Allison P. Vocanelli — NAME

SEPTEMBER 11, 2026 — DATE



3 - PROPOSED SPLASHWALL AT USACE BREAKWATER
SCALE: 1"=2'

COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VOCANELLI
CIVIL
No. 60570
PROFESSIONAL ENGINEER

Allison P. Vocanelli
9/21/26

0 2' 4'
SCALE IN FEET
SCALE: 1"=2'

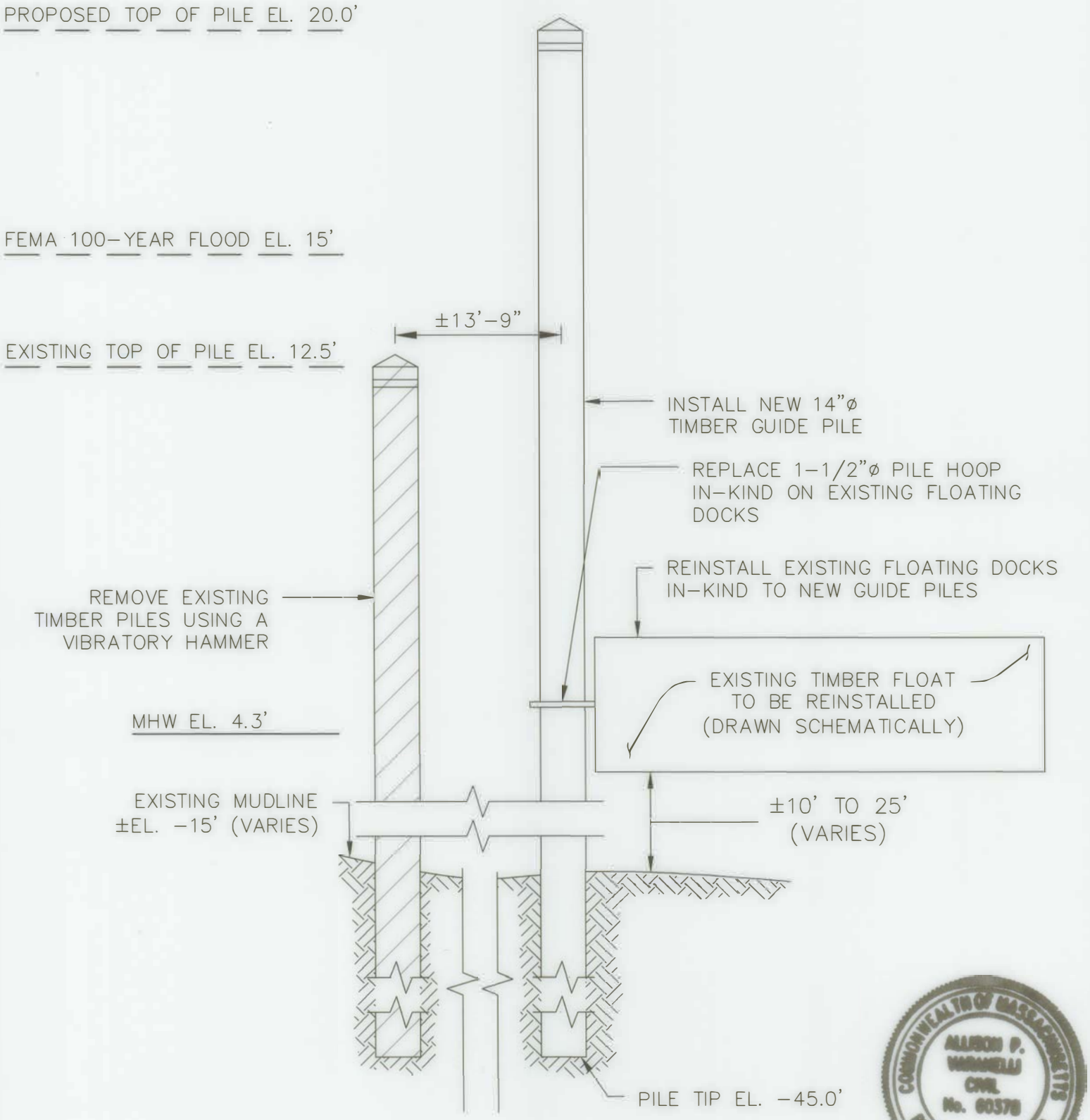
PROPOSED DETAILS 2
SHEET 14 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO WW01-0000825
Approved by Department of Environmental Protection
Date: October 15, 2026

I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

NAME

SEPTEMBER 11, 2026
DATE



TIMBER PILE RELOCATION SECTION
SCALE: 1"=3'

COMMONWEALTH OF MASSACHUSETTS
ALLISON P. VARNAVELLI
CIVIL
No. 60378
PROFESSIONAL ENGINEER

9/21/26

0 3' 6'
SCALE IN FEET
SCALE: 1"=3'

TIMBER PILE RELOCATION SECTION
SHEET 15 OF 15
SEPTEMBER 11, 2026

LICENSE PLAN NO. WW01-0000825
Approved by Department of Environmental Protection
Date: October 15, 2026

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-

A PROJECT OF:

COMMONWEALTH OF MASSACHUSETTS, DEPARTMENT OF FISH AND GAME, OFFICE OF FISHING AND BOATING ACCESS
AND
TOWN OF PLYMOUTH, MASSACHUSETTS

PROJECT NO: PA-425

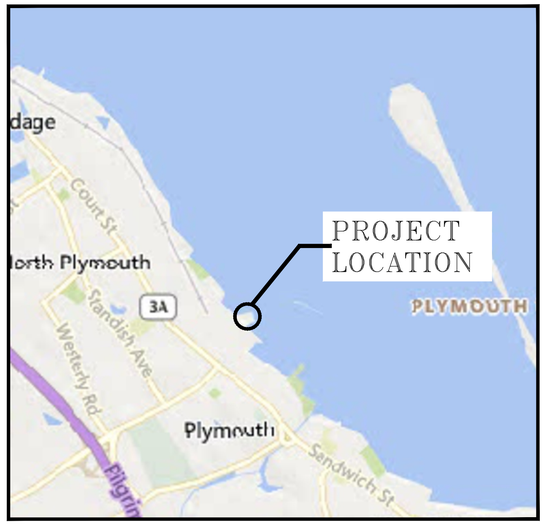
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS & COASTAL RESILIENCE PROJECT
PLYMOUTH, MASSACHUSETTS
OCTOBER, 2026



VICINITY MAP

SCALE: 1" = 250'

INDEX OF DRAWINGS			
SHEET	SHEET	DISCIPLINE	SHEET TITLE
1	G-01	GENERAL	TITLE SHEET
2	G-02	GENERAL	GENERAL NOTES
3	G-03	GENERAL	LEGEND, ABBREVIATIONS, AND GENERAL NOTES
4	G-04	GENERAL	CONSTRUCTION PHASING PLAN
5	C-01	CIVIL	EXISTING CONDITIONS PLAN
6	C-02	CIVIL	EXISTING SECTIONS 1
7	C-03	CIVIL	EXISTING SECTIONS 2
8	C-04	CIVIL	EXISTING BOAT RAMP PLAN AND SECTIONS
9	D-01	DEMOLITION	PROPOSED SITE PREPARATION AND DEMOLITION PLAN
10	D-02	DEMOLITION	PROPOSED DEMOLITION SECTIONS
11	C-05	CIVIL	PROPOSED SITE RESTORATION PLAN
12	C-06	CIVIL	PROPOSED PARKING LOT AND BOAT RAMP GRADING AND DRAINAGE PLAN
13	C-07	CIVIL	PROPOSED BOAT RAMP PROFILE
14	C-08	CIVIL	PROPOSED STORM SEWER PROFILES
14B	C-08B	CIVIL	PROPOSED STORM SEWER PROFILES
15	C-09	CIVIL	PROPOSED SITE ACCESS ROAD DETAILS
16	C-10	CIVIL	PROPOSED PEDESTRIAN LANDING AND GANGWAY ACCESS PLANS AND DETAILS
17	C-11	CIVIL	PROPOSED PEDESTRIAN LANDING AND GANGWAY ACCESS SECTIONS
18	C-12	CIVIL	PROPOSED STEEL GUARDRAIL DETAILS
19	C-13	CIVIL	PROPOSED DEEP SUMP CATCH BASIN DETAILS
20	C-14	CIVIL	PROPOSED STORMCEPTOR DETAILS
21	C-15	CIVIL	PROPOSED MISC. SITE CIVIL DETAILS
22	S-01	STRUCTURAL	PROPOSED STRUCTURAL PLAN
23	S-02	STRUCTURAL	PROPOSED BOAT RAMP PLAN AND SECTIONS
24	S-03	STRUCTURAL	PROPOSED WALL SECTIONS
25	S-04	STRUCTURAL	PROPOSED WALL DETAILS
26	S-05	STRUCTURAL	PROPOSED WALL CONNECTION DETAILS
27	S-06	STRUCTURAL	PROPOSED FLOOD BARRIER DETAILS
28	S-07	STRUCTURAL	PROPOSED FLOATING DOCK RELOCATION SECTION AND DETAILS
29	S-08	STRUCTURAL	PROPOSED ALUMINUM GANGWAY DETAILS
30	S-09	STRUCTURAL	PROPOSED FLOATING DOCK AND GANGWAY HOIST DETAILS
31	S-10	STRUCTURAL	PROPOSED SIDEWALK, ASPHALT, STAIR, AND JOINT DETAILS



LOCATION MAP

SCALE: 1" = 2000'

COLLINS ENGINEERS
1465 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

ZACHARY D. JENKINS
No. 51969
CIVIL
COMMONWEALTH OF MASSACHUSETTS
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

TITLE SHEET

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

G-01
1 OF 31

GENERAL NOTES:

1. THE OWNER (OWNER) OF THE PROJECT IS THE MASSACHUSETTS DEPARTMENT OF FISH AND GAME, OFFICE OF FISHING AND BOATING ACCESS (OFBA), AND TOWN OF PLYMOUTH, MASSACHUSETTS.

2. THE DESIGN ENGINEER (ENGINEER) FOR THE PROJECT IS COLLINS ENGINEERS, INC.

3. THE GENERAL WORK UNDER THIS CONTRACT SHALL INCLUDE REMOVAL AND REPLACEMENT OF THE EXISTING CONCRETE SEAWALLS WITH NEW CONCRETE SEAWALLS AT A HIGHER ELEVATION, CONSTRUCTION OF A NEW CONCRETE SPLASH WALL ALONG THE NORTH FACE OF THE SITE, PLACEMENT OF STRUCTURAL FILL, REMOVAL AND REPLACEMENT OF STORMWATER DRAINAGE SYSTEMS, PARKING LOT AND SIDEWALK CONSTRUCTION, EXTENDING THE EXISTING BOAT RAMP INLAND, REMOVAL OF TIMBER LANDING AND REPLACEMENT WITH AN 80 FT ALUMINUM GANGWAY, RELOCATION AND REPLACEMENT OF THE EXISTING FLOATING DOCKS AND SUPPORT PILES, AND ANCILLARY AND SURFACE WORK RESTORATIONS OF THE SITE IN ACCORDANCE WITH THESE CONTRACT DRAWINGS AND SPECIFICATIONS.

4. THE CONTRACTOR IS ADVISED THAT THE DRAWINGS AND SPECIFICATIONS FORM A PART OF THE CONTRACT DOCUMENTS. REFER TO THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL KEEP A COPY OF THE DRAWINGS AND SPECIFICATIONS ONSITE AT ALL TIMES DURING THE PROJECT.

5. ALL DIMENSIONS, ELEVATIONS, CONDITIONS, AND DETAILS OF THE EXISTING SITE SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE AFFECTED PART OF THE WORK.

6. EXISTING CONDITIONS ARE INTENDED TO PROVIDE A GENERAL OVERVIEW OF STRUCTURES BUT MAY NOT INCLUDE ALL APPURTENANCES AND CONDITIONS.

7. THE HORIZONTAL DATUM IS THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATES, IN U.S. SURVEY FEET, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83/2011) EPOCH 2010.

8. ELEVATIONS ARE IN FEET AND REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) UNLESS OTHERWISE NOTED.

9. EXISTING CONDITIONS PLAN DEVELOPED BASED ON DRAWING TITLED "TOPOGRAPHIC AND UTILITY SURVEY, PLYMOUTH HARBOR BOAT RAMP" PREPARED BY DIPRETE ENGINEERING, DATED SEPTEMBER 12, 2024, AND SITE OBSERVATIONS MADE BY COLLINS ENGINEERS, INC ON JULY 26, 2024.

10. BATHYMETRY REFERENCES DRAWINGS TITLED "NAVD88 BATHYMETRY–1.0 FOOT CONTOUR INTERVAL, PLYMOUTH HARBOR BOAT RAMP" BY CR ENVIRONMENTAL DATED MAY 21, 2024.

11. TAX ASSESSOR'S INFORMATION AND PARCELS WERE COMPILED FROM MASSACHUSETTS GEOGRAPHIC INFORMATION SYSTEM MASSMAPPER. SITE IS LOCATED AT 0 TOWN WHARF, PARCEL NUMBER 014A–000–021A–000

12. FEMA FLOOD ELEVATIONS REFERENCE NAVD88 AND ARE BASED ON FEMA FIRM MAP NUMBER 25023C0358L, REVISED JULY 06, 2021.

13. THE CONTRACTOR SHALL PROTECT SURVEY CONTROL BOUNDS AND STREET LINE MONUMENTS DURING THE WORK. PROVIDE A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF MASSACHUSETTS TO REPLACE AND/OR RESET DISTURBED BOUNDS TO ITS ORIGINAL POSITION. PREVENT DISTURBANCE OR DAMAGE TO ADJACENT PROPERTIES. CONTRACTOR SHALL MAINTAIN ADEQUATE SURVEY CONTROL AT ALL TIMES TO ESTABLISH AND MAINTAIN ALL LINES AND ELEVATIONS.

14. THE EXACT SIZE & LOCATION OF ALL EXISTING UTILITIES IMPACTED BY THE WORK SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE OWNER AT THE CONTRACTORS EXPENSE. CONTRACTOR SHALL NOTIFY THE OWNER A MINIMUM OF 15 DAYS IN ADVANCE OF ANY OUTAGES.

15. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES WITHIN THE LIMITS OF THE WORK PRIOR TO COMMENCING ANY EXCAVATION OR GROUND PENETRATING WORK. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" (1–888–344–7233) AT LEAST 14 CALENDAR DAYS PRIOR TO COMMENCEMENT OF THE EXCAVATION OR GROUND PENETRATING ACTIVITY.

16. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND ENGINEER FOR ACCESS AND SPECIFIC LIMITS AND APPROVED LOCATION OF THE STAGING AND LAYDOWN AREA. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBANCES AND LANDSCAPING TO MATCH EXISTING MATERIALS AND CONDITIONS, TO THE SATISFACTION OF THE OWNER.

17. TEMPORARY CONSTRUCTION STAGING/STORAGE AREA SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION UPON COMPLETION OF THE PROJECT TO THE SATISFACTION OF THE OWNER.

18. STANDARD CONSTRUCTION WORK HOURS ON THE SITE SHALL BE BETWEEN 7AM AND 5PM, MONDAY–FRIDAY TO MINIMIZE NOISE AND LIGHT DISTURBANCE TO NEARBY RESIDENTIAL PROPERTIES. SPECIAL WORK OUTSIDE OF THESE HOURS SHALL BE SCHEDULED WITH THE OWNERS AND REQUIRE SELECTBOARD WRITTEN APPROVAL.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE SAFETY AND SECURITY THROUGHOUT THE COURSE OF CONSTRUCTION (INCLUDING AFTER WORKING HOURS) AND SHALL DETERMINE CONSTRUCTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE FACILITIES AND THEIR COMPONENTS DURING ALL PHASES OF WORK. THIS INCLUDES THE ADDITION OF NECESSARY FENCING, VEHICULAR AND PEDESTRIAN BARRIERS, SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND BE REMOVED FROM THE SITE AFTER COMPLETION OF THE PROJECT.

20. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL DEPARTMENT OF LABOR, SAFETY, OCCUPATIONAL SAFETY AND HEALTH ACT, U.S. ARMY CORPS OF ENGINEERS, STATE/LOCAL WETLANDS AND WATERWAYS CONTROL, AND OTHER APPLICABLE PERMITS.

21. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY DAMAGE TO ADJACENT OR NEARBY STRUCTURES AND VESSELS OR INJURIES TO THE PUBLIC AS A RESULT OF PERFORMING THE WORK. THE OWNERS SHALL BE HELD HARMLESS AND NAMED AS "ADDITIONAL INSURED" ON ALL CONTRACTOR'S CERTIFICATES OF LIABILITY INSURANCES.

22. ALL MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE APPLICABLE PLANS, DETAILS, AND SPECIFICATIONS.

23. SUBMIT RELEVANT PRODUCT DATA, CERTIFICATES, MANUFACTURER'S INSTRUCTIONS, SHOP DRAWINGS, SIZES, AND QUANTITIES FOR REVIEW AND APPROVAL OF ALL WORK PRIOR TO ORDERING MATERIALS.

24. METHODS OF DEMOLITION, CONSTRUCTION, AND ERECTION ARE THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE NOTED.

25. THE CONTRACTOR SHALL COMPLETE WORK IN ACCORDANCE WITH THE OWNER'S APPROVED CONSTRUCTION PHASING PLAN, SHEET G–04, TO MINIMIZE DISRUPTION OF HARBOR ACTIVITIES, ABUTTING BUSINESSES, AND RESIDENTIAL NEIGHBORHOODS UNLESS OTHERWISE APPROVED IN WRITING BY THE OWNER, TOWN OF PLYMOUTH HARBORMASTER, SELECTBOARD, AND HARBOR COMMISSION.

ENVIRONMENTAL CONTROL NOTES:

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ENVIRONMENTAL CONTROLS AS REQUIRED BY FEDERAL, STATE AND MUNICIPAL REGULATIONS AND PERMITS, AND AS REQUIRED TO PREVENT DEBRIS CONTAMINANTS (SOLID, LIQUID OR DISSOLVED) FROM ENTERING THE WATER.

2. THE CONTRACTOR SHALL PREVENT THE SPREAD OF DUST AND DEBRIS AND AVOID THE CREATION OF A NUISANCE OR HAZARD IN THE SURROUNDING AREA FROM SUCH DUST OR DEBRIS.

3. EROSION CONTROL SHALL INCLUDE BUT NOT BE LIMITED TO SILT FENCES, SILT SACKS, SILT SOCKS, AND FLOATING SILT CURTAINS (I.E. TURBIDITY BOOMS).

4. CONTRACTOR TO EMPLOY ENVIRONMENTAL SPILL CONTROL TECHNIQUES INCLUDING OIL BOOM AND OIL SWEEP PRIOR TO ANY DECONSTRUCTION/DEMOLITION.

5. MEASURES SHALL BE TAKEN TO PREVENT DEBRIS AND WASTE WATERS FROM CONCRETE WORK AND DEMOLITION WORK FROM ENTERING THE HARBOR. READY–MIX CONCRETE TRUCKS SHALL WASHOUT ONLY IN DESIGNATED LOCATIONS ON–SITE AWAY FROM RESOURCE AREAS AND DRAINAGE SYSTEMS.

6. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO SITE EXCAVATION OR REGRADING.

7. DURING ALL WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION, CONTAINMENT, AND REMOVAL OF DEBRIS AND WASTE WITHIN THE WORK AREA.

8. STORAGE, FUELING AND LUBRICATION OF EQUIPMENT AND MOTOR VEHICLES SHALL BE CONDUCTED IN A MANNER THAT AFFORDS THE MAXIMUM PROTECTION AGAINST SPILL AND EVAPORATION. FUEL, LUBRICANTS AND OIL SHALL BE MANAGED AND STORED IN ACCORDANCE WITH ALL FEDERAL, STATE, REGIONAL, AND LOCAL LAWS AND REGULATIONS. EQUIPMENT OPERATION, ACTIVITIES, OR PROCESSES PERFORMED BY THE CONTRACTOR SHALL BE IN ACCORDANCE WITH ALL FEDERAL AND STATE AIR EMISSION AND PERFORMANCE LAWS AND STANDARDS. ALL EQUIPMENT FUELING AND MAINTENANCE SHALL BE PERFORMED IN THE UPLAND AREAS OF THE SITE.

DEMOLITION NOTES:

1. THE CONTRACTOR SHALL REMOVE AND STORE AS APPROVED THE FOLLOWING COMPONENTS AND THEIR CONNECTIONS FOR REUSE:
   - 1.1. REVETMENT STONES
   - 1.2. FLOATING DOCKS
   - 1.3. GANGWAY (PROPERTY OF THE OWNER TO BE SALVAGED)
   - 1.4. BENCHES
   - 1.5. MONUMENTS
   - 1.6. DECORATIVE ANCHOR

2. WHERE ITEMS ARE CALLED OUT ON THESE DRAWINGS AS "REMOVE", "REMOVE AND DISPOSE" OR SIMILAR VERBIAGE, CONTRACTOR MUST REMOVE AND DISPOSE OF ITEMS OFFSITE IN ACCORDANCE WITH REGULATORY REQUIREMENTS. WHERE ITEMS ARE CALLED OUT AS "REMOVE AND SALVAGE", "REMOVE AND REINSTALL", OR SIMILAR VERBIAGE, CONTRACTOR MUST REMOVE, STORE AND PROTECT REMOVED ITEMS WITHIN THE LIMITS MOF THE SITE, AND TURN ITEMS OVER TO THE OWNER, DELIVER, OR REINSTALL THE ITEMS WHERE INDICATED.

3. ALL MATERIAL REMOVED OR DEMOLISHED AND NOT IDENTIFIED TO BE REINSTALLED, REUSED, OR SALVAGED TO THE OWNER MUST BE REMOVED DAILY FROM THE OWNER'S PROPERTY UNLESS OTHERWISE INDICATED. STORE MATERIALS THAT CANNOT BE REMOVED DAILY IN AREAS SPECIFIED BY THE ENGINEER OR OWNER. DISPOSE OF REMOVED MATERIAL IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS.

4. PREVENT ANY DISTURBANCE OR DAMAGE TO ADJACENT PROPERTIES. PROTECT EXISTING UTILITIES AND WORK WHICH ARE TO REMAIN IN PLACE, BE REUSED, OR REMAIN THE PROPERTY OF THE OWNER. REPAIR ALL DAMAGE TO EXISTING UTILITIES AND STRUCTURES AT NO ADDITIONAL COST TO THE OWNER.

5. VERIFY AND VALIDATE THAT ALL MATERIALS REMOVED FROM THE SITE ARE CONTAMINANT FREE. PRIOR TO DISPOSING OR RECYCLING OF ANY MATERIAL, PERFORM APPROPRIATE REGULATORY TESTING TO CONFIRM THAT MATERIALS ARE FREE OF CONTAMINANTS.

6. CONTRACTOR MUST IMPLEMENT METHODS TO SEAL ENDS OF EXCAVATIONS AND CUT SLOPES IN ORDER TO MINIMIZE WATER INFILTRATION AND MIGRATION OF FINES FROM ADJACENT AREAS INTO THE EXCAVATION. THIS INCLUDES PROTECTION FROM TIDAL WATERS, WAVE ACTION, RAINFALL AND RUNOFF, AND OTHER ENVIRONMENTAL ELEMENTS THAT CAN BE EXPECTED AT THE SITE. AREAS THAT BECOME DESTABILIZED AND/OR LOSS OF FILL CREATED FROM THE EXCAVATIONS MUST BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.

7. EXISTING BITUMINOUS PAVEMENT AND SUB–BASE SHALL BE RECLAIMED AND REUSED ON SITE.

8. UNDERWATER INSPECTIONS MAY BE CONDUCTED BY THE OWNER/ENGINEER TO ENSURE THE CONTRACTOR HAS REMOVED ALL DEMOLITION AND CONSTRUCTION DEBRIS FROM THE MUDLINE.

9. REMOVE MARINE GROWTH AND OTHER BOND INHIBITING SUBSTANCES FROM ALL SURFACES IN CONTACT WITH THE WORK.

10. ALL MATERIAL DEMOLISHED AND NOT REUSED OR SALVAGED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF–SITE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL LAWS.

11. EXISTING UTILITIES SHOWN ARE BASED ON A LIMITED FIELD INVESTIGATION AND MAY NOT BE INDICATIVE OF ALL EXISTING UTILITY LOCATIONS. ACCORDINGLY, THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES PRIOR TO DEMOLITION AND/OR EXCAVATION. ALL DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.

12. THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE TOWN OF PLYMOUTH FIRE DEPARTMENT FOR WELDING OR TORCH CUTTING WORK PERFORMED AT THE SITE. NEW REINFORCING STEEL SHALL NOT BE CUT BY TORCH.

13. WHERE PEDESTRIAN AND DRIVER SAFETY IS ENDANGERED IN THE AREA OF REMOVAL WORK, USE TRAFFIC BARRICADES WITH FLASHING LIGHTS. ANCHOR BARRICADES IN A MANNER TO PREVENT DISPLACEMENT BY WIND. NOTIFY OWNER AND APPLICABLE SITE FACILITY PERSONNEL PRIOR TO BEGINNING SUCH WORK.

14. ALL EXISTING DRAINAGE STRUCTURES AND PIPING SHALL BE EXCAVATED, REMOVED, AND DISPOSED OF OFFSITE BY THE CONTRACTOR UNLESS STRUCTURES ARE BEING RECONNECTED AND TIED INTO THE PROPOSED DRAINAGE SYSTEM. DRAINAGE LINES SHALL NOT BE ABANDONED IN–PLACE, PLUGGED OFF, OR SEALED AT THE ENDS.

EARTHWORK NOTES:

1. ALL EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS & BRIDGES, LATEST EDITION, AS AMENDED.

2. STRUCTURAL FILL (GRAVEL BORROW) SHALL CONFORM TO THE REQUIREMENTS OF MASSDOT SECTION M1.03.0 "GRAVEL BORROW" OR APPROVED EQUIVALENT.

3. CRUSHED STONE SPECIFIED BY SIEVE SIZE SHALL CONFORM TO THE REQUIREMENTS OF MASSDOT SECTION M2.01.0 TO M2.01.4 "CRUSHED STONE" OR APPROVED EQUIVALENT.

4. SUITABLE EXCAVATED MATERIAL CONFORMING TO SECTION M1.01.0 OF THE STANDARD SPECIFICATIONS SHALL BE REUSED ON SITE FOR SITE FILL AND GRADING.

CONCRETE NOTES:

1. ALL NEW CAST–IN–PLACE CONCRETE AND CONCRETE REPAIR WORK SHALL CONFORM TO SECTION 901 – CEMENT CONCRETE OF THE MASSDOT STANDARD SPECIFICATIONS. ALL CONCRETE CONSTRUCTION AND DETAILING SHALL CONFORM TO THE LATEST EDITION OF ACI 318.
   - 1.1. 4,000 PSI CONCRETE SHALL BE USED FOR ALL RETAINING WALL FOOTINGS, SIDEWALKS, SLABS, AND SAFETY BOLLARDS.
   - 1.2. 5,000 PSI CONCRETE SHALL BE USED FOR ALL SEAWALLS, SPLASH WALLS, BOAT RAMP RETAINING WALLS, BOAT RAMP RETAINING WALL EXTENSION, THE PEDESTRIAN LANDING RETAINING WALL, OUTFALL ENCASEMENT, AND BOAT RAMP.

2. NON–SHRINK GROUT SHALL MEET THE REQUIREMENTS OF ASTM C1107 AND SHALL HAVE A 28–DAY COMPRESSIVE STRENGTH OF 6,000 PSI.

3. SIZE OF CONCRETE PLACEMENTS, UNLESS NOTED OTHERWISE, SHALL CONFORM TO ACI GUIDELINES AND RECOMMENDATIONS.

4. ALL CONSTRUCTION JOINTS, AS REQUIRED TO EXECUTE THE CONSTRUCTION, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

5. CHAMFER ALL EXPOSED EDGES 3/4 INCH UNLESS INDICATED OTHERWISE.

6. NO CONCRETE SHALL BE PLACED UNTIL REINFORCEMENT AND EMBEDDED ITEMS HAVE BEEN APPROVED BY THE ENGINEER AND/OR THE APPROVED TESTING AGENCY (IF/WHEN DIRECTED). PROVIDE A MINIMUM OF 24 HOURS NOTIFICATION TO THE ENGINEER PRIOR TO CONCRETE PLACEMENT.

7. CONCRETE SURFACES SHALL BE COVERED AND MOIST CURED FOR A PERIOD OF NOT LESS THAN TEN (10) FULL CALENDAR DAYS AFTER CONCRETE PLACEMENTS.

8. MINIMUM CONCRETE COVER SHALL BE 3 INCHES, UNLESS OTHERWISE NOTED.

9. CONCRETE FINISHES:
   SIDEWALK, STAIRS, RAMPS, AND PEDESTRIAN LANDING AREA: BROOMED FINISH PER MASSDOT SECTION 901.37.G.2.e.1.
   OTHER EXPOSED SURFACES: RUBBED FINISHED PER MASSDOT SECTION 901.37.B.

10. ALL DISCONTINUOUS REINFORCEMENT SHALL BE EXTENDED AROUND CORNERS AND LAPPED AS NECESSARY TO ACHIEVE MINIMUM DEVELOPMENT LENGTHS, AND HOOKED AT DISCONTINUOUS ENDS. USE STANDARD HOOKS UNLESS NOTED OTHERWISE. NOTE TO CONTRACTOR: MINIMUM REINFORCING STEEL SPLICE LENGTHS SHALL BE IN ACCORDANCE WITH NOTE 18 SHOWN ON THIS SHEET.

11. REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS, UNLESS OTHERWISE NOTED. PROVIDE MECHANICAL COUPLERS WHERE REQUIRED CONTINUOUS REINFORCEMENT EXCEEDS AVAILABLE LENGTHS.

12. WHERE "DRILL AND GROUT" IS CALLED FOR IN THE DRAWING SET, GROUT SHALL BE HILTI HIT–RE 500 V3 OR AN APPROVED EQUIVALENT. EQUIVALENT SHALL CONFORM TO THOSE LISTED ON THE MASSDOT QUALIFIED PRODUCTS LIST FOR CHEMICALLY CURING ANCHORING MATERIALS AND SHALL BE SUITABLE FOR MARINE AND SUBMERGED APPLICATIONS.

13. REINFORCING STEEL FOR ALL CONCRETE WORK SHALL BE ASTM A615, GRADE 60 KSI, EPOXY COATED IN ACCORDANCE WITH ASTM A775. WELDED WIRE MESH (WWM), ALSO REFERRED TO AS WELDED WIRE FABRIC (WWF), SHALL BE ASTM A1064, EPOXY COATED IN ACCORDANCE WITH ASTM A884, CLASS A, TYPE 1.

14. LAPS SHALL BE CLASS B TENSION LAP SPLICES, UNLESS NOTED OTHERWISE.

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-

CONCRETE NOTES (CONTINUED):

15. UNLESS OTHERWISE NOTED ON THE CONSTRUCTION DRAWINGS, ALL BARS SHALL BE LAPPED AS FOLLOWS:

#4 BARS	#5 BARS	#6 BARS	#7 BARS	#8 BARS
27"	34"	40"	58"	67"

STEEL AND TIMBER PILE NOTES:

1. STEEL PILES SHALL BE ASTM A252, GRADE 3, COATED WITH A FUSION–BONDED EPOXY COATING, COATED FULL LENGTH. INSTALL PILES USING APPROVED HAMMERS AND CUSHIONS, AS NECESSARY NOT TO DAMAGE OR OVERSTRESS THE PILES. PROVIDE 80–FT LONG PILES AND INSTALL TO THE MINIMUM TIP ELEVATION SHOWN ON THE DRAWINGS.

2. TIMBER PILES SHALL BE GREENHEART CONFORMING TO ASTM D25. PILES SHALL HAVE A MINIMUM TIP DIAMETER OF 9 INCHES, WITH A CORRESPONDING MINIMUM BUTT DIAMETER OF 14 INCHES IN ACCORDANCE WITH ASTM D25 STANDARDS. PROVIDE 70–FT LONG TIMBER PILES AND INSTALL TO THE MINIMUM TIP ELEVATION SHOWN ON THE DRAWINGS.

3. PILES MUST BE DRIVEN WITHIN TOLERANCES NOT EXCEEDING 2 INCHES OUT OF HORIZONTAL ALIGNMENT, 1 INCH OUT OF VERTICAL CUTOFF ELEVATION, AND A MAXIMUM BATTER OF 1–INCH OVER A LENGTH OF 20 FEET. USE TEMPLATES TO ACCURATELY LOCATE AND INSTALL PILES PLUMB. ADJUST GUIDE PILE LOCATIONS ACCORDINGLY. IF PILE MISALIGNMENT IS GREATER THAN THE TOLERANCES STATED, NOTIFY THE ENGINEER FOR APPROVED ACTION BEFORE ADVANCING THE WORK AT THAT LOCATION. PILES THAT DO NOT MEET TOLERANCE REQUIREMENTS SHALL BE REMOVED AND RE–DRIVEN AT NO ADDITIONAL COST TO THE OWNER.

4. JETTING IS NOT PERMITTED.

5. CONTRACTOR MAY PROVIDE UP TO ONE PILE SPLICE PER STEEL PILE, LOCATED AT LEAST 20 FEET BELOW THE MUDLINE ELEVATION. SPLICE MUST DEVELOP THE FULL STRUCTURAL CAPACITY OF THE PILE, AND BE PERFORMED IN THE SHOP. SUBMIT THE SPLICE DETAILS FOR APPROVAL.

6. PILES DAMAGED DURING FABRICATION, TRANSPORT, STORAGE, HANDLING OR DRIVING SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.

GEOTEXTILE FABRIC:

1. GEOTEXTILE FABRIC SHALL BE A WOVEN POLYPROPYLENE GEOTEXTILE FABRIC FOR BENEATH THE ARMOR STONE REVETMENT AND A NON–WOVEN POLYPROPYLENE GEOTEXTILE FABRIC FOR ALL OTHER LOCATIONS AND APPLICATIONS AND SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION M9.50.0 OF THE MASSDOT STANDARD SPECIFICATIONS.

2. NON–WOVEN GEOTEXTILE FABRIC SHALL BE MIRAFI 180N OR OTHER APPROVED EQUIVALENT LISTED ON THE MASSDOT QCML.

3. WOVEN GEOTEXTILE FABRIC SHALL BE MIRAFI 600X OR OTHER APPROVED EQUIVALENT LISTED ON THE MASSDOT QCML.

ALUMINUM RAILING:

1. RAILINGS SHALL BE COMPLETE ALUMINUM RAILING SYSTEMS, DESIGNED, FABRICATED, AND SUPPLIED BY A SINGLE MANUFACTURER, INCLUDING THE RAILING AND MOUNTING BRACKET ASSEMBLIES. THE RAILING SHALL BE DESIGNED AND INSTALLED IN COMPLIANCE WITH LOCAL, STATE, AND INTERNATIONAL BUILDING CODE REQUIREMENTS, INCLUDING THE FOLLOWING LOADS:
   - 1.1. TOP RAIL, POSTS, AND POST CONNECTION BRACKETS: CONCENTRATED LOAD OF 200 LB APPLIED AT ANY POINT IN ANY DIRECTION; DISTRIBUTED LOAD OF 50 PLF APPLIED IN ANY DIRECTION AT THE TOP RAIL AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTING STRUCTURE.
   - 1.2. INTERMEDIATE RAILS AND PICKETS: UNIFORM LOAD OF 50 PSF APPLIED ON AN AREA NOT TO EXCEED 1 SF. THIS LOAD IS NOT TRANSFERRED TO THE POSTS AND CONNECTION BRACKETS IN CONJUNCTION WITH THE LOADS IN SECTION 1.1.

2. THE RAILING SYSTEM SHALL BE AN ALUMINUM 2–RAIL SYSTEM (MINIMUM) WITH INTEGRATED PICKETS, AND SUITABLE FOR THE MARINE ENVIRONMENT. ALUMINUM SHALL BE 6061–T6.

3. POST CONNECTION BRACKETS SHALL BE ALUMINUM 4–INCH BY 6–INCH (MINIMUM) POST–MOUNTED BASE PLATES. CONNECTION BRACKETS SHALL BE ANCHORED WITH A MINIMUM OF FOUR(4) 3/8–INCH DIAMETER ANCHOR BOLTS, WITH MINIMUM 4–INCH EMBEDMENT INTO THE SUPPORTING CONCRETE. ANCHOR BOLTS SHALL BE STAINLESS STEEL, WITH NYLATRON–GS WASHERS (OR APPROVED EQUIVALENT) PROVIDED TO SEPARATE DISSIMILAR METALS.

FLOATING SILT CURTAIN (I.E. TURBIDITY BOOM):

1. TURBIDITY BOOM SHALL BE A TYPE 2 WOVEN FILTER FABRIC TURBIDITY BOOM, SUITABLE FOR USE IN ENVIRONMENTS WITH TIDAL FLUCTUATIONS UP TO 10 FEET, 1 KNOT CURRENTS, AND WATER DEPTHS AT THE SITE.

2. TURBIDITY BOOM SHALL BE PLACED AROUND THE ENTIRE LIMITS OF WORK WHERE DEBRIS AND SEDIMENT HAS POTENTIAL TO DISTURB THE WATER BODY. BOOM SHALL BE SECURELY FASTENED AT BOTH ENDS, EXTENDING AT A MINIMUM TO WHERE THE SHORELINE IS EXPOSED AT MLLW.

3. TURBIDITY BOOM SHALL BE CLOSED–CELL FOAM COVERED WITH PVC COATED POLYESTER. OUTER PERIMETER OF CURTAIN SHALL BE COMPOSED OF PVC.

4. TURBIDITY BOOM SHALL BE 12" DIAMETER, WITH MINIMUM 8" FREEBOARD. TOTAL HEIGHT OF CURTAIN SHALL BE AS RECOMMENDED BY THE MANUFACTURER, FOR THE SPECIFIC CONDITIONS AT THE SITE. CURTAIN LENGTH SHALL BE DESIGNED TO BE IN CONTACT WITH THE OCEAN BOTTOM THROUGHOUT THE ENTIRE TIDAL CYCLE.

5. CONTRACTOR SHALL REMOVE AND DISPOSE OF DEBRIS COLLECTED IN THE TURBIDITY BOOM ON A ROUTINE BASIS, ENSURING THAT DEBRIS DOES NOT ACCUMULATE ABOVE THE FREEBOARD OR TO THE POINT OF SUBMERGING THE TURBIDITY BOOM/CURTAIN THROUGHOUT THE DURATION OF CONSTRUCTION.

LANDSCAPING AND OTHER FINISH WORK NOTES:

1. PROVIDE SEEDING, PLANTINGS, AND VEGETATION TO MATCH ORIGINAL OR AS OTHERWISE APPROVED BY THE OWNER.

AS–BUILT DRAWING NOTES:

1. THE CONTRACTOR SHALL MAINTAIN A SET OF AS–BUILT DRAWINGS, INCLUDING REDLINES, ON SITE AT ALL TIMES TO ACCURATELY RECORD PROJECT PROGRESS AND CHANGES. SUBMIT FINAL REDLINE AS–BUILT SET TO THE OWNER AT THE COMPLETION OF WORK.

COLLINS ENGINEERS
1455 S. County Trail, Suite 103
East Greenwich, RI 02818
(401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED–FOR–BIDDING

GENERAL NOTES

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15–15409
OFBA project no.: PA–425
date: OCTOBER 2026

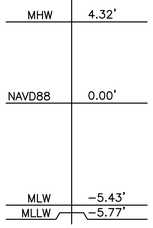
G–02
2 OF 31

TIDAL DATUMS:

WATER DATUMS	
DATUM	ELEVATION (FT, NAVD88)[1]
FEMA FLOOD ZONE (VE 15)	15.00
FEMA FLOOD ZONE (AE 14)	14.00
MEAN HIGH WATER (MHW)	4.32
NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)	0.00
MEAN LOW WATER (MLW)	−5.43
MEAN LOWER LOW WATER (MLLW)	−5.77

NOTE:
1. WATER DATUM ELEVATIONS REFERENCE STATION 8446493, PLYMOUTH HARBOR FOR THE 1983−2001 EPOCH.

DATUM	ELEVATION
FEMA FLOOD ZONE (VE 15)	15.00'
FEMA FLOOD ZONE (AE 14)	14.00'



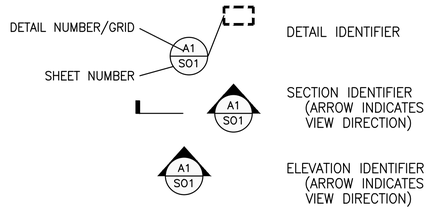
LEGEND

- WATER LINE
- SEWER LINE
- GAS LINE
- ELECTRIC LINE
- OVERHEAD WIRES
- DRAINAGE LINE
- PROPERTY LINE
- ASSESSORS LINE
- TREELINE
- GUARDRAIL
- FENCE
- FEMA FLOOD ZONE
- MAJOR CONTOUR
- MINOR CONTOUR
- MEAN HIGH WATER
- MEAN LOW WATER
- STONE REVETMENT
- RMA24−X 2024 SOIL BORING
- BH76−X 1976 SOIL BORING
- BENCH MARK
- BOLLARD
- CATCH BASIN
- DOUBLE CATCH BASIN
- DRAINAGE MANHOLE
- ELECTRIC MANHOLE
- GUY POLE
- HYDRANT
- IRRIGATION VALVE
- LIGHTPOST
- SIGN POST
- SEWER MANHOLE
- SPOT GRADE
- TREE
- UNKNOWN MANHOLE
- UNKNOWN ELECTRICAL UTILITY
- UTILITY/POWER POLE
- WATER VALVE
- GAS VALVE

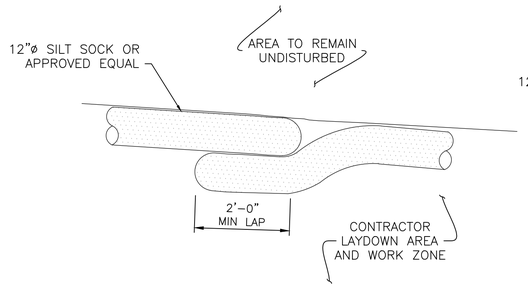
ABBREVIATIONS

ACCMP	ASPHALT CORRUGATED METAL PIPE	CJ	CONSTRUCTION JOINT	M.E.	MATCH EXISTING
BOF	BOTTOM OF FOOTING	CLR	CLEAR	MIN	MINIMUM
CB	CATCH BASIN	CONC	CONCRETE	N/F	NOW OR FORMERLY
CI	CAST IRON	CIP	CAST−IN−PLACE	O.C.	ON CENTER
DMH	DROP MANHOLE	CS	COUNTERSUNK	PL	PLATE
HDPE	HIGH−DENSITY POLYETHYLENE	ø	DIAMETER	SBC	SUPERPAVE BASE COURSE
INV	INVERT ELEVATION	D	DEEP	SF	SQUARE FEET
OHW	OVERHEAD WIRE	DWG	DRAWING	SS	STAINLESS STEEL
PVC	POLYVINYL CHLORIDE	EA	EACH	SSC	SUPERPAVE SURFACE COURSE
PY	POLYETHYLENE	EF	EACH FACE	STA	STATION
RCP	REINFORCED CONCRETE PIPE	EL	ELEVATION	T&B	TOP AND BOTTOM
SMH	SANITARY MANHOLE	ELEC	ELECTRIC	TYP	TYPICAL
123/1234	DEED BOOK/PAGE	EW	EACH WAY	UG	UNDERGROUND
∠	ANGLE	FL	FLOOD LOG	UHMW	ULTRA−HIGH MOLECULAR WEIGHT
@	AT	HC	HANDICAPPED	UP	UTILITY POLE
ADA	AMERICANS WITH DISABILITES ACT	HDG	HOT−DIPPED GALVANIZED	USACE	UNITED STATES ARMY CORPS OF ENGINEERS
AP	ASSESSOR'S PLAT	I.D.	INSIDE DIAMETER		
APPROX	APPROXIMATE	L	LONG	W	WIDE
℄	BASELINE	LF	LINEAR FEET	WWF	WELDED WIRE FABRIC
℄	CENTER LINE	MAX	MAXIMUM		

DETAILS AND IDENTIFIERS:

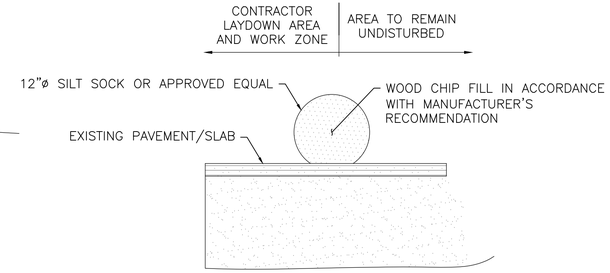


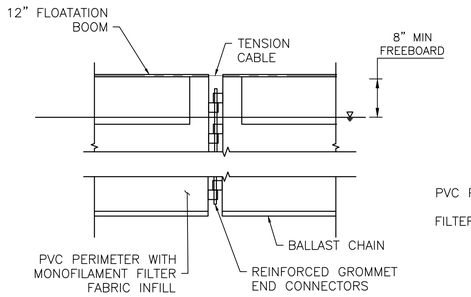
ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-

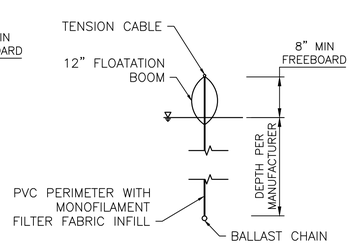


SILT SOCK DETAILS G1

SCALE: NTS

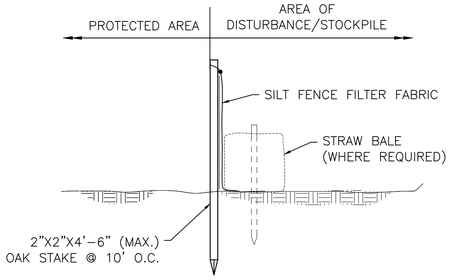






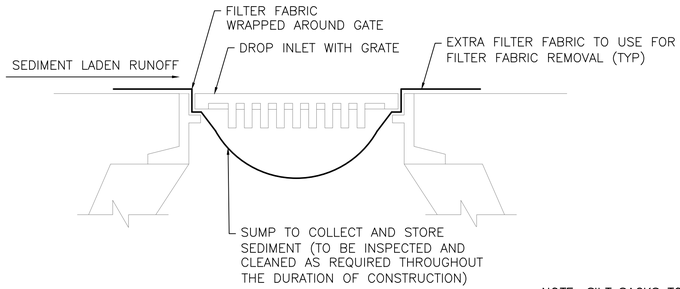
FLOATING SILT CURTAIN (I.E. FULL DEPTH TURBIDITY CURTAIN) DETAIL G2

SCALE: NTS D−01



SILT FENCE DETAIL G3

SCALE: NTS D−01



SILT SACK DETAIL G4

SCALE: NTS

NOTE: SILT SACKS TO BE INSTALLED AT DRAINAGE INLETS WITHIN THE LIMITS OF THE SITE THAT ARE SUBJECT TO SILTATION DURING CONSTRUCTION.

COLLINS ENGINEERS
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED−FOR−BIDDING

REVISIONS

LEGEND, ABBREVIATIONS, AND GENERAL NOTES

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15−15409
OFBA project no.: PA−425
date: OCTOBER 2026

G−03
3 OF 31

OWNER'S APPROVED CONSTRUCTION SEQUENCE:

PHASE 1 – CONSTRUCT CIP CONCRETE SPLASH WALL AND SEAWALLS (DECEMBER 1ST, 2026 – JUNE 30TH, 2027)

PHASE 2 – COMPLETE NEW GANGWAY FLOATS AND PILE SYSTEM, IN-WATER WORK ONLY (MARCH 1ST, 2027 – APRIL 15TH, 2027)

PHASE 3 – REMOVE EXISTING AND CONSTRUCT NEW DRAINAGE SYSTEMS & PERIMETER SIDEWALKS (JULY 1ST, 2027 – SEPTEMBER 30TH, 2027)

PHASE 4 – CONSTRUCT PRECAST BLOCK WALL ALONG EAST BAY GRILLE PROPERTY FRONTAGE (OCTOBER 1ST, 2027 – OCTOBER 31ST, 2027)

PHASE 5 – COMPLETE PARKING LOT RECLAMATION, GRAVEL FILL, FINE GRADING, PERVIOUS PAVEMENT, & BINDER COURSE PAVING OF BOAT TRAILER PARKING LOT AREAS (OCTOBER 15TH, 2027 – NOVEMBER 15TH, 2027)

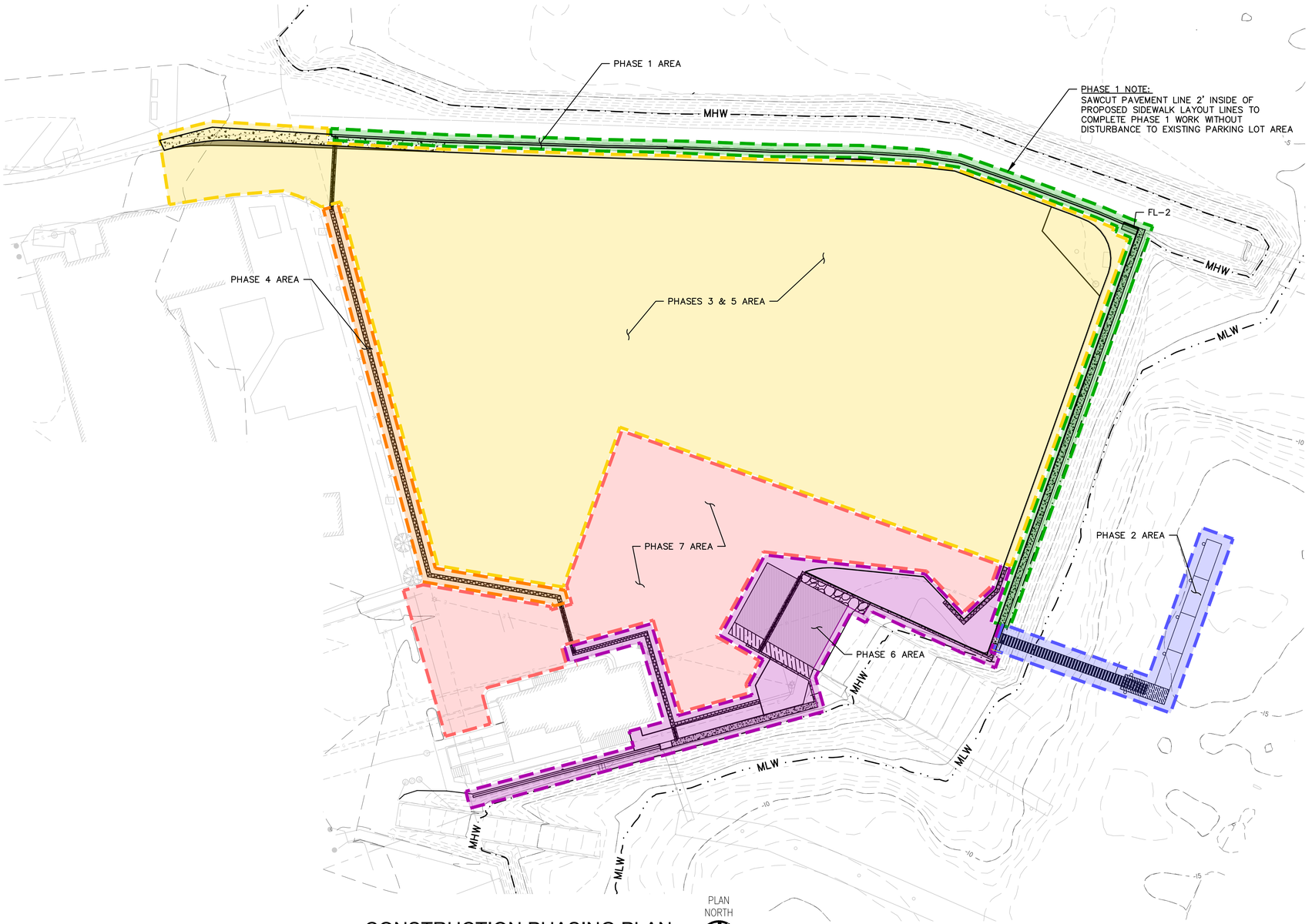
PHASE 6 – COMPLETE ALL REMAINING WORK IN AND AROUND HARBORMASTERS OFFICE, BOAT RAMP, STAGING AREA, AND EAST SEAWALLS (NOVEMBER 1ST, 2027 – APRIL 1ST, 2028)

PHASE 7 – COMPLETE MISCELLANEOUS SITE WORK AND FINAL TOP COURSE PAVING OF ALL BITUMINOUS PAVEMENT SURFACE AREAS (APRIL 1ST, 2028 – APRIL 15TH, 2028)

GENERAL NOTES:

1. CONTRACTOR TO MAINTAIN A MINIMUM NUMBER OF 30 PARKING SPACES WHILE BOAT RAMP IS OPEN.
2. BOAT RAMP SHALL REMAIN OPEN TO LIMITED PUBLIC ACCESS AND COMMERCIAL HAULERS DURING PHASES 1–5 WORK.
3. CONTRACTORS POINT OF ENTRY AND EXIT SHALL BE FROM THE NORTHWEST ENTRANCE FOR DURATION OF PROJECT.
4. CONTRACTOR SHALL PROVIDE DETAILED SCHEDULE OF WORK AND SITE SEQUENCING PLAN FOR LAYDOWN AREAS, TEMPORARY CONTROLS, AND MINIMUM PARKING NUMBERS TO MAINTAIN LIMITED PUBLIC ACCESS AND EMERGENCY ACCESS FOR FULL DURATION OF WORK FOR APPROVAL BY THE OWNER.
5. ANY DEVIATION FROM PHASING OF PROJECT AS SHOWN, SHALL BE APPROVED BY THE OWNER PRIOR TO COMMENCING WORK.

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



CONSTRUCTION PHASING PLAN
SCALE: 1"=30'

PLAN NORTH

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

REVISIONS

CONSTRUCTION PHASING PLAN

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

2026

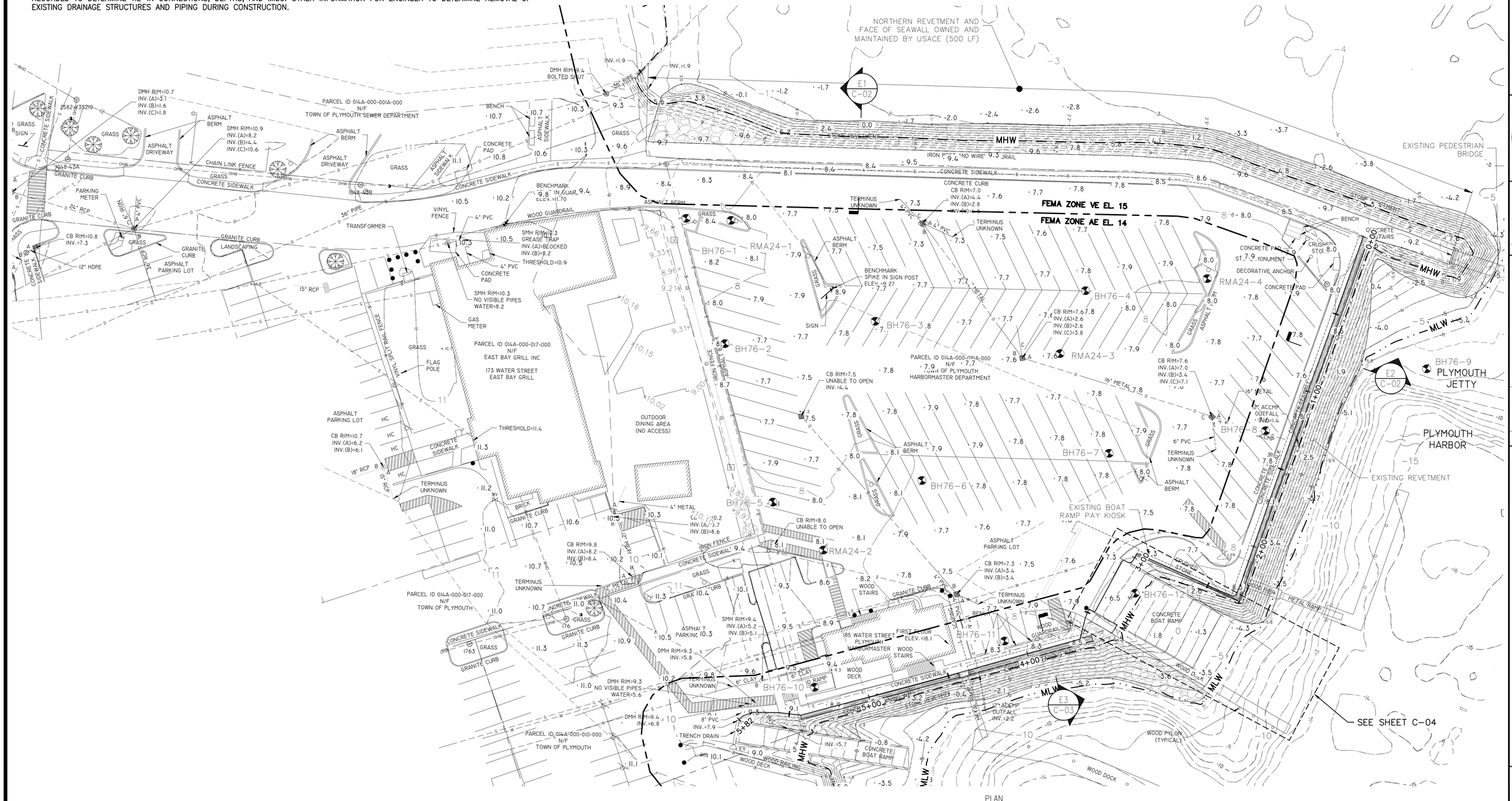
designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

G-04
4 OF 31

GENERAL NOTES:

1. EXISTING CONDITIONS PLAN DEVELOPED BASED ON DRAWING TITLED "TOPOGRAPHIC AND UTILITY SURVEY, PLYMOUTH HARBOR BOAT RAMP" PREPARED BY DIPRETE ENGINEERING DATED SEPTEMBER 12, 2024, DRAWINGS TITLED "NAVD88 BATHYMETRY – 1.0 FOOT CONTOUR INTERVAL, PLYMOUTH HARBOR BOAT RAMP" PREPARED BY CR ENVIRONMENTAL DATED MAY 21, 2024, AND SITE OBSERVATIONS BY COLLINS ENGINEERS, INC. ON JULY 26, 2024.
2. THE HORIZONTAL DATUM IS THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATES, IN U.S. SURVEY FEET, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83/2011) EPOCH 2010.
3. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN U.S. SURVEY FEET.
4. VARIOUS UNDERGROUND UTILITY LINES DEVELOPED SCHEMATICALLY BASED ON DRAWINGS TITLED "PLYMOUTH MARITIME FACILITY" PREPARED BY GZA GEOENVIRONMENTAL INC. DATED APRIL 16, 2018, AND DRAWINGS TITLED "PROPOSED PUBLIC ACCESS RAMP & FACILITIES – BOAT LAUNCHING RAMP, PLYMOUTH, MASS", BY SEELYE STEVENSON VALUE & KNECHT ENGINEERS & PLANNERS DATED FEBRUARY 1, 1980. THE EXACT SIZE & LOCATION OF ALL EXISTING UTILITIES IMPACTED BY THE WORK WITHIN PROJECT LIMITS SHALL BE FIELD VERIFIED BY THE ENGINEER AND CONTRACTOR PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE OWNER AT THE CONTRACTORS EXPENSE.
5. EXISTING DRAINAGE PIPES PIPES WITHIN THE PROJECT LIMITS SHALL BE FIELD LOCATED BY THE CONTRACTOR AND VIDEO CAMERA RECORDED TO DETERMINE TIE-IN CONNECTIONS, DEPTHS, AND MISC. OTHER INFORMATION FOR ENGINEER TO DETERMINE REMOVAL OF EXISTING DRAINAGE STRUCTURES AND PIPING DURING CONSTRUCTION.

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



EXISTING CONDITIONS PLAN

SCALE: 1"=30'

PLAN NORTH

0 30' 60'

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
000	10/20/2026	ISSUED-FOR-BIDDING

EXISTING CONDITIONS PLAN

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

2026

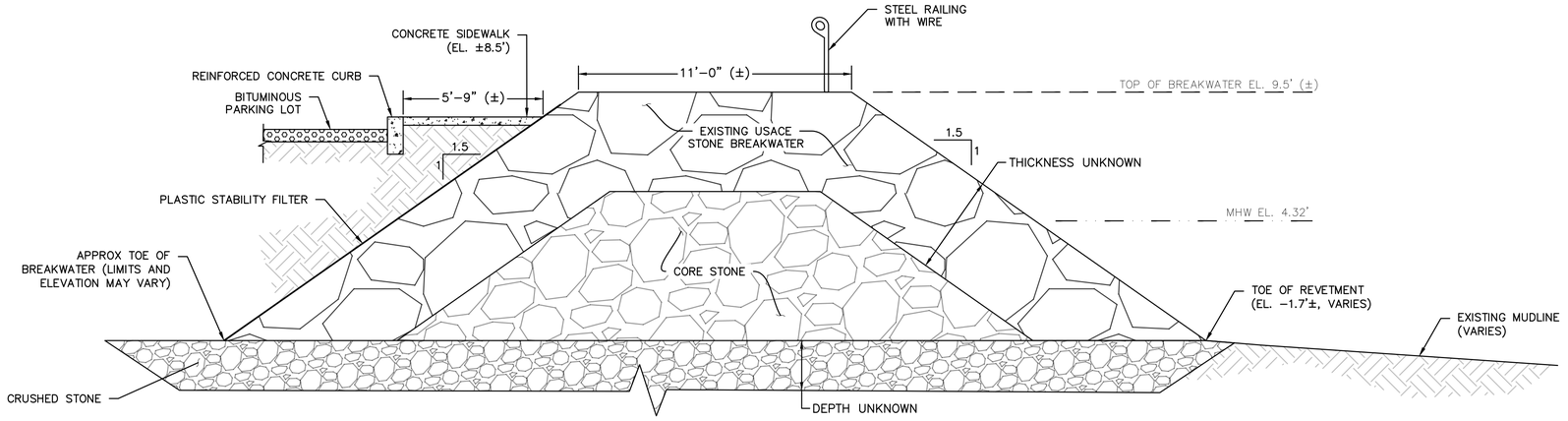
designed by:	AVR/GEM
checked by:	APV
approved by:	ZDJ/KH
QA/QC by:	WMM
CE project no.:	15-15409
OFBA project no.:	PA-425
date:	OCTOBER 2026

C-01
5 OF 31

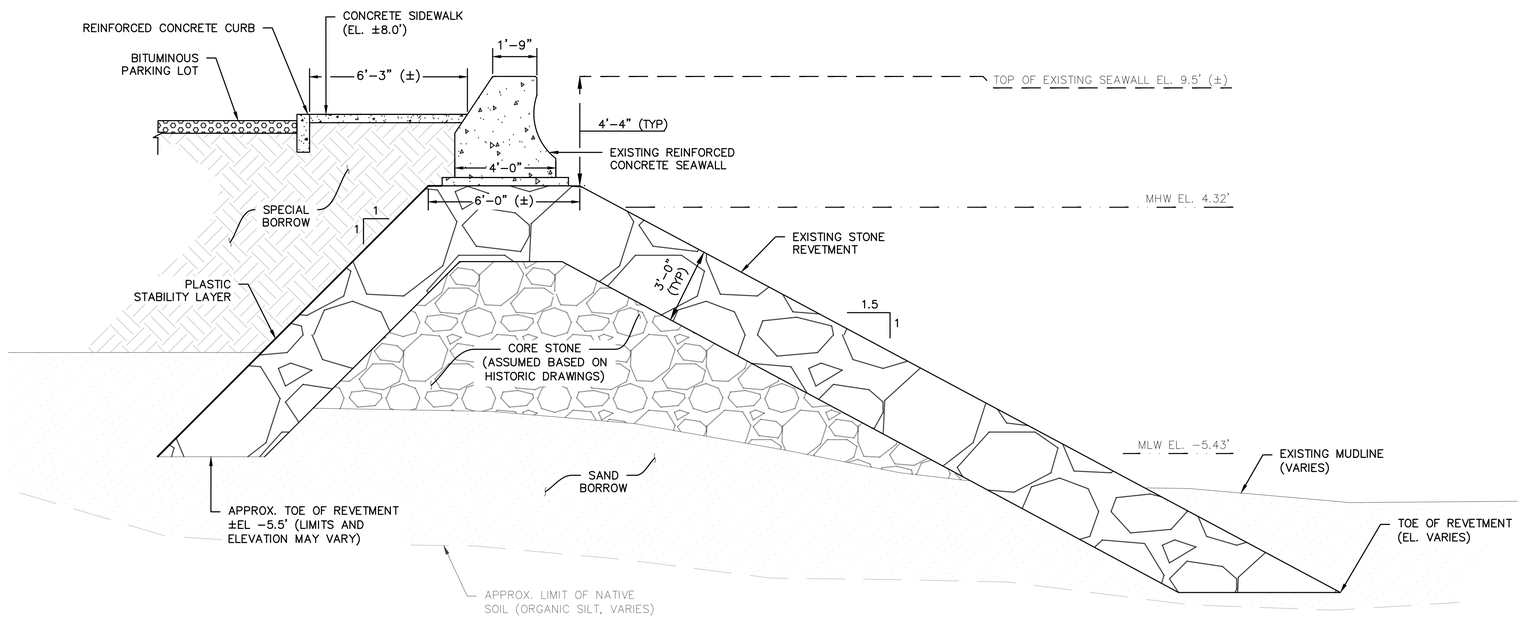
REFERENCES

1. EXISTING CONDITIONS SECTIONS DEVELOPED BASED ON DRAWING TITLED "PROPOSED PUBLIC ACCESS RAMP & FACILITIES, BOAT LAUNCHING RAMP, PLYMOUTH, MASS" PREPARED BY SEELYE STEVENSON VALUE & KNECHT ENGINEERS AND PLANNERS DATED FEB 1, 1980, AND DRAWINGS TITLED "PLYMOUTH HARBOR MASSACHUSETTS" PREPARED BY THE DEPARTMENT OF THE ARMY, NEW ENGLAND DIVISION, CORPS OF ENGINEERS DATED SEPTEMBER 30, 1986.
2. EXISTING CONDITIONS SECTIONS DEVELOPED BASED ON DRAWINGS TITLED "PLYMOUTH HARBOR BOAT RAMP OFFICE OF FISHING & BOATING ACCESS, PLYMOUTH, MA" PREPARED BY BOURNE CONSULTING ENGINEERING DATED JAN 8, 2014.

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



EXISTING USACE BREAKWATER SECTION E1
SCALE: 1"=3'-0" 0 3 6 C-01



EXISTING SEAWALL AND REVETMENT SECTION (EAST) E2
SCALE: 1"=3'-0" 0 3 6 C-01

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REVISIONS

REV NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

EXISTING SECTIONS 1

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

2026

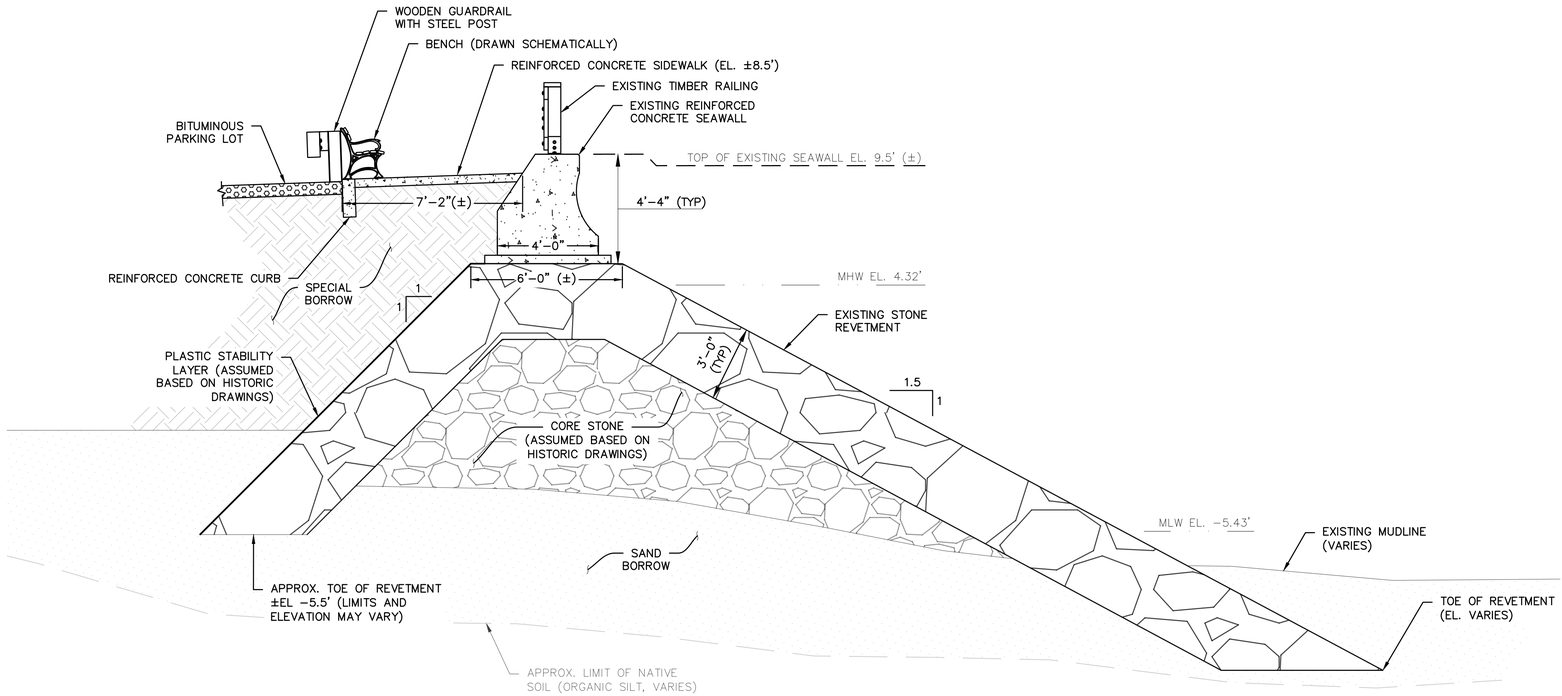
designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

C-02
6 OF 31

GENERAL NOTES:

1. EXISTING CONDITIONS SECTIONS DEVELOPED BASED ON DRAWING TITLED "PROPOSED PUBLIC ACCESS RAMP & FACILITIES, BOAT LAUNCHING RAMP, PLYMOUTH, MASS" PREPARED BY SEELYE STEVENSON VALUE & KNECHT ENGINEERS AND PLANNERS DATED FEB 1, 1980.

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



EXISTING SEAWALL AND REVETMENT SECTION (SOUTH) E3

SCALE: 1"=3'-0" 0 3 6 C-01

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

EXISTING SECTIONS 2

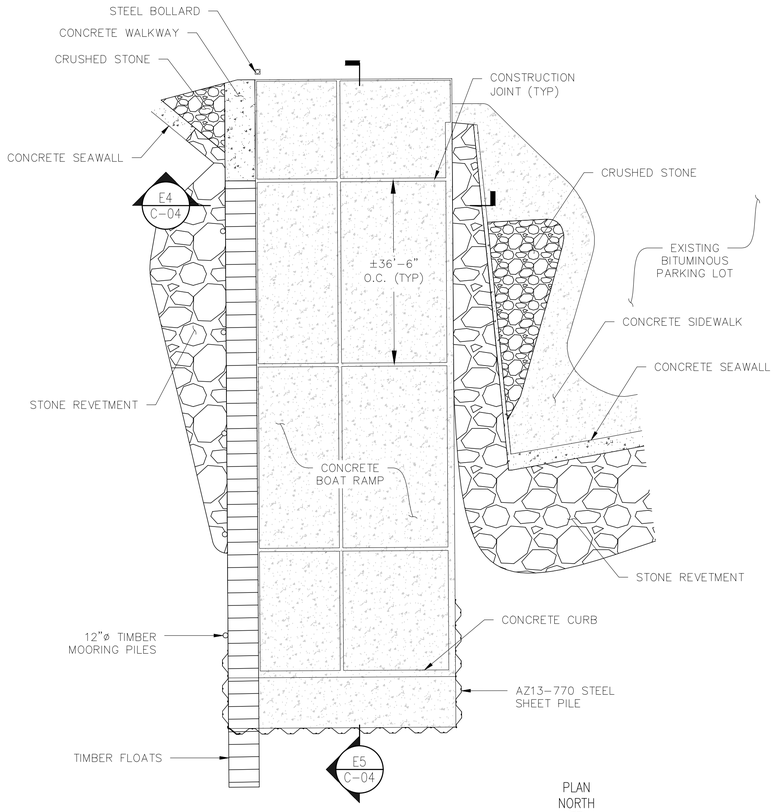
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA 2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

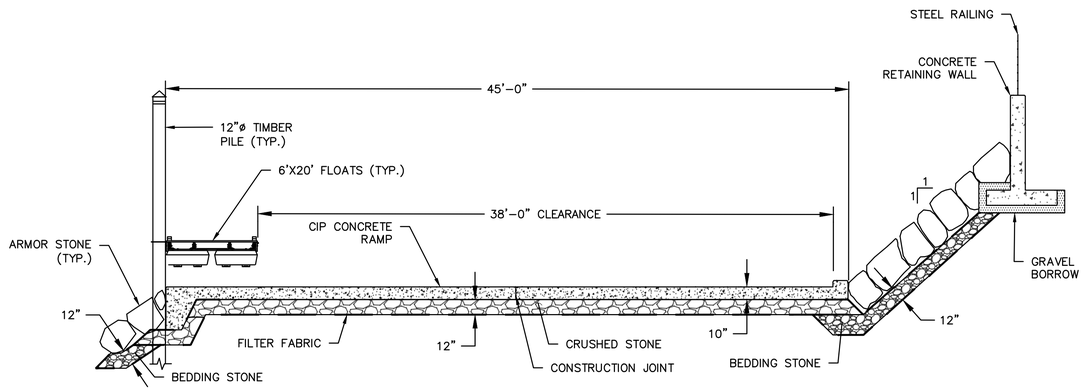
C-03

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



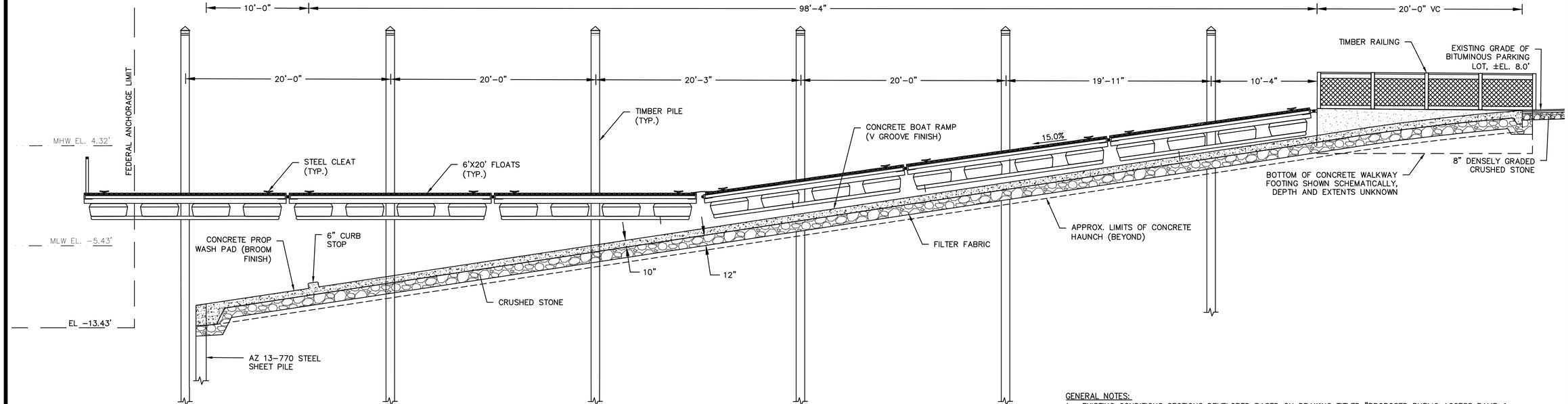
EXISTING BOAT RAMP PLAN

SCALE: 1"=15' 0 15 30



EXISTING BOAT RAMP SECTION

SCALE: 1"=5' 0 5 10 C-04 E4



EXISTING BOAT RAMP ELEVATION

SCALE: 1"=5' 0 5 10 C-04 E5

GENERAL NOTES:

1. EXISTING CONDITIONS SECTIONS DEVELOPED BASED ON DRAWING TITLED "PROPOSED PUBLIC ACCESS RAMP & FACILITIES, BOAT LAUNCHING RAMP, PLYMOUTH, MASS" PREPARED BY SEELYE STEVENSON VALUE & KNECHT ENGINEERS AND PLANNERS DATED FEB 1, 1980 AND DRAWING TITLED "PLYMOUTH HARBOR BOAT RAMP OFFICE OF FISHING & BOATING ACCESS, PLYMOUTH, MA" PREPARED BY BOURNE CONSULTING ENGINEERING DATED JAN 8, 2014.

COLLINS ENGINEERS, INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

EXISTING BOAT RAMP PLAN AND SECTIONS
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT
PLYMOUTH, MA
2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

C-04
8 OF 31

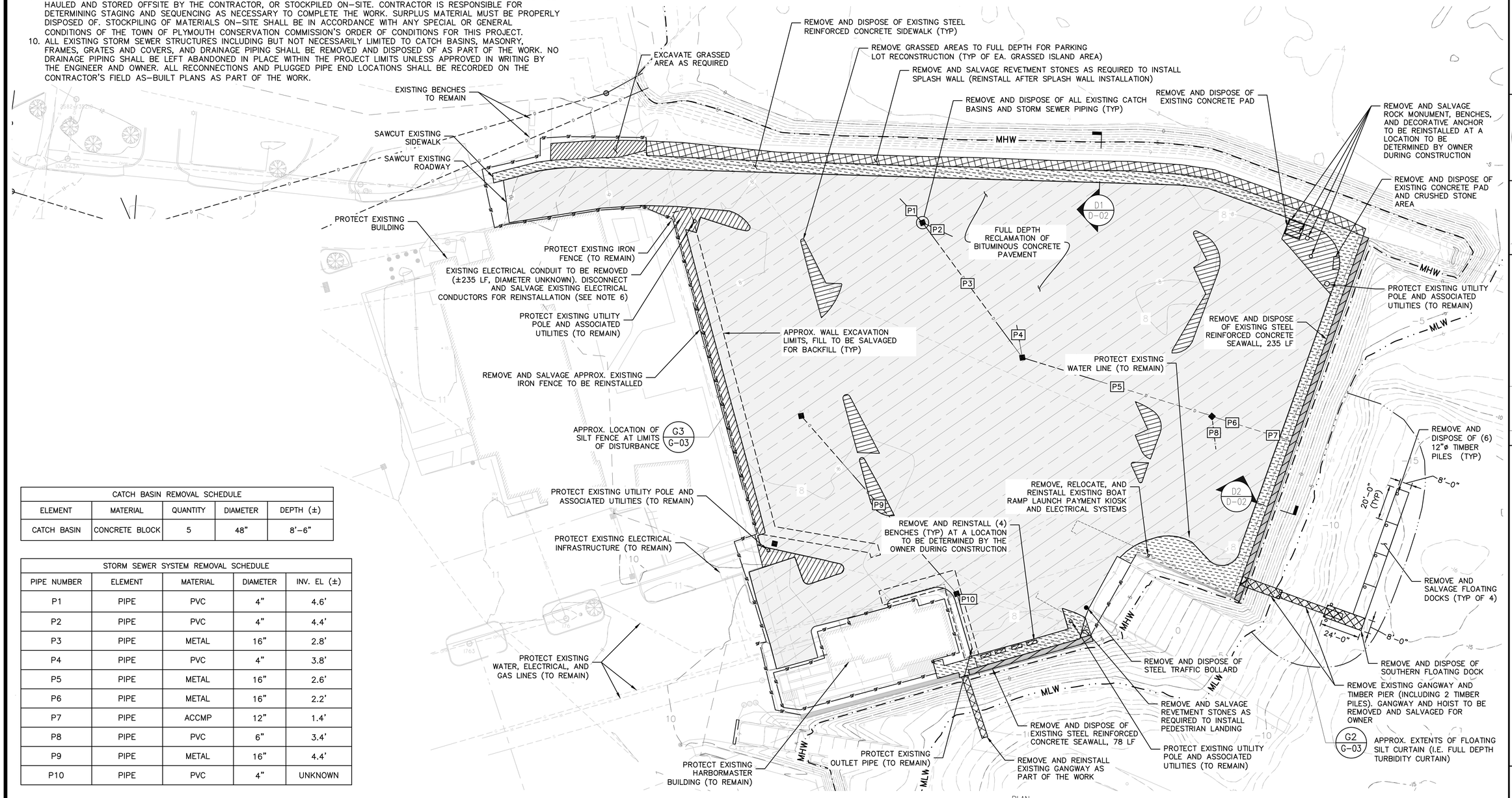
GENERAL NOTES

1. CONTRACTOR STAGING AREA TO BE WITHIN LIMITS OF PARKING LOT.
2. CONTRACTOR TO REMOVE AND STABILIZE ALL DEBRIS PRIOR TO TIDAL INUNDATION.
3. REMOVAL OF EXISTING CATCH BASINS AND STORM SEWER LINES SHALL INCLUDE THE REMOVAL AND DISPOSAL OF ASSOCIATED FITTING AND APPURTENANCES.
4. CONTRACTOR TO MAINTAIN ACCESS TO HARBORMASTER BUILDING AT ALL TIMES THROUGHOUT CONSTRUCTION.
5. APPROX. LIMIT OF EXCAVATION IS LOCATED ALONG LANDWARD EDGE OF SIDEWALK WHERE SEAWALLS AND SPLASH WALL ARE TO BE REMOVED. FILL TO BE STORED FOR BACKFILL.
6. CONTRACTOR TO NOTIFY THE ENGINEER AND OWNER PRIOR TO BEGINNING WORK WITHIN THE LIMITS OF THE EXISTING ELECTRICAL CONDUIT. CONTRACTOR TO COORDINATE DISCONNECTION, REMOVAL, RELOCATION/REPLACEMENT, AND RECONNECTION OF THE ELECTRICAL SERVICE WITH THE OWNER. ALL WORK SHALL BE IN ACCORDANCE WITH THE NEC (NFPA 70).
7. CONTRACTOR TO PROTECT, AND TEMPORARILY SUPPORT IF NECESSARY, ALL EXISTING UTILITIES NOT INDICATED FOR REMOVAL, REPLACEMENT, OR DISCONNECTION.
8. EXISTING BITUMINOUS CONCRETE SHALL BE RECLAIMED AND BLENDED WITH EXISTING GRAVEL BASE MATERIALS TO A MINIMUM DEPTH OF 12" IN ACCORDANCE WITH SPECIFICATION SECTION 403. ANY EXCESS RECLAIMED MATERIALS GENERATED FROM ONE PHASE OF WORK MAY BE STOCKPILED ON-SITE FOR REUSE IN ANOTHER PHASE OF WORK.
9. SUBBASE, FILL, REVETMENT STONES, AND OTHER EARTHWORK ITEMS REMOVED AND SALVAGED FOR REUSE MAY EITHER BE HAULED AND STORED OFFSITE BY THE CONTRACTOR, OR STOCKPILED ON-SITE. CONTRACTOR IS RESPONSIBLE FOR DETERMINING STAGING AND SEQUENCING AS NECESSARY TO COMPLETE THE WORK. SURPLUS MATERIAL MUST BE PROPERLY DISPOSED OF. STOCKPILING OF MATERIALS ON-SITE SHALL BE IN ACCORDANCE WITH ANY SPECIAL OR GENERAL CONDITIONS OF THE TOWN OF PLYMOUTH CONSERVATION COMMISSION'S ORDER OF CONDITIONS FOR THIS PROJECT.
10. ALL EXISTING STORM SEWER STRUCTURES INCLUDING BUT NOT NECESSARILY LIMITED TO CATCH BASINS, MASONRY, FRAMES, GRATES AND COVERS, AND DRAINAGE PIPING SHALL BE REMOVED AND DISPOSED OF AS PART OF THE WORK. NO DRAINAGE PIPING SHALL BE LEFT ABANDONED IN PLACE WITHIN THE PROJECT LIMITS UNLESS APPROVED IN WRITING BY THE ENGINEER AND OWNER. ALL RECONNECTIONS AND PLUGGED PIPE END LOCATIONS SHALL BE RECORDED ON THE CONTRACTOR'S FIELD AS-BUILT PLANS AS PART OF THE WORK.

LEGEND

- LIMITS OF SIDEWALK REMOVAL
- RECLAMATION OF BITUMINOUS ASPHALT
- REMOVE AND SALVAGE MATERIAL
- REMOVE AND DISPOSE MATERIAL
- PROPOSED TURBIDITY BOOM
- PROPOSED SILT FENCE
- APPROXIMATE LIMIT OF EXCAVATION

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



CATCH BASIN REMOVAL SCHEDULE				
ELEMENT	MATERIAL	QUANTITY	DIAMETER	DEPTH (±)
CATCH BASIN	CONCRETE BLOCK	5	48"	8'-6"

STORM SEWER SYSTEM REMOVAL SCHEDULE				
PIPE NUMBER	ELEMENT	MATERIAL	DIAMETER	INV. EL (±)
P1	PIPE	PVC	4"	4.6'
P2	PIPE	PVC	4"	4.4'
P3	PIPE	METAL	16"	2.8'
P4	PIPE	PVC	4"	3.8'
P5	PIPE	METAL	16"	2.6'
P6	PIPE	METAL	16"	2.2'
P7	PIPE	ACCMP	12"	1.4'
P8	PIPE	PVC	6"	3.4'
P9	PIPE	METAL	16"	4.4'
P10	PIPE	PVC	4"	UNKNOWN

SITE PREPARATION AND DEMOLITION PLAN

SCALE: 1"=30'

0 30' 60'

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REVISIONS

NEX. NO.	DATE	REVISIONS DESCRIPTION
100	10/20/2026	ISSUED-FOR-BIDDING

PROPOSED SITE PREPARATION AND DEMOLITION PLAN

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

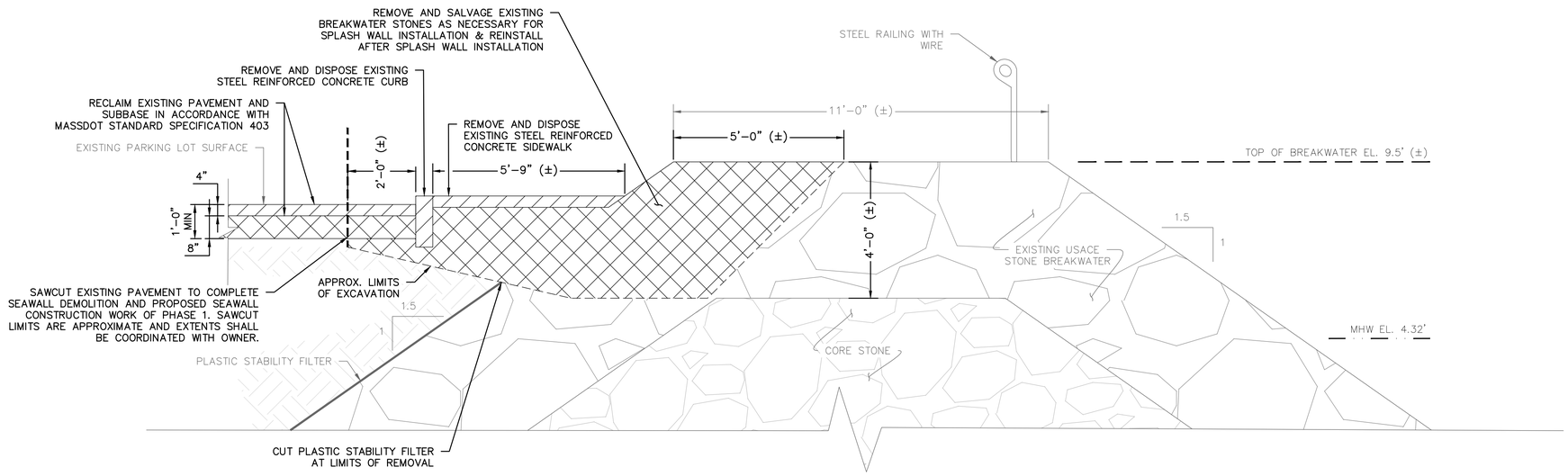
PLYMOUTH, MA

2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

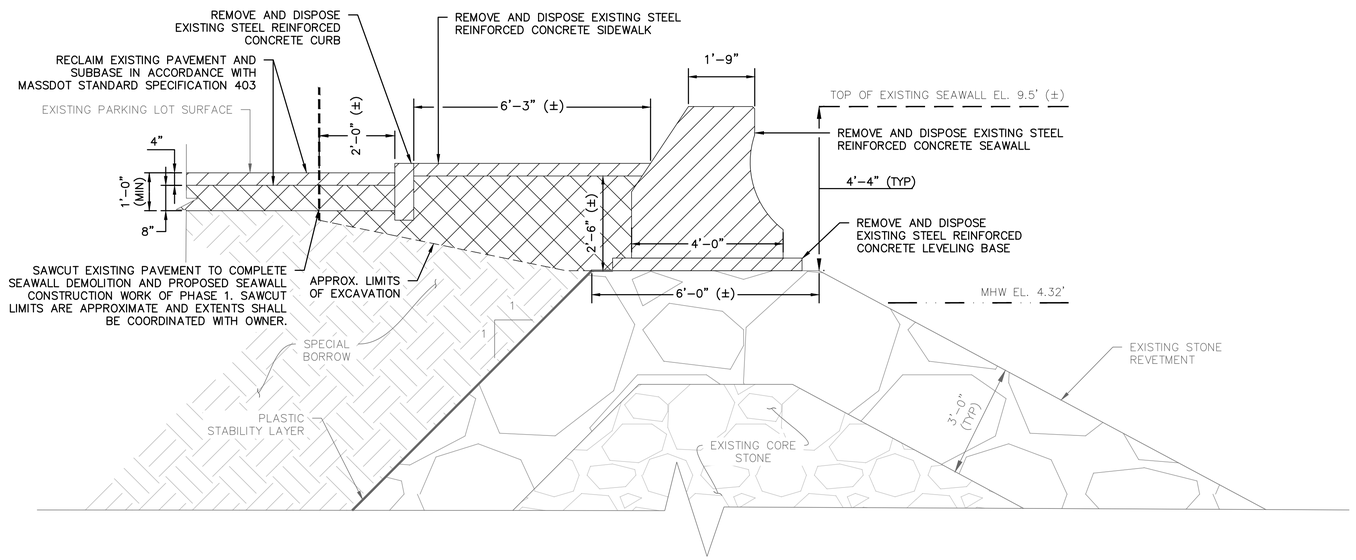
D-01
9 OF 31

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



BREAKWATER DEMOLITION SECTION

SCALE: 1"=2'-0" (0, 2, 4) D-01 D1



SEAWALL DEMOLITION SECTION

SCALE: 1"=2'-0" (0, 2, 4) D-01 D2

NOTE:

1. CONCRETE SEAWALL AND LEVELING BASE MAY BE ANCHORED TO REVETMENT. CUT OFF ANCHOR RODS FLUSH WITH TOP OF STONES.
2. UTILITIES AND MISCELLANEOUS SITE FEATURES NOT SHOWN.
3. CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY FENCING, VEHICULAR AND PEDESTRIAN BARRIERS FOR PUBLIC SAFETY AS PART OF THE MISCELLANEOUS WORK ASSOCIATED WITH BREAKWATER AND SEAWALL DEMOLITION WORK. SEQUENCING AND LOCATIONS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER AND OWNER THROUGHOUT THE PHASING OF WORK AS PART OF THE CONSTRUCTION SUBMITTAL PROCESS.

COLLINS ENGINEERS, INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REVISIONS

REV NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

DEMOLITION SECTIONS

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

D-02
10 OF 31

GENERAL NOTES

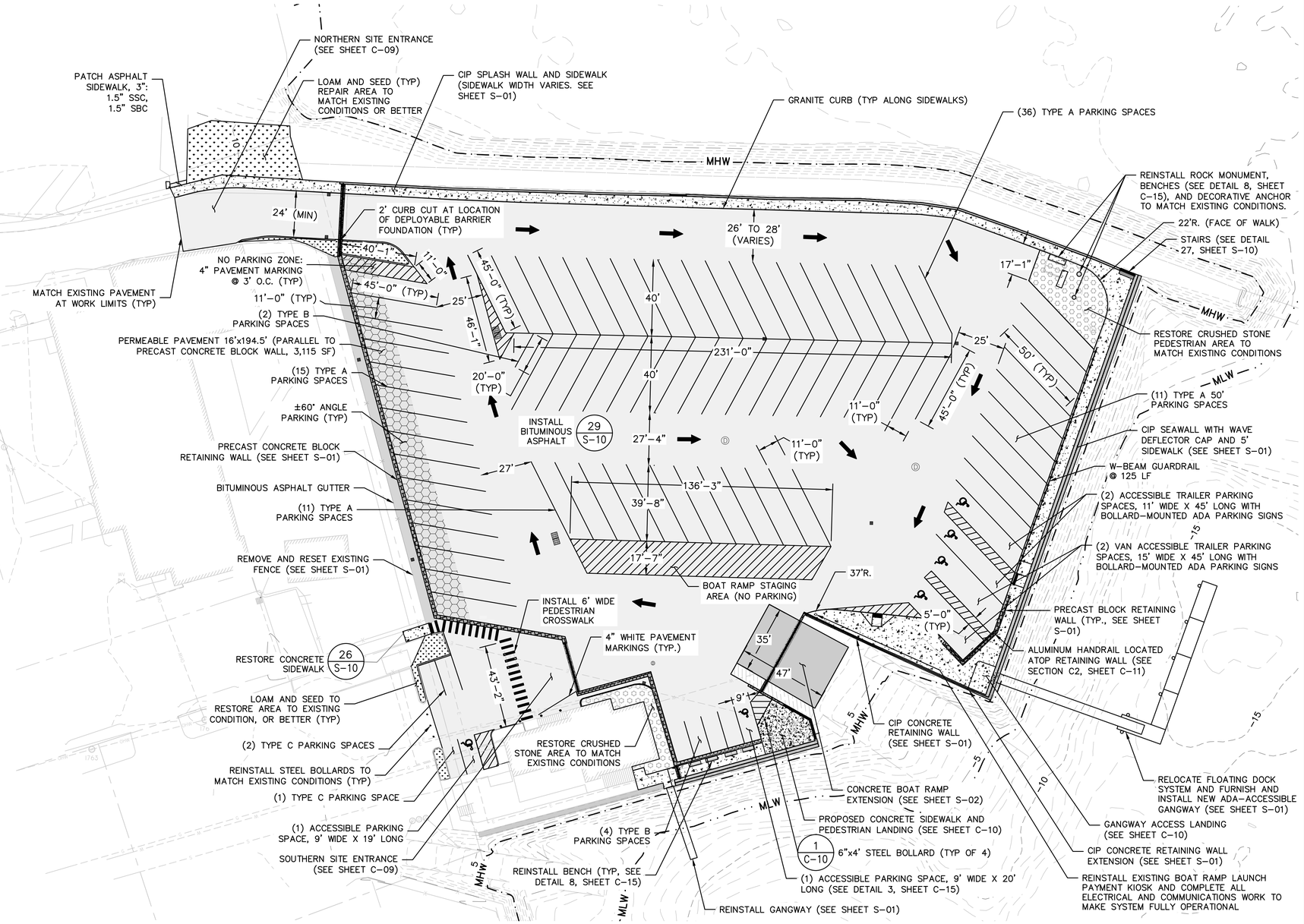
1. EXISTING STRUCTURES AND INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO GREENSPACE, BENCHES, THE NORTHERN ASPHALT SIDEWALK, AND DISTURBED AREAS OF THE STONE REVETMENT OR BREAKWATER SHALL BE RESTORED TO MATCH EXISTING CONDITIONS FOLLOWING CONSTRUCTION, UNLESS NOTED OTHERWISE.
2. SEE SHEET C–06 FOR GRADING AND DRAINAGE PLAN.
3. SEE SHEET S–01 FOR STRUCTURAL SITE PLAN.

LEGEND

- LOAM AND SEED
- BITUMINOUS PAVEMENT
- CRUSHED STONE
- RESET ARMOR STONES
- CONCRETE SIDEWALK
- PARKING PROHIBITED
- PERMEABLE PAVEMENT
- PROPOSED CATCH BASIN
- PROPOSED DRAINAGE MANHOLE (DMH)

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-

PARKING SPACE SCHEDULE				
TYPE	QUANTITY	PURPOSE	LENGTH	WIDTH
TYPE A	71	VEHICLE WITH TRAILER	45' MIN. OR AS NOTED	11'
	2	VEHICLE WITH TRAILER (ADA ACCESSIBLE)	45'	11' WITH 5' AISLE
	2	VEHICLE WITH TRAILER (ADA VAN ACCESSIBLE)	45'	15' WITH 5' AISLE
TYPE B	6	PASSENGER VEHICLE	20'	9'
	1	PASSENGER VEHICLE (ADA ACCESSIBLE)	20'	9'
TYPE C	3	PASSENGER VEHICLE	19'	9'
	1	PASSENGER VEHICLE (ADA ACCESSIBLE)	19'	9' WITH 8' AISLE



SITE CIVIL AND RESTORATION PLAN

SCALE: 1"=30'

0 30' 60'

COLLINS ENGINEERS
1486 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED–FOR–BIDDING

PROPOSED SITE RESTORATION PLAN

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15–15409
OFBA project no.: PA–425
date: OCTOBER 2026

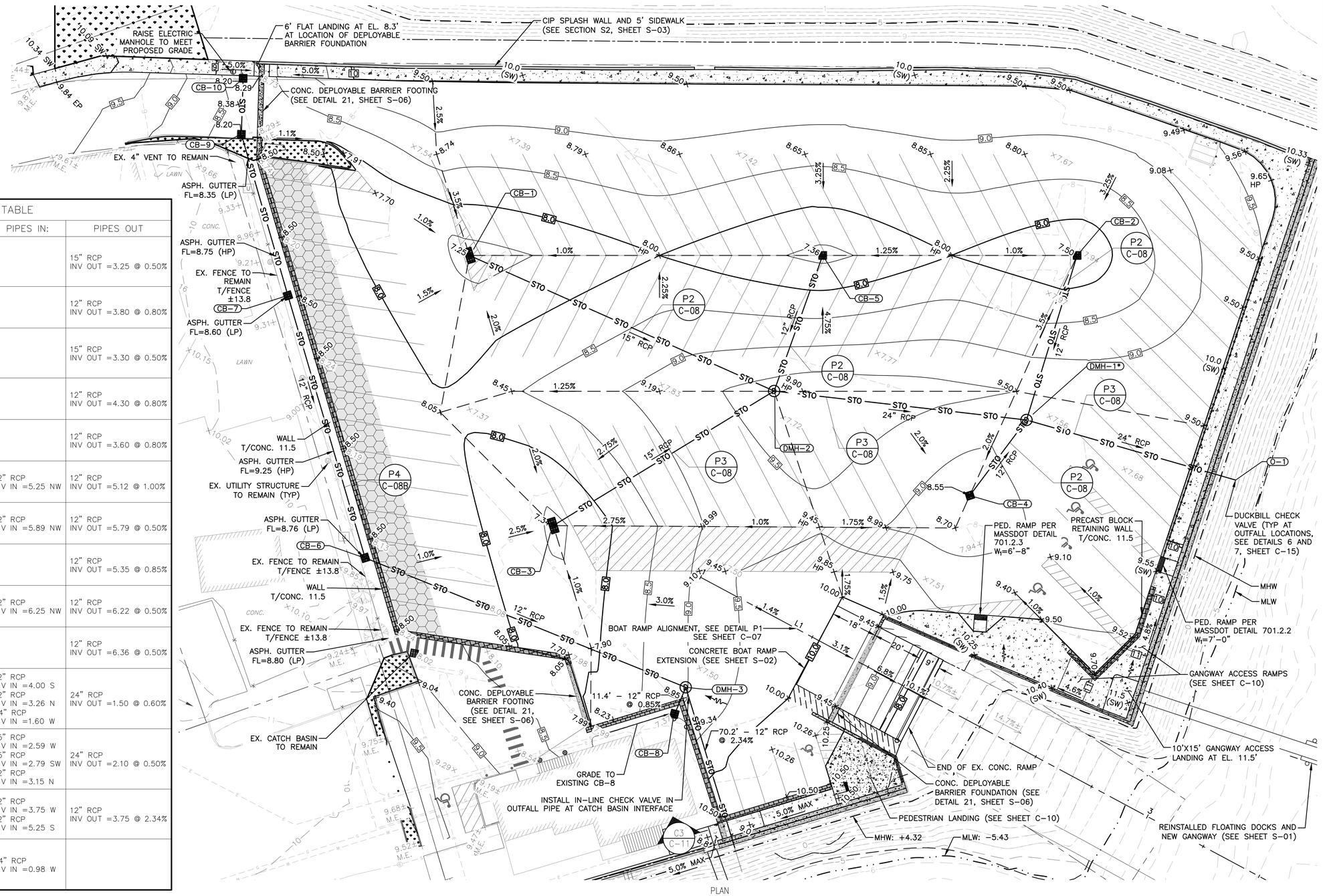
C–05
11 OF 31

NOTES:
1. REMOVE AND RESET EXISTING REVETMENT STONES AS NECESSARY FOR DRAIN OUTFALL INSTALLATION.
2. SPOT ELEVATIONS LOCATED WEST OF THE PROPERTY LINE REFERENCE RTK SPOT ELEVATIONS COLLECTED BY MASSACHUSETTS DEPARTMENT OF FISH & GAME OFFICE OF FISHING AND BOATING ACCESS DATED JUNE 12, 2026.
3. PAVEMENT GRADES SHOWN TO NEAREST 0.25% GRADE SITE TO SPOT ELEVATIONS SHOWN ON PLAN.

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-

STRUCTURE TABLE

STRUCTURE:	DETAILS:	PIPES IN:	PIPES OUT
CB-1 DOUBLE INLET CATCH BASIN N: 2,812,870.71 E: 882,474.65	60" DIA. RIM = 7.25 INV OUT = 3.25 E		15" RCP INV OUT =3.25 @ 0.50%
CB-2 CATCH BASIN N: 2,812,985.72 E: 882,685.08	48" DIA. RIM = 7.50 INV OUT = 3.80 S		12" RCP INV OUT =3.80 @ 0.80%
CB-3 DOUBLE INLET CATCH BASIN N: 2,812,792.99 E: 882,554.80	60" DIA. RIM = 7.34 INV OUT = 3.30 NE		15" RCP INV OUT =3.30 @ 0.50%
CB-4 CATCH BASIN N: 2,812,882.28 E: 882,693.36	48" DIA. RIM = 8.55 INV OUT = 4.30 N		12" RCP INV OUT =4.30 @ 0.80%
CB-5 CATCH BASIN N: 2,812,937.56 E: 882,596.96	48" DIA. RIM = 7.36 INV OUT = 3.60 S		12" RCP INV OUT =3.60 @ 0.80%
CB-6 FIELD INLET N: 2,812,746.18 E: 882,495.71	24" DIA. RIM = 8.76 INV IN = 5.25 NW INV OUT = 5.12 E	12" RCP INV IN =5.25 NW	12" RCP INV OUT =5.12 @ 1.00%
CB-7 FIELD INLET N: 2,812,822.46 E: 882,419.35	24" DIA. RIM = 8.60 INV IN = 5.89 NW INV OUT = 5.79 SE	12" RCP INV IN =5.89 NW	12" RCP INV OUT =5.79 @ 0.50%
CB-8 FIELD INLET N: 2,812,750.73 E: 882,632.42	24" DIA. RIM = 7.05 INV OUT = 5.35 N		12" RCP INV OUT =5.35 @ 0.85%
CB-9 CATCH BASIN N: 2,812,869.48 E: 882,372.72	24" DIA. RIM = 8.42 INV IN = 6.25 NW INV OUT = 6.22 SE	12" RCP INV IN =6.25 NW	12" RCP INV OUT =6.22 @ 0.50%
CB-10 CATCH BASIN N: 2,812,889.22 E: 882,362.73	24" DIA. RIM = 8.53 INV OUT = 6.36 SE		12" RCP INV OUT =6.36 @ 0.50%
DMH-1* SPECIAL MANHOLE N: 2,812,919.15 E: 882,698.70 SEE DETAIL SHEET C-14	72" DIA. RIM = 9.37 INV IN = 4.00 S INV IN = 3.26 N INV IN = 1.60 W INV OUT = 1.50 E	12" RCP INV IN =4.00 S 12" RCP INV IN =3.26 N 24" RCP INV IN =1.60 W	24" RCP INV OUT =1.50 @ 0.60%
DMH-2 STORM MANHOLE N: 2,812,881.43 E: 882,605.82	48" DIA. RIM = 9.75 INV IN = 2.59 W INV IN = 2.79 SW INV IN = 3.15 N INV OUT = 2.10 E	15" RCP INV IN =2.59 W 15" RCP INV IN =2.79 SW 12" RCP INV IN =3.15 N	24" RCP INV OUT =2.10 @ 0.50%
DMH-3 SPECIAL MANHOLE N: 2,812,762.06 E: 882,631.29 SEE DETAIL SHEET C-14	48" DIA. RIM = 8.98 INV IN = 3.75 W INV IN = 5.25 S INV OUT = 3.75 SE	12" RCP INV IN =3.75 W 12" RCP INV IN =5.25 S	12" RCP INV OUT =3.75 @ 2.34%
O-1 24" OUTFALL W/ DUCKBILL CHECK VALVE N: 2,812,937.93 E: 882,782.51	INV IN = 0.98 W	24" RCP INV IN =0.98 W	



GRADING AND DRAINAGE PLAN

SCALE: 1"=20'

0 10' 20' 40'

COLLINS ENGINEERS
1486 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

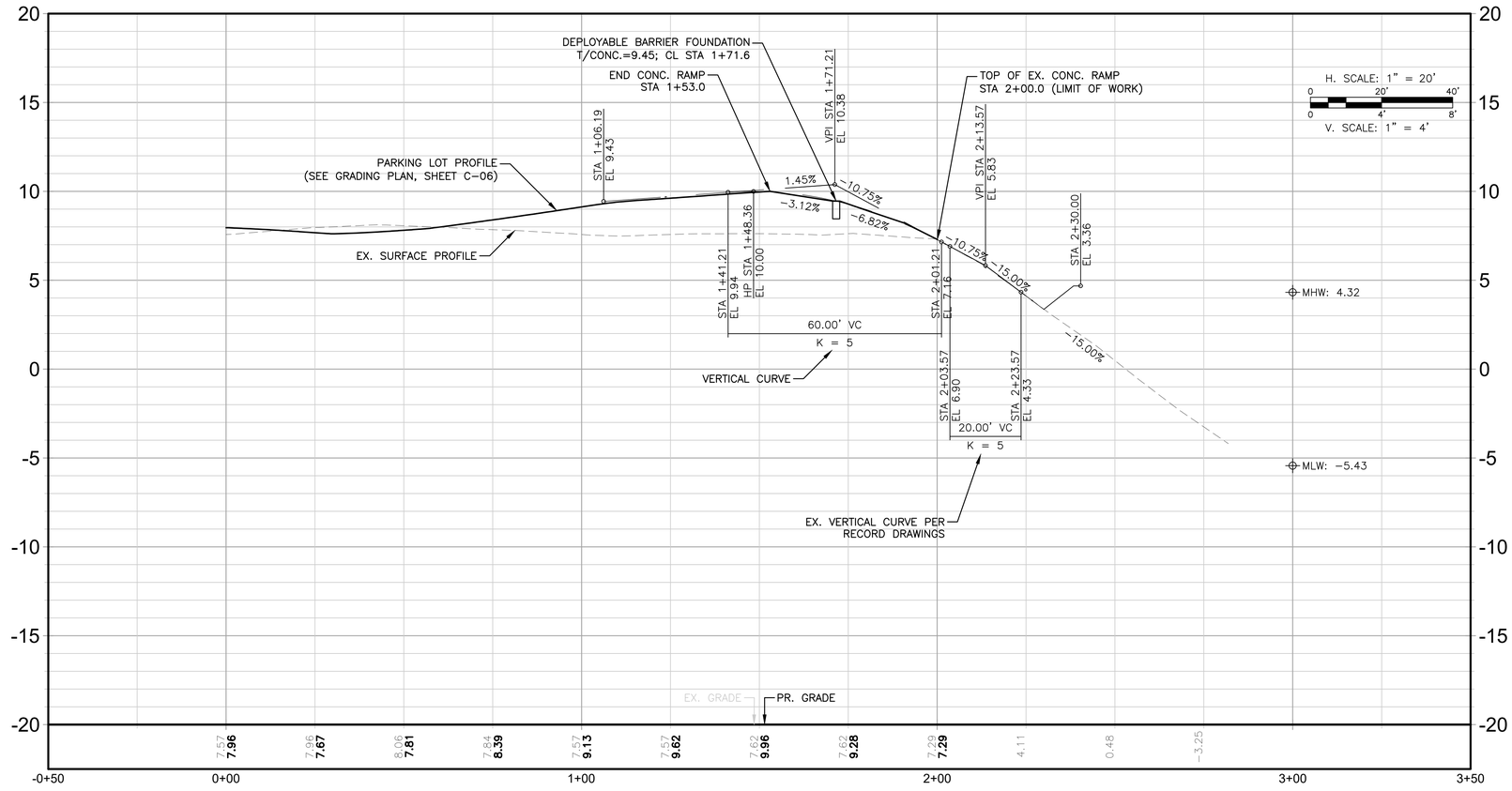
REVISIONS

PROPOSED PARKING LOT AND BOAT RAMP GRADING PLAN
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT
PLYMOUTH, MA
2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

C-06
12 OF 31

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



PROPOSED BOAT RAMP PROFILE

SCALE: AS NOTED

C-06 P1

ALIGNMENT TABLE				
SEGMENT	DISTANCE	BEARING	FROM (N,E)	TO (N,E)
L1	369.029	N89° 30' 48.36"E	2,812,802.14,882,515.62	2,812,805.27,882,884.63

NOTES:
1. CONTRACTOR TO PROTECT EXISTING BOAT RAMP THROUGHOUT DURATION OF CONSTRUCTION.

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

PROPOSED BOAT RAMP PROFILE

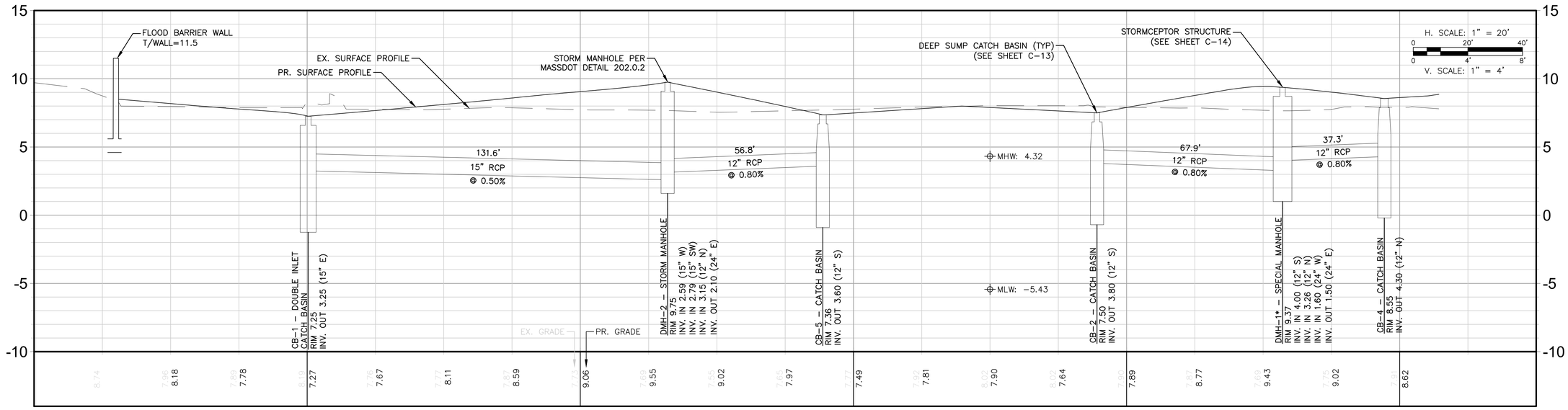
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

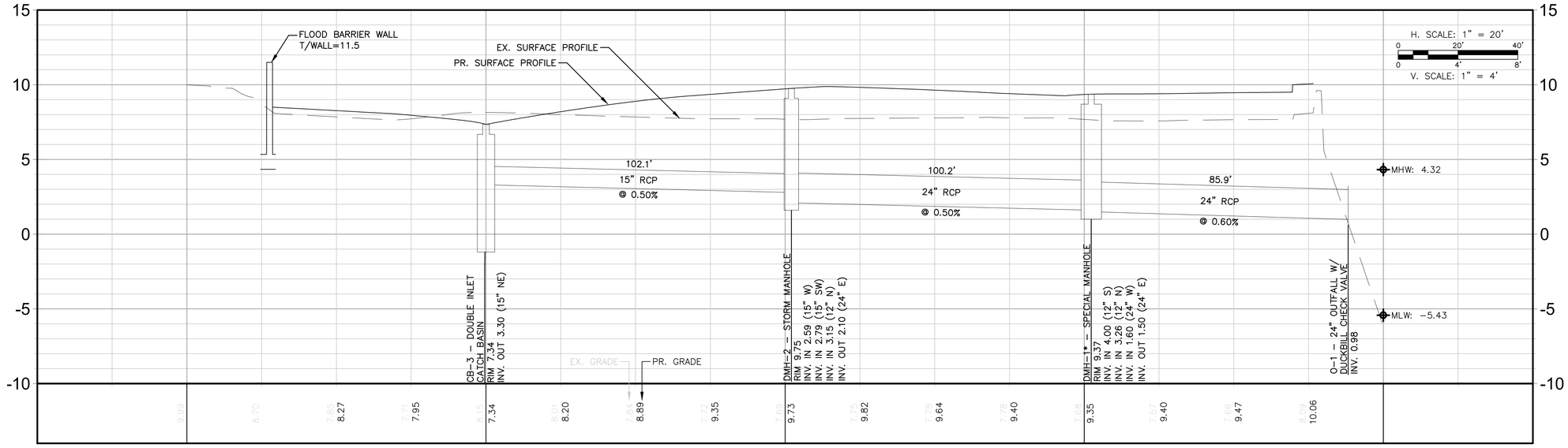
ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



STORM SEWER LATERAL PROFILES

SCALE: AS NOTED

C-06 P2



STORM SEWER TRUNK PROFILE

SCALE: AS NOTED

C-06 P3

COLLINS ENGINEERS
1486 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

REVISIONS

PROPOSED STORM SEWER PROFILES

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS
AND COASTAL RESILIENCE PROJECT

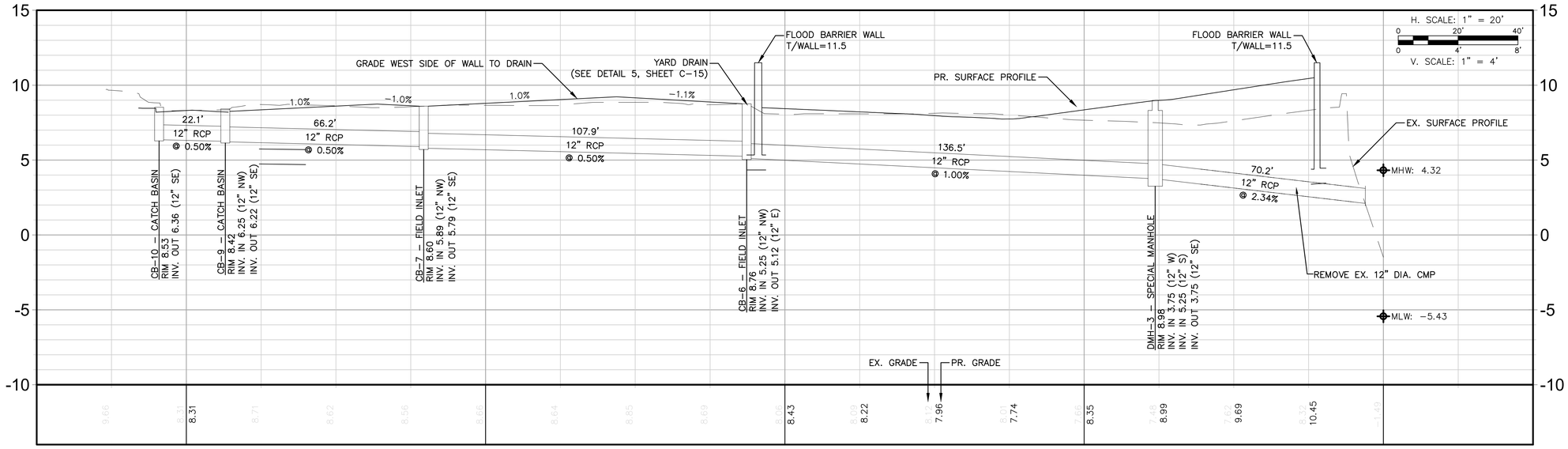
2026

PLYMOUTH, MA

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

C-08
14 OF 31

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



STORM SEWER PROFILE

SCALE: AS NOTED

C-06 P4

1486 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COLLINS ENGINEERS, INC

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

PROPOSED STORM SEWER PROFILES

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

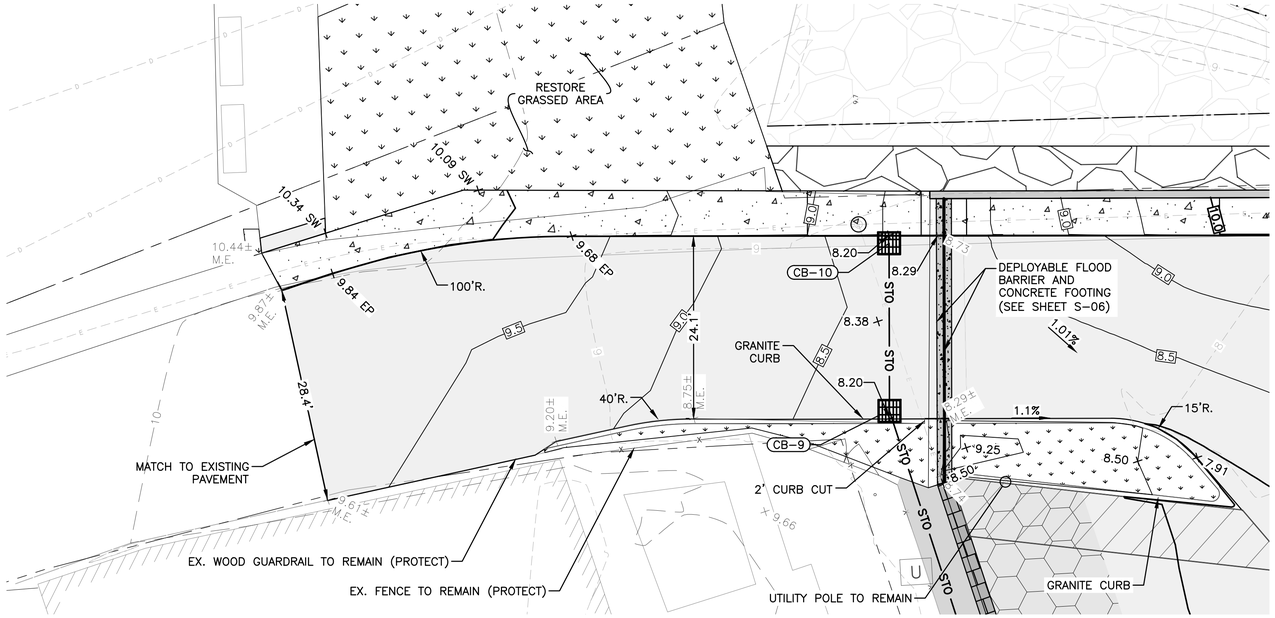
PLYMOUTH, MA

2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

C-08B
14B OF 31

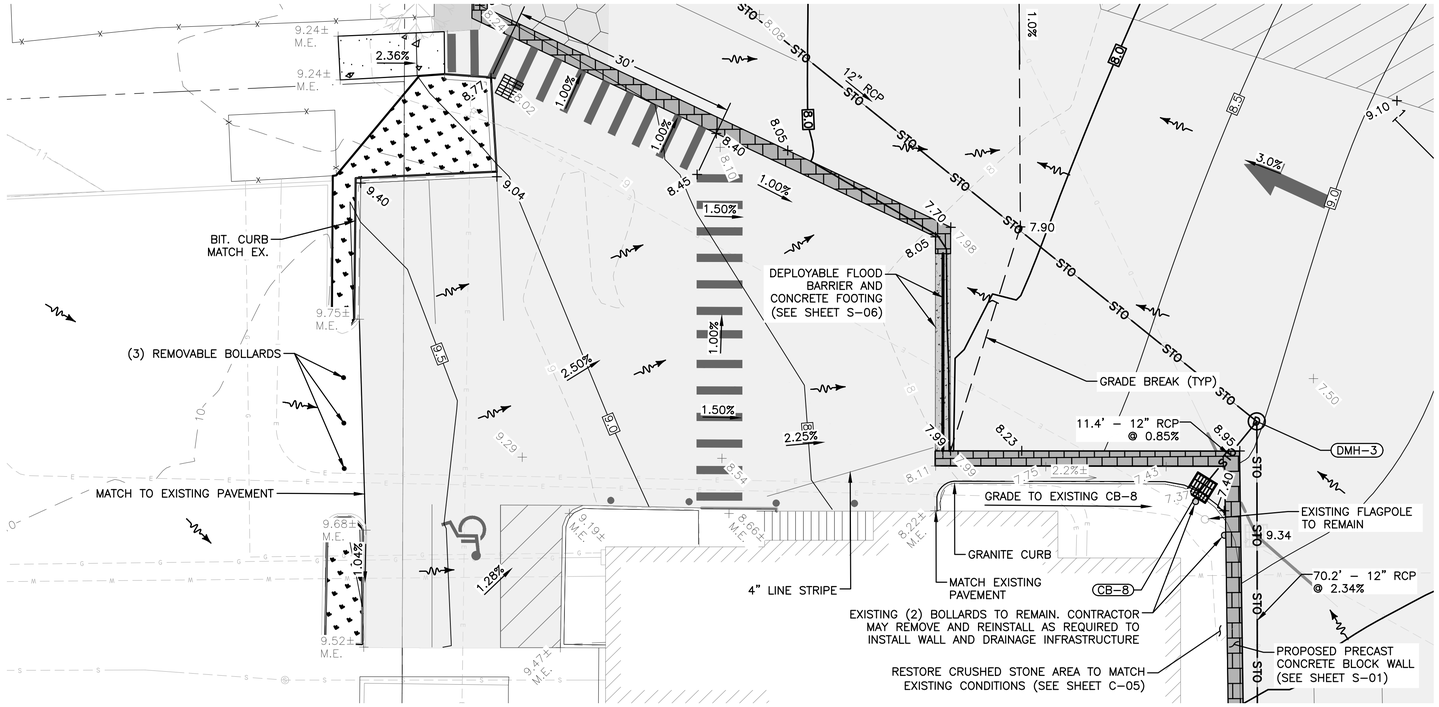
ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



PLAN NORTH

NORTHERN SITE ENTRANCE PLAN

SCALE: 1"=10'



PLAN NORTH

SOUTHERN SITE ENTRANCE PLAN

SCALE: 1"=10'

COLLINS ENGINEERS, INC.
1486 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

REVISIONS

PROPOSED SITE ACCESS ROAD DETAILS

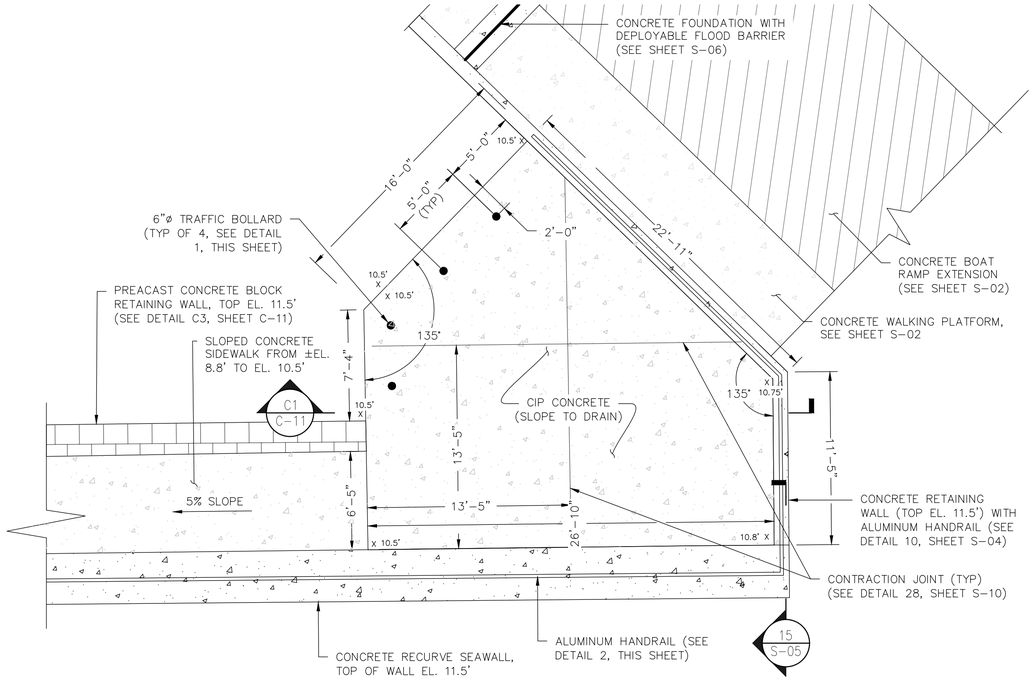
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

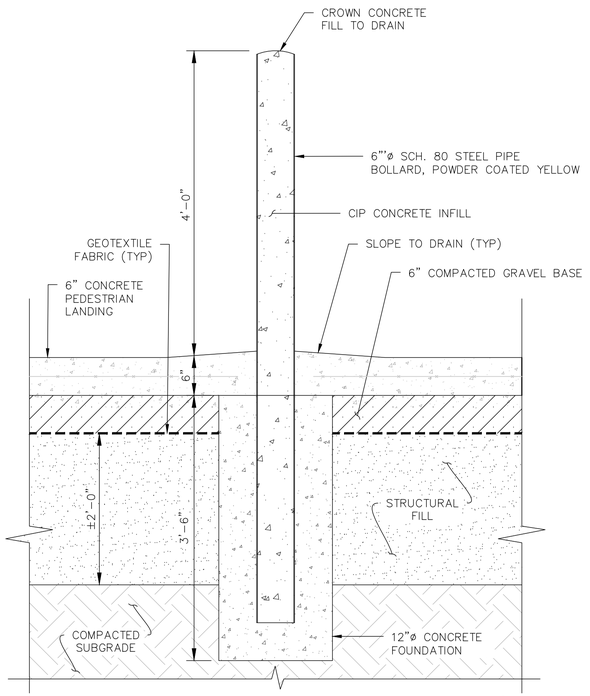
C-09
15 OF 31



PEDESTRIAN LANDING PLAN

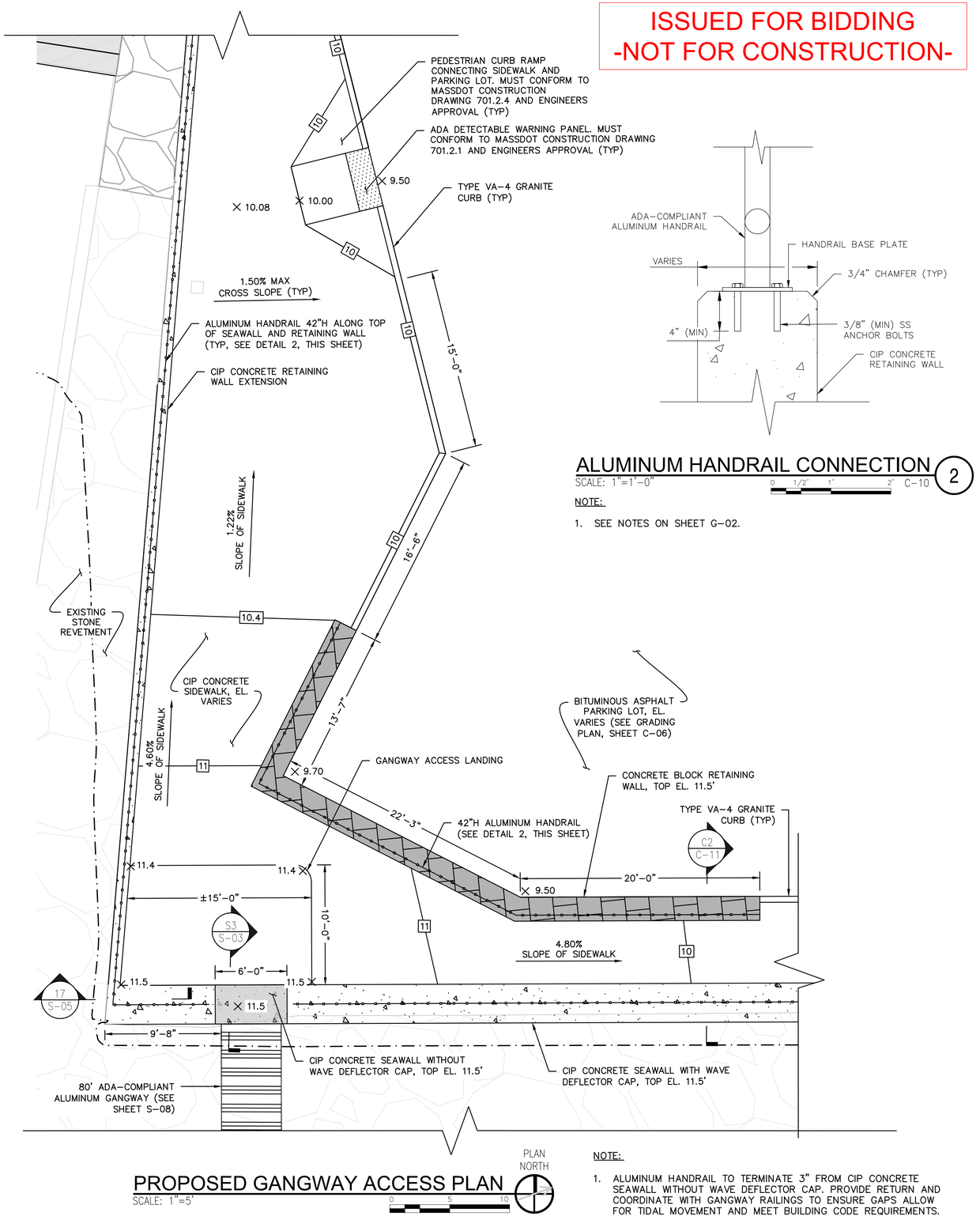
SCALE: 1"=5'

PLAN NORTH



TRAFFIC BOLLARD DETAIL

SCALE: 1"=1'-0" — 1



PROPOSED GANGWAY ACCESS PLAN

SCALE: 1"=5'

PLAN NORTH

NOTE:

1. ALUMINUM HANDRAIL TO TERMINATE 3" FROM CIP CONCRETE SEAWALL WITHOUT WAVE DEFLECTOR CAP. PROVIDE RETURN AND COORDINATE WITH GANGWAY RAILINGS TO ENSURE GAPS ALLOW FOR TIDAL MOVEMENT AND MEET BUILDING CODE REQUIREMENTS.

ALUMINUM HANDRAIL CONNECTION

SCALE: 1"=1'-0" — 2

NOTE:

1. SEE NOTES ON SHEET G-02.

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-

1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COLLINS ENGINEERS INC

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

REVISIONS

PROPOSED PEDESTRIAN LANDING AND GANGWAY ACCESS PLANS AND DETAILS

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

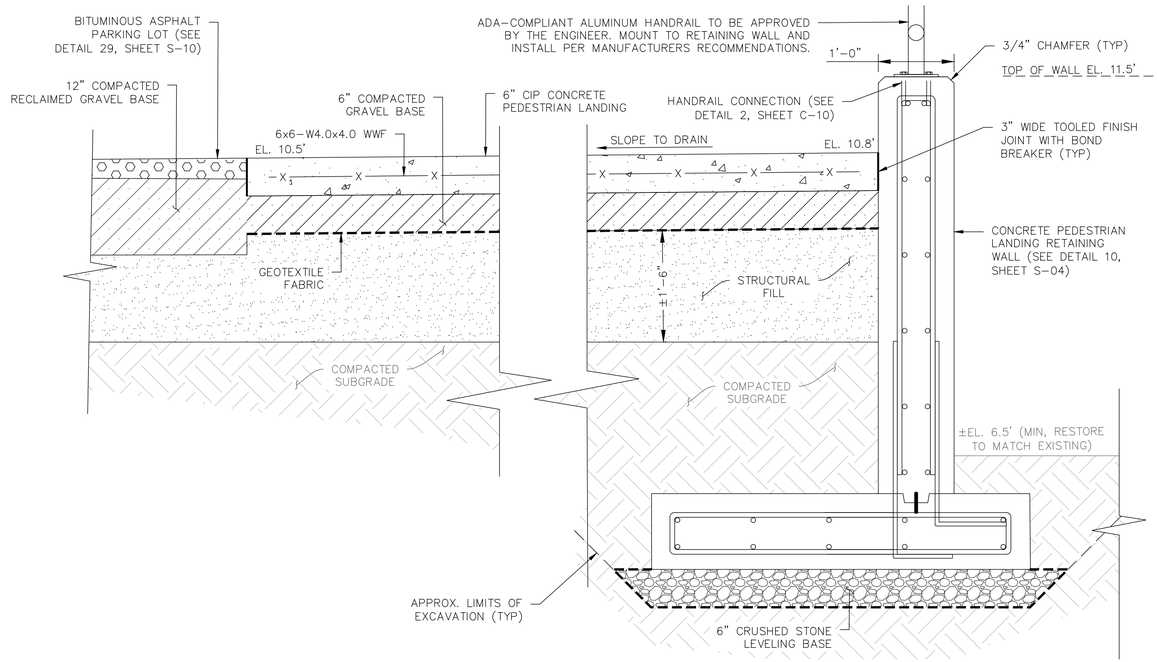
2026

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

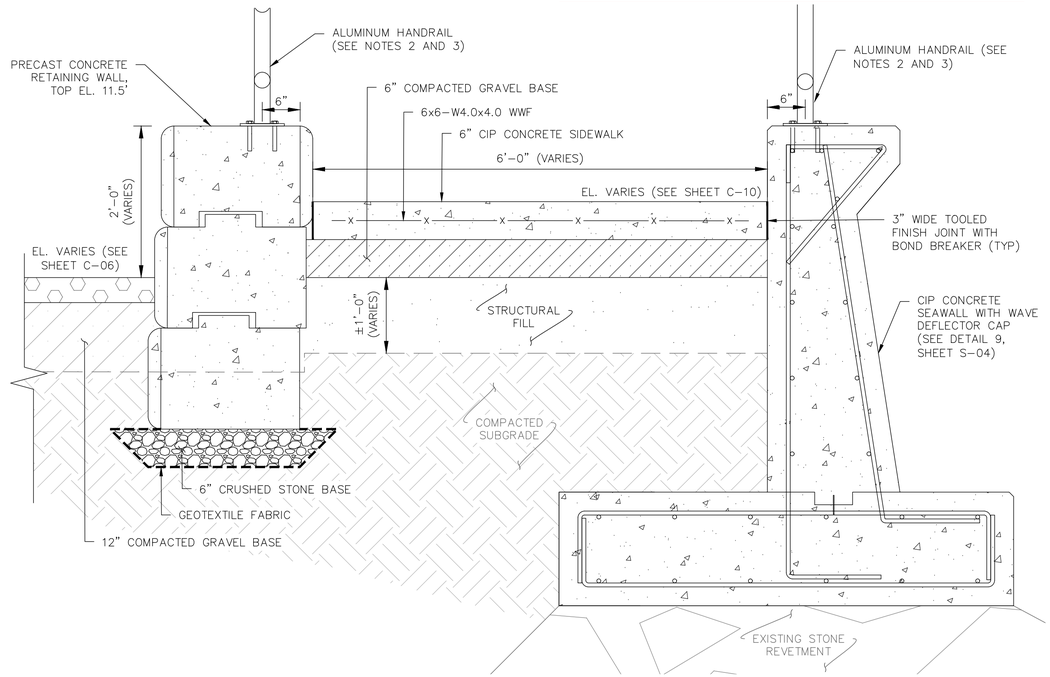
C-10
16 OF 31

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



PEDESTRIAN LANDING SECTION (C1)

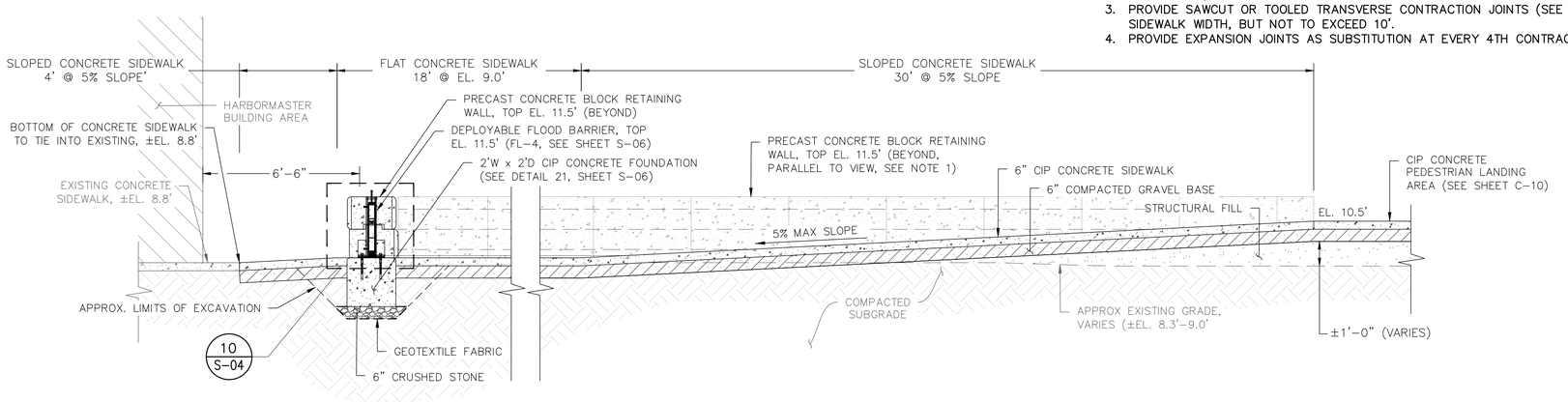
SCALE: 1"=1'–0" 0 1/2' 1' 2' C–10



GANGWAY ACCESS SECTION (C2)

SCALE: 1"=1'–0" 0 1/2' 1' 2' C–10

NOTE:
1. PRECAST CONCRETE BLOCK RETAINING WALL SHALL CONSIST OF 16"H x 24"W x 48"L CONCRETE BLOCKS, OR APPROVED EQUIVALENT. WALL SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND APPROVED BY THE ENGINEER.
2. ALUMINUM HANDRAIL SHALL BE INSTALLED PER THE MANUFACTURERS RECOMMENDATIONS AND APPROVED BY THE ENGINEER.
3. SEE DETAIL 2, SHEET C–10 FOR ADDITIONAL ALUMINUM HANDRAIL INSTALLATION.
3. PROVIDE SAWCUT OR TOOLED TRANSVERSE CONTRACTION JOINTS (SEE DETAIL 28, SHEET S–10) AT SPACING EQUAL TO SIDEWALK WIDTH, BUT NOT TO EXCEED 10'.
4. PROVIDE EXPANSION JOINTS AS SUBSTITUTION AT EVERY 4TH CONTRACTION JOINT (SEE DETAIL 31, S–10).



PROPOSED GRADED SIDEWALK AND SOUTH FLOODWALL SECTION (C3)

SCALE: 1"=3'–0" 0 3 6 C–06

NOTE:
1. PRECAST CONCRETE BLOCK RETAINING WALL SHALL CONSIST OF 16"H x 24"W x 48"L CONCRETE BLOCKS, OR APPROVED EQUIVALENT. WALL SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND APPROVED BY THE ENGINEER.
2. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER TO PROVIDE END TRANSITION BETWEEN CIP CONCRETE RETAINING WALL AND PRECAST CONCRETE BLOCK RETAINING WALL. CONTRACTOR SHALL ENSURE TRANSITION PROVIDES PROPER ALIGNMENT AND COMPLETE SEAL WITH DEPLOYABLE FLOOD BARRIER CONNECTION. TRANSITION IS TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
3. PROVIDE SAWCUT OR TOOLED TRANSVERSE CONTRACTION JOINTS (SEE DETAIL 28, SHEET S–10) AT SPACING EQUAL TO SIDEWALK WIDTH, BUT NOT TO EXCEED 10'.
4. PROVIDE EXPANSION JOINTS AS SUBSTITUTION AT EVERY 4TH CONTRACTION JOINT (SEE DETAIL 31, S–10).
5. REINFORCEMENT NOT SHOWN FOR CLARITY.

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED–FOR–BIDDING

REVISIONS

PROPOSED PEDESTRIAN LANDING AND GANGWAY ACCESS PLANS AND DETAILS

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

2026

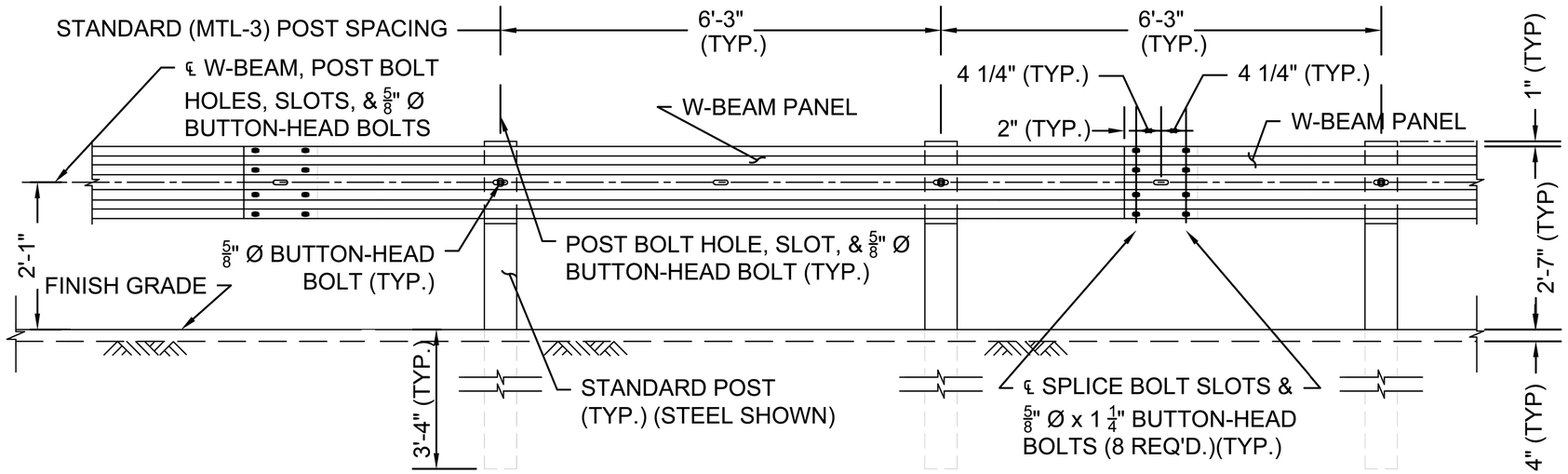
designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15–15409
OFBA project no.: PA–425
date: OCTOBER 2026

C–11
17 OF 31

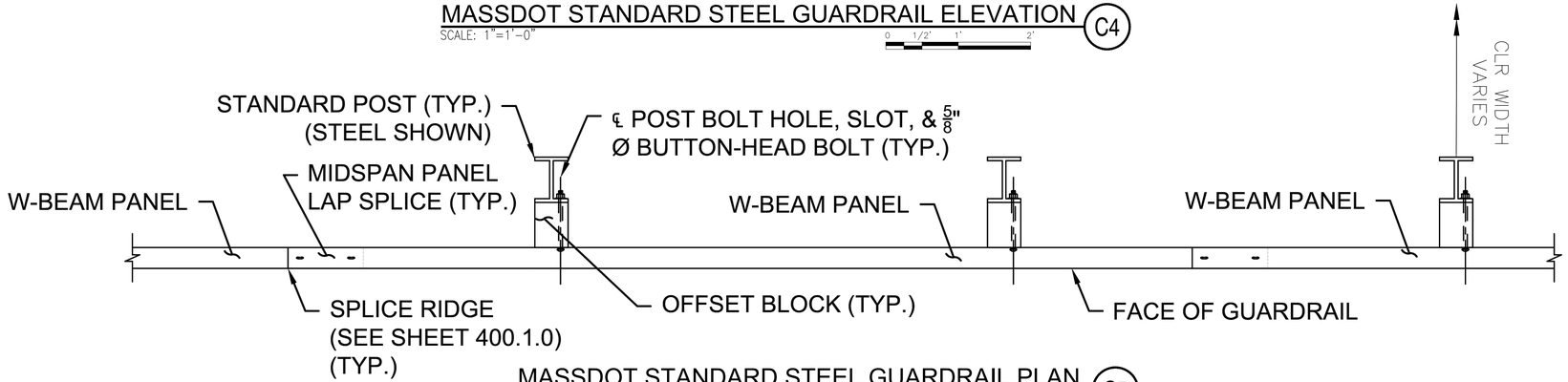
ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-

NOTE:

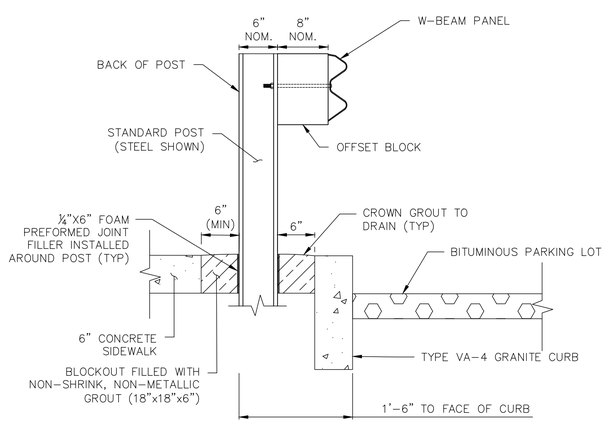
1. STEEL GUARDRAIL MUST CONFORM TO MASSDOT CONSTRUCTION DRAWING 601.0.2, MASSDOT STANDARD SPECIFICATIONS SUBSECTION 601, AND THE ENGINEERS APPROVAL.
2. BLOCKOUTS SHALL BE INSTALLED AROUND STEEL GUARDRAIL POSTS TO ISOLATE THE POSTS FROM THE CONCRETE SIDEWALK (SEE DETAIL C6, THIS SHEET).



MASSDOT STANDARD STEEL GUARDRAIL ELEVATION C4
SCALE: 1"=1'-0"



MASSDOT STANDARD STEEL GUARDRAIL PLAN C5
SCALE: 1"=1'-0"



MASSDOT STANDARD STEEL GUARDRAIL SECTION C6
SCALE: 1"=1'-0"

COLLINS ENGINEERS, INC.
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
100	10/20/2026	ISSUED FOR BIDDING

REVISIONS

PROPOSED STEEL GUARDRAIL DETAILS

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

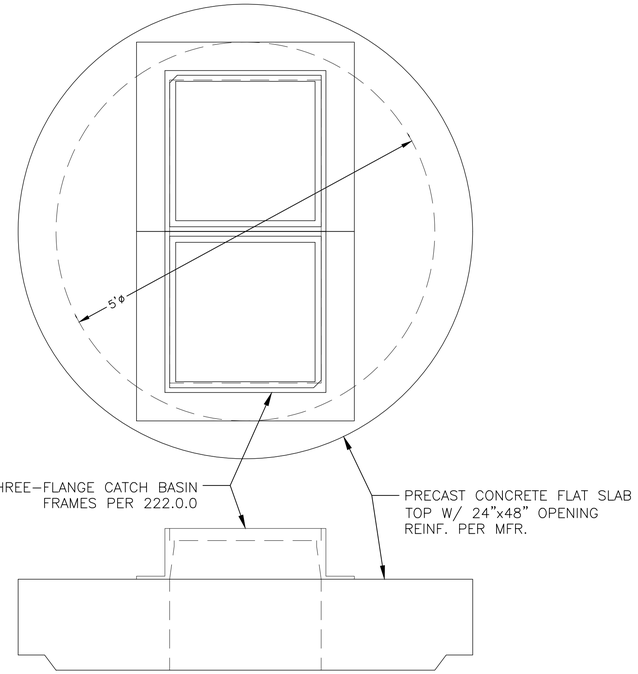
PLYMOUTH, MA

2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

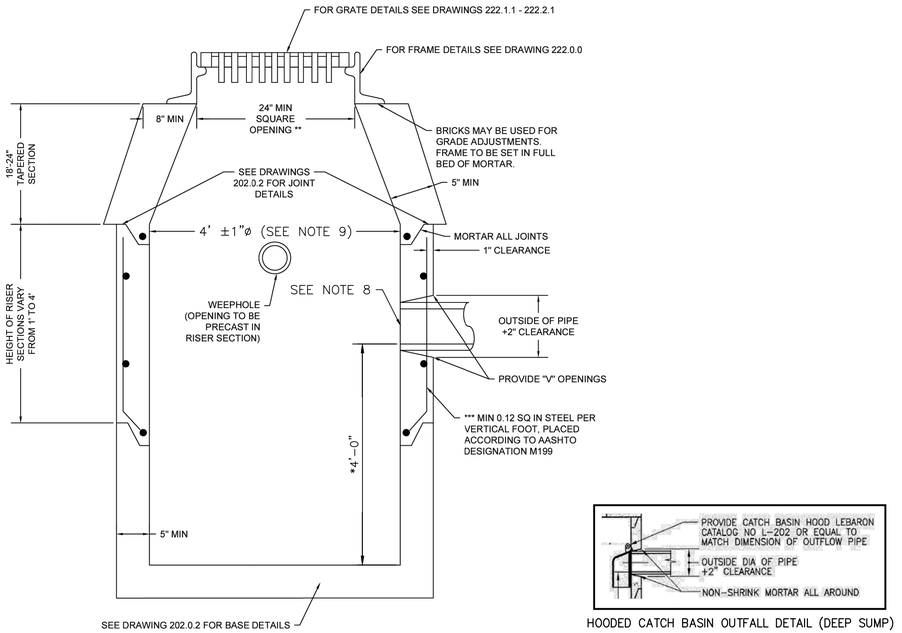
C-12
18 OF 31

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



DOUBLE INLET FRAME DETAIL C7A

SCALE: 1"=1'-0"



HOODED CATCH BASIN OUTFALL DETAIL (DEEP SUMP)

MASSDOT STANDARD PRECAST CONCRETE CATCH BASIN DETAIL C7B

SCALE: 1"=1'-0"

* MINIMUM DEPTH OF SUMP TO BE 4 FEET.
** WHEN A CURB INLET IS INSTALLED, THE OPENING IS TO BE 24"±1" x 27"±1".
*** REINFORCING STEEL BASED ON A WALL THICKNESS OF 5".

NOTES:
1. DETAILS NOT INDICATED ABOVE ARE TO BE SIMILAR TO THOSE SHOWN ON DETAIL C7.
2. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTERLINE OF PIPE.
3. FOR DESCRIPTION, MATERIALS, AND CONSTRUCTION METHODS, SEE STANDARD SPECIFICATIONS.
4. ALL CONCRETE SHALL BE AIR ENTRAINED, TYPE II PORTLAND CEMENT.
5. PRECAST STRUCTURE MIX CONCRETE DESIGN SHALL BE APPROVED BY ENGINEER AND OWNER.
6. AT LOCATIONS OF "V" OPENINGS, CONTRACTOR SHALL INSTALL NON-SHRINK MORTAR PIPE PENETRATION VOID SPACES INSIDE AND OUTSIDE STRUCTURE TO MAKE WATERTIGHT.
7. TAPERED SECTION MAY BE REPLACED BY FLAT TOP SECTION WHERE REQUIRED UPON APPROVAL BY THE ENGINEER AND OWNER.
8. CATCH BASINS SHALL HAVE HOODED OUTFALLS AS DEPICTED IN THE HOODED CATCH BASIN OUTFALL DETAIL (DEEP SUMP). DMH-1 SHALL HAVE A HYDRODYNAMIC SEPARATOR INSTALLED THAT SHALL BE APPROVED BY THE ENGINEER AND OWNER.
9. CB-1 AND CB-3 SHALL BE 5' DIAMETER. ALL OTHER CATCH BASINS SHALL BE 4' DIAMETER UNLESS NOTED OTHERWISE.

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

REVISIONS

2026

PROPOSED DEEP SUMP CATCH BASIN DETAILS

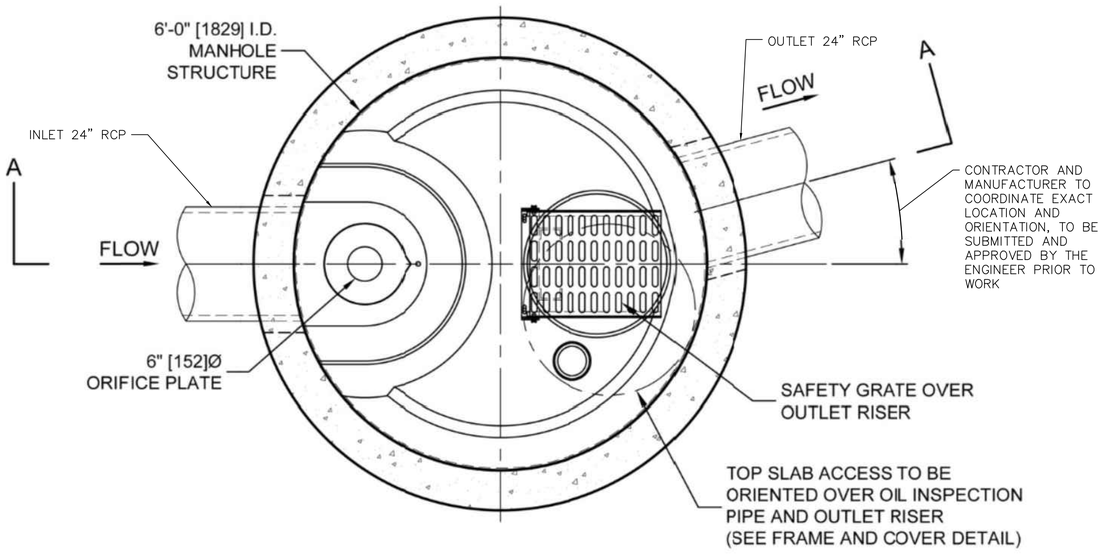
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

designed by: AVR/CEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

C-13
19 OF 31

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



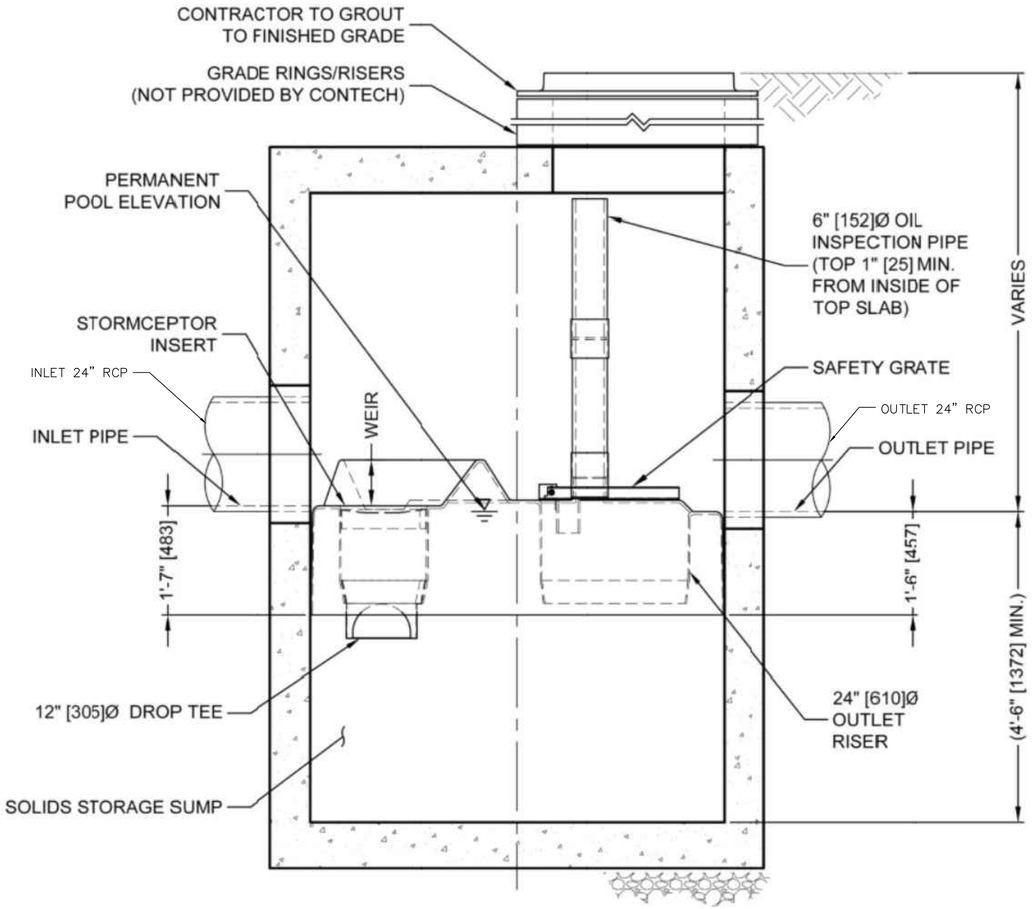
STORMCEPTOR PLAN C8

SCALE: NTS

NOTES:
1. INLET AND OUTLET PIPES SHALL BE 24" RCP AS INDICATED ON SHEET C-06.
2. CONTRACTOR AND MANUFACTURER TO COORDINATE ON EXACT OUTFLOW ORIENTATION ANGLES FOR PROJECT SUBMITTALS AND APPROVALS BY ENGINEER AND OWNER.

GENERAL NOTES:
1. STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
2. STORMCEPTOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' – 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306.
3. STORMCEPTOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES:
1. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOATATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY THE ENGINEER OF RECORD.
2. CONTRACTOR SHALL INSTALL A MINIMUM 6" OF COMPACTED CRUSHED STONE BENEATH STORMCEPTOR BASE.
3. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMCEPTOR MANHOLE STRUCTURE.
4. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
5. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
6. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. ALL JOINTS BELOW PIPE INVERTS SHALL BE GROUTED.



STORMCEPTOR SECTION C9

SCALE: NTS

NOTE:
1. INLET AND OUTLET PIPES SHALL BE 24" RCP AS INDICATED ON SHEET C-06.

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REVISIONS

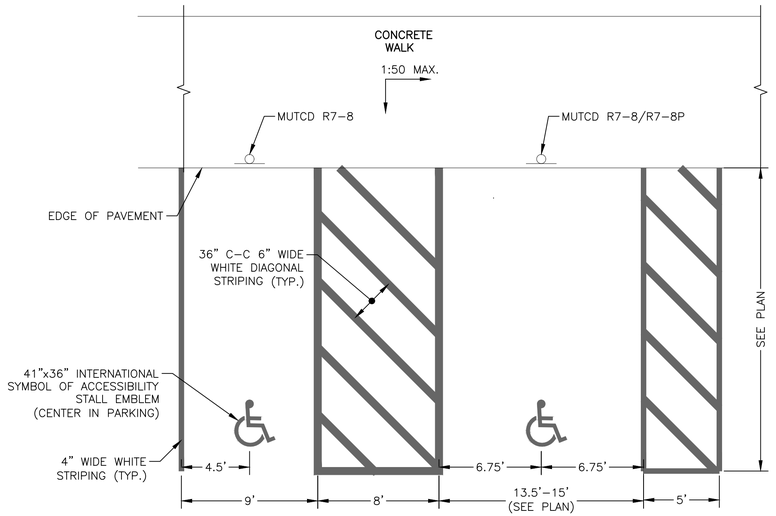
REV. NO.	DATE	DESCRIPTION
0	10/20/2026	ISSUED-FOR-BIDDING

PROPOSED STORMCEPTOR DETAILS
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT
PLYMOUTH, MA
2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

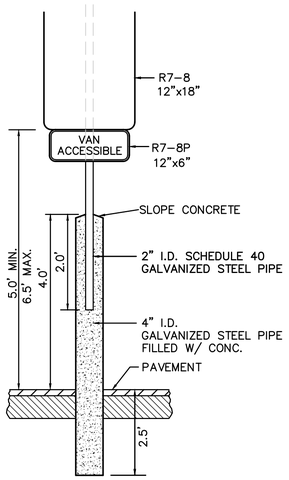
C-14
20 OF 31

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



ADA PARKING STRIPING
PLAN VIEW

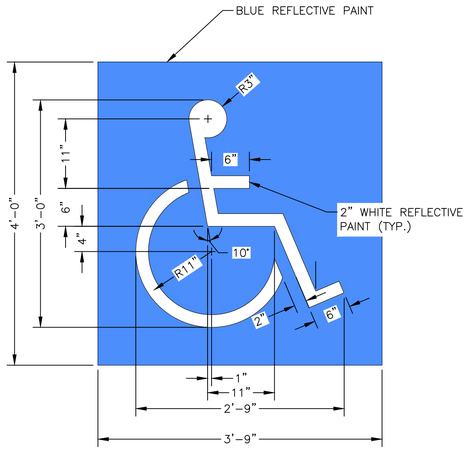
PAVING, MARKING, AND SIGNAGE OF ACCESSIBLE PARKING AREAS SHALL COMPLY WITH THE REQUIREMENTS OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (521 CMR).

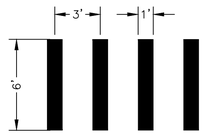


ALL SIGNS SHALL BE MOUNTED TO POSTS BY MEANS OF 5/16" BOLTS. HOLES 3/8" IN DIAMETER, DRILLED THROUGH BOTH SIDES OF POSTS PRIOR TO SIGN INSTALLATION.

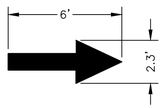
NOTE: ALL ADA SIGNING AND STRIPING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "MANUAL ON TRAFFIC DEVICES FOR STREETS AND HIGHWAYS", (MUTCD), ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, LATEST EDITION.

SIGNING DETAILS





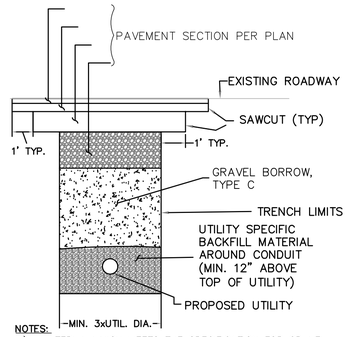
CROSSWALK



TRAFFIC ARROW

TYPICAL ADA PARKING, SIGNING, & STRIPING DETAILS 3

SCALE: NTS C-05



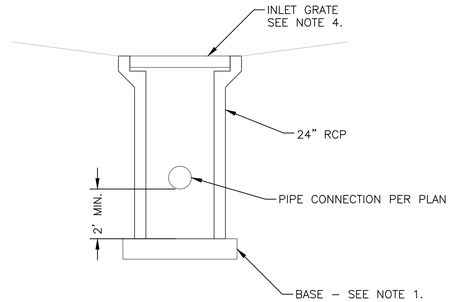
NOTES:
1.) MATERIAL WHICH MEETS THE SPECIFICATION FOR GRAVEL BORROW TYPE C (M1.03.0 TYPE C) SHALL BE PLACED AND COMPACTED IN LAYERS NO GREATER THAN 6" LIFTS.

2.) UNLESS OTHERWISE SPECIFIED, ALL TRENCH DIMENSIONS SHALL BE IN ACCORDANCE WITH SUB-SECTION 140.80 OF THE MASSDOT STANDARDS AND SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.

TYPICAL UTILITY TRENCH DETAIL 4

SCALE: NTS C-06

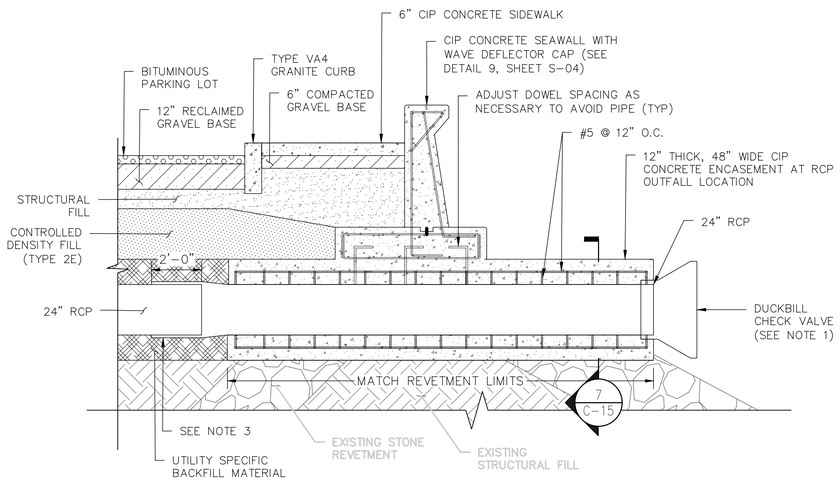
NOTE:
1. APPLIES TO ALL UTILITIY TRENCH/BEDDING, EXCEPT FOR PAVEMENT, SEE DETAIL 29, SHEET S-10 FOR PAVEMENT DETAILS



NOTES:
1. ACCEPTABLE BASE MATERIALS:
 1.1. 6" CAST-IN-PLACE CONCRETE (UNREINFORCED)
 1.2. 3" PRE-CAST CONCRETE ON 3" AGGREGATE
2. SET RCP SEGMENT BELL UP ON BASE (STRUCTURE DIA. <24"). OMIT BELL FOR 24" DIA. INLET.
3. CORE OR SAWCUT OPENING FOR PIPE CONNECTIONS. MORTAR JOINT.
4. INLET GRATE:
 4.1. 24": NEENAH R-4030-24 OR APPROVED EQUAL

FIELD INLET 5

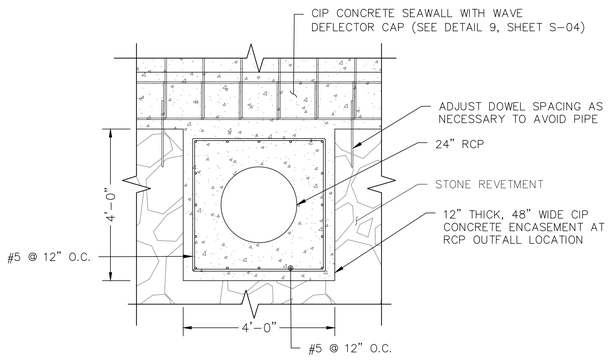
SCALE: NTS C-06



CONCRETE OUTFALL PENETRATION DETAIL 6

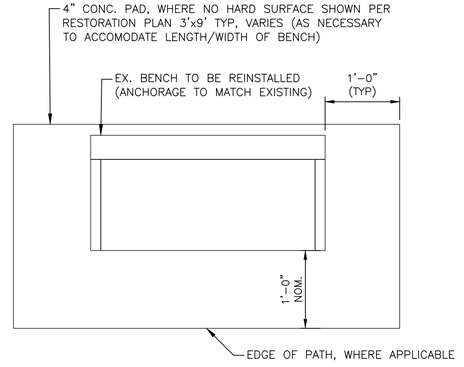
SCALE: NTS C-06

NOTES:
1. CONTRACTOR TO COORDINATE WITH MANUFACTURER ON DUCKBILL CHECK VALVE FABRICATION AND INSTALLATION, TO BE APPROVED BY THE ENGINEER.
2. CIP CONCRETE SEAWALL WITH WAVE DEFLECTOR CAP TO BE CAST INTEGRAL WITH 12" CIP CONCRETE ENCASEMENT
3. LANDWARD RCP TO EXTEND A MINIMUM OF 2' INTO SEAWARD RCP OUTFALL. CONTRACTOR TO COORDINATE WITH MANUFACTURER ON REQUIRED SPACING AND PACKER MATERIAL, TO BE APPROVED BY THE ENGINEER.



CONCRETE OUTFALL PENETRATION DETAIL 7

SCALE: NTS C-15



TYPICAL BENCH INSTALLATION DETAIL 8

SCALE: NTS C-05

COLLINS ENGINEERS, INC.
1486 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

ZACHARY D. JENKINS No. 51969 CIVIL REGISTERED PROFESSIONAL ENGINEER 10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

PROPOSED MISC. SITE CIVIL DETAILS
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT
PLYMOUTH, MA
2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

C-15
21 OF 31

GENERAL NOTES
1. EXISTING STRUCTURES AND INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO GREENSPACE, BENCHES, THE NORTHERN ASPHALT SIDEWLAK, AND DISTURBED AREAS OF THE STONE REVETMENT OR BREAKWATER SHALL BE RESTORED TO MATCH EXISTING CONDITIONS FOLLOWING CONSTRUCTION, UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER TO PROVIDE END TRANSITION BETWEEN PRECAST CONCRETE BLOCK RETAINING WALL AND DEPLOYABLE FLOOD BARRIER CONNECTION. CONTRACTOR SHALL ENSURE TRANSITION PROVIDES PROPER ALIGNMENT AND COMPLETE SEAL WITH DEPLOYABLE FLOOD BARRIER. TRANSITION SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

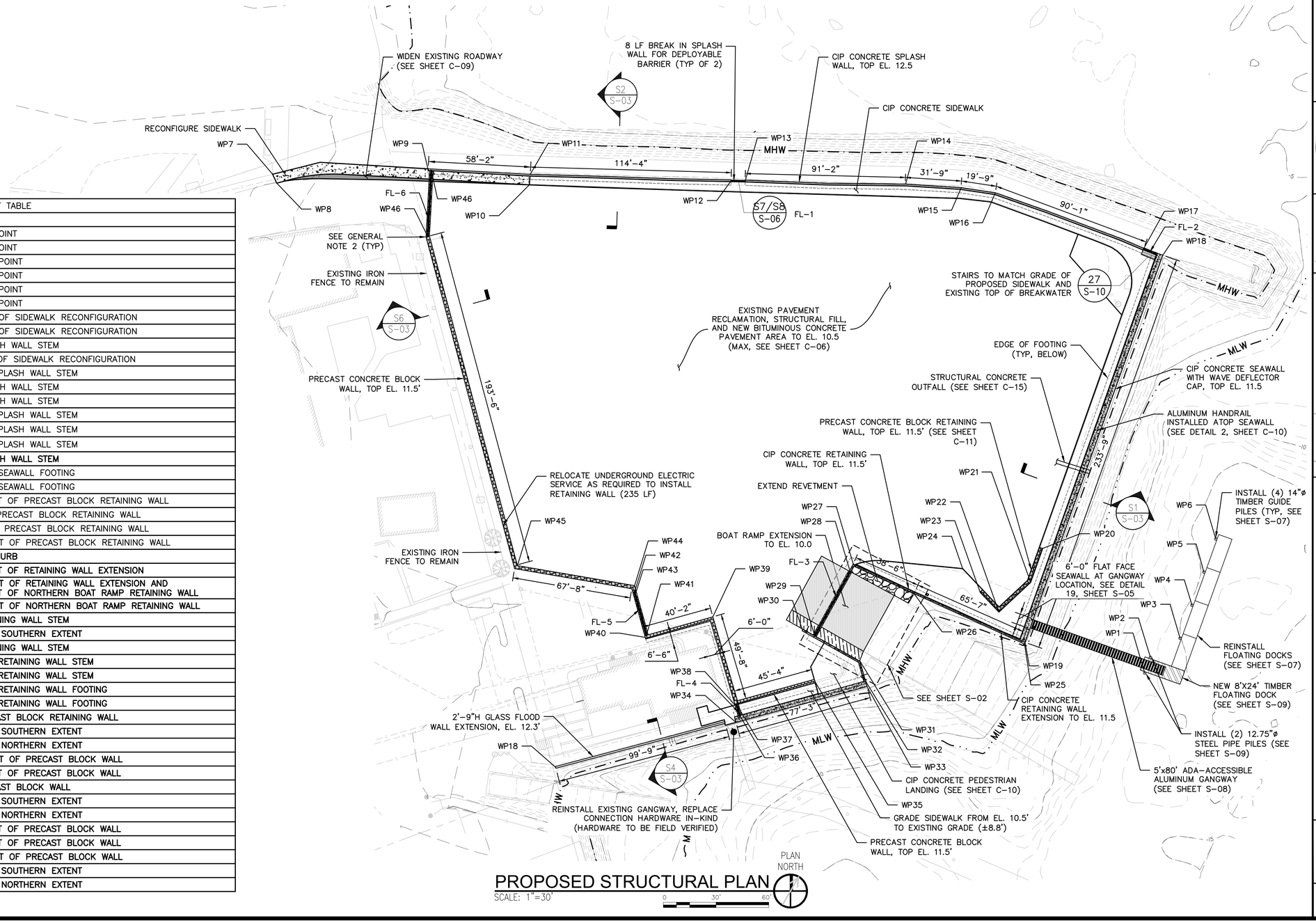
LEGEND

- PROPOSED EL. CONCRETE SPLASH WALL
- PROPOSED SEGMENTAL PRECAST CONCRETE BLOCK WALL
- PROPOSED CONCRETE RECURVE SEAWALL
- PROPOSED CONCRETE SEAWALL AROUND HARBORMASTER'S BUILDING
- PROPOSED CONCRETE SIDEWALK AND LANDING RECONFIGURATION
- PROPOSED REMOVAL AREA
- PROPOSED STAIRS
- PROPOSED GUARDRAIL
- PROPOSED DEPLOYABLE BARRIER

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-

DEPLOYABLE FLOOD BARRIER SCHEDULE		
NUMBER	LENGTH	HEIGHT
FL-1	8'-0"	1'-6"
FL-2	8'-0"	2'-0"
FL-3	41'-9"	2'-0"
FL-4	6'-6"	2'-6"
FL-5	25'-6"	3'-6"
FL-6	37'-6"	3'-0"

WORKING POINT TABLE			
WP	EASTING	NORTHING	DESCRIPTION
WP1	2812853.2406	882860.9416	STEEL PILE CENTER POINT
WP2	2812862.5944	882859.2799	STEEL PILE CENTER POINT
WP3	2812880.4254	882868.4770	TIMBER PILE CENTER POINT
WP4	2812900.1067	882864.9210	TIMBER PILE CENTER POINT
WP5	2812919.7880	882861.3650	TIMBER PILE CENTER POINT
WP6	2812939.4694	882857.8091	TIMBER PILE CENTER POINT
WP7	2812850.8397	**882289.3486**	NORTHWESTERN LIMIT OF SIDEWALK RECONFIGURATION
WP8	2812847.6138	882293.9674	SOUTHWESTERN LIMIT OF SIDEWALK RECONFIGURATION
WP9	2812897.3434	882364.6613	CENTERLINE OF SPLASH WALL STEM
WP10	2812918.6575	882418.8493	SOUTHEASTERN LIMIT OF SIDEWALK RECONFIGURATION
WP11	**2812924.2194**	**882416.5955**	NORTHERN SIDE OF SPLASH WALL STEM
WP12	**2812978.0845**	**882517.1217**	CENTERLINE OF SPLASH WALL STEM
WP13	**2812981.9335**	**882524.1349**	CENTERLINE OF SPLASH WALL STEM
WP14	**2813026.0549**	**882604.0438**	NORTHERN SIDE OF SPLASH WALL STEM
WP15	2813040.1284	882632.4900	NORTHERN SIDE OF SPLASH WALL STEM
WP16	2813047.3030	882650.8134	NORTHERN SIDE OF SPLASH WALL STEM
WP17	2813061.6543	882739.7190	CENTERLINE OF SPLASH WALL STEM
WP18	2813064.2218	882750.9963	SEAWARD EXTENT OF SEAWALL FOOTING
WP19	2812834.3194	882793.2567	SEAWARD EXTENT OF SEAWALL FOOTING
WP20	2812885.5858	882775.1918	NORTHEASTERN EXTENT OF PRECAST BLOCK RETAINING WALL
WP21	2812865.4686	882778.8971	EASTERN EXTENT OF PRECAST BLOCK RETAINING WALL
WP22	2812841.8219	882771.7078	SOUTHERN EXTENT OF PRECAST BLOCK RETAINING WALL
WP23	2812846.2531	882756.7998	SOUTHWESTERN EXTENT OF PRECAST BLOCK RETAINING WALL
WP24	2812852.8842	882741.5105	EDGE OF CONCRETE CURB
WP25	2812833.3403	882793.4367	SOUTHEASTERN EXTENT OF RETAINING WALL EXTENSION
WP26	2812826.7275	882724.6748	SOUTHWESTERN EXTENT OF RETAINING WALL EXTENSION AND SOUTHEASTERN EXTENT OF NORTHERN BOAT RAMP RETAINING WALL
WP27	2812824.0440	882686.2762	NORTHWESTERN EXTENT OF NORTHERN BOAT RAMP RETAINING WALL
WP28	2812819.4357	882686.8743	CENTERLINE OF RETAINING WALL STEM
WP29	2812777.6821	882687.7404	CENTERLINE OF FL-3 SOUTHERN EXTENT
WP30	2812777.0772	882680.0758	CENTERLINE OF RETAINING WALL STEM
WP31	2812778.0539	882717.3101	SEAWARD EXTENT OF RETAINING WALL STEM
WP32	2812769.8895	882725.6025	SEAWARD EXTENT OF RETAINING WALL STEM
WP33	2812767.6042	882727.9133	SEAWARD EXTENT OF RETAINING WALL FOOTING
WP34	2812712.6563	882673.5551	SEAWARD EXTENT OF RETAINING WALL FOOTING
WP35	2812755.4080	882700.6065	CENTERLINE OF PRECAST BLOCK RETAINING WALL
WP36	2812717.1514	882673.4708	CENTERLINE OF FL-4 SOUTHERN EXTENT
WP37	2812721.6503	882668.8516	CENTERLINE OF FL-4 NORTHERN EXTENT
WP38	2812720.9372	882668.1505	SOUTHWESTERN EXTENT OF PRECAST BLOCK WALL
WP39	2812758.0658	882632.1347	NORTHEASTERN EXTENT OF PRECAST BLOCK WALL
WP40	2812728.7227	882604.6748	CENTERLINE OF PRECAST BLOCK WALL
WP41	2812730.1296	882604.6701	CENTERLINE OF FL-5 SOUTHERN EXTENT
WP42	2812748.0124	882586.4802	CENTERLINE OF FL-5 NORTHERN EXTENT
WP43	2812748.7255	882587.1813	SOUTHEASTERN EXTENT OF PRECAST BLOCK WALL
WP44	2812751.1701	882584.6947	NORTHEASTERN EXTENT OF PRECAST BLOCK WALL
WP45	2812727.7076	882521.2731	SOUTHWESTERN EXTENT OF PRECAST BLOCK WALL
WP46	2812864.3274	882383.4691	CENTERLINE OF FL-6 SOUTHERN EXTENT
WP47	2812897.736	882366.5349	CENTERLINE OF FL-6 NORTHERN EXTENT



PROPOSED STRUCTURAL PLAN
SCALE: 1"=30'
0 30' 60'

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

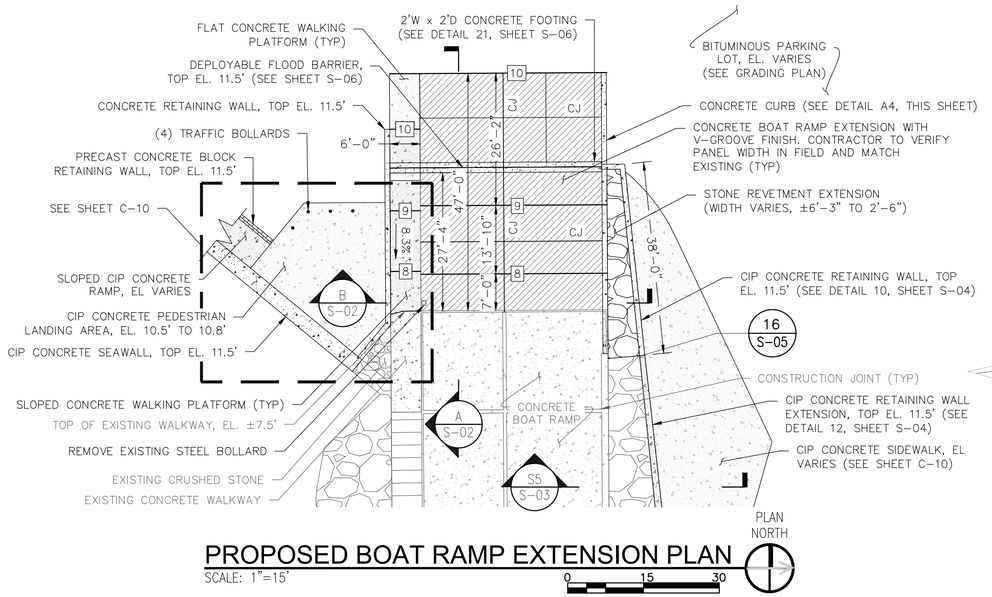
REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

PROPOSED STRUCTURAL PLAN
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT
PLYMOUTH, MA
2026

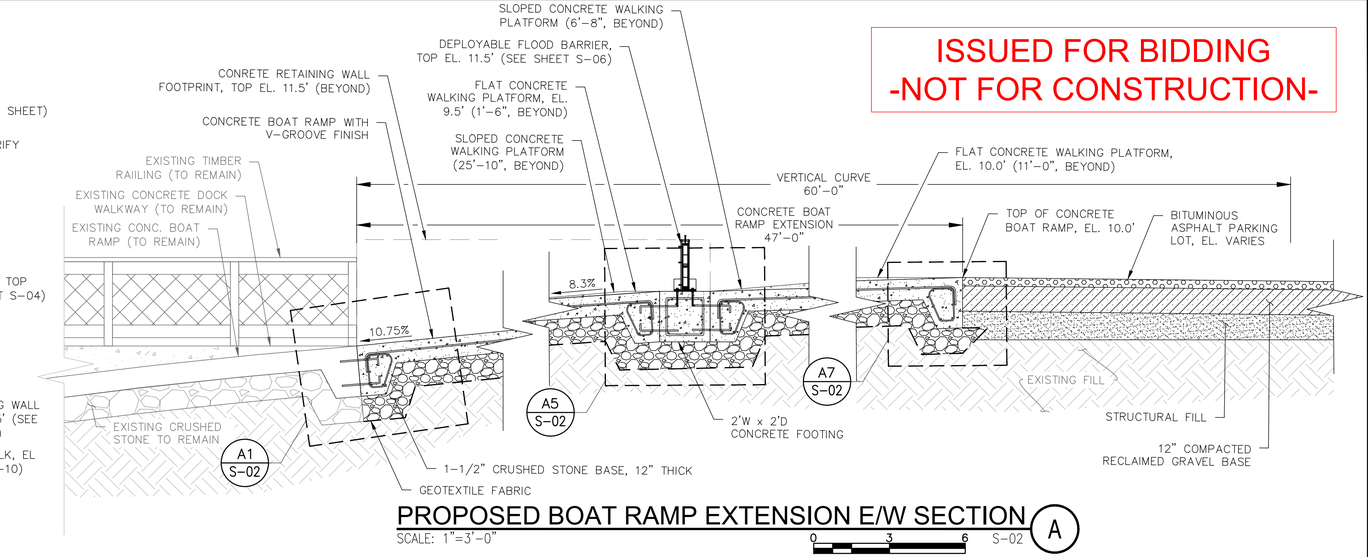
designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

S-01
22 OF 31



PROPOSED BOAT RAMP EXTENSION PLAN

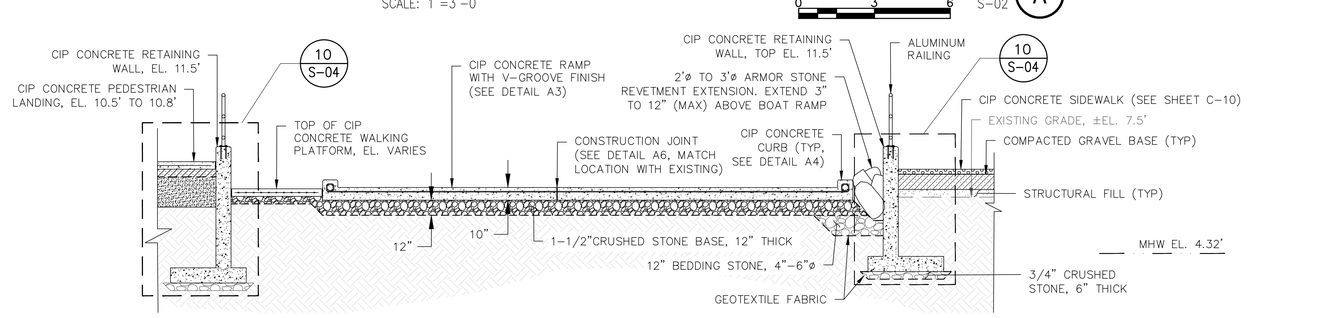
SCALE: 1"=15'



PROPOSED BOAT RAMP EXTENSION E/W SECTION A

SCALE: 1"=3'-0" 0 3 6 S-02

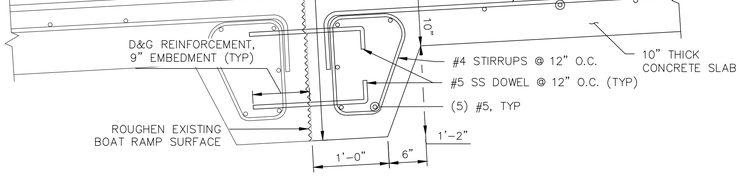
ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



PROPOSED BOAT RAMP EXTENSION N/S SECTION B

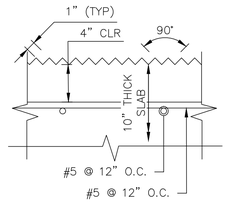
SCALE: 1"=5' 0 5 10 S-02

NOTE:
1. REINFORCEMENT NOT SHOWN FOR CLARITY.



BOAT RAMP EXTENSION SLAB CONNECTION A1

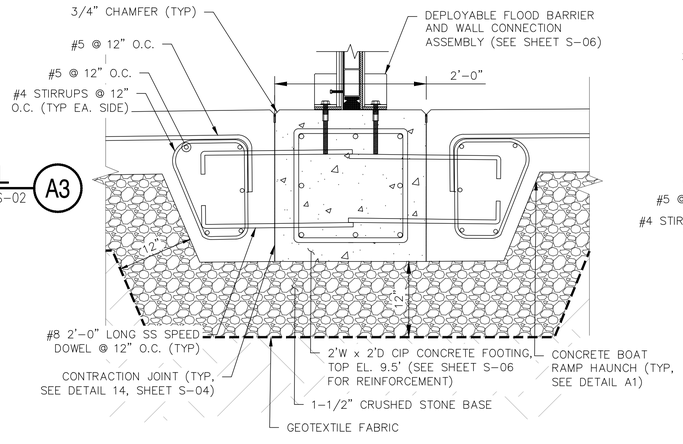
SCALE: 1"=1'-0" 0 1/2' 1' 2' S-02



V-GROOVE FINISH DETAIL A3

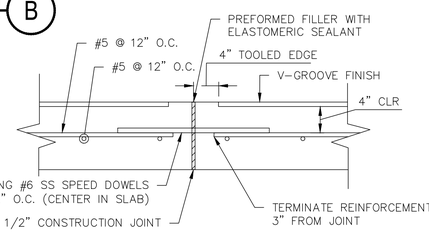
SCALE: 1½"=1'-0" 0 1/2' 1' 1 1/2' S-02

NOTE:
1. GROOVES TO MATCH EXISTING DIRECTION.



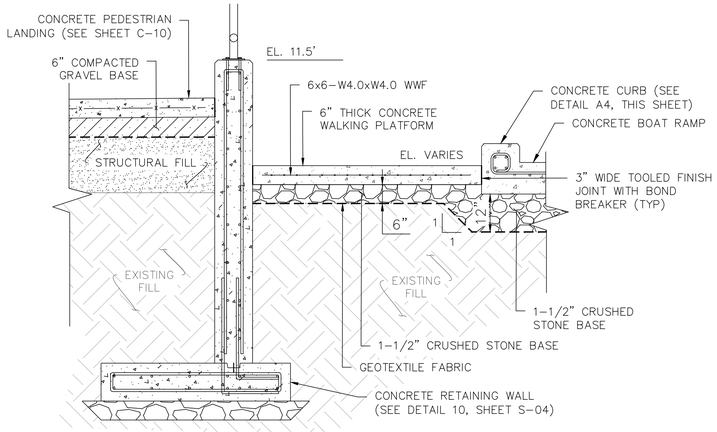
BOAT RAMP CONCRETE FOOTING DETAIL A5

SCALE: 1"=1'-0" 0 1/2' 1' 2' S-02



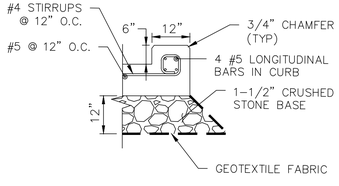
CONSTRUCTION JOINT DETAIL A6

SCALE: 1"=1'-0" 0 1/2' 1' 2' S-02



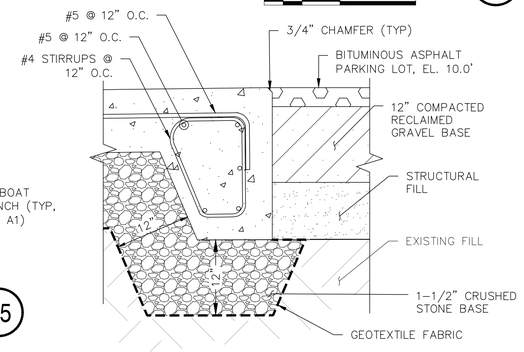
CONCRETE WALKING PLATFORM A2

SCALE: 1"=2'-0" 0 2 4 S-02



BOAT RAMP CURB DETAIL A4

SCALE: 1"=1'-0" 0 1/2' 1' 2' S-02



TOP OF BOAT RAMP DETAIL A7

SCALE: 1"=1'-0" 0 1/2' 1' 2' S-02

COLLINS ENGINEERS
1465 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

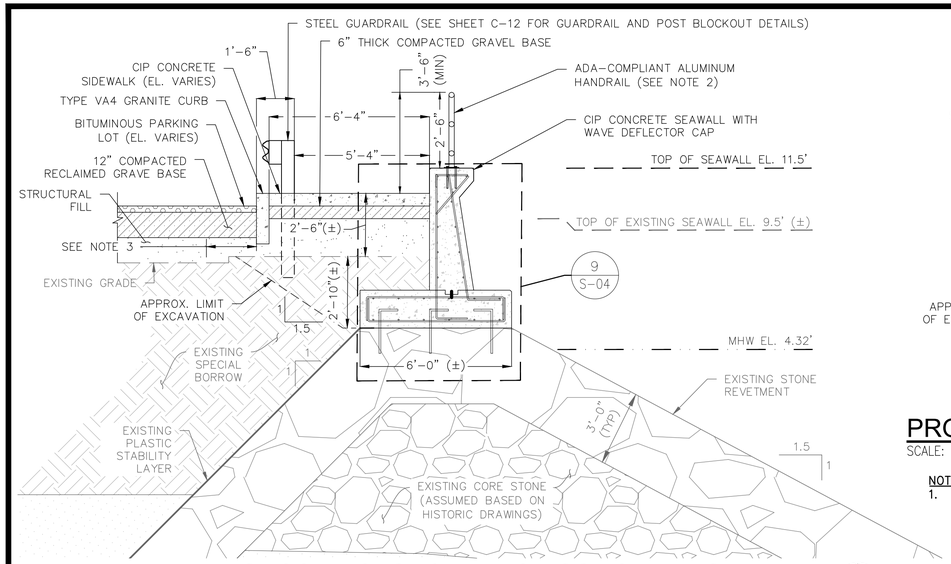
REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
000	10/20/2026	ISSUED-FOR-BIDDING

PROPOSED BOAT RAMP PLAN AND SECTIONS
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT
PLYMOUTH, MA
2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

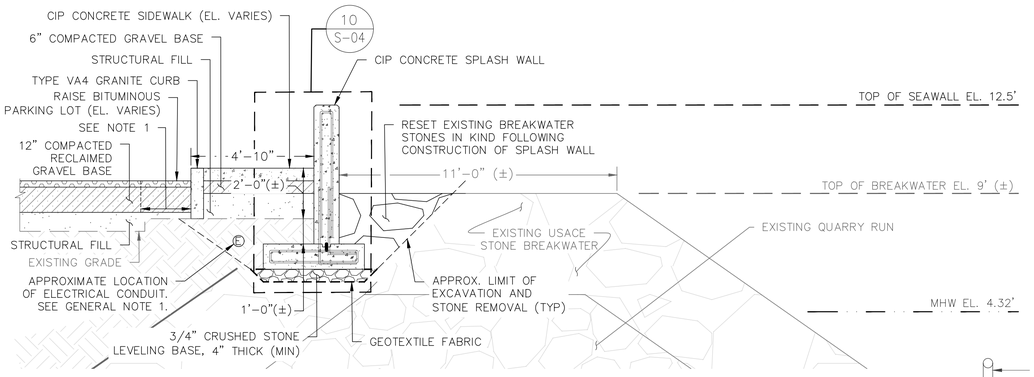
S-02
23 OF 31



PROPOSED CAST-IN-PLACE CONCRETE SEAWALL S1

SCALE: 1"=3'-0" 0 3 6 S-01

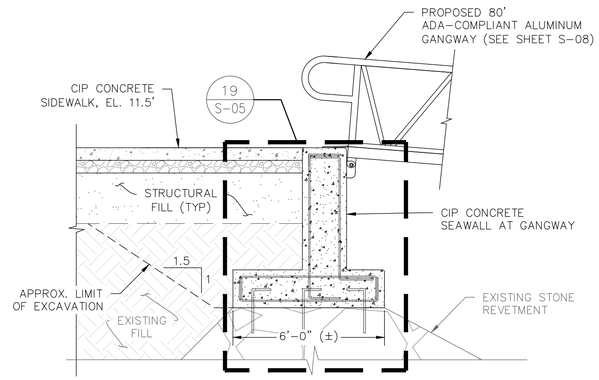
NOTE:
1. TYPICAL AT EAST AND SOUTH FACES OF SITE
2. HANDRAIL TO BE APPROVED BY THE ENGINEER. MOUNT TO RETAINING WALL EXTENSION AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS
3. SAWCUT EXISTING PAVEMENT LINE ±2' OFF FACE OF PROPOSED CURBLINE FOR PHASE I – CIP CONCRETE SEAWALL WORK SEQUENCE.
4. BLOCKOUTS AROUND GUARDRAIL POSTS SHALL BE INSTALLED. REFER TO NOTE 2, SHEET C-12.



PROPOSED CAST-IN-PLACE CONCRETE SPLASH WALL SECTION S2

SCALE: 1"=3'-0" 0 3 6 S-01

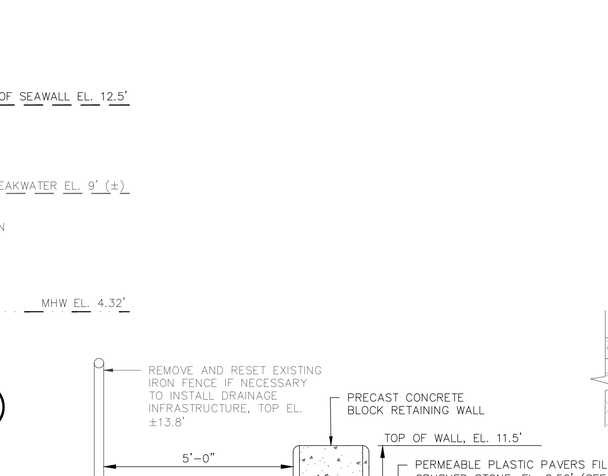
NOTE:
1. SAWCUT EXISTING PAVEMENT LINE ±2' OFF FACE OF PROPOSED CURBLINE FOR PHASE I – CIP CONCRETE SPLASH WALL WORK SEQUENCE.



PROPOSED SEAWALL SECTION AT GANGWAY S3

SCALE: 1"=3'-0" 0 3 6 C-10

NOTES:
1. CONTRACTOR SHALL PROVIDE A TEMPORARY GANGWAY CONNECTION TO BE APPROVED BY THE ENGINEER AS PART OF PHASE 2 WORK UNTIL NEW SEAWALL WORK OF PHASE 6 IS COMPLETED. NEW GANGWAY CONNECTIONS SHALL BE COMPLETED IN ACCORDANCE WITH DETAILS SHOWN ON SHEET S-08.

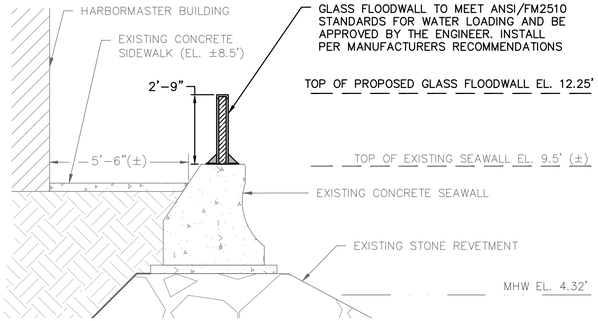


PROPOSED PRECAST RETAINING WALL SECTION S6

SCALE: 1"=2'-0" 0 2 4 S-01

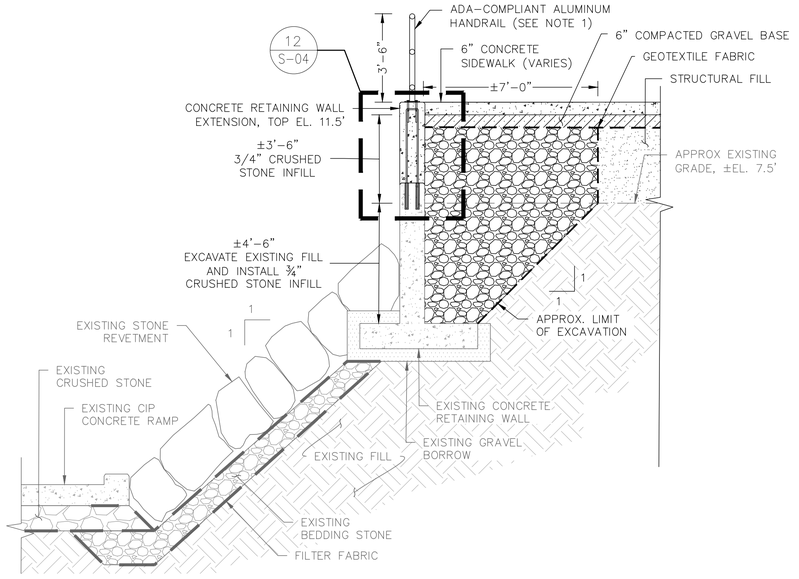
NOTE:
1. DEPTH OF CONCRETE BLOCKS BELOW GRADE SHALL BE PER MANUFACTURERS RECOMMENDATION AND AS APPROVED BY THE ENGINEER.
2. PERMEABLE PLASTIC PAVERS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND AS APPROVED BY THE ENGINEER.
3. ASPHALT SHALL BE INSTALLED OVER 6" COMPACTED GRAVEL BASE WITH THE INTERMEDIATE AND SURFACE COURSES IN ACCORDANCE WITH ON DETAIL 29, SHEET S-10.
4. REINFORCEMENT NOT SHOWN FOR CLARITY.

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



BID ALTERNATE 1: PROPOSED GLASS FLOODWALL SECTION S4

SCALE: 1"=3'-0" 0 3 6 S-01



PROPOSED RETAINING WALL EXTENSION SECTION S5

SCALE: 1"=3'-0"

NOTE:
1. HANDRAIL TO BE APPROVED BY THE ENGINEER. MOUNT TO RETAINING WALL EXTENSION AND INSTALL PER MANUFACTURERS RECOMMENDATIONS

COLLINS ENGINEERS
1465 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
9/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

REVISIONS

PROPOSED WALL SECTIONS

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

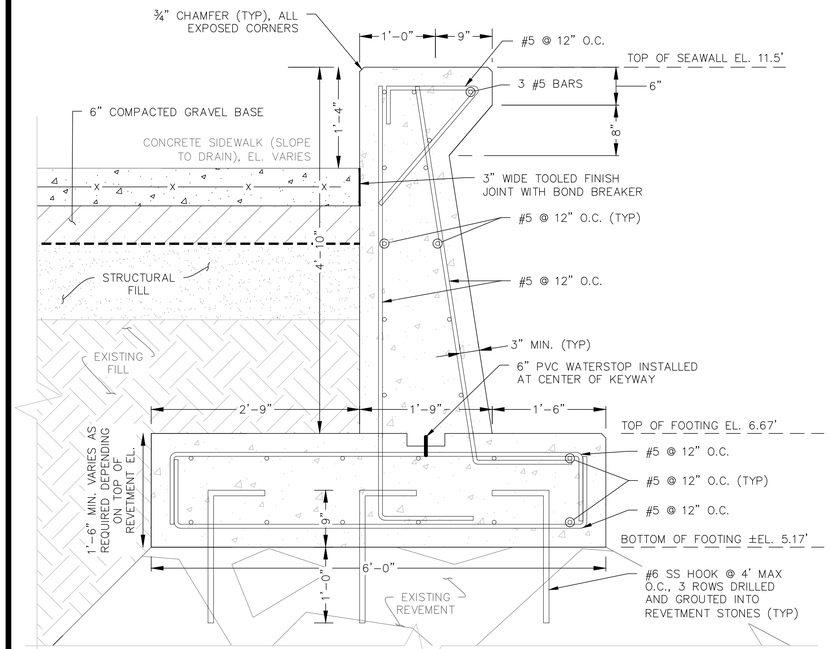
2026

PLYMOUTH, MA

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

S-03
24 OF 31

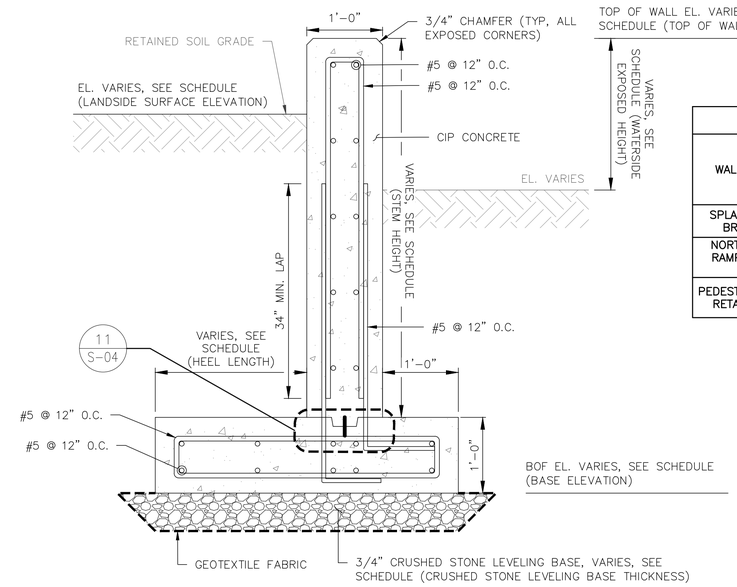
ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



PROPOSED CONCRETE SEAWALL DETAIL (9)

SCALE: 1"=1'-0"

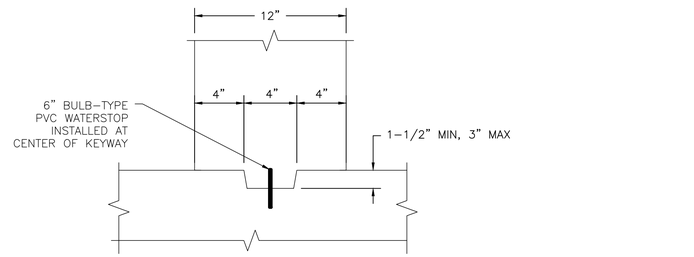
NOTE:
1. CONTRACTOR TO USE APPROVED CEMENTITIOUS DRY-PACK OR HIGH-BUILD MORTAR TO SEAL JOINTS IN REVETMENT AS REQUIRED TO FORM AND POUR THE FOOTING LEVEL AND PREVENT LOSS OF CONCRETE THROUGH THE JOINTS DURING PLACEMENT.



TYPICAL CAST-IN-PLACE CONCRETE RETAINING WALL DETAIL (10)

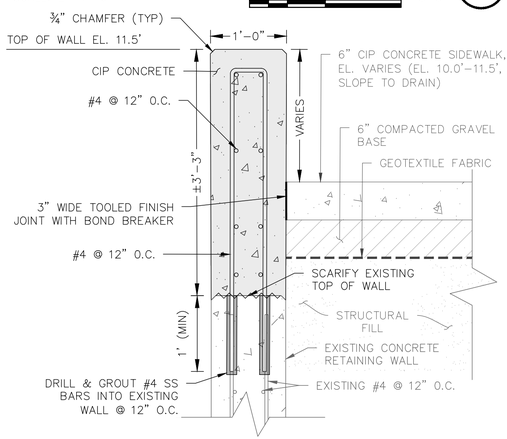
SCALE: 1"=1'-0"

RETAINING WALL SCHEDULE							
WALL LOCATION	BASE ELEVATION	HEEL LENGTH	STEM HEIGHT	TOP OF WALL ELEVATION	LANDSIDE SURFACE ELEVATION	WATERSIDE EXPOSED HEIGHT	3/4" CRUSHED STONE LEVELING BASE THICKNESS (MASSDOT M2.01.1)
SPLASH WALL AT BREAKWATER	6.0'	2'-0"	5'-6"	EL. 12.5'	EL. 9.5'	±3'-0"	AS REQUIRED
NORTHERN BOAT RAMP RETAINING WALL	3.25'	3'-0"	7'-3"	EL. 11.5'	EL. 9.5' TO EL. 10.0'	±0'-6" TO ±6'-3"	6"
PEDESTRIAN LANDING RETAINING WALL	2.5'	3'-0"	8'-0"	EL. 11.5'	EL. 10.0' TO EL. 10.5'	±1'-0" TO ±5'-0"	6"



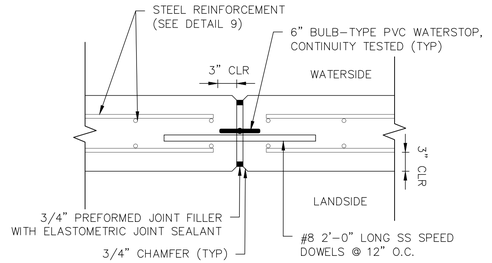
TYPICAL RETAINING WALL KEYWAY (11)

SCALE: 2"=1'-0"



PROPOSED NORTHERN BOAT RAMP RETAINING WALL EXTENSION DETAIL (12)

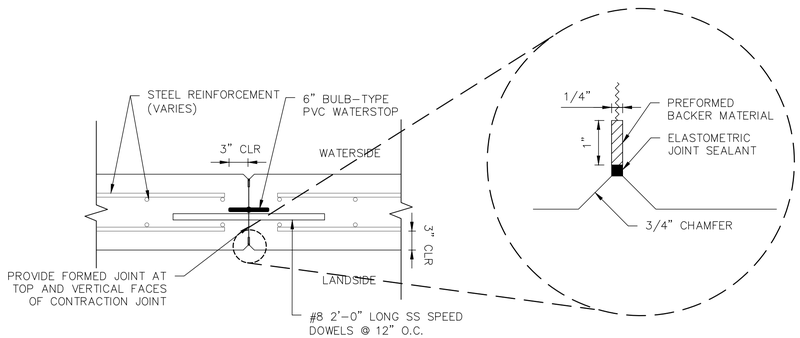
SCALE: 1"=1'-0"



TYPICAL EXPANSION JOINT DETAIL (13)

SCALE: 1"=1'-0"

NOTES:
1. DETAIL APPLICABLE TO ALL CAST-IN-PLACE CONCRETE WALLS.
2. PROVIDE EXPANSION JOINTS AT A MAXIMUM 80' SPACING.
3. TERMINATE WATERSTOP 4" BELOW TOP OF WALL.



TYPICAL CONTRACTION JOINT DETAIL (14)

SCALE: 1"=1'-0"

NOTE:
1. DETAIL APPLICABLE TO ALL CAST-IN-PLACE CONCRETE WALLS.
2. PROVIDE CONTRACTION JOINTS AT A MAXIMUM 20' SPACING (EXPANSION JOINT AT 80' SPACING).
3. TERMINATE WATERSTOP 4" BELOW TOP OF WALL.

GENERAL NOTES:
1. ALL STEEL REINFORCEMENT SHALL HAVE A MINIMUM 3" OF CONCRETE COVER UNLESS OTHERWISE NOTED
2. PROVIDE 3/4" CHAMFER TO ALL EXPOSED CONCRETE CORNERS AT TOP OF WALLS.

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REVISIONS

REV NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED FOR BIDDING

PROPOSED WALL DETAILS

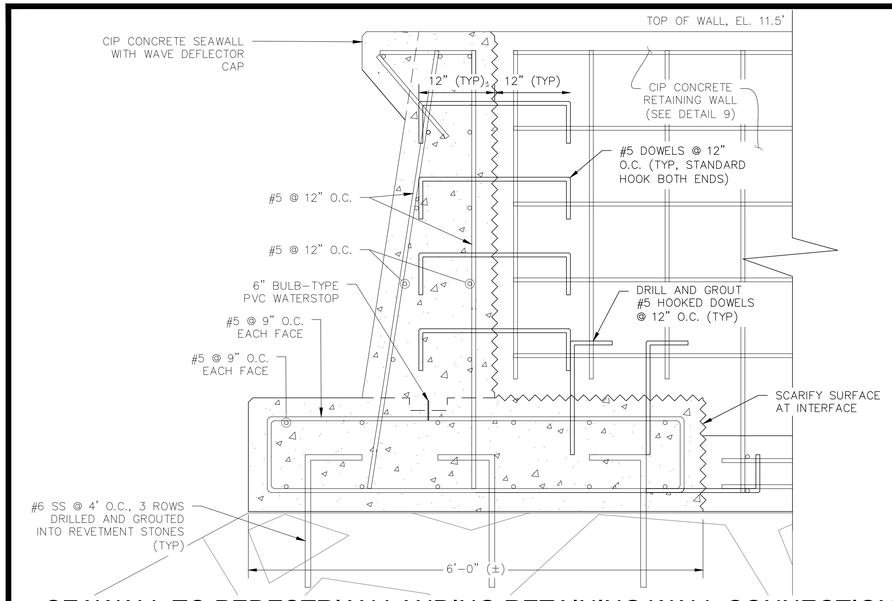
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

2026

PLYMOUTH, MA

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

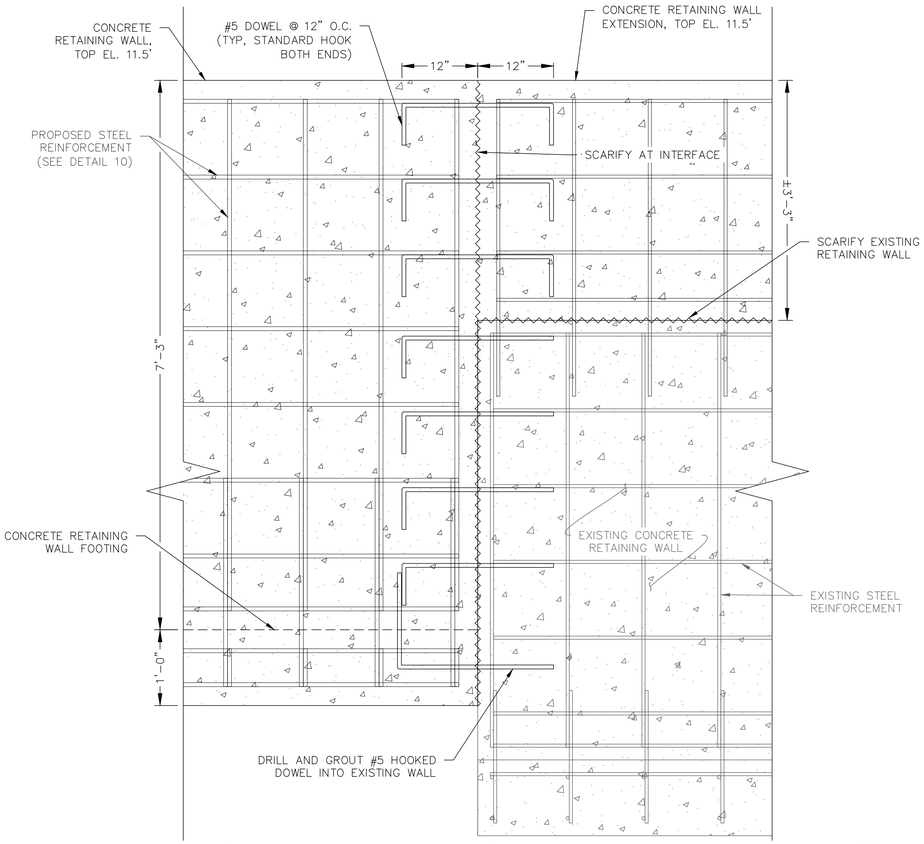
S-04
25 OF 31



SEAWALL TO PEDESTRIAN LANDING RETAINING WALL CONNECTION (15)

SCALE: 1"=1'-0" — 0 1/2' 1' 2' C-10

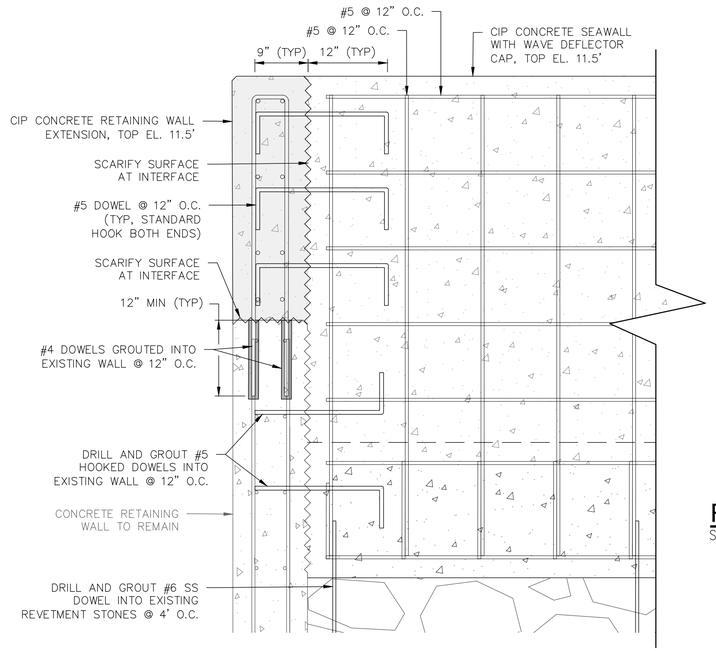
NOTE:
1. ALUMINUM HANDRAIL NOT SHOWN FOR CLARITY.



RETAINING WALL TO RETAINING WALL EXTENSION DETAIL (16)

SCALE: 1"=1'-0" — 0 1/2' 1' 2' S-02

NOTE:
1. ALUMINUM HANDRAIL NOT SHOWN FOR CLARITY.

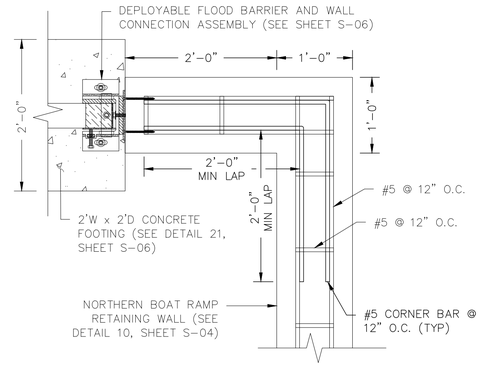


RETAINING WALL TO SEAWALL CONNECTION DETAIL (17)

SCALE: 1"=1'-0" — 0 1/2' 1' 2' C-10

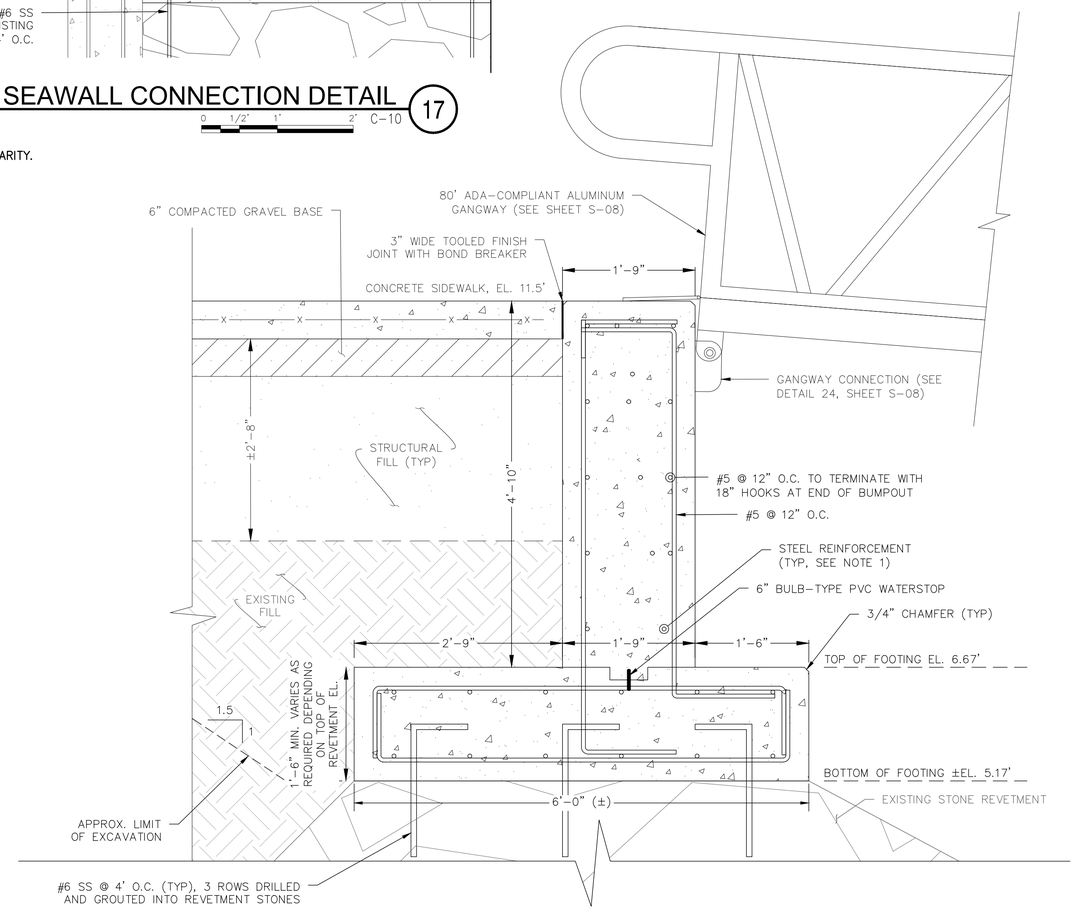
NOTE:
1. ALUMINUM HANDRAIL NOT SHOWN FOR CLARITY.

ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



RETAINING WALL CORNER PLAN VIEW (18)

SCALE: 1"=1'-0" — 0 1/2' 1' 2'



SEAWALL AT GANGWAY LOCATION (19)

SCALE: 1"=1'-0" — 0 1/2' 1' 2' S-03

NOTE:
1. STEEL REINFORCEMENT IN SEAWALL INDICATED IN DETAIL S1 TO BE CONTINUOUS THROUGH SEAWALL AT GANGWAY LOCATION.

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

REVISIONS

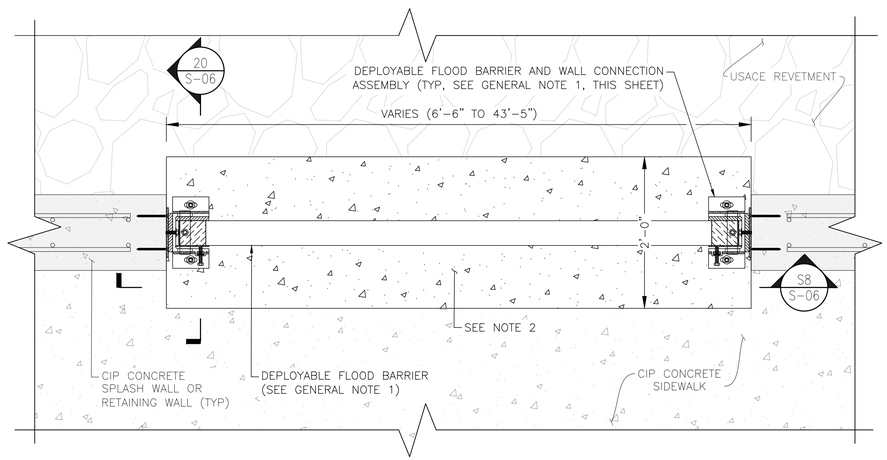
PROPOSED WALL CONNECTION DETAILS
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT
PLYMOUTH, MA
2026

designed by: AVR/CEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

S-05
26 OF 31

GENERAL NOTE:
1. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR REQUIRED DEPLOYABLE FLOOD BARRIER SPECIFICATIONS AND INSTALLATION REQUIREMENTS.

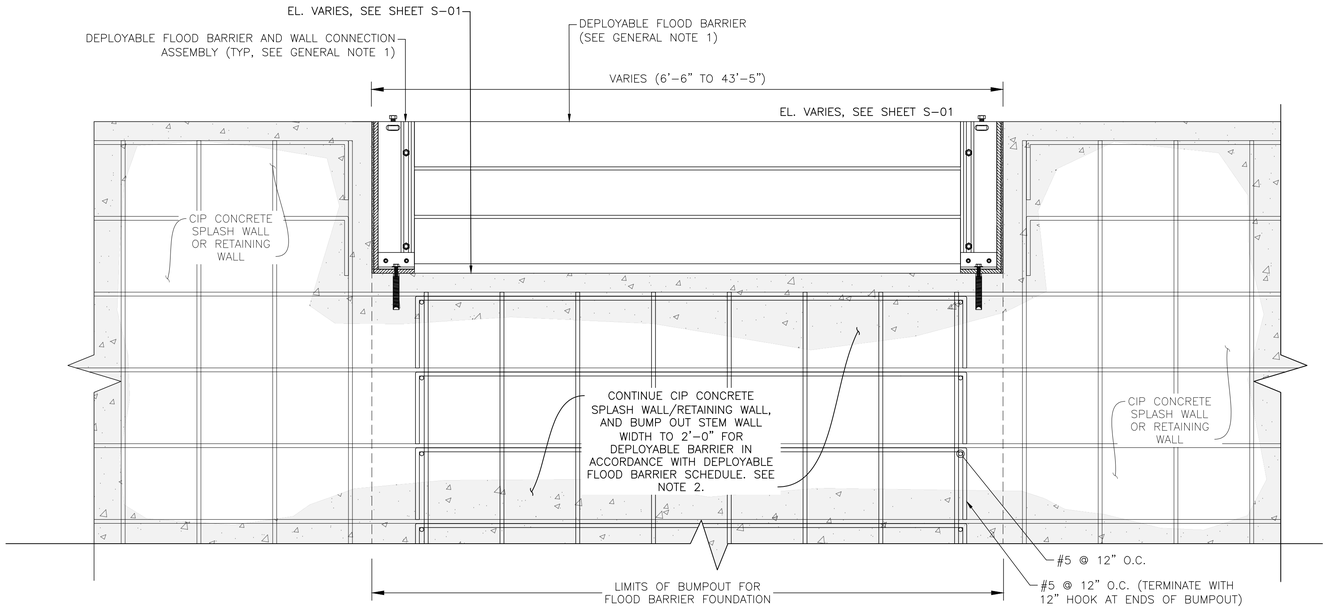
ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



TYPICAL DEPLOYABLE FLOOD BARRIER PLAN VIEW (S7)

SCALE: 1"=1'-0" 0 1/2' 1' 2' S-01

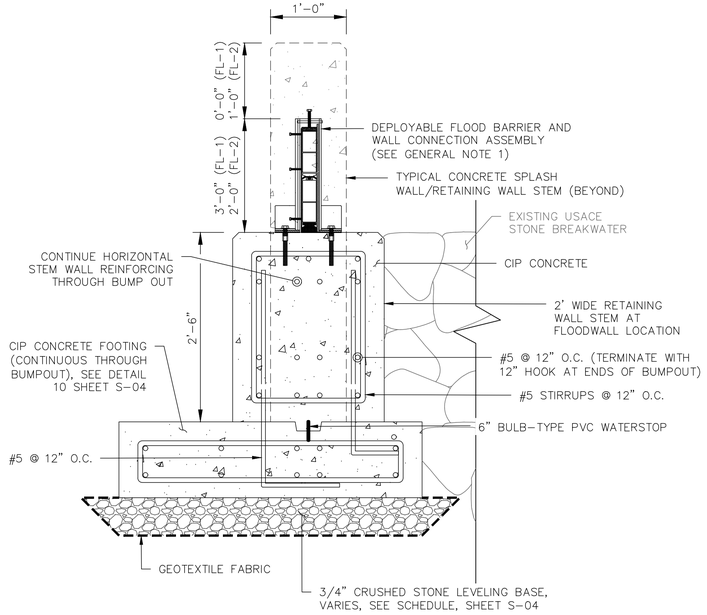
NOTE:
1. PLAN SHOWN APPLIES TO FLOOD LOGS FL-1 AND FL-2. FL-3 THROUGH FL-6 ARE SIMILAR EXCEPT TERMINATE PERPENDICULAR TO RETAINING WALLS/SEAWALLS WITH FOOTING BELOW PER DETAIL 20.
2. CONCRETE STEM BUMP OUT APPLICABLE TO FL-1 AND FL-2, SEE DETAIL 20. CONCRETE FOOTING APPLICABLE TO FL-3 THROUGH FL-6, SEE DETAIL 21.



TYPICAL FLOOD BARRIER ELEVATION (S8)

SCALE: 1"=1'-0" 0 1/2' 1' 2' S-06

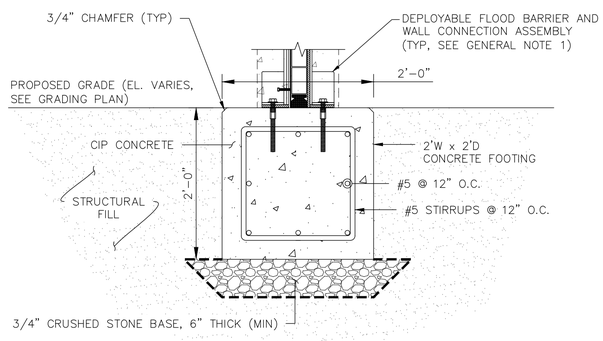
NOTE:
1. ELEVATION SHOWN APPLIES TO FLOOD LOGS FL-1 AND FL-2. FL-3 THROUGH FL-6 ARE SIMILAR EXCEPT TERMINATE PERPENDICULAR TO RETAINING WALLS/SEAWALLS WITH FOOTING BELOW PER DETAIL 20.
2. CONCRETE STEM BUMP OUT APPLICABLE TO FL-1 AND FL-2, SEE DETAIL 20. CONCRETE FOOTING APPLICABLE TO FL-3 THROUGH FL-6, SEE DETAIL 21.



TYPICAL FLOOD BARRIER SECTION AT RETAINING WALL/SPLASH WALL (20)

SCALE: 1"=1'-0" 0 1/2' 1' 2' S-06

NOTE:
1. WIDENED STEM DETAIL APPLICABLE TO DEPLOYABLE FLOOD BARRIERS FL-1 AND FL-2



TYPICAL FLOOD BARRIER SECTION AT SLAB LOCATIONS (21)

SCALE: 1"=1'-0" 0 1/2' 1' 2' S-01

NOTE:
1. CONCRETE FOOTING DETAIL APPLICABLE TO DEPLOYABLE FLOOD BARRIERS FL-3, FL-4, FL-5, AND FL-6.

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

PROPOSED FLOOD BARRIER DETAILS

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

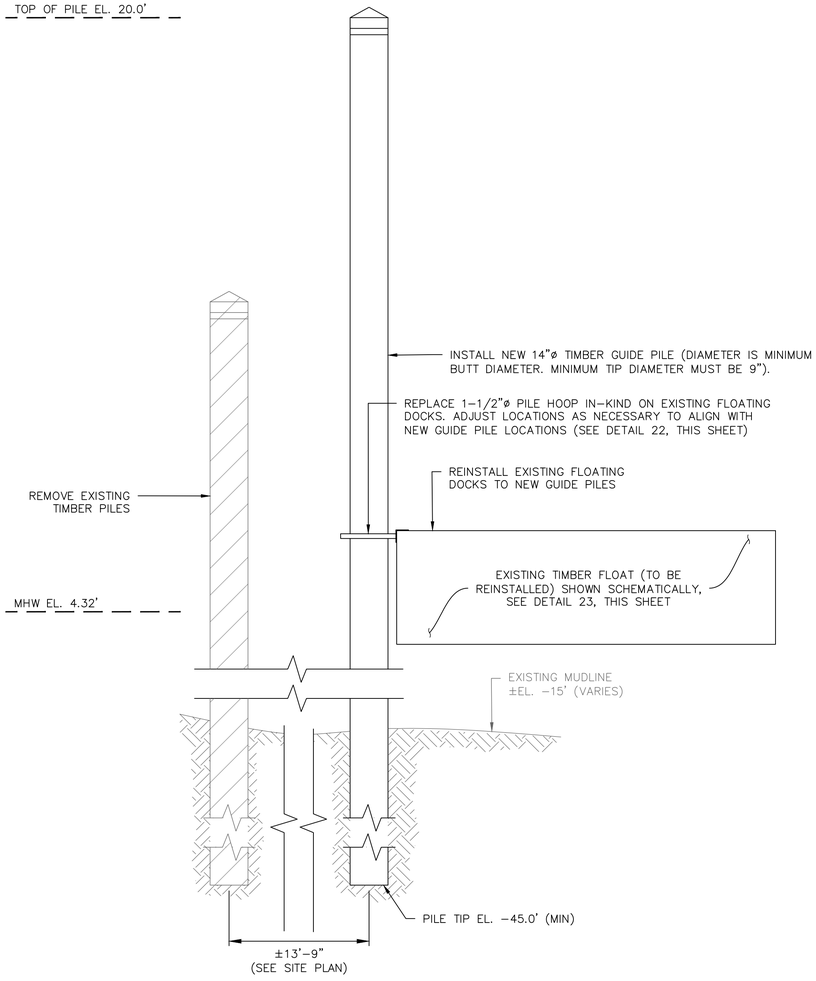
PLYMOUTH, MA

2026

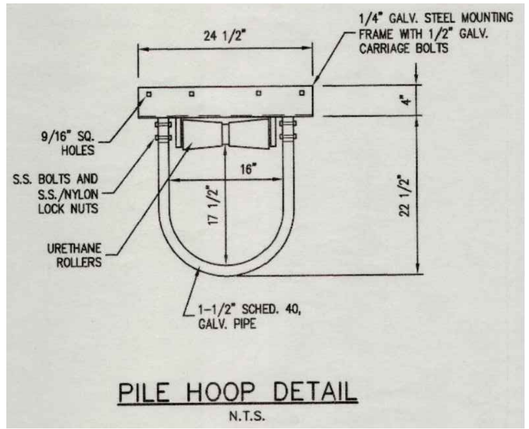
designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
CFBA project no.: PA-425
date: OCTOBER 2026

S-06
27 OF 31

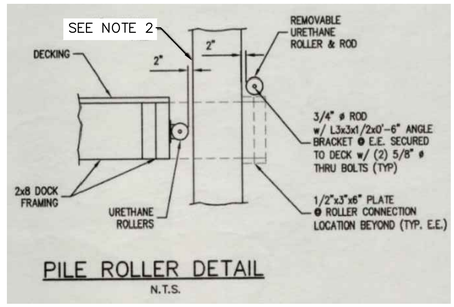
ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



TYPICAL GUIDE PILE RELOCATION SECTION
SCALE: 1"=1'-0" S-01 S9



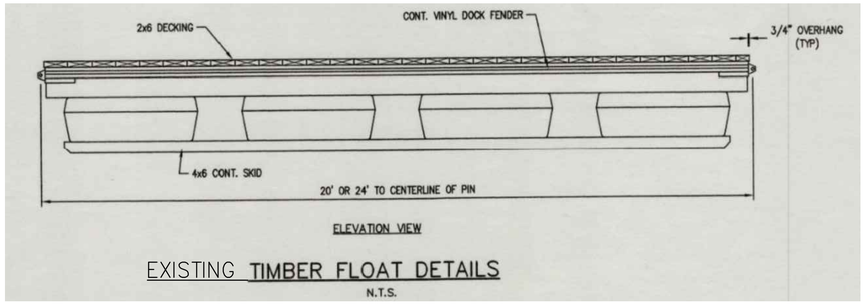
PILE HOOP DETAIL
N.T.S.



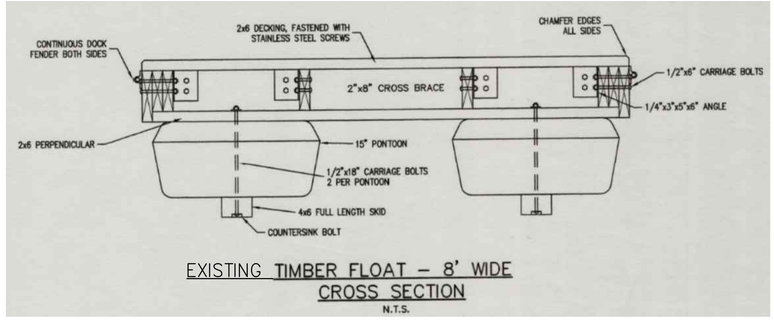
PILE ROLLER DETAIL
N.T.S.

GUIDE PILE CONNECTION DETAIL
SCALE: NTS S-07 22

NOTE
1. DETAILS SHOWN AS REFERENCE FOR BIDDING. CONTRACTOR TO FIELD VERIFY AND REPLACE EXISTING PILE HOOPS IN-KIND.
2. DETAILS SHALL BE REVISED BY THE CONTRACTOR AS NEEDED TO SUPPORT THE 14"ø TIMBER PILES, AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.



EXISTING TIMBER FLOAT DETAILS
N.T.S.



EXISTING TIMBER FLOAT - 8' WIDE CROSS SECTION
N.T.S.

EXISTING TIMBER FLOAT SECTION AND ELEVATION
SCALE: NTS S-07 23

NOTE
1. SECTION AND ELEVATION SHOWN FOR CONTRACTOR'S REFERENCE ONLY. EXISTING FLOATS ARE TO BE RELOCATED AS INDICATED ON THE DRAWINGS.

1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com
COLLINS ENGINEERS INC

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

PROPOSED FLOATING DOCK
RELOCATION SECTION AND DETAILS

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS
AND COASTAL RESILIENCE PROJECT

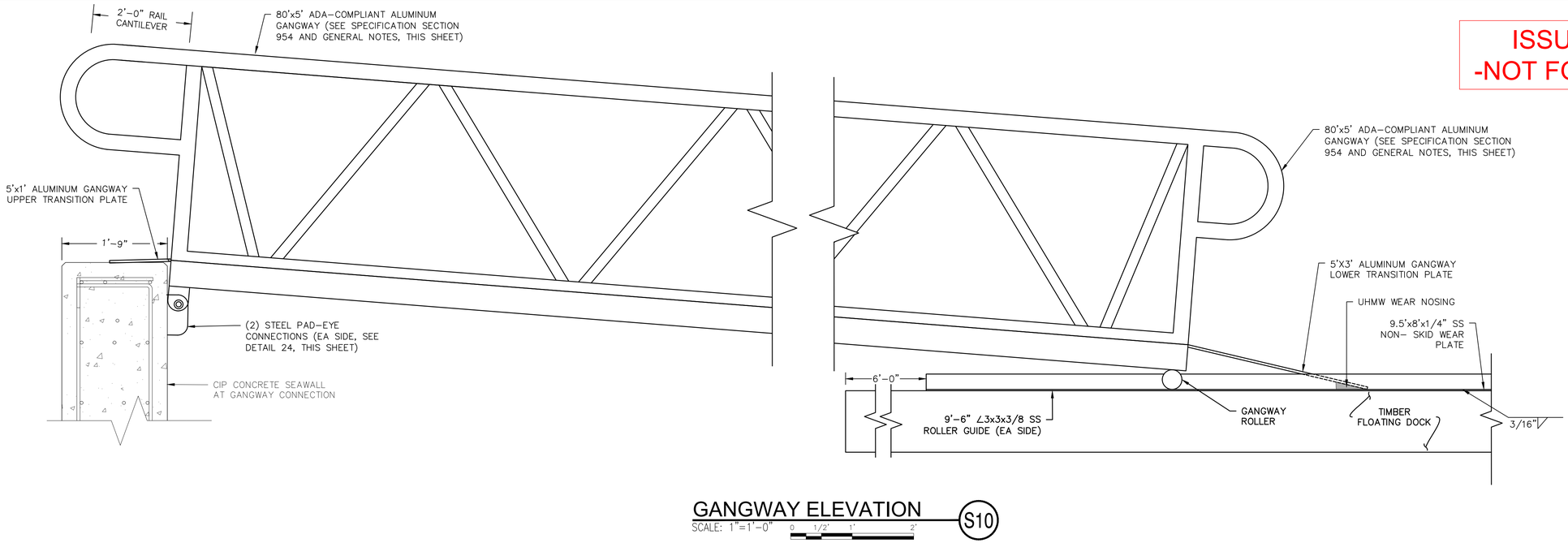
2026

PLYMOUTH, MA

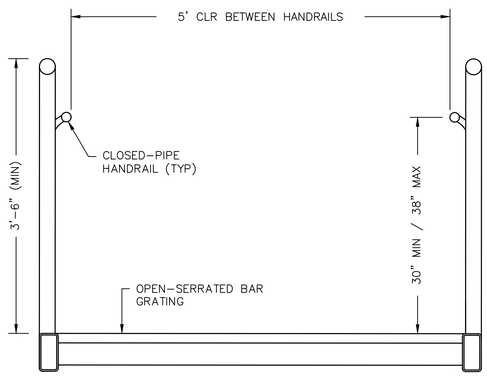
designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
CFBA project no.: PA-425
date: OCTOBER 2026

S-07
28 OF 31

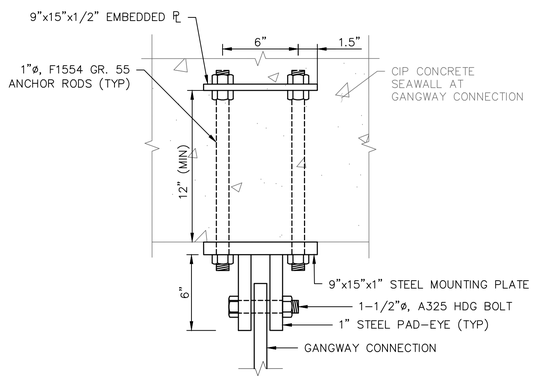
ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-

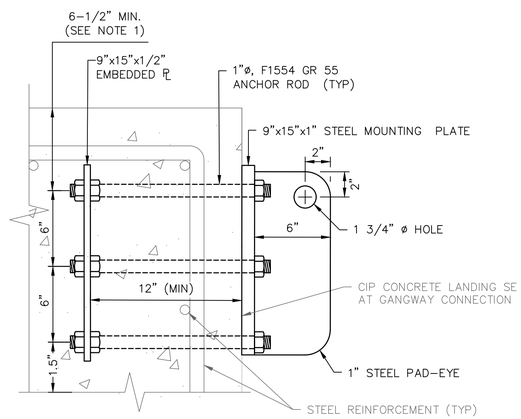


GANGWAY ELEVATION
SCALE: 1"=1'-0" (S10)



GANGWAY SECTION
SCALE: 1"=1'-0" (S11)





GANGWAY CONNECTION DETAILS
SCALE: 3"=1'-0" (S-08) (24)

NOTE
1. COORDINATE REQUIRED MOUNTING HEIGHT AND ASSOCIATED FINAL HEIGHT OF 1-3/4" HOLE WITH GANGWAY MANUFACTURER TO ENSURE SIMILAR DECK HEIGHT (GANGWAY DECK JUST ABOVE TOP OF WALL) WITH TOP OF SEAWALL AND ADA-COMPLIANT TRANSITION

GENERAL NOTES:
1. GANGWAY SHALL BE CONSTRUCTED OF 6061 ALUMINUM ALLOY, FITTED WITH STANDARD APPURTENANCES INCLUDING BUT NOT LIMITED TO HANDRAILS, TOP AND BOTTOM TRANSITION PLATES, AND UHMW ROLLERS. GANGWAY SHALL HAVE NON-SLIP SURFACE. GANGWAY SHALL BE FULLY ADA-COMPLIANT.
2. GANGWAY SHALL BE SUPPLIED WITH SUITABLE BEARINGS AND ANCHORAGE TO TRANSFER ALL LOADS TO THE SEAWALL SUPPORT BRACKETS AND TO THE FLOATING DOCK. TOP GANGWAY CONNECTION SHALL CONSIST OF A LINK-ARM HINGE, FABRICATED AND INSTALLED TO ACCOMMODATE THE FULL EXTREME TIDAL RANGE AND WAVE ACTION AT THE SITE AND OUT-OF-PLACE MOVEMENT DUE TO FLOAT MOTION. SUBMIT CONNECTION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.
3. HEIGHT OF GANGWAY CONNECTION TABS SHALL BE COORDINATED WITH THE MOUNTING BRACKETS AT THE SEAWALL SO THAT THE TOP OF THE GANGWAY IS LOCATED JUST ABOVE THE TOP OF THE SEAWALL, SO THAT THE TRANSITION PLATE IS ADA-COMPLIANT THROUGH THE FULL TIDAL CYCLE.
4. GANGWAY LIVE LOAD CAPACITY SHALL BE MINIMUM OF 100 PSF, WITH HORIZONTAL WIND LOADING BASED ON 130 MPH WIND SPEED. GANGWAY SHALL HAVE A MAXIMUM DEFLECTION OF L/360, WHERE L IS THE LENGTH OF THE GANGWAY.
5. ALL ALUMINUM STRUCTURAL COMPONENTS SHALL BE 6061 ALUMINUM ALLOY AND SHALL CONFORM TO THE LATEST EDITION OF THE ALUMINUM ASSOCIATION DESIGN AND SPECIFICATIONS DESIGN MANUAL.
6. SECURE WEAR PLATE TO FLOATING DOCK WITH STAINLESS STEEL COUNTER SUNK SCREWS, IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
7. SEE SPECIFICATION SECTION 954 FOR ADDITIONAL REQUIREMENTS.

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

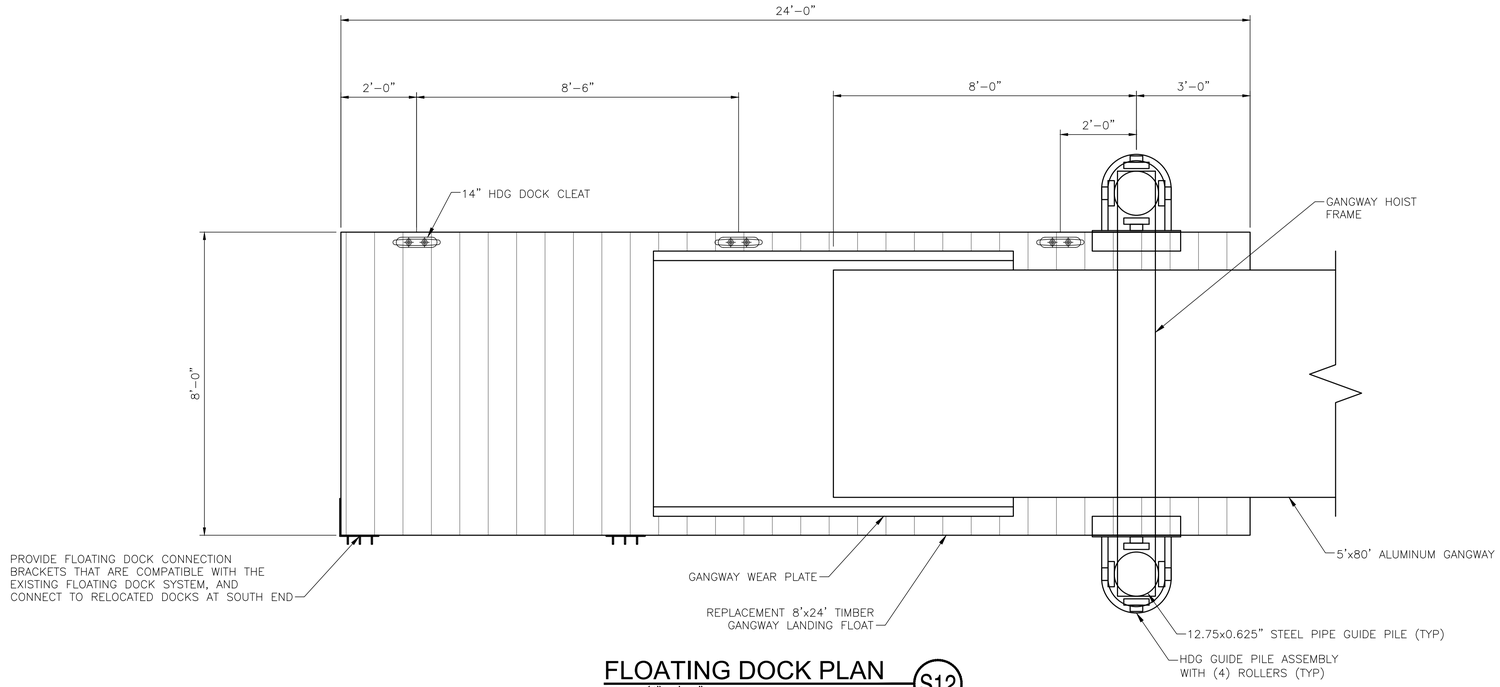
REVISIONS

PROPOSED ALUMINUM GANGWAY DETAILS
PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT
PLYMOUTH, MA
2026

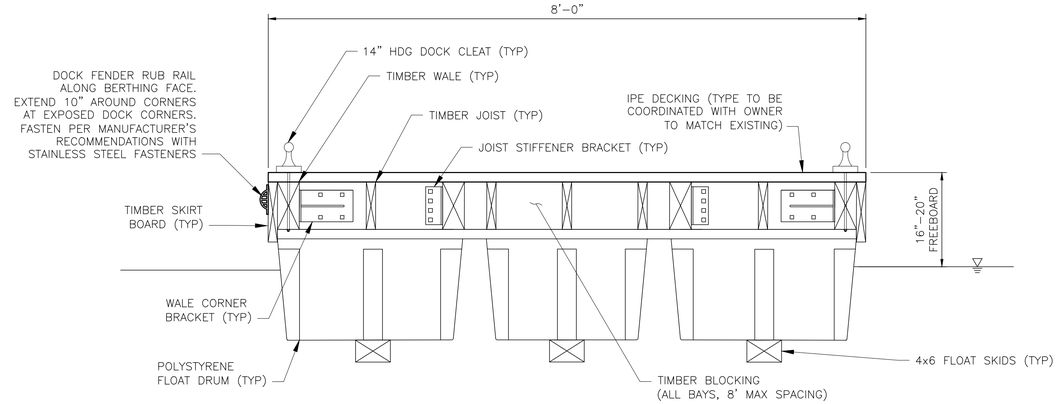
designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

S-08
29 OF 31

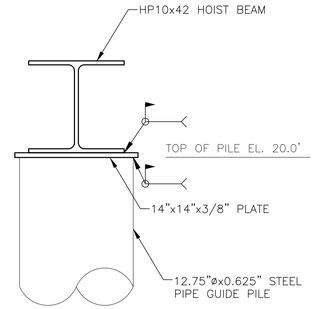
ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-

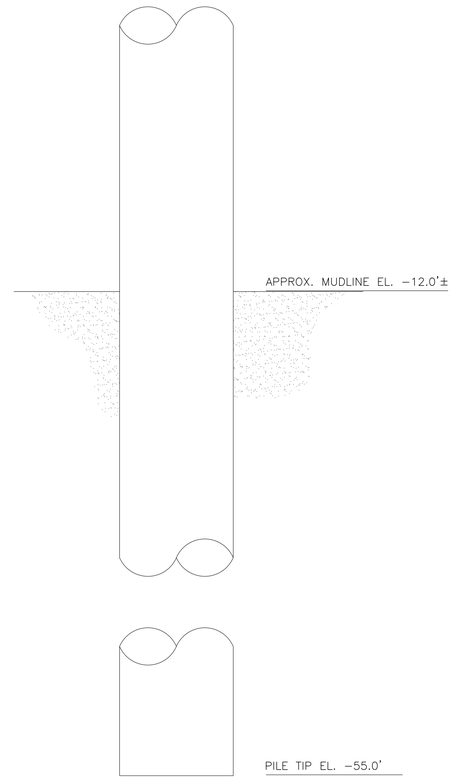


FLOATING DOCK PLAN
SCALE: ½"=1'-0" S12



FLOATING DOCK SECTION
SCALE: 1"=1'-0" S13





GANGWAY HOIST FRAME DETAIL
SCALE: 1½"=1'-0" 25

NOTE:
1. COORDINATE MECHANICAL GANGWAY HOIST TYPE WITH OWNER AND SECURE TO FRAME PER MANUFACTURER'S RECOMMENDATIONS

GENERAL NOTES:
1. THE FLOATING DOCKS SHALL BE CONSTRUCTED OF PRESSURE-TREATED TIMBER, WITH FLOAT MODULES CONSISTING OF EXPANDED POLYSTYRENE BILLETS ENCAPSULATED IN AN HDPE SHELL. ALL DOCKS SHALL BE DESIGNED FOR THE MARINE SALTWATER ENVIRONMENT. TIMBER FRAMING SHALL BE NO. 1 (OR BETTER) SOUTHERN PINE, TREATED IN ACCORDANCE WITH THE LATEST AWPA STANDARDS FOR MARINE EXPOSURE IN NORTHERN WATERS (USE CATEGORY UC5A).
2. FLOATING DOCK SHALL MAINTAIN A MINIMUM FREEBOARD OF 8 INCHES UNDER DEAD AND LIVE LOAD CONDITIONS. DOCKS SHALL HAVE A MINIMUM FREEBOARD OF 16-20 INCHES UNDER DEAD LOAD CONDITIONS, MATCHING THE FREEBOARD OF THE EXISTING FLOATING DOCK SYSTEM WITHIN 1 INCH.
3. FREEBOARD UNDER DEADLOAD CONDITIONS SHALL INCLUDING ALL PERMANENT DOCK COMPONENTS, GUIDE PILE ASSEMBLIES, AND THE DEADLOAD OF THE GANGWAY. ADDITIONAL FLOATATION SHALL BE USED FOR FLOATING DOCK UNDER THE GANGWAY LANDING AND AT GUIDE PILE LOCATIONS AS NECESSARY TO PROVIDE LEVEL FLOATATION UNDER ORDINARY TIDE CYCLES SPECIFIC TO THE PROJECT SITE. DOCKS SHALL NOT HAVE MORE THAN A 2% (1:50) LIST AFTER COMPLETED INSTALLATION.
4. FLOATING DOCK WILL BE EXPOSED TO WIND AND WAVES DURING ERECTION AND WHILE IN SERVICE, AND CONTRACTOR SHALL ANALYZE, DESIGN AND CONSTRUCT ACCORDINGLY. CONTRACTOR SHALL USE BRACKETED CONNECTIONS AND SUFFICIENT HARDWARE TO ACCOMMODATE DESIGN LOADS AND FREEBOARD REQUIREMENTS AS OUTLINED ABOVE, AND TO WITHSTAND ENVIRONMENTAL WAVE AND VESSEL WAKE ACTION NORMAL TO THE SITE. THE FOLLOWING IS MINIMUM DESIGN CRITERIA THAT SHALL BE USED FOR THE DOCK SYSTEM:
   - 4.1. UNIFORM LIVE LOAD (FOR STRUCTURAL COMPONENTS): 60 PSF
   - 4.2. UNIFORM LIVE LOAD (FOR BUOYANCY AND FREEBOARD): 40 PSF
   - 4.3. MAXIMUM CONCENTRATED LOAD: 400 LB
   - 4.4. CURRENT VELOCITY: < 1 KNOT
   - 4.5. SIGNIFICANT WAVE HEIGHT (Hs): 2 FT
   - 4.6. WIND LOAD: 16 PSF ON A 40-FT MOORED VESSEL, AND EXPOSED FLOAT AREAS.
5. DECKING SHALL BE IPE, AS COORDINATED WITH THE OWNER TO MATCH THE EXISTING SYSTEM AND AS APPROVED BY THE OWNER'S REPRESENTATIVE. DECK THICKNESS SHALL BE AS APPROPRIATE TO SPAN THE JOISTS UNDER STRUCTURAL LIVE LOAD CONDITIONS, MEETING ALLOWABLE BENDING AND L/360 DEFLECTION CRITERIA.
6. CLEATS SHALL BE HOT-DIPPED GALVANIZED CAST STEEL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, USING THRU-BOLTED CONNECTIONS. ALL HARDWARE SHALL BE HOT-DIP GALVANIZED.
7. ALL STEEL FOR FLOATING DOCK CONNECTIONS SHALL BE ASTM A36, HOT-DIP GALVANIZED. CONNECTION FOR THE REPLACEMENT GANGWAY LANDING FLOAT SHALL BE COORDINATED WITH AND BE COMPATIBLE WITH THE EXISTING FLOATING DOCK SYSTEM.
8. PROVIDE 3-INCH (NOMINAL) GRAY EPDM FENDERS ALONG BERTHING FACES. EXTEND 10" AROUND CORNERS AT EXPOSED DOCK CORNERS. FENDER FASTENERS SHALL BE STAINLESS STEEL.
9. FLOATING DOCK DESIGN SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO ORDERING MATERIAL OR CONSTRUCTING.
10. SEE SPECIFICATION SECTION 921 FOR ADDITIONAL REQUIREMENTS.

COLLINS ENGINEERS INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

REVISIONS

PROPOSED FLOATING DOCK AND GANGWAY HOIST DETAILS

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

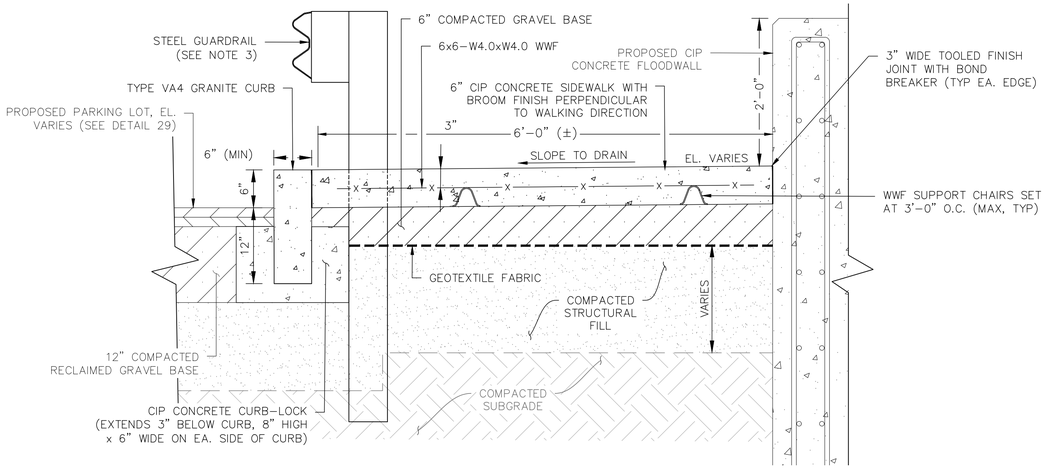
PLYMOUTH, MA

2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

S-09
30 OF 31

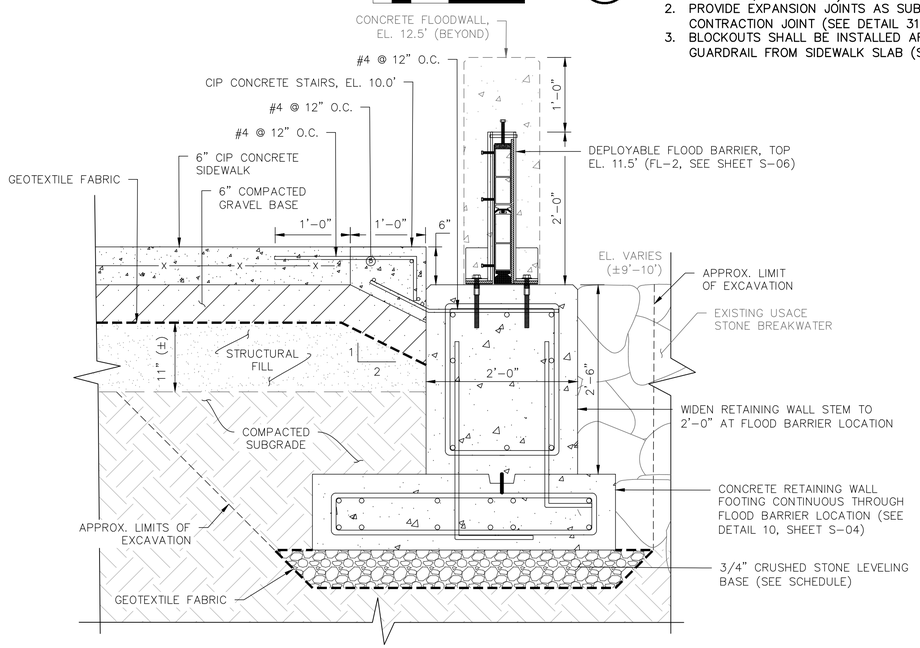
ISSUED FOR BIDDING
-NOT FOR CONSTRUCTION-



TYPICAL SIDEWALK DETAIL 26

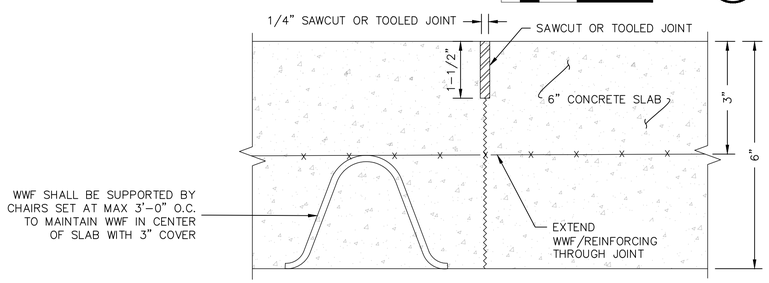
SCALE: 1"=1'-0"

NOTES:
1. PROVIDE SAWCUT OR TOOLED TRANSVERSE CONTRACTION JOINTS (SEE DETAIL 28, THIS SHEET) AT SPACING EQUAL TO SIDEWALK WIDTH.
2. PROVIDE EXPANSION JOINTS AS SUBSTITUTION AT EVERY 4TH CONTRACTION JOINT (SEE DETAIL 31, THIS SHEET).
3. BLOCKOUTS SHALL BE INSTALLED AROUND GUARDRAIL POSTS TO ISOLATE GUARDRAIL FROM SIDEWALK SLAB (SEE DETAIL C6, SHEET C-12).



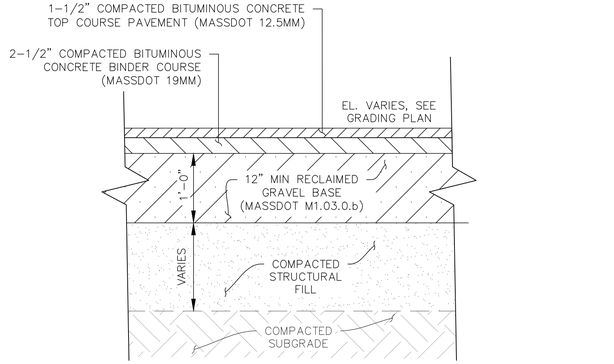
PROPOSED CONCRETE STAIRS DETAIL 27

SCALE: 1"=1'-0" S-01



SIDEWALK AND SLAB CONTRACTION JOINT DETAIL 28

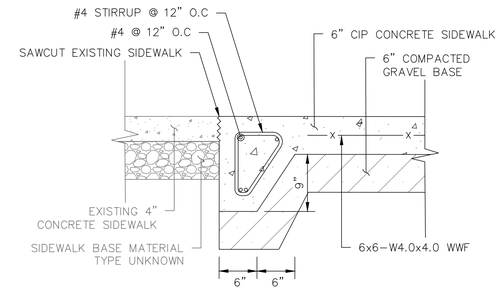
SCALE: 6"=1'-0"



TYPICAL BITUMINOUS PAVEMENT DETAIL 29

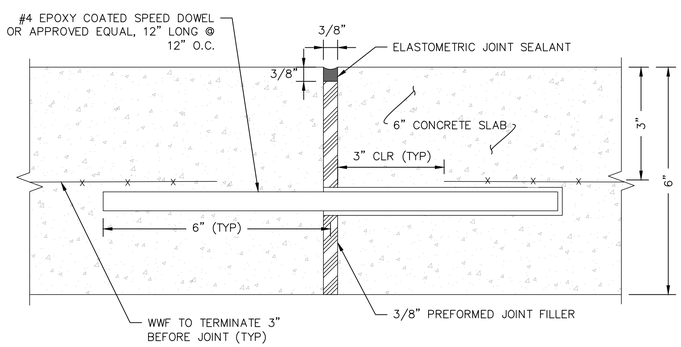
SCALE: 1"=1'-0"

NOTES:
1. ALL PAVEMENT SHALL BE IN ACCORDANCE WITH MASSDOT STANDARD SPECIFICATION 460 AND 401 UNLESS OTHERWISE NOTED.
2. SUBGRADE, STRUCTURAL FILL, AND GRAVEL BASE LAYERS SHALL BE COMPACTED TO A MINIMUM 95% MAXIMUM DRY DENSITY IN A MAXIMUM OF 12" THICK LIFTS.



TYPICAL SIDEWALK END DETAIL 30

SCALE: 1"=1'-0"



SIDEWALK EXPANSION JOINT DETAIL 31

SCALE: 6"=1'-0"

COLLINS ENGINEERS, INC
1485 S. County Trail, Suite 103
East Greenwich, RI 02818
voice: (401) 732-7714
web: collinsengr.com

REV. NO.	DATE	REVISIONS DESCRIPTION
00	10/20/2026	ISSUED-FOR-BIDDING

REVISIONS

PROPOSED SIDEWALK, ASPHALT, STAIR, AND JOINT DETAILS

PLYMOUTH HARBOR BOAT RAMP IMPROVEMENTS AND COASTAL RESILIENCE PROJECT

PLYMOUTH, MA

2026

COMMONWEALTH OF MASSACHUSETTS
ZACHARY D. JENKINS
No. 51969
CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/20/2026

designed by: AVR/GEM
checked by: APV
approved by: ZDJ/KH
QA/QC by: WMM
CE project no.: 15-15409
OFBA project no.: PA-425
date: OCTOBER 2026

S-10
31 OF 31