City of East Providence

Department of Public Works

City Hall – 145 Taunton Avenue

East Providence, Rhode Island 02914

Request for Proposal

RFP EP25/26-016

Crescent Park Shoreline Protection & Sabin Point Sand Berm Project

Crescent Park and Sabin Point Park

REQUEST FOR PROPOSAL

STANDARD INSTRUCTIONS TO BIDDERS – REQUEST FOR PROPOSALS

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SPECIAL INSTRUCTIONS TO BIDDERS

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BID FORM / BID PROPOSAL

CRMC ASSENT

PROJECT PLANS

PROJECT SPECIFICATIONS

BEACH ROAD STORMWATER MANAGEMENT IMPROVEMENTS PLANS IFC

REQUEST FOR PROPOSAL

RFP EP25/26-016
CRESCENT PARK SHORELINE PROTECTION & SABIN POINT SAND BERM PROJECT

City of East Providence, Rhode Island
City Hall
145 Taunton Avenue
East Providence, RI 02914

Separate sealed Bids will be received by the CITY OF EAST PROVIDENCE, RHODE ISLAND for the: CRESCENT PARK SHORELINE PROTECTION & SABIN POINT SAND BERM PROJECT and related appurtenances. One (1) original, two (2) copies and one (1) Thumb Drive of the proposal shall be submitted in one (1) sealed envelope to East Providence City Hall, Controllers Office, Room 103, Attn: Jessica Lamprey, Procurement Specialist, 145 Taunton Avenue, East Providence, Rhode Island 02914, no later than **WEDNESDAY, SEPTEMBER 2, 2026, AT 2:00 PM**. The bids will be publicly opened and recorded on the same day at East Providence City Hall in Conference Room A. Bid received with a time of 2:01 PM or later will be rejected. The outside envelope needs to be marked **RFP EP25/26-016 Crescent Park Shoreline Protection & Sabin Point Sand Berm Project.**

Contract Documents may be downloaded from the City's website https://eastprovidenceri.gov/rfp.

There will be a **Mandatory Pre-Bid** meeting for this bid on **THURSDAY, AUGUST 6, 2026, AT 1:00 PM** at Crescent Park, located at 701 Bullocks Point Avenue, East Providence, RI.

Questions are due no later than **THURSDAY, AUGUST 13, 2026 AT 4:00 PM** and should be submitted electronically via email to the City Engineer, Erik Skadberg, P.E. (eskadberg@eastprovidenceri.gov). Responses will be posted in an addendum no later than **FRIDAY, AUGUST 21, 2026 AT 4:00 PM**.

No Bidder may withdraw their Bid within ninety (90) days after the scheduled closing time for receipt of Bid.

The City of East Providence reserves the right to reject any/all Bids, waive any informalities in the Bids received, and to accept the Bid deemed most favorable to the interest of the City of East Providence.

Contract Security – The Contractor shall furnish a Bid Bond in the amount of Five Percent (5%) and a Surety Bond/Performance Bond in an amount equal to at least One Hundred Percent (100%) of the contract price in accordance with the STANDARD INSTRUCTIONS TO BIDDERS.

STANDARD INSTRUCTIONS TO BIDDERS
REQUEST FOR PROPOSALS

STANDARD INSTRUCTIONS TO BIDDERS- REQUEST FOR PROPOSALS

THESE INSTRUCTIONS ARE STANDARD FOR ALL REQUEST FOR PROPOSALS ISSUEDBY THE PURCHASING DIVISION AND MAY BE DELETED OR MODIFIED BY INDICATING SUCH CHANGE/S BY "SPECIAL INSTRUCTIONS TO BIDDERS."

1.0 RECEIPT AND OPENING OF PROPOSALS:

Sealed proposals will be received and date stamped at East Providence City Hall, Controllers Office, Room 103, Attn: Procurement Specialist 145 Taunton Avenue, East Providence, Rhode Island 02914, until the time and date indicated on the Request for Proposals. No submission received after that time will be considered. Mark outside bid envelope with bid number and title, and time and date of proposal due date. FAXED OR EMAILED SUBMISSIONS WILL NOT BE ACCEPTED

2.0 FORM OF PROPOSAL:

Proposals must be submitted on and in accordance with the proposal forms attached hereto, blank places must be filled in as noted, no change shall be made in the phraseology of the proposal form or in the item or items mentioned therein. Additionally, the proposals must contain the name and proper address of the proposed firm and must be signed by a responsible member of the firm with his signature and official title. Proposals, which are not complete, or contain erasures or alterations, not initiated by the signer, may be rejected. FAXED OR EMAILED SUBMISSIONS WILL NOT BE ACCEPTED.

3.0 SUBMISSION OF PROPOSALS:

3.1 Envelopes containing proposals must be sealed and addressed to the East Providence City Hall, Controllers Office, Room 103, Attn: Procurement Specialist 145 Taunton Avenue, East Providence, Rhode Island 02914 and must be clearly marked with the vendor's name and address, the bid number/title, and the due date of the proposal.

3.2 The Procurement Specialist will decide when the specified time has arrived to collect the proposals, and no proposal received thereafter will be considered.

3.3 Any proposer may withdraw his proposal by written request at any time prior to the advertised time for proposal due date. Telephonic proposals, amendments, or withdrawals will not be accepted. FAXED OR EMAILED SUBMISSIONS WILL NOT BE ACCEPTED.

3.4 No proposal may be withdrawn for a period of ninety (90) calendar days from the date and time of proposal due date. The City reserves the right to waive this requirement in order to best serve the interests of the City.

3.5 Negligence on the part of the proposer in preparing the proposal confers no rights for the withdrawal of the proposal after it has been opened.

3.6 Proposals received prior to the time of the due date will be securely kept unopened. No responsibility will attach to an officer or person of the City for the premature opening of a proposal not properly addressed and identified as a proposal.

4.0 ADDENDA

Copies of all Addenda will be posted to the City's Website and BidNet. It is the Vendor's responsibility to check and download all addenda.

4.1 No Addenda will be posted later than five (5) working days prior to the date for receipt of bids except an Addendum, if necessary, postponing the date for receipt of bids or withdrawing the request for bids. Each bidder shall ascertain prior to submitting their bid that they have received all Addenda issued and shall acknowledge their receipt in his bid.

5.0 QUALIFICATIONS OF PROPOSER

The City may make such investigations as it deems necessary to determine the ability of the proposer to perform the work, and the proposer shall furnish the City all such information and data for this purpose as the City may request. The City reserves the right to reject any proposal if the evidence submitted by or investigation of such proposer fails to satisfy the City that such proposer is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.

6.0 CONTRACT SECURITY

Only when a Contract Security is required in the Request for Proposal, the Contractor shall furnish a Bid Bond in the amount of Five Percent (5%) and a Surety Bond/Performance Bond in an amount equal to at least One Hundred Percent (100%) of the contract price as security for the faithful performance of the contract and for the payment of all persons performing labor on the project under the contract and furnishing materials, equipment and all other incidentals in connection with the contract. The surety on such bonds shall be a duly authorized surety company licensed to bond in the State of Rhode Island, and the cost of same will be paid by the Contractor. Before final acceptance, the bonds must be approved by the City. The bonding company providing surety must be listed in the Federal Register as issued by the Department of Treasury, Department Circular 570, latest edition, as well as being licensed in the State of Rhode Island to provide surety.

7.0 BID PRICES:

Bidders shall state the proposed price/s in the manner designated in the Bid Form. If there is a discrepancy between the unit prices and the extended totals, the unit prices shall govern. In the event there is a discrepancy between the price written in words and in figures, the price written in words shall govern.

8.0 TERMS:

Cash Discounts offered will be considered in determining awards. However, discounts for a period of less than twenty (20) days will not be considered. The discount period shall be computed from date of delivery or from date the correct invoice is received by the City Controller, whichever date is later. The date of delivery shall be construed to mean the date on which the bid item is determined to meet the specifications and is therefore acceptable.

9.0 RHODE ISLAND SALES TAX:

The City of East Providence is exempt from the Rhode Island Sales or Use Tax under the 1956 General Laws of the State of Rhode Island, Section 44-18-30, Para. 1, as amended.

10.0 "OR EQUAL" BIDDING:

When the name of a manufacturer, a brand name, or manufacturer's catalogue number is issued as the bid standard in describing an item followed by "Or Approved Equal", this description is used to indicate quality, performance and other essential characteristics of the item required. If bidding on other than the make, model, brand or sample specified, but equal thereto, bidder must state so by giving the manufacturer's name, catalogue number and any other information necessary to prove that his intended substitution of a commodity is equal in all essential respects to the bid standard. Bidder must prove to the satisfaction of the City Manager, or by person or persons designated by him, that the bidder's designated substitute is equal to the bid standard; otherwise, his bid will be rejected.

11.0 AWARD AND CONTRACT:

11.1 Unless otherwise specified, the City reserves the right to make award by item, or items, or by total, as may be in the best interest of the City.

11.2 A written award (or acceptance of bid) mailed (or otherwise furnished) to the successful bidder followed by a City Purchase Order, shall be deemed to result in a binding contract without further action by either party.

11.3 It is the intent of the City to award a contract to the lowest responsible bidder in accordance with City Ordinances, Article V. Purchasing, Sec. 2- 243, and provided that the bid has been submitted in accordance with the requirements of the Bidding Documents, is judged to be reasonable, and does not exceed the funds available.

12.0 CONSIDERATION OF PROPOSALS REJECTION OF PROPOSALS

12.1 The City reserves the right to reject the proposal of any proposer who has previously failed to perform properly or complete on time, contracts of a similar nature, or who is not in a position to perform the contract, or who has habitually and without just cause, neglected the payment of bills or disregarded its obligations to sub-contractors, material, or employees.

12.2 The City reserves the right to reject any or all proposals and in particular to reject a proposal not accompanied by any data required by the Bidding Documents or a proposal in any way incomplete or irregular, and to waive any informality in the proposals received, and to accept the proposal or parts thereof deemed to be most favorable to the best interest of the City.

12.3 The City shall have the right to waive any informality or irregularity in any proposal received

12.4 It is the intent of the City, if it accepts any Alternates, to accept them in the order in which they are listed in the proposal form, but the City shall have the right to accept Alternates in any order or combination and determine the low bidder on the basis of the sum of the Base Bid and the Alternates accepted.

13.0 DELIVERY:

All prices bid must be on the basis of F.O.B. Delivery Point, East Providence, Rhode Island. Therefore, shipping costs are to be included within the prices quoted. Deliveries must consist only of new merchandise or equipment and shall be made between 8:00 A.M. and 4:00 P.M. Prevailing Time, Monday through Friday.

No delivery shall become due or be acceptable without a written Purchase Order, issued by the Procurement Specialist.

THE FOLLOWING TERMS AND PROVISIONS, IN addition TO THOSE LISTED ABOVE, ARE APPLICABLE TO ALL BIDS FOR PROFESSIONAL SERVICES AND CONSTRUCTION/DPW PROJECTS

14.0 AFFIRMATIVE ACTION REQUIREMENTS: MBE/WBE PARTICIPATION

Any firm or Contractor providing services to or doing business with the City shall adhere to the City's Affirmative Action Plan for MBE/WBE Participation. Said plan is on file with the City's Affirmative Action Officer.

14.1 All bidders are required to submit the MBE/WBE Participation Affidavit.

15.0 INSURANCE REQUIREMENTS:

The Contractor shall carry the following insurance coverages at his own expense:

(a) General: All insurance for this contract shall be written by a company (or companies) acceptable to the city and all policies or certificates shall be submitted to the City for examination prior to commencement of operations by the contractor. In the event any policy or certificate, the amount of the insurance, or the company writing same are not satisfactory to the City, the contractor shall secure other policies or certificates in form and amount with a company satisfactory to the City. The contractor shall not permit policies to be changed, cancelled, or to lapse and all policies shall include a clause to the effect that the policy shall not be subject to cancellation or a reduction in the limits of liability or amounts of insurance until notice has been sent by mail to the city stating when, (not less than 30 days thereafter) such cancellation or reduction shall be effective. All certificates of insurance shall be delivered to the City and contain true transcripts from the policy or policies authenticated by the proper officer of the insurer evidencing in particular those insured, the extent of the insurance, the location and operations to which the insurance applies, the expiration date and the above mentioned notice as to the location and operations involved.

The Contractor is required to list the City of East Providence not only as Certificate Holder but as an Additional Insured as well, on the "Certificate of Insurance".

If any part of the work is sublet, similar insurance shall be provided by or on behalf of the subcontractors to cover their operations. The contractor shall be charged with the responsibility for insurance protection for all his subcontract operations and should the contractor's policy not cover each and every subcontractor, certificates of insurance acceptable to the City covering each and every subcontractor shall be filed with said City prior to the commencement of subcontract operations.

Statutory Workman's Compensation Insurance: shall be provided by the contractor for all labor employed on the project who may come within the protection of such laws, and Employer's General Liability

Insurance shall be provided for the benefit of employees who are not protected by compensation laws. The contractor will be charged with the responsibility for proper and adequate workman's compensation for all subcontract operations.

Contractors Comprehensive General Liability and Property Damage Insurance INCLUDING Owner's Protective: the contractor shall carry the above insurance for a minimum limit of not less than $1,000,000.00 for all damages arising out of injury to or death of one person and subject to that limit for each person, a total limit of not less than $1,000,000.00 for all damages arising out of injury to, or death of two or more persons in any one occurrence and Property Damage Liability Insurance providing for a limit of not less than $1,000,000.00 for all damages arising out of injury to or destruction of property (including loss of use) in any occurrence and subject to that limit per occurrence total limit of $1,000,000.00 all damages arising out of injury to or destruction of property during the policy period.

Contractor's Liability Insurance: Shall also include all major divisions of coverage and be on a comprehensive general liability basis including:

Premises - Operations

Independent Contractor's protective

Products and completed operations

Blanket Contractual

Owned, non-owned and hired motor vehicles

Broad form coverage for property damage (including explosion, Collapse and underground).

Comprehensive Automobile Liability and Property Damage Insurance: The Contractor shall carry the above insurance covering all owned, hired or non-owned vehicles in the amount of $300,000.00 for all damages arising out of bodily injuries to death of one person and subject to that limit for each person, a total of $500,000.00 for all damages arising out of bodily injuries to or death of two or more persons in any one accident and Property Damage coverage in the amount of $300,000.00 for all damages arising out of injury to or destruction of property.

16.0 OSHA SAFETY AWARENESS PROGRAM

In accordance with R.I.G.L. 28-20-35, all contractors bidding on construction projects of the City with a total project cost of one hundred thousand dollars ($100,000.) or more, are required to have an OSHA "ten-hour construction safety program", for their on-site employees. The training program shall utilize instructors trained by the Occupational Safety and Health Administration, using an OSHA approved curriculum.

17.0 PREVAILING WAGES

In accordance with R.I.G.L 37-13-7, all contractors bidding on public works projects that exceed one thousand dollars ($1,000) must comply with all applicable provisions as they relate to prevailing rate of pay for regular, holiday, and overtime wages to be paid to each craftsman, mechanic, teamster, laborer, or other type of worker performing work on public works projects.

Current wage rates and information can be found at https://dlt.ri.gov/regulation-and-safety/prevailing-wage.

PLEASE COMPLETE THIS FORM AND SUBMIT WITH YOUR BID

MBE/WBE PARTICIPATION AFFIDAVIT

Item Description (as seen on RFP):

Prime Bidder:

Prime Bidder (Company) Phone Number:

Prime Bidder (Company) Zip Code:

Which one of the following describes your business' status in terms of Minority and/or Woman-Owned Business Enterprise certification with the State of Rhode Island? _____MBE _____WBE _____Neither MBE nor WBE

By initialing the following sections and signing the bottom of this document in my capacity as the contractor or an authorized representative of contractor, I make this Affidavit:

It is the policy of the City of East Providence that minority business enterprises (**MBEs**) and women business enterprises (**WBEs**) should have the maximum opportunity to participate in procurements and projects as prime contractors and vendors. Pursuant to Sec. 21-52 of the Providence Code of Ordinances and Chapter 31-14 et seq. of the Rhode Island General Laws (as amended), MBE and WBE participation goals apply to contracts.

> The goal for Minority Business Enterprise (MBE) participation is 10% of the total bid value.
> The goal for Women's Business Enterprise (WBE) participation is 10% of the total bid value. The goal for combined MBE/WBE participation is 20% of the total bid value.

I acknowledge the City of East Providence's goals of supporting MBE/WBE certified businesses. Initial_____

Are you subcontracting with other parties on this project: Yes ___ No ____ if yes fill out page 2, **Subcontractor Disclosure Form.**

Are you using any subcontractors on this job and not meeting the 20% MBE/WBE participation goal: Yes ____ No ____ if yes fill out page 3, **MBE/WBE Waiver Request Form**.

If awarded the contract, I understand that my company must submit to the Minority and Women's Business Coordinator at the City of East Providence (MBE/WBE Office), copies of all executed agreements with the subcontractor(s) being utilized to achieve the participation goals and other requirements of the RI General Laws. **I understand that these documents must be submitted prior to the issuance of a notice to proceed.** Initial_____

I understand that, if awarded the contract, my firm must submit to the MBE/WBE Office canceled checks and reports required by the MBE/WBE Office on a quarterly basis verifying payments to the subcontractors(s) utilized on the contract. Initial

If I am awarded this contract and find that I am unable to utilize the subcontractor(s) identified in my Statement of Intent, I understand that I must substitute another certified MBE and WBE firm(s) to meet the participation goals. **I understand that I may not make a substitution until I have obtained the written approval of the MBE/WBE Office.** Initial_____

If awarded this contract, I understand that authorized representatives of the City of East Providence may examine the books, records and files of my firm from time to time, to the extent that such material is relevant to a determination of whether my firm is complying with the City's MBE/WBE participation requirements. Initial _____

I do solemnly declare and affirm under the penalty of perjury that the contents of the foregoing Affidavit are true and correct to the best of my knowledge, information and belief.

Signature of Bidder _____ Printed Name

Company Name _____ Date

SUBCONTRACTOR DISCLOSURE FORM

Fill out this form only if you WILL SUBCONTRACT with other parties. If you will not subcontract any portion of the proposed bid, do not fill out this form.

Prime Bidder: _____ Primary NAICS Code:

Item Description (as seen on RFP):**Please List all Subcontractors below.** Include the total dollar value that you propose to share with each subcontractor and the dollar amount to be subcontracted. Please check off MBE and WBE where applicable. The directory of all state-certified MBE/WBE firms is located at www.mbe.ri.gov. Business NAICS codes can be found at http://www.naics.como/search/

Proposed Subcontractor	MBE	WBE	Primary NAICS Code	Date of Mobilization	$ Value of Subcontract
					$
					$
					$
					$
					$
					$
A. MBE SUBCONTRACTED AMOUNT:					$
B. WBE SUBCONTRACTED AMOUNT:					$
C. NON MBE WBE SUBCONTRACTED AMOUNT:					$
D. DOLLAR AMOUNT OF WORK DONE BY THE PRIME CONTRACTOR:					$
E. TOTAL AMOUNT OF BID (SUM OF A, B, C & D):					$
F. PERCENTAGE OF BID SUBCONTRACTED TO MBEs AND WBEs. (Add A and B. Divide by E and multiply by 100).					%

Please read and initial the following statement acknowledging you understand.

If the percentage of the total amount of the bid being awarded to MBE or WBE vendors is less than 20% (Box F) and the prime contractor is NOT a Rhode Island State-certified MBE or WBE, **you must fill out the MBE/WBE WAIVER REQUEST FORM for consideration by City of East Providence MBE/WBE Outreach Director**.

Initial _____

_____ _____ _____

Signature of Prime Contractor *Printed Name* *Date Signed*

PLEASE COMPLETE THIS FORM AND SUBMIT WITH YOUR BID

MBE/WBE WAIVER REQUEST FORM

Fill out this form only if you are using subcontractors and did not meet the 20% MBE/WBE participation goal. MBE or WBE Prime Bidders that are certified by the State of Rhode Island **are NOT REQUIRED to fill out this form.**

Submit this form to the City of East Providence MBE/WBE Outreach Director**,** Elmer Carvalho-Pina at epina@eastprovidenceri.gov and Procurement Specialist, Jessica Lamprey at jlamprey@eastprovidenceri.gov for review with your bid submission.

This waiver applies only to the current bid which you are submitting to the City of Providence and does not apply to other bids your company may submit for in the future.

Prime Bidder: _____

Company Trade: _____

Item Description (as seen on RFP):_____

To receive a waiver, you must list the certified MBE and/or WBE companies you contacted, the name of the primary individual with whom you interacted and the reason the MBE/WBE company could not participate in the project.

MBE/WBE Company name	Individual's Name	Company Trade	Why did you choose not to work with this company?

I acknowledge the City of East Providence's goal of a combined MBE/WBE participation is 20% of the total bid value. I am requesting a waiver of _____% MBE/WBE (20% minus the Value of Box F on the Subcontractor Disclosure Form). If an opportunity is identified to subcontract any task associated with the fulfillment of this contract, a good faith effort will be made to select MBE/WBE certified businesses as partners.

_____	_____	_____
Signature of Prime Contractor	Printed Name	Date Signed
_____	_____	_____
Signature of City of East Providence MBE/WBE Outreach Director	Printed Name of City of East Providence MBE/WBE Outreach Director	Date Signed

City of East Providence
Attn: Procurement Specialist

ELECTRONIC BID DOCUMENT NOTIFICATION OF RECEIPT

In order to compile a complete listing of all recipients of the initial bid package please return this completed form by e-mail to Controllers@eastprovidenceri.gov

It is the responsibility of all potential bidders to ensure any and all addenda are downloaded from the City website https://eastprovidenceri.gov/rfp

The undersigned hereby acknowledges electronic receipt of the bid documents for the procurement specified below.

From:

Company Name: _____

Contact Name: _____

Phone Number: _____

Fax Number: _____

Email Address: _____

Bid No.: _____

Title of Specification received:

_____

Date _____

ANTI-COLLUSION DECLARATION

PLEASE COMPLETE THIS FORM AND SUBMIT WITH YOUR BID

ANTI-COLLUSION DECLARATION

The Bidder, by virtue of issuing a Bid certifies that Bidder has not divulged, discussed or compared the Bid with other Bidders and has not colluded with any other Bidder of parties to a Bid whomsoever. Bidder further certifies and agrees that premiums, rebates or gratuities are prohibited whether with, prior to, or after any delivery of material or services. Any such violation will result in the cancellation of this contract and the removal of offending parties from all Bid lists.

CONFLICT OF INTEREST

The Bidder and all sub-contractors shall disclose in writing as part of their Bid any possible or potential conflicts of interest which are known to, or reasonably should be known to the Bidder or sub-contractors, which may exist between their firms and the City of East Providence.

All Bidders and their subcontractors and business partners must disclose with their Bid, the name of any officer, director, agent or employee who is also an employee or family member of an employee of the City of East Providence.

Further, the Bidder must disclose the name of any City of East Providence employee or family member or any elected official who owns, directly or indirectly, an investment or other proprietary interest, in the firm or any of its parent company, subsidiaries or affiliates.

The Bidder and all sub-contractors and business partners shall disclose in writing as part of their Bid, any familial, personal or business relationships between members of Bidders, sub-contractor's or business partner's firms and members of the City of East Providence, whether or not there is any belief that the relationship might constitute a possible conflict of interests.

BIDDING FIRM:

SIGNATURE: DATE:

PRINT NAME: TITLE:

DAVIS-BACON WAGE RATES

"General Decision Number: RI20260001 05/18/2026

State: Rhode Island

Construction Types: Building, Heavy and Highway

Counties: Rhode Island Counties of
Bristol, Kent, Newport, Providence and
Washington

Includes Marine Construction Projects

Modification Number	Publication Date
2	01/30/2026
3	05/18/2026

ASBE0006-006 09/01/2024

	Rates	Fringes
HAZARDOUS MATERIAL HANDLER (INCLUDES PREPARATION, WETTING, STRIPPING, REMOVAL SCRAPPING, VACUUMING, BAGGING & DISPOSING OF ALL INSULATION MATERIALS, WHETHER THEY CONTAIN ASBESTOS OR NOT, FROM MECHANICAL SYSTEMS)	$ 49.91	36.63

ASBE0006-008 09/01/2024

	Rates	Fringes
ASBESTOS WORKER/INSULATOR (INCLUDES APPLICATION OF ALL INSULATING MATERIALS, PROTECTIVE COVERINGS, COATINGS & FINISHES TO ALL TYPES OF MECHANICAL SYSTEMS)	$ 49.91	36.63

BOIL0029-001 01/01/2025

	Rates	Fringes
BOILERMAKER	$ 50.62	28.82

BRRI0003-001 06/01/2022

	Rates	Fringes
BRICKLAYER, STONEMASON, POINTER, CAULKER & CLEANER	$ 46.86	29.14

BRRI0003-002 09/01/2022

	Rates	Fringes
MARBLE SETTER, TERRAZZO WORKER & TILE SETTER	$ 46.54	30.34

BRRI0003-003 09/01/2022

	Rates	Fringes
MARBLE, TILE & TERRAZZO FINISHER	$ 38.78	29.61

CARP0330-001 01/01/2023

	Rates	Fringes
PILEDRIVER FOOTNOTES: WHEN NOT DIVING OR		

TENDING THE DIVER, THE DIVER AND DIVER TENDER SHALL RECEIVE THE PILEDRIVER RATE. DIVER TENDERS SHALL RECEIVE $1.00 PER HOUR ABOVE THE PILE DRIVER RATE WHEN TENDING THE DIVER. WORK ON FREE-STANDING STACKS, CONCRETE SILOS & PUBLIC UTILITY ELECTRICAL POWER HOUSES, WHICH ARE OVER 35 FT. IN HEIGHT WHEN CONSTRUCTED: $.50 PER HOUR ADDITIONAL. WORK ON EXTERIOR CONCRETE SHEAR WALL GANG FORMS, 45 FT. OR MORE ABOVE GROUND ELEVATION OR ON SETBACK: $.50 PER HOUR ADDITIONAL. THE DESIGNATED PILEDRIVER, KNOWN AS THE ""MONKEY"": $1.00 PER HOUR ADDITIONAL....$ 41.53 29.35

WELDER FOOTNOTES: WHEN NOT DIVING OR TENDING THE DIVER, THE DIVER AND DIVER TENDER SHALL RECEIVE THE PILEDRIVER RATE. DIVER TENDERS SHALL RECEIVE $1.00 PER HOUR ABOVE THE PILE DRIVER RATE WHEN TENDING THE DIVER. WORK ON FREE-STANDING STACKS, CONCRETE SILOS & PUBLIC UTILITY ELECTRICAL POWER HOUSES, WHICH ARE OVER 35 FT. IN HEIGHT WHEN CONSTRUCTED: $.50 PER HOUR ADDITIONAL. WORK ON EXTERIOR CONCRETE SHEAR WALL GANG FORMS, 45 FT. OR MORE ABOVE GROUND ELEVATION OR ON SETBACK: $.50 PER HOUR ADDITIONAL. THE DESIGNATED PILEDRIVER, KNOWN AS THE ""MONKEY"": $1.00 PER HOUR ADDITIONAL....$ 48.68 30.50

DIVER TENDER FOOTNOTES: WHEN NOT DIVING OR TENDING THE DIVER, THE DIVER AND DIVER TENDER SHALL RECEIVE THE PILEDRIVER RATE. DIVER TENDERS SHALL RECEIVE $1.00 PER HOUR ABOVE THE PILE DRIVER RATE WHEN TENDING THE DIVER. WORK ON FREE-STANDING STACKS, CONCRETE SILOS & PUBLIC UTILITY ELECTRICAL POWER HOUSES, WHICH ARE OVER 35 FT. IN HEIGHT WHEN CONSTRUCTED: $.50 PER HOUR ADDITIONAL. WORK ON EXTERIOR CONCRETE SHEAR WALL GANG FORMS, 45 FT. OR MORE ABOVE GROUND ELEVATION OR ON SETBACK: $.50 PER HOUR ADDITIONAL. THE DESIGNATED PILEDRIVER, KNOWN AS THE ""MONKEY"": $1.00 PER HOUR ADDITIONAL....$ 48.68 30.50

DIVER FOOTNOTES: WHEN NOT DIVING OR TENDING THE DIVER, THE DIVER AND DIVER TENDER SHALL RECEIVE THE PILEDRIVER RATE. DIVER TENDERS SHALL RECEIVE $1.00 PER HOUR ABOVE THE PILE DRIVER RATE WHEN TENDING THE DIVER. WORK ON FREE-STANDING STACKS, CONCRETE SILOS & PUBLIC UTILITY ELECTRICAL POWER HOUSES, WHICH ARE OVER 35 FT. IN HEIGHT WHEN CONSTRUCTED: $.50 PER HOUR ADDITIONAL. WORK ON EXTERIOR CONCRETE SHEAR WALL GANG FORMS, 45 FT. OR MORE ABOVE GROUND ELEVATION OR ON SETBACK: $.50 PER HOUR ADDITIONAL. THE DESIGNATED PILEDRIVER, KNOWN AS THE ""MONKEY"": $1.00 PER HOUR ADDITIONAL....$ 60.83 30.50

CARPENTER: INCLUDES SOFT FLOOR LAYER.....$ 47.88 30.50

CARP0330-001 06/02/2025

	Rates	Fringes

PILEDRIVER FOOTNOTES: WHEN NOT DIVING OR TENDING THE DIVER, THE DIVER AND DIVER TENDER SHALL RECEIVE THE PILEDRIVER RATE. DIVER TENDERS SHALL RECEIVE $1.00 PER HOUR ABOVE THE PILE DRIVER RATE WHEN TENDING THE DIVER. WORK ON FREE-STANDING STACKS, CONCRETE SILOS & PUBLIC UTILITY ELECTRICAL POWER HOUSES, WHICH ARE OVER 35 FT. IN HEIGHT WHEN CONSTRUCTED: $.50 PER HOUR ADDITIONAL. WORK ON EXTERIOR CONCRETE SHEAR WALL GANG FORMS, 45 FT. OR MORE ABOVE GROUND ELEVATION OR ON SETBACK: $.50 PER HOUR ADDITIONAL. THE DESIGNATED PILEDRIVER, KNOWN AS THE ""MONKEY"": $1.00 PER HOUR ADDITIONAL....$ 41.53 29.35

WELDER FOOTNOTES: WHEN NOT DIVING OR TENDING

THE DIVER, THE DIVER AND DIVER TENDER SHALL RECEIVE THE PILEDRIVER RATE. DIVER TENDERS SHALL RECEIVE $1.00 PER HOUR ABOVE THE PILE DRIVER RATE WHEN TENDING THE DIVER. WORK ON FREE-STANDING STACKS, CONCRETE SILOS & PUBLIC UTILITY ELECTRICAL POWER HOUSES, WHICH ARE OVER 35 FT. IN HEIGHT WHEN CONSTRUCTED: $.50 PER HOUR ADDITIONAL. WORK ON EXTERIOR CONCRETE SHEAR WALL GANG FORMS, 45 FT. OR MORE ABOVE GROUND ELEVATION OR ON SETBACK: $.50 PER HOUR ADDITIONAL. THE DESIGNATED PILEDRIVER, KNOWN AS THE ""MONKEY"": $1.00 PER HOUR ADDITIONAL....$ 48.68 30.50

DIVER TENDER FOOTNOTES: WHEN NOT DIVING OR TENDING THE DIVER, THE DIVER AND DIVER TENDER SHALL RECEIVE THE PILEDRIVER RATE. DIVER TENDERS SHALL RECEIVE $1.00 PER HOUR ABOVE THE PILE DRIVER RATE WHEN TENDING THE DIVER. WORK ON FREE-STANDING STACKS, CONCRETE SILOS & PUBLIC UTILITY ELECTRICAL POWER HOUSES, WHICH ARE OVER 35 FT. IN HEIGHT WHEN CONSTRUCTED: $.50 PER HOUR ADDITIONAL. WORK ON EXTERIOR CONCRETE SHEAR WALL GANG FORMS, 45 FT. OR MORE ABOVE GROUND ELEVATION OR ON SETBACK: $.50 PER HOUR ADDITIONAL. THE DESIGNATED PILEDRIVER, KNOWN AS THE ""MONKEY"": $1.00 PER HOUR ADDITIONAL....$ 48.68 30.50

DIVER FOOTNOTES: WHEN NOT DIVING OR TENDING THE DIVER, THE DIVER AND DIVER TENDER SHALL RECEIVE THE PILEDRIVER RATE. DIVER TENDERS SHALL RECEIVE $1.00 PER HOUR ABOVE THE PILE DRIVER RATE WHEN TENDING THE DIVER. WORK ON FREE-STANDING STACKS, CONCRETE SILOS & PUBLIC UTILITY ELECTRICAL POWER HOUSES, WHICH ARE OVER 35 FT. IN HEIGHT WHEN CONSTRUCTED: $.50 PER HOUR ADDITIONAL. WORK ON EXTERIOR CONCRETE SHEAR WALL GANG FORMS, 45 FT. OR MORE ABOVE GROUND ELEVATION OR ON SETBACK: $.50 PER HOUR ADDITIONAL. THE DESIGNATED PILEDRIVER, KNOWN AS THE ""MONKEY"": $1.00 PER HOUR ADDITIONAL....$ 60.83 30.50

CARPENTER: INCLUDES SOFT FLOOR LAYER.....$ 47.88 30.50

CARP1121-002 04/21/2025

	Rates	Fringes
MILLWRIGHT	$ 45.72	31.50

ELEC0099-002 06/01/2025

	Rates	Fringes
TELEDATA SYSTEM INSTALLER FOOTNOTES: WORK OF A HAZARDOUS NATURE, OR WHERE THE WORK HEIGHT IS 30 FT. OR MORE FROM THE FLOOR, EXCEPT WHEN WORKING OSHA-APPROVED LIFTS: 20% PER HOUR ADDITIONAL. WORK IN TUNNELS BELOW GROUND LEVEL IN COMBINED SEWER OUTFALL: 20% PER HOUR ADDITIONAL.....	$ 42.09	19.71
ELECTRICIAN FOOTNOTES: WORK OF A HAZARDOUS NATURE, OR WHERE THE WORK HEIGHT IS 30 FT. OR MORE FROM THE FLOOR, EXCEPT WHEN WORKING OSHA-APPROVED LIFTS: 20% PER HOUR ADDITIONAL. WORK IN TUNNELS BELOW GROUND LEVEL IN COMBINED SEWER OUTFALL: 20% PER HOUR ADDITIONAL.....	$ 56.11	24.74

ELEV0039-001 01/01/2025

	Rates	Fringes
ELEVATOR MECHANIC FOOTNOTES: A. PAID HOLIDAYS: NEW YEARS DAY; MEMORIAL DAY; INDEPENDENCE DAY; LABOR DAY; VETERANS' DAY; THANKSGIVING DAY; THE FRIDAY AFTER THANKSGIVING DAY; AND CHRISTMAS DAY.		

B. EMPLOYER CONTRIBUTES 8% BASIC HOURLY RATE FOR 5 YEARS OR MORE OF SERVICE OF 6% BASIC HOURLY RATE FOR 6 MONTHS TO 5 YEARS OF SERVICE AS VACATION PAY CREDIT.....$ 64.52 38.44

ENGI0057-001 12/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR: POWER PLANTS, SEWER TREATMENT PLANTS, PUMPING STATIONS, TUNNELS, CAISSONS, PIERS, DOCKS, BRIDGES, WIND TURBINES, SUBTERRANEAN & OTHER MARINE AND HEAVY CONSTRUCTION WORK: GROUP 9 BOAT & TUG OPERATOR.		

A. BOOM LENGTHS, INCLUDING JIBS: 150 FEET AND OVER + $ 2.00 180 FEET AND OVER + $ 3.00 210 FEET AND OVER + $ 4.00 240 FEET AND OVER + $ 5.00 270 FEET AND OVER + $ 7.00 300 FEET AND OVER + $ 8.00 350 FEET AND OVER + $ 9.00 400 FEET AND OVER + $10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY, CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. A. FOOTNOTES: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL. TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 48.92 29.95

POWER EQUIPMENT OPERATOR: POWER PLANTS, SEWER TREATMENT PLANTS, PUMPING STATIONS, TUNNELS, CAISSONS, PIERS, DOCKS, BRIDGES, WIND TURBINES, SUBTERRANEAN & OTHER MARINE AND HEAVY CONSTRUCTION WORK: GROUP 8 HEATER, CONCRETE MIXER, STONE CRUSHER, WELDING MACHINE, GENERATOR AND LIGHT PLANT, GAS AND ELECTRIC DRIVEN PUMP AND AIR COMPRESSOR.

A. BOOM LENGTHS, INCLUDING JIBS: 150 FEET AND OVER + $ 2.00 180 FEET AND OVER + $ 3.00 210 FEET AND OVER + $ 4.00 240 FEET AND OVER + $ 5.00 270 FEET AND OVER + $ 7.00 300 FEET AND OVER + $ 8.00 350 FEET AND OVER + $ 9.00 400 FEET AND OVER + $10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY,

MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY, CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. A. FOOTNOTES: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL. TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 45.00 29.95

POWER EQUIPMENT OPERATOR: POWER PLANTS, SEWER TREATMENT PLANTS, PUMPING STATIONS, TUNNELS, CAISSONS, PIERS, DOCKS, BRIDGES, WIND TURBINES, SUBTERRANEAN & OTHER MARINE AND HEAVY CONSTRUCTION WORK: GROUP 7 UTILITY ENGINEERS AND SIGNAL PERSONS

A.

BOOM LENGTHS, INCLUDING JIBS: 150 FEET AND OVER + $ 2.00 180 FEET AND OVER + $ 3.00 210 FEET AND OVER + $ 4.00 240 FEET AND OVER + $ 5.00 270 FEET AND OVER + $ 7.00 300 FEET AND OVER + $ 8.00 350 FEET AND OVER + $ 9.00 400 FEET AND OVER + $10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY, CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. A. FOOTNOTES: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL. TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 33.15 29.95

POWER EQUIPMENT OPERATOR: POWER PLANTS, SEWER TREATMENT PLANTS, PUMPING STATIONS, TUNNELS, CAISSONS, PIERS, DOCKS, BRIDGES, WIND TURBINES, SUBTERRANEAN & OTHER MARINE AND HEAVY CONSTRUCTION WORK: GROUP 6 WELL-POINT INSTALLATION CREW.

A. BOOM LENGTHS, INCLUDING JIBS: 150 FEET AND OVER + $ 2.00 180 FEET AND OVER + $ 3.00 210 FEET AND OVER + $ 4.00 240 FEET AND OVER + $ 5.00 270

FEET AND OVER + $ 7.00 300 FEET AND OVER + $ 8.00
350 FEET AND OVER + $ 9.00 400 FEET AND OVER +
$10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY,
PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY
DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY,
THANKSGIVING DAY, CHRISTMAS DAY. A: ANY EMPLOYEE
WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY
FALLS SHALL BE PAID FOR THE HOLIDAY. A. FOOTNOTES:
 HAZMAT WORK: $2.00 PER HOUR ADDITIONAL.
TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 39.15 29.95
POWER EQUIPMENT OPERATOR: POWER PLANTS, SEWER
TREATMENT PLANTS, PUMPING STATIONS, TUNNELS,
CAISSONS, PIERS, DOCKS, BRIDGES, WIND TURBINES,
SUBTERRANEAN & OTHER MARINE AND HEAVY CONSTRUCTION
WORK: GROUP 5 BULLDOZER, BOBCATS, SKID STEER
LOADER, TRACTOR, SCRAPER, COMBINATION LOADER
BACKHOE, ROLLER, FRONT END LOADER (LESS THAN 3
YDS.), STREET AND MOBILE-POWERED SWEEPER (3-YD.
CAPACITY), 8-FT. SWEEPER MINIMUM 65 HP).

A. BOOM LENGTHS, INCLUDING JIBS: 150
FEET AND OVER + $ 2.00 180 FEET AND OVER + $ 3.00
210 FEET AND OVER + $ 4.00 240 FEET AND OVER + $
5.00 270 FEET AND OVER + $ 7.00 300 FEET AND OVER
+ $ 8.00 350 FEET AND OVER + $ 9.00 400 FEET AND
OVER + $10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY,
PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY
DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY,
THANKSGIVING DAY, CHRISTMAS DAY. A: ANY EMPLOYEE
WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY
FALLS SHALL BE PAID FOR THE HOLIDAY. A. FOOTNOTES:
 HAZMAT WORK: $2.00 PER HOUR ADDITIONAL.
TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 48.35 29.95
POWER EQUIPMENT OPERATOR: POWER PLANTS, SEWER
TREATMENT PLANTS, PUMPING STATIONS, TUNNELS,
CAISSONS, PIERS, DOCKS, BRIDGES, WIND TURBINES,
SUBTERRANEAN & OTHER MARINE AND HEAVY CONSTRUCTION
WORK: GROUP 4 OILER ON CRAWLER BACKHOE.

A. BOOM LENGTHS, INCLUDING JIBS: 150 FEET AND OVER
+ $ 2.00 180 FEET AND OVER + $ 3.00 210 FEET AND
OVER + $ 4.00 240 FEET AND OVER + $ 5.00 270 FEET
AND OVER + $ 7.00 300 FEET AND OVER + $ 8.00 350
FEET AND OVER + $ 9.00 400 FEET AND OVER + $10.00

A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY, CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. A. FOOTNOTES: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL. TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 42.07 29.95
POWER EQUIPMENT OPERATOR: POWER PLANTS, SEWER TREATMENT PLANTS, PUMPING STATIONS, TUNNELS, CAISSONS, PIERS, DOCKS, BRIDGES, WIND TURBINES, SUBTERRANEAN & OTHER MARINE AND HEAVY CONSTRUCTION WORK: GROUP 3 OILERS ON CRANES.

A. BOOM LENGTHS, INCLUDING JIBS: 150 FEET AND OVER + $ 2.00 180 FEET AND OVER + $ 3.00 210 FEET AND OVER + $ 4.00 240 FEET AND OVER + $ 5.00 270 FEET AND OVER + $ 7.00 300 FEET AND OVER + $ 8.00 350 FEET AND OVER + $ 9.00 400 FEET AND OVER + $10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY, CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. A. FOOTNOTES: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL. TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 44.92 29.95
POWER EQUIPMENT OPERATOR: POWER PLANTS, SEWER TREATMENT PLANTS, PUMPING STATIONS, TUNNELS, CAISSONS, PIERS, DOCKS, BRIDGES, WIND TURBINES, SUBTERRANEAN & OTHER MARINE AND HEAVY CONSTRUCTION WORK: GROUP 2 DIGGING MACHINE, ROSS CARRIER, LOCOMOTIVE, HOIST, ELEVATOR, BIDWELL-TYPE MACHINE, SHOT & WATER BLASTING MACHINE, PAVER, SPREADER, GRADERS, FRONT END LOADER (3 YDS. AND OVER), VIBRATORY HAMMER & VACUUM TRUCK, ROADHEADERS, FORKLIFTS, ECONOMOBILE TYPE EQUIPMENT, TUNNEL BORING MACHINES, CONCRETE PUMP AND ON SITE CONCRETE PLANTS.

A. BOOM LENGTHS, INCLUDING JIBS: 150 FEET AND OVER + $ 2.00 180 FEET AND OVER + $ 3.00 210 FEET AND OVER + $ 4.00 240 FEET

AND OVER + $ 5.00 270 FEET AND OVER + $ 7.00 300 FEET AND OVER + $ 8.00 350 FEET AND OVER + $ 9.00 400 FEET AND OVER + $10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY, CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. A. FOOTNOTES: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL.
 TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 49.30 29.95

POWER EQUIPMENT OPERATOR: POWER PLANTS, SEWER TREATMENT PLANTS, PUMPING STATIONS, TUNNELS, CAISSONS, PIERS, DOCKS, BRIDGES, WIND TURBINES, SUBTERRANEAN & OTHER MARINE AND HEAVY CONSTRUCTION WORK: GROUP 1 CRANES, LIGHTERS, BOOM TRUCKS AND DERRICKS

A. BOOM LENGTHS, INCLUDING JIBS: 150 FEET AND OVER + $ 2.00 180 FEET AND OVER + $ 3.00 210 FEET AND OVER + $ 4.00 240 FEET AND OVER + $ 5.00 270 FEET AND OVER + $ 7.00 300 FEET AND OVER + $ 8.00 350 FEET AND OVER + $ 9.00 400 FEET AND OVER + $10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY, CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. A. FOOTNOTES: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL. TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 51.30 29.95

ENGI0057-003 12/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR: BUILDING CONSTRUCTION: GROUP 8 HEATER, CONCRETE MIXER, STONE CRUSHER, WELDING MACHINE, GENERATOR FOR LIGHT PLANT, GAS AND ELECTRIC DRIVEN PUMP & AIR COMPRESSOR		

A. BOOM LENTHS, INCLUDING JIBS: 150 FT. AND OVER: + $ 2.00 180 FT. AND OVER: + $ 3.00 210 FT. AND OVER: + $ 4.00 240 FT. AND OVER: + $ 5.00 270 FT. AND OVER: + $ 7.00 300 FT. AND OVER: + $ 8.00 350 FT. AND OVER: + $ 9.00 400 FT. AND OVER: + $10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY & CHRISTMAS DAY. A: ANY EMPLOYEE

WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY.
A. FOOTNOTE: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL. TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 44.54 29.95
POWER EQUIPMENT OPERATOR: BUILDING CONSTRUCTION:
GROUP 7 WELL POINT INSTALLATION CREW

A. BOOM LENTHS, INCLUDING JIBS: 150 FT. AND OVER: + $ 2.00 180 FT. AND OVER: + $ 3.00 210 FT. AND OVER: + $ 4.00 240 FT. AND OVER: + $ 5.00 270 FT. AND OVER: + $ 7.00 300 FT. AND OVER: + $ 8.00 350 FT. AND OVER: + $ 9.00 400 FT. AND OVER: + $10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY & CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. A. FOOTNOTE: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL.
TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 47.22 29.95
POWER EQUIPMENT OPERATOR: BUILDING CONSTRUCTION:
GROUP 6 BULLDOZER,SKID STEER LOADERS,BOBCATS, TRACTOR, GRADER, SCRAPER,COMBINATION LOADER BACKHOE, ROLLER, FRONT END LOADER (LESS THAN 3 YDS.), STREET AND MOBILE POWERED SWEEPER (3 YDS. CAPACITY), 8-FT. SWEEPER (MINIMUM 65 HP)

A. BOOM LENTHS, INCLUDING JIBS: 150 FT. AND OVER: + $ 2.00 180 FT. AND OVER: + $ 3.00 210 FT. AND OVER: + $ 4.00 240 FT. AND OVER: + $ 5.00 270 FT. AND OVER: + $ 7.00 300 FT. AND OVER: + $ 8.00 350 FT. AND OVER: + $ 9.00 400 FT. AND OVER: + $10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY & CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY.
A. FOOTNOTE: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL. TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 47.65 29.95
POWER EQUIPMENT OPERATOR: BUILDING CONSTRUCTION:
GROUP 5 OILER ON CRAWLER BACKHOE

A. BOOM LENTHS, INCLUDING JIBS: 150 FT. AND OVER: + $ 2.00 180 FT. AND OVER: + $ 3.00 210 FT. AND OVER: + $ 4.00 240 FT. AND OVER: + $ 5.00 270 FT. AND OVER: + $ 7.00 300 FT. AND OVER: + $ 8.00 350 FT. AND OVER: + $ 9.00 400 FT. AND OVER: + $10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY & CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY.
A. FOOTNOTE: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL. TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 41.50 29.95
POWER EQUIPMENT OPERATOR: BUILDING CONSTRUCTION:
GROUP 4 FIREMAN & OILER ON CRANES

A. BOOM LENTHS, INCLUDING JIBS: 150 FT. AND OVER: + $ 2.00 180 FT. AND OVER: + $ 3.00 210 FT. AND OVER: + $ 4.00 240 FT. AND OVER: + $ 5.00 270 FT. AND OVER: + $ 7.00 300 FT. AND OVER: + $ 8.00 350 FT. AND OVER: + $ 9.00 400 FT. AND OVER: + $10.00
A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY & CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. A. FOOTNOTE: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL.
TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 44.35 29.95
POWER EQUIPMENT OPERATOR: BUILDING CONSTRUCTION:
GROUP 3 TELEHANDLER EQUIPMENT, FORKLIFT, CONCRETE PUMP & ON-SITE CONCRETE PLANT

A. BOOM LENTHS, INCLUDING JIBS: 150 FT. AND OVER: + $ 2.00 180 FT. AND OVER: + $ 3.00 210 FT. AND OVER: + $ 4.00 240 FT. AND OVER: + $ 5.00 270 FT. AND OVER: + $ 7.00 300 FT. AND OVER: + $ 8.00 350 FT. AND OVER: + $ 9.00 400 FT. AND OVER: + $10.00 A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY & CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY.
A. FOOTNOTE: HAZMAT WORK: $2.00 PER HOUR ADDITIONAL. TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 48.35 29.95
POWER EQUIPMENT OPERATOR: BUILDING CONSTRUCTION:
GROUP 2 DIGGING MACHINE, ROSS CARRIER, LOCOMOTIVE, HOIST, ELEVATOR, BIDWELL-TYPE MACHINE, SHOT & WATER BLASTING MACHINE, PAVER, SPREADER, FRONT END LOADER (3 YDS. AND OVER), VIBRATORY HAMMER AND VACUUM TRUCK

LENTHS, INCLUDING JIBS: 150 FT. AND OVER: + $ 2.00
180 FT. AND OVER: + $ 3.00 210 FT. AND OVER: + $
4.00 240 FT. AND OVER: + $ 5.00 270 FT. AND OVER:
+ $ 7.00 300 FT. AND OVER: + $ 8.00 350 FT. AND
OVER: + $ 9.00 400 FT. AND OVER: + $10.00
A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY,
MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY,
COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY &
CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN
THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR
THE HOLIDAY. A. FOOTNOTE: HAZMAT
WORK: $2.00 PER HOUR ADDITIONAL.
TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 48.57 29.95
POWER EQUIPMENT OPERATOR: BUILDING CONSTRUCTION:
GROUP 1 CRANES, LIGHTERS, BOOM TRUCKS AND
DERRICKS.

A. BOOM
LENTHS, INCLUDING JIBS: 150 FT. AND OVER: + $ 2.00
180 FT. AND OVER: + $ 3.00 210 FT. AND OVER: + $
4.00 240 FT. AND OVER: + $ 5.00 270 FT. AND OVER:
+ $ 7.00 300 FT. AND OVER: + $ 8.00 350 FT. AND
OVER: + $ 9.00 400 FT. AND OVER: + $10.00
A. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY,
MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY,
COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY &
CHRISTMAS DAY. A: ANY EMPLOYEE WHO WORKS 3 DAYS IN
THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR
THE HOLIDAY. A. FOOTNOTE: HAZMAT
WORK: $2.00 PER HOUR ADDITIONAL.
TUNNEL/SHAFT WORK: $5.00 PER HOUR ADDITIONAL.....$ 50.57 29.95

ENGI0057-005 12/01/2025

Rates Fringes

POWER EQUIPMENT OPERATOR: HIGHWAY CONSTRUCTION
PROJECTS; WATER AND SEWERLINE PROJECTS WHICH ARE
INCIDENTAL TO HIGHWAY CONSTRUCTION PROJECTS; AND
BRIDGE PROJECTS THAT DO NOT SPAN WATER: GROUP 8 GAS
AND ELECTRIC DRIVE HEATERS, CONCRETE MIXERS, LIGHT
PLANTS, WELDING MACHINES, PUMPS AND COMPRESSORS

A. FOOTNOTE: A. ANY
EMPLOYEE WHO WORKS THREE DAYS IN THE WEEK IN WHICH
A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. B.
PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY,
MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY,
COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY &
CHRISTMAS DAY.....$ 38.70 29.95
POWER EQUIPMENT OPERATOR: HIGHWAY CONSTRUCTION
PROJECTS; WATER AND SEWERLINE PROJECTS WHICH ARE
INCIDENTAL TO HIGHWAY CONSTRUCTION PROJECTS; AND
BRIDGE PROJECTS THAT DO NOT SPAN WATER: GROUP 7
COMBINATION LOADER / BACKHOES, FRONT-END LOADERS
(LESS THAN 3 YDS.), FORKLIFT, BULLDOZERS, SCRAPERS,
BOATS, ROLLERS, SKID STEER LOADERS (REGARDLESS OF

ATTACHMENTS), STREET SWEEPERS, MECHANICS, WELDERS, OPERATORS IN MATERIALS YARDS, SHOPS AND GARAGES

A. FOOTNOTE: A. ANY EMPLOYEE WHO WORKS THREE DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. B. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY & CHRISTMAS DAY.....$ 43.43 29.95

POWER EQUIPMENT OPERATOR: HIGHWAY CONSTRUCTION PROJECTS; WATER AND SEWERLINE PROJECTS WHICH ARE INCIDENTAL TO HIGHWAY CONSTRUCTION PROJECTS; AND BRIDGE PROJECTS THAT DO NOT SPAN WATER: GROUP 6
OILERS ON CRANES AND DECKHANDS

A. FOOTNOTE: A. ANY EMPLOYEE WHO WORKS THREE DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. B. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY & CHRISTMAS DAY.....$ 39.73 29.95

POWER EQUIPMENT OPERATOR: HIGHWAY CONSTRUCTION PROJECTS; WATER AND SEWERLINE PROJECTS WHICH ARE INCIDENTAL TO HIGHWAY CONSTRUCTION PROJECTS; AND BRIDGE PROJECTS THAT DO NOT SPAN WATER: GROUP 5
SIGNAL PERSONS

A. FOOTNOTE: A. ANY EMPLOYEE WHO WORKS THREE DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE HOLIDAY. B. PAID HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY,

THANKSGIVING DAY & CHRISTMAS DAY.....$ 33.15 29.95
POWER EQUIPMENT OPERATOR: HIGHWAY CONSTRUCTION
PROJECTS; WATER AND SEWERLINE PROJECTS WHICH ARE
INCIDENTAL TO HIGHWAY CONSTRUCTION PROJECTS; AND
BRIDGE PROJECTS THAT DO NOT SPAN WATER: GROUP 4
UTILITY ENGINEERS

A. FOOTNOTE:
A. ANY EMPLOYEE WHO WORKS THREE DAYS IN THE WEEK IN
WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE
HOLIDAY. B. PAID HOLIDAYS: NEW YEAR'S DAY,
PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY
DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY,
THANKSGIVING DAY & CHRISTMAS DAY.....$ 25.75 29.95
POWER EQUIPMENT OPERATOR: HIGHWAY CONSTRUCTION
PROJECTS; WATER AND SEWERLINE PROJECTS WHICH ARE
INCIDENTAL TO HIGHWAY CONSTRUCTION PROJECTS; AND
BRIDGE PROJECTS THAT DO NOT SPAN WATER: GROUP 3
WELLPOINT INSTALLATION AND DRILL/BORING MACHINE
ASSISTANTS

A. FOOTNOTE: A. ANY EMPLOYEE WHO WORKS THREE
DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE
PAID FOR THE HOLIDAY. B. PAID HOLIDAYS: NEW YEAR'S
DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH,
VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY,
THANKSGIVING DAY & CHRISTMAS DAY.....$ 39.15 29.95
POWER EQUIPMENT OPERATOR: HIGHWAY CONSTRUCTION
PROJECTS; WATER AND SEWERLINE PROJECTS WHICH ARE
INCIDENTAL TO HIGHWAY CONSTRUCTION PROJECTS; AND
BRIDGE PROJECTS THAT DO NOT SPAN WATER: GROUP 2
DIGGING MACHINES, EXCAVATORS, LOCOMOTIVES, JOHN
HENRY'S, DIRECTIONAL DRILLING MACHINES, COLD
PLANERS, RECLAIMERS, PAVERS, SPREADERS, GRADERS,
FRONT-END LOADERS (3YDS & OVER), VACUUM TRUCK,
DRILL/BORING MACHINE OPERATORS, VERMEER SAW, WATER
BLASTER, HYDRAULIC-DEMOLITION ROBOT, ROSS CARRIERS,
CONCRETE PUMP OPERATORS, ASPHALT/MATERIAL TRANSFER
MACHINES, ROTATING TELEHANDLERS, SPMT TYPE

EQUIPMENT

A. FOOTNOTE: A.
ANY EMPLOYEE WHO WORKS THREE DAYS IN THE WEEK IN
WHICH A HOLIDAY FALLS SHALL BE PAID FOR THE
HOLIDAY. B. PAID HOLIDAYS: NEW YEAR'S DAY,
PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH, VICTORY
DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY,
THANKSGIVING DAY & CHRISTMAS DAY.....$ 44.45 29.95
POWER EQUIPMENT OPERATOR: HIGHWAY CONSTRUCTION
PROJECTS; WATER AND SEWERLINE PROJECTS WHICH ARE
INCIDENTAL TO HIGHWAY CONSTRUCTION PROJECTS; AND
BRIDGE PROJECTS THAT DO NOT SPAN WATER: GROUP 1
CRANES, PILE DRIVERS, LIGHTERS, BOOM TRUCKS,
HOISTS, DERRICKS

A. FOOTNOTE: A. ANY EMPLOYEE WHO WORKS THREE
DAYS IN THE WEEK IN WHICH A HOLIDAY FALLS SHALL BE
PAID FOR THE HOLIDAY. B. PAID HOLIDAYS: NEW YEAR'S
DAY, PRESIDENT'S DAY, MEMORIAL DAY, JULY FOURTH,
VICTORY DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY,
THANKSGIVING DAY & CHRISTMAS DAY.....$ 46.45 29.95

IRON0037-001 09/16/2025

	Rates	Fringes
IRONWORKER	$ 43.03	33.53

LABO0271-001 12/03/2023

	Rates	Fringes
LABORER GROUP 5 (BUILDING CONSTRUCTION)	$ 39.00	26.90
LABORER GROUP 4 (BUILDING CONSTRUCTION)	$ 37.00	26.90
LABORER GROUP 3 (BUILDING CONSTRUCTION)	$ 37.00	26.90
LABORER GROUP 2 (BUILDING CONSTRUCTION)	$ 37.00	26.90
LABORER GROUP 1 (BUILDING CONSTRUCTION)	$ 37.00	26.90

LABO0271-002 11/27/2022

	Rates	Fringes
LABORER TEST BORING LABORER	$ 41.95	24.15
LABORER TEST BORING DRILLER	$ 41.95	24.15
LABORER OPEN AIR CAISSON, UNDERPINNING WORK AND BORING CREW TOP MAN & LABORER	$ 35.60	24.15
LABORER OPEN AIR CAISSON, UNDERPINNING WORK AND BORING CREW BOTTOM MAN	$ 41.50	24.15
LABORER FREE AIR GROUP 3	$ 42.45	24.15
LABORER FREE AIR GROUP 2	$ 45.00	24.15
LABORER FREE AIR GROUP 1	$ 46.00	24.15

LABORER COMPRESSED AIR GROUP 3	$ 42.45	24.15
LABORER COMPRESSED AIR GROUP 2	$ 52.93	24.15
LABORER COMPRESSED AIR GROUP 1	$ 55.40	24.15

PAIN0011-005 06/01/2025

	Rates	Fringes
PAINTER (SPRAY, SAND & WATER BLASTING)	$ 42.57	26.60
PAINTER (EPOXY, TANKS, TOWERS, SWING STAGE & STRUCTURAL STEEL)	$ 41.57	26.60
PAINTER (BRUSH AND ROLLER)	$ 39.57	26.60

PAIN0011-006 06/01/2024

	Rates	Fringes
GLAZIER FOOTNOTES: SWING STAGE: $1.00 PER HOUR ADDITIONAL. PAID HOLIDAYS: LABOR DAY & CHRISTMAS DAY	$ 41.63	26.15

PAIN0011-011 06/01/2024

	Rates	Fringes
PAINTER (BRIDGE WORK)	$ 57.85	26.40

PAIN0035-008 06/01/2011

	Rates	Fringes
SIGN PAINTER	$ 24.79	13.72

PLAS0040-001 01/01/2025

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (BUILDING CONSTRUCTION) FOOTNOTE: CEMENT MASON: WORK ON FREE SWINGING SCAFFOLDS UNDER 3 PLANKS WIDTH AND WHICH IS 20 OR MORE FEET ABOVE GROUND AND ANY OFFSET STRUCTURE: $.30 PER HOUR ADDITIONAL	$ 44.75	29.10

PLAS0040-002 01/01/2025

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (HEAVY AND HIGHWAY CONSTRUCTION)	$ 44.75	29.10

PLAS0040-003 01/01/2025

	Rates	Fringes
PLASTERER	$ 45.52	29.43

PLUM0051-002 08/25/2025

	Rates	Fringes
PLUMBERS AND PIPEFITTERS	$ 54.34	34.50

ROOF0033-004 12/01/2025

	Rates	Fringes
ROOFER	$ 47.49	31.44

SFRI0669-001 04/01/2025

	Rates	Fringes
SPRINKLER FITTER	$ 53.76	33.44

SHEE0017-002 06/01/2025

	Rates	Fringes
SHEET METAL WORKER	$ 44.42	41.94

TEAM0251-001 05/01/2025

	Rates	Fringes
TRUCK DRIVER: HEAVY AND HIGHWAY CONSTRUCTION: GROUP 5 FOUR- AND FIVE-AXLE EQUIPMENT		

FOOTNOTES:

A. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY AND CHRISTMAS DAY, PLUS PRESIDENTS' DAY, COLUMBUS DAY, VETERAN'S DAY & V-J DAY, PROVIDING THE EMPLOYEE HAS WORKED AT LEAST ONE DAY IN THE CALENDAR WEEK IN WHICH THE HOLIDAY FALLS. B. EMPLOYEE WHO HAS BEEN ON THE PAYROLL FOR 1 YEAR OR MORE BUT LESS THAN 5 YEARS AND HAS WORKED 150 DAYS DURING THE LAST YEAR OF EMPLOYMENT SHALL RECEIVE 1 WEEK'S PAID VACATION; 5 TO 10 YEARS - 2 WEEKS' PAID VACATION; 10 OR MORE YEARS - 3 WEEK'S PAID VACATION. C. EMPLOYEES ON THE SENIORITY LIST SHALL BE PAID A ONE HUNDRED DOLLAR ($100.00) BONUS FOR EVERY FOUR HUNDRED (400) HOURS WORKED, UP TO A MAXIMUM OF FIVE HUNDRED DOLLARS ($500.00) ALL DRIVERS WORKING ON A DEFINED HAZARD MATERIAL JOB SITE SHALL BE PAID A PREMIUM OF $2.00 PER HOUR OVER APPLICABLE RATE.

.....	$ 32.21	34.51
TRUCK DRIVER: HEAVY AND HIGHWAY CONSTRUCTION: GROUP 10 TRACTOR TRAILER		

FOOTNOTES: A. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY AND CHRISTMAS DAY, PLUS PRESIDENTS' DAY, COLUMBUS DAY, VETERAN'S DAY & V-J DAY, PROVIDING THE EMPLOYEE HAS WORKED AT LEAST ONE DAY IN THE CALENDAR WEEK IN WHICH THE HOLIDAY FALLS. B. EMPLOYEE WHO HAS BEEN ON THE PAYROLL FOR 1 YEAR OR MORE BUT LESS THAN 5 YEARS AND HAS WORKED 150 DAYS DURING THE LAST YEAR OF EMPLOYMENT SHALL RECEIVE 1 WEEK'S PAID VACATION; 5 TO 10 YEARS - 2 WEEKS' PAID VACATION; 10 OR MORE YEARS - 3

WEEK'S PAID VACATION. C. EMPLOYEES ON THE SENIORITY LIST SHALL BE PAID A ONE HUNDRED DOLLAR ($100.00) BONUS FOR EVERY FOUR HUNDRED (400) HOURS WORKED, UP TO A MAXIMUM OF FIVE HUNDRED DOLLARS ($500.00) ALL DRIVERS WORKING ON A DEFINED HAZARD MATERIAL JOB SITE SHALL BE PAID A PREMIUM OF $2.00 PER HOUR OVER APPLICABLE RATE. .....$ 32.36 34.51

TRUCK DRIVER: HEAVY AND HIGHWAY CONSTRUCTION: GROUP 9 SPECIAL EARTH-MOVING EQUIPMENT, 35 TONS OR OVER

FOOTNOTES: A. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY AND CHRISTMAS DAY, PLUS PRESIDENTS' DAY, COLUMBUS DAY, VETERAN'S DAY & V-J DAY, PROVIDING THE EMPLOYEE HAS WORKED AT LEAST ONE DAY IN THE CALENDAR WEEK IN WHICH THE HOLIDAY FALLS. B. EMPLOYEE WHO HAS BEEN ON THE PAYROLL FOR 1 YEAR OR MORE BUT LESS THAN 5 YEARS AND HAS WORKED 150 DAYS DURING THE LAST YEAR OF EMPLOYMENT SHALL RECEIVE 1 WEEK'S PAID VACATION; 5 TO 10 YEARS - 2 WEEKS' PAID VACATION; 10 OR MORE YEARS - 3 WEEK'S PAID VACATION. C. EMPLOYEES ON THE SENIORITY LIST SHALL BE PAID A ONE HUNDRED DOLLAR ($100.00) BONUS FOR EVERY FOUR HUNDRED (400) HOURS WORKED, UP TO A MAXIMUM OF FIVE HUNDRED DOLLARS ($500.00) ALL DRIVERS WORKING ON A DEFINED HAZARD MATERIAL JOB SITE SHALL BE PAID A PREMIUM OF $2.00 PER HOUR OVER APPLICABLE RATE. .....$ 32.56 34.51

TRUCK DRIVER: HEAVY AND HIGHWAY CONSTRUCTION: GROUP 8 SPECIAL EARTH-MOVING EQUIPMENT, UNDER 35 TONS

FOOTNOTES: A. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY AND CHRISTMAS DAY, PLUS PRESIDENTS' DAY, COLUMBUS DAY, VETERAN'S DAY & V-J DAY, PROVIDING THE EMPLOYEE HAS WORKED AT LEAST ONE DAY IN THE CALENDAR WEEK IN WHICH THE HOLIDAY FALLS. B. EMPLOYEE WHO HAS BEEN ON THE PAYROLL FOR 1 YEAR OR MORE BUT LESS THAN 5 YEARS AND HAS WORKED 150 DAYS DURING THE LAST YEAR OF EMPLOYMENT SHALL RECEIVE 1 WEEK'S PAID VACATION; 5 TO 10 YEARS - 2 WEEKS' PAID VACATION; 10 OR MORE YEARS - 3 WEEK'S PAID VACATION. C. EMPLOYEES ON THE SENIORITY LIST SHALL BE PAID A ONE HUNDRED DOLLAR ($100.00) BONUS FOR EVERY FOUR HUNDRED (400) HOURS WORKED, UP TO A MAXIMUM OF FIVE HUNDRED DOLLARS ($500.00) ALL DRIVERS WORKING ON A DEFINED HAZARD MATERIAL JOB SITE SHALL BE PAID A PREMIUM OF $2.00 PER HOUR OVER APPLICABLE RATE. .....$ 32.31 34.51

TRUCK DRIVER: HEAVY AND HIGHWAY CONSTRUCTION: GROUP 7 TRAILERS WHEN USED ON A DOUBLE HOOK UP (PULLING 2 TRAILERS)

FOOTNOTES: A. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY AND CHRISTMAS DAY, PLUS PRESIDENTS' DAY, COLUMBUS DAY, VETERAN'S DAY & V-J DAY, PROVIDING THE EMPLOYEE HAS WORKED AT LEAST ONE DAY IN THE CALENDAR WEEK IN WHICH THE HOLIDAY FALLS. B. EMPLOYEE WHO HAS BEEN ON THE PAYROLL FOR 1 YEAR OR MORE BUT LESS THAN 5 YEARS AND HAS WORKED 150 DAYS DURING THE LAST YEAR OF EMPLOYMENT SHALL RECEIVE 1 WEEK'S PAID VACATION; 5 TO 10 YEARS - 2 WEEKS' PAID VACATION; 10 OR MORE YEARS - 3 WEEK'S PAID VACATION. C. EMPLOYEES ON THE SENIORITY LIST SHALL BE PAID A ONE HUNDRED DOLLAR ($100.00) BONUS FOR EVERY FOUR HUNDRED (400) HOURS WORKED, UP TO A MAXIMUM OF FIVE HUNDRED DOLLARS ($500.00) ALL DRIVERS WORKING ON A DEFINED HAZARD MATERIAL JOB SITE SHALL BE PAID A PREMIUM OF $2.00 PER HOUR OVER APPLICABLE RATE.

TRUCK DRIVER: HEAVY AND HIGHWAY CONSTRUCTION: GROUP 6 LOW-BED OR BOOM TRAILER.	$ 32.81	34.51

FOOTNOTES: A. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY AND CHRISTMAS DAY, PLUS PRESIDENTS' DAY, COLUMBUS DAY, VETERAN'S DAY & V-J DAY, PROVIDING THE EMPLOYEE HAS WORKED AT LEAST ONE DAY IN THE CALENDAR WEEK IN WHICH THE HOLIDAY FALLS. B. EMPLOYEE WHO HAS BEEN ON THE PAYROLL FOR 1 YEAR OR MORE BUT LESS THAN 5 YEARS AND HAS WORKED 150 DAYS DURING THE LAST YEAR OF EMPLOYMENT SHALL RECEIVE 1 WEEK'S PAID VACATION; 5 TO 10 YEARS - 2 WEEKS' PAID VACATION; 10 OR MORE YEARS - 3 WEEK'S PAID VACATION. C. EMPLOYEES ON THE SENIORITY LIST SHALL BE PAID A ONE HUNDRED DOLLAR ($100.00) BONUS FOR EVERY FOUR HUNDRED (400) HOURS WORKED, UP TO A MAXIMUM OF FIVE HUNDRED DOLLARS ($500.00) ALL DRIVERS WORKING ON A DEFINED HAZARD MATERIAL JOB SITE SHALL BE PAID A PREMIUM OF $2.00 PER HOUR OVER APPLICABLE RATE.

TRUCK DRIVER: HEAVY AND HIGHWAY CONSTRUCTION: GROUP 4 THREE-AXLE DUMP TRUCK	$ 32.61	34.51

FOOTNOTES: A. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY AND CHRISTMAS DAY, PLUS PRESIDENTS' DAY, COLUMBUS DAY, VETERAN'S DAY & V-J DAY, PROVIDING THE EMPLOYEE HAS WORKED AT LEAST ONE

DAY IN THE CALENDAR WEEK IN WHICH THE HOLIDAY FALLS. B. EMPLOYEE WHO HAS BEEN ON THE PAYROLL FOR 1 YEAR OR MORE BUT LESS THAN 5 YEARS AND HAS WORKED 150 DAYS DURING THE LAST YEAR OF EMPLOYMENT SHALL RECEIVE 1 WEEK'S PAID VACATION; 5 TO 10 YEARS - 2 WEEKS' PAID VACATION; 10 OR MORE YEARS - 3 WEEK'S PAID VACATION. C. EMPLOYEES ON THE SENIORITY LIST SHALL BE PAID A ONE HUNDRED DOLLAR ($100.00) BONUS FOR EVERY FOUR HUNDRED (400) HOURS WORKED, UP TO A MAXIMUM OF FIVE HUNDRED DOLLARS ($500.00) ALL DRIVERS WORKING ON A DEFINED HAZARD MATERIAL JOB SITE SHALL BE PAID A PREMIUM OF $2.00 PER HOUR OVER APPLICABLE RATE. .....$ 32.11 34.51

TRUCK DRIVER: HEAVY AND HIGHWAY CONSTRUCTION: GROUP 3 TWO-AXLE DUMP TRUCK

FOOTNOTES: A. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY AND CHRISTMAS DAY, PLUS PRESIDENTS' DAY, COLUMBUS DAY, VETERAN'S DAY & V-J DAY, PROVIDING THE EMPLOYEE HAS WORKED AT LEAST ONE DAY IN THE CALENDAR WEEK IN WHICH THE HOLIDAY FALLS. B. EMPLOYEE WHO HAS BEEN ON THE PAYROLL FOR 1 YEAR OR MORE BUT LESS THAN 5 YEARS AND HAS WORKED 150 DAYS DURING THE LAST YEAR OF EMPLOYMENT SHALL RECEIVE 1 WEEK'S PAID VACATION; 5 TO 10 YEARS - 2 WEEKS' PAID VACATION; 10 OR MORE YEARS - 3 WEEK'S PAID VACATION. C. EMPLOYEES ON THE SENIORITY LIST SHALL BE PAID A ONE HUNDRED DOLLAR ($100.00) BONUS FOR EVERY FOUR HUNDRED (400) HOURS WORKED, UP TO A MAXIMUM OF FIVE HUNDRED DOLLARS ($500.00) ALL DRIVERS WORKING ON A DEFINED HAZARD MATERIAL JOB SITE SHALL BE PAID A PREMIUM OF $2.00 PER HOUR OVER APPLICABLE RATE. .....$ 32.06 34.51

TRUCK DRIVER: HEAVY AND HIGHWAY CONSTRUCTION: GROUP 2 TWO-AXLE ON LOW BEDS

FOOTNOTES: A. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY AND CHRISTMAS DAY, PLUS PRESIDENTS' DAY, COLUMBUS DAY, VETERAN'S DAY & V-J DAY, PROVIDING THE EMPLOYEE HAS WORKED AT LEAST ONE DAY IN THE CALENDAR WEEK IN WHICH THE HOLIDAY FALLS. B. EMPLOYEE WHO HAS BEEN ON THE PAYROLL FOR 1 YEAR OR MORE BUT LESS THAN 5 YEARS AND HAS WORKED 150 DAYS DURING THE LAST YEAR OF EMPLOYMENT SHALL RECEIVE 1 WEEK'S PAID VACATION; 5 TO 10 YEARS - 2 WEEKS' PAID VACATION; 10 OR MORE YEARS - 3 WEEK'S PAID VACATION. C. EMPLOYEES ON THE SENIORITY LIST SHALL BE PAID A ONE HUNDRED DOLLAR ($100.00) BONUS FOR EVERY FOUR HUNDRED (400) HOURS WORKED, UP TO A MAXIMUM OF FIVE HUNDRED DOLLARS ($500.00) ALL DRIVERS WORKING ON A DEFINED HAZARD

MATERIAL JOB SITE SHALL BE PAID A PREMIUM OF $2.00
PER HOUR OVER APPLICABLE RATE. .....$ 32.01 34.51
TRUCK DRIVER: HEAVY AND HIGHWAY CONSTRUCTION: GROUP
1 PICK-UP TRUCKS, STATION WAGONS, & PANEL TRUCKS

FOOTNOTES: A. PAID HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING DAY AND CHRISTMAS DAY, PLUS PRESIDENTS' DAY, COLUMBUS DAY, VETERAN'S DAY & V-J DAY, PROVIDING THE EMPLOYEE HAS WORKED AT LEAST ONE DAY IN THE CALENDAR WEEK IN WHICH THE HOLIDAY FALLS. B. EMPLOYEE WHO HAS BEEN ON THE PAYROLL FOR 1 YEAR OR MORE BUT LESS THAN 5 YEARS AND HAS WORKED 150 DAYS DURING THE LAST YEAR OF EMPLOYMENT SHALL RECEIVE 1 WEEK'S PAID VACATION; 5 TO 10 YEARS - 2 WEEKS' PAID VACATION; 10 OR MORE YEARS - 3 WEEK'S PAID VACATION. C. EMPLOYEES ON THE SENIORITY LIST SHALL BE PAID A ONE HUNDRED DOLLAR ($100.00) BONUS FOR EVERY FOUR HUNDRED (400) HOURS WORKED, UP TO A MAXIMUM OF FIVE HUNDRED DOLLARS ($500.00) ALL DRIVERS WORKING ON A DEFINED HAZARD MATERIAL JOB SITE SHALL BE PAID A PREMIUM OF $2.00
PER HOUR OVER APPLICABLE RATE. .....$ 31.86 34.51

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker

protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than **SU**, **UAVG**, **SA**, or **SC** denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The **SU** identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the

year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

SU wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The SA identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the SA identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment

data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION

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SPECIAL INSTRUCTIONS TO BIDDERS

SPECIAL INSTRUCTIONS TO BIDDERS

ARTICLE 1: PREPARATION OF BID

Each bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in ink or typewritten, both in words and figures. All bids must be prepared in conformity with and shall be based on and submitted subject to all requirements of the Specifications and Drawings, together with all Addenda thereto.

Each bid submission shall include the completed Bid Form, Bid Proposal, Anti-Collusion Declaration, Qualifications, Estimated Schedule, MBE/WBE Participation Affidavit, Subcontractor Disclosure Form and confirmation of Bid Bonds.

ARTICLE 2: CORRECTIONS

Erasures or other changes in the bid must be explained or noted over the signature of the bidder.

ARTICLE 3: QUALIFICATIONS OF THE BIDDER

The OWNER may make such investigations as they deems necessary to determine the ability of the bidder to perform the Work, and the bidder shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the OWNER that such bidder is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein. The bidder shall provide a written summary of qualifications with the bid; the minimum qualification requirements are provided below and in other sections of this bid package.

To be considered for this project the Contractor shall demonstrate minimum qualifications related to construction of coastal structures, specifically stone revetment structures of similar size in a similar coastal environment. This shall include a minimum of 5 years of experience and a minimum of three (3) projects completed within the last 10 years. The Contractor shall include a Qualification Statement with their bid that includes, at a minimum, a list of 3 projects with project description, client contact/reference name, emails and telephone number with the bid.

ARTICLE 4: OBLIGATIONS OF THE BIDDER

Bidders must satisfy themselves by personal examination at the site of the proposed Work, by review of the Drawings and the Specifications including Addenda, and by such other means as they may prefer, as to the actual conditions, requirements, and limits of the proposed Work, and as to the accuracy of the information and statements herein contained, and the submission of any bid will be accepted by the OWNER as satisfactory proof that the bidder has satisfied themself in these respects. The bidder shall not at any time after the submission of a bid dispute or complain of such statements or information, nor assert that there was any misunderstanding in regard to the nature, or amount of Work to be done. The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve the bidder of their obligation to furnish all materials

and labor necessary to carry out the provisions of the Contract Documents and to complete the contemplated Work for the considerations set forth in their bid, if their bid is accepted.

ARTICLE 5: CONDITIONS OF WORK

Insofar as possible, the CONTRACTOR, in carrying out their Work, must employ such methods or means as will not cause any interruption of or interference with traffic, with the use of park and beach areas outside of the construction work areas, with the use of municipally- or State- or privately-owned lands, or with the Work being performed by others. The CONTRACTOR must satisfy themself by their own investigation and research as to the nature and location of the Work, the general and local conditions, including, but not restricted to, those bearing upon the transportation, disposal, handling and storage of materials, water, electric power, roads, means of access, the construction and making of connections of the Work to existing facilities and utilities, or other similar conditions at the site, the character of equipment and facilities needed preliminary to and during the prosecution of the Work, requirements of owners and controlling authorities having jurisdiction over the various lands, existing structures, facilities and utilities, and all other conditions affecting the Work to be done and labor and materials needed.

ARTICLE 6: INFORMATION SUPPLIED TO BIDDERS

The Contract Documents contain the provisions required for the construction of the Project. Information obtained from any officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve them from fulfilling any of the conditions of the Contract.

ARTICLE 7: METHOD OF AWARD

If, at the time this Contract is to be awarded, the most qualified bid (this will be based on experience, proposed schedule, and cost), submitted by a responsible bidder, does not exceed the amount of funds then estimated by the OWNER as available to finance the Contract, the Contract may be awarded on the bid. If such bid exceeds such amount, the OWNER expressly reserves the right to increase or decrease any class, item, or part of the Work, and this reservation includes the omission of any such item, items, class or part of the Work as may be decided by the OWNER at unit prices submitted by the bidder to bring the Contract within available funds; or the OWNER may reject all bids.

The low bidder shall supply the names and addresses of major material suppliers and subcontractors when requested to do so by the OWNER.

ARTICLE 8: EXECUTION OF THE AGREEMENT

A Contract in the form set forth hereinafter will be required to be executed by the successful bidder and the OWNER. The attention of all bidders, therefore, is called to the form of the Agreement and the provisions thereof.

Should the OWNER not execute the Agreement within thirty (30) days of receipt, the bidder may, by written notice, withdraw their signed Agreement. Such notice by withdrawal shall be effective upon receipt of the notice by the OWNER.

ARTICLE 9: NOTICE TO PROCEED

The Notice to Proceed shall be issued within thirty (30) days of the execution of the Agreement by the OWNER. Should there be reasons why the Notice to Proceed cannot be issued within such period, the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the Notice to Proceed has not been issued within the thirty (30) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

ARTICLE 10: TIME OF COMPLETION AND LIQUIDATED DAMAGES

The bidder must agree to commence Work within thirty (30) days of the Notice to Proceed. The City intends to maintain use of the park(s) through **September 15, 2026**. As a result, the Contractor shall not mobilize prior to this date. The Contractor must be prepared to mobilize prior to **October 15, 2026,** and be prepared to complete the Work by **November 30, 2027**. Liquidated damages are not included in this contract.

ARTICLE 11: POWER OF ATTORNEY

N/A

ARTICLE 12: ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the Drawings, Specifications, or other pre-bid documents will be made to any bidder orally. Every request for such interpretation should be in writing, sent via email to the City Engineer.

In order to be given consideration, such request must be made at least eight (8) working days prior to the date fixed for the opening of bids. Any and all interpretations and any supplemental instructions will be in the form of written Addenda to the Specifications, which, if issued, will be posted, not later than five (5) days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such Addenda or interpretations shall not relieve the bidder from any obligation under their bid as submitted. All Addenda so issued shall become a part of the Contract Documents.

ARTICLE 13: UNCERTAINTY OF QUANTITIES

The quantities listed in the bid (proposal) are approximate and are given only for use in comparing bids and to indicate approximately the total amount of the Contract; and the OWNER does not expressly or by implication represent that the actual amounts of Work will even approximately correspond therewith, but does call particular attention to the uncertainty of the quantities of the Work involved, which cannot be predicted in advance. The Work under certain items may be

materially greater or less than that given in the bid, as may be necessary in the judgment of the OWNER to complete the Work contemplated in the Contract.

Under the Contract, the OWNER reserves the right to increase or decrease the approximate quantities for, or to omit entirely, any of the items as listed in the bid.

Only such quantities of the respective items of Work actually performed and accepted will be paid for. An increase or decrease in the quantity for any item shall not be regarded as grounds for an increase or decrease in the bid prices.

ARTICLE 14: ITEMS NOT LISTED IN THE BID

Appurtenant items of Work shown on the Drawings or specified or required to complete the Work, but not listed separately under the list of items in the bid, shall be included in the cost of payment under the various applicable bid items. It shall be the responsibility of the CONTRACTOR to verify any missing or incomplete items.

ARTICLE 15: BALANCED BIDDING

Minus bidding on any item or items of the Specifications is prohibited. Bids should be made on each separate item of Work shown in the bid (proposal) with reasonable relation to the probable cost of doing the Work included in such item, and the right is reserved to reject wholly any bid in case any item or items thereof are obviously unbalanced or appear to the OWNER to be so unbalanced as to affect or to be liable to affect adversely any interests of the OWNER. The attention of the bidder is called to the fact that unbalancing of bids may adversely affect the CONTRACTOR, if certain portions of the Work are increased or decreased as provided in the Contract Documents.

ARTICLE 16: PRICES

Bidders shall state the proposed price for the Work by which the bids will be compared. This price is to cover all of the expenses incidental to the completion of the Work in full conformity with the Contract, the Specifications, and the Drawings. The price or prices proposed shall be stated both in words and in figures, and any bid not so stated may be rejected.

In the event there is a discrepancy between the unit prices and the extended totals, the unit prices shall govern. In the event that there is a discrepancy between the unit prices written in words and the unit prices written in figures, the unit prices written in words shall govern. No bid will be accepted which does not contain a unit or lump sum price for every item contained in the bid form.

ARTICLE 17: NOTICE OF SPECIAL CONDITIONS

Attention is particularly called to those parts of the Contract Documents and Specifications which deal with the following:

a. inspection and testing of materials,
b. insurance requirements,

c. wage rates,
d. interpretation of Drawings and Specifications,
e. special requirements for Work within the limits of Privately-owned property and State Highways, and
f. the use of explosives and protection.

ARTICLE 18: LAWS AND REGULATIONS

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances and rules, and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract the same as though herein written in full. Specifically included is the requirements necessary to comply with the Americans with Disabilities Act.

ARTICLE 19: MANUFACTURER'S EXPERIENCE

Wherever it may be written that an equipment manufacturer must have a specified period of experience with their product, equipment which does not meet the specified experience period may, at the option of the OWNER, be considered if the equipment supplier or manufacturer is willing to provide a bond or cash deposit for the duration of the specified time period which will guarantee replacement of that equipment in the event of failure.

ARTICLE 20: ACCESS TO SITE

Representatives of the "OWNER" and of the State shall have access to the Work wherever it is in preparation or progress, and the CONTRACTOR shall provide proper facilities for such access and inspection.

ARTICLE 21: RHODE ISLAND SALES AND USE TAX

Materials and equipment purchased for installation under this Contract are exempt from the Rhode Island Sales Tax. The exemption from the Sales Tax shall be taken into account by the CONTRACTOR during bidding.

ARTICLE 22: JOB CONDITIONS

The bidder is advised that free vehicular and pedestrian access must be maintained to the major streets and park area outside of construction areas. The method of construction must be therefore compatible with this requirement of free access. Pedestrian access to the beach must be maintained below the high tide line throughout the length of the project.

ARTICLE 23: PRECONSTRUCTION CONFERENCE

The CONTRACTOR shall be prepared to attend a preconstruction conference scheduled by the OWNER after award of the Contract, but prior to the actual commencement of Work at the site. The main item of discussion will be the CONTRACTOR's construction schedule, proposed Superintendent, Professional Engineer or Land Surveyor, record drawings, etc.

ARTICLE 24: OWNER'S RIGHT TO DELETE PORTION OF CONTRACT

The OWNER reserves the right to delete a portion of this Contract after review of submitted bids, and prior to or after Bid award. The CONTRACTOR shall have no claim for anticipated profits or for loss of profits or for increase in prices should the OWNER exercise this right.

ARTICLE 25: LABOR REGULATIONS

The following paragraphs regarding nondiscrimination in employment shall be included and become part of these Specifications:

a. The Contract for Work under this proposal will obligate the CONTRACTOR and subcontractors not to discriminate in employment practices and conform with Executive Order No. 11246.

b. Bidders must, if required, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive award of the Contract.

c. Successful bidders must, if required, submit a list of all subcontractors who will perform Work on the Project, and written signed statements from authorized agents of labor pools with which they will or may deal with for employees on the Work, together with any information to the effect that such labor pools practices or policies are in conformity with Executive Order No. 11246; that they will affirmatively cooperate in or offer no hindrance to the recruitment, employment, and equal treatment of employment, and equal treatment of employees seeking employment and performing Work under this Contract; or a certification as to when such agents or labor pools have failed or refused to furnish them, prior to award of the Contract.

ARTICLE 26: ESTIMATED SCHEDULE

With bid submission, Contractor shall submit their estimated schedule. At a minimum this shall include estimated mobilization date, estimated start of revetment construction date, estimated start of Sabin Point berm construction date, estimated substantial completion date, estimated planting dates and estimated final completion date.

ARTICLE 27: FEDERAL SUB-AWARD REQUIREMENTS

Provisions the same or substantially similar in substance and form to those included as *Exhibit A – NOAA Additional Terms and Conditions* and *Exhibit B – TNC Federal Sub-Award Contractual Terms and Conditions* shall be required in any subaward or subcontract issued by the City of East Providence. The City's standard contract provided herein will be amended as required to incorporate these requirements.

Exhibit A
NOAA Additional Terms and Conditions

Laws, Regulations, Orders

Contractor must comply with the following laws, regulations and/or orders:

1. All applicable provisions of 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements, as adopted pursuant to 2 CFR §1327.101.
2. Department of Commerce Financial Assistance General Terms and Conditions issued September 22, 2025 (available at: https://www.commerce.gov/oam/policy/financial-assistance-policy).
3. NOAA Financial Assistance Standard Terms and Conditions (available at: https://www.noaa.gov/sites/default/files/2024-10/Administrative-Standard-Award-Condition-October-2024.pdf).
4. All applicable federal, state and local laws, specifically including but not limited to, the National Environmental Policy Act (NEPA).

Warranties, Assurances, Certifications

1. Contractor must ensure that work conducted as part of this award will be conducted in accordance with appropriate Federal, state and local laws, will follow recognized best practices with the goal of no effect to any listed species or historic resources, and will follow best practices for minimizing impacts to the human and natural environment. Contractor must follow the guidelines in the NOAA Best Management Practices for work in critical habitats, essential fish habitats and around endangered-threatened species. These best practices will be under the award or delivered through consultations by the NOAA environmental compliance team consultations.

2. **Buy America Preference**. Recipients of an award of Federal financial assistance from the Department of Commerce (Department) for a program for infrastructure are hereby notified that none of the funds provided under this award may be used for an infrastructure project unless:

   1. all iron and steel used in the project are 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 the project are 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, unless another standard that meets or exceeds this standard has been established under applicable law or regulation for determining the minimum amount of domestic content of the manufactured product; and

   3. all construction materials are manufactured in the United States this means that all manufacturing processes for the construction material occurred in the United States. The construction materials standards are listed below.

   Incorporation into an infrastructure project. The Buy America Preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America Preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

   Categorization of articles, materials, and supplies. An article, material, or supply should only be classified into one of the following categories: (i) Iron or steel products; (ii) Manufactured products; (iii) Construction materials; or (iv) Section 70917(c) materials. An article, material, or supply should not be

considered to fall into multiple categories. In some cases, an article, material, or supply may not fall under any of the categories listed in this paragraph. The classification of an article, material, or supply as falling into one of the categories listed in this paragraph must be made based on its status at the time it is brought to the work site for incorporation into an infrastructure project. In general, the work site is the location of the infrastructure project at which the iron, steel, manufactured products, and construction materials will be incorporated.

Application of the Buy America Preference by category. An article, material, or supply incorporated into an infrastructure project must meet the Buy America Preference for only the single category in which it is classified.

Determining the cost of components for manufactured products. In determining whether the cost of components for manufactured products is greater than 55 percent of the total cost of all components, use the following instructions:

a. For components purchased by the manufacturer, the acquisition cost, including transportation costs to the place of incorporation into the manufactured product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

b. For components manufactured by the manufacturer, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (a), plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the manufactured product.

Construction material standards. The Buy America Preference applies to the following construction materials incorporated into infrastructure projects. Each construction material is followed by a standard for the material to be considered produced in the United States. Except as specifically provided, only a single standard should be applied to a single construction material.

1. Non-ferrous metals. All manufacturing processes, from initial smelting or melting through final shaping, coating, and assembly, occurred in the United States.

2. Plastic and polymer-based products. All manufacturing processes, from initial combination of constituent plastic or polymer-based inputs, or, where applicable, constituent composite materials, until the item is in its final form, occurred in the United States.

3. Glass. All manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting, occurred in the United States.

4. Fiber optic cable (including drop cable). All manufacturing processes, from the initial ribboning (if applicable), through buffering, fiber stranding and jacketing, occurred in the United States. All manufacturing processes also include the standards for glass and optical fiber, but not for non-ferrous metals, plastic and polymer-based products, or any others.

5. Optical fiber. All manufacturing processes, from the initial preform fabrication stage through the completion of the draw, occurred in the United States.

6. Lumber. All manufacturing processes, from initial debarking through treatment and planing, occurred in the United States.

7. Drywall. All manufacturing processes, from initial blending of mined or synthetic gypsum plaster and additives through cutting and drying of sandwiched panels, occurred in the United States.

8. Engineered wood. All manufacturing processes from the initial combination of constituent materials until the wood product is in its final form, occurred in the United States.

Waivers.

When necessary, recipients may apply for, and the Department may grant, a waiver from these requirements.

To help federal agencies and recipients meet BABA requirements, the U.S. Department of Commerce, National Institute for Standards and Technology (NIST), Hollings Manufacturing Extension Partnership (MEP) National Network provides a service to connect stakeholders, including recipients, to U.S. manufacturers that have relevant production capabilities and capacities to help fulfill current market and supply chain needs. Recipients considering a BABA nonavailability waiver are strongly encouraged to contact the NIST/MEP for assistance with supplier scouting services prior to seeking a BABA nonavailability waiver. Further information on the NIST/MEP supplier scouting services is available at: https://nist.gov/mep/supply-chain/supplier-scouting.

When the Department has made a determination that one of the following exceptions applies, the awarding official may waive the application of the Buy America Preference in any case in which the Department determines that:

applying the Buy America Preference would be inconsistent with the public interest (public interest waiver);

the types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality (nonavailability waiver); or

the inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent (unreasonable cost waiver).

A request to waive the application of the Buy America Preference must be in writing. The Department will provide instructions on the format, contents, and supporting materials required for any waiver request. Waiver requests are subject to public comment periods of no less than 15 days and must be reviewed by the Made in America Office.

There may be instances where an award qualifies, in whole or in part, for an existing waiver described on the Department s Build America, Buy America website found at https://www.commerce.gov/oam/build-america-buy-america.

Definitions

Buy America Preference means the domestic content procurement preference set forth in section 70914 of the Build America, Buy America Act, which requires the head of each Federal agency to ensure that none of the funds made available for a Federal award for an infrastructure project may be obligated unless all of the iron, steel, manufactured products, and construction materials incorporated into the project are produced in the United States.

Construction materials means articles, materials, or supplies that consist of only one of the items listed in paragraph (1) of this definition, except as provided in paragraph (2) of this definition. To the extent one of the items listed in paragraph (1) contains as inputs other items listed in paragraph (1), it is nonetheless a construction material.

1. The listed items are:
i. Non-ferrous metals;
ii. Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
iii. Glass (including optic glass);
iv. Fiber optic cable (including drop cable);

v. Optical fiber;
vi. Lumber;
vii. Engineered wood; and
vii. Drywall.

2. Minor additions of articles, materials, supplies, or binding agents to a construction material do not change the categorization of the construction material.

Infrastructure means public infrastructure projects in the United States, which includes, at a minimum, the structures, facilities, and equipment for 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; and buildings and real property; and structures, facilities, and equipment that generate, transport, and distribute energy including electric vehicle (EV) charging.

Infrastructure project means any activity related to the construction, alteration, maintenance, or repair of infrastructure in the United States regardless of whether infrastructure is the primary purpose of the project. See also paragraphs (c) and (d) of 2 CFR 184.4.

Iron or steel products means articles, materials, or supplies that consist wholly or predominantly of iron or steel or a combination of both.

Manufactured products means:

1. Articles, materials, or supplies that have been:

i. Processed into a specific form and shape; or
ii. Combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.

2. If an item is classified as an iron or steel product, a construction material, or a Section 70917(c) material under 2 CFR 184.4(e) and the definitions set forth in 2 CFR 184.3, then it is not a manufactured product. However, an article, material, or supply classified as a manufactured product under 2 CFR 184.4(e) and paragraph (1) of this definition may include components that are construction materials, iron or steel products, or Section 70917(c) materials.

Predominantly of iron or steel or a combination of both means that the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. The cost of iron and steel is the cost of the iron or steel mill products (such as bar, billet, slab, wire, plate, or sheet), castings, or forgings utilized in the manufacture of the product and a good faith estimate of the cost of iron or steel components.

Section 70917(c) materials means cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives. See Section 70917(c) of the Build America, Buy America Act.

IMPLEMENTATION OF DOMESTIC SOURCING REQUIREMENT

Prior to initiation of any construction that may arise in this award, the Recipient is required to inform the NOAA Grants Officer and the Federal Program Officer whether it is using iron, steel, manufactured products, or construction materials as described in the Specific Award Condition in this award on Required Use of American Iron, Steel, Manufactured Products, and Construction Materials. In addition, the Recipient is required to inform the NOAA Grants Officer and the Federal Program Officer whether those materials are produced or manufactured in the United States, or alternatively, it is requesting one or more waivers, as described in the award condition. The Recipient is required to coordinate with NOAA regarding its compliance with this Term.

Exhibit B
TNC Federal Sub-Award Contractual Terms & Conditions

CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY CONTRACTS UNDER FEDERAL AWARDS

(A) Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

(B) All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.

(C) Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

(D) Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

(E) Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

(F) Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

(G) Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended—Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

(H) Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

(I) Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

(J) See § 200.323.

(K) See § 200.216.

(L) See § 200.322.

DRAFT CONTRACT FORM

This Contract (the "Contract") is made and entered into by and between The City of East Providence, (the "City") and [ ] (the "Contractor"). This Contract shall become effective on the date it is executed by the last party to execute it ("the Effective Date").

This Contract is for a project identified as [ ] # [ ] - [ ]

For and in consideration of the mutual promises, covenants and agreements set forth herein, and for other good and valuable consideration, the sufficiency of which is hereby acknowledged, the City and the Contractor agree as follows:

ARTICLE 1
THE WORK OF THIS CONTRACT

The Contractor shall execute the entire work described in the Contract Documents, within twelve (12) weeks from date of signed contract except to the extent specifically indicated in the Contract Documents to be the responsibility of others, or as follows:

ARTICLE 2
DOCUMENTS INCORPORATED BY REFERENCE

This Contract includes the plans and specifications for the project as identified thereon for the [ ] City's Request for Proposal issued [ ], all of which are hereby incorporated herein by reference and made a part hereof. Change Orders issued hereafter, and any other amendments executed by the City and the Contractor, shall become and be a part of this Contract. Documents not included or expressly contemplated in this Article 2 do not, and shall not, form any part of this Contract.

ARTICLE 3
REPRESENTATIONS OF THE CONTRACTOR

In order to induce the City to execute this Contract and recognizing that the City is relying thereon, the Contractor, by executing this Contract, makes the following express representation to the City.

(A) The Contractor is fully qualified to act as the contractor for the Project and has, and shall maintain, any and all licenses, permits or other authorizations necessary to act as the contractor for, and to construct, the Project;

(B) The Contractor has become familiar with the Project site and the local conditions under which the Project is to be constructed and operated;

(C) The Contractor has received, reviewed and carefully examined all the documents which make up this Contract, including, but not limited to, the plans and specifications, and has found them in all respects to be complete, accurate, adequate, consistent, coordinated and sufficient for construction;

(D) The Contractor is familiar with all Federal, State, municipal, and department laws, ordinances, orders, and regulations which may in any way affect the work of those employed therein, including, but not limited to, any special acts relating to the work or the Project of which it is a part;

(E) The Contractor is aware of the hazards involved in the work and the danger to life and property both evident and inherent, and that the Contractor will conduct the work in a careful and safe manner without injury to persons or property.

ARTICLE 4
INTENT AND INTERPRETATION

With respect to the intent and interpretation of this Contract, the City and the Contractor agree as follows:

(A) This Contract, together with the Contractor's and Surety's performance in the total amount of the project cost and payment bonds for the Project, constitute the entire and exclusive agreements between the parties with reference to the Project, and said Contract supersedes any and all prior discussions, communications, representations, understandings, negotiations, or agreements. This Contract also supersedes any bid documents not incorporated herein pursuant to Article 2.

(B) Anything that may be required, implied or inferred by the documents which make up this Contract, or any one or more of them, shall be provided by the Contractor for the Contract Price;

(C) Nothing contained in this Contract shall create, nor be interpreted to create, privity or any other relationship whatsoever between the City and any person except the Contractor;

(D) When a word, term, or phrase is used in this Contract, it shall be interpreted or construed first, as defined herein; second, if not defined, according to its generally accepted meaning in the construction industry; and third, if there is no generally accepted meaning in the construction industry, according to its common and customary usage;

(E) The Contractor shall have a continuing duty to read, examine, review, compare and contrast

each of the documents which make up this Contract, shop drawings, and other submittals and shall give written notice to the City of any conflict, ambiguity, error or omission which the Contractor may find with respect to these documents before proceeding with the affected work. The express or implied approval by the City of any shop drawings or other submittals shall not relieve the Contractor of the continuing duties impose hereby, nor shall any such approval be evidence of the Contractor's compliance with this Contact. HOWEVER, THE CITY MAKES NO REPRESENTATION OR WARRANTY OF ANY NATURE WHATSOEVER TO THE CONTRACTOR CONCERNING SUCH DOCUMENTS. The Contractor again hereby acknowledges and represents that it has received, reviewed and carefully examined such documents, has found them to be complete, accurate, adequate, consistent, coordinated and sufficient for construction, and that the Contractor has not, does not, and will not rely upon any representations or warranties by the City concerning such documents, as no such representations or warranties have been or are hereby made;

(F) In the event of any conflict, discrepancy, or inconsistency among any of the documents which make up this Contract, the following shall control:

(1) As between drawings and specifications, the specifications shall govern;

(2) As between figures given on plans and scaled measurements, the figures shall govern;

(3) As between this document and the plans or specifications, this document shall govern.

ARTICLE 5
OWNERSHIP OF DOCUMENTS WHICH MAKE UP THE CONTRACT

The documents which make up this Contract, and each of them, as well as any other documents furnished by the City, shall remain the property of the City. The City shall provide the Contractor with a sufficient number of copies of the complete Contract as the City determines is necessary. The Contractor shall have the right to keep the Contractor's executed set; provided, however, that in no event shall the Contractor use, or permit to be used, any portion or all of such Contract on other projects without the City's prior written authorization. All sets in usable condition, with the exception of the Contractor's executed set, shall be returned to the City at the completion or cessation of the work or termination of the Contract.

ARTICLE 6
CONTRACTOR'S PERFORMANCE

The Contractor shall perform all of the work required, implied or reasonably inferable from this Contract including, but not limited to, the following:

(A) Construction of the Project;

(B) The furnishing of the required 100% Performance Bond and Certificate of General Liability insurance coverage of $1,000,000, as well as Workers' Compensation Insurance as required by the State of Rhode Island for itself and any of its employees.

(C) The provision and furnishing, and prompt payment of labor, supervision, services, materials, supplies, equipment, fixtures, appliances, facilities, tools, transportation, storage, power, fuel, heat, light, cooling, or other utilities, required for construction and all necessary building permits and other permits required for the construction of the Project;

(D) The creation and submission to the City of detailed and comprehensive as-built drawings depicting all as-built construction. Said as-built drawings shall be submitted to the City upon final completion of the Project and receipt of same by the City shall be a condition precedent to final payment to the Contractor.

ARTICLE 7
TIME FOR CONTRACTOR'S PERFORMANCE

(A) The Contractor shall commence the performance of this Contract within ten (10) calendar days after the Notice to Proceed and shall diligently continue its performance to and until final completion of the Project (subject to a winter shutdown period if necessary as provided for in Article 8 Paragraph (L)). The Contractor shall accomplish Substantial Completion of the Project on or before the dated established pursuant to Paragraphs (K) and (L) in Article 8.

(B) The Contractor shall pay the City the sum of $ 500.00 Dollars per day for each and every calendar day of unexcused delay in achieving Substantial Completion beyond the date set forth herein for Substantial Completion. Any sums due and payable hereunder by the Contractor shall be payable, not as a penalty, but as liquidated damages representing an estimate of delay damages likely to be sustained by the City, estimated at the time of executing this Contract. When the City reasonably believes that Substantial Completion will be inexcusably delayed, the City shall be entitled, but not required, to withhold from any amounts otherwise due the Contractor an amount then believed by the City to be adequate to recover liquidated damages applicable to such delays. If and when the Contractor overcomes the delay in achieving Substantial Completion, or any part thereof, for which the City has withheld payment, the City shall promptly release to the Contractor those funds withheld, but no longer applicable, as liquidated damages.

(C) The term "Substantial Completion", as used herein, shall mean that point as determined by the City at which the Project is at a level of completion in strict compliance with this Contract such that the City or its designee can enjoy beneficial use or occupancy and can use or operate in all respects, for its intended purpose. Partial use or occupancy of the Project being deemed substantially complete, and such partial use or occupancy shall not

be evidence of Substantial Completion.

(D) All limitations of time set forth herein are material and are of the essence of this Contract.

ARTICLE 8
PAYMENTS TO CONTRACTOR

(A) The City shall pay, and the Contractor shall accept, as full and complete payment for the Contractor's timely performance of its obligations hereunder, the Contract Sum of ($) total for at the price set forth in this Paragraph 8 shall constitute the Contract Price, which shall not be modified except by Change Order as provided in this contract.

(B) The City shall pay the Contract Price to the Contractor in accordance with the procedures set forth in this Paragraph 8. On or before the 15th day of each month after commencement of performance, but no more frequently than one monthly, the Contractor may submit a Payment Request for the period ending the 31st day of preceding the month. Said Payment Request shall be in such format and include whatever supporting information as may be required by the City. Each Payment Request shall be signed by the Contractor and shall constitute the Contractor's representation that the quantity of work has reached the level for which payment is requested, that the work has been properly installed or performed in strict compliance with this Contract and that the Contractor knows of no reason why payment should not be made as requested. Thereafter, the City shall review the Payment Request and may also review the work at the project site or elsewhere to determine whether the quantity and quality of the work is as represented in the Payment Request and is as required by this Contract. The City shall approve in writing the amount which, in the opinion of the City, is properly owing to the Contractor. The payment of the Contractor's invoice will be made no later than thirty (30) days after the receipt of the invoice subject to the above. The Contractor shall submit progress invoices dated the last day of the month. These invoices will be submitted on G702 and G703 (AIA approved) documents.

(C) The City will retain a percentage of the progress or monthly payments claimed, including approved change orders. The retainage shall remain at five percent (5%) until seventy-five percent (75%) of the Contract is complete, as determined by the City. At that time if the City decides the Contractor is making adequate progress, the City may reduce retainage to two and one half percent (2.5%) of the dollar value of all work satisfactorily complete to date, including change orders. Any further reduction in the retainage amount shall be at the City's discretion. The retainage shall be paid by the City to the Contractor within ninety (90) days of the date the work is accepted by the City unless a dispute exists with respect to the work.

(D) Upon Substantial Completion, the City may reduce the amount of retainage to the final retainage of 2.5% of the dollar value of all work satisfactorily completed to date, including approved change orders plus an additional retainage based on the City's estimate of the fair value of any punch list items and the cost of completing and/or correcting such incomplete

or defective items or work. As these items are completed or corrected, they shall be paid for out of the retainage until Final Completion and Acceptance of Work is declared by the City. The final (2.5%) retainage shall be paid to the Contractor by the City within ninety (90) days of the date the work is accepted by the City unless a dispute exists with respect to the work.

(E) Upon Final Completion and Acceptance of the Work, City shall issue a certificate attached to the final payment request stating that the Work has been accepted by the City under the conditions of the Contract Documents. The entire balance to be due the Contractor shall be paid to the Contractor within ninety (90) days of Final Completion and Acceptance of Work.

(F) When payment is received from the City, the Contractor shall immediately pay all subcontractor, materialmen, laborers and suppliers the amounts they are due for the work covered by such payment. In the event the City becomes informed that the Contractor has not paid a subcontractor, materialman, laborer, or supplier as provided herein, the City shall have the right, but not the duty, to issue future checks and payment to the Contractor of amounts otherwise due hereunder naming the Contractor and any such subcontractor, materialman, laborer, or supplier as joint payees. Such joint check procedure, if employed by the City, shall create no rights in favor of any person or entity beyond the right of the named payees to payment of the check and shall not be deemed to commit the City to repeat the procedure in the future.

(G) Neither payment to the Contractor, utilization of the Project for any purpose by the City, nor any other act or omission by the City shall be interpreted or construed as an acceptance of any work of the Contractor not strictly in compliance with this Contract.

(H) The City shall have the right to refuse to make payment and, if necessary, may demand the return of a portion or all of the amount previously paid to the Contractor due to:

(1) The quality of a portion, or all, of the Contractor's work not being in accordance with the requirements of this Contract;

(2) The quantity of the Contractor's work not being as represented in the Contractor's Payment Request, or otherwise;

(3) The Contractor's rate of progress being such that, in the City's opinion, substantial or final completion, or both, may be inexcusably delayed;

(4) The Contractor's failure to use Contract funds, previously paid the Contractor by the City, to pay Contractor's Project-related obligations including, but not limited to, subcontractors, laborers and material and equipment suppliers;

(5) Claims made, or likely to be made, against the City or its property;

(6) Loss caused by the Contractor;

(7) The Contractor's failure or refusal to perform any of its obligations to the City.

In the event that the City makes a written demand upon the Contractor for amounts previously paid by the City as contemplated in this paragraph, the Contractor shall promptly comply with such demand.

(I) When Substantial Completion has been achieved, the Contractor shall notify the City in writing and shall furnish to the City a listing of those matters yet to be finished. The City will thereupon conduct an inspection to confirm that the work is in fact substantially complete. Upon its confirmation that the Contractor's work is substantially complete, the City will so notify the Contractor in writing and will therein set forth the date of Substantial Completion. If the City, through its inspection, fails to find that the Contractor's work is substantially complete, and is required to repeat all, or any portion, of its Substantial Completion inspection, the Contractor shall bear the cost of such repeat inspection(s) which cost may be deducted by the City from any payment then or thereafter due to the Contractor.

(J) When the Project is finally complete and the Contractor is ready for final inspection, it shall notify the City thereof in writing. Thereupon, the City will perform a final inspection of the project. If the City confirms that the project is complete in full accordance with this Contract and the Contractor has performed all of its obligations to the City hereunder, the City will furnish a final Approval for Payment certifying that the project is complete and the Contractor is entitled to the remainder of the unpaid Contract Price, less any amount withheld pursuant to this Contract. If the City is unable to issue its final Approval for Payment and is required to repeat its final inspection of the Project, the Contractor shall bear the cost of such repeat inspection(s), which costs may be deducted by the City from the Contractor's final payment.

(K) The Contractor is to begin work within ten (10) days after the date of the Notice to Proceed and shall complete the work within 90 consecutive days of notification of each assignment. If the Contractor fails to complete the work as set forth in this paragraph 8(L), the Contractor shall pay the City the sum of Five Hundred Dollars ($500.00) per day for each and every calendar day of unexcused delay in completing the work. Any sums due and payable hereunder by the Contractor shall be payable, not as a penalty, but as liquidated damages representing an estimate of delay damages likely to be sustained by the City, estimated at or before the time of executing this Contract. When the City reasonably believes that the date of completion will be unexcusably delayed, the City shall be entitled, but not required, to withhold from any amounts otherwise due the Contractor an amount then believed by the City to be adequate to recover liquidated damages applicable to such delays. If and when the Contractor overcomes the delay in achieving completion of the

work, or any part thereof, for which the City has withheld payment, the City shall promptly release the Contractor those funds withheld, but no longer applicable, as liquidated damages.

(L) The time for completion noted above has been developed upon the assumption that the work may be suspended during winter shutdown if necessary. Winter shutdown shall be determined by the Director of Public Works for the City of East Providence. The time period specified for completion of the work in Paragraph (K) above shall be suspended during such winter shutdown. The contractor shall plan on winter shutdown period based upon these dates unless otherwise directed by the City. The winter shutdown dates are subject to change depending upon weather conditions. The City shall notify the Contractor in writing if there is a change in the winter shutdown period due to weather, environmental or other conditions which preclude the work from being executed in accordance with these documents.

(M) Prior to being entitled to receive final payment, and as a condition precedent thereto, the Contract shall furnish to the City, in the form and manner required by the City:

(1) An affidavit that all of the Contractor's obligations to subcontractors, laborers, equipment or material suppliers, or other third parties in connection with the Project, have been paid or otherwise satisfied;

(2) If required by the City, separate releases of lien or lien waivers from each subcontractor, lower tier subcontractor, laborer, supplier or other person or entity who has, or might have a claim against the City or the City's property;

(3) If applicable, consent(s) of surety to final payment;

(4) All product warranties, operating manuals, instruction manuals and other record documents, drawings and things customarily required of the Contractor, or expressly required herein, as a part of or prior to Project closeout.

ARTICLE 9
MUNICIPAL POLICE TRAFFIC CONTROL

The cost of municipal police traffic control shall be paid in accordance with RIGL §37-12-10. The Contractor shall be responsible for scheduling municipal police officers for traffic control purposes through the police department. If traffic control assignments are cancelled without twenty-four (24) hours notice, the Contractor is responsible to pay the City of East Providence for the hours police officers would have worked it if had not been for the untimely cancellation of the assignment. The City at its sole discretion may require such scheduling to be pre-approved by the Public Works Department. The Contractor is responsible for all highway safety equipment for traffic control purposes including but not

limited to proper signage and traffic cones.

ARTICLE 10
CEASE AND DESIST ORDER

In the event the Contractor fails or refuses to perform the work as required herein, the City may instruct the Contractor to cease and desist from performing further work in whole or in part. Upon receipt of such instruction, the Contractor shall immediately cease and desist as instructed by the City and shall not proceed further until the cause for the City's instruction has been corrected, no longer exists, or the City instructs that the work resume. In the event the City issues instructions to cease and desist, and in the further event that the Contractor fails and refuses within seven (7) calendar days of receipt of same to provide adequate assurance to the City that the cause of such instructions will be eliminated or corrected, then the City shall have the right, but not the obligation, to carry out the work with its own forces, or with the forces of another contractor, and the Contractor shall be fully responsible and liable for the costs of performing such work by the City. The rights set forth herein are in addition to, and without prejudice to, any other rights or remedies the City may have against the Contractor.

ARTICLE 11
DUTIES, OBLIGATIONS AND RESPONSIBILITIES OF THE CONTRACTOR

In addition to any and all other duties, obligations and responsibilities of the Contractor set forth in this Contract, the Contractor shall have and perform the following duties, obligations and responsibilities to the City:

(A) The Contractor is again reminded of its continuing duties set forth in Subparagraph 4(E) which are by reference hereby incorporated in this Subparagraph 10(A). The Contractor shall not perform work without adequate plans and specifications, or, as appropriate, approved shop drawings, or other submittals. If the Contractor performs work knowing or believing it involves an error, inconsistency or omission in the Contract without first providing written notice to the City and the Architect, the Contractor shall be responsible for such work and pay the cost of correcting same;

(B) All work shall strictly conform to the requirements of this Contract;

(C) The work shall be strictly supervised, the Contractor bearing full responsibility for any and all acts or omissions of those engaged in the work on behalf of the Contractor;

(D) The Contractor hereby warrants that all labor furnished under this Contract shall be competent to perform the tasks undertaken, that the product of such labor shall yield only first-class results, that all materials and equipment provided shall be new and of high quality, that the completed work will be complete, of high quality, without defects, and that all work strictly complies with the requirements of this Contract. Any work not strictly

complying with the requirements of this Subparagraph shall constitute a breach of the Contractor's warranty.

(E) The Contractor shall obtain and pay for all required permits, fees and licenses customarily obtained by the Contractor. The Contractor shall comply with all legal requirements applicable to the work;

(F) The Contractor shall employ and maintain at the Project site only competent supervisory personnel.

(G) The Contractor shall keep an updated copy of this Contract at the Project site. Additionally, the Contractor shall keep a copy of approved shop drawings and other submittals. All of these items shall be available to the City at all regular business hours. Upon final completion of the work, all of these items shall be finally updated and provided to the City and shall become the property of the City.

(H) The Contractor shall maintain the Project site in a reasonably clean condition during performance of the work. Upon final completion, the Contractor shall thoroughly clean the Project site of all debris, trash and excess materials or equipment.

(I) At all times relevant to this Contract, the Contractor shall permit the City to enter upon the Project site and to review or inspect the work without formality or other procedure.

ARTICLE 12
DUTIES, OBLIGATIONS AND RESPONSIBILITIES OF THE CITY

(A) Except for permit fees which are the responsibility of the Contractor, the City shall secure and pay for necessary approvals, easements, assessments and charges required for the construction, and services performed pursuant to the Contract.

(B) If the Contractor fails to correct work which is not in accordance with the requirements of the contract, and persistently fails to carry out the work in accordance with the Contract, the City, by a written letter, may order the contractor to stop all work, or any portion thereof, until the cause of such order has been eliminated; however, the right of the City to stop the work shall not give rise to a duty on the part of the city to exercise this right for the benefit of the Contractor or any other person or entity.

(C) Upon completion and acceptance of the work, the City shall issue a certificate attached to the final payment request that the work has been accepted by the City under the conditions of the Contract.

ARTICLE 13
"OR EQUAL" CLAUSE

(A) Whenever a material or article required is specified or shown on the drawings by using the name of the proprietary product of a particular manufacturer or vendor, any material or article which will perform adequately the duties imposed by the general design may be considered equal and satisfactory providing the material or article so proposed is of equal substance and function in the City's opinion. It shall not be purchased or installed without the City's written approval. In all cases new material shall be used in the project.

(B) If more than one brand, make of material, device, or piece of equipment is shown or specified, each should be regarded as the equal of the other. Any other brand, make of material, device, or equipment, which in the opinion of the City or its Authorized Representative, is the recognized equal of that specified (considering quality, workmanship and economy of operation), and is suitable for the purpose intended, may be accepted.

ARTICLE 14
INDEMNITY

The Contractor shall indemnify and hold the City harmless from any and all claims, liability, damages, loss, cost and expense of every type whatsoever including, without limitation, attorney's fees and expenses, in connection with the Contractor's performance of this Contract, provided that such claims, liability, damage, loss, cost or expense is due to sickness, personal injury, disease or death, or loss or destruction of tangible property (other than the work itself), including loss of use resulting therefrom, to the extent caused by the Contractor, or anyone for whose acts the Contractor may be liable, regardless of whether such liability, claim, damage, loss, cost or expense is caused in part by the City.

ARTICLE 15
CLAIMS BY THE CONTRACTOR

Claims by the Contractor against the City are subject to the following terms and conditions:

(A) All Contractor claims against the City shall be initiated by a written claim submitted to the City. Such claim shall be received by the City no later than seven (7) calendar days after the event, or the first appearance of the circumstances, causing the claim, and the same shall set forth in detail all known facts and circumstances supporting the claim;

(B) The Contractor and City shall continue their performance hereunder regardless of the existence of any claims submitted by the Contractor.

(C) In the event the Contractor discovers previously concealed and unknown site conditions which are materially at variance from those typically and ordinarily encountered in the general geographical location of the Project, the Contract Price shall be modified, either upward or downward, upon the written claim made by either party within seven (7) calendar days after the first appearance to such party of the circumstances. As a condition precedent to the City having any liability to the Contractor due to concealed and unknown conditions, the Contractor must give the City written notice of, and an opportunity to

observe, such condition prior to disturbing it. The failure by the Contractor to give written notice and make the claim as provided by this Subparagraph 15(c) shall constitute a waiver by the Contractor of any rights arising out of or relating to such concealed and unknown condition.

(D) In the event the Contractor seeks to make a claim for an increase in the Contract Price, as a condition precedent to any liability of the City therefor, the Contractor shall strictly comply with the requirements of Subparagraph 15(A) above and such claim shall be made by the Contractor before proceeding to execute any additional or change work. Failure of the condition precedent to occur shall constitute a waiver by the Contractor of any claim for additional compensation.

(E) In connection with any claim by the Contractor against the City for compensation in excess of the Contract Price, any liability of the City for the Contractor's cost shall be strictly limited to direct cost incurred by the Contractor and shall in no event include indirect cost or consequential damages of the Contractor. The City shall not be liable to the Contractor for claims of third-parties including subcontractors, unless and until liability of the Contractor has been established therefor in a court of competent jurisdiction.

(F) In the event the Contractor shall be delayed in performing any task which at the time of the delay is then critical, or which during the delay becomes critical, as the sole result of any act or omission by the City or someone acting in the City's behalf, or by City-authorized Change Orders, unusually bad weather not reasonably anticipatable, fire or other Acts of God, the date for achieving Substantial Completion, or, as applicable, final completion, shall be appropriately adjusted by the City upon the written claim of the Contractor to the City. A task is critical within the meaning of this Subparagraph 15(A) if, and only if, said task is on the critical path of the Project schedule so that delay in performing such task will delay the ultimate completion of the Project. Any claim for an extension of time by the Contractor shall strictly comply with the requirements of Subparagraph 15(A) above. If the Contractor fails to make such claim as required in this Subparagraph 15(F), any claim for an extension of time shall be waived.

ARTICLE 16
SUBCONTRACTORS

Upon execution of this Contract, the Contractor shall identify to the City, in writing, those parties intended as subcontractors on the Project. The City shall, in writing, state any objections the City may have to one or more of such subcontractors. The Contractor shall not enter into a subcontract with an intended subcontractor with reference to whom the City objects. The Contractor shall not award work to a subcontractor(s) in excess of fifty (50) percent of the Contract Price, without prior written approval of the City. All subcontracts shall afford the Contractor rights against the subcontractor which correspond to those rights afforded to the City against the

Contractor herein. Nothing contained in this Contract shall create any contractual relation between any subcontractor and the City.

ARTICLE 17
WAGE RATES

(A) There shall be paid to each laborer or mechanic of the Contractor or subcontractor engaged in the work on the Project under this Contract in the trade or occupation, an hourly wage rate pursuant to §37-13-7 of the General Laws of the State of Rhode Island regardless of any contractual relationship which may be alleged to exist between the Contractor or any subcontractor and such laborers and mechanics.

(B) If, after the award of the Contract, it becomes necessary to employ any person in a trade or occupation not classified in the Contract, such person shall be paid at not less than a rate to be determined by the same authority which established the other wage rates for this Contract. Such approved minimum rate shall be retroactive to the time of the initial employment of such person in such trade or occupation. The Contractor shall notify the City of his intention to employ persons in trades or occupations not classified in sufficient time for the City to obtain approved rates for such trades or occupations.

(C) The foregoing specified wage rates are minimum rates only, and the City will not consider any claims for additional compensation made by the Contractor because of payment by the Contractor of any wage rate in excess of the applicable rate contained in this Contract. All disputes in regard to the payment of wages in excess of those specified in this Contract, shall be adjusted by the Contractor.

(D) Except as may otherwise be required by law, all claims and disputes pertaining to the classification of labor employed on the Project under this Contract, shall be decided by the City's governing body or other duly designated official.

ARTICLE 18
CHANGE ORDERS

One or more changes to the work within the general scope of this Contract, may be ordered by Change Order. The Contractor shall proceed with any such changes, and the same shall be accomplished in strict accordance with the following terms and conditions:

(A) Change Order shall mean a written order to the Contractor executed by the City after execution of this Contract, directing a change in the work and may include a change in the Contract Price or the time for the Contractor's performance, or any combination thereof. Said change orders must be approved by the City Manager on behalf of the City;

(B) Any change in the Contract Price resulting from a Change Order shall be determined as

follows:

(1) By mutual agreement between the City and the Contractor as evidenced by (a) the change in the Contract Price being set forth in the Change Order, (b) such change in the Contract Price, together with any conditions or requirements relating thereto, being initialed by both parties and (c) the Contractor's execution of the Change Order; or,

(2) If no mutual agreement occurs between the City and the Contractor, the change in the Contract Price, if any, shall be derived by determining the reasonable actual costs incurred or savings achieved, resulting from revisions in the work. Any such costs or savings shall be documented in the format, and with such content and detail as the City requires.

(C) The execution of a Change Order by the Contractor shall constitute conclusive evidence of the Contractor's agreement to the ordered changes in the work, this Contract as thus amended, the Contract Price and the time for performance by the Contractor. The Contractor, by executing the Change Order, waives and forever releases any claim against the City for additional time or compensation for matters relating to or arising out of or resulting from the work included within or affected by the executed Change Order.

(D) The Contractor shall notify and obtain the consent and approval of the Contractor's surety with reference to all Change Orders if such notice, consent or approval are required by the City, the Contractor's surety or law. The Contractor's execution of the Change Order shall constitute the Contractor's warranty to the City that the surety has been notified of, and consents to, such Change Order and the surety shall be conclusively deemed to have been notified of such Change Order and to have expressly consented thereto.

ARTICLE 19
DISCOVERING AND CORRECTING DEFECTIVE OR INCOMPLETE WORK

(A) In the event that the Contractor covers, conceals or obscures its work in violation of this Contract or in violation of a directive from the City, such work shall be uncovered and displayed for the City's inspection upon request, and shall be reworked at no cost in time or money to the City;

(B) If any of the work is covered, concealed or obscured in a manner not covered by Subparagraph 19(A) above, it shall, if directed by the City, be uncovered and displayed for the City's inspection. If the uncovered work conforms strictly with this Contract, the costs incurred by the Contractor to uncover and subsequently, replace such work shall be borne by the City. Otherwise, such costs shall be borne by the Contractor;

(C) The Contractor shall, at no cost in time or money to the City, correct work rejected by the City as defective or failing to conform to this Contract. Additionally, the Contractor shall

reimburse the City for all testing, inspections and other expenses incurred as a result thereof;

(D) In addition to its warranty obligations set forth elsewhere herein, the Contractor shall be specifically obligated to correct any and all defective or nonconforming work for a period of twelve (12) months following final completion upon written direction from the City.

(E) The City may, but in no event be required to, choose to accept defective or nonconforming work. In such event, the Contract Price shall be reduced by the greater of (1) the reasonable costs of removing and correcting the defective or nonconforming work, and (2) the difference between the fair market value of the Project as constructed and the fair market value of the project had it not been constructed in a manner as to include defective or nonconforming work. If the remaining portion of the unpaid Contract Price, if any, is insufficient to compensate the City for the acceptance of defective or nonconforming work, the Contractor shall, upon written demand from the City, pay the City such remaining compensation for accepting defective or nonconforming work.

ARTICLE 20
TERMINATION BY THE CONTRACTOR

If the City repeatedly fails to perform its material obligations to the Contractor for a period of thirty (30) days after receiving written notice from the Contractor of its intent to terminate hereunder, the Contractor may terminate performance of this Contract by written notice to the City. In such event, the Contractor shall be entitled to recover from the City as though the City had terminated the Contractor's performance under this Contract for convenience pursuant to Subparagraph 22(A) hereunder.

ARTICLE 21
CITY'S RIGHT TO SUSPEND CONTRACTOR'S PERFORMANCE

(A) The City shall have the right at any time to direct the Contractor to suspend its performance, or any designated part thereof, for any reason whatsoever, or without reason, for a cumulative period of up to thirty (30) calendar days. If any such suspension is directed by the City, the Contractor shall immediately comply with same;

(B) In the event the City directs a suspension of performance under this Paragraph 21, through no fault of the Contractor, the City shall pay the Contractor as full compensation for such suspension the Contractor's reasonable costs, actually incurred and paid, of:

(1) demobilization and remobilization, including such costs paid to subcontractors;
(2) preserving and protecting work in place;
(3) storage of materials or equipment purchased for the Project, including insurance thereon;

(4) performing in a later, or during a longer, time frame than that contemplated by this Contract.

ARTICLE 22
TERMINATION BY THE CITY

The City may terminate this Contract in accordance with the following terms and conditions:

(A) The City may, for any reason whatsoever, terminate performance under this Contract by the Contractor for convenience. The City shall give written notice of such termination to the Contractor specifying when termination becomes effective. The Contractor shall incur no further obligations in connection with the work and the Contractor shall stop work when such termination becomes effective. The Contractor shall also terminate outstanding orders and subcontracts. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The City may direct the Contractor to assign the Contractor's right, title and interest under termination orders or subcontracts to the City or designee. The Contractor shall transfer title and deliver to the City such completed or partially completed work and materials, equipment, parts, fixtures, information and Contract rights as the Contractor has. When terminated for convenience, the contractor shall be compensated as follows:

(1) The Contractor shall submit a termination claim to the City specifying the amounts due because of termination for convenience together with costs, pricing or other data required by the City. If the Contractor fails to file a termination claim within one (1) year from the effective date of termination, the City shall pay the Contractor, an amount derived in accordance with Subparagraph (3) below;

(2) The City and the Contractor may agree to the compensation, if any, due to the Contractor hereunder;

(3) Absent agreement to the amount due to the Contractor, the City shall pay the Contractor the following amounts:

a) Contract prices for labor, materials, equipment and other services accepted under this contract;

b) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the work, and in terminating the Contractor's performance, plus a fair and reasonable allowance for jobsite overhead and profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it appears that the Contractor would not have profited or would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or

included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;

c) Reasonable costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to Subparagraph 18(A) of this Paragraph. These costs shall not include amounts paid in accordance with other provisions hereof.

The total sum to be paid the Contractor under this Subparagraph 18(A) shall not exceed the total Contract Price, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

(B) If the Contractor does not perform the work, or any part thereof, in a timely manner, supply adequate labor, supervisory personnel or proper equipment or materials, or if it fails to timely discharge its obligations for labor, equipment, and materials, or proceeds to disobey applicable law, or otherwise commits a violation of a materi*a*l provision of this Contract, then the City, in addition to any rights it may have against the Contractor or others, may terminate the performance of the Contractor and assume possession of the Project site and of all materials and equipment at the site and may complete the work. In such case, the Contractor shall not be paid further until the work is complete. After final completion has been achieved, if any portion of the Contract Price, as it may be modified hereunder, remains after the cost to the City of completing the work, including all costs and expenses of every nature incurred, has been deducted by the City, such remainder shall belong to the Contractor. Otherwise, the Contractor shall pay and make whole the City for such cost. This obligation for payment shall survive the termination of the Contract. In the event the employment of the Contractor is terminated by the City for cause pursuant to this Subparagraph 22(B) and is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under Subparagraph 2(A) and the provision of Subparagraph 22(A) shall apply.

ARTICLE 23
INSURANCE

The Contractor shall carry and maintain the following insurance coverage at his own expense and add the City of East Providence as an additionally insured

(A) All insurance for this Contract shall be written by a company (or companies) acceptable to the City and all policies or certificates shall be submitted to the City for examination prior to commencement of operations by the Contractor. In the event any policy or certificate, the amount of the insurance, or the company writing same are not satisfactory to the City, the Contractor shall secure other policies or certificates in form and amount with a company satisfactory to the City. The Contractor shall not permit policies to be changed, cancelled, or to lapse and all policies shall include a clause to the effect that the policy shall

not be subject to cancellation or a reduction in the limits of liability or amounts of insurance until notice has been sent by mail to the City stating when, (not less than thirty days thereafter) such cancellation or reduction shall be effective. All certificates of insurance shall be delivered to the City and contain true transcripts from the policy or policies authenticated by the proper officer of the insurer evidencing in particular those insured, the extent of the insurance, the location and operations to which the insurance applies, the expiration date and the above mentioned notice as to the location and operations involved.

If any part of the work is sublet, similar insurance shall be provided by or in behalf of the subcontractors to cover their operations. The Contractor shall be charged with the responsibility for insurance protection for all his subcontract operations and should the Contractor's policy not cover each and every subcontractor, certificates of insurance acceptable to the City covering each and every subcontractor shall be filed with said City prior to the commencement of subcontract operations.

(B) Contractor's Liability Insurance.
Liability insurance shall include all major divisions of coverage and be on a comprehensive general liability basis including:

Premises - Operations (including X-C-U)
Independent Contractor's protective
Products & completed operations
Blanket Contractual
Owned, non-owned and hired motor vehicles
Broad form coverage for property damage (including explosion, collapse and underground).

(C) The insurance required by this Subparagraph (b) shall be written for not less than the following, or greater if required by Law:

(1) Workers' Compensation:
a. State of Rhode Island - Statutory
b. Employer's Liability

(2) Comprehensive General Liability (including Premises Operations; Independent Contractor’s Protective; Products & Completed Operations; Broad Form Property Damage):

(a) Bodily Injury:
$1,000,000 - Each Occurrence
$1,000,000 - Annual Aggregate

(b) Property Damage:
$1,000,000 - Each Occurrence
$1,000,000 - Annual Aggregate

(c) Products & Completed Operations to be maintained for one (1) year after final payment.

(d) Property Damage Liability Insurance will provide X, C, or U coverage as applicable.

(3) Contractor's Liability:

(a) Bodily Injury:
$1,000,000 - Each Occurrence

(b) Property Damage:
$1,000,000 - Each Occurrence
$1,000,000 - Annual Aggregate

(4) Personal injury, with Employment Exclusion deleted:
$1,000,000 Annual Aggregate

(5) Comprehensive Automobile Liability:

(a) Bodily Injury:
$ 500,000 - Each Person
$1,000,000 - Each Occurrence

(b) Property Damage:
$1,000,000 - Each Occurrence

(6) Property Insurance:

The Contractor shall purchase and maintain property insurance upon the entire Work at the site to the full insurable value thereof. This insurance shall include the interests of the City, the Contractor, Subcontractors and Subcontractors in the Work shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss or damage including, without duplication of coverage, theft, vandalism and malicious mischief.

(D) Insurance Covering Special Hazards:

Special hazards shall be covered by rider or riders to the Public Liability and Property Damage Insurance policy or policies herein above required to be furnished by the Contractor or by separate policies of insurance in the amounts stated in Paragraph 5(C).

(1) Property Damage Liability arising out of the collapse of or injury to any building or structure due to excavation (including burrowing, filling or backfilling in

connection therewith), tunneling, pile driving, cofferdam work, or caisson work; or moving, shoring, underpinning, razing or demolition of any building or structure, or removal or rebuilding of any structural support thereof.

(2) Property Damage Liability for injury to or destruction of property arising directly or indirectly from blasting or explosions, however caused, other than explosions of air or steam vessels, piping under pressure, prime movers, machinery, or power transmitting equipment.

(3) Property Damage Liability for injury to or destruction of wires, conduits, pipes, mains, sewers, or other similar property, or any apparatus in connection therewith below the surface of the ground arising from and during the use of mechanical equipment for the purpose of excavating or drilling within project limits; injury to or destruction of property at any time resulting there from.

(4) The Contractor shall require similar insurance in such amounts to be taken out and maintained by each subcontractor.

(E) "ALL RISK" Insurance:

The Contractor shall acquire and maintain "All Risk" type Builder's Insurance. This insurance shall be in an amount equal to 100% of the insurable portion of the Project, and shall be for the benefit of the City, the Contractor, and each subcontractor as their interest may respectively appear.

ARTICLE 24
SURETY BONDS

The Contractor shall be licensed to do business in the State of Rhode Island and shall furnish separate performance and payment bonds to the City. Each bond shall set forth a penal sum in an amount of not less than the Contract Price. Each bond furnished by the Contractor shall incorporate by reference the terms of this Contract as fully as though they were set forth verbatim in such bonds. In the event the Contract Price is adjusted by Change Order executed by the Contractor, the penal sum of both the performance bond and the payment bond shall be deemed increased by like amount. The performance and payment bonds furnished by the Contractor shall be in form suitable to the City and shall be executed by a surety, or sureties, reasonably acceptable to the City.

ARTICLE 25
PATENTS

The Contractor shall pay all applicable royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent rights, and save the City harmless from loss on account thereof, except that the City shall be responsible for any such loss on when a

particular process, design, or product of a manufacturer(s) is specified. However, if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, the Contractor shall be responsible for such loss unless the Contractor promptly gives such information to the City.

ARTICLE 26
APPRENTICES

Apprentices shall be permitted to work only under a bona fide apprenticeship program registered with a State Apprenticeship Council which is recognized by the Federal Committee of Apprenticeship, United States Department of Labor; or if no such Council exists in a State, under a program registered with the Bureau of Apprenticeship, United States Department of Labor.

ARTICLE 27
ASSIGNMENTS

The Contractor shall not assign the whole or any part of this Contract, or any monies due or to become due hereunder, without the written consent of the City. In case the Contractor assigns all or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms or corporations for services rendered or materials supplied for the performance of the work called for in this Contract.

ARTICLE 28
APPLICABLE LAW

The law is hereby agreed to be the law of the State of Rhode Island.

ARTICLE 29
SUCCESSORS AND ASSIGNS

Each party binds itself, its successors, assigns, executors, administrators or other representatives to the other party hereto and to successors, assigns, executors, administrators or other representatives of such party in connection with all terms and conditions of this Contract.

CITY	**CONTRACTOR**
The City of East Providence East Providence, RI 02914	
By:	By:
_____ (Signature)	_____ (Signature)
ROBERTO L. DASILVA, MAYOR (Printed Name and Title)	(Printed Name and Title)
_____ (Date of Execution)	_____ (Date of Execution)

BID FORM / BID PROPOSAL

RFP EP25/26-016
CRESCENT PARK SHORELINE PROTECTION & SABIN POINT SAND BERM PROJECT

BID FORM

Pursuant to and in compliance with the REQUEST FOR PROPOSAL, the STANDARD INSTRUCTIONS TO BIDDERS, and the SPECIAL INSTRUCTIONS TO BIDDERS relating thereto, the undersigned Bidder hereby states that he/she (they or it) has carefully examined the **CONTRACT DOCUMENTS** and the party understands the provisions, requirements, terms and conditions thereof, all of which are acknowledged to be part of the **BID PROPOSAL**.

Further, he/she (they or it) has become familiar with local conditions and the extent of Work; has determined the required quality, quantity and sources of supply of all plant, equipment, materials, tools, supplies, labor and all other facilities and things necessary or proper or incidental to the continuous execution and completion of the Work as required; and hereby agrees to perform the Contract in strict accordance with the **CONTRACT DOCUMENTS** within the time frame set forth herein.

The undersigned Bidder hereby agrees that the BID PROPOSAL submitted shall remain in effect and binding upon the Bidder for a period of 90 calendar days, from the date and time Bids are received.

The undersigned Bidder declares that his/her BID PROPOSAL in all respects is fair and made without collusion with any other person, firm, and/or corporation making a proposal for this Work.

The undersigned Bidder, if awarded the Contract by the City, hereby agrees to enter into a Contract for said project within seven (7) calendar days from the date of said Notice.

TOTAL AMOUNT OF BID:

_____ $_____
(written) (figures)

BUSINESS NAME:_____

ADDRESS:_____

BY: _____TITLE:_____

DATE: _____

CITY OF EAST PROVIDENCE
RHODE ISLAND

RFP EP25/26-016
CRESCENT PARK SHORELINE PROTECTION & SABIN POINT SAND BERM PROJECT
CRESCENT PARK & SABIN POINT PARK

BID PROPOSAL

BID TO: City of East Providence
Attn: Procurement Specialist
145 Taunton Avenue
East Providence, Rhode Island 02914

BID FROM:

_____

_____
(Print Name and Address of Bidder)

A Corporation/A Partnership/An Individual/A Joint Venture
(Bidder to strike out inapplicable terms)

To All:

The undersigned Bidder offers and agrees, if this Bid is accepted, to enter into an Agreement with OWNER in the form included in the Contract Documents, and to complete all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the Contract Documents.

Bidder declares that no person or persons other than those named herein are interested in this Bid; that this Bid is made without collusion with any other person, firm, or corporation; and that no person or persons acting in any official capacity for the OWNER are directly or indirectly interested in this Bid, or in any portion of the profit thereof.

In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that they have examined the Standard Instructions to Bidders, all of the other Bidding Documents, and all of the Contract Documents; that they have examined the actual site and locality where the work is to be performed; that they have familiarized themself with the legal requirements (Federal, State, and local laws, ordinances, rules, and regulations); that they have made such independent investigation as they deem necessary; and that they have satisfied themself as to all conditions affecting cost, progress or performance of the Work; and that by signing this Bid waives all rights to plead any misunderstanding regarding the same.

The undersigned further understands and agrees that the estimated quantities for unit Bid Prices, if any, are to be considered as approximate only. The OWNER does not expressly or by implication agree that the actual quantities will correspond therewith and reserves the right to increase or decrease any quantity or to eliminate any quantity as they may deem necessary. Neither the OWNER nor the CONTRACTOR will be entitled to any adjustments in a unit Bid Price as a result of any change in quantity and they agree to accept the aforesaid unit Bid Prices as complete and total compensation for any additions or deductions caused by variation in quantities as a result of more accurate measurements, or by any changes or alterations in the Work ordered by the OWNER, and for use in the computation of the value of the Work performed for progress payments.

Bidder further agrees as follows: 1) that this Bid shall remain open and may not be withdrawn for the time period set forth in the Information for Bidders; 2) that they accept all of the terms and conditions of the Information for Bidders, including without limitation those dealing with the disposition of their Bid Security; 3) and that, upon acceptance of this Bid, they will execute the Agreement and will furnish the required Insurance Certificates within the time period(s) set forth in the Contract Documents.

ADDENDA: The following Addenda have been received. The modifications to the Bid Documents noted therein have been considered and all costs thereto are included in the Bid Price.

Addendum No._____ Dated_____

Addendum No._____ Dated_____

Addendum No._____ Dated_____

Addendum No._____ Dated_____

In accordance with the above understandings and agreements, Bidder will complete the Work for the following unit and lump sum prices:

SCHEDULE OF PRICES

In the event of a discrepancy between the words and figures given, the amount written in words shall govern.

Item No.	Estimated Quantity	Description	Total Cost
1	1 L.S.	Mobilization & Demobilization: _____Dollars and _____Cents $_____	$

Item No.	Estimated Quantity	Description	Total Cost
2	1 L.S.	Labor & Materials Performance Bond: _____Dollars and _____Cents $_____	$
CRESCENT PARK			
3	1 L.S.	Crescent Park Demolition & Excavation: _____Dollars and _____ Cents $_____	$
4	1 L.S.	F&I Revetment System: _____Dollars and _____Cents $_____	$
5	1 L.S.	F&I New Timber Stairs: _____Dollars and _____Cents $_____	$
6	1 L.S.	F&I Vegetated Slope & Fencing: _____Dollars and _____Cents $_____	$

Item No.	Estimated Quantity	Description	Total Cost
7	1 L.S.	F&I Crescent Park Sand Berm & Vegetation & Placing Excess Sand: _____Dollars and _____Cents $_____	$
8	1 L.S.	F&I New Drainage Structures: _____Dollars and _____ Cents $_____	$
9	1 L.S.	F&I Beach Road Stormwater Management Improvements _____Dollars and _____Cents $_____	$
10	1 L.S.	Crescent Park Site Restoration & Paving: _____Dollars and _____ Cents $_____	$
SABIN POINT			
11	1 L.S.	Sabin Point Demolition & Excavation: _____Dollars and _____ Cents $_____	$

Item No.	Estimated Quantity	Description	Total Cost
12	1 L.S.	F&I Sabin Point Sand Berm & Vegetation & Seasonal Timber Walkway: _____Dollars and _____Cents $_____	$
13	1 L.S.	Sabin Point Site Restoration: _____Dollars and _____ Cents $_____	$

Item No.	Estimated Quantity	Description	Total Cost
Add Alt #1	1 L.S.	Additional One-Year of Maintenance and Warranty for Plantings at Crescent Park & Sabin Point: _____Dollars and _____Cents $_____	$

BID ITEMS:

The description of bid items can be found in Specification Section 01 20 00 – Measure and Payment. The Owner reserves the right to modify the project scope as necessary for fiscal reasons by eliminating items below if necessary. This determination would be made prior to executing the contract.

The Total Amount of this **Base Bid**, as computed by the Bidder, is:

_____Dollars

and _____Cents

$_____

The Total Amount of this **Add Alternate #1 Bid**, as computed by the Bidder, is:

_____Dollars

and _____Cents

$_____

BUSINESS NAME:_____

BY:_____(Signature)

_____(Print)

_____(Title) (Seal - if Bidder is a Corporation)

_____(Business Address)

_____

_____(Business Telephone Number)

_____(Business Fax Number)

_____(Date)

_____(Employer Identification Number)

CRMC ASSENT

State of Rhode Island
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-2069

Post CRMC Assent Requirements

The following is a checklist of Post Assent actions that are required for you to address:

☒ Recording of Assent

- As per General Stipulation "A" of the enclosed Assent, the Property Owner or their Agent **must record** this CRMC Assent in its entirety at the project location's local municipal Town/City Clerk's office. Each and every page of this enclosed Assent must be registered by the applicant onto the property's title and certified by the City/Town. You **must** do this within 30 days of receiving this Assent. **You, the applicant, are responsible for returning, a hard copy or email to the Coastal Resources, a copy of each and every page to CRMC of the recorded Assent which will be stamped by the Clerk's office upon your filing.** Failure to comply could render this Assent null and void, revocation of your Assent and/or resulting in an Administrative Fine of up to $2,500.00 being assessed. Your prompt attention to this matter is greatly appreciated. Should you have any questions please do not hesitate to call the Coastal Resources office at 401-783-3370, fax us at 401-783-2069 or email copy of the recorded Assent to **jabbruzzese@crmc.ri.gov**.

☒ Commencement of Work Notice:

- Please alert CRMC within 48 hours of the start of your project by emailing: Cstaff1@crmc.ri.gov.

☒ Posting of Assent Card:

- To be in compliance with your CRMC Assent you must post the orange or blue assent card enclosed in a conspicuous place on the project site. Please do not remove the document attached which is the actual assent with stipulations.

☐ Post Dock Construction Requirement

- As per Red Book (650-RICR-20-00-1) § 1.3.1(D)(11)(y), all residential docks shall be certified by the Design Engineer that it was constructed according to the approved plans with typical marine construction standards. Please provide confirmation of certification through the use of the enclosed document. All applicants for residential and limited recreational docks shall submit the CRMC designer's dock as-built form and an as-built survey within thirty (30) days following construction. Post construction survey shall meet all requirements of Section 1.3.1(D)(10)(t).

State of Rhode Island
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 116
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-3767

ASSENT

CRMC File No.: 2023-10-015 CRMC Assent No.: B2023-10-015

Whereas, of

City of East Providence
c/o Erik Skadberg, PE
145 Taunton Avenue
East Providence, RI 02914

has applied to the Coastal Resources Management Council for assent to: Construct a shoreline protection system along the southern end of Crescent Park which includes re-grading the existing slope and relocating the toe approximately 30 ft landward from the location of the toe prior to recent storm damage, which is the current location of toe of bluff. Removal of existing slope vegetation as needed for safety during and after construction, and the construction of a stone revetment system along the shoreline with a vegetated slope incorporating an erosion control mat and coir logs above the revetment. The work includes reconstructing the existing wooden stairs at a new location to the north to maintain access to the beach at the park's southern end. The applicant represents that they are the owner(s) of the riparian rights attached to the property involved and submitted plans of the work to be done.

Now, said Council, having fully considered said application in accordance with all the regulations as set forth in the Administrative Procedures Act does hereby authorize said applicant, subject to the provisions of Title 46, Chapter 23 of the General Laws of Rhode Island, 1956, as amended, and all laws which are or may be in force applicable thereto: To construct a shoreline protection system along the southern end of Crescent Park which includes re-grading the existing slope and relocating the toe approximately 30 ft landward from the location of the toe prior to recent storm damage, which is the current location of toe of bluff. Removal of existing slope vegetation as needed for safety during and after construction, and the construction of a stone revetment system along the shoreline with a vegetated slope incorporating an erosion control mat and coir logs above the revetment. The work includes reconstructing the existing wooden stairs at a new location to the north to maintain access to the beach at the park's southern end. **Also work includes the following:**

Crescent Park

1. **Construct a 10 ft wide sand berm along the seaward side of the proposed revetment toe at a maximum slope of 3H:1V;**
2. **Plant American beachgrass on the sand berm spaced at 1 foot on center;**
3. **Install post and rope fencing at the toe of the sand berm to protect vegetation;**
4. **Place sand in the revetment stone matrix, as feasible;**
5. **Place sand in the revetment stone matrix along Crescent Park's northern shoreline (CRMC # 2022-02-036), as feasible;**
6. **Place sand at end of Beach Road (above high tide line) after completion of the new stormwater system construction; and,**
7. **Regrade beach profile seaward of the sand berm up to the high tide line at a maximum slope of 10H:1V where feasible.**

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City of East Providence, Rhode Island
Andreza Skipworth City Clerk

Sabin Point

1. **Construct sand berm with a maximum slope of 3H:1V;**
2. **Plant American beachgrass on the sand berm spaced at 1 foot on center;**
3. **Remove and demolish/abandon existing buried drainage utilities as shown;**
4. **Install post and rope fencing around the perimeter of the sand berm to protect vegetation; and,**
5. **Install timber access mat over sand berm for pedestrian access.**

The project is located at plat 414, lot 7, 8, 8-1; 701 Bullocks Point Avenue, East Providence, RI, and will be performed in accordance with said plans submitted to this Council and approved by this Council. All work being permitted must be completed on or before **March 2, 2029** after which date this assent is null and void, (unless written application requesting an extension is received by CRMC sixty (60) days prior to expiration date).

Applicant agrees that as a condition to the granting of this assent, members of the Coastal Resources Management Council or its staff shall have access to applicant's property to make on-site inspections to insure compliance with the assent.

Licensee shall be fully and completely liable to State, and shall waive any claims against State for contribution or otherwise, and shall indemnify, defend, and save harmless State and its agencies, employees, officers, directors, and agents with respect to any and all liability, damages (including damages to land, aquatic life, and other natural resources), expenses, causes of action, suits, claims, costs (including testing, auditing, surveying, and investigating costs), fees (including attorneys' fees and costs), penalties (civil and criminal), and response, cleanup, or remediation costs assessed against or imposed upon Licensee, State, or the Property, as a result of Licensee's control of the Property, or Licensee's use, disposal, transportation, generation and/or sale of Hazardous Substances or that of Licensee's employees, agents, assigns, sublicensees, contractors, subcontractors, permittees, or invitees.

Nothing in this assent shall be construed to impair the legal rights of this granting authority or of any person. By this assent the granting authority by no manner, shape, or form assumes any liability or responsibility implied, or in fact, for the stability or permanence of said project; nor by this assent is there any liability implied or in fact assumed or imposed on the granting authority. Further, the granting authority by its representatives or duly authorized agents shall have the right to inspect said project at all times including, but not limited to, the construction, completion, and all times thereafter.

This Assent is granted with the specific proviso that the construction authorized therein will be maintained in good condition by the owner thereof, his heirs, successors, or assigns for a period of fifty (50) years from the date thereof, after which time this permission shall terminate necessitating either complete removal or a new application.

Permits issued by the CRMC are issued for a finite period of time, confer no property rights, and are valid only with the conditions and stipulations under which they are granted. Permits imply no guarantee of renewal, and may be subject to denial, revocation, or modification.

If this matter appeared before the full Council, a copy of the legal decision from this proceeding may be acquired by contacting the CRMC office in writing.

A copy of this Assent shall be kept on site during construction.

Application for future alteration of the shoreline or other construction or alteration within the CRMC jurisdiction shall be submitted to the CRMC for review prior to commencing such activity.

All applicable policies, prohibitions, and standards of the RICRMP shall be upheld.

All local, state or federal ordinances and regulations must be complied with.

Please be advised that as a further conditions of this Assent, it is hereby stipulated that you and/or your agents shall comply at all times with Federal and State Water Quality Standards and other State standards and regulations regarding water quality, and shall exercise such supervision over and control of these facilities to prevent the dumping or discarding or refuse, sanitary wastes and other pollutants in the tidal waters, either from vessels docked at said facilities or from land adjacent thereto.

No work that involves alteration to wetlands or waters of the United States shall be done under this Assent until the required Federal Permit has been obtained.

Non-compliance with this assent shall result in legal action and/or revocation of this permit.

CAUTION:

The limits of authorized work shall be only for that which was approved by the CRMC. Any activities or alterations in which deviate from this assent or what was detailed on the CRMC approved plans will require a separate application and review. Additionally, if the information provided to the CRMC for this review is inaccurate or did not reveal all necessary information or data, then this permit may be found to be null and void. Plans for any future alteration of the shoreline or construction or alteration within the 200' zone of CRMC jurisdiction or in coastal waters must be submitted for review to the CRMC prior to commencing such activity.

Permits, licenses or easements issued by the Council are valid only with the conditions and stipulation under which they are granted and imply no guarantee of renewal. The initial application or an application for renewal may be subject to denial or modification. If an application is granted, said permit, license and easement may be subject to revocation and/or modification for failure to comply with the conditions and stipulations under which the same was issued or for other good cause.

ATTENTION: ALL STRUCTURES AND FILLED AREAS IN THE TIDAL, COASTAL, OR NAVIGABLE WATERS OF THE STATE OF RHODE ISLAND ARE SUBJECT TO:

1. The Superior Property Rights of the State of Rhode Island in the Submerged and Submersible Lands of the Coastal, Tidal, and Navigable Waters;
2. The Superior Navigation Servitude of the United States;
3. The Police Powers of the State of Rhode Island and the United States to regulate Structures in the Tidal, Coastal, or Navigable Waters.

THE SUBMERGED AND SUBMERSIBLE LANDS OF THE TIDAL, COASTAL, AND NAVIGABLE WATERS OF THE STATE ARE OWNED BY THE STATE AND HELD IN TRUST FOR THE PUBLIC.

CONVEYANCE OF THESE LANDS IS ILLEGAL; TITLES PURPORTING TO TRANSFER SUCH LANDS ARE VOID. ASSENTS THAT INVOLVE THE FILLING OR USE OF THE STATES SUBMERGED LANDS ARE GRANTED WITH THE PROVISO THAT IT IS SUBJECT TO THE IMPOSITION OF A USAGE FEE TO BE ESTABLISHED BY THE COASTAL RESOURCES MANAGEMENT COUNCIL.

The lands adjacent to tidal waters and/or access to these lands may be impacted or rendered unusable in the future due to sea level rise, storm surge, and shoreline erosion. Online resources including STORMTOOLS, Shoreline Change Maps, and Sea Levels Affecting Marshes Model (SLAMM) Maps can be accessed through the CRMC website (www.crmc.ri.gov). The Council recommends the use of these resources to evaluate the flood extent and inundation from sea level rise, storm surge and erosion and damages to land, aquatic life, loss of public access and other natural resources on and near the site of the above assent. The project life may be shortened by these processes and may require additional adaptation measure up to and including relocation of the project. By issuing this assent the granting authority neither explicitly nor implicitly assumes any liability or responsibility for the stability or permanence of said project under future climate and shoreline conditions.

SPECIFIC STIPULATIONS OF APPROVAL

General Stipulations

A. **The applicant shall record this assent in its entirety in the land evidence records of the City of East Providence within thirty (30) days of the date of assent issuance. Certification by the Town Clerk's office that this stipulation has been complied with shall be furnished to Coastal Resources Management Council by the applicant within fifteen (15) days thereafter. Failure to comply with provision will render this assent null and void.**

B. For the purpose of this permit at Rose Larisa Park the coastal feature shall be the coastal bluff with a vegetated upper section of bluff all fronted by coastal beach; and the inland edge of the coastal feature shall be inland edge of the coastal bluff. At Cresent Point Park the coastal feature shall be the coastal beach and low bluff and riprap revetment; and the inland edge of the coastal feature shall be the inland edge of the low coastal bluff and riprap revetment.

C. **The approved Shoreline Protection Plans shall be**: "Slope Repairs & Shoreline Protection, Southern Shoreline, Rose Larisa Memorial Park...," sheets 1-18 dated September 27, 2024 by FR ENGINEERING Group, stamped by Stephanie M. Robat, P.E.; and **The approved Sand Placement Plans shall be**: SAND PLACEMENT PLANS: "Crescent Park Shoreline Protection, Crescent Park...," Sheets C-1 to C-5 dated May 22, 2025 by FR ENGINEERING Group, stamped by Stephanie M. Robat, P.E. Except as stipulated or modified herein, all details and specifications thereon shall be strictly adhered to. Any and all changes require written approval from this office.

D. Prior to commencement of site alterations, you shall post the CRMC assent card. This assent card must be maintained at the site in a conspicuous location until such time that the project is complete.

E. **Any remaining sand not utilized for beach nourishment and coastal bluff establishment shall be stockpiled at the City's municipal yard on Forbes Street and will be used in the future at these sites when beach renourishment is required. At no time shall this sand be used for any other purpose than for this project. The stockpile shall be clearly delineated and closed off so that the stockpile will not be utilized for any other purpose.**

F. Once additional sand is stockpiled, the City shall submit location information, volumetric estimate, and images of the stockpile to CRMC via email.

Earthwork Stipulations

A. The Permittee shall construct and maintain all soil erosion, runoff, and sediment control practices in accordance with the CRMC approved site plan (referenced herein).

B. Prior to the initiation of site alterations or construction including the mobilization of construction vehicles, equipment or machinery, the Limit of Disturbance (LOD) shall be adequately delineated on site (by survey methods where appropriate). No equipment access, equipment or material storage or other activities including construction vehicle parking shall occur beyond the Limit of Disturbance, even on a temporary basis.

C. Prior to conducting earthwork and other land disturbing activities, erosion, runoff and sediment control measures shall be installed and maintained in accordance with good engineering practices including the applicable details found in the manufacturer's specifications and/or in the Rhode Island Soil Erosion and Sediment Control Handbook (as amended). These measures must be maintained until the site is stabilized through the establishment of vegetative cover and/or construction of the approved facilities (buildings, roadways, parking areas, etc.) has stabilized soils sufficiently to prevent erosion and sedimentation.

D. All excavated material shall be cast on the upslope side of the excavation to minimize sedimentation. No excavated material shall be stockpiled beyond the Limit of Disturbance (LOD) or in unauthorized locations.

E. All areas of disturbed soils which are impacted by construction, site work and related activities shall be temporarily stabilized throughout the site construction period. Soil stabilization may be achieved through appropriate temporary measures as described by the Rhode Island Soil Erosion and Sediment Control Handbook (as amended). Where the season is not conducive to the establishment of vegetative cover, other temporary measures shall be employed including the application of mulch and/or use of fiber rolls (erosion control blankets, etc.). Temporary erosion, runoff and sediment controls shall be employed and maintained until temporary or permanent vegetative cover can be achieved and/or site improvements such as approved buildings, roadways and parking areas are constructed resulting in a lack of exposed soil.

F. There shall be no discharge or disposal of toxic waste, hazardous materials, oil, grease and other lubricants, excess fertilizer, pesticides or other chemicals or controlled materials either on site or in any area which may enter a wetland, watercourse or groundwater. All spills of such materials shall be reported to the RI Department of Environmental Management for appropriate remediation. All used lubricants, excess chemicals, fertilizers, pesticides, etc., shall be removed from the site for transport, handling and disposal in accordance with all applicable state and federal regulations.

G. All excess excavated materials (soils, rock, gravel, etc.), excess construction materials, demolition debris, temporary erosion, runoff and sediment control measures, etc., shall be removed from the site for appropriate re-use and/or proper disposal at a suitable upland location or landfill. All toxic materials and waste shall be properly transported and disposed of in accordance applicable state and federal regulations.

H. Upon the successful stabilization of exposed soils, all temporary (interim) erosion, runoff and sediment control measures as well as pollution prevention measures shall be appropriately decommissioned and removed from the site for re-use and/or for disposal at a suitable, legal upland location or landfill. All temporary sediment basins, sediment traps and channels, etc., shall be removed and/or restored in accordance with the approved site plans.

Building Stipulations

A. All pertinent requirements of the RI State Building Code as administered by the local building official shall be strictly adhered to.

Shoreline Protection Stipulations -- General:

A. The granting of this Assent does not grant the right to maintenance of the shoreline protection facility at this site in perpetuity. Any future storm or wave activity that causes further erosion of the coastal feature may require that the shoreline protection system be relocated landward accordingly or removed.

B. If the shoreline protection structure is damaged, a separate Maintenance Certification must be issued before repair activity can commence. If damage is >50%, as assessed by CRMC, any replacement work shall be classified as New work and will require a new CRMC Assent.

Shoreline Protection Stipulations -- Structural Components:

A. On site beach materials shall not be used as construction material.

B. Concrete or grout is not permitted within, behind, or over the shoreline protection facility.

C. All backfill shall be coarse, clean, and free-draining sediments containing less than 10% silt.

Additional Stipulations:

A. Sediment placement activities shall be conducted only during lower tides in dry conditions. No heavy machinery or construction materials shall be stored or stockpiled on the coastal beach throughout the project.

B. Excavated sediment utilized for beneficial reuse shall consist of natural sand grains that are similar in grain size, shape and composition to sand currently on the beach. Sand shall consist of 90% or more sand sized grains.

C. Sediment placement to create the berm feature, in accordance with the accepted site plan, shall be a low gradient profile, and shall not exceed a 3:1 slope.

D. Sediment placement on the beach feature, in accordance with the accepted site plan, shall not exceed a 10:1 slope. Sediment placement shall not extend beyond the High Tide Line unless independent authorization is provided from the USACE.

E. Placement of sand on pre-existing marsh vegetation is prohibited.

F. Symbolic post and rope fencing is authorized for pedestrian control across newly revegetated areas. Fencing shall extend no farther seaward than five feet (5') seaward from the planted vegetation on the berm. Fence posts shall be wooden.

G. Duck bill anchors are authorized for use to secure the coir logs in place. All anchoring and connecting components shall be removed upon exposure unless being repaired or replaced as part of a CRMC approved maintenance.

H. Existing areas of natural vegetation landward of the shoreline protection facility shall be preserved, or replaced where disturbed, and retained in an undisturbed condition.

In Witness Whereof, said Coastal Resources Management Council has hereto set their hands and seal this 2nd day of March in the year two-thousand-twenty-six.

Laura Miguel, Deputy Director
Coastal Resources Management Council

/lat

PROJECT PLANS

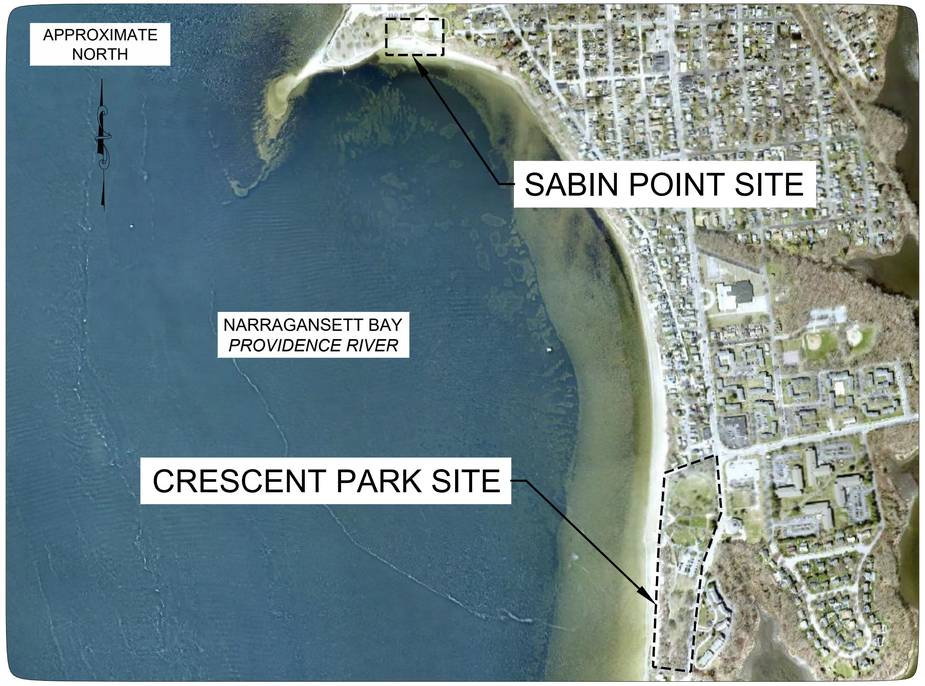
CRESCENT PARK SHORELINE PROTECTION & SABIN POINT SAND BERM CONSTRUCTION

CRESCENT PARK & SABIN POINT PARK

EAST PROVIDENCE, RHODE ISLAND

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VICINITY MAP

1" = 1000' (APPROX.)
(GENERATED FROM RIDEM)

PREPARED FOR
CITY OF EAST PROVIDENCE
145 TAUNTON AVENUE
EAST PROVIDENCE, RI 02914

STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

FR ENGINEERING GROUP
2346 Post Road, Suite 202
Warwick, RI 02886
401-575-1569
stephanie.roba@fr-eng.com

#	REVISION DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

CRESCENT PARK SHORELINE PROTECTION & SABIN POINT SAND BERM
EAST PROVIDENCE, RHODE ISLAND

TITLE SHEET

ISSUED FOR CONTRUCTION

DATE: JULY 20, 2026
DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR
PROJECT NUMBER: 22006.00

C-1
SHEET 1 OF 26

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GENERAL NOTES

1. LANDSIDE TOPOGRAPHY AND EXISTING CONDITIONS PLAN INFORMATION FOR THE AREA WHERE THE WORK IS PROPOSED IS DEVELOPED FROM THE SURVEYS PERFORMED, PREPARED AND PROVIDED BY CITY OF EAST PROVIDENCE (THE CITY). ADDITIONAL INFORMATION FOR SABIN POINT WATERFRONT PARK WAS DERIVED FROM 2022 NOAA LIDAR DATA. EXISTING GRADES MAY DIFFER FROM WHAT IS SHOWN DUE TO EROSION. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMATION OF ACTUAL SITE GRADES AND LAYOUT CONDITIONS. FREG ACCEPTS NO RESPONSIBILITY FOR EXISTING TOPOGRAPHIC AND SITE INFORMATION.

2. THERE IS LIMITED HYDROGRAPHIC SURVEY INFORMATION AVAILABLE FOR THIS SITE AS SHOWN ON THE CITY'S SURVEY PLAN. CHANGES TO ELEVATIONS ALONG THE SHORELINE SHOULD BE EXPECTED.

3. SOUNDINGS AND UPLAND TOPOGRAPHY ARE REFERENCED TO NAVD88. BENCHMARKS ARE INDICATED ON THE CITY'S SURVEY PLAN.

4. THE HORIZONTAL DATUM FOR THIS PROJECT IS THE R.I.S.P.C.S. (NAD 83). THE VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

5. THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN IS APPROXIMATE AND HAS NOT BEEN VERIFIED. THE DRAWINGS MAKE NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE DRAWINGS DO NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.

6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE EXISTING CONDITIONS ARE NOT OBLITERATED BEFORE CONTROL POINTS ARE LOCATED AND CONSTRUCTION LAYOUT IS ESTABLISHED. THE CONSTRUCTION LAYOUT SHALL BE PROVIDED IN SUFFICIENT DETAIL, THEREBY ENABLING THEM TO CONSTRUCT THE PROJECT IN CONFORMITY WITH THE PLANS AND SPECIFICATIONS. SURVEY WILL BE PROVIDED BY THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR LAYOUT.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ROADWAYS FREE OF DEBRIS RESULTING FROM THEIR CONSTRUCTION OPERATIONS. ALL DEBRIS SHALL BE REMOVED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.

8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY CONSTRUCTION OPERATIONS INCLUDING ALL ACTIONS OR OMISSION OF ANY SUBCONTRACTORS, AGENTS OR EMPLOYEES. THE CONTRACTOR MUST ENSURE THAT THE CONDITIONS OF ALL PERMITS, SPECIFICATIONS AND FEDERAL, STATE, AND LOCAL REGULATIONS ARE STRICTLY ENFORCED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL ASPECTS OF ON-SITE SAFETY INCLUDING ANY DAMAGE TO EXISTING STRUCTURES.

9. THE BEACH IS TO REMAIN OPEN TO THE PUBLIC DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO PROVIDING SIGNS WARNING THE PUBLIC OF CONSTRUCTION ACTIVITIES WHICH MAY LIMIT ACCESS TO PORTIONS OF THE BEACH. CONTRACTOR CANNOT BLOCK PUBLIC ACCESS TO THE BEACH.

10. WORK SHOWN ON THE PLANS FOR WHICH THERE ARE NO PARTICULAR DETAILS OR SPECIFICATIONS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING THE WORK. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE CONTRACT DOCUMENTS AND PLANS AND INSPECT THE SITE, AND THE BID PRICE SHALL INCLUDE ALL SERVICES AND MATERIALS NECESSARY TO COMPLETE THE PROJECT. ANY CHANGES TO THE PROJECT OR THE INSTALLATION OF AN ITEM FOR WHICH NO PARTICULAR DETAIL OR SPECIFICATION WAS PROVIDED MUST BE REVIEWED BY AND MUST BE ACCEPTED AND APPROVED BY THE OWNER'S REPRESENTATIVE.

11. THE CONTRACTOR SHALL PROVIDE TREE PROTECTION DEVICES (RI STD. 51.1.0) AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

12. THE CONTRACTOR SHALL NOT STORE ANY MATERIALS BELOW MHW ELEVATION.

13. PROVIDE ALL MATERIAL, EQUIPMENT, AND TOOLS NECESSARY TO COMPLETE THE WORK. THE OWNER WILL NOT PROVIDE SECURITY AND ASSUMES NO RESPONSIBILITY OR LIABILITY FOR ANY MATERIALS, EQUIPMENT OR TOOLS STORED AT ITS PROPERTY.

14. THE CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.

15. ALL TYPES OF WASTE GENERATED AT THE SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH FEDERAL, STATE AND LOCAL REGULATIONS.

16. ALL WORK SHALL BE IN ACCORDANCE WITH THE LOCAL, STATE, FEDERAL AND UTILITY COMPANY REQUIREMENTS.

17. EXCAVATIONS SHALL CONFORM TO CURRENT OSHA REGULATIONS.

18. IF DURING THE COURSE OF WORK UNFORSEEN OR APPARENTLY DANGEROUS CONDITIONS ARE ENCOUNTERED THE CONTRACTOR SHALL STOP WORK AND NOTIFY THE ENGINEER IMMEDIATELY FOR DISPOSITION.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT & POSITIONING OF ALL PROPOSED STRUCTURES AS SHOWN ON THE PROJECT DRAWINGS.

GENERAL NOTES (CONTINUED)

20. CONTRACTOR SHALL MAINTAIN ADEQUATE SURVEY CONTROL AT ALL TIMES TO ESTABLISH AND MAINTAIN ALL LINES AND ELEVATIONS.

21. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AS THEY RELATE TO NEW CONSTRUCTION. REPORT TO ENGINEER ALL OBSERVATIONS AND DISCREPANCIES BEFORE PROCEEDING WITH ANY WORK.

22. CONTRACTOR SHALL AT ALL TIMES BE SOLELY RESPONSIBLE FOR EXERCISING REASONABLE PRECAUTION TO PROTECT THE HEALTH, SAFETY AND WELFARE OF ALL ON-SITE PERSONNEL, THE PUBLIC AND THE ENVIRONMENT DURING PERFORMANCE OF THE WORK DESCRIBED WITHIN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF FEDERAL, STATE AND LOCAL HEALTH AND SAFETY AND OCCUPATIONAL HEALTH AND SAFETY STATUTES AND CODES.

23. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS, LICENSES, CERTIFICATES OF INSPECTION AND PAY ALL LEGAL FEES IN CONNECTION WITH THE WORK OF THIS CONTRACT. THE OWNER HAS OBTAINED NECESSARY CRMC REGULATORY PERMITS REQUIRED FOR THE WORK IN REGULATED AREAS. THE CONTRACTOR SHALL REQUEST COPIES OF THOSE REGULATORY PERMITS AND MAKE PROVISION IN THIS WORK AND IN THE COST OF THE WORK FOR ALL APPLICABLE CONDITIONS OF THOSE PERMITS. FAILURE TO CONSIDER ANY CONDITION OF THE REGULATORY PERMITS AS A PART OF THE BID SHALL NOT RELIEVE THE CONTRACTOR FROM THEIR RESPONSIBILITY TO APPLY THOSE CONDITIONS TO THEIR WORK AT NO ADDITIONAL COST TO THE OWNER.

24. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE CRMC ASSENT ON SITE AND ADHERE TO ALL PERMIT STIPULATIONS.

25. THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE PROJECT REGULATORY PERMITS AND ALL CONDITIONS OF THOSE PERMITS. THE CONTRACTOR IS ADVISED THAT THE REGULATORY PERMITS FOR THIS PROJECT MAY CONTAIN ADDITIONAL REQUIREMENTS THAT, AFTER ANY ADDENDUM, SUPERSEDE THE DRAWING NOTES. THE CONTRACTOR IS FURTHER ADVISED THAT IN THE CASE OF ANY DISCREPANCIES WITHIN THE CONTRACT DOCUMENTS FOUND BEFORE CONSTRUCTION, THE FINAL DECISION AS TO WHAT INFORMATION TAKES PRECEDENCE WILL BE MADE BY THE ENGINEER OF RECORD ON THE BASIS OF THAT INTENT.

26. CONTRACTOR SHALL CONTACT DIGSAFE (811 OR DIGSAFE.COM) TO NOTIFY MEMBER UTILITIES TO HAVE THE SITE MARKED PRIOR TO START OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WORK WITH SUCH UTILITIES.

27. DAMAGE TO ANY PROPERTY, PRIVATE OR OF PUBLIC TRUST, OCCURRING DURING THE CONSTRUCTION BY THE CONTRACTOR, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE EXPENSE OF THE CONTRACTOR.

28. THE CONTRACTOR SHALL PROTECT ALL WETLANDS AND COASTAL RESOURCES FROM INTRUSION BY TURBID WATERS, CONSTRUCTION DEBRIS, CONSTRUCTION EQUIPMENT, OR PERSONNEL DURING ALL WORK ACTIVITIES.

29. ALL REMOVED AND SALVAGED ITEMS TO BE REUSED SHALL BE SECURED AND STORED ONSITE OR AT A MUTUALLY AGREED UPON LOCATION BY THE CITY AND THE CONTRACTOR.

REVETMENT DESIGN CRITERIA

1. ALL DIMENSIONS ARE IN DECIMAL FEET UNLESS OTHERWISE NOTED. ELEVATIONS ARE IN FEET REFERENCED TO NAVD88.

2. TIDAL RANGE IS 4.41 FEET ACCORDING TO THE NOAA STATION IN PROVIDENCE, RHODE ISLAND.

3. FEMA 100 YEAR (1%) SWL IS EL 12.6 FT NAVD88.

4. BASE FLOOD ELEVATION (BFE) IS 20 FT NAVD88 ALONG THIS PORTION OF THE SHORELINE.

5. THE APPROXIMATE 100 YEAR (1%) SIGNIFICANT WAVE HEIGHT IS 3.8 FT ALONG THIS PORTION OF THE SHORELINE. THE REVETMENT WAS DESIGNED FOR A SIGNIFICANT WAVE HEIGHT OF 7.6 FT IN ACCORDANCE WITH THE 2015 FIS TO MAINTAIN DESIGN CONSISTENCY WITH THE ADJACENT REVETMENT SYSTEMS.

6. THE REVETMENT AREA IS DESIGNED FOR THE SIGNIFICANT WAVE HEIGHT OF 7.6 FT AND A MAXIMUM SLOPE OF 1.5:1.

REFERENCE PLANS, DESIGN AND DETAIL/SPEC DOCUMENTS

1. EXISTING TOPOGRAPHIC AND GENERAL CONDITIONS INFORMATION IN THE ANTICIPATED CONSTRUCTION AREA IS FROM THE AUTOCAD FILES TITLED "2020050.DWG," "SURVEY PLAN," AND "2023006-RLP-BANKEROSION" PROVIDED ELECTRONICALLY TO FREG ON MARCH 31, 2021, DECEMBER 15, 2021, AND JANUARY 10, 2023, RESPECTIVELY, BY THE CITY OF EAST PROVIDENCE. THE AUTOCAD FILES PROVIDED WERE USED TO CREATE THE BASE PLAN FOR THESE DRAWINGS. A LIMITED VISUAL SURVEY OF EROSION WITHIN THE REVETMENT AREA WAS CONDUCTED BY FREG ON DECEMBER 29, 2022 FOLLOWING THE DECEMBER 23, 2022 STORM AND PRIOR TO COMPLETION OF THE EMERGENCY WORK. AN ADDITIONAL SURVEY OF EROSION WITHIN THE REVETMENT AREA WAS CONDUCTED BY FREG ON JANUARY 30, 2024 FOLLOWING THE DECEMBER 18, 2023 STORM. EXISTING CONDITIONS SHOWN ARE APPROXIMATE.

2. HORIZONTAL CONDITIONS, PROPERTY LINES AND BUILDING LOCATIONS, ETC., ARE SHOWN ON THE SURVEY PLANS REFERENCED ABOVE.

3. EXISTING SITE GRADES MAY VARY FROM WHAT IS SHOWN DUE TO RECENT EROSION FROM THE DECEMBER 23, 2022 AND DECEMBER 18, 2023 STORMS. VARIATIONS MAY INCLUDE BUT ARE NOT LIMITED TO SITE GRADE, EXISTING STRUCTURE GEOMETRY AND STRUCTURE LOCATION.

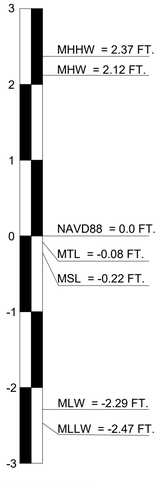
4. FEMA FLOOD INSURANCE STUDY 44007CV001D, PROVIDENCE COUNTY, RHODE ISLAND, REVISED JULY 19, 2023.

5. US ARMY CORPS OF ENGINEERS SHORE PROTECTION MANUAL, 1984.

6. COASTAL CONSTRUCTION MANUAL, FEMA 55.

ABBREVIATIONS

N.I.C.	NOT IN CONTRACT
U.O.N.	UNLESS OTHERWISE NOTED
N.T.S.	NOT TO SCALE
I.A.W.	IN ACCORDANCE WITH
TYP.	TYPICAL
R&D	REMOVE AND DISPOSE
F&I	FURNISH AND INSTALL
BIT.	BITUMINOUS CONCRETE
N/F	NOW OR FORMERLY
F.F.	FINISH FLOOR
T.O.F.	TOP OF FOUNDATION
M.P.L.	MARINA PERIMETER LINE
FREG	FR ENGINEERING GROUP, INC.
S.F.	SQUARE FOOT
A.P.	ASSESSORS PLAT
EXTG	EXISTING
SMH	SEWER MANHOLE
DMH	STORM WATER MANHOLE
MIN.	MINIMUM
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MTL	MEAN TIDE LEVEL
MSL	MEAN SEA LEVEL
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER
SWL	STILL WATER LEVEL
BFE	BASE FLOOD ELEVATION



DATUM INFORMATION
INFORMATION FOR NOAA TIDAL ELEVATION STATION 8454000 LOCATED IN PROVIDENCE, RHODE ISLAND - VERTICAL DATUM IS NAVD88

STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

F2 ENGINEERING GROUP
2346 Post Road, Suite 202
Warwick, RI 02886
401-575-1569
stephanie.roba@fr-eng.com

#	REVISION DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

CRESCENT PARK SHORELINE PROTECTION & SABIN POINT SAND BERM
EAST PROVIDENCE, RHODE ISLAND

GENERAL NOTES

ISSUED FOR CONTRUCTION

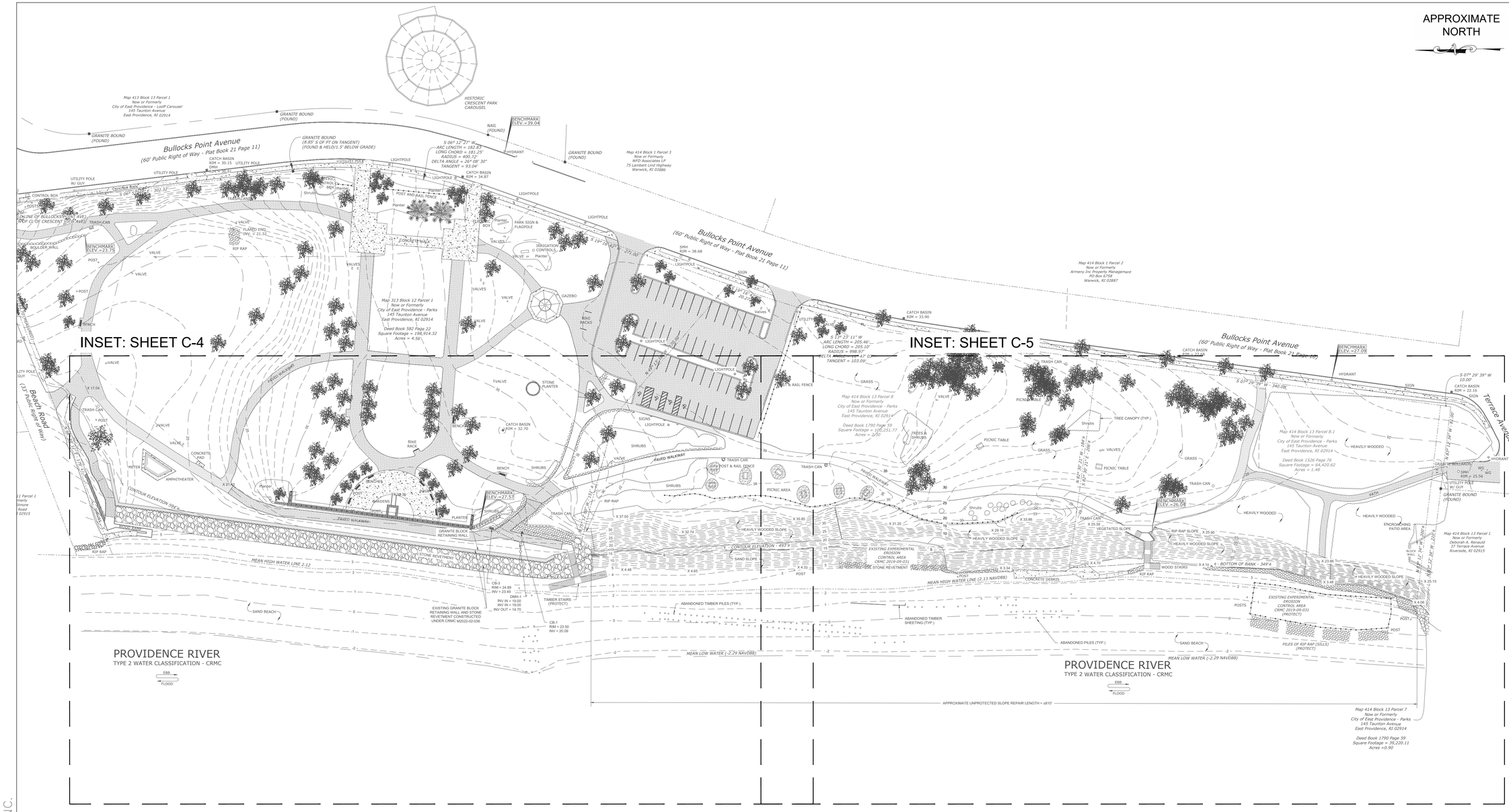
DATE:
JULY 20, 2026

DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR

PROJECT NUMBER:
22006.00

C-2
SHEET 2 OF 26

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1 C-3 C-3 EXISTING CONDITIONS PLAN - OVERALL

SCALE: 1" = 50'

LEGEND

- PROPERTY LINE
- EXISTING 1' MINOR CONTOUR
- EXISTING 5' MAJOR CONTOUR
- EXISTING MEAN HIGH WATER
- EXISTING MEAN LOW WATER
- EXISTING VEGETATION
- EXISTING DRAINAGE LINE
- EXISTING POST AND RAIL FENCE
- EXISTING DRAINAGE LINE
- EXISTING RIPRAP
- CATCH BASIN
- LIGHT POLE
- SIGN
- UTILITY POLE

NOTES

1. THIS BASE PLAN WAS DEVELOPED FROM THE FOLLOWING AUTOCAD DWG FILE:
   A. '2020050.DWG' BY THE CITY OF EAST PROVIDENCE DEPARTMENT OF PUBLIC WORKS - ENGINEERING DEPARTMENT.
2. THE FIELD SURVEY FOR THE BASE PLAN WAS COMPLETED BY THE DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION ON AUGUST 7, 2020 AND DOES NOT REFLECT RECENT CHANGES TO SITE CONDITIONS.

STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

0' 25' 50' 100'

FULL SCALE (22X34 PRINT): 1" = 50'
HALF SCALE (11X17 PRINT): 1" = 100'

F3 ENGINEERING GROUP
2346 Post Road, Suite 202
Warwick, RI 02886
401-575-1569
stephanie.roba@fr-eng.com

#	REVISION DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND

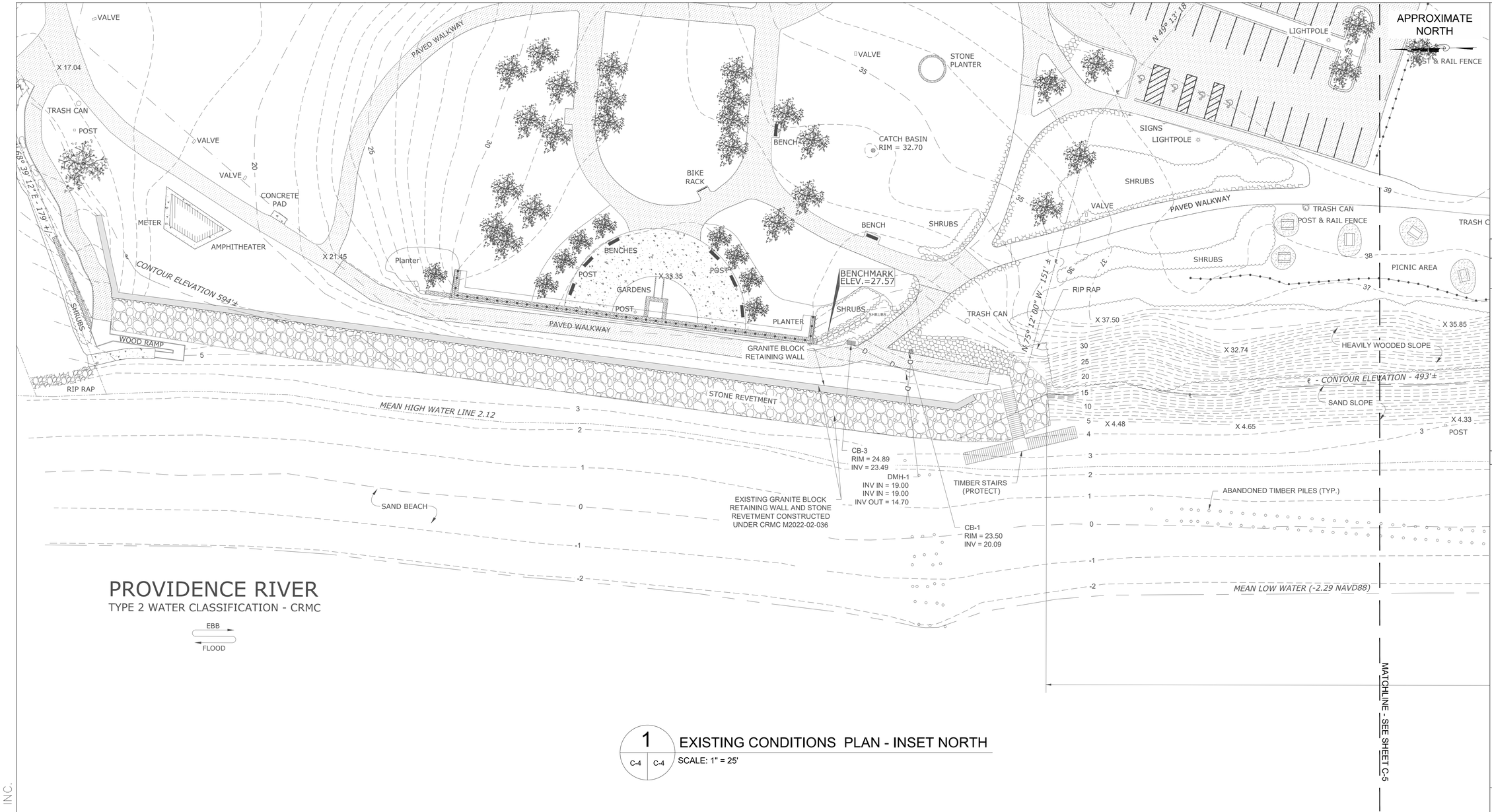
EXISTING CONDITIONS PLAN - OVERALL

ISSUED FOR CONTRUCTION

DATE: JULY 20, 2026
DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR
PROJECT NUMBER: 22006.00

C-3
SHEET 3 OF 26

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1 EXISTING CONDITIONS PLAN - INSET NORTH
C-4 C-4
SCALE: 1" = 25'

LEGEND

- PROPERTY LINE
- EXISTING 1' MINOR CONTOUR
- EXISTING 5' MAJOR CONTOUR
- EXISTING MEAN HIGH WATER
- EXISTING MEAN LOW WATER
- EXISTING VEGETATION
- EXISTING DRAINAGE LINE
- EXISTING POST AND RAIL FENCE
- EXISTING DRAINAGE LINE
- EXISTING RIPRAP
- CATCH BASIN
- LIGHT POLE
- SIGN
- UTILITY POLE

NOTES

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   A. '2020050.DWG' BY THE CITY OF EAST PROVIDENCE DEPARTMENT OF PUBLIC WORKS - ENGINEERING DEPARTMENT.
2. THE FIELD SURVEY FOR THE BASE PLAN WAS COMPLETED BY THE DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION ON AUGUST 7, 2020 AND DOES NOT REFLECT RECENT CHANGES TO SITE CONDITIONS.

STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

0' 12.5' 25' 50'
FULL SCALE (22X34 PRINT): 1" = 25'
HALF SCALE (11X17 PRINT): 1" = 50'

F3 ENGINEERING GROUP
2346 Post Road, Suite 202
Warwick, RI 02886
401-575-1569
stephanie.roba@fr-eng.com

#	REVISION DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

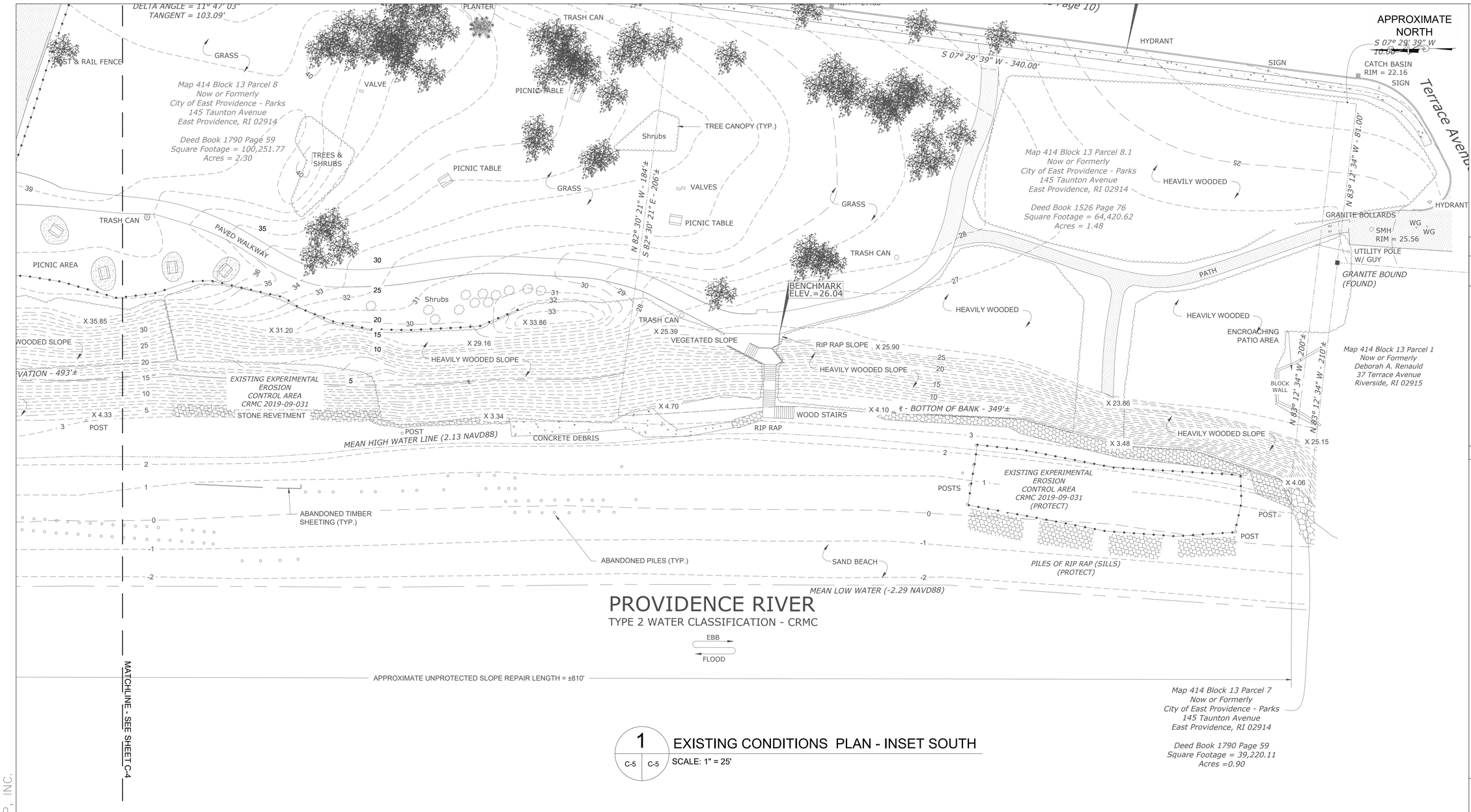
CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND
EXISTING CONDITIONS PLAN
INSET NORTH

ISSUED FOR CONTRUCTION

DATE: JULY 20, 2026
DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR
PROJECT NUMBER: 22006.00

C-4
SHEET 4 OF 26

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1 EXISTING CONDITIONS PLAN - INSET SOUTH

C-5 | C-5

SCALE: 1" = 25'

LEGEND

- PROPERTY LINE
- EXISTING 1' MINOR CONTOUR
- EXISTING 5' MAJOR CONTOUR
- EXISTING MEAN HIGH WATER
- EXISTING MEAN LOW WATER
- EXISTING VEGETATION
- D — EXISTING DRAINAGE LINE
- EXISTING POST AND RAIL FENCE
- EXISTING DRAINAGE LINE
- EXISTING RIPRAP
- CATCH BASIN
- LIGHT POLE
- SIGN
- UTILITY POLE

NOTES

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STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

0' 12.5' 25' 50'

FULL SCALE (22X34 PRINT): 1" = 25'
HALF SCALE (11X17 PRINT): 1" = 50'

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stephanie.robat@fr-eng.com

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1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND

EXISTING CONDITIONS PLAN
INSET SOUTH

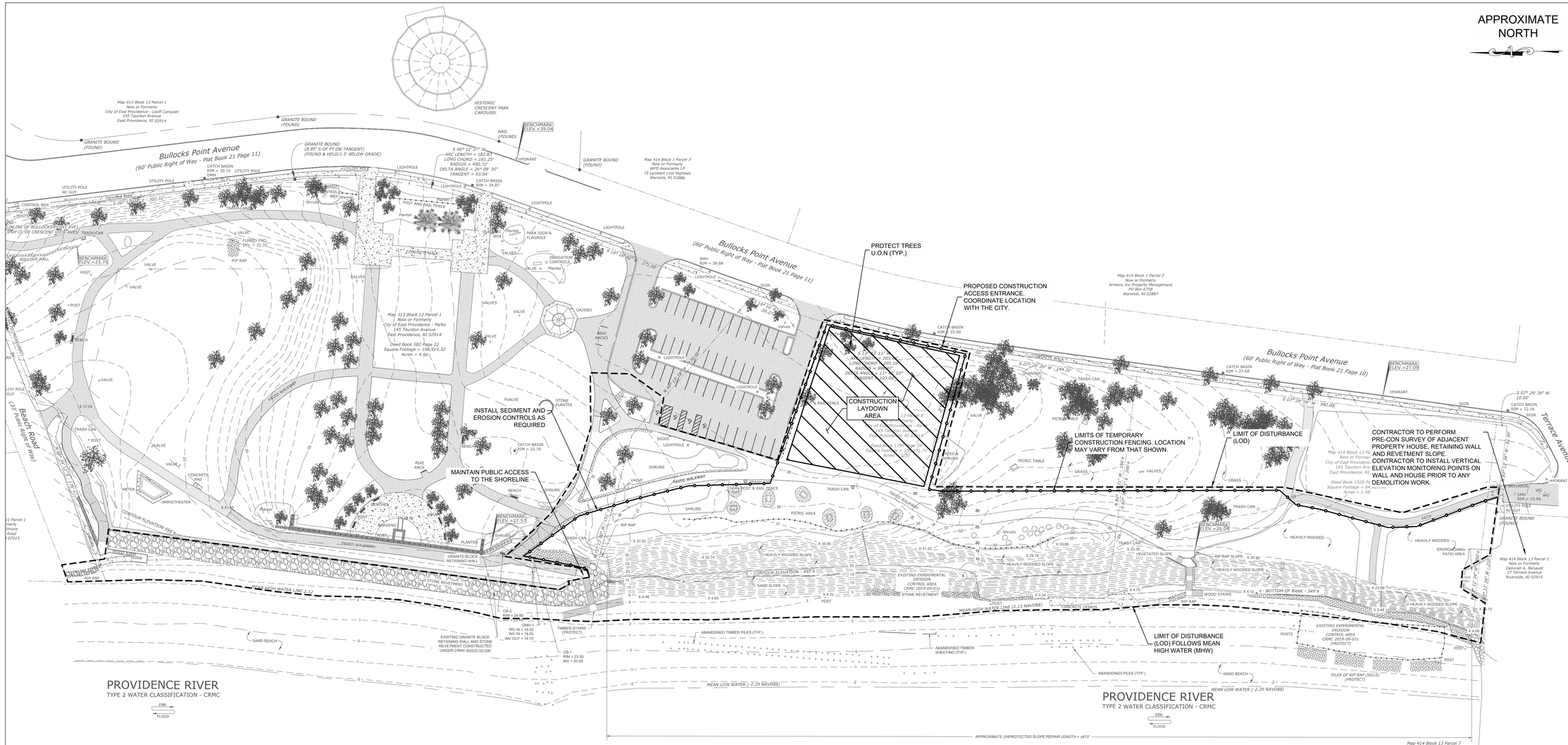
ISSUED FOR CONTRUCTION

DATE:
JULY 20, 2026

DESIGN BY: SMR
DRAWN BY: BMF
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PROJECT NUMBER:
22006.00

C-5



LEGEND

- PROPERTY LINE
- EXISTING 1' MINOR CONTOUR
- EXISTING 5' MAJOR CONTOUR
- EXISTING MEAN HIGH WATER
- EXISTING MEAN LOW WATER
- EXISTING VEGETATION
- EXISTING DRAINAGE LINE
- EXISTING POST AND RAIL FENCE
- EXISTING DRAINAGE LINE
- EXISTING RIPRAP
- CATCH BASIN
- LIGHT POLE
- SIGN
- UTILITY POLE
- LIMIT OF DISTURBANCE (LOD)
- TEMPORARY CONSTRUCTION FENCING

1 CONSTRUCTION LAYDOWN AND TEMPORARY CONTROLS

C-6 | C-6

SCALE: 1" = 50'

LAYDOWN AND TEMPORARY CONTROL NOTES

1. THE PROPOSED CONSTRUCTION LAYDOWN AREA IS SUBJECT TO CHANGE FROM THAT SHOWN. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF EAST PROVIDENCE THE LOCATION OF ALL EQUIPMENT, VEHICLE, OR MATERIAL LAYDOWN AREAS.
2. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN ALL TEMPORARY CONTROLS IN ACCORDANCE WITH THE PROJECT, PERMIT, AND CONTRACT DOCUMENTS. THE LIMITS OF TEMPORARY CONTROLS NECESSARY TO COMPLETE THE SCOPE OF WORK MAY VARY FROM THAT SHOWN ON THIS PLAN.

NOTES

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2. THE FIELD SURVEY FOR THE BASE PLAN WAS COMPLETED BY THE DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION ON AUGUST 7, 2020 AND DOES NOT REFLECT RECENT CHANGES TO SITE CONDITIONS.

STEPHANIE M. ROBAT No. 12101 REGISTERED PROFESSIONAL ENGINEER CIVIL 7/20/26

0' 25' 50' 100'

FULL SCALE (22X34 PRINT): 1" = 50'

HALF SCALE (11X17 PRINT): 1" = 100'

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CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND
CONSTRUCTION LAYDOWN AND TEMPORARY CONTROLS PLAN

ISSUED FOR CONTRUCTION

DATE: JULY 20, 2026

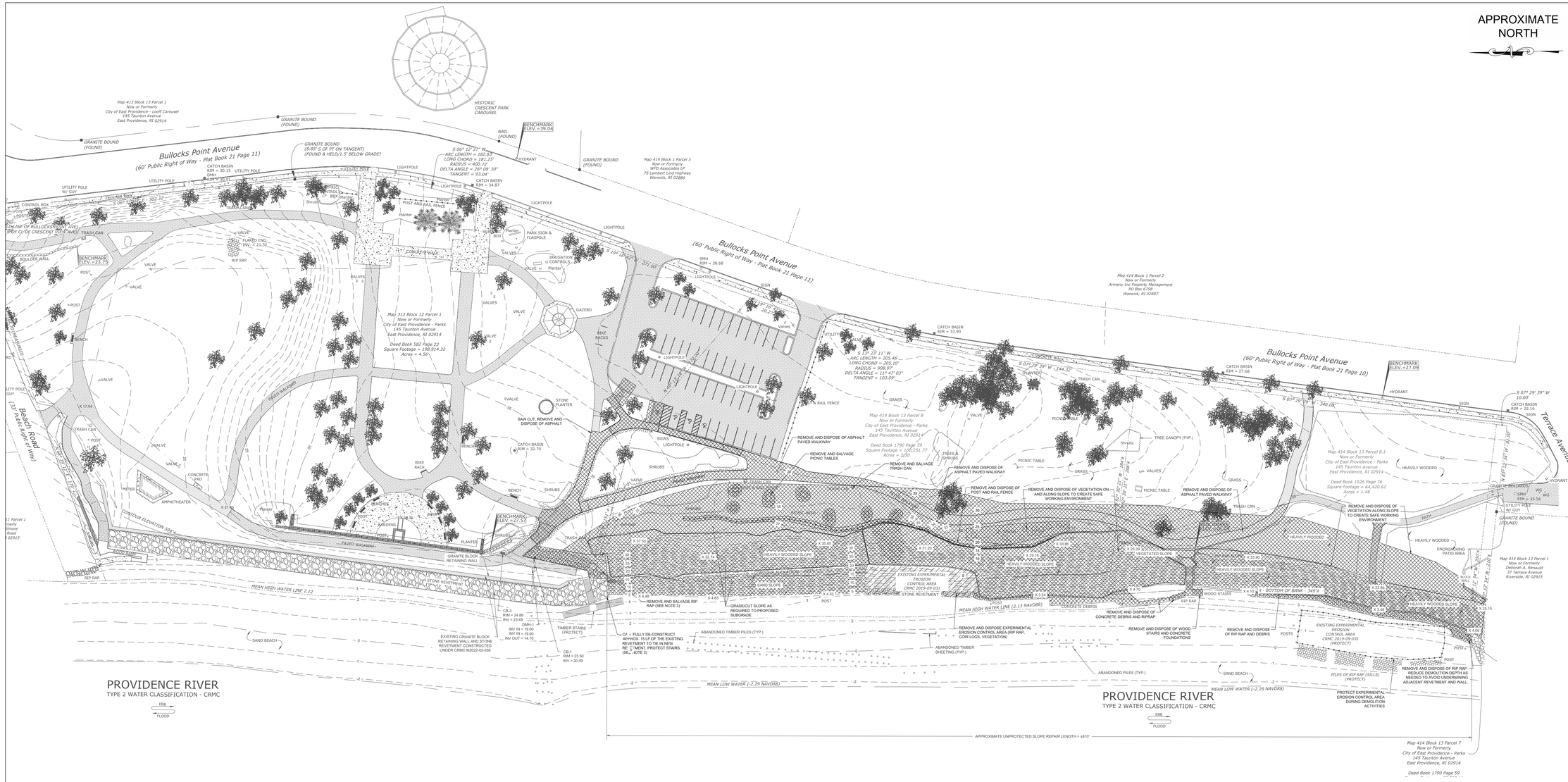
DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR

PROJECT NUMBER: 22006.00

C-6

SHEET 6 OF 26

APPROXIMATE NORTH



1 DEMOLITION PLAN

C-7 | C-7

SCALE: 1" = 50'

LEGEND

INDICATES AREA IS INCLUDED IN DEMOLITION PLAN

NOTES

1. THIS BASE PLAN WAS DEVELOPED FROM THE FOLLOWING AUTOCAD DWG FILE:
   A. '2020050.DWG' BY THE CITY OF EAST PROVIDENCE DEPARTMENT OF PUBLIC WORKS - ENGINEERING DEPARTMENT.
2. THE SURVEY FOR THE BASE PLAN WAS CONDUCTED PRIOR TO THE COMPLETION OF THE NORTHERN REVETMENT. THE LOCATION OF THE NORTHERN REVETMENT IS APPROXIMATE.
3. CONTRACTOR SHALL CAREFULLY REMOVE ARMOR STONES AT ABUTTING REVETMENT AS NEEDED TO CONSTRUCT NEW REVETMENT WITHOUT DAMAGING THE EXISTING FILTER FABRIC. A CRANE OR SPECIALTY EXCAVATOR IS REQUIRED TO PICK UP THE STONES. USE OF AN EXCAVATOR WITHOUT A THUMB WILL NOT BE ALLOWED. DAMAGE TO ANY EXISTING STRUCTURE WILL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY AND CITY'S ENGINEER AT NO COSTS TO THE CITY.

STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

0' 25' 50' 100'

FULL SCALE (22X34 PRINT): 1" = 50'
HALF SCALE (11X17 PRINT): 1" = 100'

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CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND

DEMOLITION PLAN

ISSUED FOR CONTRUCTION

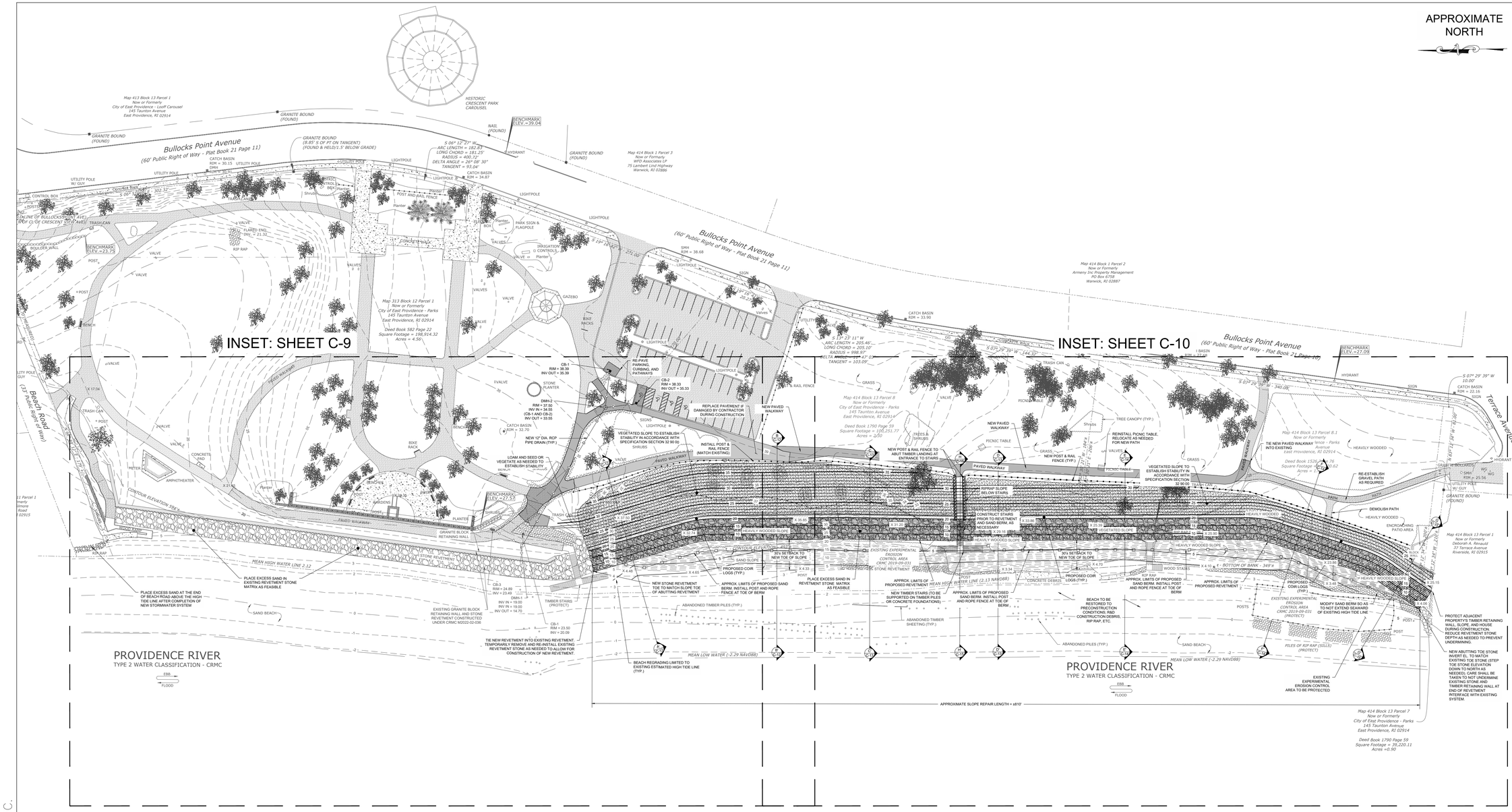
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CHECKED BY: SMR

PROJECT NUMBER: 22006.00

C-7
SHEET 7 OF 26

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LEGEND

- PROPERTY LINE
- EXISTING 1' MINOR CONTOUR
- EXISTING 5' MAJOR CONTOUR
- EXISTING MEAN HIGH WATER
- EXISTING MEAN LOW WATER
- EXISTING VEGETATION
- EXISTING DRAINAGE LINE
- EXISTING POST AND RAIL FENCE
- EXISTING DRAINAGE LINE
- EXISTING RIPRAP
- CATCH BASIN
- LIGHT POLE
- SIGN
- UTILITY POLE
- PROPOSED 1' MINOR CONTOUR
- PROPOSED 5' MAJOR CONTOUR
- PROPOSED DRAINAGE LINE
- PROPOSED POST AND RAIL FENCE
- PROPOSED POST AND ROPE FENCE
- PROPOSED RIPRAP
- PROPOSED COIR LOGS

1 C-8 | C-8 — PROPOSED CONDITIONS PLAN - OVERALL

SCALE: 1" = 50'

NOTES

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4. REMAINDER OF EXCESS SAND TO BE TRANSPORTED TO SABIN POINT PARK AND THE CITY'S YARD ON FORBES STREET FOR FUTURE BEACH REPLENISHMENT NEEDS.

STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

0' 25' 50' 100'

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CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND

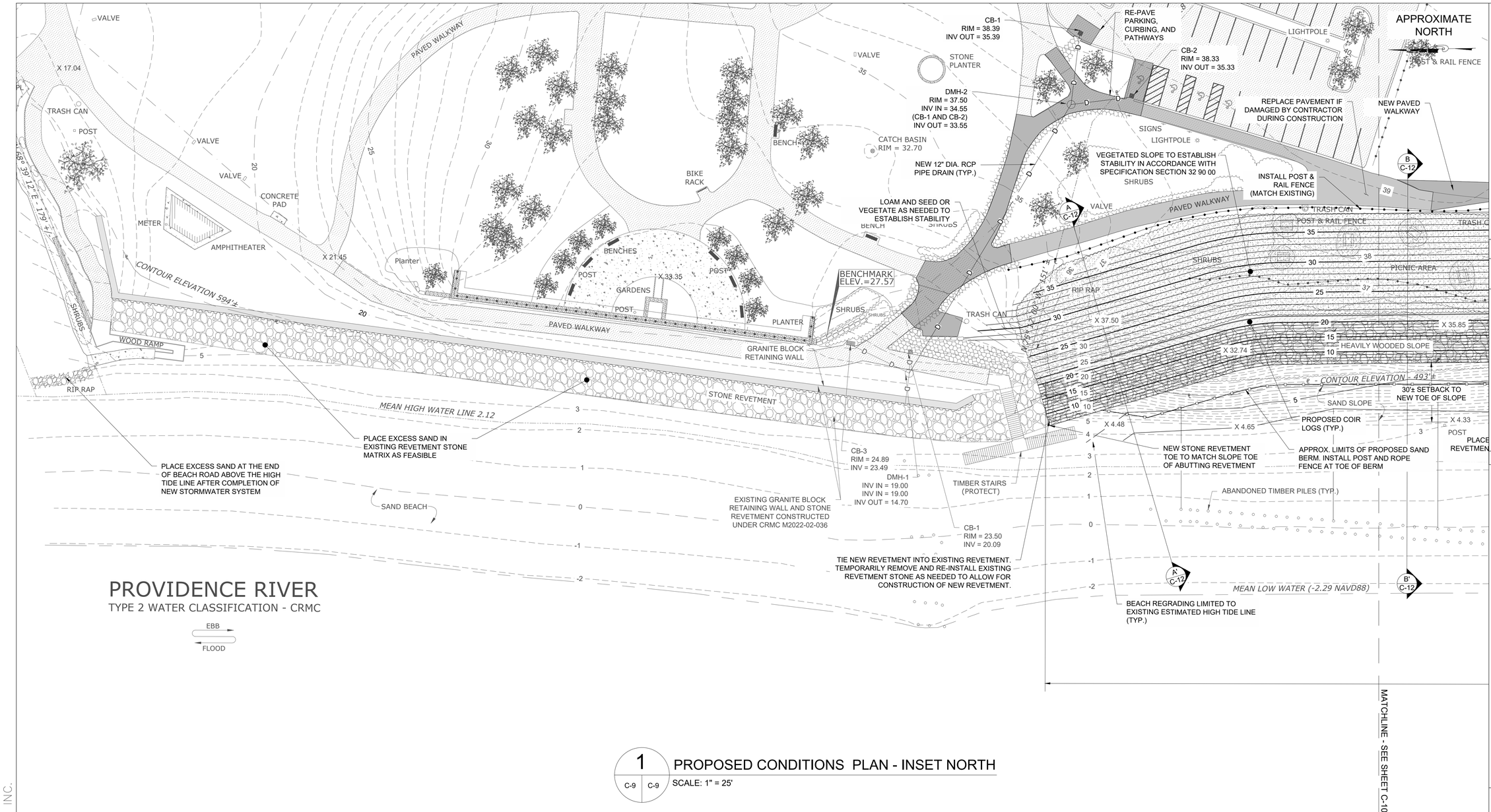
PROPOSED CONDITIONS PLAN - OVERALL

ISSUED FOR CONTRUCTION

DATE: JULY 20, 2026
DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR
PROJECT NUMBER: 22006.00

C-8
SHEET 8 OF 26

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1 PROPOSED CONDITIONS PLAN - INSET NORTH

C-9 | C-9

SCALE: 1" = 25'

LEGEND

- PROPERTY LINE
- EXISTING 1' MINOR CONTOUR
- EXISTING 5' MAJOR CONTOUR
- EXISTING MEAN HIGH WATER
- EXISTING MEAN LOW WATER
- EXISTING VEGETATION
- EXISTING DRAINAGE LINE
- EXISTING POST AND RAIL FENCE
- EXISTING DRAINAGE LINE
- EXISTING RIPRAP
- PROPOSED 1' MINOR CONTOUR
- PROPOSED 5' MAJOR CONTOUR
- PROPOSED DRAINAGE LINE
- PROPOSED POST AND RAIL FENCE
- PROPOSED POST AND ROPE FENCE
- PROPOSED RIPRAP
- PROPOSED COIR LOGS
- CATCH BASIN
- LIGHT POLE
- SIGN
- UTILITY POLE

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STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

0' 12.5' 25' 50'

FULL SCALE (22X34 PRINT): 1" = 25'
HALF SCALE (11X17 PRINT): 1" = 50'

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stephanie.roba@fr-eng.com

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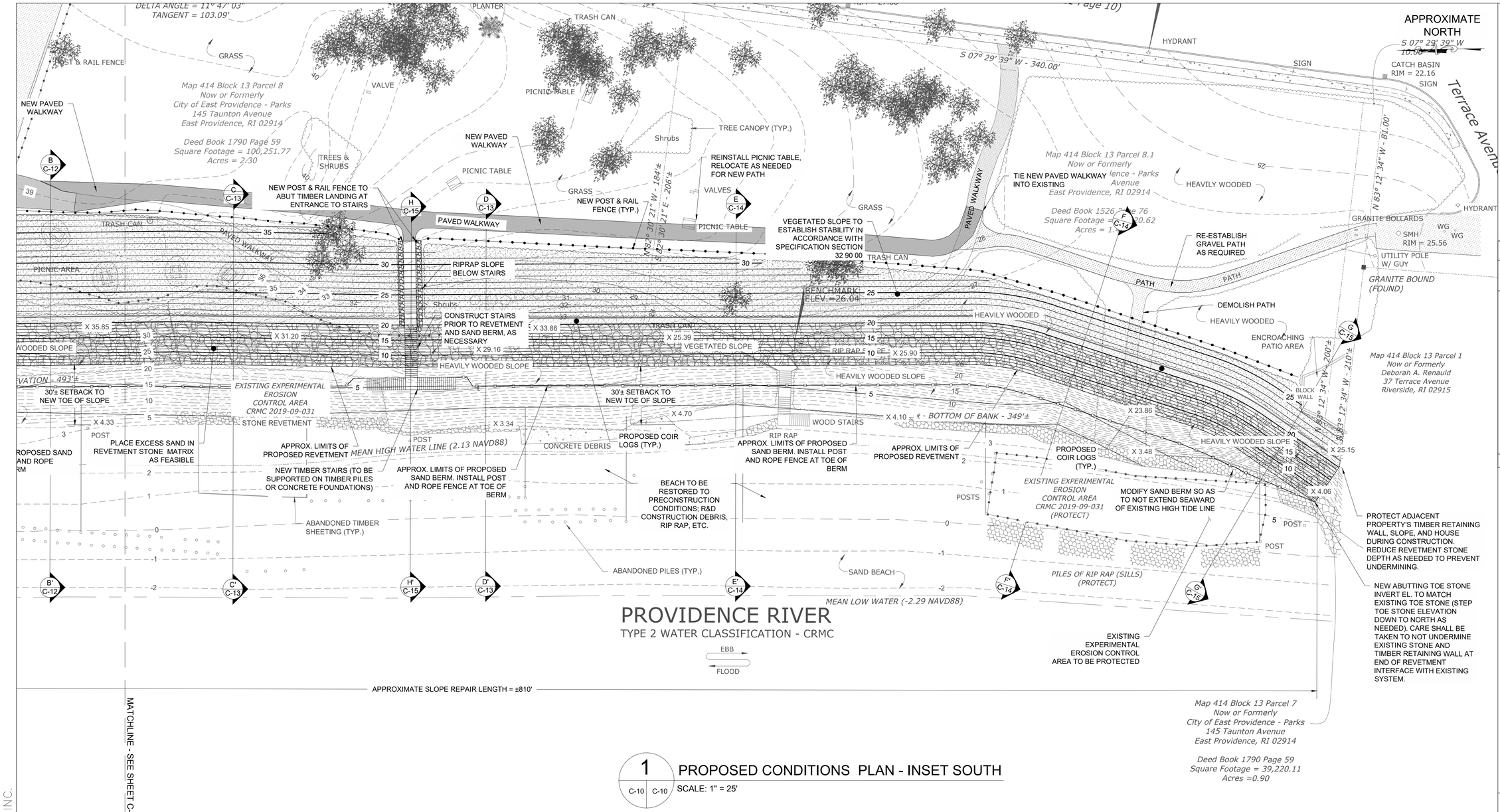
CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND
PROPOSED CONDITIONS PLAN
INSET NORTH

ISSUED FOR CONTRUCTION

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PROJECT NUMBER: 22006.00

C-9
SHEET 9 OF 26

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1 PROPOSED CONDITIONS PLAN - INSET SOUTH

C-10 | C-10

SCALE: 1" = 25'

LEGEND

- PROPERTY LINE
- EXISTING 1' MINOR CONTOUR
- EXISTING 5' MAJOR CONTOUR
- EXISTING MEAN HIGH WATER
- EXISTING MEAN LOW WATER
- EXISTING VEGETATION
- EXISTING DRAINAGE LINE
- EXISTING POST AND RAIL FENCE
- EXISTING DRAINAGE LINE
- EXISTING RIPRAP
- PROPOSED 1' MINOR CONTOUR
- PROPOSED 5' MAJOR CONTOUR
- PROPOSED DRAINAGE LINE
- PROPOSED POST AND RAIL FENCE
- PROPOSED POST AND ROPE FENCE
- PROPOSED RIPRAP
- PROPOSED COIR LOGS
- CATCH BASIN
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- SIGN
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NOTES

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REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

0' 12.5' 25' 50'

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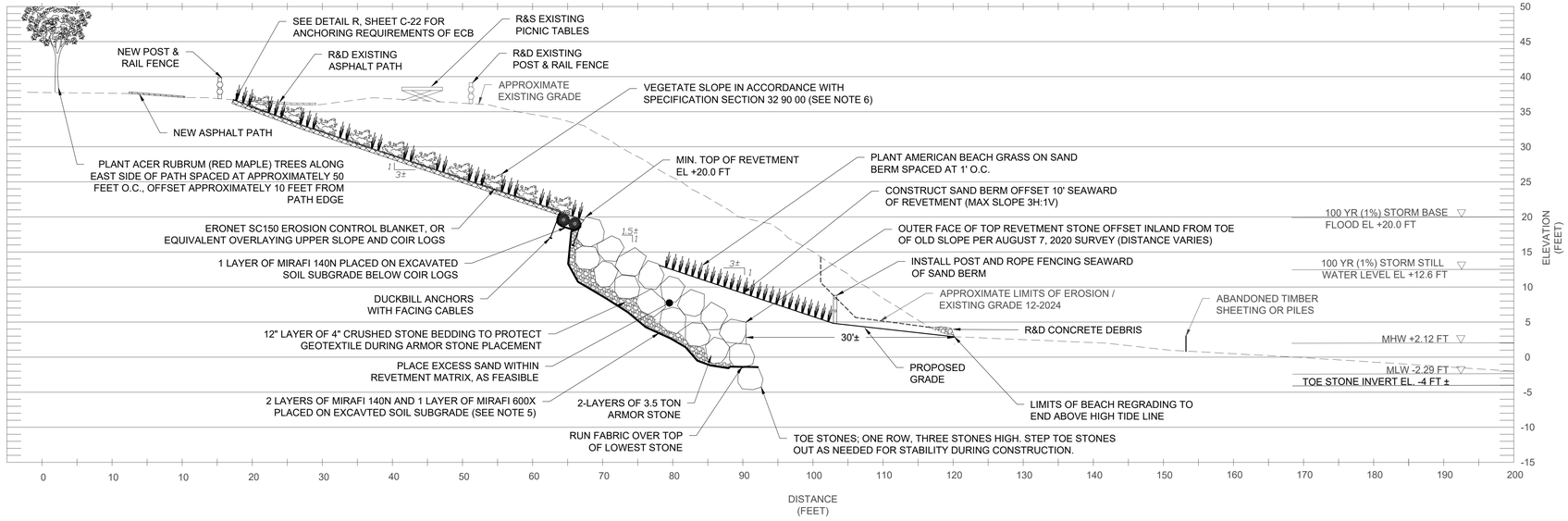
CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND
PROPOSED CONDITIONS PLAN
INSET SOUTH

ISSUED FOR CONTRUCTION

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C-10
SHEET 10 OF 26

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1 TYPICAL PROPOSED REVETMENT CROSS SECTION

C-11 | C-11

SCALE: 1" = 10'

NOTES:

1. A TWO ARMOR STONE LAYER REVETMENT SYSTEM IS SHOWN. A THIRD LAYER OF STONE MAY BE REQUIRED DEPENDING ON THE ACTUAL SIZE AND GEOMETRY OF THE STONES PLACED TO MEET THE MINIMUM TOP OF REVETMENT ELEVATION.
2. RECENTLY ERODED AREAS ARE APPROXIMATED.
3. FEMA HAS ISSUED FIS NO. 44007CV001D, DATED JULY 19, 2023 FOR PROVIDENCE COUNTY, RHODE ISLAND. THE TOP OF THE REVETMENT STONE HAS BEEN SET TO EL. +20 FT TO REFLECT THE BFE PROVIDED FOR THE SITE IN THE REPORT. THE REVETMENT WAS DESIGNED FOR A SIGNIFICANT WAVE HEIGHT OF 7.6 FT IN ACCORDANCE WITH THE 2015 FIS TO MAINTAIN DESIGN CONSISTENCY WITH THE ADJACENT REVETMENT SYSTEMS.
4. CONTRACTOR TO PRUNE OR REMOVE DEAD, UNSTABLE/UNSAFE VEGETATION AS NEEDED TO CREATE A SAFE WORKING ENVIRONMENT. EXISTING TREES AND VEGETATION ALONG SLOPE NOT SHOWN FOR CLARITY.
5. CONTRACTOR TO INSTALL 2 LAYERS OF MIRAFI 140N AND 1 LAYER OF MIRAFI 600X ON EXCAVATED SOIL SUBGRADE IN ACCORDANCE WITH SPECIFICATION SECTION 31 05 19 - GEOSYNTHETICS FOR EARTHWORK. FABRIC SHALL BE INSTALL PRIOR TO PLACEMENT OF THE 4" BEDDING STONE LAYER.
6. VEGETATED SLOPE SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATION SECTION 32 90 00 - LANDSCAPE & PLANTINGS. LOW-GROWING SHRUBS TO BE PLANTED AT A 5' STAGGARD SPACING VERTICALLY AND HORIZONTALLY ACROSS THE SLOPE. NATIVE GRASSES TO BE PLANTED AT 12 INCHES ON CENTER VERTICALLY AND HORIZONTALLY ACROSS THE SLOPE. NATIVE FORBS TO BE PLANTED BETWEEN GRASSES AND SHRUBS THROUGHOUT THE SLOPE. PLANTINGS SHOWN IN SECTION ARE FOR ILLUSTRATIVE PURPOSES ONLY, NATIVE FORBS AND SOME GRASSES NOT SHOWN FOR CLARITY.

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#	REVISION DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND

TYPICAL PROPOSED REVETMENT CROSS SECTION

STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

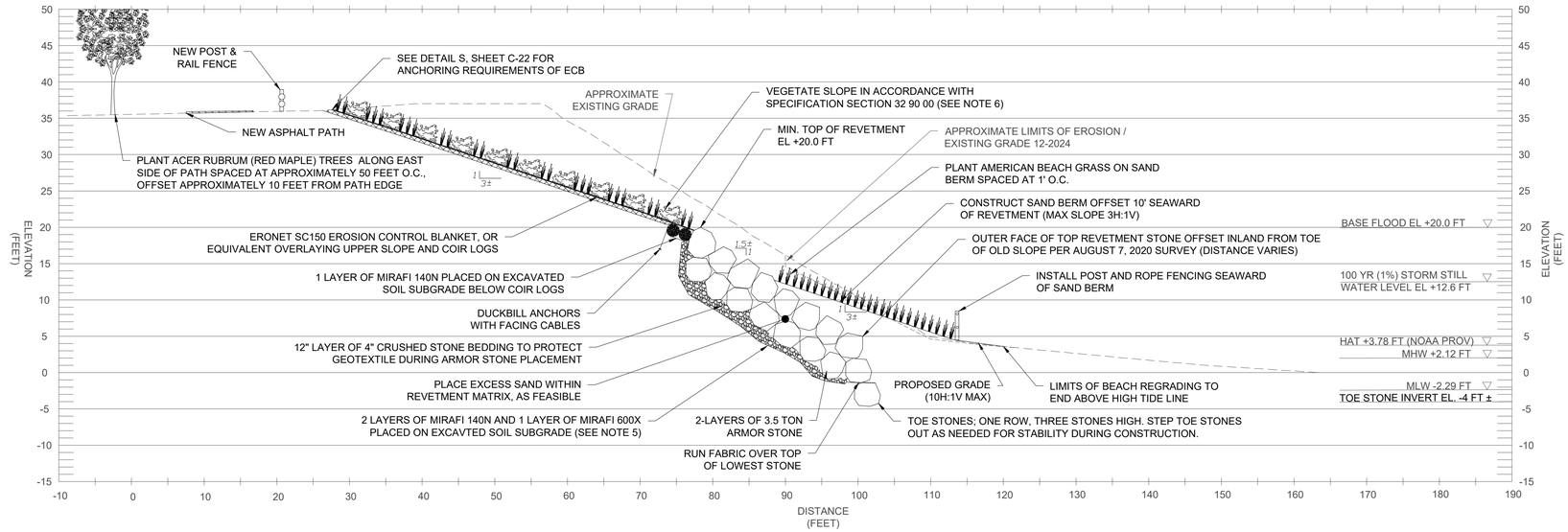
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DATE: JULY 20, 2026
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PROJECT NUMBER: 22006.00

0' 5' 10' 20'
FULL SCALE (22X34 PRINT): 1" = 10'
HALF SCALE (11X17 PRINT): 1" = 20'

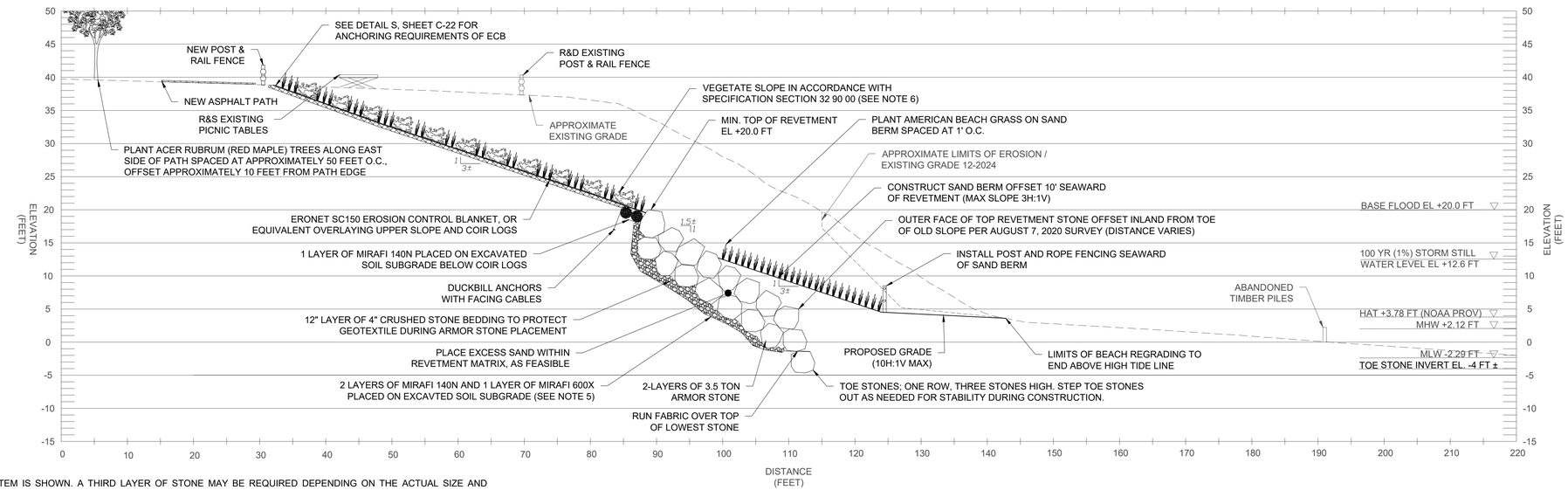
C-11
SHEET 11 OF 26



1 REVETMENT SECTION A-A'

C-9 | C-12

SCALE: 1" = 10'



2 REVETMENT SECTION B-B'

C-9 | C-12

SCALE: 1" = 10'

NOTES:

1. A TWO ARMOR STONE LAYER REVETMENT SYSTEM IS SHOWN. A THIRD LAYER OF STONE MAY BE REQUIRED DEPENDING ON THE ACTUAL SIZE AND GEOMETRY OF THE STONES PLACED TO MEET THE MINIMUM TOP OF REVETMENT ELEVATION.
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1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND
PROPOSED REVETMENT CROSS SECTIONS
1 OF 4

ISSUED FOR CONTRUCTION

DATE:
JULY 20, 2026

DESIGN BY: SMR
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CHECKED BY: SMR

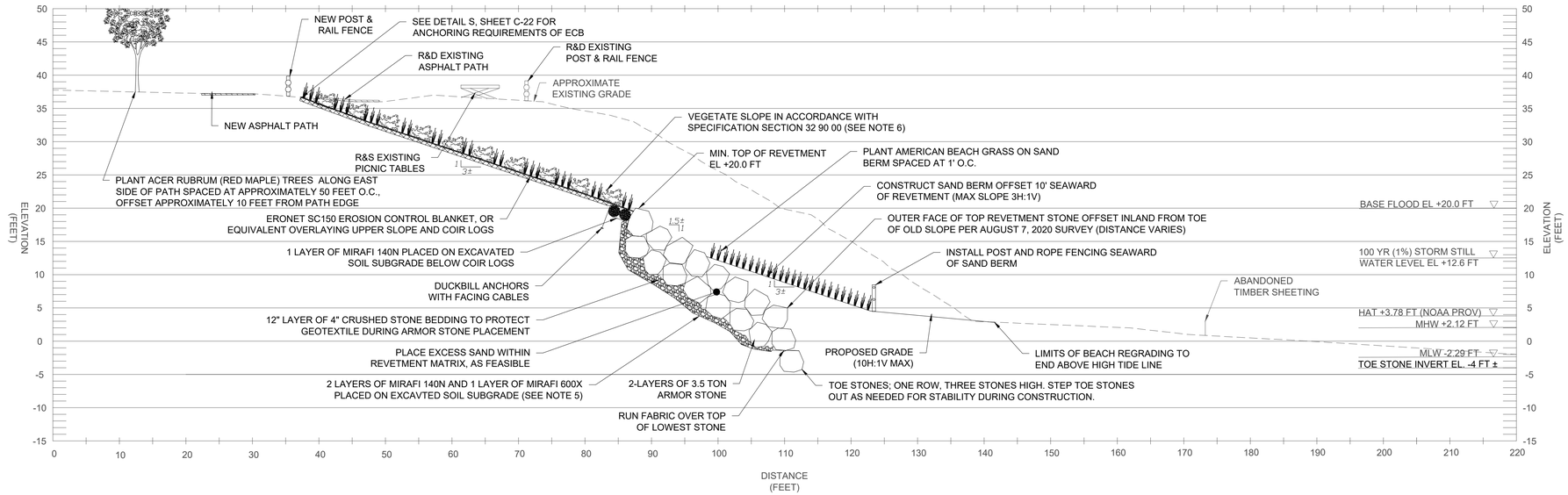
PROJECT NUMBER:
22006.00

C-12
SHEET 12 OF 26



0' 5' 10' 20'

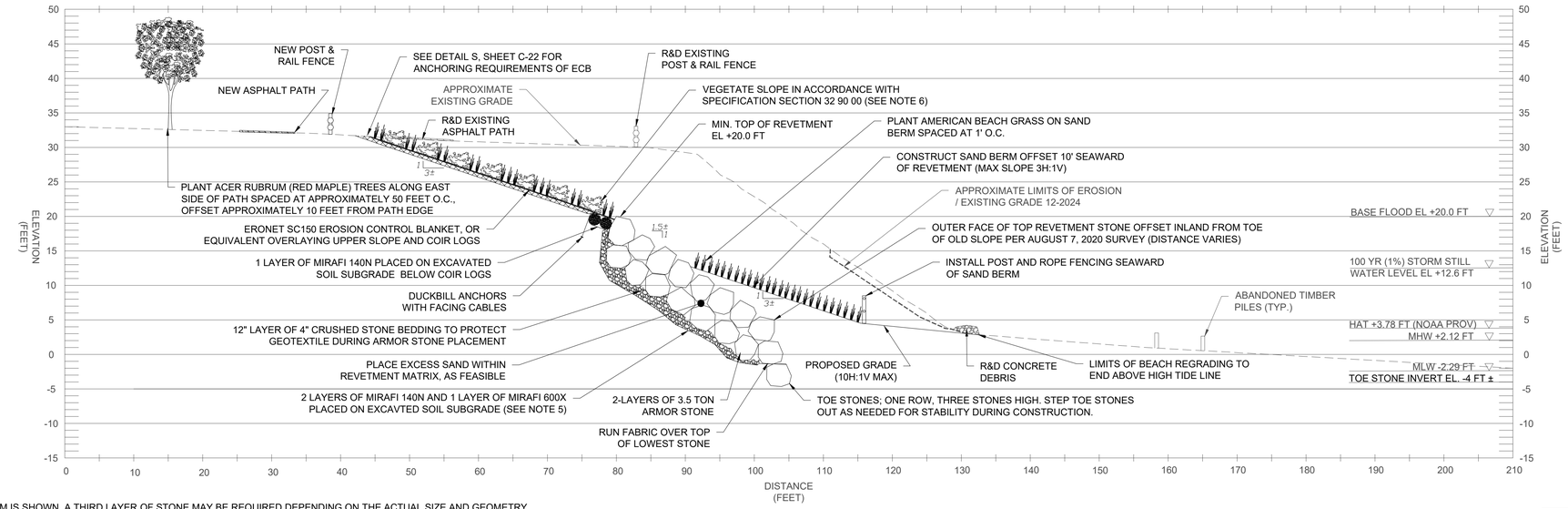
FULL SCALE (22X34 PRINT): 1" = 10'
HALF SCALE (11X17 PRINT): 1" = 20'



1 REVETMENT SECTION C-C'

C-10 | C-13

SCALE: 1" = 10'



2 REVETMENT SECTION D-D'

C-10 | C-13

SCALE: 1" = 10'

NOTES:

1. A TWO ARMOR STONE LAYER REVETMENT SYSTEM IS SHOWN. A THIRD LAYER OF STONE MAY BE REQUIRED DEPENDING ON THE ACTUAL SIZE AND GEOMETRY OF THE STONES PLACED TO MEET THE MINIMUM TOP OF REVETMENT ELEVATION.
2. RECENTLY ERODED AREAS ARE APPROXIMATED.
3. FEMA HAS ISSUED FIS NO. 44007CV001D, DATED JULY 19, 2023 FOR PROVIDENCE COUNTY, RHODE ISLAND. THE TOP OF THE REVETMENT STONE HAS BEEN SET TO EL. +20 FT TO REFLECT THE BFE PROVIDED FOR THE SITE IN THE REPORT. THE REVETMENT WAS DESIGNED FOR A SIGNIFICANT WAVE HEIGHT OF 7.6 FT IN ACCORDANCE WITH THE 2015 FIS TO MAINTAIN DESIGN CONSISTENCY WITH THE ADJACENT REVETMENT SYSTEMS.
4. CONTRACTOR TO PRUNE OR REMOVE DEAD, UNSTABLE/UNSAFE VEGETATION AS NEEDED TO CREATE A SAFE WORKING ENVIRONMENT. EXISTING TREES AND VEGETATION ALONG SLOPE NOT SHOWN FOR CLARITY.
5. CONTRACTOR TO INSTALL 2 LAYERS OF MIRAFI 140N AND 1 LAYER OF MIRAFI 600X ON EXCAVATED SOIL SUBGRADE IN ACCORDANCE WITH SPECIFICATION SECTION 31 05 19 - GEOSYNTHETICS FOR EARTHWORK. FABRIC SHALL BE INSTALL PRIOR TO PLACEMENT OF THE 4" BEDDING STONE LAYER.
6. VEGETATED SLOPE SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATION SECTION 32 90 00 - LANDSCAPE & PLANTINGS. LOW-GROWING SHRUBS TO BE PLANTED AT A 5' STAGGARD SPACING VERTICALLY AND HORIZONTALLY ACROSS THE SLOPE. NATIVE GRASSES TO BE PLANTED AT 12 INCHES ON CENTER VERTICALLY AND HORIZONTALLY ACROSS THE SLOPE. NATIVE FORBS TO BE PLANTED BETWEEN GRASSES AND SHRUBS THROUGHOUT THE SLOPE. PLANTINGS SHOWN IN SECTION ARE FOR ILLUSTRATIVE PURPOSES ONLY, NATIVE FORBS AND SOME GRASSES NOT SHOWN FOR CLARITY.

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Warwick, RI 02886
401-575-1569
stephanie.roba@fr-eng.com

#	REVISION DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND

PROPOSED REVETMENT CROSS SECTIONS
2 OF 4

STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

0' 5' 10' 20'
FULL SCALE (22X34 PRINT): 1" = 10'
HALF SCALE (11X17 PRINT): 1" = 20'

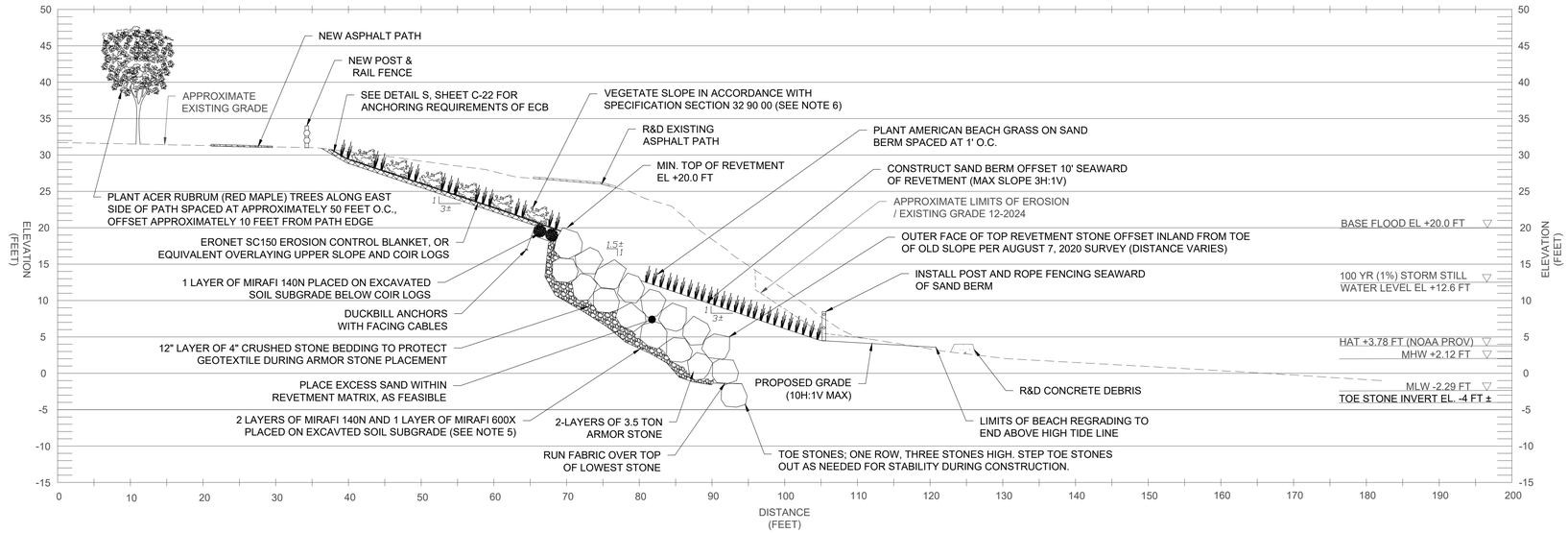
ISSUED FOR CONTRUCTION

DATE:
JULY 20, 2026

DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR

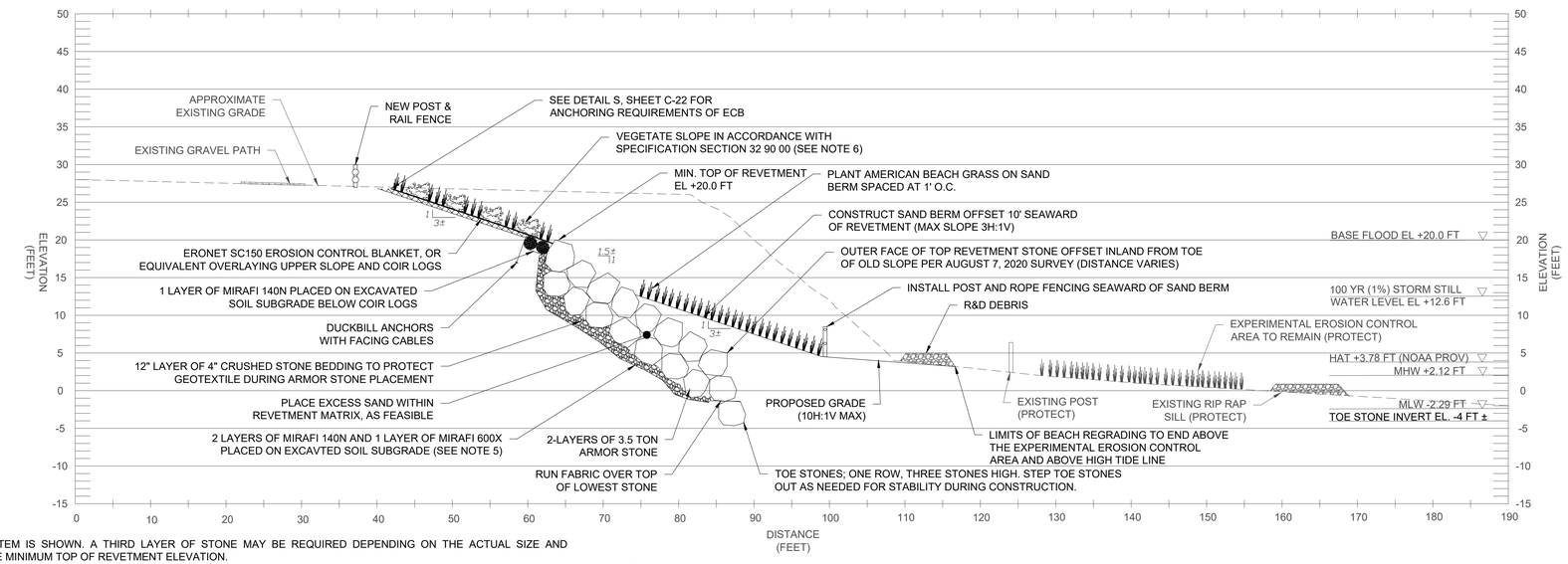
PROJECT NUMBER:
22006.00

C-13
SHEET 13 OF 26



1 C-10 C-14 REVETMENT SECTION E-E'

SCALE: 1" = 10'



2 C-10 C-14 REVETMENT SECTION F-F'

SCALE: 1" = 10'

NOTES:

1. A TWO ARMOR STONE LAYER REVETMENT SYSTEM IS SHOWN. A THIRD LAYER OF STONE MAY BE REQUIRED DEPENDING ON THE ACTUAL SIZE AND GEOMETRY OF THE STONES PLACED TO MEET THE MINIMUM TOP OF REVETMENT ELEVATION.
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CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND

PROPOSED REVETMENT CROSS SECTIONS
3 OF 4

ISSUED FOR CONTRUCTION

STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL
7/20/26

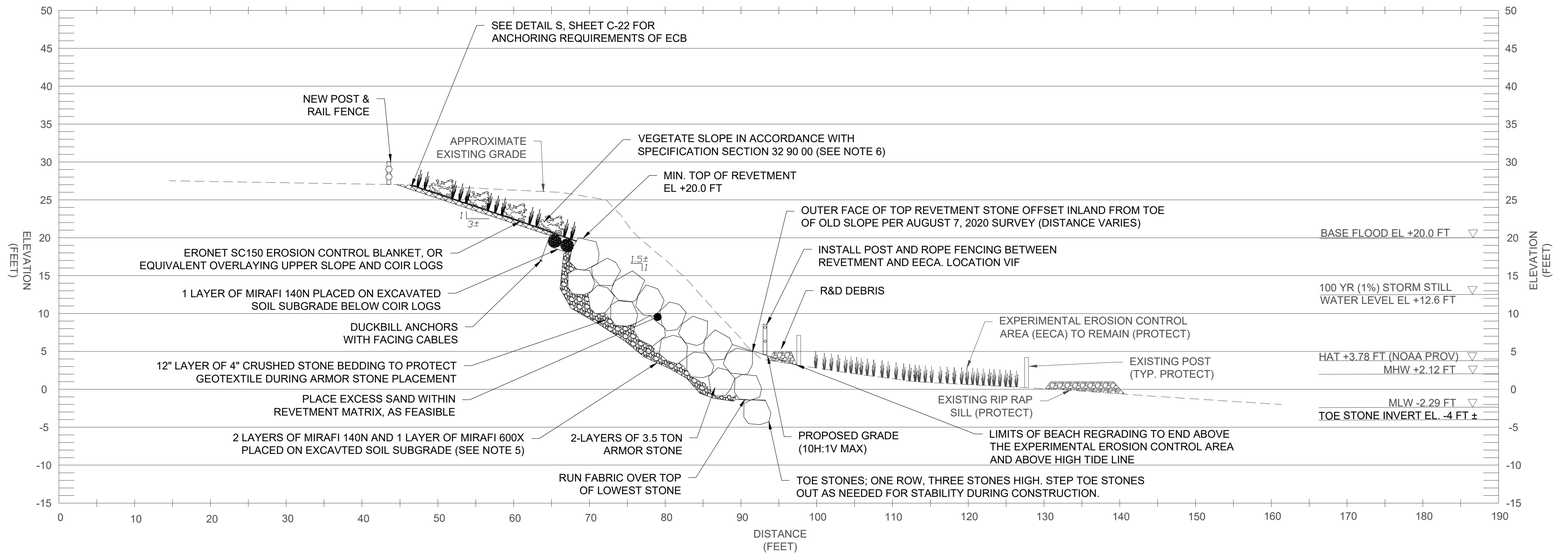
DATE: JULY 20, 2026

DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR

PROJECT NUMBER: 22006.00

0' 5' 10' 20'
FULL SCALE (22X34 PRINT): 1" = 10'
HALF SCALE (11X17 PRINT): 1" = 20'

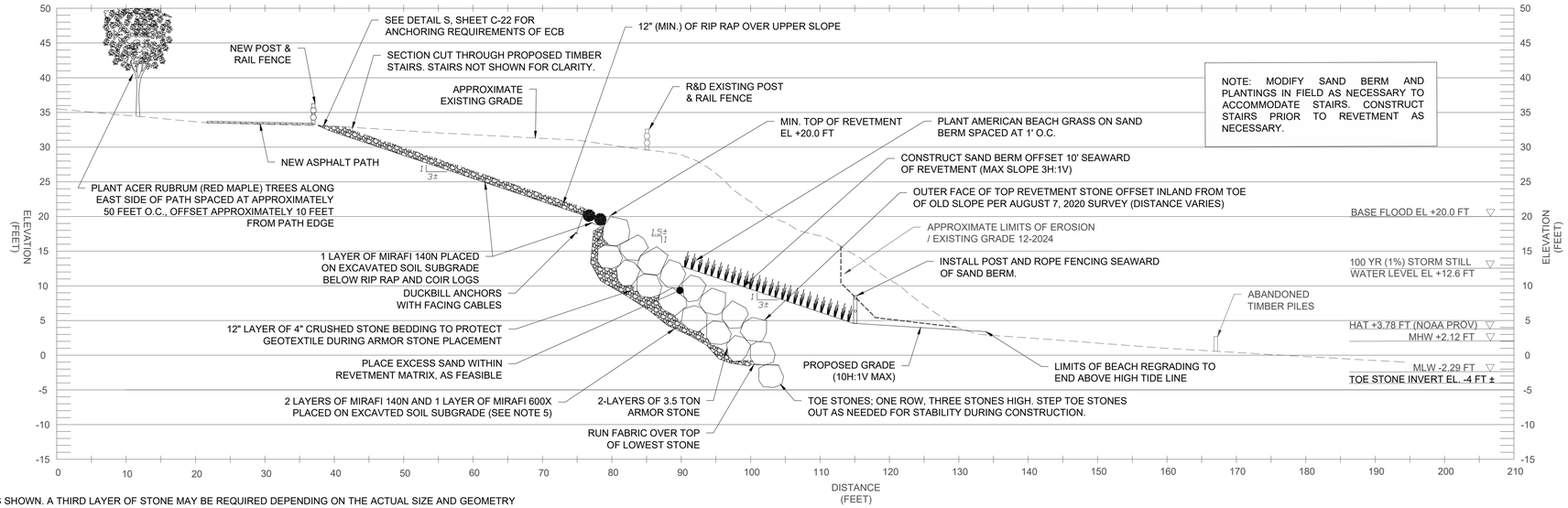
C-14
SHEET 14 OF 26



1 REVETMENT SECTION G-G'

C-10 | C-15

SCALE: 1" = 10'



2 REVETMENT SECTION H-H' (STAIRS)

C-10 | C-15

SCALE: 1" = 10'

NOTES:

1. A TWO ARMOR STONE LAYER REVETMENT SYSTEM IS SHOWN. A THIRD LAYER OF STONE MAY BE REQUIRED DEPENDING ON THE ACTUAL SIZE AND GEOMETRY OF THE STONES PLACED TO MEET THE MINIMUM TOP OF REVETMENT ELEVATION.
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CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND
PROPOSED REVETMENT CROSS SECTIONS
4 OF 4

ISSUED FOR CONTRUCTION

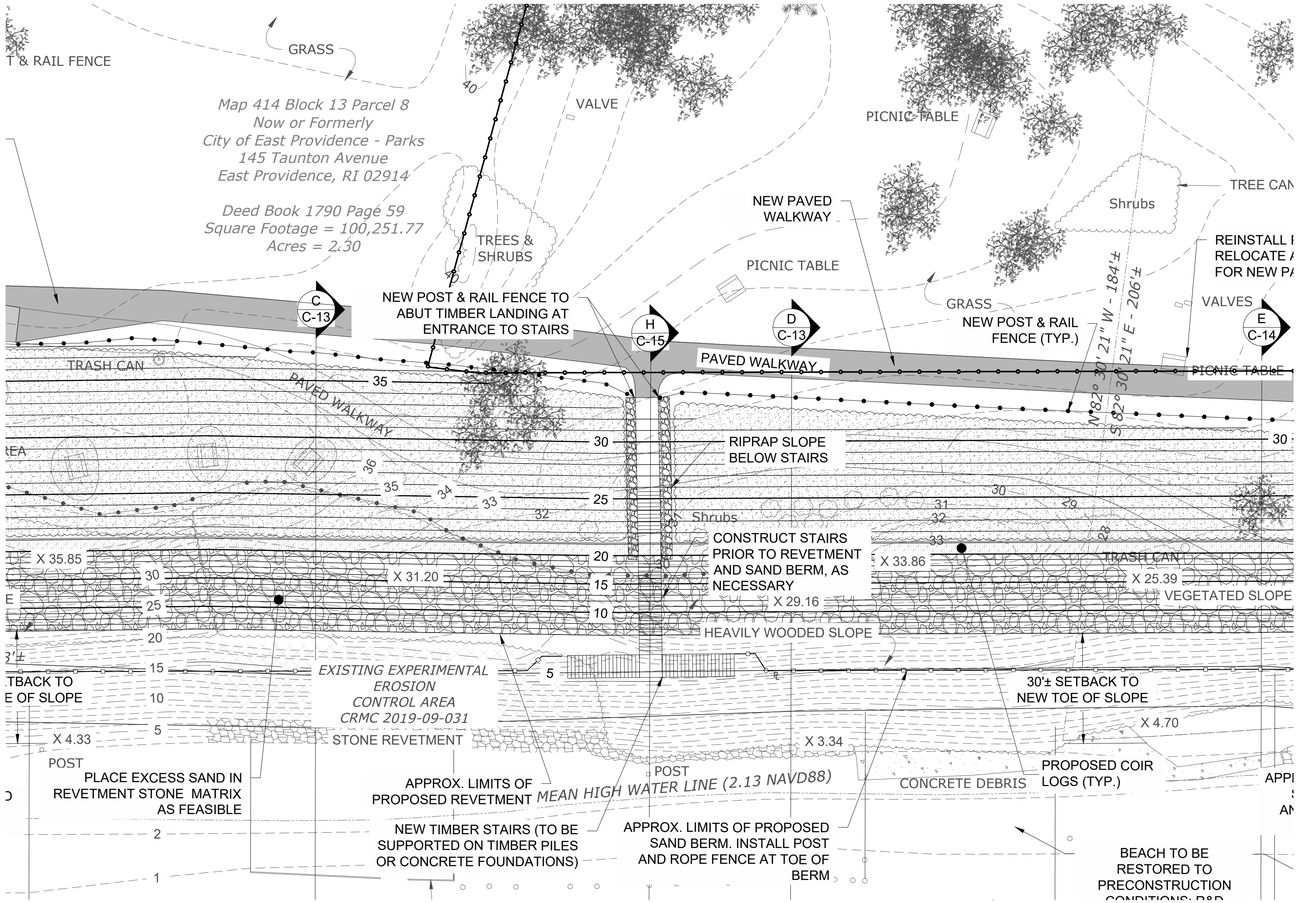
STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

DATE: JULY 20, 2026
DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR
PROJECT NUMBER: 22006.00

0' 5' 10' 20'
FULL SCALE (22X34 PRINT): 1" = 10'
HALF SCALE (11X17 PRINT): 1" = 20'

C-15
SHEET 15 OF 26

APPROXIMATE
NORTH



1 C-16 C-16 PROPOSED TIMBER STAIRS

SCALE: 1" = 20'

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stephanie.roba@fr-eng.com

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1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND

PROPOSED TIMBER STAIRS
1 OF 5

ISSUED FOR CONTRUCTION

STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

DATE:
JULY 20, 2026

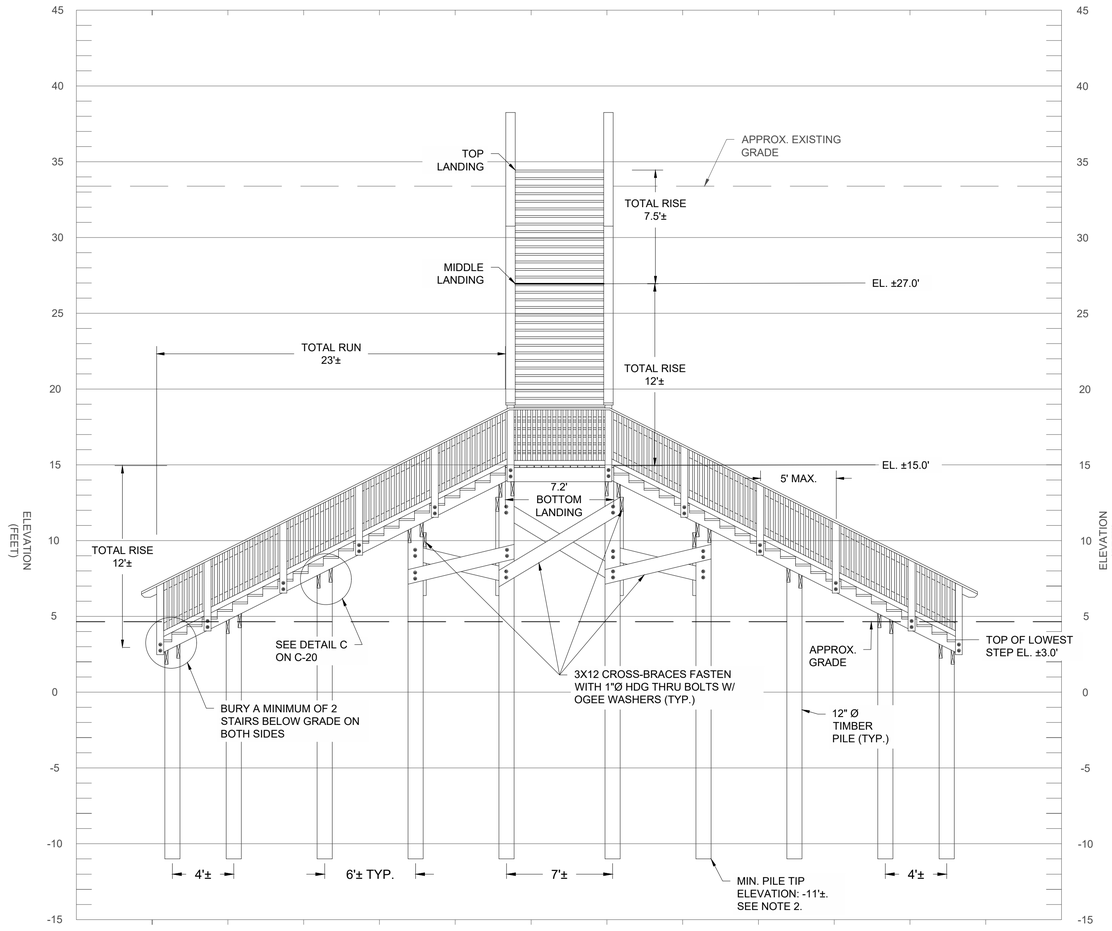
DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR

PROJECT NUMBER:
22006.00

0' 10' 20' 40'
FULL SCALE (22X34 PRINT): 1" = 20'
HALF SCALE (11X17 PRINT): 1" = 40'

C-16
SHEET 16 OF 26

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1 C-17 C-17 WEST ELEVATION

SCALE: 1" = 5'

NOTES

1. ALL HARDWARE IS NOT SHOWN FOR CLARITY. REFER TO SECTIONS AND DETAILS FOR HARDWARE DETAILS.
2. ESTIMATED PILE TIP ELEVATIONS VARY. MINIMUM 15' EMBEDMENT BELOW BOTTOM OF STONE REVETMENT.
3. THE INTENT IS TO CONSTRUCT THE STAIRS PRIOR TO CONSTRUCTING THE REVETMENT AND SAND BERM.

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CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND
PROPOSED TIMBER STAIRS
2 OF 5

ISSUED FOR CONTRUCTION

STEPHANIE M. ROBAT No. 12101 REGISTERED PROFESSIONAL ENGINEER CIVIL 7/20/26

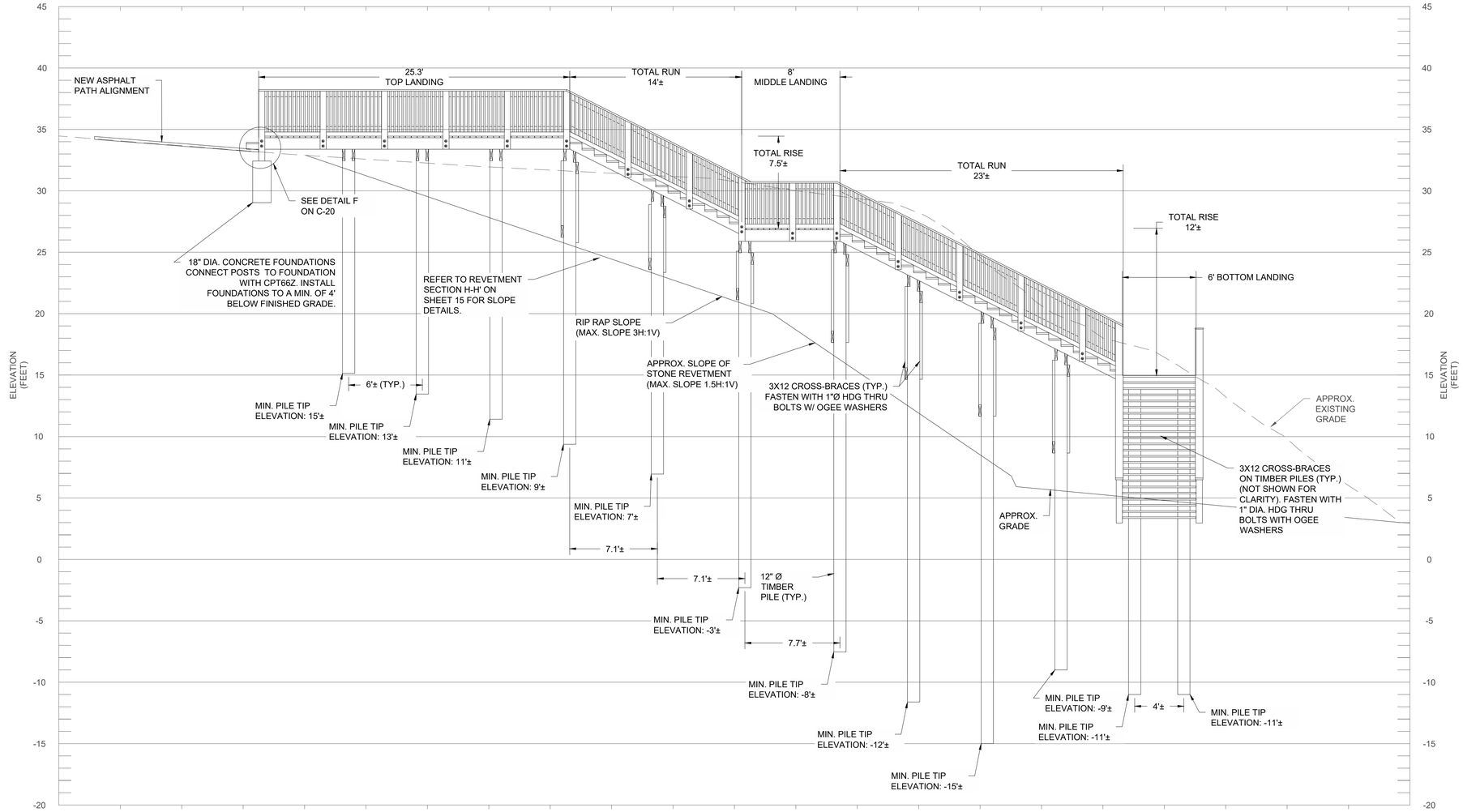
DATE: JULY 20, 2026

DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR

PROJECT NUMBER: 22006.00

0' 2.5' 5' 10'
FULL SCALE (22X34 PRINT): 1" = 5'
HALF SCALE (11X17 PRINT): 1" = 10'

C-17
SHEET 17 OF 26



1 NORTH ELEVATION
C-18 C-18
SCALE: 1" = 5'

NOTES

1. ALL HARDWARE IS NOT SHOWN FOR CLARITY. REFER TO SECTIONS AND DETAILS FOR HARDWARE DETAILS.
2. ESTIMATED PILE TIP ELEVATIONS VARY. MINIMUM 15' EMBEDMENT BELOW BOTTOM OF STONE REVETMENT AND RIP RAP SLOPE.
3. THE INTENT IS TO CONSTRUCT THE STAIRS PRIOR TO CONSTRUCTING THE REVETMENT AND SAND BERM.

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EAST PROVIDENCE, RHODE ISLAND
PROPOSED TIMBER STAIRS
3 OF 5

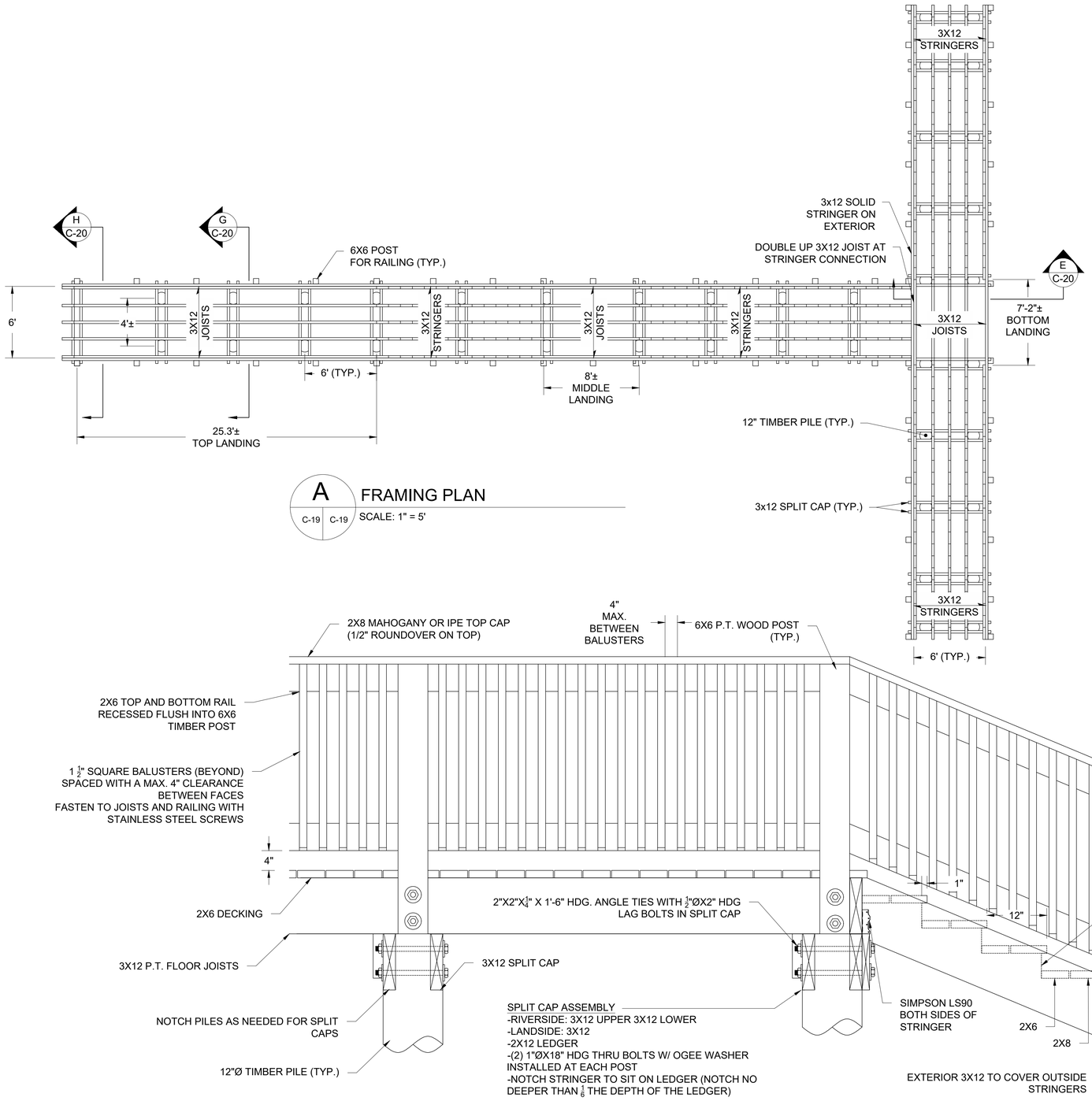
STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

ISSUED FOR CONTRUCTION

DATE: JULY 20, 2026
DESIGN BY: SMR
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PROJECT NUMBER: 22006.00

0' 2.5' 5' 10'
FULL SCALE (22X34 PRINT): 1" = 5'
HALF SCALE (11X17 PRINT): 1" = 10'

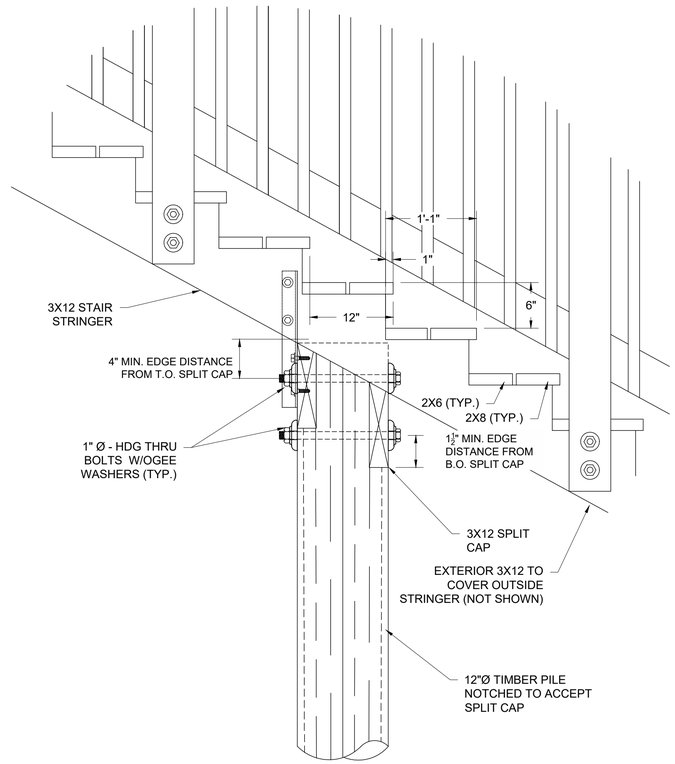
C-18
SHEET 18 OF 26



A FRAMING PLAN

C-19 | C-19

SCALE: 1" = 5'



C SPLIT CAP SUPPORT AT PILES

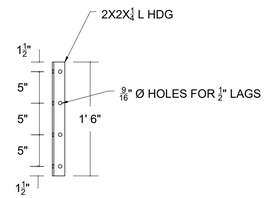
C-19 | C-19

SCALE: 1" = 10'

B ELEVATION - TOP LANDING

C-19 | C-19

SCALE: 1" = 1'



D TYP. ANGLE TIE STRAP

C-19 | C-19

SCALE: 1" = 1'

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CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND
PROPOSED TIMBER STAIRS
4 OF 5

ISSUED FOR CONTRUCTION

STEPHANIE M. ROBAT
No. 12101
REGISTERED
PROFESSIONAL ENGINEER
CIVIL 7/20/26

0' 0.5' 1' 2'
FULL SCALE (22X34 PRINT): 1" = 1'
HALF SCALE (11X17 PRINT): 1" = 2'

0' 2.5' 5' 10'
FULL SCALE (22X34 PRINT): 1" = 5'
HALF SCALE (11X17 PRINT): 1" = 10'

0' 5' 10' 20'
FULL SCALE (22X34 PRINT): 1" = 10'
HALF SCALE (11X17 PRINT): 1" = 20'

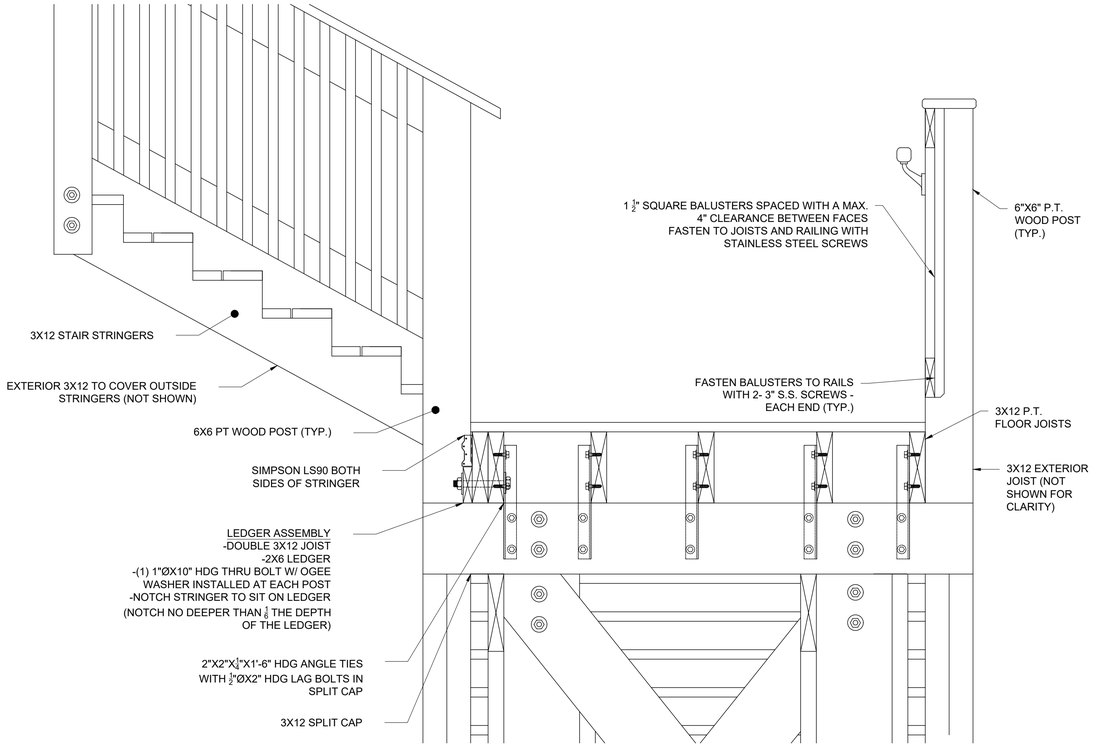
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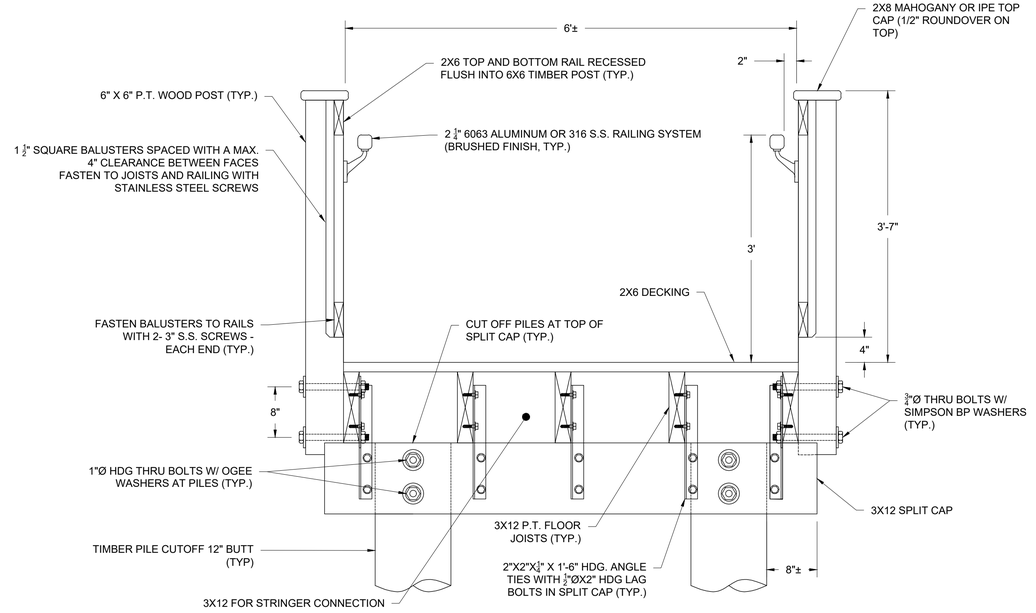
C-19
SHEET 19 OF 26

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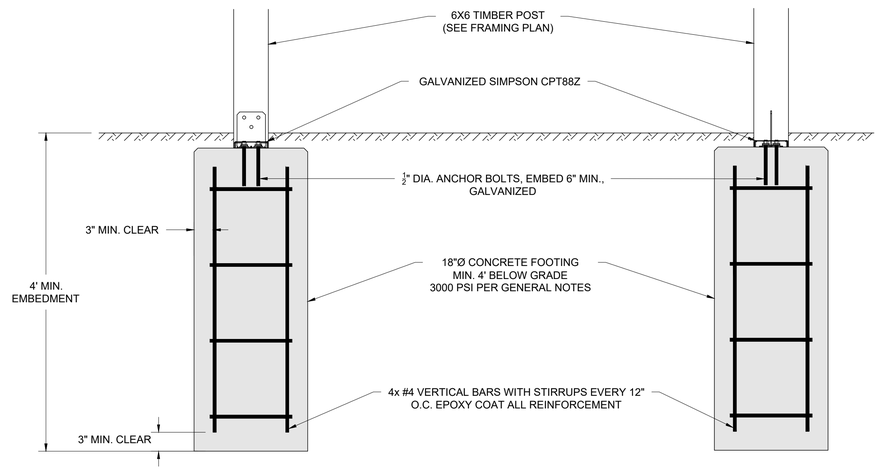
E SECTION - BOTTOM LANDING

C-20 C-20 SCALE: 1" = 1'



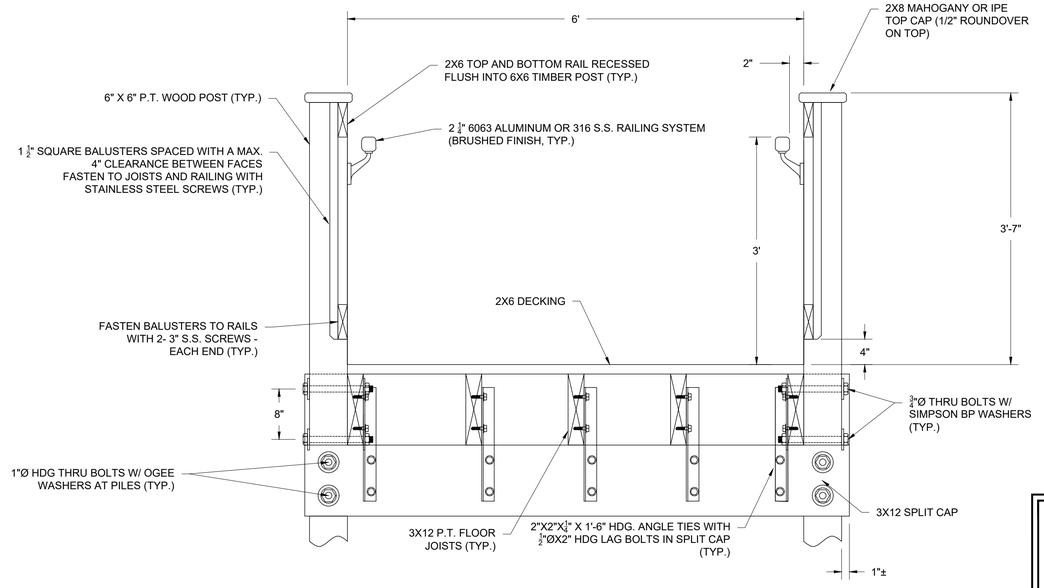
G SECTION - TOP/MIDDLE LANDING THRU PILES

C-20 C-20 SCALE: 1" = 1'



F STAIR FOUNDATION ABOVE SLOPE

C-20 C-20 SCALE: 1" = 1'



H SECTION - TOP/MIDDLE LANDING THRU POSTS

C-20 C-20 SCALE: 1" = 1'

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CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND
PROPOSED TIMBER STAIRS
5 OF 5

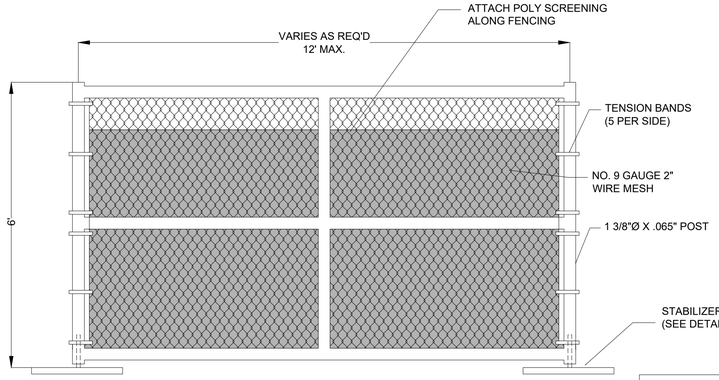
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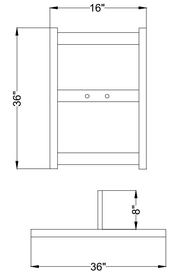
0' 0.5' 1' 2'
FULL SCALE (22X34 PRINT): 1" = 1'
HALF SCALE (11X17 PRINT): 1" = 2'

C-20
SHEET 20 OF 26



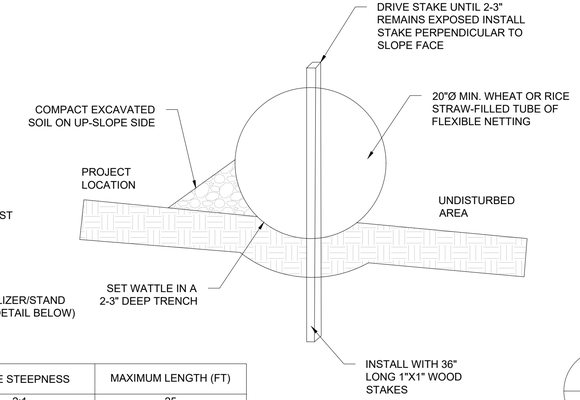
TEMPORARY CONSTRUCTION FENCING NOTES:

1. FENCES SHALL BE CONSTRUCTED WITH A TOP AND BOTTOM RAIL.
2. GATES MUST REMAIN IN GOOD WORKING ORDER AND MUST BE CLOSED AND SECURED DURING NON-WORKING HOURS.
3. GATES SHALL BE CONSTRUCTED SO THAT THEY SWING IN TOWARDS THE CONSTRUCTION SITE.
4. GATES MUST BE CONSTRUCTED WITH THE SAME DESIGN CHARACTERISTICS AS THE TEMPORARY CONSTRUCTION FENCE.
5. FABRIC SHALL BE ANCHORED IN EACH GROMMET WITH ALUMINUM TIES.
6. THIS SITE IS SUBJECT TO HIGH WINDS AT TIMES. FENCE STABILIZER/STANDS SHALL BE REINFORCED USING ANCHORS/PINS OR BALLAST BLOCKS.



TYPICAL FENCE STABILIZER / STAND

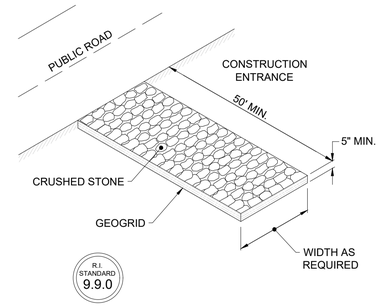
I — TYPICAL CONSTRUCTION FENCING (C-21 | C-21) SCALE: NTS



SLOPE STEEPNESS	MAXIMUM LENGTH (FT)
2:1	25
3:1	50
4:1	75
5:1 OR FLATTER	100

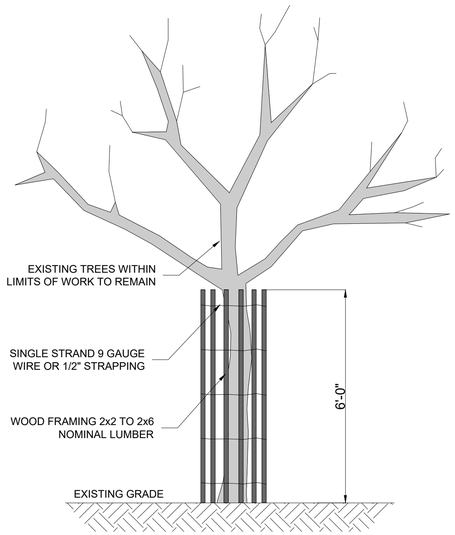
NOTES:
1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3" DEEP X 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHALL BE PLACED UP-SLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONFORMS TO THE SOIL SURFACE. COMPACT THE SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UP-HILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
3. SECURE THE WATTLE WITH STAKES EVERY 3-4' WITH A STAKE ON EACH END. STAKES SHALL BE DRIVEN THROUGH THE MIDDLE OF THE WATTLES LEAVING AT LEAST 2-3" OF STAKE EXTENDING ABOVE. THE WATTLE STAKES SHALL BE DRIVEN PERPENDICULAR TO SLOPE FACE.
4. MAX. DRAINAGE AREA ≤ 0.25 ACRES/100 LINEAR FEET.

J — STRAW WATTLE (C-21 | C-21) SCALE: NTS



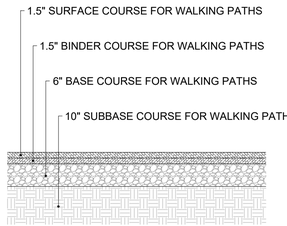
NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE RHODE ISLAND STANDARD SPECIFICATIONS.

K — CONSTRUCTION ENTRANCE (C-21 | C-21) SCALE: NTS



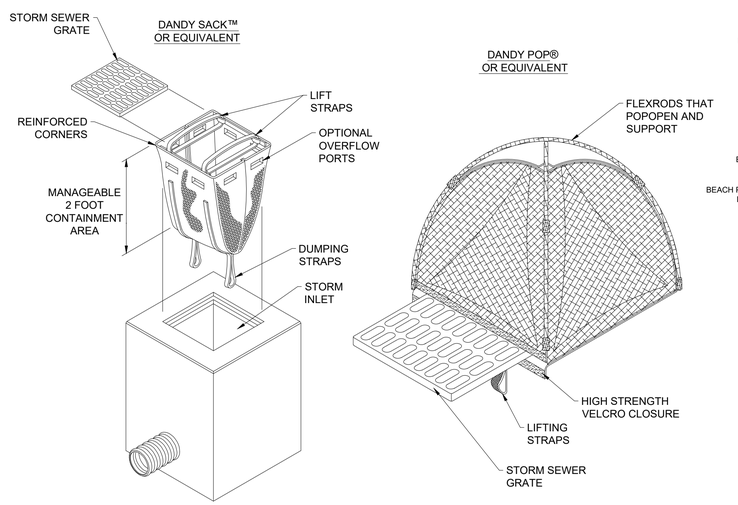
NOTE:
THIS DETAIL SHALL BE USED TO PROTECT THE TREE'S TRUNK IN SITUATION WHERE CONSTRUCTION IS WITHIN CLOSE PROXIMITY, OR OTHERWISE NOTED HEREIN AS PROTECTED TREE

M — TYPICAL TREE PROTECTION (C-21 | C-21) SCALE: NTS



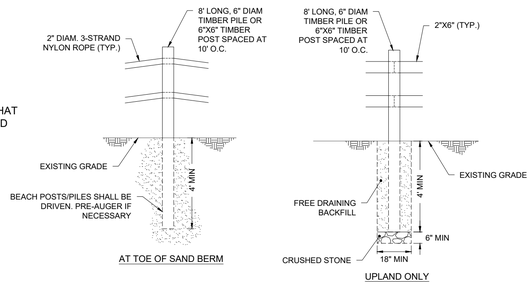
NOTES:
1. SURFACE AND BINDER COURSE SHALL CONFORM TO RIDOT BLUEBOOK M.03 BITUMINOUS PAVEMENT.
2. BASE COURSE SHALL BE GRAVEL BORROW CONFORMING TO RIDOT BLUEBOOK M01.09, TABLE 1,I, "GRAVEL BORROW", 1A (<8 PASSING #200 SIEVE).
3. SUBBASE SHALL BE PERVIOUS FILL CONFORMING TO RIDOT BLUEBOOK M01.09, TABLE 1, IV, "PREVIOUS FILL", TYPE D.
4. EXPOSED SUBGRADE SHALL BE PROOF ROLLED OR PROOF COMPACTED PRIOR TO PLACING SUBBASE. WEAK AREAS SHALL BE EXCAVATED AND REPLACED WITH PERVIOUS FILL COMPACTED TO A MIN. 95% OF THE MODIFIED PROCTOR DENSITY.
5. BASE AND SUBBASE COURSES SHALL BE COMPACTED TO A MIN. OF 95% OF THE MODIFIED PROCTOR DENSITY.

L — PAVEMENT (C-21 | C-21) SCALE: NTS

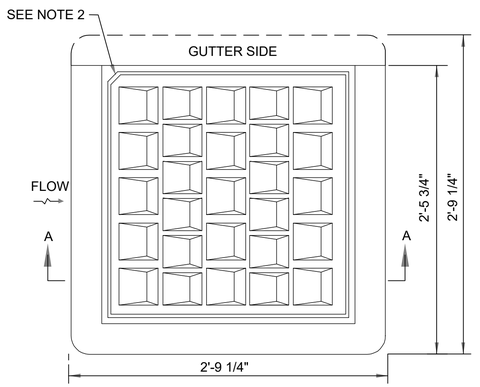


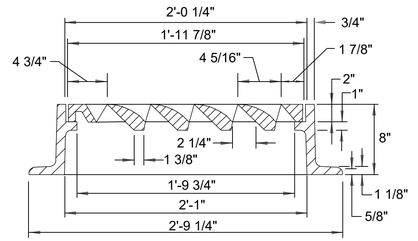
NOTE:
1. SHALL BE INSTALLED AND MAINTAINED PER THE MANUFACTURER'S RECOMMENDATIONS.

N — CATCH BASIN SEDIMENT PROTECTION (C-21 | C-21) SCALE: NTS



O — TYPICAL FENCE DETAIL (C-21 | C-21) SCALE: NTS





SECTION A-A

NOTES:

1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS CORNER LEFT FOR "LEFT" GRATE, DIAGONALLY OPPOSITE CORNER FOR "RIGHT" GRATE TO FIT IN KEYED FRAME.

P — HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE) (C-21 | C-21) SCALE: NTS

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#	DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND

TYPICAL DETAILS
1 OF 2

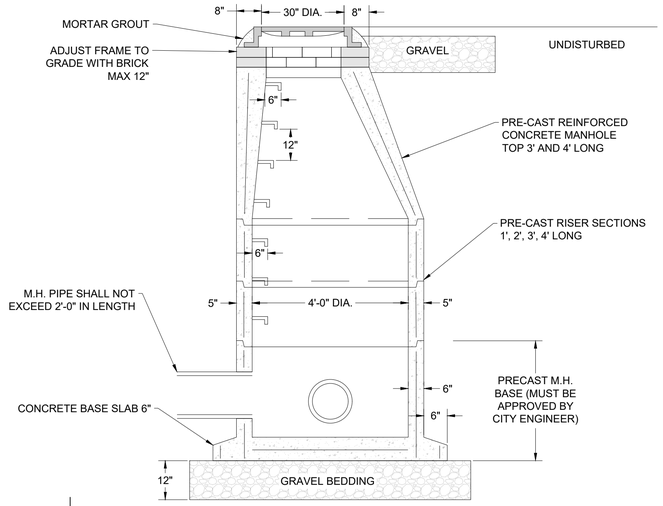
ISSUED FOR CONTRUCTION

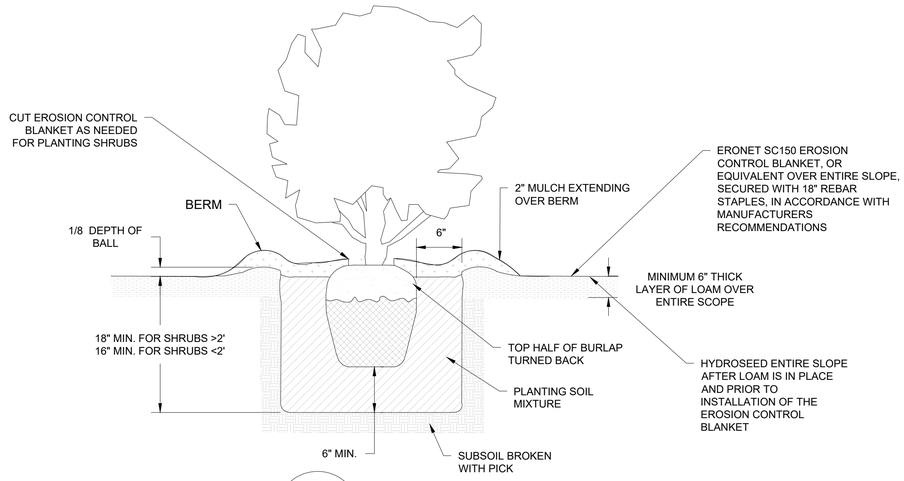
DATE: JULY 20, 2026
DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR
PROJECT NUMBER: 22006.00

C-21
SHEET 21 OF 26

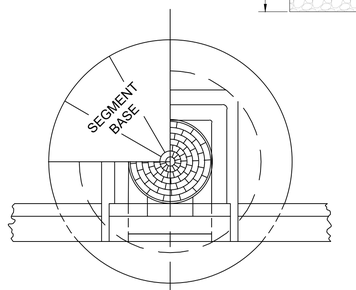
STEPHANIE M. ROBAT No. 12101 REGISTERED PROFESSIONAL ENGINEER CIVIL 7/20/26

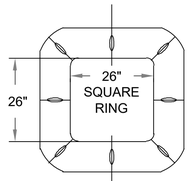
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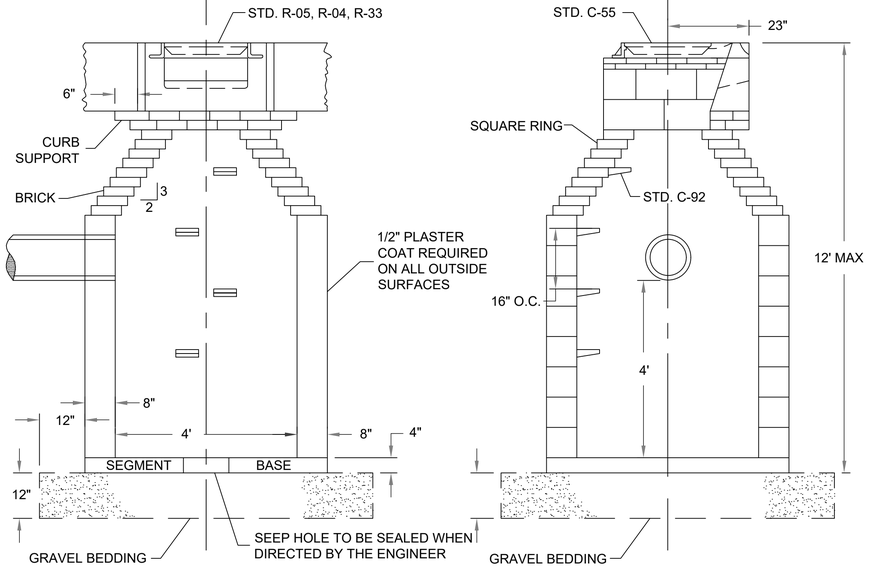




R SHRUB DETAIL
C-22 C-22 SCALE: NTS

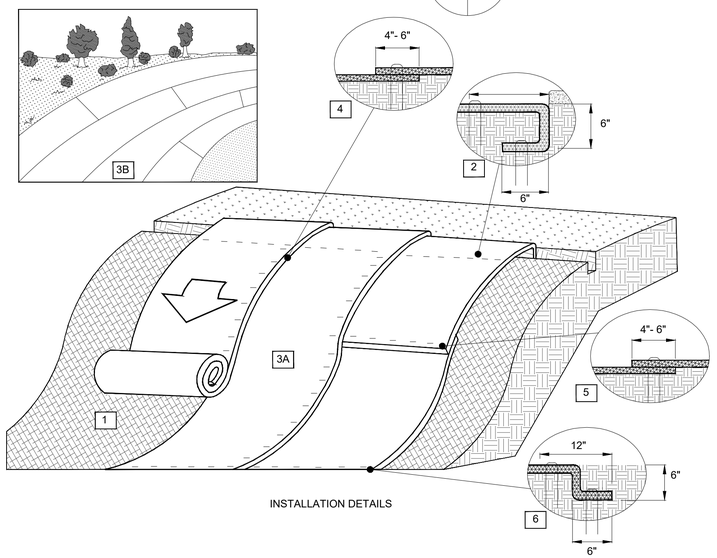






* IF OVER 12', SEE STD. C-33

Q CATCH BASIN DETAIL
C-22 C-22 SCALE: NTS



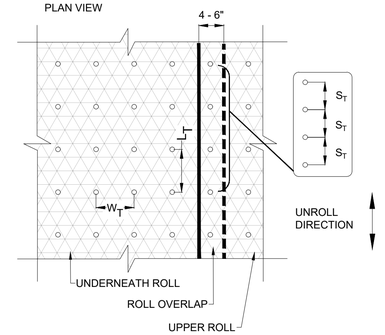
INSTALLATION DETAILS

INSTALLATION NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPS), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. GROUND SURFACE MUST BE FREE OF DEBRIS, ROCKS, CLAY CLODS AND RAKED SMOOTH SUFFICIENT TO ALLOW INTIMATE CONTACT OF THE RECP WITH THE SOIL OVER THE ENTIRETY OF THE INSTALLATION.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECPS IN A 6" DEEP X 6" WIDE TRENCH. ANCHOR THE RECPS WITH A ROW OF STAPLES/STAKES/PINS SPACED AT S_T APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING AND FOLD THE ROLL OVER, DOWNSLOPE. SECURE RECPS OVER COMPACTED SOIL WITH A ROW OF STAPLES/ STAKES/PINS SPACED AT S_T APART ACROSS THE WIDTH OF THE RECPS.
3. ROLL THE RECPS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECPS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/ STAKES/PINS IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. ROLLMAX RECPS AND ECBS SHOULD UTILIZE STAPLE PATTERN SHOWN IN ACCOMPANYING TABLE.
4. THE EDGES OF PARALLEL RECPS MUST BE STAPLED WITH APPROXIMATELY 4" - 6" OVERLAP.
5. CONSECUTIVE RECPS SPLICED DOWN THE SLOPE MUST OVERLAPPED WITH THE UPSTREAM MAT ATOP THE DOWNSTREAM MAT (SHINGLE STYLE). THE OVERLAP SHOULD BE 4" - 6".
6. AT THE TERMINAL END, SECURE EACH MAT ACROSS THE WIDTH WITH A ROW OF STAPLES/STAKES/PINS SPACED AT S_T. IF EXPOSED TO FLOW, FOOT TRAFFIC, WIND UPLIFT OR OTHER DISRUPTION, TRENCH THE TERMINAL END IN AS SHOWN IN DETAIL.
7. FASTENERS SHOULD PROVIDE A MINIMUM OF TWENTY POUNDS OF PULLOUT RESISTANCE.

S EROSION BLANKET ANCHOR DETAIL
C-22 C-22 SCALE: NTS

STAPLE PATTERN GUIDE



○ PIN / STAPLE / TWIST PIN, AS APPROPRIATE FOR FIELD CONDITIONS

DIMENSION	MEASUREMENT
W_T	30"
L_T	30"
S_T	18"
NOMINAL FREQUENCY	1.7 / SY
APPLICATION	ECB (DEGRADABLE)

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#	REVISION DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

CRESCENT PARK SHORELINE PROTECTION
CRESCENT PARK
EAST PROVIDENCE, RHODE ISLAND
TYPICAL DETAILS
2 OF 2

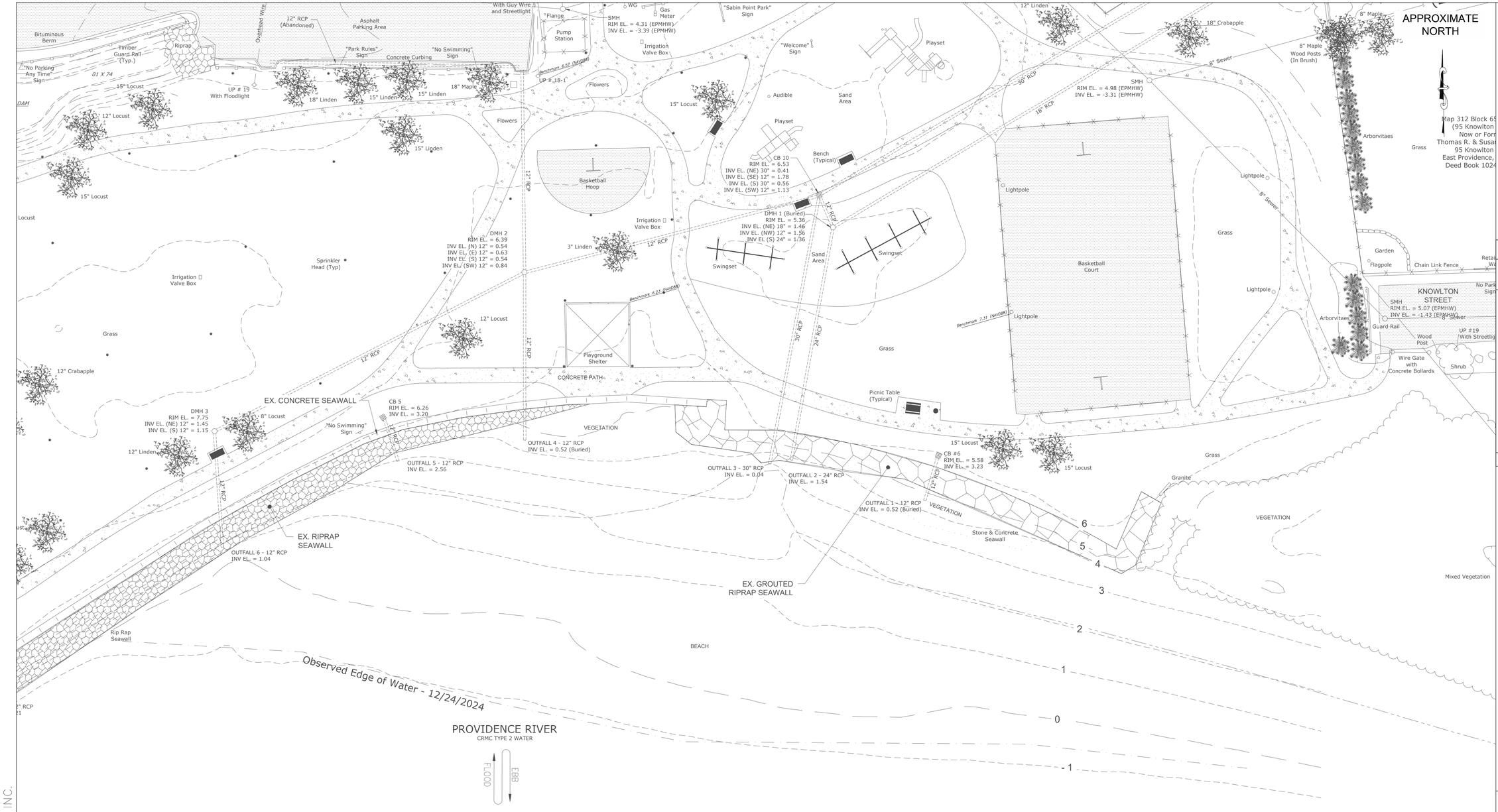
ISSUED FOR CONTRUCTION

DATE: JULY 20, 2026
DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR

PROJECT NUMBER: 22006.00

C-22
SHEET 22 OF 26

STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26



LEGEND

- EXISTING 1' MINOR CONTOUR
- EXISTING 5' MAJOR CONTOUR
- EXISTING OBSERVED EDGE OF WATER
- EXISTING VEGETATION
- EXISTING DRAINAGE REINFORCED CONCRETE PIPE
- EXISTING CATCH BASIN
- EXISTING MANHOLE / LIGHT POLE / UTILITY POLE
- EXISTING RIPRAP SEAWALL

1 / C-23 C-23 — EXISTING CONDITIONS PLAN

SCALE: 1" = 20'

NOTES

1. THIS BASE PLAN WAS DEVELOPED FROM AN EXISTING SURVEY PLAN OF SABIN POINT BY THE CITY OF EAST PROVIDENCE, DATED 11/06/201 AND CAN ONLY REFLECT THE CONDITIONS OF THE SITE AT THAT TIME.
2. PROJECT BENCHMARKS (NAVD88) WERE SET MARCH 9, 2026 BY THE CITY OF EAST PROVIDENCE DEPARTMENT OF PUBLIC WORKS - ENGINEERING DIVISION.

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#	REVISION DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

SABIN POINT SAND BERM
SABIN POINT WATERFRONT PARK
EAST PROVIDENCE, RHODE ISLAND

SABIN POINT
EXISTING CONDITIONS PLAN

ISSUED FOR CONTRUCTION

STEPHANIE M. ROBAT No. 12101 REGISTERED PROFESSIONAL ENGINEER CIVIL 7/20/26

DATE: JULY 20, 2026

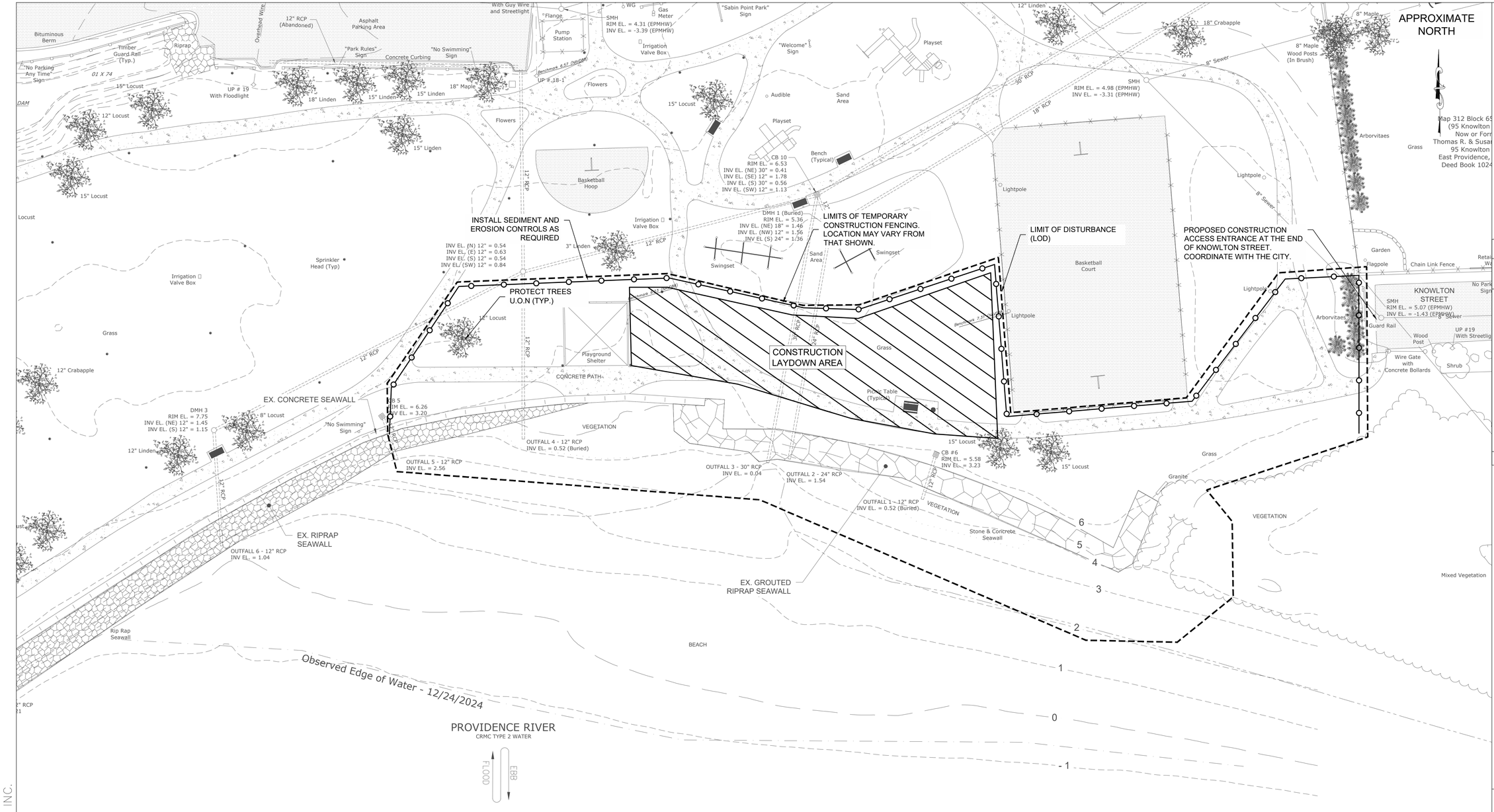
DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR

PROJECT NUMBER: 22006.00

0' 10' 20' 40'
FULL SCALE (22X34 PRINT): 1" = 20'
HALF SCALE (11X17 PRINT): 1" = 40'

C-23
SHEET 23 OF 26

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LEGEND

- EXISTING 1' MINOR CONTOUR
- EXISTING 5' MAJOR CONTOUR
- EXISTING OBSERVED EDGE OF WATER
- EXISTING VEGETATION
- EXISTING DRAINAGE REINFORCED CONCRETE PIPE
- EXISTING CATCH BASIN
- EXISTING MANHOLE / LIGHT POLE / UTILITY POLE
- EXISTING RIPRAP SEAWALL
- LIMIT OF DISTURBANCE (LOD)
- TEMPORARY CONSTRUCTION FENCING

1 CONSTRUCTION LAYDOWN AND TEMPORARY CONTROLS PLAN

C-24 | C-24

SCALE: 1" = 20'

LAYDOWN AND TEMPORARY CONTROL NOTES

1. THE PROPOSED CONSTRUCTION LAYDOWN AREA IS SUBJECT TO CHANGE FROM THAT SHOWN. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF EAST PROVIDENCE THE LOCATION OF ALL EQUIPMENT, VEHICLE, OR MATERIAL LAYDOWN AREAS.
2. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN ALL TEMPORARY CONTROLS IN ACCORDANCE WITH THE PROJECT, PERMIT, AND CONTRACT DOCUMENTS. THE LIMITS OF TEMPORARY CONTROLS NECESSARY TO COMPLETE THE SCOPE OF WORK MAY VARY FROM THAT SHOWN ON THIS PLAN.

NOTES

1. THIS BASE PLAN WAS DEVELOPED FROM AN EXISTING SURVEY PLAN OF SABIN POINT BY THE CITY OF EAST PROVIDENCE, DATED 11/06/201 AND CAN ONLY REFLECT THE CONDITIONS OF THE SITE AT THAT TIME.
2. PROJECT BENCHMARKS (NAVD88) WERE SET MARCH 9, 2026 BY THE CITY OF EAST PROVIDENCE DEPARTMENT OF PUBLIC WORKS - ENGINEERING DIVISION.

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#	REVISION DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

SABIN POINT SAND BERM
SABIN POINT WATERFRONT PARK
EAST PROVIDENCE, RHODE ISLAND

SABIN POINT
CONSTRUCTION LAYDOWN AND TEMPORARY CONTROLS PLAN

ISSUED FOR CONTRUCTION

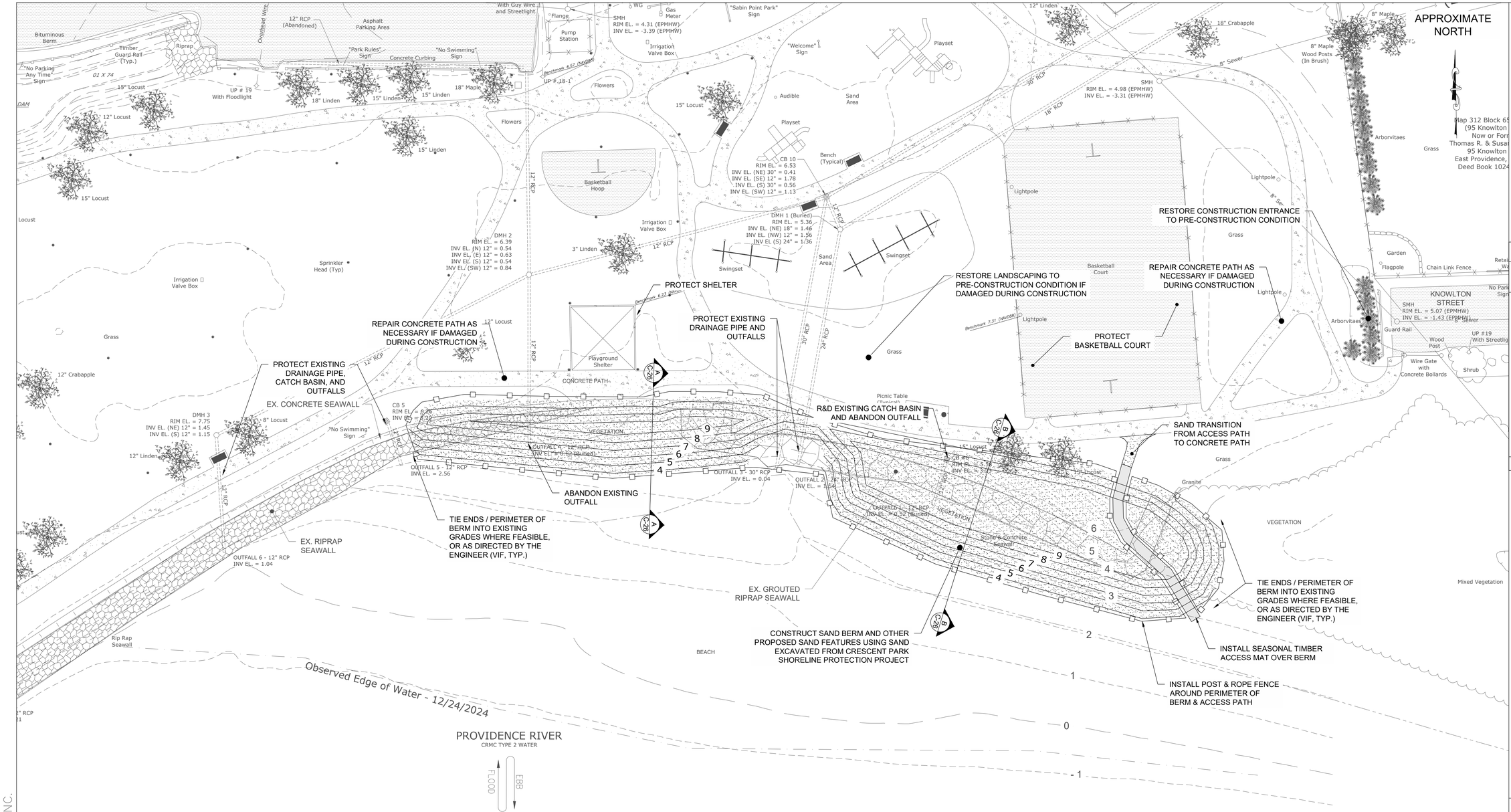
DATE: JULY 20, 2026

DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR

PROJECT NUMBER: 22006.00

C-24
SHEET 24 OF 26

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LEGEND

- EXISTING 1' MINOR CONTOUR
- EXISTING 5' MAJOR CONTOUR
- EXISTING OBSERVED EDGE OF WATER
- EXISTING VEGETATION
- EXISTING DRAINAGE REINFORCED CONCRETE PIPE
- EXISTING CATCH BASIN
- EXISTING MANHOLE / LIGHT POLE / UTILITY POLE
- EXISTING RIPRAP SEAWALL
- PROPOSED POST AND ROPE FENCE
- PROPOSED CONTOUR
- PROPOSED SEASONAL TIMBER ACCESS PATH
- PROPOSED SAND BERM / TRANSITION PATH

1 | C-25 C-25 — PROPOSED CONDITIONS PLAN

SCALE: 1" = 20'

NOTES

1. THIS BASE PLAN WAS DEVELOPED FROM AN EXISTING SURVEY PLAN OF SABIN POINT BY THE CITY OF EAST PROVIDENCE, DATED 11/06/201 AND CAN ONLY REFLECT THE CONDITIONS OF THE SITE AT THAT TIME.
2. PROJECT BENCHMARKS (NAVD88) WERE SET MARCH 9, 2026 BY THE CITY OF EAST PROVIDENCE DEPARTMENT OF PUBLIC WORKS - ENGINEERING DIVISION.
3. EXCESS SAND GENERATED DURING CONSTRUCTION AT CRESCENT PARK SHALL BE IMPORTED TO CONSTRUCT THE SAND BERM.

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#	DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	7/20/26	SMR

SABIN POINT SAND BERM
SABIN POINT WATERFRONT PARK
EAST PROVIDENCE, RHODE ISLAND

SABIN POINT
PROPOSED CONDITIONS PLAN

ISSUED FOR CONTRUCTION

STEPHANIE M. ROBAT No. 12101 REGISTERED PROFESSIONAL ENGINEER CIVIL 7/20/26

DATE: JULY 20, 2026

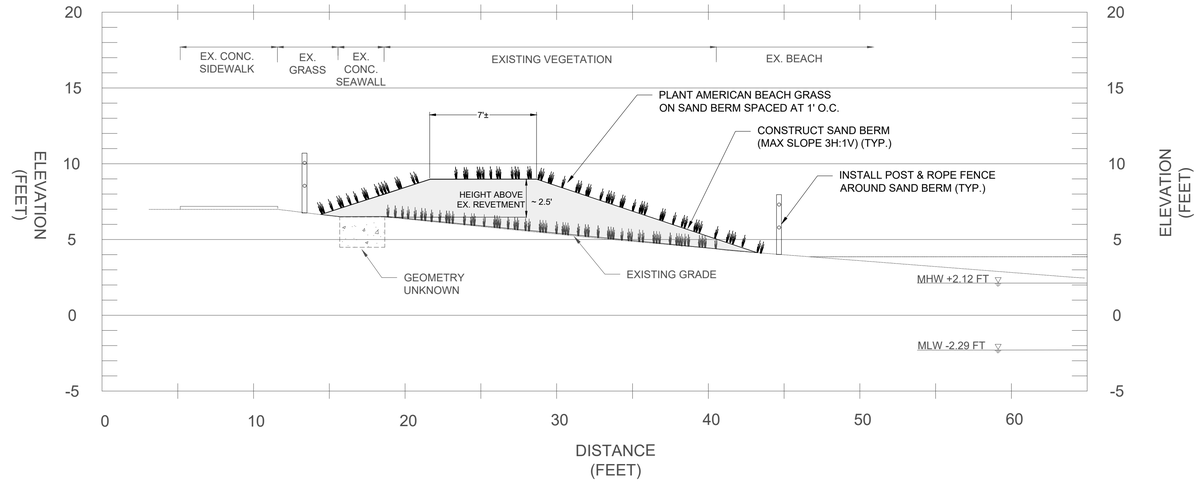
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CHECKED BY: SMR

PROJECT NUMBER: 22006.00

C-25
SHEET 25 OF 26

0' 10' 20' 40'
FULL SCALE (22X34 PRINT): 1" = 20'
HALF SCALE (11X17 PRINT): 1" = 40'

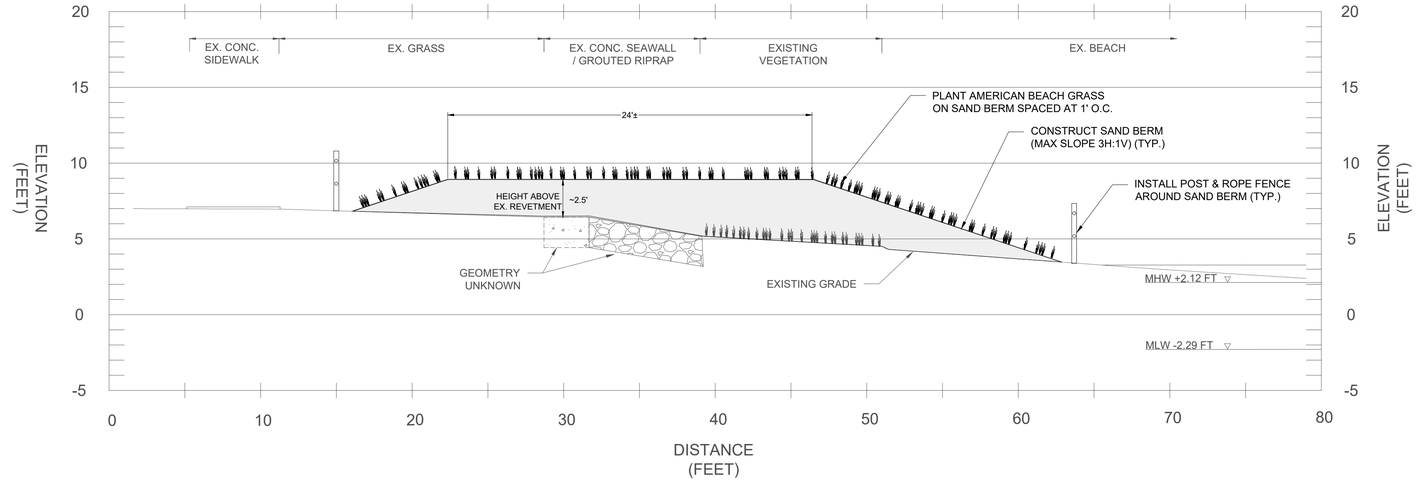
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A BERM SECTION A-A'

C-25 C-26

SCALE: 1" = 5'



B BERM SECTION B-B'

C-25 C-26

SCALE: 1" = 5'

NOTES

1. REFER TO SHEET C-21 / C-22 FOR TYPICAL DETAILS

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SABIN POINT SAND BERM
SABIN POINT WATERFRONT PARK
EAST PROVIDENCE, RHODE ISLAND

SABIN POINT
PROPOSED SAND BERM CROSS SECTIONS

ISSUED FOR CONTRUCTION

STEPHANIE M. ROBAT
No. 12101
REGISTERED PROFESSIONAL ENGINEER
CIVIL 7/20/26

DATE: JULY 20, 2026
DESIGN BY: SMR
DRAWN BY: BMF
CHECKED BY: SMR
PROJECT NUMBER: 22006.00

0' 2.5' 5' 10'
FULL SCALE (22X34 PRINT): 1" = 5'
HALF SCALE (11X17 PRINT): 1" = 10'

C-26
SHEET 26 OF 26

PROJECT SPECIFICATIONS

SECTION 00 01 10
TABLE OF CONTENTS

Document No. **Title**

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01 14 00 Work Restrictions
01 20 00 Measure and Payment
01 25 00 Substitution Procedure
01 26 00 Contract Modification Procedures
01 31 00 Project Management and Coordination
01 31 19 Project Meetings
01 32 16 Construction Progress Schedule
01 33 00 Submittal Procedures
01 34 00 Shop Drawings, Product Data and Samples
01 35 23 Safety Requirements
01 35 29 Contractors Health and Safety Plan
01 35 53 Security Procedures
01 41 26 Permit Requirements
01 52 00 Construction Facilities and Temporary Controls
01 55 00 Vehicular Access and Parking
01 56 00 Temporary Barriers and Enclosures
01 57 00 Temporary Erosion and Sedimentation Controls
01 74 00 Cleaning and Waste Management
01 77 00 Closeout Procedures
01 78 39 Project Record Documents

DIVISION 02- EXISTING CONDITIONS

02 21 00 Surveys
02 40 00 Demolition and Structure Moving

DIVISION 03 – CONCRETE

03 00 00 Concrete

DIVISION 05 – METALS

05 05 13 Shop Applied Coatings for Metals
05 05 23 Metal Fastenings

DIVISION 06 – TIMBER

06 13 00 Heavy Timber Construction

DIVISION 31 – EARTHWORK

31 00 00 Earthwork
31 05 19 Geosynthetics for Earthwork
31 11 00 Clearing and Grubbing

DIVISION 32 EXTERIOR IMPROVEMENTS

32 31 13 Fences and Gates
32 90 00 Landscape Work & Plantings

DIVISION 35 MARINE AND WATERWAYS

35 31 19 Stone Revetment

SECTION 01 11 00
SUMMARY OF WORK

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Work covered by contract documents/requirements included
B. Work sequence
C. Contract drawings and specifications – intent
D. Obligations of the contractor
E. Errors and/or discrepancies
F. Permits and licenses
G. Responsibilities of engineer
H. Contractor's responsibilities
I. Employees of the contractor
J. General protective measures
K. General safety precautions
L. "Dig-Safe" damage prevention system
M. Weather conditions
N. Loading
O. Partial occupancy
P. Materials and workmanship
Q. Sleeves and inserts
R. Other requirements

1.2 WORK COVERED BY CONTRACT DOCUMENTS/REQUIREMENTS INCLUDED

A. The work to be done under this contract consists of improving 810 linear feet (lf) of existing shoreline at Crescent Park and 320 lf of existing shoreline at Sabin Point Park along the Providence River and Narragansett Bay. Please refer to the Plans, Bid Proposal, Measure, and Payment sections of this specification for more detailed information related to Base Bid work. In general, the project includes, but is not limited to, the following work:

Crescent Park:

- R&D the existing fence and picnic tables at the top of the slope, portions of the existing asphalt walkway, select revetment stone at the south end of the existing revetment (north end of project), the existing southern timber staircase, trees and vegetation on the existing slope, concrete debris, riprap, and coir logs within the work area, and other miscellaneous structures required to complete the work.
- Excavate existing soil slope as necessary to relocate the toe of the slope and create the new slope in accordance with the contract documents.
- Transport the appropriate quantity of the excavated sand from Crescent Park to Sabin Point required to construct sand berms and other proposed sand features at the Sabin Point Waterfront Park Project. Deliver and stockpile excess sand to East Providence's yard on Forbes Street.
- Protect the existing northern timber stairs, revetment, and seawall during work and/or repair any damage caused by work. Protect the existing timber retaining wall and stone revetment for the adjacent property to the south during work and/or repair any

damage caused by work. Set and monitor vertical and horizontal monitoring points on top of slope and on structure adjacent to southern end of project.

- Remove and replace existing revetment stone at northern and southern limits of work as necessary to join the new revetment to the existing revetment to the north and the existing revetment to the south (limited to stones on East Providence's property).
- F&I geotextile fabric, bedding layer, and quarry stone required to construct the new stone revetment. It is anticipated that all quarry stones will be delivered via Beach Road and transported from Beach Road to the project site along the beach which is subject to tides.
- F&I coir logs, duckbill anchors, erosion control blanket, loam, shrubbery/plantings and hydroseed along upper portion of slope above the revetment. This includes the one-year warranty and associated maintenance for all plantings.
- Place excess sand in the existing stone revetment matrix along the northern shoreline, as feasible, and at the end of Beach Road above the high tide line after completion of the new stormwater system. Place excess sand in the new stone revetment matrix, as feasible. Use excess sand to restore the beach to pre-construction elevations above the mean high tide line, as feasible. Place sand in a manner that ensures it fills voids in revetment stone (i.e. wash sand in) and does not create a hazard.
- F&I sand berm, beach grass, and fencing seaward of the sand berm at the toe of the new stone revetment system. This includes the one-year warranty and associated maintenance for all plantings.
- F&I new timber stairs, including timber piles, concrete foundations and all required materials and hardware.
- F&I new catch basins, manholes, pipes and other structures required for the stormwater upgrades in Crescent Park.
- F&I all stormwater and appurtenant structures for the Beach Road Stormwater Management Improvements.
- Loam & seed all disturbed areas.
- Repave the parking lots, walkways, and curbing in the park.
- F&I new post and rail fencing along top of new slope.
- Mobilization, demobilization, site restoration and cleanup.

Sabin Point Park:

- R&D the existing vegetation, required catch basin(s) and outfall pipes, and other miscellaneous structures required to complete the work.
- Protect existing structures to remain during work and/or repair any damage caused by work.
- Excavate soil as necessary. Use sand excavated from the Crescent Park Shoreline Protection Project to construct sand berms, sand transition from access path to concrete path, and other proposed sand features at Sabin Point. Any excess sand brought to Sabin Point that is not required for the construction of the sand berm and appurtenant structures should be brought to East Providence's yard on Forbes Street.
- F&I sand berm, beach grass, and fencing around the perimeter of the berm and access path. Tie the perimeter of the sand berm into existing grades where feasible or as directed by the engineer. This includes the one-year warranty and associated maintenance for all plantings.

- F&I seasonal timber access mat over the sand berm.
- Loam & seed all disturbed areas.
- Mobilization, demobilization, site restoration, and cleanup.

1.3 WORK SEQUENCE

A. The Contractor is required to submit a detailed schedule of work sequence to the Engineer after the preconstruction conference and prior to the start of construction. The schedule shall be updated each month. This sequence shall outline their exact construction schedule for the completion of the work awarded in this contract.

B. The Contractor is advised of the following when preparing the work sequence:

a. The Contractor shall coordinate input from all their Subcontractors and suppliers in the preparation of this schedule.

b. Work at night, on Saturdays, Sundays, or major holidays will not be permitted without the Owner's written permission except in the case of emergency. If night work is required, the Contractor shall provide, at their own expense, all lighting, safety and other facilities necessary for the proper execution of the work.

1.4 CONTRACT DRAWINGS AND SPECIFICATIONS - INTENT

A. The contract drawings and specifications are intended to compliment each other, and all work called for by either shall be as binding as if called for by both. The Contractor shall thoroughly acquaint themself with all the requirements of the specifications and contract drawings. For convenience of reference, these specifications are separated into sections. Such separations shall not operate to make the Engineer an arbiter to establish jurisdictional limits, all sections are complimentary. All drawings, specifications and memoranda relative to the work are the property of the Owner and shall be returned to the Engineer at the completion or cessation of work.

1.5 OBLIGATIONS OF THE CONTRACTOR

A. The Contractor shall furnish all labor, materials, supplies, equipment, tools and all other facilities necessary for the proper and complete construction of the project, as required by the contract drawings and as specified herein. Throughout the contract, wherever it is specified that work is to be done, or labor, materials or equipment are to be furnished, it is understood to mean that the said work to be done or the labor, materials, or equipment to be furnished is to be supplied or done by the Contractor at their own proper cost or expense.

1.6 ERRORS AND/OR DISCREPANCIES

A. The Contractor shall verify all quantities and measurements shown on the contract drawings or called for in the specifications and shall notify the Engineer of all discrepancies, errors or omissions found therein. The Contractor shall notify the Engineer immediately of any apparent ambiguity, error or omission in the contract drawings or specifications. The failure to correctly or specifically mention or note any portion of the work, the proper performance of which is evidently necessary to fulfill the general intention of the contract drawings, and specifications, shall not act to release the Contractor from the proper performance of such work in the identical manner as if fully and correctly indicated and without expense to the Owner beyond the stipulated contract price or prices. The foregoing shall not apply to additions, improvements or changes for which provisions have been otherwise made.

1.7 PERMITS AND LICENSES

A. The Owner has obtained the required CRMC Assent(s) for the Work, a copy of which is provided herein. The Contractor shall secure and pay for all other permits and licenses necessary for the prosecution of the work and give such notices, comply with all laws, ordinances, rules or regulations having bearing on the conduct of the work. The Contractor shall indemnify the Owner, its officers and agents against any claim or liability arising from failure to comply with such rules, laws, or ordinances by themself, their employees or Subcontractors.

1.8 RESPONSIBILITIES OF ENGINEER

A. The Engineer shall be the interpreter of the requirements of the contract documents and the judge of the performance there under by both the Owner and Contractor. The Engineer shall render interpretations necessary for the proper execution or progress of the work with reasonable promptness on written request of either the Owner or the Contractor, and shall render written decisions, within a reasonable time, on all claims, disputes and other matters in question between the Owner and the Contractor relating to the execution or progress of the work or the interpretation of the contract documents.

B. Interpretations and decisions of the Engineer shall be consistent with the intent of and reasonably inferable from the contract documents and shall be in written or graphic form. In the capacity of interpreter and judge, the Engineer shall endeavor to secure faithful performance by both the Owner and the Contractor, shall not show partiality to either, and shall not be liable for the result of any interpretation or decision rendered in good faith in such capacity.

C. The Engineer shall have authority to reject work which does not conform to the contract documents. Whenever, in the Engineer's reasonable opinion, it is necessary or advisable for the implementation of the intent of the contract documents, the Engineer will have authority to require special inspection or testing of the work in accordance with the provisions of the contract documents, whether or not such work be then fabricated, installed or completed.

D. The Engineer will <u>not</u> have control over or charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work, since these are solely the Contractor's responsibility.

E. The Engineer is not responsible for survey or layout. All survey and layout required is the responsibility of the Contractor.

1.9 CONTRACTOR'S RESPONSIBILITIES:

A. Mutual Responsibility:

a. If other Contractors or Subcontractors suffer loss or damage to their work through acts of neglect on part of General Contractor, then General Contractor agrees to satisfactorily arrange for settlement with other such Contractor or Subcontractor, if other such Contractor or Subcontractor will settle.

b. If, however, such other Contractor or Subcontractor chooses to assert claim against Owner, on account of damage alleged to have been sustained, Owner shall notify Contractor, who shall defend, at their expense, any suit based on such claims, and, if judgment or claims against owner shall be allowed, Contractor shall pay or satisfy such judgment or claims, and pay costs and expenses in connection with same.

B. Legal Address of the Contractor: Both the address given in the bid or proposal submitted by the Contractor and the Contractor's office at or near the site of the work are hereby designated as places to either of which notices, letters, and other communications to the Contractor shall be certified, mailed or delivered. The delivering at the above-named place, or depositing in a postpaid

wrapper directed the first-named place, in any post office box regularly maintained by the Post Office Department, or any notice, letter or other communication to the Contractor, shall be deemed sufficient service thereof upon the Contractor and the date of said service shall be the date of such delivery or mailing. The first-named address may be changed at any time by an instrument in writing, executed and acknowledged by the Contractor and delivered to the Engineer. Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter or other communication upon the Contractor personally.

1.10 EMPLOYEES OF THE CONTRACTOR

A. The Contractor shall employ a competent, experienced superintendent and foreman to represent them throughout the work. These personnel shall be present at all times while the work entrusted to them is in progress and shall be fully informed regarding it. The superintendent shall be satisfactory to the Engineer and shall represent and have full authority to act for the Contractor in their absence. All other personnel employed on the work shall be competent and skillful in the trades employed.

1.11 GENERAL PROTECTIVE MEASURES

A. The Contractor shall, at their own expense, protect all work completed or partially completed under this contract and shall be solely responsible for the care and protection of all materials covered by this contract. Damage, loss, or injury from any cause whatsoever, shall be made good by the Contractor at their own expense. The method of providing against such damage, loss or injury is left to the discretion of the Contractor. All damaged work must be replaced to the satisfaction of the Engineer at no cost to the Owner.

1.12 GENERAL SAFETY PRECAUTIONS

A. The Contractor shall take all necessary precautions to conduct their operations in such a manner to provide maximum possible safety for all employees on the work site and the general public as well. The Contractor shall provide suitable barricades, bridges, railings, and similar protection around and over excavations and open trenches to ensure maximum protection. All State and Federal Laws applicable to the work shall receive compliance, including, but not limited to, the latest amendments of the following:
   a. Williams-Steiger Occupational Safety and Health Act of 1970, Public Law 91-596;
   b. Part 1926 - Occupational Safety and Health Standards for construction industry 29 CFR 1926/1910;
   c. Part 1518 - Safety and Health Regulations for Labor 29CFR 1926.

B. This project, the Contractor and their Subcontractors shall, at all times, be governed by 29 CFR and OSHA Safety and Health Standards (29 CFR 1926/1910).

C. The Contractor shall designate a responsible member of their organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the Owner and the Engineer.

1.13 "DIG-SAFE" DAMAGE PREVENTION SYSTEM

A. All Contractors or Subcontractors performing drilling, boring, auguring, jetting, sheeting or pile installation, soil preloading for consolidation, demolition, excavation or like work shall, prior to commencement of these activities, contact utility companies having responsibility for underground transmission systems for information relative to locations of existing underground utilities and/or an appropriate Dig Safe damage prevention and notification agency.

1.14 WEATHER CONDITIONS

A. No work shall be done when, in the opinion of the Engineer, the weather is unsuitable. In no instance shall concrete, earth backfill, paving or embankment be placed upon frozen material. The Contractor shall be responsible for the protection of all completed or partially completed work as a result of extreme weather conditions. The Contractor shall make themself fully aware of the extremes of weather conditions in the area in regards to the depth of snowfall and the degree and length of sub-freezing temperatures during the winter season. If there is a delay or interruption in the work due to weather conditions, the necessary measures must be taken to bond new work to old. Only such work as will not suffer injury to workmanship or materials will be permitted in inclement weather.

B. Should tornado, hurricane, gale, or heavy wind warnings be issued, take every practicable precaution to minimize the damage to persons, to the work, and to the adjacent property. Such damage caused to any part of the work shall be rectified or replaced to the complete satisfaction of the Engineer and at no expense to the Owner. Injury to personnel or damage to adjacent property because of the work shall be the complete responsibility of the Contractor, and they accept exclusive liability for same.

1.15 LOADING

A. No part of any work involved in this contract shall be loaded during construction with a load greater than it is calculated to carry with safely. Should any accidents or damage occur through any violation of this requirement, the Contractor shall be held responsible under their contract and bond.

1.16 PARTIAL OCCUPANCY

A. The Owner shall have the right to take possession of or use any part of the completed or partially completed work prior to final acceptance.

B. Prior to incremental occupancy, Owner will give notice thereof to Contractor, and such occupancy shall be upon the following terms:
   a. The general guarantee period, called for in General Conditions, for work substantially completed shall not begin to run until issuance of certificate by Engineer.
   b. The occupancy or use of any area shall not constitute acceptance of work not performed in accordance with the contract, nor relieve Contractor of liability to perform any work required by contract but not completed at time of said occupancy.
   c. Contractor shall be relieved of all maintenance costs on portions occupied under this agreement.
   d. Contractor shall not be responsible for wear and tear or damage resulting from said occupancy.
   e. Owner shall assume risk of loss with respect to any portion occupied by it under the terms of this agreement, Contractor shall assume full responsibility for loss or damage traceable to their fault or negligence in the performance of their contract.

1.17 MATERIALS AND WORKMANSHIP

A. All work shall be done in a neat, workmanlike manner. All materials, equipment and workmanship shall fully conform to the requirements of the contract documents and shall be in every respect in accordance with the best modern practice. All materials and equipment shall be new and of standard first-grade quality and design. Materials and equipment shall be assembled and erected in a neat, workmanlike manner and in proper level and alignment.

1.18 SLEEVES AND INSERTS

A. All anchor bolts, sleeves, inserts, hangers, foundation bolts, conduit boxes, and other similar appurtenances shall be installed in the walls, floors, and roofs of the various structures as the work progresses. Such appurtenances shall be installed whether or not they are shown on the drawings or specified and compensation for such work shall be considered as having been included in the various contract price.

1.19 OTHER REQUIREMENTS

A. Existing Utilities and Structures:
   a. Contractor shall be responsible for damage to water pipes, electrical wires, conduits, drains, sewers, buildings, retaining walls, timber stairs, stone revetments, and other structures, that may be met within execution of the work, owned by individuals, by firms or corporations, or by the municipality. Contractor shall be liable for damages to public or private property resulting therefrom.
   b. Shore or sling up in their places, without injury, water pipes, electrical conduits and other structures. Maintain them in constant operation except as may be required to connect and disconnect from them.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 14 00
WORK RESTRICTIONS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. Work Sequencing
C. Local Ordinances
D. Access to site
E. Work hours and days
F. Contractors' use of site
G. Work in right of way
H. Coordination with occupants

1.2 DESCRIPTION

A. Contractor shall perform and sequence Work in a manner that meets all Work restrictions in accordance with this Section and the Contract Documents.

1.3 WORK SEQUENCING

A. The Work of the Contract shall be sequenced in accordance with the Contractor's approved Construction Progress Schedule and Project Work Plan in accordance with Section 01 32 16 – Construction Progress Schedule.
B. Work sequencing and scheduling shall be performed consistent with the requirements of these Specifications, including but not limited to all permit-required restrictions.
C. Contractor shall perform Work in a manner that will allow the Site and adjacent property owners to maintain normal activities and be compliant with all provisions of the Contract Documents. Contractor shall ensure that neighboring operations or activities are not disturbed, interrupted, or prohibited as a result of Work.
D. Work sequencing shall be conducted in a manner to coordinate staging and loading of materials to be transported and stockpiled or disposed of off-site.
    a. All excess materials generated during the Work shall be stockpiled only in the Contractor's approved staging areas, as designated on the Drawings or coordinated with the Owner. No excess materials shall be stockpiled on the beach below the mean high tide line.

1.4 LOCAL ORDINANCES

A. Work shall be performed in accordance with all applicable Laws and Regulations, including all applicable ordinances.
B. If complaints are received by the Construction Manager or Owner regarding interferences due to Work activities, then no further Work shall be performed until reduction measures are implemented by the Contractor and approved by the Construction Manager.

1.5 ACCESS TO SITE

A. Access to the Site, Access Roads, and Parking Areas: Refer to Section 01 55 00 - Vehicular Access and Parking.

1.6 WORK HOURS AND DAYS

A. Contractor shall plan and schedule Work activities to be limited to weekdays (Monday-Friday), unless otherwise requested in advance (minimum three days) and approved in writing by the Owner.
B. Contractor shall plan and schedule Work activities to normal business hours 7:00 a.m. to 5:00 p.m.. No heavy equipment shall be operated outside of these hours without prior approval by the Owner.
C. No equipment or material deliveries shall occur prior to 7:00 a.m. without prior approval by the Owner.

1.7 CONTRACTOR'S USE OF SITE

A. Limits of Work shall be confined to the smallest reasonable and practicable area to perform Work in a safe and efficient manner within the Limits of Work shown on the Drawings. Equipment staging areas, material storage areas, and material staging areas shall be within the Limits of Work. Access to and from the Site shall only be by the means described in these Specifications and/or as shown on the Drawings. Under no circumstances shall Contractor perform any Work or conduct any activities at the Site outside of the Limits of Work. Any disturbed area(s) shall be restored to original conditions by Contractor at no additional cost to Owner
B. Contractor Shall:
    a. Assume responsibility for Site security within the Limits of Work as described in 01 35 53 – Security Procedures. Contractor shall provide adequate barricades to prevent unauthorized access to Work areas and shall be responsible for protecting their equipment and materials from vandalism during working and non-working hours.
    b. Protect adjacent properties and the Site.
    c. During construction and until final acceptance of the Work, Contractor shall protect and be responsible for all Work performed by Contractor.
    d. Existing features on the Site indicated on Drawings or marked in the field by Owner and/or Engineer shall be protected, as required, from damage of any type which might result from Contractor's operations. In the event such features are damaged as a result of Contractor's operations, they shall be repaired by Contractor at no additional cost to Owner.
    e. Land resources within the project boundaries and outside the Limits of Work shall be preserved in their present condition or be restored to a condition after construction that will appear to be natural, agreeable to the affected property owners, and not detract from the appearance of the project.
    f. Conform to all applicable laws, regulations, codes, ordinances, standards, and Contract Documents.
    g. Conform to the requirements of all permits necessary to perform the Work including the permits obtained by the Owner as described in Section 01 41 26 - Permit Requirements.
    h. Assume full responsibility for health and safety of Contractor's employees and subcontractor employees while at the Site and for implementation of Contractor's Health and Safety Plan for the Work in accordance with Section 01 35 23 - Safety Requirements and Section 01 35 29 - Contractors Health and Safety Plan.
    i. Coordinate performance of the Work with all local authorities including police and fire officials.
    j. Assume full responsibility for all snow removal within the Limits of Work as necessary to perform the Work.

1.8 COORDINATION WITH OCCUPANTS

A. Contractor shall notify Owner and Engineer when the Work may affect adjacent properties or use of adjacent properties. Owner will notify owners of adjacent property; Contractor shall not contact owners of adjacent property directly, unless previously authorized by the Owner.

B. When it is necessary to temporarily obstruct access to property, or when utility service connection will be interrupted, provide notices sufficiently in advance to enable affected persons to provide for their needs. Such notifications shall comply with Laws and Regulations and, whether delivered orally or in writing, shall include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 20 00
MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. Unit Quantities
C. Measurements of Quantities
D. Prices Include
E. Unit prices and lump sum prices
F. Method of measurement and basis of payment

1.2 DESCRIPTION

A. This section describes the measurement of and the payment for the work to be done under the items listed in the BID.

1.3 UNIT QUANTITIES

A. Quantities indicated in the Bid Proposal are for bidding and contract purposes only. Quantities will be determined by the Contractor and submitted to the Engineer for review.
B. If the actual work requires more or fewer quantities than those indicated, the Contractor will not be entitled to any adjustments in the Unit Bid Price as indicated in the Bid Proposal.

1.4 MEASUREMENT OF QUANTITIES

A. Volume will be determined by using the mean length, width and height or thickness.
B. Area will be determined by using the mean length, width or radius.
C. Length will be determined by measuring along the horizontal projection of the centerline.
D. The Engineer shall determine the appropriate method for measuring and computing each quantity, and for estimating the sums due for the various kinds of work and material, using such methods, tools and degrees of precision as are suitable for the particular measurement, item or computation. When requested by the Engineer, assistance in measuring or determining quantities shall be provided by the Contractor by furnishing the help of personnel on the site, by furnishing copies of invoices, or by other means.

1.5 PRICES INCLUDE

A. The prices stated in the Proposal include full compensation for:
    a. Furnishing all the labor, equipment and material needed for performing the work and building the structures contemplated by the Contract and also for assuming all risks of any kind for expenses arising by reason of the nature of the soil, ground water, tidal impacts, or the action of the elements.
    b. All excavation and backfilling.
    c. The removal of and delay or damage occasioned by trees, stumps, tracks, pipes, ducts, timber, masonry, or other obstacles.
    d. Removing, protecting, repairing, or restoring, without cost to the Owner, all pipes, ducts, drains, sewers, culverts, conduits, curbs, gutters, walks, fences, tracks, or other obstacles, road pavements, and other ground surfacing, whether shown on plans or not.
    e. Furnishing, inserting and removing all sheeting, shoring staging, cofferdams, dewatering systems, etc.

f. All signs, fencing, lighting, watching, guarding, temporary surfacing, bridging, snow removal, etc., necessary to maintain and protect travel on streets, walks, the beach, and private ways.
g. Making all provisions necessary to maintain and protect buildings, fences, poles, trees, structures, pipes, ducts and other public or private property affected or endangered by the work.
h. The repair or replacement of such things if injured by neglect of such provisions for removing all surplus or rejected materials as may be directed.
i. Replacing, repairing and maintaining the surfaces of streets, highways, public and private lands if and where disturbed by work performed under the Contract or by negligence in the performance of work under the Contract.
j. Furnishing of filling materials in case of any deficiency or lack of suitable materials.
k. Obtaining all permits and licenses and complying with the requirements thereof, including the cost of furnishing any security needed in connection therewith.
l. Any and all expenses on account of the use of any patented device or process.
m. Protection against inclement or cold weather.
n. All expenses incurred by or on account of the suspension, interruption or disturbance of work.
o. The cost of the surety bond and adequate insurance.
p. All taxes, fees, union dues, etc., for which the Contractor may be or become liable arising out of their operations incidental to the Contract.
q. Equipment on the site and away there from.
r. Providing a field office and its appurtenances and for all general and incidental expenses.
s. Tools, implements and equipment required to build and put into good working order all work contemplated by the Contract and maintaining and guaranteeing the same as provided.
t. Fulfilling all obligations assumed by the Contractor under the Contract and its related documents.

B. The Owner shall pay and the Contractor shall receive the prices stipulated in the Bid Proposal made a part hereof as full compensation for everything performed and for all risks and obligations undertaken by the Contractor under and as required by the Contract.
C. The prices for those items which involve excavation shall include compensation for removal and disposal of existing pavement, disposal of surplus excavated material, handling water, and installation of all necessary sheeting, shoring and bracing.
D. In all items involving excavation, the price shall be based on doing the entire excavation in earth and boulders as defined in the Contract Documents. Where Bedrock is encountered any excavation required, shall be in addition to the cost of excavating earth and boulders and no deduction will be made in the amount for earth and boulder excavation.
E. The prices for all pipe items shall constitute full compensation for furnishing, laying, jointing and testing; earth excavation, backfill and compaction; materials for bedding pipe as specified; and cleaning up.
F. Items of work shown on the drawings or specified or required to complete the work but not listed separately under the list of items in the Bid Proposal shall be included in the cost of payment under the various applicable bid items of work and no separate payment will be made for such items. It shall be the responsibility of the Contractor to verify any missing or incomplete items.
G. All damaged or disturbed items of work, or items required to be removed and replaced due to construction purposes and operations that are not listed in the Bid Proposal, shall be restored, replaced or repaired by the Contractor in a manner satisfactory to the Engineer, at no additional expenses to the Owner.

1.6 UNIT PRICES AND LUMP SUM PRICES

A. Each unit or lump sum price stated in the Bid shall constitute full compensation for all labor, equipment, materials and all incidental and appurtenant work required or necessary to satisfactorily complete the specified work in accordance with the contract documents and specifications.
B. Payment for unit prices will be computed on the basis of the unit price bid in the Bid Proposal for each item, and the quantity of units completed.
C. Payment for lump sum prices will be computed on the basis of the percentage of work completed on each item in the contract Bid Proposal. The Contractor's breakdown submitted to the Engineer of the lump sum bid items will be used only as a guide to determine percentage of completion.

1.7 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

BASE BID ITEMS:

A. Mobilization & Demobilization:
   a. Description: Mobilization & Demobilization shall include, but not be limited to, all equipment, material, labor and costs associated with moving equipment, workers and materials to the site, cleaning the site and removing all equipment and materials completely from the site, and all project management efforts and costs, required to complete the project.
   b. Method of Measurement: Mobilization & Demobilization shall be measured on a lump sum basis.
   c. Method of Payment: A portion of Mobilization & Demobilization shall be paid at the start of the project after the contractor's equipment has been mobilized to the site. The total cost of this item shall not exceed five percent (5 %) of the total Base Bid cost. The Mobilization portion of the item shall not exceed 60% of overall the item cost. The Demobilization portion of this item shall be a minimum of 40% of the overall item cost.
B. Labor & Materials Bonds:
   a. Description: Provide a Labor & Materials Bonds for the project.
   b. Method of Measurement: Labor & Materials Bonds shall be measured on a lump sum basis.
   c. Method of Payment: Labor & Materials Bonds shall be paid as follows:
      i. 100% after contract is executed.

CRESCENT PARK

C. Crescent Park Demolition & Excavation:
   a. Description: Crescent Park Demolition & Excavation shall include, but not be limited to, all equipment, materials, labor and costs associated with all demolition and excavation required to complete the work including, but not limited to, excavation of the soil from the existing slope in order to relocate the toe of the slope per the contract drawings, demolition of the existing fence and picnic tables at the top of the slope, portions of the existing asphalt walkway, select revetment stone at the south end of the existing revetment (north end of project), the existing southern timber staircase, trees and vegetation on the existing slope, concrete debris, riprap, and coir logs within the work area, and other miscellaneous structures required to complete the work. It also includes provisions to protect existing structures to remain and/or repair any damage to any structures to remain as a result of the work. This also includes all trucking/transport required for re-use at Crescent Park, re-use at Sabin Point, stockpiling and/or disposal of all demolished and excavated materials. Contractor to assume bulking of materials will occur due to excavation and removal of in-situ sand from slope.

b. Method of Measurement: Crescent Park Demolition & Excavation shall be measured on a lump sum basis.
c. Method of Payment: Crescent Park Demolition & Excavation shall be paid as follows:
    i. 100% after all work is completed and accepted, or progress payments monthly based on percentage of work completed.

D. F&I Revetment System:
a. Description: F&I Revetment System shall include, but not be limited to, all equipment, materials, labor and costs associated with sourcing, delivering and placement of revetment stone to the final lines and grades indicated. This includes furnishing and installing the geotextile fabrics and crushed stone bedding at the subgrade interface as detailed and placing excess sand in the stone matrix, as feasible. The required porosity of the armor layer shall not exceed 37% of theoretical. This shall be used when estimating quantities of armor stone.
b. Method of Measurement: F&I Revetment System shall be measured on a lump sum basis.
c. Method of Payment: F&I Revetment System shall be paid as follows:
    ii. 100% after all work is completed and accepted, or progress payments monthly based on percentage of work completed.

E. F&I New Timber Stairs
a. Description: F&I New Timber Stairs shall include, but not be limited to, all equipment, materials, labor and costs associated with constructing the new timber stairs.
b. Method of Measurement: F&I New Timber Stairs shall be measured on a lump sum basis.
c. Method of Payment: F&I New Timber Stairs shall be paid as follows:
    iii. 100% after all work is completed and accepted, or progress payments monthly based on percentage of work completed.

F. F&I Vegetated Slope & Fencing:
a. Description: F&I Vegetated Slope shall include, but not be limited to, all equipment, materials, labor and costs associated with constructing the new vegetated slope above the stone revetment at Crescent Park and installing the new post and rail fence behind the slope. This includes furnishing and installing coir logs, duckbill anchors, erosion control blanket and anchors, loam, shrubbery/plantings, hydroseed, and timber post and rail fencing. This includes the one-year warranty and associated maintenance for all plantings.
b. Method of Measurement: F&I Vegetated Slope shall be measured on a lump sum basis.
c. Method of Payment: F&I Vegetated Slope shall be paid as follows:
    iv. 100% after all work is completed and accepted, or progress payments monthly based on percentage of work completed.

G. F&I Crescent Park Sand Berm & Vegetation & Placing Excess Sand:
a. Description: F&I Crescent Park Sand Berm & Vegetation & Placing Excess Sand shall include, but not be limited to, all equipment, materials, labor and costs associated with constructing the new sand berm in front of the stone revetment at Crescent Park and placing excess sand in the revetment matrix along the northern shoreline, as feasible, at the end of Beach Road above the high tide line after completion of the new stormwater system, and along the beach above the high tide line as is required to restore the beach to pre-construction elevations. This includes furnishing and installing the beach grass at the sand berm, as detailed in the plans, and the post and rope fencing system. This includes the one-year warranty and associated maintenance for all plantings.
b. Method of Measurement: F&I Crescent Park Sand Berm & Vegetation & Placing Excess Sand shall be measured on a lump sum basis.

c. Method of Payment: F&I Crescent Park Sand Berm & Vegetation & Placing Excess Sand shall be paid as follows:
   v. 100% after all work is completed and accepted, or progress payments monthly based on percentage of work completed.

H. F&I New Drainage Structures:
   a. Description: F&I New Drainage Structures shall include, but not be limited to, all equipment, materials, labor and costs associated with constructing the new catch basins, manholes, pipes and other structures required for the stormwater upgrades in the park.
   b. Method of Measurement: F&I New Drainage Structures shall be measured on a lump sum basis.
   c. Method of Payment: F&I New Drainage Structures shall be paid as follows:
      vi. 100% after all work is completed and accepted.

I. F&I Beach Road Stormwater Management Improvements:
   a. Description: F&I Beach Road Stormwater Management Improvements shall include, but not be limited to, all equipment, materials, labor and costs associated with constructing the new stormwater and appurtenant structures for the Stormwater Management Improvements at Beach Road in accordance with the Plans.
   b. Method of Measurement: F&I Beach Road Stormwater Management Improvements shall be measured on a lump sum basis.
   c. Method of Payment: F&I Beach Road Stormwater Management Improvements shall be paid as follows:
      vii. 100% after all work is completed and accepted, or progress payments monthly based on percentage of work completed.

J. Site Restoration & Paving:
   a. Description: Site Restoration & Paving shall include, but not be limited to, all equipment, materials, labor and costs associated with repairing areas to preconstruction conditions damaged by construction and placing asphalt along new walkways, in the parking area and for curbing, as specified in the construction documents. This includes placing loam and seed in all disturbed areas.
   b. Method of Measurement: Site Restoration & Paving shall be measured on a lump sum basis.
   c. Method of Payment: Site Restoration & Paving shall be paid as follows:
      viii. 100% after all work is complete and accepted

SABIN POINT

K. Sabin Point Demolition & Excavation:
   a. Description: Sabin Point Demolition & Excavation shall include, but not be limited to, all equipment, materials, labor and costs associated with all demolition and excavation required to complete the work including, but not limited to, demolition of the existing vegetation, catch basins, outfall pipes, and other miscellaneous structures as required to complete the work. It also includes provisions to protect existing structures to remain and/or repair any damage to any structures to remain as a result of the work.
   b. Method of Measurement: Sabin Point Demolition & Excavation shall be measured on a lump sum basis.
   c. Method of Payment: Sabin Point Demolition & Excavation shall be paid as follows:
      i. 100% after all work is completed and accepted, or progress payments monthly based on percentage of work completed.

L. F&I Sabin Point Sand Berm & Vegetation & Seasonal Timber Walkway:
   a. Description: F&I Sabin Point Sand Berm & Vegetation shall include, but not be limited to, all equipment, materials, labor and costs associated with constructing the new sand berm at Sabin Point. This includes furnishing and installing the beach grass at the sand berm, as detailed in the plans, the post and rope fencing system, and the seasonal timber access mat over the berm. This includes the one-year warranty and associated maintenance for all plantings.
   b. Method of Measurement: F&I Crescent Park Sand Berm & Vegetation & Placing Excess Sand shall be measured on a lump sum basis.
   c. Method of Payment: F&I Crescent Park Sand Berm & Vegetation & Placing Excess Sand shall be paid as follows:
      ii. 100% after all work is completed and accepted, or progress payments monthly based on percentage of work completed.

M. Sabin Point Site Restoration:
   a. Description: Sabin Point Site Restoration shall include, but not be limited to, all equipment, materials, labor and costs associated with repairing areas to preconstruction conditions damaged by construction. This includes placing loam and seed in all disturbed areas.
   b. Method of Measurement: Sabin Point Site Restoration shall be measured on a lump sum basis.
   c. Method of Payment: Sabin Point Site Restoration shall be paid as follows:
      iii. 100% after all work is complete and accepted

ADD ALTERNATE #1

O. Additional Year of Maintenance and Warranty for Plantings at Crescent Park at Sabin Point:
   a. Description: Additional Year of Maintenance and Warranty for Plantings at Crescent Park and Sabin Point includes an extension of the maintenance and warranty requirements covered under the planting work outlined in F&I Vegetated Slope & Fencing, F&I Crescent Park Sand Berm & Vegetation & Placing Excess Sand, and F&I Sabin Point Sand Berm & Vegetation & Seasonal Timber Walkway. The extended warranty and maintenance will be for 1-year (i.e. 365 calendar days).
   d. Method of Measurement: Additional Year of Maintenance and Warranty for Plantings at Crescent Park and Sabin Point shall be measured on a lump sum basis.
   e. Method of Payment: Additional Year of Maintenance and Warranty for Plantings at Crescent Park and Sabin Point shall be paid as follows:
      iv. 100% after all work is completed and accepted.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 25 00
SUBSTITUTION PROCEDURE

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. Substitute materials and equipment
C. Substitute construction methods or procedures
D. Contractor's representations

1.2 DESCRIPTION

A. This Section includes:
   a. Administrative and procedural requirements for selecting materials and equipment for the Project.
   b. Procedural requirements for substitutions of materials and equipment.
   c. Procedural requirements for substitute construction methods or procedures, when construction methods or procedures are specified.
B. A proposed substitute will not be accepted for review if:
   a. Approval would require changes in design concept or a substantial revision of the Contract Documents.
   b. Approval would delay completion of the Work or the Work of other contractors.
   c. Substitution request is indicated or implied on a Shop Drawing or other submittal, or on a request for interpretation or clarification, and is not accompanied by Contractor's formal and complete request for substitution.
C. If the proposed substitute is not approved, Contractor shall provide the specified materials, equipment, method, or procedure, as applicable.
D. Approval of a substitute does not relieve Contractor from the requirement for submitting Shop Drawings and other submittals in accordance with the Contract Documents.
E. Owner and Engineer have the right to rely upon the completeness and accuracy of the information included in Contractor's request for approval of a substitute, and Contractor accepts full responsibility for the completeness and accuracy thereof.
F. When an approved substitute is defective or fails to perform in accordance with the Contract Documents, responsibility for remedying the defect or failure resides solely with Contractor and Supplier.

1.3 SUBSTITUTE MATERIALS AND EQUIPMENT

A. Requests for approval of substitute materials or equipment items will be considered within a period of 60 days after the Effective Date of the Agreement. After the end of specified period, substitution requests will be considered only in case of unavailability of a specified material or equipment item or other conditions beyond Contractor's control.
B. Procedure:
   a. Submit to Engineer one copy of each substitution request in accordance with the requirements for furnishing submittals, as indicated in Section 01 33 00 - Submittal Procedures.
   b. Submit a separate request for each proposed substitute.

c. Engineer will provide timely review of substitution requests. Allow sufficient time (10 working days) for review and response.
d. Engineer will provide a written response to each substitution request. One copy of Engineer's response will be distributed to:
   i. Contractor.
   ii. Owner.
   iii. Construction Manager.
   iv. Engineer.
e. If the Engineer requests additional information to make an interpretation, provide the requested information within ten working days, unless the Engineer allows additional time, via correspondence referring to the substitution request number.

C. Preparation of Substitution Request:
a. Prepare each substitution request using the form included with this Section, or other form acceptable to Engineer
b. Number each substitution request using a two-digit sequential number. First substitution request will be "01".
c. Complete all information requested on the form, and enclose with the form supplementary information as required. Include with each substitution request the following:
   i. Identification of the material or equipment item (as applicable), including manufacturer's name and address.
   ii. Manufacturer's literature with description of the material or equipment item, performance and test data, and reference standards with which material or equipment item complies.
   iii. Samples, when appropriate.
   iv. Name and address of similar projects on which the material or equipment item was used, and date of installation.

1.4 SUBSTITUTE CONSTRUCTION METHODS OR PROCEDURES

A. Where construction methods or procedures are specified, for a period of 60 days after the Effective Date of the Agreement, Engineer will consider Contractor's written requests for substitute construction methods or procedures specified.
B. Procedure:
a. Submit to Engineer one copy of each substitution request in accordance with the requirements for furnishing submittals, as indicated in Section 01 33 00 - Submittal Procedures.
b. Submit a separate request for each proposed substitute.
c. Engineer will provide timely review of substitution requests. Allow sufficient time (10 working days) for review and response.
d. Engineer will provide a written response to each substitution request. One copy of Engineer's response will be distributed to:
   i. Contractor.
   ii. Owner.
   iii. Construction Manager.
   iv. Engineer.

e. If Engineer requests additional information to make an interpretation, provide information requested within ten days, unless Engineer allows additional time, via correspondence referring to request for substitution number.

C. Preparation of Substitution Request:
   a. Prepare each substitution request using the form included with this Section, or other form acceptable to Engineer.
   b. Number each substitution request using a two-digit sequential number. First substitution request will be “01”.
   c. Complete all information requested on the form, and enclose with the form supplementary information as required. Include with each substitution request the following:
      i. Detailed description of proposed method or procedure.
      ii. Itemized comparison of the proposed substitution with the specified method or procedure.
      iii. Drawings illustrating method or procedure.
      iv. Other data required by Engineer to establish that proposed substitution is equivalent to specified method or procedure.

1.5 CONTRACTORS REPRESENTATIONS

A. In submitting substitution request, Contractor represents that:
   a. Substitution request is complete and includes all information required by the Contract Documents.
   b. Contractor will provide the same or better guarantees or warranties for proposed substitute as for the specified materials, equipment, methods, or procedures, as applicable.
   c. Contractor waives all Claims for additional costs or extension of time related to proposed substitute that subsequently may become apparent.

PART 2 – PRODUCTS- NOT USED

PART 3 – EXECUTION

3.1 SECTION INCLUDES

3.2 ATTACHMENTS

A. The attachments listed below, which follow after the "End of Section" designation, are part of the section:
   a. Attachment A: Substitution request form (three pages).

END OF SECTION

SUBSTITUTION REQUEST

Substitution Request No.: _____ Date: _____

Reference: _____
Specifications Section Page Article / Paragraph

Proposed Substitute:
_____

Manufacturer: _____
Address: _____ Telephone No.: _____
Trade Name: Model No.:_____
Installer:
.:_____
Address: _____ Telephone No.: _____
History: ☐ New Product ☐ 1 to 4 Years Old ☐ 5 to 10 Years Old ☐ More than 10 Years Old
Differences between proposed substitute and specified item: _____

Point-by-Point Comparative Data Attached ☐

Reason for not providing specified item: _____

Similar Installation:
Project: _____ Date Installed: _____
Address:

Owner: _____ Engineer: _____
Proposed substitute affects other parts of Work: ☐ No ☐ Yes; explain _____
Savings to Owner for accepting substitute: _____ ($ _____)
(attach detailed, itemized estimate)
Proposed substitute changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ days.
(clarify whether change is to Substantial Completion, Milestone, or time for readiness for final payment)
Supporting Data Attached: ☐ Drawings ☐ Product ☐ Data ☐ Samples ☐ Tests ☐ Reports

- ☐ Substitute product, method, or procedure is subject to payment of licensing fee or royalty *(check if "yes" and attach information)*
- ☐ Substitute product, method, or procedure is patented or copyrighted *(check if "yes" and attach information)*

The Undersigned certifies:

- Representations in Section 01 25 00 (Substitution Procedures) regarding substitutions are valid.
- Same or better warranty and guarantee will be furnished for proposed substitute as for specified item.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitute will have no adverse effect on other trades and will not affect or delay Progress Schedule.
- Cost data as stated above is complete. Claims for additional costs or time related to accepted substitution which may subsequently become apparent are waived.

- Proposed substitute does not affect dimensions and functional clearances.
- Payment will be made for Engineer's review and changes, if any, to the design and Contract Documents, and construction costs caused by the substitute.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted By: _____
Firm: _____
Address: _____

Signature: _____ Date: _____
Attachments: _____
ENGINEER'S REVIEW AND ACCEPTANCE (OR NON-ACCEPTANCE) WILL BE DOCUMENTED IN A FIELD ORDER OR CHANGE ORDER, AS APPROPRIATE.
Additional Comments:

☐ Contractor ☐Subcontractor ☐Supplier ☐Manufacturer☐ Engineer ☐Other:

_____
_____
_____
_____
_____
_____

END OF SUBSTITUTION REQUEST

SECTION 01 26 00
CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. Requests for interpretation
C. Written clarification
D. Minor changes in the work and field orders
E. work change directives
F. Proposal requests
G. Change proposals
H. Change orders

1.2 DESCRIPTION

A. This Section includes general administrative and procedural requirements for the following:
   a. Requests for interpretation.
   b. Written clarifications.
   c. Minor changes in the Work and Field Orders.
   d. Work Change Directives.
   e. Proposal requests.
   f. Change Proposals.
   g. Change Orders.
B. Submit Contract modification documents to Owner and Engineer.
C. Retain at Contractor's office and at the Site a complete copy of each Contract modification document and related documents, and Owner's response.

1.3 REQUESTS FOR INTERPRETATION

A. General:
   a. Submit written requests for interpretation to obtain clarifications or interpretations of the Contract Documents. Report conflicts, errors, ambiguities, and discrepancies in the Contract Documents by requesting interpretation.
   b. Do not submit request for interpretation when other form of communication is appropriate, such as Contractor's submittals, requests for approvals of substitutes, notices, ordinary correspondence, or other form of communication. Improperly prepared or inappropriate requests for interpretation will be returned without response or action by Engineer.
   c. Do not submit request for interpretation or clarification when:
      i. answer may be obtained by observations at the Site; or
      ii. required information is clearly indicated in the Contract Documents; or
      iii. required information is included in industry standards referenced in the Contract Documents or Supplier's instructions that are consistent with the Contract Documents; or
      iv. are reasonably inferable from any of the foregoing.
   d. Contractor shall have sole financial responsibility for requests for interpretations or clarifications that are submitted late, out of sequence, or that are unnecessary.

e. Submit written requests for interpretation to Engineer.
f. Engineer will maintain a log of all requests for interpretation. Upon request, a copy of the log will be transmitted to the Contractor.

B. Procedure:
a. Submit each request for interpretation to Engineer via email. Submit each request for interpretation with separate letter of transmittal.
b. Engineer will provide timely review of requests for interpretation. Allow sufficient time (10 working days) for review and response.
c. Engineer will provide written response to each request for interpretation. One copy of Engineer's response will be distributed electronically to:
i. Contractor.
ii. Owner.
iii. Engineer.
d. If Engineer requests additional information to make an interpretation, entity requesting the interpretation shall transmit the information requested within ten working days, unless Engineer allows additional time, via correspondence referring to request for interpretation number.
e. Interpretations that One or Both Parties Believes Entails a Change to the Contract:
i. If Contractor or Owner believes that a change in the Contract Price or Contract Times or other change to the Contract is required as a result of Engineer's interpretation, so advise Engineer in writing before proceeding with the Work associated with the request for interpretation.
ii. If, after this initial communication, either Owner or Contractor believes that a change in the Contract Price, Contract Times, both, or other relief with respect to the terms of the Contract is necessary, recourse shall be in accordance with the Contract Documents.

C. Preparation of Request for Interpretation:
a. Prepare each request for interpretation using the form included with this Section, or other form acceptable to Engineer.
b. Number each request for interpretation using a two-digit sequential number. First request for interpretation will be "01".
c. In space provided on request for interpretation form, describe the interpretation requested. Provide additional sheets as necessary. Include text and sketches as required in sufficient detail to describe the need for an interpretation.
d. When applicable, request for interpretation shall include Contractor's recommended resolution.

1.4 WRITTEN CLARIFICATION

A. General:
a. Written clarifications provide clarification or interpretation of conflicts, errors, ambiguities, and discrepancies in the Contract Documents that are identified by Engineer.
b. Written clarifications do not change the Contract Price or Contract Times, and do not alter the Contract Documents.
c. Written clarifications, when required, will be initiated and issued by Engineer as correspondence or using a clarification notice form, with additional information as required.

B. Procedure:
a. Engineer will distribute one copy of each written clarification, electronically, to:

i. Contractor.
ii. Owner.
iii. Engineer.

b. Written clarifications that one or both parties believes entails a change to the contract:
   i. If Contractor or Owner believes that a change in the Contract Price or Contract Times or other change to the Contract is required as a result of Engineer's written clarification, so advise Engineer in writing before proceeding with the Work associated with the written clarification.
   ii. If, after this initial communication, either Owner or Contractor believes that a change in the Contract Price, Contract Times, both, or other relief with respect to the terms of the Contract is necessary, recourse shall be in accordance with the Contract Documents.
c. If Engineer's written clarification is unclear, submit request for interpretation.

1.5 MINOR CHANGES IN THE WORK AND FIELD ORDERS

A. General:
   a. Field Orders authorize minor variations in the Work, but do not change the Contract Price or Contract Times.
   b. Field Orders, when required, will be initiated and issued by Engineer.
   c. Field Orders will be in the form of EJCDC® C-942, "Field Order", or other form acceptable to Engineer.
   d. Engineer will maintain a log of all Field Orders issued.
B. Procedure:
   a. Engineer will distribute one copy of each Field Order, electronically, to:
      i. Contractor.
      ii. Owner.
      iii. Engineer.
   b. Field Orders that One or Both Parties Believes Entails a Change to the Contract:
      i. If Contractor or Owner believes that a change in the Contract Price or Contract Times or other change to the Contract is required as a result of a Field Order, so advise Engineer in writing before proceeding with the Work associated with the Field Order.
      ii. If, after this initial communication, Contractor or Owner believes that a change in the Contract Price, Contract Times, both, or other relief with respect to the terms of the Contract is necessary, recourse shall be in accordance with the Contract Documents.
   c. If Field Order is unclear, submit request for interpretation.

1.6 WORK CHANGE DIRECTIVES

A. General:
   a. Work Change Directives, when required, order additions, deletions, or revisions to the Work.
   b. Work Change Directives do not change the Contract Price or Contract Times, but are evidence that the parties to the Contract expect that the change ordered or documented by the Work Change Directive will be included in a subsequently issued Change Order following agreement by the parties as to the Work Change Directive's effect, if any, on the Contract Price or Contract Times.
   c. Work Change Directives, when required, will be initiated and issued by Engineer.

d. Work Change Directives will be in the form of EJCDC® C-940, "Work Change Directive", or other form acceptable to Engineer.
e. Engineer will maintain a log of all Work Change Directives issued.

B. Procedure
a. Engineer will furnish to Contractor one electronic copy of each Work Change Directive signed by Owner and Engineer.
b. Promptly sign each original Work Change Directive and, within five days of receipt, return all originals to Engineer.
c. Engineer will distribute one copy of signed Work Change Directives electronically to:
i. Contractor:
ii. Owner:
iii. Engineer:
d. Documentation of Costs:
i. When required by Engineer, document the Work performed under each separate Work Change Directive.
ii. For each day, document the following in a format acceptable to Engineer:
a) Number and labor classifications of workers employed and hours worked.
b) Construction equipment used, including manufacturer, model, and year of manufacture, and number of hours such equipment was on-Site and used for the Work under the Work Change Directive.
c) Consumables and similar materials used.
d) Receipts, bills, or invoices for and descriptions of materials and equipment incorporated into the Work.
e) Invoices and labor and equipment breakdowns for Subcontractors and Suppliers.
f) Other information required by Owner or Engineer.
iii. Submit documentation to Engineer as a Change Proposal.

1.7 PROPOSAL REQUESTS

A. General:
a. Proposal requests are for requesting details on the effect on the Contract Price, and Contract Times, and other information relative to contemplated changes in the Work.
b. Proposal requests do not authorize changes or variations in the Work, and do not change the Contract Price or Contract Times, or terms of the Contract.
c. Proposal requests may be initiated by Engineer or Owner.
d. Proposal requests will be in a form acceptable to Owner or Engineer.
e. Engineer will maintain a log of all proposal requests issued.

B. Procedure:
a. Engineer will transmit one copy of each signed proposal request electronically to Contractor, Owner, Engineer.
b. Submit request for interpretation to clarify conflicts, errors, ambiguities, and discrepancies in proposal request.
c. Upon receipt of proposal request, Contractor shall prepare and submit to Engineer a Change Proposal, in accordance with the Contract Documents, for the proposed Work described in the proposal request.

1.8 CHANGE PROPOSALS

A. General:
   a. Submit written Change Proposal to Engineer:
      i. in response to each proposal request; or
      ii. when Contractor believes a change in the Contract Price or Contract Times, or other change to the terms of the Contract is required; or
      iii. to appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; or
      iv. contest a set-off against payment due; or
      v. seek other relief under the Contract.
   b. Engineer will maintain a log of all Change Proposals.

B. Procedure:
   a. Submit Change Proposal to Engineer electronically. Include with each Change Proposal all required supporting documentation and a separate letter of transmittal.
   b. Engineer's Review and Requests for Additional Information:
      i. Engineer will review and act on each Change Proposal within 10 working days of submission.
      ii. When Engineer requests additional information to render a decision, submit required information within five working days of receipt of Engineer's request, unless Engineer allows more time. Submit the required information via correspondence that identifies the specific Change Proposal number.
      iii. Owner shall transmit to Engineer such comments, if any, that Owner has on the Change Proposal, within 10 working days of Owner's receipt of the Change Proposal.
      iv. Engineer will render a written decision on the Change Proposal.
   c. Upon completing review, one copy of Engineer's written response will be distributed to:
      i. Contractor.
      ii. Owner.
      iii. Engineer.
   d. If Change proposal is recommended for approval by Engineer and is approved by Owner, a Change Order will be issued or, when applicable, an appropriate use of contingency allowance will be authorized by Owner.

C. Preparation of Change Proposals:
   a. Prepare each Change Proposal using the form included with this Section, or other form acceptable to Owner and Engineer.
   b. Number each Change Proposal using a two-digit sequential number. First Change Proposal will be "01".
   c. In space provided on Change Proposal form:
      i. Describe the scope of each proposed change. Include text and sketches on additional sheets as required to provide detail sufficient for Engineer's review and response. If a change item is submitted in response to a proposal request, write in as scope, "In accordance with proposal request number" followed by the proposal request number. Submit written clarifications, if any, to scope of change.
      ii. Submit justification for each proposed change. If a change item is submitted in response to a proposal request, write in as justification, "In accordance with proposal request number" followed by the proposal request number.

iii. List the total change in the Contract Price and Contract Times for each separate change item included in the Change Proposal.

d. Unless otherwise directed by Engineer, attach to the Change Proposal detailed breakdowns of pricing (Cost of the Work and Contractor's fee), including:
   i. List of Work tasks to accomplish the change.
   ii. For each task, labor cost breakdown including labor classification, total hours per labor classification, and hourly cost rate for each labor classification.
   iii. Construction equipment and machinery to be used, including manufacturer, model, and year of manufacture, and number of hours for each.
   iv. Detailed breakdown of cost of materials and equipment to be incorporated into the Work, including quantities, unit costs, and total cost, with Supplier's written quotations.
   v. Breakdowns of the Cost of the Work and fee for Subcontractors, including labor, construction equipment and machinery, and materials and equipment incorporated into the Work, other costs, and Subcontractor fees (e.g., overhead and profit).
   vi. Breakdown of other costs eligible.
   vii. Other information required by Engineer.
   viii. Contractor's fees applied to eligible Contractor costs and eligible Subcontractor costs.

1.9 CHANGE ORDERS

A. General:
   a. Change Orders will be recommended by Engineer (when required by the Contract Documents), and will be signed by Owner and Contractor, to authorize additions, deletions, or revisions to the Work, or changes to the Contract Price or Contract Times.
   b. Change Orders will be in the form of EJCDC® C-941, "Change Order", or other form acceptable to Owner.
   c. Engineer will maintain a log of all Change Orders issued.

B. Procedure:
   a. Engineer will furnish to Contractor one original copy of each Change Order electronically.
   b. Promptly sign each original Change Order and, within five working days of receipt, return all originals to Engineer.
   c. Engineer will sign each original Change Order and forward them to Owner.
   d. After approval and signature by Owner, Engineer will distribute the original, signed Change Order electronically to:
      i. Contractor.
      ii. Owner.
      iii. Engineer.

PART 2 PRODUCTS – NOT USED

PART 3 - EXECUTION

3.1 SECTION INCLUDES

A. Attachments

3.2 ATTACHMENTS

A. The attachments listed below, which follow after the "End of Section" designation, are part of this Section:
   a. Attachment A: Request for interpretation form (one page).
   b. Attachment B: Change Proposal form (two pages).

END OF SECTION

REQUEST FOR INTERPRETATION

Request for Interpretation No.:
_____
Contractor:_____ Purchase Order No. _____
Date Transmitted: _____ Date Received: _____
Date Response Requested: _____ Date Response Transmitted: _____
Subject:_____
Reference(s): _____
Specifications Section(s) Drawing(s) /Note(s) / Detail(s)
Interpretation Requested:

Signature: _____ Date: _____

Engineer's Response:

Signature: _____ Date: _____

END OF REQUEST FOR INTERPRETATION

CHANGE PROPOSAL

Change Proposal No.: _____ Date:_____
Contractor: _____ Purchase Order No.: _____
Submitted in Response to Proposal Request No.: _____
Subject:
_____
_____

Scope of Work:
Attach and list supporting information as required.

Justification

Changes in Contract Price and Contract Times:
For Contract Price, attach detailed cost breakdowns for Contractor and Subcontractors, Supplier quotations, and other information required. For the Contract Times, state increase, decrease, or no change to Contract Times for Substantial Completion, readiness for final payment, and Milestones, if any. If increase or decrease, state specific number of days for changes to the Contract Times.

The following changes are proposed to the Contract Price and Contract Times:

Description	Contracted Price (Dollars)	Contract Times (Days)	
		Substantial	Final
1.	$		
2.	$		
Total This Change Proposal:	$		

Changes to Milestones (if any): _____
Contractor represents that supporting data attached to this Change Proposal are accurate and complete. The requested time or price adjustment indicated in this Change Proposal is the entire adjustment to which Contractor believes it is entitled as a result of the proposed change(s) indicated herein.

Change Proposal By:_____

Signature of Proposer:_____Date: _____

END OF CHANGE PROPOSAL

SECTION 01 31 00
PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. Project Coordination and Management

1.2 DESCRIPTION

A. This Section provides the general requirements for coordinating and managing construction operations to complete the Work.

1.3 PROJECT COORDINATION AND MANAGEMENT

A. Contractor shall coordinate scheduling, submittals, and Work of various sections of Contract Documents to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
B. Contractor shall coordinate space requirements, sequencing, supports, fencing, erosion and sediment controls, permit compliance and monitoring, chain of communications, roles and responsibilities. This includes but not limited to physical or mechanical installation or removal of materials, excess materials, or equipment in accordance with plans, specifications, guidance, procedures, best management practices, or as indicated on Drawings. If Contractor is unsure of plan, drawing, process, or approval, notification shall be made to Construction Manager for decision.
C. Contractor shall coordinate the Work of all subcontractors and make certain that, where the Work of one trade is dependent upon the Work of another trade, the Work first installed is properly placed, installed, aligned, and finished as specified or required to properly receive subsequent materials applied or attached thereto. Direct subcontractors to correct defects in their workmanship when subcontractors of subsequent materials have a reasonable and justifiable objection to conditions of Work. Do not force subcontractors to apply or install products to an improperly finished product.
D. Contractor shall establish on-Site lines of authority and communications, and shall comply with procedures for communications and submittals as described in this specifications package.
E. Contractor shall establish and maintain contact information, including email addresses, for Contractor's project managers and project Site superintendents. Contractor's project manager and Site superintendent shall have available and maintain phone, email, and internet access at the Site.
F. Contractor shall attend and participate in all project meetings outlined in Section 01 31 19 - Project Meetings.
G. Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work.
H. Maintain sufficient competent personnel, drafting and computer-aided drafting/design (CAD) equipment, software systems, and supplies at the Site or at the Contractor's office for preparing layout drawings, coordination drawings, and record documents. With the Contract Documents and Shop Drawings, use such coordination drawings as tools for coordinating the work of various trades. Where such coordination drawings are to be prepared by Subcontractor, ensure that each Subcontractor maintains required personnel and facilities at the Site or subcontractor's office.

I. Contractor shall complete all Work by Date or sooner in accordance with the Contractor's Construction Progress Schedule.

PART 2 – PRODUCTS- NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 31 19
PROJECT MEETINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. Weekly Construction progress meetings
C. Additional meetings
D. Closeout meeting

1.2 DESCRIPTION

A. Contractor shall perform and sequence Work in a manner that meets all Work restrictions in accordance with this Section and the Contract Documents.
   a. A Pre-Construction Meeting will be held for the Project.
   b. Contractor shall attend the meeting prepared to discuss items on the Pre-Construction Meeting preliminary agenda presented in this Section.
   c. The Pre-Construction Meeting will be used to designate responsible parties, discuss the Contractor's Preliminary Progress Schedule, and review administrative and procedural requirements for the Project.
   d. Work requiring coordination will be discussed, and procedures for handling the Work and coordination will be established.
B. Weekly Construction Progress Meetings
   a. Weekly Construction Progress Meetings will be held on a weekly basis throughout the Project. Contractor shall attend each progress meeting prepared to discuss in detail all items on the agenda. If agreeable to Contractor, Owner and Engineer, weekly meetings can be transitioned to bi-weekly meetings.
   b. Engineer will preside at weekly progress meetings and will prepare and distribute meeting minutes to all participants and others, as requested.
   c. Weekly Construction Progress Meeting will be held every week on a day and time agreeable to Owner, Engineer, and Contractor.
C. Closeout Meeting
   a. One project closeout meeting with Engineer, Owner and Contractor will be held prior to demobilization of Contractor from the Site. Contractor and all key subcontractors shall attend.

1.3 WEEKLY CONSTRUCTION PROGRESS MEETINGS

A. Engineer will schedule and administer meetings throughout progress of the Work at weekly intervals, and other meeting as required.
B. Engineer will make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings.
C. Handouts: Contactor shall bring copies of the following for each attendee:
   a. List of Work completed since previous meeting.
   b. Updated Project Schedule and Schedule of Submittals.
   c. "Look Ahead" Schedule of Work for next two weeks.

D. Attendance Required: Contractor's Project Manager, Job Superintendent, major subcontractors and suppliers, Owner, Engineer, and other authorities having jurisdiction over the Work, if available.
E. Agenda: Contractor shall make revisions to the agenda provided below prior to the first meeting. Engineer may revise the agenda as the Work proceeds.
   a. Review minutes of previous meetings.
   b. Health and safety issues.
   c. Review of Work progress.
   d. Field observations, problems, and decisions.
   e. Identification of problems impeding planned progress.
   f. Review of submittals schedule and status of submittals.
   g. Review of off-Site fabrication and delivery schedules.
   h. Review of Construction Progress Schedule in Gantt format.
   i. Corrective measures to regain projected schedules.
   j. Planned progress during succeeding work period.
   k. Identification of potential impacts to ongoing operations during succeeding work period, and means and methods to reduce said impact.
   l. Identification of noise and vibration-producing activities planned during succeeding work period, and means and methods to control and monitor related impacts.
   m. Site management issues, access, security, traffic and housekeeping.
   n. Maintenance of quality and work standards, testing and inspections.
   o. Effect of proposed changes on progress schedule and coordination.
   p. Permits
   q. Financials discussion.
   r. Action items.
   s. Agency comments and concerns.
   t. Other Work-related business.
F. Engineer will record minutes and distribute copies to all meeting participants.
G. The weekly and other meetings shall be conducted on the Site in Contractor's field office constructed per Section 01 52 00 - Field Offices and Sheds, or other mutually agreed upon location by Owner, Engineer, and Contractor.

1.4 ADDITIONAL MEETINGS

A. Contractor shall attend additional meetings requested by Engineer, Owner, and/or local officials at no additional Cost to Owner.
B. Engineer will prepare agenda and minutes for such meetings.

1.5 CLOSEOUT MEETING

A. Engineer will schedule and conduct one project closeout meeting with Contractor and Owner prior to demobilization of Contractor from the Site. Contractor and all key subcontractors shall attend.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 32 16
CONSTRUCTION PROGRESS SCHEDULE

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Requirements included
B. Form of schedules
C. Content of schedules
D. Monthly progress reports
E. Submissions
F. Distribution

1.2 REQUIREMENTS INCLUDED

A. Within fifteen working days after award of the contract, prepare and submit to the Engineer estimated construction progress schedules for the work, with sub-schedules, if required, of related activities which are essential to its progress.
B. Submit revised progress schedules with the submission of each payment request.

1.3 FORM OF SCHEDULES

A. Prepare schedules in the form of a horizontal bar chart.
B. Provide a separate horizontal bar for each item of work that matches verbatim the breakdown of the contract price toward which partial payments will be made to the Contractor.
C. Horizontal Time Scale: Identify the first workday of each week.
D. Scale and Spacing: To allow space for notations and future revisions.
E. Minimum Sheet Size: 11" by 17"

1.4 CONTENT OF SCHEDULES

A. Construction Progress Schedule: Include the following:
   a. The name of the project and name and address of the Contractor.
   b. The name and address of the Engineer.
   c. Date indicating the end of the construction period being reported.
   d. Legend showing a solid line representing estimated construction and a dotted line representing actual construction.
   e. Columns showing the percentage of the total contract of each item, the percentage of completion to date of each item, and the weighted percentage of completion of each item to the project as a whole.
   f. Starting and completion dates of the contract.
   g. Project percentage of completion for each item, as of the first day of each month.
   h. A curved line plotted by adding the products of the estimated percentages of completion and the percentages of the total contract of all items for each month. Horizontal control of the curved line shall be the same monthly indications used for the bar chart and vertical control shall be divided to indicate 100%.
B. Submittals Schedule for Shop Drawings, Product Data and Samples:
   a. Show the following:
      i. The dates for Contractor's submittals.
      ii. The dates reviewed submittals will be required from the Engineer.

1.5 MONTHLY PROGRESS REPORTS

A. Indicate progress of each activity to date of submission.
B. Show changes occurring since previous submission of schedule:
   a. Major changes in scope.
   b. Activities modified since previous submission.
   c. Revised projections of progress and completion.
   d. Other identifiable changes.
C. Provide a narrative report as needed to define:
   a. Problem areas, anticipated delays, and the impact on the schedule.
   b. Corrective action recommended, and its effect.
   c. The effect of changes on schedules of other prime Contractors.

1.6 SUBMISSIONS

A. Submit initial schedules within fifteen working days after award of contract.
   a. Engineer will review schedules and return review copy within ten working days after receipt.
   b. If required, resubmit within seven working days after return of review copy.
B. Submit revised progress schedules with each application for payment.
C. Submit the schedules in PDF via email to the Engineer.

1.7 DISTRIBUTION

A. Distribute copies of the reviewed schedules to:
   a. Jobsite file.
   b. Subcontractors.
   c. Other concerned parties.
B. Instruct recipients to report promptly to the Contractor, in writing, any problems anticipated by the projections shown in the schedules.

PART 2 – PRODUCTS- NOT USED

PART 3 – EXECUTION- NOT USED

END OF SECTION

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. Types of submittals
C. Submittals required in this section
D. Procedure for submittals
E. Engineer's review

1.2 DESCRIPTION

A. Contractor shall prepare and furnish submittals in accordance with this Section.
B. Provide submittals within the timeframes specified in the respective Specification Sections (when such timeframes are specified) and well in advance of the need for the material, equipment, or procedure (as applicable) in the Work and with ample time required for delivery of materials and equipment and to implement procedures following Engineer's review or acceptance of the associated submittal. Work covered by a submittal will not be included in progress payments until review or acceptance of related submittals has been obtained in accordance with the Contract Documents.
C. Contractor is responsible for dimensions to be confirmed and corrected at the Site; quantities; information pertaining solely to fabrication processes; means, methods, sequences, procedures, and techniques of construction; safety precautions and programs incident thereto; and for coordinating the work of all trades.
D. Contractor's signature of submittal's stamp and letter of transmittal shall be Contractor's representation that Contractor has complied with its obligations under the Contract Documents relative to that submittal. Owner and Engineer shall be entitled to rely on such representations by Contractor.

1.3 TYPES OF SUBMITTALS

A. Submittals are classified as Action Submittals, Informational Submittals and Closeout Submittals. The type of each required submittal is designated in the respective Specifications Sections. When type of submittal is not designated in the associated Specifications Section, submittal will be classified as follows:
    a. Action Submittals include:
        i. Shop Drawings.
        ii. Product data.
        iii. Delegated design submittals, which include documents prepared, sealed, and signed by a design professional retained by Contractor, Subcontractor, or Supplier for materials and equipment to be incorporated into the completed Work. Delegated design submittals do not include submittals related to temporary construction unless specified otherwise in the related Specifications Section. Delegated design submittals include design drawings, design data including calculations, specifications, certifications, and other submittals prepared by such design professional.
        iv. Samples.
        v. Testing plans, procedures, and testing limitations.
    b. Informational Submittals include:

i. Certificates.
ii. Design data not sealed and signed by a design professional retained by Contractor, Subcontractor, or Supplier.
iii. Pre-construction test and evaluation reports, such as reports on pilot testing, subsurface investigations, testing for potential Contaminants, and similar reports.
iv. Supplier instructions, including installation data, and instructions for handling, starting-up, and troubleshooting.
v. Source quality control submittals (other than testing plans, procedures, and testing limitations), including results of shop testing.
vi. Field quality control submittals (other than testing plans, procedures, and testing limitations), including results of operating and acceptability tests at the Site.
vii. Supplier reports.
viii. Sustainable design submittals (other than sustainable design closeout documentation).
ix. Special procedure submittals, including plans for shut-downs and tie-ins, and other procedural submittals.
x. Qualifications statements.
xi. Administrative submittals, including:
a) Progress Schedules.
b) Progress reports.
c) Schedules of Submittals.
d) Schedules of Values.
e) Photographic documentation.
f) Coordination drawings, when submittal of such is required.
g) Copies of permits obtained by Contractor.
h) Survey data and similar information.

b. Closeout Submittals include:
i. Maintenance contracts.
ii. Operations and maintenance data.
iii. Bonds, such as special maintenance bonds and bonds for a specific material, equipment item, or system.
iv. Warranty documentation.
v. Photographic documentation.
vi. Record documentation.
vii. Sustainable design closeout documentation.

c. When type of submittal is not specified and is not included in the list above, submit request for interpretation in accordance with Section 01 26 00 - Contract Modification Procedures.

B. Not Included in this Section: Administrative and procedural requirements for the following are covered elsewhere in the Contract Documents:
a. Requests for interpretations of the Contract Documents.
b. Field Orders, Work Change Directives, and Change Orders.
c. Applications for Payment.
d. Reports, documentation, and permit applications required to be furnished by Contractor to authorities having jurisdiction.

1.4 SUBMITTALS REQUIRED IN THIS SECTION

A. Informational Submittals:
a. Schedule of Submittals:

i. Timing:
   a) Furnish submittal within time frames indicated in the Contract Documents.
   b) Submit updated Schedule of Submittals with each submittal of the updated Progress Schedule.

ii. Content: In accordance with the General Conditions, as may be modified by the Supplementary Conditions, and this Section. Requirements for content of preliminary Schedule of Submittals and subsequent submittals of the Schedule of Submittals are identical. Identify on Schedule of Submittals all submittals required in the Contract Documents. Updates of Schedule of Submittals shall show scheduled dates and actual dates for completed tasks. Indicate submittals that are on the Project's critical path. Indicate the following for each submittal:
   a) Date by which submittal will be received by Engineer.
   b) Whether submittal will be for a substitution or "or-equal". Procedures for requesting approval of substitutes and "or-equals" are specified in Section 01 25 00 - Substitution Procedures.
   c) Date by which Engineer's response is required. Not less than 14 days shall be allowed for Engineer's review, starting upon Engineer's actual receipt of each submittal. Allow increased time, upwards of 28 days, for large or complex submittals.
   d) For submittals for materials or equipment, date by which material or equipment must be at the Site to avoid delaying the Work and to avoid delaying the work of other contractors, if any.

iii. Prepare Schedule of Submittals using same software, and in same format, specified for Progress Schedules in Section 01 32 16 - Construction Progress Schedule.

iv. Coordinate Schedule of Submittals with the Progress Schedule.

v. Schedule of Submittals that is not compatible with the Progress Schedule, or that does not indicate submittals on the Project's critical path, or that that places extraordinary demands on Engineer for time and resources, is unacceptable. Do not include submittals not required by the Contract Documents.

vi. In preparing Schedule of Submittals:
   a) Considering the nature and complexity of each submittal, allow sufficient time for review and revision.
   b) Reasonable time shall be allowed for Engineer's review and processing of submittals, for submittals to be revised and resubmitted, and for returning submittals to Contractor.
   c) Identify and accordingly schedule submittals that are expected to have long-anticipated review times and submittals that may be subject to review by authorities having jurisdiction.

1.5 PROCEDURE FOR SUBMITTALS

A. Submittal Identification System: Use the following submittal identification system, consisting of submittal number and review cycle number.
   a. Submittal number shall be separate and unique number correlating to each individual submittal required. Contractor shall assign submittal number as follows:
      i. First part of submittal number shall be the applicable Specification Section number, followed by a hyphen.

ii. Second part of submittal number shall be a three-digit number (sequentially numbered from 001 through 999) assigned to each separate and unique submittal furnished under the associated Specifications Section.
iii. Typical submittal number for the third submittal furnished for Section 31 00 00- Earthwork would be “31 00 00-003”.

b. Review cycle number shall be a letter designation indicating the initial submittal or re-submittal associated with each submittal number:
i. “A” = Initial (first) submittal.
ii. “B” = Second submittal (i.e., first re-submittal).
iii. "C” = Third submittal (i.e., second re-submittal).

c. Typical submittal identification for the second submission (first re-submission) of the third submittal provided for Section 31 00 00 - Earthwork would be “31 00 00-003-B”.

B. Letter of Transmittal for Submittals:
a. Furnish separate letter of transmittal with each submittal.
b. Each letter of transmittal shall contain the following:
i. Contractor’s name.
ii. Owner’s name.
iii. Project name.
iv. Contract or Purchase Order number.
v. Transmittal number.
vi. Submittal number and review cycle number.
vii. Submittal date and dates of any previous submissions.
viii. Reference to appropriate Specifications Section number, page, and paragraph(s).
ix. Reference to appropriate Drawing sheet(s) and detail(s).
x. Clear space at least three inches by three inches in size for affixing Engineer’s review stamp.
xi. Clear space suitably sized for affixing Contractor’s stamp.

c. For submittals with proposed deviations from the requirements of the Contract Documents, letter of transmittal shall specifically describe each proposed variation.

C. Contractor’s Review and Stamp:
a. Contractor’s Review: Before transmitting submittals to Engineer, review submittals to:
i. Ensure proper coordination of the Work.
ii. Determine that each submittal is in accordance with Contractor’s desires.
iii. Verify that submittal contains sufficient information for Engineer to determine compliance with the Contract Documents.

b. Incomplete or inadequate submittals will be returned without review.
c. Contractor’s Stamp and Signature:
i. Each submittal furnished shall bear Contractor’s stamp of approval and signature, as evidence that submittal has been reviewed by Contractor and verified as complete and in accordance with the Contract Documents.
ii. Submittals without Contractor’s stamp and signature will be returned without review.
iii. Contractor’s stamp shall contain the following certification statement: “By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers, and similar data, and I have checked and coordinated each item with other applicable Shop Drawings and all Project requirements.”

D. Submittal Marking and Organization:

a. Mark each page of submittal, and each individual component submitted, with submittal number and applicable Specifications paragraph.
b. Arrange submittal information in same order as requirements are written in the associated Specifications Section.
c. Each Shop Drawing sheet shall have title block with complete identifying information satisfactory to Engineer.
d. Package together submittals for the same Specifications Section. Do not furnish required information piecemeal.

E. Format of Submittals:
a. Action Submittals and Informational Submittals: Submit electronic copies.
b. Closeout Submittals:
i. Submit electronic copies of the following Closeout Submittals:
a) Maintenance contracts.
b) Operations and maintenance data.
c) Bonds for specific products or systems.
d) Warranty documentation.
e) Sustainable design closeout documentation.
ii. Record Documentation: Submit in accordance with Section 01 78 39 - Project Record Documents.

F. Electronic Submittals:
a. Format: Electronic files shall be in Portable Document Format (PDF). Files shall be electronically searchable.
b. Organization and Content:
i. Each electronic submittal shall be one file; do not divide individual submittals into multiple files each.
ii. When submittal is large or contains multiple parts, furnish PDF file with bookmark foreach section of submittal.
iii. Content shall be identical to printed submittal. First page of electronic submittal shall be Contractor's letter of transmittal.
c. Quality and Legibility: Electronic submittal files shall be made from the original and shall be clear and legible. Do not provide scans of faxed copies. Electronic file shall be full size of original, printed documents. Properly orient all pages for reading on a computer screen.
d. Provide sufficient Internet service and e-mail capability for Contractor's use in transferring electronic submittals, receiving responses to electronic submittals, and associated electronic correspondence. Check not less than once per day for distribution of electronic submittals, responses to electronic submittals, and electronic correspondence related to submittals.
e. Submitting Electronic Files: Electronic copies shall be emailed to Engineer and/or uploaded to project website (managed by Contractor).

G. Distribution:
a. Engineer will upload electronic copy of each reviewed or accepted submittal requiring Engineer's written response to the Project website or email to project team.
b. Contractor shall distribute hard copy reproductions of reviewed or accepted submittals, where required, to the job site file and elsewhere, as directed by Engineer. Number of hard copies shall be as directed by Engineer, but will not exceed six.

H. Engineer's Submittal Log:
a. Engineer will maintain a log of required submittals. Updated submittal log will be provided to Contractor upon request.

b. Review submittal log and status of each submittal with Engineer on a weekly or more frequent basis.
c. Coordinate updates to Schedule of Submittals with Engineer's updates to submittal log.

1.6 ENGINEER'S REVIEW

A. Timing: Engineer's review will conform to timing indicated in the Schedule of Submittals accepted by Engineer.
B. Submittals not required by the Contract Documents will not be reviewed by Engineer and will not be recorded in Engineer's submittal log. Hard copies, if any, of such submittals will be returned to Contractor.
C. Results of Engineer's Review:
   a. Action Submittals: Each submittal will be given one of the following dispositions by Engineer:
      i. Reviewed: Upon return of submittal marked "Reviewed", order, ship, or fabricate materials and equipment included in the submittal (pending Engineer's review or acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents.
      ii. Reviewed and Noted: Upon return of submittal marked "Reviewed and Noted", order, ship, or fabricate materials and equipment included in the submittal (pending Engineer's review or acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents, and in accordance with corrections indicated in Engineer's submittal response.
      iii. Revise and Resubmit: Upon return of submittal marked "Revise and Resubmit", make the corrections indicated and re-submit to Engineer for review.
      iv. Rejected: This disposition indicates that submittal includes material or equipment that cannot be reviewed. Upon return of submittal marked "Rejected", repeat initial submittal procedure utilizing reviewable material or equipment. Number resubmittal with appropriate review cycle number.
   b. Informational Submittals:
      i. Each submittal will be given one of the following dispositions:
         a) Accepted: Information included in submittal complies with the applicable requirements of the Contract Documents, and is acceptable. No further action by Contractor is required relative to this submittal, and the Work covered by the submittal may proceed, and materials and equipment with submittals with this disposition may be shipped or operated, as applicable.
         b) Not Accepted: Submittal does not indicate compliance with the applicable requirements of the Contract Documents and is not acceptable. Revise submittal and re-submit to indicate acceptability and compliance with the Contract Documents.
      ii. The following types of Informational Submittals, when acceptable to Engineer, will not receive a written response from Engineer. Disposition as "Accepted" will be recorded in Engineer's submittal log. When submittals of the following are not acceptable, Engineer will provide written response to Contractor:
         a) Safety data sheets.
         b) Manifests and other shipping documents.
         c) Delivery tickets.
         d) Compaction testing reports.
         e) Concrete testing reports.
         f) Manufacturer's instructions.

c. Closeout Submittals: Dispositions and meanings are the same as specified for Informational Submittals. When acceptable, Closeout Submittals will not receive a written response from Engineer. Disposition as "Accepted" will be recorded in Engineer's submittal log. When Closeout Submittal is not acceptable, Engineer will provide written response to Contractor.

PART 2 – PRODUCTS- NOT USED

PART 3 – EXECUTION – NOT USED

END OF SECTION

SECTION 01 34 00
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Requirements included
B. Shop drawings
C. Product data
D. Samples
E. Contractor responsibilities
F. Engineer duties
G. Submission requirements
H. Resubmission requirements
I. Distribution

1.2 REQUIREMENTS INCLUDED

A. Submit shop drawings, product data and samples required by Contract Documents.

1.3 SHOP DRAWINGS

A. Drawings shall be presented in a clear and thorough manner.
   a. Details shall be identified by reference to sheet and detail or schedule shown on Contract Drawings.
B. Minimum Sheet Size: 8 1/2 inch by 11 inch.

1.4 PRODUCT DATA

A. Preparation:
   a. Clearly mark each copy to identify pertinent products or models.
   b. Show performance characteristics, capacities and efficiencies.
   c. Show dimensions and clearances required.
   d. Show wiring or piping diagrams and controls.
B. Manufacturer's Standard Schematic Drawings and Diagrams:
   a. Modify drawings and diagrams to delete information which is not applicable to the work.
   b. Supplement standard information to provide information specifically applicable to the work.

1.5 SAMPLES

A. Office samples shall be of sufficient size and quantity to clearly illustrate:
   a. Functional characteristics of the product, with integrally related parts and attachment devices.
   b. Full range of color, texture and pattern.
B. Field Samples and Markups:
   a. Contractor shall erect, at the project site, at a location acceptable to the Engineer.
   b. Size or Area: That specified in the respective Specification Section.
   c. Fabricate each sample and mark-up complete and finished.
   d. Remove mark-ups at conclusion of work or when acceptable to the Engineer.

1.6 CONTRACTOR RESPONSIBILITIES

A. Review shop drawings, product data and samples prior to submission.

B. Determine and verify:
   a. Field measurements.
   b. Field construction criteria.
   c. Catalog numbers and similar data.
   d. Conformance with Specifications.
C. Coordinate each submittal with requirements of the work and of the Contract Documents.
D. Notify the Engineer in writing, at time of submission, of any deviations in the submittals from requirements of the Contract Documents, stating the difference in value between the Contract requirements and that denoted by said shop drawings.
E. Begin no fabrication or work which requires submittals until return of submittals with Engineer review status.

1.7 ENGINEER DUTIES

A. The Engineer will check and review shop drawings only for conformance with the design concept and for compliance with information given in the Contract Documents. Review by the Engineer of shop drawings for any material, apparatus, device, etc., will not relieve the Contractor from responsibility for furnishing same of proper dimensions, size, quantity, and quality to effectively perform the work and carry out the requirements and intent of the Contract Documents. Such review will not relieve the Contractor from responsibility for errors of any sort in the shop drawings, nor for the proper coordination of any submittal with all other work.
B. Affix stamp and initials or signature, and indicate disposition of each submittal in accordance with the following grading requirements:
   a. "Reviewed" indicates that Engineer notes no exception to the intent of the Contract Documents. Fabrication of item may commence.
   b. "Reviewed as Noted" indicates that with minor corrections or additions, Engineer notes no exception to the intent of the Contract Documents. Item may be fabricated on basis of corrections noted. No further checking will be required.
   c. "Revise and Resubmit" indicates that no fabrication may be commenced.
   d. "Rejected" indicates nonconformance with the Contract requirements, or that too many corrections would be necessary. The Engineer will state the reasons for rejection.
C. Return submittals to Contractor for distribution, or for resubmission.

1.8 SUBMISSION REQUIREMENTS

A. Make submittals promptly in accordance with reviewed schedule, and in such sequence as to cause no delay in the work or in the work of any other Contractor.
B. No submittals will be accepted by the Engineer if transmitted via FAX machine (email is acceptable).
C. The Contractor shall schedule the submission of shop drawings in proper sequence, in order of priority, reflecting the logical sequence of construction requirements. Such scheduling shall allow reasonable time for checking revisions, resubmission and rechecking where required, until material submitted is acceptable to Engineer. It shall be the responsibility of the Contractor to establish submission dates which will allow the Engineer adequate time for checking and processing, not exceeding three (3) weeks, and such date shall recognize the possibility of disapproval and required resubmission. Such schedules shall be subject to change from time to time, as required, by mutual agreement of the Engineer and the Contractor. Note: The aforementioned three (3) weeks time provided the Engineer for checking shop drawings is from the date of receipt of shop drawings by the Engineer to the mailing date of shop drawings returned to the Contractor by the Engineer.

D. No work shall be started in the shop or on the job or material delivered to the site until pertinent shop drawings have been reviewed by the Engineer.
E. Specific manufacturers' names and catalog numbers are used herein to establish quality and design of a particular item.
F. Wherever in the Plans and Specifications any item of equipment or material is designated by reference to a particular brand, manufacturer, or trade name, it is understood that a reviewed equal product, acceptable to the Engineer, may be substituted by the Bidder or Contractor.
G. If the Contractor proposes to use a material which, while suitable for the intended use, deviates in any way from the detailed requirements of the Contract Documents, he shall inform the Engineer in writing of the nature of such deviations at the time the material is submitted for review, and shall request a review of the deviation from the requirements of the Contract Documents.
H. In requesting a review of deviations or substitutions, the Contractor shall provide, upon request, evidence leading to a reasonable certainty that the proposed substitution or deviation shall provide a result at least equal in quality to that specified. If, in the opinion of the Engineer, the evidence presented by the Contractor does not provide a sufficient basis for such reasonable certainty, the Engineer will reject such substitution or deviation without further investigation, in which case it shall be the responsibility of the Contractor to provide another product which is satisfactory to the Engineer. A Contractor or Subcontractor who carries the cost of a substituted product in his bid with no prior review by the Engineer, does so at his own risk. The Engineer is in no way obligated to review nor allow that speculative substitution to be furnished. The Contractor shall submit all requests for substitutions sufficiently ahead of need to cause no delay in the job because of the subsequent rejections and/or resubmissions.
I. Any additional cost, or any loss or damage arising from the substitution of any material or any method for those originally specified shall be borne by the Contractor, notwithstanding review or acceptance of such substitution by the Owner or the Engineer, unless such substitution was made at the written initiation of the Owner. Any additional cost for redesign of any components for a substituted product shall be borne by Contractor unless such substitution was initiated in writing by the Owner.
J. Only shop drawings received from the Contractor will be considered for review by the Engineer. All shop drawings prepared by Subcontractors shall be processed through the Contractor in the same manner as stipulated in the paragraphs above. The Contractor shall check all shop drawings for conformity with the Contract documents and particularly for field measurement and proper fit with adjoining work prior to submitting same to the Engineer for review. Certification shall appear on each shop drawing stating that the Contractor has made this check. The term "by others" shall not be used on shop drawings; the Contractor shall state by whom related items are to be furnished and/or installed, or the supplier or Subcontractor preparing said drawings shall note related work as "not by (this supplier or Subcontractor)". The Engineer reserves the right to reject and return to the Contractor, without examination, any shop drawings which have not been previously checked and certified as outlined above, which carry the term "by others" or other such vague reference, or which in any way obviously are not in conformity with Contract requirements.
K. <u>Shop Drawings:</u>
    a. Shop drawings shall show the design, dimensions, connections, and other details necessary to ensure that they accurately interpret the Contract Documents and shall show adjoining work in such detail as required to provide proper connection with same. Where adjoining work required shop drawings, they shall be submitted for review at the same time so that connections can be accurately checked.

b. Submit email pdf files of any prints of each shop drawing with sufficient blank space for the Engineer's annotations and review stamp, except as otherwise called for herein. The Engineer will make annotations directly on the print, stamp same with appropriate review, and return to the Contractor.
c. Reproducible marked "Reviewed" or "Reviewed as Noted" shall be used by the Contractor to obtain and distribute the prints necessary for fabrication and construction. They shall then be returned to vendor or Subcontractor from whom they were originally received.
d. Prints marked "Revise and Resubmit" or "Rejected" shall be used by the Contractor to make a record print and then returned to vendor or Subcontractor who made the submittal for corrections required. Resubmittals shall be pdf print files with a clear revision number and date. Submittals marked "Rejected" or "Revise and Resubmit" shall not be sent to job site or used for shop fabrication.
e. This procedure shall be repeated until all corrections are made to the satisfaction of the Engineer. The reviewed print will be returned to the Contractor who in turn will be responsible for making print copies in sufficient numbers for his own and his Subcontractors' use.

L. Product Data:
a. Submit the number of copies which the Contractor requires, plus a pdf file emailed to the Engineer for record.
b. Data sheets shall show illustrated cuts of item to be furnished, scale details, dimensions, capacity, performance, characteristics, efficiencies, wiring diagrams, controls, and other pertinent information, as applicable. If more than one type of size is shown on these sheets, the item being submitted shall be clearly denoted. Engineer will retain copies and transmit via email appropriate copies to Contractor for distribution to interested parties.

M. Samples:
a. Submit the number stated in each Specification Section.
b. Furnish samples (and related certificates if required) as stipulated under various sections to location designated by Engineer (i.e., to office, test lab or project site) in ample time for proper consideration and action. Samples requiring testing should be submitted approximately twenty (20) days prior to required review date. Samples shall not be submitted with bid nor before award of Contract and acceptance of construction Bonds.
c. Each sample shall be labeled to indicate material, trade name, place or origin, name of producer, name of Contractor, and name of project concerned. Pack paste or liquid samples in tight containers in manner to reach destination in good condition. Letter of transmittal shall accompany samples and shall include certificate as to compliance with Contract requirements.
d. No material for which samples are required shall be delivered to site for use until representative samples have been reviewed in writing by Engineer.
e. Review of samples shall be deemed to be general only, and shall not constitute waiver of Owner's rights to demand full compliance with contract requirements. After actual delivery of material to site, Engineer will make such inspection and testing as deemed necessary, and may reject such materials, equipment and accessories for cause, even though such items may have been given general review.
f. When a sample has been designated "Reviewed" or "Reviewed as Noted" no change in brand or make may be made unless manufacturer fails to make satisfactory delivery, or the delivered material fails to conform with Contract requirements.

g. If materials, equipment, or accessories which fail to meet check-tests have been incorporated in work, Owner shall have the right to cause their removal and replacement by proper materials, or to demand and secure such reparation by Contractor as is equitable.
h. Samples designated as "Reviewed" or "Reviewed as Noted" not subject to destruction tests will be retained by the Engineer until completion of work. Certain samples may be built into work after substantial completion of work they represent. Rejected samples will be returned to Contractor upon request, and at his expense, within thirty (30) days after rejection.

N. Submittals, Unless Otherwise Noted, Shall Contain:
a. The date of submission and the dates of any previous submissions.
b. The project title and number.
c. Contract identification.
d. The names of:
i. Contractor.
ii. Supplier.
iii. Manufacturer.
e. Identification of the product, with the Specification Section number.
f. Field dimensions clearly identified as such.
g. Relation to adjacent or critical features of the work or materials.
h. Applicable standards, such as ASTM or Federal Specification numbers.
i. Identification of deviations from Contract Documents.
j. Identification of revisions on resubmittals.
k. An 8" x 3" blank space for Contractor and Engineer stamps.
l. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the work and of Contract Documents.

1.9 RESUBMISSION REQUIREMENTS

A. Make corrections or changes in the submittals required by the Engineer and resubmit until they are denoted "Reviewed" or "Reviewed as Noted" by the Engineer.
B. Shop Drawings and Product Data:
a. Revise initial drawings or data, and resubmit as specified for the initial submittal.
b. Indicate any changes which have been made other than those requested by the Engineer.
C. Samples: Submit new samples as required for initial submittal.

1.10 DISTRIBUTION

A. Distribute reproductions of shop drawings and copies of product data which carry the Engineer stamp denoting "Reviewed" or "Reviewed as Noted" to:
a. Job site file.
b. Record documents file.
c. Other affected Contractors.
d. Subcontractors.
e. Supplier or fabricator.
B. Distribute samples which carry the Engineer stamp denoting "Reviewed" or "Reviewed as Noted" as directed by the Engineer.

PART 2 – PRODUCTS – NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 35 23
SAFETY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. References and standards
C. Quality assurance
D. Submittals
E. Minimum responsibility of the contractor
F. Emergency contact information
G. Daily health and safety field reports
H. Stop work authority
I. Site access and controls

1.2 DESCRIPTION

A. This section expands on the requirements in these Contract Documents regarding Contractors responsibilities for safety and protection and includes requirements for Contractor's safety representatives and other safety requirements applicable to the Work.
B. Contractor shall provide all labor, materials, tools, equipment, training, certificates, protective measures, as specified and required to comply with Contractor's obligations under this Contract for safety and protection of personnel and property.

1.3 REFERENCES AND STANDARDS

A. Federal Occupational Health and Safety Administration (OSHA) Standards.
    a. OSHA Field Operations Manual. 2nd Edition. U.S. Department of Labor. Occupational Safety and Health Administration. 1987.

1.4 QUALTIY ASSURANCE

A. Laws and Regulations:
    a. Contractor shall be responsible for full compliance with the regulations established under the federal Occupational Safety and Health Act of 1970 ("OSHA"), including agreements with the U.S. Department of Labor and the State of Rhode Island and any applicable amendments or revisions thereof, whether associated with the furnishing of equipment and or systems, the furnishing and installation of equipment and/or systems, the construction of facilities, the performance of services or any other similar contractual relation.
        i. Contractor shall be responsible for any violations of the regulations including payment of costs involved with correction of violations, hearing or appeal procedures, and claims and/or fines associated with said violations at no additional cost to Owner.

ii. Contractor shall comply with applicable requirements of labor laws and regulations of the State of Rhode Island applicable to safety and the authorities having jurisdiction over the site.

iii. Contractor shall maintain adequate protection against damage to life and property involved in the Work and shall provide all necessary, protective devices until completion and final acceptance of project by Owner.

iv. In any emergency threatening life or property, not considered by Contractor as coming under the preceding provisions, Contractor may act at its own discretion without authorization by Owner. In the case of such an event, Contractor shall notify Engineer and Owner as soon as possible.

1.5 SUBMITTALS

A. Informational Submittals:
   a. Contractor's Health and Safety Plan in Accordance with Section 01 35 29 – Contractors Health and Safety Plan
   b. Emergency contact information as described in this Section.
   c. During Construction Activities:
      i. All required forms and OSHA records shall be maintained on the Site by Contractor as applicable.
      ii. In the event of a safety incident, including injuries and "near-misses" and vehicle accidents occurring during the performance of the Work, the Safety Representative shall provide details of the incident to Contractor, Engineer, and Owner as soon as possible and, at a minimum, within 2 hours of the incident and shall follow up with a written Incident Report by 10 a.m. the following day.

1.6 MINIMUM RESPONSIBILITY OF THE CONTRACTOR

A. Contractor shall at all times be solely responsible for exercising reasonable precaution to protect the health, safety, and welfare, of all on-Site personnel, the public and the environment during performance of the Work described herein and shown on the Drawings. Contractor shall comply with all applicable provisions of federal, state and local health and safety and occupational health and safety statutes and codes.

B. Contractor shall also comply with conditions contained in Site-specific permits or licenses obtained by Owner.

C. Contractor shall provide all necessary health and safety equipment, including, but not limited to, PPE, respiratory equipment and monitoring instruments.

D. In the event Contractor discovers unknown, unforeseen, sudden or potentially hazardous conditions, or environmental conditions inconsistent with known existing conditions, Contractor shall notify Engineer and Owner immediately. At that time, Site actions may include a safety stand-down or safety Work stoppage depending on the severity of the event. It shall be followed

by a written description of the conditions. Written description shall be submitted to Engineer by 10 a.m. the next day. Contractor shall cooperate with any follow up investigations conducted by Engineer of a reportable condition or other incident.

1.7 EMERGENCY CONTACT INFORMATION

A. Contractor shall submit a list of emergency contact information for 24-hour use throughout the Project. Emergency contact information shall be updated and kept current throughout the Project. If personnel or contact information change, furnish updated emergency contact information list at the next progress meeting.

B. Contractor's list of emergency contact information shall include, at a minimum, the following:
   a. Contractor:
      i. Project manager's office, field office, and cellular telephone numbers.
      ii. Site superintendent's office, field office, and cellular telephone numbers.
      iii. Foreman's field office and cellular telephone numbers.
      iv. Safety representative's field office and cellular telephone numbers.
      v. Major Subcontractors' and Suppliers' office and cellular telephone numbers of project manager and foreman (when applicable).
   b. Owner:
      i. Project manager's office and cellular telephone numbers.
   c. Engineer:
      i. Engineer of record's office and cellular telephone numbers.
   d. Emergency telephone numbers for the hospital, ambulance service, police department, and fire department nearest to the Site. Furnish names of each of these institutions.
   e. Authorities having jurisdiction.
   f. Other involved entities as applicable.

C. Include with list of emergency contact information an 8.5-inch by 11-inch map showing route from the Site to the nearest hospital.

1.8 STOP WORK AUTHORITY

A. Should any unforeseen safety-related factor, hazard, or condition which poses a potential threat of physical injury or harm to Site personnel or the environment become evident during the performance of the Work, all Site personnel shall have authority as granted by OSHA regulations to issue a Stop Work directive.

B. If a Stop Work directive is issued Contractor must immediately take prudent corrective action to secure the Work and provide safe conditions for Site personnel and the environment. This corrective action shall be followed by an immediate oral (and followed up with written) incident report to Engineer and Owner. The incident report shall be provided as soon as possible but, at a minimum, by 10 a.m. the next day.

C. Contractor shall conduct an investigation and provide a written report incorporating results of the investigation if directed to do so by Engineer or Owner.
D. Should Contractor refuse to obey a Stop Work directive, Contractor shall immediately be excused from the Site.
E. Return complete and accurate health and safety records for all Contractor and Subcontractor employees assigned to the Site at all times.

1.9 SITE ACCESS AND CONTROLS

A. Contractor shall prepare Site control procedures to establish Work Zones, based on the proposed Work locations and the requirements specified in this Section and based on the drawings.
B. Contractor shall change Work zones as necessary to support the specific Work being performed.
C. No smoking is allowed on Site.
D. Contractor shall be required to make provisions for pedestrian and other Site worker traffic control as necessary.

PART 2 – PRODUCTS

2.1 SECTION INCLUDES

A. Safety Equipment

2.2 SAFETY EQUIPMENT

A. Contractor and all Subcontractors shall provide on-Site personnel, when required by the Contractor's HASP, with the appropriate PPE and shall ensure that all PPE is kept clean and well maintained.
B. All health and safety materials and equipment shall conform, at a minimum, to OSHA, NIOSH and American National Standards Institute (ANSI), and American Society of Testing and Materials (ASTM) standards and requirements.

PART 3 – EXECUTION

3.1 SECTION INCLUDES

A. Incident reporting procedures

3.2 INCIDENT REPORTING PROCEDURES

A. Incident Response Steps. In the event of a safety incident, including injuries and "near-misses" and vehicle accidents occurring during the performance of the Work, and shall provide details of the incident to Contractor, Engineer, and Owner as soon as possible and, at a minimum, within 2 hours of the incident and shall follow up with a written incident report by 10 a.m. the following day. The report shall include a root-cause analysis, i.e., identification of contributing factors relating to the incident, and describe the corrective actions that will be taken to prevent recurrence. The report shall provide details regarding the following:

a. What happened?
b. Who and how many people were injured?
c. What treatment was administered?
d. What was the nature and seriousness of the injury?
e. Where did the incident occur?
f. When did the incident occur (date, time of day)?
g. Were there any witnesses?

B. All injuries, accidents and illnesses occurring as a result of or during on-Site Work must be recorded on the Contractor's or affected Subcontractor's OSHA 300 and 301 or equivalent forms. These forms shall be forwarded to Owner and Engineer. Contractor shall report all injuries to the appropriate authorities, including OSHA if necessary, and to Owner and Engineer immediately.

END OF SECTION

SECTION 01 35 29
CONTRACTORS HEALTH AND SAFETY PLAN

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. References and standards
C. Submittals
D. HASP Submittals

1.2 DESCRIPTION

A. Contractor shall prepare and maintain a written Site-specific Health and Safety Plan (HASP) designed such that all Work is performed to avoid:
   a. Injuries
   b. Employee exposure to health hazards above occupational limits relevant laws and regulations
   c. Violations of applicable Laws and Regulations.

1.3 REFERENCES AND STANDARDS

A. Federal Occupational Health and Safety Administration (OSHA) Standards.
   a. OSHA Field Operations Manual. 2nd Edition. U.S. Department of Labor. Occupational Safety and Health Administration. 1987.

1.4 SUBMITTALS

A. Informational Submittals:
   a. Within 30 days prior to Contractor's scheduled mobilization date, Contractor shall submit a Site-specific Health and Safety Plan (HASP) in accordance with Section 01 33 00 - Submittal Procedures. Submit HASP in accordance with the minimum requirements presented herein.
   b. No Work shall be performed until the HASP has been accepted by the Engineer.

1.5 HASP SUBMITTAL

A. The HASP shall address all applicable requirements under OSHA 29 CFR 1910.120. The plan shall be written to avoid misinterpretation, ambiguity, and mistakes that verbal orders cause.
B. Each employer working at the Site shall develop and implement a written HASP for its employees and other individuals for whom such employer is responsible.
C. HASP shall be maintained at all times at the Contractor's field office.
D. Copies of the Contractor's accepted HASP shall be made available to the Engineer and Owner.
E. At a minimum, the HASP shall include:
   a. Organizational Structure:
      i. Specific chain of command and overall responsibilities of supervisors and employees.
      ii. Include the following:
         a) Name and contact information for Contractor's safety representative.
         b) Name and contact information for Contractor's "competent person(s)" for various Work-related activities.
         c) Lines of authority, responsibility, and communication.

iii. Review and update organizational structure as necessary to reflect the current status of Work activities on the Project and the status of personnel.

b. Site description, background, and scope of Work.
   i. Safety and health risk or hazard analysis, and planned hazard controls, for each task and operation required to complete the Project.
c. Site control measures, including procedures for:
   i. Preventing trespassing.
   ii. Preventing unqualified or unprotected workers from entering restricted areas.
d. Personal Protective Equipment (PPE):
   i. PPE selection criteria.
   ii. Site- and task-specific PPE ensembles.
   iii. Training in the use of PPE.
   iv. Respiratory protection.
   v. Hearing conservation.
   vi. PPE maintenance and storage.
e. Heat and cold stress prevention programs.
f. Spill Response Plan/Spill containment program.
g. Emergency Response Plan:
   i. Potential emergencies that may occur at the Site.
   ii. Pre-emergency planning.
   iii. On-site emergency response equipment, materials, and PPE.
   iv. Emergency Maps: Evacuation routes, gathering points, and route to nearest hospital.
   v. Emergency roles and responsibilities.
   vi. Emergency alerting and evacuation procedures for Site personnel.
   vii. Procedures for notifying, and list of emergency contact information for:
      a) Emergency responders, including fire officials, ambulance service, poison control, police, and local hospitals.
      b) Authorities having jurisdiction.
      c) Owner and Engineer.
      d) Contractor’s project manager, Site superintendent, safety representative, and foreman.
      e) Other entities, as required.
   viii. Emergency response procedures.
   ix. Emergency medical treatment and first-aid.
   x. Emergency response training.
h. Other standard operating procedures applicable to the Work.

F. Limitations of Engineer's Review of HASP:
   a. Engineer's review and acceptance of HASP will be only to determine if the topics covered in HASP comply with the Contract Documents and specific requirements of safety documents referenced therein (such as Owner's safety programs, if any).
   b. Engineer's review and acceptance will not extend to safety measures, means, methods, techniques, procedures of construction, or whether representations made in the HASP comply with Laws and Regulations, or standards of good practice.
   c. Contractor's responsibility for safety and protection at the Site shall be as indicated in the Contract Documents. Nothing associated with Engineer's review or acceptance of HASP will

create or imply any obligation by Engineer to oversee or become, in any way, responsible for Contractor's safety obligations under the Contract Documents.

PART 2 – PRODUCTS - NOT USED

PART 3 – EXECUTION - NOT USED

END OF SECTION

SECTION 01 35 53
SECURITY PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. Submittals
C. Contractor's security program requirements

1.2 DESCRIPTION

A. Contractor is responsible for security of property, equipment, materials, and personnel within the Limits of Work to protect against loss, theft, damage, and vandalism until project Completion. This includes, but is not limited to, maintaining and securing all enclosures, barriers and gates during working and non-working hours, and maintaining a log registering all visitors.
B. All communications and coordination with property owners will be performed by the Owner or Engineer.
C. Contractor shall secure all open excavations and trenches at the end of each day consistent with the Site Specific Health and Safety Plan, Section 31 00 00 -Earthwork, and applicable OSHA regulations.
D. This Work includes safely guarding properties in the vicinity of the Work and Project, the Site, from injury and loss in connection with the Work.
E. Remedy damage to property or equipment resulting from Contractor's failure to provide adequate security at no additional cost to Owner.

1.3 CONTRACTOR'S SECURITY PROGRAM REQUIREMENTS

A. Contractor shall implement a security program upon mobilization to the Site and maintain security program throughout the Work.
    a. Protect Limits of Work from theft, vandalism, and unauthorized entry.
    b. Should any unforeseen, potentially hazardous condition become evident during the performance of the Work, it shall be Contractor's responsibility to bring such to the attention of Engineer for resolution both verbally immediately and in writing by 10 a.m. the next day. In the interim, Contractor shall implement all necessary prudent actions to establish and maintain safe working conditions and to safeguard employees, the public, and the environment.
B. Contractor shall be responsible for all costs associated with providing the access restriction features, maintaining all features during construction, and removal and disposal of temporary features at the conclusion of the Work.
C. Contractor's Site Entry Control Requirements:
    a. Restrict entrance of persons and vehicles into Limits of Work areas.
    b. See Section 01 55 00 - Vehicular Access and Parking for information regarding traffic and parking within and proximate to the Limits of Work.
    c. Allow entrance only to authorized persons with proper identification.
    d. Maintain Daily Security Log of workers and visitors. The log shall be made available to Engineer and Owner if requested.

e. Visitors within the Limits of Work are not allowed without the approval of Engineer or Owner. Visitors must not be left unescorted. Visitors are not permitted to enter active Work areas without permission from Engineer or Owner.
f. Secure (lock) fence gates during non-working hours and when not in active use during working hours. During active work hours gates are to remain closed at all times other than when needed for entry or exit.

D. Contractor shall be responsible for security within the Limits of Work. Contractor shall be solely responsible for the security and protection of his/her and its subcontractor(s) equipment, supplies, and materials at all times. Any vandalism, damage or theft shall be the sole responsibility of Contractor.

PART 2 – PRODUCTS- NOT USED

PART 3 – EXECUTION

3.1 SECTION INCLUDES

A. Maintaining Security During Site Access/Use

3.2 MAINTAINING SECURITY DURING SITE ACCESS/USE

A. Gates installed within Work areas must be properly maintained by Contractor and gates must remain closed and locked during non-working hours and when not in active use during working hours. During working hours, Contractor is responsible for controlling access to the Work areas for only authorized personnel, and gates shall remain closed at all times other than when needed for entry or exit.
B. Contractor shall be responsible for maintaining a registry (log) of personnel entering and exiting the Work area. The log shall be made available to Engineer and Owner, if requested.

END OF SECTION

SECTION 01 41 26
PERMIT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Related section
B. Submittals
C. Project permit records
D. Workmanship

1.2 RELATED SECTIONS

A. This section contains general information that applies to all Work performed under the Contract and is inherently made a part of each specification section.

1.3 SUBMITTALS

A. Unless otherwise specified, Contractor shall provide copies of all applicable permits to Owner and Engineer at least ten (10) workdays prior to start of relevant Work. Retain hard copies of all permits on Site.
B. Submit additional correspondence or addenda to permits to Owner and Engineer within 2 workdays of receipt of addenda.

1.4 PROJECT PERMIT RECORDS

A. Maintain on-site complete and accurate copies of all permits, addenda, and relevant correspondence from appropriate agencies.

1.5 WORKMANSHIP

A. All workmanship and materials shall conform to federal and state laws, local ordinances, utility company regulations, and applicable codes and other standards. In case of conflict with these Drawings and Specifications, such laws and regulations shall apply wherever they may require workmanship or materials other than required in the Contract Documents. In the event of conflict between standards, the more stringent standard as determined by Engineer shall apply.

PART 2- PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 SECTION INCLUDES

A. Permits obtained by owner
B. Permits obtained by contractor
C. Project permit Compliance

3.2 PERMITS OBTAINED BY OWNER

A. Owner has obtained the permits and approvals from the Coastal Resource Management Council (CRMC) necessary for the Work. Contractor shall perform all Work in compliance with these permits and approvals. Contractor shall be responsible for obtaining all other permits and approvals necessary for the execution of the Work in accordance with all applicable local, state

and federal regulations, laws, and requirements. CRMC Assent 2023-10-015 is provided in the Contract Documents for the Contractor's records and use.

3.3 PERMITS OBTAINED BY CONTRACTOR

A. The Contractor shall obtain and pay for all necessary permits, licenses, certificates of inspection and pay all legal fees in connection with the work of this contract. These Contractor-obtained permits include, but are not limited to:
   a. Digsafe
   b. Road Opening Permit (City of East Providence, if necessary).
   c. Approval to use City/hydrant water (City of East Providence, if necessary).

B. The Contractor shall request copies of those regulatory permits and make provision in this work and in the cost of the work for all applicable conditions of those permits. Failure to consider any condition of the regulatory permits as a part of the bid shall not relieve the contractor from their responsibility to apply those conditions to their work at no additional cost to the owner.

3.4 PROJECT PERMIT COMPLIANCE

A. Contractor shall comply with all terms and/or conditions of all project permits in the execution of the Work and pay any and all fines and/or penalties resulting from noncompliance with project permit requirements or failure to obtain or maintain necessary local, State of Rhode Island, or Federal project permits required for completion of the Work.

B. Contractor shall inform and update Engineer and Owner on permit status and regulatory compliance.

END OF SECTION

SECTION 01 52 00
CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Requirements included
B. Requirements of regulatory agencies
C. Quality assurance

1.2 REQUIREMENTS INCLUDED

A. Furnish, install, and maintain construction facilities and temporary controls required for construction, as specified herein, and remove on completion of work.
B. Temporary controls described herein and in related Section 01 57 00 - Temporary Erosion and Sedimentation Controls and shown on the Drawings shall be maintained by the Contractor throughout the Project until no longer required.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

A. Comply with National Electric Code.
B. Comply with Federal, State and Local Codes, Laws, Ordinances and Regulations and with utility company requirements.

1.4 QUALITY ASSURANCE

A. Contractor shall provide all temporary control measures shown on the Drawings, or as directed by Owner and/or Engineer, for the duration of the Work. Temporary controls presented on Drawings are intended to be a guide to address the stages of Work shown. Additional measures not specified on the Drawings may be necessary and shall be implemented by the Contractor to address intermediary stages of Work and any conditions that may develop during construction at no cost to Owner.
B. Temporary control measures shall at all times be satisfactory to Engineer. Engineer will inform Contractor of unsatisfactory construction procedures and operations if observed. If the unsatisfactory construction procedures and operations are not responded to and corrected the same day, Engineer may suspend the performance of any or all other construction until the unsatisfactory condition has been corrected. Such suspension shall not be the basis of any claim by Contractor for additional compensation nor for an extension of time to complete the Work. Any delays, complaints, fines, etc. relating to ineffective erosion control shall be the sole responsibility of Contractor.

PART 2 - PRODUCTS

2.1 SECTION INCLUDES

A. Materials general
B. Temporary sanitary facilities
C. Temporary fire protection
D. Hoisting facilities
E. Scaffolding and staging
F. Temporary barriers
G. Protection
H. Safety to traffic

I. Roads and sidewalks to be open
J. Security
K. Temporary controls

2.2 MATERIALS GENERAL

A. Materials may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.
B. Coordinate interruptions of permanent utilities with utility companies and affected users.

2.3 TEMPORARY SANITARY FACILITIES

A. Provide sanitary facilities in compliance with laws and regulations. Such facilities shall be properly secluded from public view.
B. Service, clean and maintain facilities and enclosures.

2.4 TEMPORARY FIRE PROTECTION

A. The Contractor shall provide and maintain in good operating condition suitable and adequate fire protection equipment and services, and shall comply with all reasonable recommendations regarding fire protection made by the representatives of the fire insurance company carrying insurance on the work or by the local fire chief or fire marshal.
B. Permanent fire protection equipment used for fire protection during construction shall be the responsibility of the installing Contractor.

2.5 HOISTING FACILITIES

A. Provide hoisting facilities as required for the vertical movement of all materials.
B. Comply with OSHA for all hoists, conveyors, and elevators and maintain the facilities in compliance with the law.

2.6 SCAFFOLDING AND STAGING

A. Contractor shall furnish, erect and maintain staging and scaffolding for their use during construction. Each subcontractor shall furnish, erect and maintain staging and scaffolding in work under their subcontract. Staging shall be erected and removed by experienced staging builders, and shall conform to Federal, State and Local requirements. On completion of their work, each Subcontractor shall dismantle and remove their staging and scaffolding.

2.7 TEMPORARY BARRIERS

A. Provide guardrails, barricades, and handrails as required to complete the Work safely.
B. Provide barricades, guards, coverings, lighting, warning lights and signs as required by State and Local Regulations to protect obstructions in streets and sidewalks, open trenches and pits, hazards, and like items. Mark and light barricades and guards as required.
C. The Contractor shall, at times, employ watchmen when such action is required to prevent injury or damage to the public. The Contractor shall indemnify and protect the Owner from any damage or injury caused by an act or neglect of the Contractor or their Subcontractors.
D. Comply with OSHA with regard to standards and requirements for guardrails, openings and stairways.
E. Contractor shall install temporary protection measures while working near the existing or new timber staircase(s). Any damage to the stairs will be repaired by the contractor at no cost to the city.
F. Temporary construction signs shall not be placed so the encroach on open lanes of traffic.

G. Temporary construction signs and drums shall be in place prior to the start of work.

2.8 PROTECTION

A. The Contractor shall at all times protect excavations, new construction, old construction, all job materials, apparatus and fixtures from rain, wind, snow, ice, dust, dirt, mud, ground water, back-up or leakage of sewers, drains, or other piping, and from water of any other origin, and shall remove promptly any accumulation of the above. The Contractor shall provide and operate all pumps, piping and other equipment necessary to this end at no additional cost to the Owner.
B. Thoroughly protect all completed work and all stored materials.
C. Protect, at end of each day's work, such work that may be liable to damage by the elements.
D. Replace or rectify work or materials damaged by workmen, by the elements or by any other cause, to the satisfaction of the Engineer and at no additional expense to the Owner.

2.9 SAFETY TO TRAFFIC

A. When portions of the traveled way are made dangerous for the movement of vehicles or pedestrians, a sufficient number of uniformed police officers, flagmen or traffic personnel shall be employed to direct the traffic safely through the areas as required by State and Local regulations. If such conditions exist at the close of the working day, a watchman and a sufficient number of flagmen or police officers shall be assigned by the permittee to direct traffic at night. The work must be planned to avoid such conditions whenever possible.
B. Traffic control devices used by the Contractor in the work traffic control zone shall conform to the American National Standards Institute, manual on Uniform Traffic Control - Devices and OSHA Safety and Health Standards (29 CFR 1926/1910).

2.10 ROADS AND SIDEWALKS TO BE KEPT OPEN

A. The Contractor shall at all times keep roads and sidewalks open for pedestrian and vehicular traffic. The Contractor shall bridge or construct plank crossings over trenches where directed by the Engineer.

2.11 SECURITY

A. The Contractor shall take all precautions necessary to prevent loss or damage caused by vandalism, theft, burglary, pilferage or unexplained disappearance of property of the Owner or this Contractor, whether or not forming part of the work, located within the limits of work. The Contractor shall have full responsibility for the security of such property located in such areas and shall reimburse the Owner for any such loss, damage, or injury, except such as may be directly caused by agents or employees of the Owner.

2.12 TEMPORARY CONTROLS

A. <u>Construction Entrance Control</u>:
   a. Construction entrance shall consist of the following and as specified on the Drawings
      i. Surface and binder course shall conform to RIDOT Bluebook M.03 bituminous pavement.
      ii. Base course shall be gravel borrow conforming to RIDOT Bluebook M01.09, table 1,i, "gravel borrow", 1a (<8 passing #200 sieve).
      iii. Subbase shall be pervious fill conforming to RIDOT Bluebook M01.09, table 1, iv, "previous fill", type D.
      iv. Exposed subgrade shall be proof rolled or compacted prior to placing subbase.

v. Weak areas shall be excavated and replaced with pervious fill compacted to a min. 95% of the modified proctor density.
vi. Base and subbase courses shall be compacted to a min. of 95% of the modified proctor density

B. Erosion Control: Sufficient precautions shall be taken during construction to minimize the runoff of polluting substances such as silt, clay, fuels, oils, calcium chloride or other polluting materials harmful to humans, fish, or other life, into supplies and surface waters of the State as required by Federal, State and Local regulations. See related Section 01 57 00 - Temporary Erosion and Sedimentation Controls.
C. Dust Control: During periods of dry weather: Water spread calcium chloride, or otherwise treat unpaved areas, within contract limit, which may be source of dust nuisance. Treatment shall be of sufficient effectiveness to allay dust nuisance.
D. Trash Control:
   a. Maintain premises and properties free of accumulation of waste, debris, and rubbish caused by operations.
   b. Provide sufficient trash receptacles around site.
   c. Collect and deposit debris in such collection facilities.
   d. Remove all debris from the job site on a regular basis.
E. Hazards Control:
   a. Store volatile wastes in covered metal containers, and remove from premises daily.
   b. Prevent accumulation of wastes which create hazardous conditions.
   c. Provide adequate ventilation during use of volatile or noxious substances.
   d. Any hazardous waste caused by the Contractor, the Contractor is to correct the situation in the proper manner at no loss to the Owner.
F. Cleaning and Disposal:
   a. Conduct cleaning and disposal operations to comply with Local Ordinances and anti-pollution laws.
   b. Do not burn or bury rubbish and waste materials on project site.
   c. Do not dispose of volatile wastes such as mineral spirits, oil or paint thinner in storm or sanitary drain.
   d. Do not dispose of wastes into streams or waterways.
   e. Maintain cleaning until project, or portion thereof, is occupied by the Owner.
G. Storage Areas:
   a. Coordinate the allocation of storage areas to the various trades and Subcontractors.
   b. Such storage areas shall be approved by the Engineer.
   c. Maintain such areas in a clean condition at all times.
   d. Field houses, storage sheds, and work facilities for workmen shall be the responsibility of each Subcontractor and shall be removed by them.
H. Noise Control:
   a. Contractor's vehicles, equipment, and operations shall minimize noise emissions to the greatest degree practicable. Provide mufflers and silencers on construction equipment, and provide temporary sound barriers when necessary, or as directed by Owner, Engineer, or authorities having jurisdiction, and comply with provisions of accepted construction noise mitigation plan.
      i. Noise levels shall comply with Laws and Regulations, including OSHA requirements and local ordinances.
      ii. Noise emissions shall not interfere with the Work of Owner or others.

PART 3 - EXECUTION

3.1 SECTION INCLUDES

A. General
B. Removal of construction facilities and temporary controls

3.2 GENERAL

A. Comply with applicable local, State and Federal requirements relative to temporary utilities.
B. Maintain and operate temporary utility systems to assure continuous service.

3.3 REMOVAL OF CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

A. Completely remove temporary materials and equipment when their use is no longer required.
B. Upon completion of work of all trades and before final acceptance of entire project, each trade shall remove, at its own expense, all wiring, appurtenances and accessories used in performance of its respective work.
C. Temporary sheds, utilities, barricades, signs, and other appurtenances related to prosecution of the work and not incorporated in the permanent constructions hall be completely removed from the site prior to acceptance of work by the Owner.
D. Clean and repair damage caused by temporary installations or use of temporary facilities.

END OF SECTION

SECTION 01 55 00
VEHICULAR ACCESS AND PARKING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. References and standards
C. Submittals
D. Quality assurance
E. Traffic control

1.2 DESCRIPTION

A. Contractor shall furnish all labor, materials, equipment, tools, and services necessary to provide temporary access roads, walks, parking areas, and appurtenances required throughout the Project to use by Contractor, Owner, Engineer, visitors and emergency vehicles.

1.3 REFERENCES AND STANDARDS

A. United States Department of Transportation, 2009, revision 2025. Manual on Uniform Traffic Control Devices for Streets and Highways. 2009, December 2025, revised.
B. Rhode Island Department of Transportation (RIDOT) Standard Specifications and Standard Sheets

1.4 SUBMITTALS

A. Informational Submittals:
   a. Contractor is responsible for obtaining required approvals from local, state, and/or federal officials regarding the placement of traffic control devices, which may impact public and private roadways associated with the Work. All approvals shall be in written form. Verbal communications will not be applicable as approval verification. Copies of written communications shall be provided to the Engineer for review no later than 21 days prior to implementing associated Work.

1.5 QUALITY ASSURANCE

A. Contractor shall be responsible for the continuous maintenance of all traffic control devices to the satisfaction of Owner and Construction Manager. Contractor shall conduct surveillance operations daily to assure that the devices are reasonably and adequately maintained in accordance with local, state, and federal requirements.
B. Regulatory Requirements:
   a. Laws and Regulations applying to the Work under this Section include, but are not limited to, the following:
      i. RI Title 31 of the General Laws
      ii. RI Traffic Offenses Chapters 31 – 43

1.6 TRAFFIC CONTROL

A. In the event the Engineer or Owner observes traffic conditions that, in their opinion, require additional controls, these controls shall be put in place and performed by Contractor at no additional cost to Owner.

B. If required for trucking operations or deliveries to Site, flaggers shall be provided by Contractor to direct vehicle traffic entering and exiting the Site.
C. Parking for construction vehicles and cars shall be coordinated with the City. At no time should construction vehicles or cars block roadway access or vehicular access to and from Crescent Park or Sabin Point Park.
D. The Work shall not interfere with truck or vehicle traffic entering or exiting adjacent properties and shall not impede access of pedestrians, vehicles or trailers entering or exiting adjacent properties in the vicinity of the Site. Contractor is responsible for understanding traffic flow and potential congestion and will not be subject to additional compensation by Owner for failing to do so.
E. Contractor is responsible for coordinating around local traffic and traffic entering or exiting adjacent and on-Site properties. Resulting delays shall be at no additional cost to Owner.

PART 2 - PRODUCTS

2.1 SECTION INCLUDES

A. Traffic Control Devices

2.2 TRAFFIC CONTROL DEVICES

A. All traffic control devices shall conform to the requirements of Local Ordinances. These devices include, but are not limited to, flag units, police details, construction signs, channelizing devices, barricades, delineators, and lighting devices. All signs conveying messages during darkness shall use reflectors or be illuminated. No signs or supports shall bear any commercial advertising.

PART 3 - EXECUTION

3.1 SECTION INCLUDES

A. Access roads
B. Traffic signals and signs
C. Construction parking control
D. Flag persons
E. Pedestrian safety
F. Maintenance of roads
G. Truck idling / Emissions
H. Removal of traffic controls

3.2 ACCESS ROADS

A. Vehicular access to the Site shall be via Beach Road or through the Crescent Park parking lot for Crescent Park, and via Shore Road for Sabin Point.
B. Contractor shall maintain access to adjacent properties located outside the Limits of Work at all times unless approved by Owner.
C. Provide unimpeded access for emergency vehicles.
D. Provide and maintain access to fire hydrants free of obstructions.

3.3 TRAFFIC SIGNALS AND SIGNS

A. Provide and operate temporary traffic controls and directional signals required to direct and maintain an orderly flow of traffic in areas under Contractor's control, and areas affected by construction operations.

B. Provide temporary traffic controls and directional signs, mounted on temporary barriers or standard posts, at the following locations:
   a. Each change of direction of a roadway and at each crossroad.
   b. Detours and areas of hazard.
   c. Parking areas.
   d. Each traffic entrance to and exit from the Site.
   e. Other locations required by the Contract Documents.

3.4 CONSTRUCTION PARKING CONTROL

A. Contractor shall make arrangements to secure parking for essential and non-essential personal vehicles driven by Contractor's employees and subcontractors at a location agreed upon by the Owner.
B. Construction equipment not actively engaged in the Work shall not be parked or stored within the Limits of Work unless approved by Owner. Construction equipment and employee vehicles shall not be parked or stored on public ways and shall not be parked or stored in the vicinity of the Work in such a manner as to further restrict or obstruct traffic flow.

3.5 FLAG PERSONS

A. Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.

3.6 PEDESTRIAN SAFETY

A. Contractor shall maintain safe and adequate pedestrian zones including walkways and control devices.

3.7 MAINTENANCE OF ROADS

A. General:
   a. Maintain temporary roads and parking areas to continuously provide at the Site access for construction vehicles and trucks, Owner's vehicles, emergency vehicles, and parking areas for Owner's personnel.
   b. Public roads shall be passable at all times unless a road closure is approved in writing by authority having jurisdiction.
   c. Provide snow and ice removal for temporary roads and parking areas.
B. Cleaning and Dust Control:
   a. Cleaning: Clean paved surfaces over which construction vehicles travel. Perform cleaning not less often than the frequency indicated in Section 01 74 00 - Cleaning and Waste Management, or more frequently as directed by Engineer, by mechanical sweeping or other means acceptable to Engineer.
   b. Clean the following surfaces:
      i. Roads within limits of the Project.
      ii. Permanent roads at the Site, between the Site entrance and the Work area, and between the Site entrance and construction parking and staging areas.
      iii. Public roads that require sweeping and cleaning due to construction operations.
   c. Dust Control:
      i. Control dust resulting from construction operations to prevent nuisances at the Site and in nearby areas.

ii. Apply water or use other methods approved by Engineer that will minimize airborne dust. Do not use water when water will cause hazardous or objectionable conditions such as ice, mud, ponds, and pollution.
iii. Provide dust control that is non-polluting and does not contribute to tracking-out of dirt and dust onto pavement. Reapply dust control treatment as required.
iv. Comply with dust control requirements of Section 01 52 00 – Construction Facilities and Temporary Controls.

3.8 TRUCK IDLING/EMISSIONS

A. Contractor shall comply with Rhode Island, Rules and Regulations CH. 31.16.1 regarding truck idling.
   a. No person shall operate the engine of a motor vehicle while said vehicle is stopped for a foreseeable period of time in excess of 5 minutes during any 60-minute period unless exempted by RIDEM. This regulation shall not apply to:
      i. Vehicles being serviced, provided that operation of the engine is essential to the proper maintenance for repair thereof.
      ii. Vehicles engaged in the delivery or acceptance of goods, wares, or merchandise, for which engine-assisted power is necessary and substitute alternate means cannot be made available.
      iii. Vehicles engaged in an operation for which the engine power is necessary for an associated power need other than movement, and substitute alternate power means cannot be made available, provided that such operation does not cause or contribute to a condition of air pollution.

3.9 REMOVAL OF TRAFFIC CONTROLS

A. Contractor shall be responsible for the removal of all temporary traffic control devices upon the completion of the project.
B. Contractor shall be responsible for surface restoration once the temporary traffic control devices are removed.

END OF SECTION

SECTION 01 56 00
TEMPORARY BARRIERS AND ENCLOSURES

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Description
B. References and standards
C. Submittals

1.2 DESCRIPTION

A. Contractor shall furnish and/or provide all supervision, labor, tools, materials, equipment, services, and appurtenances necessary for, or incidental to, the installation of temporary fencing, gates, hardware, screens, jersey barriers and other accessories as shown on the Drawings and described herein.
B. All temporary fencing and gates shall be installed by Contractor consistent with the requirements of this Section, the Drawings, and in coordination with Engineer and the representatives of various property owners.

1.3 REFERENCES AND STANDARDS

A. ASTM F567 - Standard Practice for Installation of Chain-Link Fence; 2011.

1.4 SUBMITTALS

A. Action Submittals:
   a. Within 30 days from Notice to Proceed submit package of cut sheets and material specifications for all temporary fencing and screening types described herein and shown on the Drawings, including but not limited to:
      i. Manufacturer's installation instructions.
      ii. Sketch plan and shop drawings showing temporary fencing and barricades including gate layout, detailing height, size of post, rails, braces, gates, accessories, post locations. Include materials and dimensions for temporary footings to support posts.
      iii. Cut-sheets and/or shop drawings of concrete barriers including details of how the fencing system will attach.
      iv. Copies of the manufacturer's certification.

PART 2 - PRODUCTS

2.1 SECTION INCLUDES

A. Temporary fencing and gates
B. Miscellaneous
C. Safety fence

2.2 TEMPORARY FENCING AND GATES

A. Material Information
   a. Temporary Fences shall be 6 feet in height and a maximum of 12 feet wide.
B. Posts and Rails
   a. 2- 6 foot posts with a top and bottom rail.
   b. Posts shall be stabilized by stands that are 36" wide with an 8" insert.

C. Chain Link Fabric
   a. No. 9 Gauge 2" Wire Mesh
   b. Attach poly screening along fencing
   c. Tension bands of 5 per side should connect mesh to posts
D. Gates
   a. Gates shall be constructed as needed for authorized vehicular and pedestrian access and when necessary properly secured.
   b. Gates shall be constructed so they swing in towards the construction site
   c. Fabric of gates shall be the same as temporary fence.

2.3 MISCELLANEOUS

A. Base
   a. Detachable Concrete Base: Concrete for base shall be minimum 4,000 pounds per square inch (at 28 days) mix. The completed base shall be sized to have a minimum weight of 100 pounds.
   b. Fabricated Galvanized Pipe Frame: As an alternate to the Detachable Concrete Base, the base for the Temporary Link Fence can be fabricated of galvanized pipe frame designed to stabilize the fence and to hold two 50-pound (minimum) sand bags.
   c. Additional weight may be required depending on wind loads and Site conditions. Contractor shall be responsible for assessing and supplying sufficient weight so that fencing is secure at all times.
B. Wire ties or clips shall be a minimum of 6 gauge. Hog rings may be used to tie fabric to tension wire.

2.4 SAFETY FENCE

A. 4-foot-high orange (high visibility) safety fence manufactured with recycled plastics as made by Tenax or approved equal.
B. The safety fence shall have a round mesh and be UV protected.
C. Install with wooden (oak) stakes (or approved equal) driven to properly secure the fence and spaced no greater than 6 feet on center.

PART 3 - EXECUTION

3.1 SECTION INCLUDES

A. General
B. Installation of temporary chain link fence and gates
C. Installation of safety fence
D. Removal of temporary enclosures and barriers

3.2 GENERAL

A. Contractor shall provide temporary fencing and gates within the Limits of Work as shown on the Drawings.
B. The location of fencing, fencing mounted on concrete barriers, and fencing equipped with screening shall be as shown on the Drawings.
C. Contractor shall be responsible for maintaining all fencing and screening during the Work. Contractor shall replace any fencing or screening that is damaged at no additional cost to Owner.
D. Contractor shall relocate fences and screening as needed to accommodate the Work.
E. Fences shall be properly secured and maintained. Fences and screens shall be secured to resist high winds and other weather conditions.

3.3 INSTALLATION OF TEMPORARY CHAIN LINK FENCE AND GATES

A. Posts and Panel Sections
   a. Space line posts equidistant at intervals not exceeding 12 feet.
   b. Panel posts shall be connected using a minimum of three panel clamps per post. Panel posts shall be properly secured at the base with appropriate weights as specified in this Section and shown on the Drawings.

B. Braces
   a. Provide at all ends, gate, and in both tangents at pull and corner posts.

C. Fabric
   a. Tighten to provide a smooth uniform appearance free from sags.
   b. Attach to terminal post using stretcher bars with tension bands to maximum 14-inch intervals or other approved method
   c. Install fabric 2 inches above finished grade.
   d. Fasten to line post at intervals not exceeding 14 inches.
   e. Fasten to top rail, braces, and tension wire at intervals not exceeding 24 inches.

D. Gates
   a. All gates shall conform to the materials specified herein. When closed, gates that cross dirt, gravel or other soft coverage, must not leave a gap larger than two (2) inches on average with no gaps or bends larger than three (3) inches. Gates that cross a hard surface such as blacktop, concrete or macadam must not exceed four (4) inches on average with no gaps larger than five and a half (5-1/2) inches.
   b. Install true to opening, plumb, and to open as shown on the Drawings.
   c. Adjust hardware for smooth operation.

E. Grades
   a. The fence fabric must extend to within 2 inches of firm ground.
   b. Contractor shall leave the area neat and free of any debris caused by the erection of the fence.

3.4 INSTALLATION OF SAFETY FENCE

A. Install Safety Fence in areas where excavations will remain open longer than 1 workday.
B. Install Safety Fence so that it is secure and interlocks between sections.
C. Maintain and relocate Safety Fence, as needed, so the Work can proceed in a safe and secure manner.

3.5 REMOVAL OF TEMPORARY ENCLOSURES AND BARRIERS

A. Contractor shall be responsible for the removal of all temporary enclosures and barriers at the completion of Work.
B. Contractor shall be responsible for the removal and disposal of all installed temporary enclosures and barriers, including but not limited to jersey barriers, chain link fence, gates, safety fence, and posts, within the Limits of Work at the completion of the project.
C. Contractor shall be responsible for surface restoration once the temporary enclosures and barriers are removed.

END OF SECTION

SECTION 01 57 00
TEMPORARY EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. References and standards
C. Quality assurance
D. Submittals

1.2 DESCRIPTION

A. Contractor shall provide and maintain methods, equipment, materials and temporary construction as required for temporary control of environmental conditions at the Site, adjacent properties and waterways during Work.
B. Temporary controls described herein and shown on the Drawings shall be maintained by the Contractor throughout the Project until no longer required.
C. The measures described herein are designed to control the following during construction of all Work.
    a. Erosion and sedimentation.
    b. Surface water, including storm water run-off.
    c. Pollution.

1.3 REFERENCES AND STANDARDS

A. ASTM D3786/D3786M - Standard Test Method for Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics--Diaphragm Bursting Strength Tester Method; 2013.
B. AASHTO M 288, Standard Specification for Geotextile Specification for Highway Applications.
C. ASTM D4751, Standard Test Method for Determining Apparent Opening Size (AOS) of a Geotextile.
D. ASTM D4397 - Standard Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications; 2010.
E. ASTM D4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity; 1999a (Reapproved 2014).
F. ASTM D4533 - Standard Test Method for Trapezoid Tearing Strength of Geotextiles; 2011.
G. ASTM D4632/D4632M - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles; 2015a.
H. ASTM D4833/D4833M - Standard Test Method for Index Puncture Resistance of Geomembranes, and Related Products; 2007 (Reapproved 2013).

1.4 QUALITY ASSURANCE

A. Soil erosion and sediment control measures shall be implemented in accordance with the requirements and procedures outlined in these Specifications, the Drawings, the State of Rhode Island and the City of East Providence standards or guidelines for soil erosion and sediment control, and all regulatory authorities having jurisdiction. Where conflicts between requirements exist, the more restrictive rules shall govern.
B. Contractor shall provide all temporary control measures shown on the Drawings, or as directed by Owner and/or Engineer, for the duration of the Work. Temporary controls presented on Drawings are intended to be a guide to address the stages of Work shown. Additional measures

not specified on the Drawings may be necessary and shall be implemented by the Contractor to address intermediary stages of Work and any conditions that may develop during construction at no cost to Owner.

C. Temporary control measures shall at all times be satisfactory to Engineer. Engineer will inform Contractor of unsatisfactory construction procedures and operations if observed. If the unsatisfactory construction procedures and operations are not responded to and corrected the same day, Engineer may suspend the performance of any or all other construction until the unsatisfactory condition has been corrected. Such suspension shall not be the basis of any claim by Contractor for additional compensation nor for an extension of time to complete the Work. Any delays, complaints, fines, etc. relating to ineffective erosion control shall be the sole responsibility of Contractor.
D. Contractor shall inspect all soil erosion and sediment control measures at least at the beginning and end of each day to ascertain that all devices are functioning properly during construction. Maintenance and/or replacement of all soil erosion and sediment control measures on the Limits of Work shall be the responsibility of Contractor until final stabilization is complete, and until the permanent soil erosion controls are established and in proper working condition.
E. Contractor shall protect adjacent properties and watercourses from soil erosion and sediment damage throughout construction.
F. Extreme care shall be exercised so as to prevent any unsuitable material from entering the Providence River and any portion of the city drainage system and/or adjacent property.

1.5 SUBMITTALS

A. Action Submittals
   a. The Contractor shall submit material specifications 30 calendar days prior to mobilization related to the erosion and sediment control (E&SC) requirements of the applicable Site-specific permits, as shown on the Drawings and described herein. The Contractor shall utilize Best Management Practices (BMPs) for erosion and sediment control to address Site-specific activities. The selection of BMPs shall consider the following references:
      i. RIDEM Standards and Specifications for Erosion and Sediment Control.
      ii. RIDOT Standard Specifications and Standard Sheets.
   b. Submit product information and data on all temporary controls planned for use.

PART 2 - PRODUCTS

2.1 SECTION INCLUDES

A. Materials

2.2 MATERIALS

A. Straw Wattles:
   a. Straw wattles shall be minimum 20-inches in diameter as shown on the Drawings
   b. Straw wattles shall be wheat or rice straw-filled tube or flexible netting
   c. Straw wattles shall be secured with a minimum 36-inch long 1-inch by 1-inch wooden stake
   d. Filtrexx Soxx may be used in lieu of straw wattles.
B. Sandbags:
   a. Sandbags shall consist of a woven polypropylene fabric designed for UV protection for outdoor use. Sandbags shall have adequate strength to retain soil and water during handling, lifting and placement. Sandbags shall be filled with non-contaminated sand or similar soil. Sandbags shall be porous to allow water to drain freely.

C. Silt Sacks:
   a. Silt Sacks shall be manufactured from woven polypropylene geotextile and sewn by a double needle thread machine using a high strength nylon thread.
   b. Silt Sacks shall have the following minimum properties:

PROPERTIES	TEST METHOD	UNITS	SPECIFIED
Grab Tensile	ASTM D4632	lbs	315
Grab Elongation	ASTM D4632	%	15
Puncture	ASTM D4833	lbs	140
Mullen Burst	ASTM D3786	psi	800
Trapezoid Tear	ASTM D4533	lbs	125 x 150
Permittivity	ASTM D4491	sec^{-1}	0.70

   c. Silt Sacks shall consist of a Series I, Regular Flow Type C, Silt Sack manufactured by ACF Environmental of Richmond, Virginia or an Engineer-approved equivalent.

D. Tree Coverings
   a. Trees designated to be preserved, but are within the limits of construction, shall be protected from damage associated with construction.
   b. The contractor is responsible for installing a tree protection fence around all the trees identified to remain on site prior to the start of any site work, grading, or staging of any equipment or materials.
   c. Tree fencing shall be a minimum of 6 feet in height and constructed from wood framing of 2x2 to 2x6 lumber, tied with single strange 9 gauge wire or ½" strapping

PART 3- EXECUTION

3.1 SECTION INCLUDES

A. General
B. Installation
C. Provisions for temporary controls during construction
D. Protection of soil resources
E. Protection of water resources
F. Removal of temporary controls

3.2 GENERAL

A. The Contractor shall furnish all labor, materials, equipment, tools, supervision, transportation and incidentals required to provide, install, maintain, repair, replace and remove temporary controls prior to, during and upon completion of the Work as specified herein, consistent with all application permits and approvals, as shown on the Drawings, and as necessary to complete the Work.
B. The Work shall include temporary erosion control measures for those areas shown on the Drawings and all areas disturbed by the Contractor which include, but are not limited to, straw wattles or Filtrexx Soxx, sandbags, silt sacks, turbidity curtain, tree protection and other applicable Best Management Practices (BMPs).
C. Contractor shall protect adjacent properties and watercourses from soil erosion and sediment damage throughout construction.

D. The contractor shall regularly sweep and maintain Beach Road and Bullocks Point Avenue (Crescent Park), and Knowlton Street (Sabin Point), keeping them free of tracked sediment and debris.
E. Straw wattles and/or Filtrexx Soxx shall be installed as required to prevent sedimentation into the Providence River and/or onto adjacent properties.
F. Disturbed slopes shall not be exposed for excessive periods of time. The onsite soils have a high erosion potential. Excavated slopes shall be protected from erosion if they are planned to remain exposed for extended periods of time (plastic sheeting, rip rap with filter fabric, or Other effective measures).
G. Stockpiles shall have no slope steeper than 2:1. Stockpiles are not to be left on the beach.
H. The contractor shall be responsible for all erosion control maintenance during construction and shall inspect/replace as needed.
I. Sandbags shall be used to divert storm water runoff away from exposed slopes and into a nearby catch basin.
J. Additional sandbags, or haybales as an alternative, shall be located as conditions warrant or as directed by the engineer, owner, City representatives or regulatory agency having jurisdiction.

3.3 INSTALLATION

A. Straw Wattles
   a. Install Straw Wattles at the alignment and locations shown on the Drawings.
   b. Excavate a 2 to 3-inch deep by 9-inch wide trench along the contour of the slope. Place the wattle in the trench, and compact the soil from the excavated trench against the wattle on the uphill side.
   c. Secure the wattle with stakes every 3 to 4 feet, as shown on the Drawings. Stakes shall be driven through the middle of the wattles, leaving at least 2 to 3-inches of stake extending above. Wattle stakes shall be driven perpendicular to slope face.
B. Install sand bags for temporary water control, as needed.
C. Insert silt sacks with catch basin inlets per manufacturer's instructions.
D. Tree Coverings
   a. Tree protection barriers shall be installed prior to the start of any site activity and shall remain in effective condition until start of landscape construction in the immediate area of the project.
   b. A sturdy, physical barrier (fluorescent orange in color) shall be fixed in place around each tree for the duration of construction.
      i. Barrier shall be placed no closer than six (6) feet from the trunk, or one half of the drip line, whichever is greater.
      ii. Barrier shall be fixed so it cannot be moved easily; but the material can be flexible, such as orange snow fence attached to T-posts driven into the ground, and shall act as an effective deterrent to deliberate or accidental damage of each tree.
      iii. The movement or storage of equipment, material, debris, or fill within these required protective barriers is completely prohibited.

3.4 PROVISIONS FOR TEMPORARY CONTROLS DURING CONSTRUCTION

A. Contractor shall implement and maintain erosion and sedimentation control measures as specified herein, shown on the Drawings, and as described in the Contract Documents to the satisfaction of Engineer and Engineer and consistent with all permits and approvals. All observed

deficiencies shall be corrected by Contractor the same day they are identified at no additional cost to Owner.

B. No earth disturbing activities, material deliveries, clearing or grubbing shall be allowed prior to the installation of acceptable erosion and sediment control measures to the satisfaction of Engineer.
C. The Drawings depict the minimum limits of erosion and sedimentation controls. If additional Site areas are disturbed during the course of Work, the Contractor shall be responsible for the installation of additional controls as needed to limit the migration of disturbed Site soils or sediments at no additional cost to the Owner.
D. The Drawings depict the minimum limits of erosion and sedimentation controls. If additional Site areas are disturbed during the course of Work, the Contractor shall be responsible for the installation of additional controls as needed to limit the migration of disturbed Site soils or sediments at no additional cost to the Owner.
E. Contractor shall take sufficient precautions during construction to prevent the runoff of polluting substances such as silt, clay, wastes, fuels, and oils to surface waters. Stormwater catch basins or drains shall be protected from material runoff. Contractor shall use all BMPs necessary to protect these inlets from sediment and debris if encountered.
F. Accumulated silt and debris shall be removed and managed by Contractor from behind the face of any erosion control device or other BMPs as needed to maintain BMP effectiveness and properly handled and disposed of by Contractor in accordance with Section 02 61 00 - Excess Materials Management and Disposal. Clogged or damaged BMPs shall be replaced immediately.
G. Care shall be taken not to place removed sediments within the path of existing, newly created, or proposed areas that are or may be subjected to storm water flow.
H. All disturbed areas that are subject to potential erosion, either newly filled or excavated shall be protected at no additional cost to Owner.
I. Additional erosion and sediment control measures shall be placed as conditions warrant or as directed by Engineer or local or state environmental officials at no additional cost to Owner.
J. Work Stoppage: If the Work is temporarily stopped or suspended for any reason, Contractor shall provide additional temporary controls necessary to prevent environmental damage to the Site and adjacent areas while the Work is stopped or suspended.
K. Failure to Provide Adequate Controls: In the event Contractor repeatedly fails to satisfactorily control erosion and sedimentation, Owner reserves the right to employ outside assistance or to use Owner's own forces for erosion and sediment control. Cost of such work by Owner, plus engineering and inspection costs, will be deducted from amounts due to Contractor.

3.5 PROTECTION OF SOIL RESOURCES

A. All areas within the Limits of Work must have appropriate erosion control measures in as described herein, as shown on the Drawings, and consistent with all applicable permits and approvals, with erosion control barriers installed as necessary around active Work areas to prevent migration of materials.
B. Erosion controls shall be established and maintained as required by all applicable permits.

3.6 PROTECTION OF WATER RESOURCES

A. Waste materials shall not be discharged to surface water or groundwater except as specified herein and/or in accordance with applicable permits and regulations. Contractor shall comply with all applicable federal, State, and local laws concerning pollution of surface water and ground waters. Contractor is responsible for proper management of any stormwater or

groundwater that may be encountered during execution of the Work, regardless of when such groundwater or stormwater control is necessary.

B. Contractor shall comply with all requirements regarding protection of water resources in the environmental permits referenced in Section 01 41 26 - Permits.
C. Control the surface water runoff from the Work areas and the discharge of waters from Work areas to the surrounding land or watercourses.
D. Compliance with state water quality standards and conditions of any permits is the Contractor's responsibility.
E. Surface drainage shall be held in sedimentation catchment areas or the areas shall be graded to control erosion with accepted standards.

3.7 REMOVAL OF TEMPORARY CONTROLS

A. Contractor shall ensure that all disturbed areas and surfaces are stabilized at the end of the Work.
B. Contractor shall be responsible for the removal of all temporary controls at the end of the Work.
C. Temporary controls shall only be removed with prior approval from Engineer.

END OF SECTION

SECTION 01 74 00
CLEANING AND WASTE MANAGEMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. Requirements included
C. Disposal requirements

1.2 DESCRIPTION

A. The Contractor shall remove all debris and perform all cleaning required as a result of the performance of the Work.
B. Cleaning work shall be performed throughout the duration of the project in a neat, safe and organized manner. Contractor shall keep the Limits of Work in a neat and clean condition that is free of debris to the satisfaction of Engineer. All materials and debris accumulated in conjunction with completing this Work shall be legally recycled or disposed of by Contractor consistent with these Specifications.
C. Furnish all labor, containers, transportation and payment of fees associated with recycling, reuse, salvage and disposal of construction materials. Contractor shall provide dumpsters for his own use. Dumpsters shall be of adequate size to handle all refuse and shall be emptied on a regular schedule or more often as needed. Contractor shall not use existing refuse or recycling containers at the properties within and adjacent to the Limits of Work unless approved by Owner.
D. Prior to demobilizing, clean-up shall be performed by Contractor to the satisfaction of Owner and Engineer, including mechanical sweeping of paved areas if necessary. Final clean-up shall be performed by the Contractor to the satisfaction of Engineer at the completion of the Work.
E. Contractor shall conduct cleaning and disposal operations to comply with all state, federal, and local codes, ordinances, regulations, anti-pollution laws and these Specifications.
F. Burning of waste material is not permitted.
G. Excess impacted soil/sediment encountered during the Work shall be handled and disposed of in accordance with Section 02 61 00 - Excess Materials Management and Disposal.

1.3 REQUIREMENTS INCLUDED

A. Execute cleaning during the progress of work and at the completion of the work.

1.4 DISPOSAL REQUIREMENTS

A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations and anti-pollution laws.

PART 2 – PRODUCTS

2.1 SECTION INCLUDES

A. Materials

2.2 MATERIALS

A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.

C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 – EXECUTION

3.1 SECTION INCLUDES

A. During construction
B. Final cleaning

3.2 DURING CONSTRUCTION

A. Execute periodic cleaning to keep the work, the site, and adjacent properties free from accumulations of waste materials, rubbish, and windblown debris, resulting from construction operations.
B. Perform routine cleaning to keep the Limits of Work and adjacent properties free from accumulation of waste materials, rubbish and windblown debris resulting from construction operations. This includes, but is not limited to, not less than weekly, brush sweeping of roadways and paved areas that are used during the Work.
C. The Engineer will temporarily stop Work if Contractor does not perform adequate periodic cleaning and maintain the Site in a neat and orderly fashion at no additional cost to the Owner.
D. Provide on-site containers for the collection of waste materials, debris and rubbish.
E. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
F. Remove all spilled liquids immediately and report, regardless of volume, to Owner and Engineer.
G. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.
H. All packaging devices including cartons, crating, boxes, wrappings which have been used to enclose materials, devices or equipment brought to the premises for use in the Work of Contractor and identifiable in any proven way as to be such, shall be removed from the premises by Contractor.
I. Keep installed Work clean and clean installed surfaces according to manufacturer's recommendations. Remove waste materials, debris, and rubbish from Site and legally dispose of at facilities pre-approved by Owner.
J. Debris or waste material from cutting, patching or other construction procedures shall be removed by Contractor at the end of each day's work.
K. Remove snow and ice from drives, walks, etc., which impedes access or drainage or present danger to workers, public or property.

3.3 FINAL CLEANING

A. Prior to final completion, Engineer inspection for substantial completion, or Owner occupancy, Contractor shall conduct a final inspection of all work areas, to verify that the entire work is clean.
B. At completion of work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and leave project clean and ready for occupancy.
C. Beach is to be clear of debris and construction materials, soil stockpiles, cobbles, boulders, unused armor stone, etc.

END OF SECTION

SECTION 01 77 00
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Requirements included
B. Substantial completion
C. Final review
D. Contractor's closeout submittals to engineer
E. Final adjustment of accounts
F. Final application for payment

1.2 REQUIREMENTS INCLUDED

A. Comply with requirements stated in conditions of the contract and in specifications for administrative procedure in closing out the work.

1.3 SUBSTANTIAL COMPLETION

A. When Contractor considers the work is substantially complete, they shall submit to Engineer:
   a. A written notice that the work, or designated portion thereof, is substantially complete.
   b. A list of items to be completed or corrected.
B. Within a reasonable time after receipt of such notice, Engineer will review the work to determine the status of completion.
C. Should Engineer determine that the work is not substantially complete:
   a. Engineer will promptly notify the Contractor in writing, giving the reasons therefore.
   b. Contractor shall remedy the deficiencies in the work, and send a second written notice of substantial completion to the Engineer.
   c. Engineer will again review the work.
D. When Engineer concurs that the work is substantially complete, they will:
   a. Prepare a certificate of substantial completion on AIA Form G704, or similar, accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the Engineer.
   b. Submit the certificate to Owner, Contractor and manufacturer for their written acceptance of the responsibilities assigned to them in the certificate.

1.4 FINAL REVIEW

A. When Contractor considers the work is complete, they shall submit written certification that:
   a. Contract documents have been reviewed.
   b. Work has been inspected for compliance with contract documents.
   c. Work has been completed in accordance with contract documents.
   d. Equipment and systems have been tested in the presence of the Owner's representative and are operational.
   e. Work is completed and ready for final review.
B. Engineer will make final review to verify the status of completion with reasonable promptness after receipt of such certification.
C. Should Engineer consider that the work is incomplete or defective:
   a. Engineer will promptly notify the Contractor in writing, listing the incomplete or defective work.

b. Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to Engineer that the work is complete.
c. Engineer will again review the work.

D. When the Engineer finds that the work is acceptable under the contract documents and that all punch list items have been accomplished to their satisfaction, they shall request the Contractor to make closeout submittals.

1.5 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ENGINEER

A. Submit evidence of compliance with requirements of governing authorities.
B. Project Record Documents and As-Built Drawings: To requirements of Section 01720.
C. Warranties, Guarantees and Bonds: In addition to the Warranty and Guarantee Requirements of the Contract, provide all other guarantees, bonds, affidavits and certifications required throughout the specifications.
D. Spare parts and maintenance materials for Owner.
E. Contractor's affidavit of payment of debts and claims (AIA Document G706).
F. Contractor's affidavit of release of liens (AIA Document G706A).
G. Consent of surety to final payment (AIA Document G707).
H. Certificate of insurance for products and completed operations.

1.6 FINAL ADJUSTMENT OF ACCOUNTS

A. Submit a final statement of accounting to Engineer.
B. Statement shall reflect all adjustments to the contract sum:
   a. The original contract sum.
   b. Additions and deductions resulting from:
      i. Previous change orders.
      ii. Allowances.
      iii. Unit prices.
      iv. Deductions for uncorrected work.
      v. Penalties and bonuses.
      vi. Deductions for liquidated damages.
      vii. Deductions for re-inspection payments.
   c. Other adjustments.
   d. Total contract sum, as adjusted.
   e. Previous payments.
   f. Sum remaining due.
C. Engineer will prepare a final change order reflecting approved adjustments to the contract sum which were not previously made by change orders.

1.7 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit the final application for payment in accordance with procedures and requirements stated in the conditions of the contract.

PART 2 – PRODUCTS - NOT USED

PART 3 – EXECUTION - NOT USED

END OF SECTION

SECTION 01 78 39
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Requirements included
B. Recording
C. As-built drawings
D. Photography

1.2 REQUIREMENTS INCLUDED

A. Maintain at the site for the Owner one (1) record copy of:
   a. Drawings.
   b. Specifications.
   c. Addenda.
   d. Change orders and other modifications to the contract.
   e. Engineer field orders or written instructions.
   f. Reviewed shop drawings, product data and samples.
   g. Field test records.

B. No additional compensation will be granted to the Contractor to provide as-built drawings. If significant changes are made to proposed conditions provided in the Contract Documents, the Contractor will be required to furnish, at no additional expense to the Owner, the services of a surveyor registered in the State where the project is located and under whose direction shall be obtained and recorded all surveys, measurements and such other data required for the determination of the as-built records of the construction of the project.

1.3 RECORDING

A. Drawings: Principal dimensions, elevations, and other data, as required, shall be recorded for all work, such as:
   a. Significant deviations of any nature made during construction.
   b. Indicate locations, elevations and other conditions of pipes, house connections, structures, all existing utilities encountered during excavation and other appurtenances which are different from those shown on the drawings.
   c. All new underground utilities shall be located with dimensions from permanent features.
   d. Field changes of dimension and detail.
   e. Changes made by field order or by change order.
   f. Details not on original contract drawings.

B. The marked-up prints shall be inspected weekly by the Engineer and shall be corrected immediately if found either inaccurate or incomplete.

C. Specifications and Addenda: Legibly mark each section to record:
   a. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
   b. Changes made by field order or by change order.

1.4 AS-BUILT DRAWINGS

A. At the completion of the project, the record prints shall be submitted to the Engineer for final review and comment prior to application of final payment.

B. The Contractor shall correct, amplify, and do all other work as may be required by the Engineer to complete the drawings in a manner satisfactory to the Engineer.

1.5 PHOTOGRAPHY

A. Provide photographs of site and construction areas prior to commencement of work produced by an experienced photographer, acceptable to the Engineer.

B. Take photographs as follows:
   a. Site conditions prior to construction.
   b. During construction when encountering quantities or conditions that differ from Contract Documents.
   c. As directed by the Owner and/or Engineer.

C. Photo files:
   a. Pdf or jpeg files of photographs taken. The file shall include date and time photograph was taken.
   b. If not obvious, provide information about each photograph, including the name of the project, contract number, phase orientation or view, date, and time of view.
   c. Provide a typed Table of Contents if warranted.

D. Technique:
   a. Provide factual presentation.
   b. Provide correct exposure and focus, high resolution and sharpness, maximum depth of field, and minimum distortion.

E. Views: Consult with Engineer for instructions on views required.

F. Preconstruction Video: At this time no preconstruction video is required for this project. However, if this changes and is determined to be warranted by the Engineer the Contractor shall perform a preconstruction video taken by an engineer of person experienced with this type of work. It shall be narrated showing existing conditions clearly. The original video (CD or flash drive) shall be submitted to the Engineer prior to undertaking any work by the Contractor at the site.

G Submittals:
   a. All photographic documentation shall be submitted to Engineer and Owner within a reasonable timeframe.

PART 2 – PRODUCTS- NOT USED

PART 1 – EXECUTION- NOT USED

END OF SECTION

SECTION 02 21 00
SURVEYS

PART 1- GENERAL

1.1 SECTION INCLUDES

A. Description
B. References and standards
C. Quality assurance
D. Submittals
E. Project datum
F. Survey reference points

1.2 DESCRIPTION

A. Perform all survey work required to execute and document the Work described in these Specifications and as shown on the Drawings.
B. Contractor shall retain the services of a licensed Professional Engineer in the State of Rhode Island to perform a pre-construction condition survey of the adjacent property structure(s) to the south of the project area located at 37-39 Terrace Avenue, East Providence, Rhode Island. Pre-construction survey shall document, at a minimum, the existing condition of the exterior of the structure, the interior of the structure (if permitted by the homeowner), the timber retaining wall, and the revetment slope.
C. Contractor shall retain the services of a licensed Surveyor in the State of Rhode Island to perform the following surveys and provide As-Built Record Drawings specified herein:
    a. Pre-Construction & During Construction Surveys to establish line and grade control: Perform construction surveys to establish line and grade control for construction of layout of temporary controls, construction of the Work and site restoration. Additional surveys shall be performed during construction to maintain line and grade controls, as needed.
    b. Pre-Construction & During Construction to install and monitor horizontal and vertical movement monitoring points on the adjacent property retaining wall, slope and structure to the south of the project site, as shown on the Drawings.
    c. Surveys for Closeout Submittals (if required): Perform surveys to generate required As-Built Record Drawings as described in these Specifications, if required.
D. Provide required benchmarks, control points, grade stakes, structure and pipeline stakes and all other related items.
E. If significant changes are made to the proposed conditions provided in the Contract Documents, the Contractor's Surveyor shall prepare As-Built Record Drawings to be used for confirming quantities and documenting construction. The final As-Built Record Drawings shall be prepared in accordance with Section 01 78 39 - Project Record Documents.

1.3 REFERENCE AND STANDARDS

A. American Land Title Association, Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, effective February 2011.
B. Geometric Geodetic Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques, Federal Geodetic Control Committee, Version 5.0, May 1988 and corrected August 1, 1989.

1.4 QUALITY ASSURANCE

A. Qualifications:
   a. The qualifications of the Surveyor shall be submitted as outlined in this Specification. The Engineer reserves the right to disallow the person(s) selected by the Contractor for surveying. If, in the Engineer's opinion, the person is not qualified to do the work, the Contractor shall select another surveyor and submit qualifications until a qualified person is approved.
   b. The Surveyor selected by the Contractor shall be a Registered Professional Land Surveyor licensed in the State of Rhode Island, and whose qualifications are acceptable to the Owner. The surveyor shall have not less than 5 years of experience performing work of similar scope and extent.

B. Professional Engineer Responsibilities include but are not limited to:
   a. Perform and/or oversee the pre-construction survey work required for 37-39 Terrace Avenue, East Providence, Rhode Island. Provide a reasonable number of personnel to perform work in a timely manner and minimally impose on the property owner.

C. Surveyor Responsibilities include but are not limited to:
   a. Provide acceptable survey equipment consisting of Laser levels, Optical Automatic Levels, Total Stations and/or RTK Global Positioning System (GPS). If a GPS unit is utilized, grade spot checks shall be made with conventional surveying equipment at a minimum frequency of twice per day.
   b. Establishing required lines and grades for performing all excavating, filling, compacting, and grading, and for constructing the stone revetment, sand berms, timber stairs, all appurtenant structures, and all other Work.
   c. Establishing monitoring points for monitoring horizontal and vertical movements of the adjacent property (37-39 Terrace Avenue) structure, retaining wall, and slope. Perform subsequent monitoring of structures on a weekly basis during, and after work performed within 100 feet of the property.
   d. Preparing and maintaining professional-quality, accurate, well-organized, legible notes of all measurements and calculations made while surveying and laying out the Work.
   e. Performing such surveys necessary to record actual construction, including demolition, excavation, backfilling, and restoration operations.
   f. Prior to backfilling operations, surveying, locating, and recording on a copy of the Contract Documents accurate representation of below-grade utilities encountered and below-grade Work.
   g. Locating on a site plan of the Site the actual location of above-ground Work to be indicated on record documents.
   h. Preparing As-Built Record Drawings in accordance with Section 01 78 39 -Project Record Documents.
   i. Complying with requirements of the Contract Documents relative to surveying and related Work.

1.5 SUBMITTALS

A. Informational Submittals:
   a. Survey Work Plan: Submit a work plan for surveying related work, not less than 14 days prior to starting Work. At a minimum, this Survey Work Plan shall include the following:

i. A listing of all required surveying tasks and areas to be surveyed for both horizontal limits and elevations as necessary to perform and document the Work described in the Specifications and Drawings.
ii. A description of the proposed survey methods, including equipment, procedures, calibration methods, calibration frequency, estimated precision/accuracy of measurements.
iii. Instrument and GPS calibration certificates (6 months current).
iv. A description of record keeping procedures during surveying.

b. Pre-Construction Survey Report: Submit the results of the pre-construction survey performed at 37-39 Terrace Avenue. Report shall include, at a minimum, a description of the property and any deficiencies observed, representative photographs of the property condition, and photographs of all deficiencies and damage observed. Pre-construction survey shall be performed prior to Contractor mobilizing to the Site.
c. Weekly Monitoring Report: Submit the results of the weekly horizontal and vertical movement monitoring for 37-39 Terrace Avenue. Monitoring report shall include raw measurement data as well as tabulated movement(s) from prior reading(s) and from start of monitoring program.
d. Qualifications Statement:
i. Contractor shall provide the name, address, and a summary of qualifications of the proposed Registered Surveyor and a copy of the license for the Surveyor that will certify the Work.

B. Closeout Submittals:
a. As-Built Record Drawing in accordance with this Section.

1.6 PROJECT DATUM

A. All surveys shall be prepared using the project datum listed in these Specifications and as shown on the Drawings.
B. Horizontal Datum: Rhode Island State Plane East Zone in U.S. Survey Feet.
C. Vertical Datum: North American Vertical Datum of 1988 (NAVD 88) in U.S. Survey Feet.

1.7 SURVEY REFERENCE POINTS

A. Existing horizontal and vertical control points for the project are those designated on the Drawings.
B. Locate and protect monuments and control points prior to starting the Work and preserve all permanent reference points during construction.
a. Make no changes or relocations without prior written notice to the Engineer and after obtaining Engineer approval.
b. Report to the Engineer when any reference point is lost, destroyed, or requires relocation because of necessary changes in grades or locations.
c. Require surveyor to correctly replace project monuments or control points that may be lost or destroyed and establish replacements based on original horizontal and vertical controls at no additional cost to Owner.

PART 2- PRODUCTS- NOT USED

PART 3- EXECUTION

3.1 SECTION INCLUDES

A. Survey limits
B. Required surveys
C. Project survey requirements
D. Survey reporting

3.2 SURVEY LIMITS

A. Survey limits shall extend a minimum of twenty (20) feet beyond the planned Limits of Work.

3.3 REQUIRED SURVEYS

A. Pre-Construction & During Construction Surveys to Establish Line and Grade Control:
   a. Perform surveys to establish line and grade control for construction of layout of temporary controls, construction of the Work, including but not limited to all excavation, backfilling, and layout of the revetment, vegetated slope, walkways, utilities, sand berms, fencing, etc.
B. Pre-Construction & During Construction Survey work to install and monitor horizontal and vertical movement monitoring points:
   a. Install monitoring points on building structure, timber retaining wall and top of slope at 37-39 Terrace Avenue, East Providence, Rhode Island. Install enough points to reasonably monitor any construction induced horizontal or vertical movements of the structures.
   b. Perform weekly surveys to measure any horizontal or vertical movements once Contractor begins work within 100 feet of the noted property. Equipment utilized for movement surveys shall meet the accuracy requirements outlined herein.
C. Pre-Construction Survey of adjacent property to South of project area (37-39 Terrace Avenue):
   a. Perform a pre-construction survey of the building structure, timber retaining wall and slope located at 37-39 Terrace Avenue. Survey shall be performed or overseen by a Professional Engineer registered in the State of Rhode Island. The survey shall document, at a minimum, the general property layout and condition, any deficiencies observed. The survey work shall include representative photographs of the property condition, and photographs of all deficiencies and damage observed. Pre-construction survey shall be performed prior to Contractor mobilizing to the Site.
D. Surveys to Generate As-Built Record Drawings:
   a. Upon Completion of Work, Contractor shall prepare As-Built Record Drawings. If significant changes are made to the proposed conditions provided in the Contract Documents, the Contractor's survey shall prepare the As-Built drawings which shall be signed and sealed by a surveyor licensed and registered in the State of Rhode Island, for the Work at Crescent Park and Sabin Point.

3.4 PROJECT SURVEY REQUIREMENTS

A. Survey procedures including, but not limited to, positioning modes, calibration, and data reduction, adjustment, processing, and plotting shall conform to recognized industry standards. Horizontal location observations shall compensate for errors, geodetic corrections, and atmospheric variations. Failure to perform and process such surveys in accordance with recognized standards will result in a rejection and non-payment for Work performed.
B. All vertical and horizontal control points shall be of third order accuracy.

C. The Surveyor shall verify Work utilizing manufacturer calibration and field verification procedures per industry standards.
D. Surveys shall meet the following additional criteria at a minimum:
    a. Measure the target horizontal and vertical position to a precision of 0.05 foot and the target elevation to a precision of 0.05 foot.
    b. Horizontal positioning shall be by Real Time Kinematic (RTK) Global Positioning System (GPS) or equivalent technology capable of providing the same level of positioning accuracy.

3.5 SURVEY REPORTING

A. Maintain a complete, accurate log of all control and survey work as it progresses.
    a. Survey data and records shall be in accordance with recognized professional surveying standards, Laws and Regulations, and prevailing standards of practice.
    b. Original filed notes, computations, and other surveying data shall be recorded by Contractor's surveyor in hard bound field books and signed and sealed by Contractor's Surveyor.
B. Contractor shall provide Engineer all Survey Record Drawings and meet the requirements specified in Section 01 78 39 - Project Record Documents.

END OF SECTION

SECTION 02 40 00
DEMOLITION AND STRUCTURE MOVING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. Submittals
C. Regulatory requirements
D. Qualifications
E. Project conditions

1.2 DESCRPTION

A. Contractor shall be responsible for removing and legally disposing (R&D) of all materials indicated for demolition on the plans, unless otherwise noted herein. R&D materials to include, but not limited to:
   a. Pavement, excess soil, vegetation/trees, fencing, timber stairs and associated foundations, coir logs/erosion mats, picnic tables, riprap and debris on beach along the alignment of the revetment.
B. Contractor shall be responsible for excavating and transporting excess sand from the Crescent Park project to Sabin Point and the City of East Providence's yard on Forbes Street as directed by the Engineer and Owner. Appropriate quantity of sand required for construction of the Sabin Point berm(s) shall be transported to Sabin Point. The remainder of sand produced by excavation work at Crescent Park shall be transported and stockpiled at the City of East Providence’s Forbes Street yard.
C. The existing conditions shown on the plan are assumed based on the survey plan provided to FREG.
D. Contractor should carry contingency in pricing for differences in conditions shown, including but not limited to:
   a. Discovery of abandoned structures or footings,
   b. Pavement, curbing, or concrete areas with atypical depths or footings
   c. Discovery of abandoned or active utilities
E. This base plan was by the City of East Providence Department of Public Works - Engineering Department.
F. The survey for the base plan was conducted prior to the completion of the northern revetment. The location of the northern revetment is approximate.
G. Contractor shall carefully remove armor stones at abutting revetment as needed to construct new revetment without damaging the existing filter fabric, timber stairs, revetment structure to remain, or granite block wall.
H. Damage to any existing structure will be repaired by the contractor to the satisfaction of the City and Engineer at no cost to the City.
I. All materials not planned for stockpiling or re-use shall be disposed of legally in accordance with all local, state, and federal regulations.

1.3 SUBMITTALS

A. Submit a comprehensive Demolition and Structure Moving Work Plan, for Engineer’s review and approval at least 30 days prior to mobilization. The Plan shall include detailed procedures and

product data information for all methods, equipment and materials proposed for completing Work described herein and shown on the Drawings.

B. Survey Record Documents: Accurately record actual locations of capped utilities, subsurface obstructions, and any active utilities to remain in service consistent with Section 02 21 00 – Surveys.

1.4 REGULATORY REQUIREMENTS

A. Conform to applicable federal, State, and local codes as applicable for demolition of structures, lead-based paint, utility termination or removal/abandonment, safety and protection of adjacent structures, traffic and pedestrian control, odor control, dust control, noise control, vibration control, vermin control, soil erosion and sedimentation control, and waste disposal.

B. Conform to the conditions associated with Site-specific permits as described in Section 01 41 26 – Permits

C. Demolition activities shall be sequenced and completed to comply with the requirements of the National Fire Protection Association (NFPA) 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations 2009 Edition.

D. Notify affected utility companies before starting Work and comply with their requirements, including obtaining, paying for, and maintaining all applicable permits.

E. Do not close or obstruct roadway, pedestrian, or Site access without prior approval by Owner, Engineer and City of East Providence. See requirements of Section 01 55 00 – Vehicular Access and Parking.

1.5 QUALIFICATIONS

A. Demolition Firm: Company specializing in performing work of this Section with minimum 10 years' experience executing similar projects of scope and complexity. The demolition firm may be the Contractor if experienced in demolition of paving, concrete, and utilities.

B. Design shoring, bracing, and other earth support as necessary to complete demolition under direct supervision of Professional Engineer experienced in design of this Work and licensed in the State of Rhode Island.

1.6 PROJECT CONDITIONS

A. The contractor shall notify the engineer when unanticipated or apparently dangerous conditions are uncovered during construction or demolition.

B. Contractor shall conform to applicable laws and regulations when hazardous or potentially hazardous materials or contaminated substances are encountered. Contractor is directed not to disturb or attempt to remove any discovered hazardous or potentially hazardous materials or contaminated substances without first notifying Owner or Engineer. Immediately notify Owner or Engineer upon the discovery of such conditions.

C. Maintain existing Site access as much as practical during demolition. Restore Site access as necessary to provide adequate Site ingress/egress during construction.

PART 2 - PRODUCTS

2.1 SECTION INCLUDES

A. Demolition equipment
B. Run-off controls

2.2 DEMOLITION EQUIPMENT

A. Crane or Specialty Excavator shall be used to dismantle the Revetment Stones at the North end of the project to ensure adjacent structures are not damaged and existing fabric is not ripped during demolition. Use of an excavator without a thumb will not be allowed.
B. Use of explosives, wrecking balls, or other demolition methods likely to generate excessive dust, noise, vibration, and other debris is not permitted unless approved in writing by Owner and Engineer.

2.3 RUN-OFF CONTROLS

A. Refer to Section 01 57 13 – Temporary - Erosion and Sedimentation Controls, for run-off control requirements.

PART 3 - EXECUTION

3.1 SECTION INCLUDES

A. Existing site documentation
B. Examination
C. Preparation
D. Hot work
E. Demolition requirements

3.2 EXISTING SITE DOCUMENTATION

A. Document existing site conditions in accordance with Section 01 78 39 – Project Record Documents prior to the start of demolition work.

3.3 EXAMINATION

A. Examine existing Site features indicated to be demolished before demolition.
B. Coordinate demolition sequence and procedures to prevent structures from becoming unstable.

3.4 PREPARATION

A. Call Dig Safe at 1-800-DIG-SAFE not less than five working days before performing Work. Request underground utilities to be located and marked within and surrounding construction areas. Refresh mark outs as necessary, and maintain live Dig- Safe number for as long as intrusive work is ongoing.
B. Pay for, obtain, and comply with all necessary work authorizations and permits.
C. Notify affected utility companies before starting work and comply with utility's requirements.
D. Survey locations of any utilities capped during the Work.
E. Do not close or obstruct roadways, sidewalks, or hydrants without permits.
F. Erect and maintain temporary barriers and security devices, including warning signs and lights (as necessary), and similar measures, for protection of the public, Owner, and existing improvements indicated to remain.
G. Protect existing structures indicated to remain, abutting properties and public ways including, but

not limited to preventing movement or settlement of adjacent structures. Provide and maintain bracing and shoring as needed.

3.5 HOT WORK

A. No hot cutting equipment may be used on surfaces containing lead-based paint unless the appropriate precautions are taken to comply with Occupational Health and Safety Administration (OSHA) regulations, specifically 40 CFR 1926.62.
B. A Hot Work Permit shall be required for the use of equipment that generates sparks from welding, cutting or brazing. Hot work shall be minimized to the extent possible.
C. Selective Demolition of Site Improvements:
    a. Pavement, Sidewalks, Curbs, and Gutters: Selective demolition of asphalt or concrete pavement, sidewalks, curbs, and gutters, as applicable, shall terminate at saw-cut edges. Edges shall be linear and have a vertical cut face.
    b. Fencing, Guardrails, and Bollards: Remove to the limits shown or indicated on the Drawings. Completely remove below-grade posts and concrete.
    c. Comply with Section 31 11 00 - Clearing and Grubbing.

3.6 DEMOLITION REQUIREMENTS

A. Work shall be conducted in such a manner as to keep it confined within the Limits of Work shown on the Drawings.
B. Contractor shall conduct the Work in a manner giving prime consideration to protection of the public and the environment; protection from the weather, control of noise, shocks and vibrations; control of dirt and dust; orderly access for storage of materials; protection of existing structures, surfaces, property features not part of the Work; and coordination and cooperation with Owner and other property owners at all times.
C. Hours of construction operations are to be per local ordinances. Weekend work may be limited by the City. City to provide written approval for all weekend work.
D. Clearing and grubbing is not to extend beyond the Limit of Work.
E. Contractor shall be responsible for maintaining and protecting all existing site features to remain. Any damage to said features shall be repaired or replaced at the owner's discretion and at the contractor's expense.
F. Contractor shall install temporary protection measures while working near the new timber staircase. Any damage to the stairs will be repaired by the contractor at no cost to the Owner.
G. The contractor shall be responsible for the removal of all dumped materials from the project, including but not limited to garbage, trash and like material. The proper disposal of material shall be in accordance with all applicable local, state, and federal regulations.
H. The Contractor shall be responsible for maintaining existing utilities to remain and protecting the same from damage during demolition operations. The Contractor is responsible for all replacement and coordination costs associated with any damage to existing active utilities.
I. Contractor shall coordinate with the City to locate and repair irrigation lines which become damaged during demolition.
J. All inactive utility lines, pipes, and structures discovered to be in conflict with the proposed construction shall be removed and disposed of unless otherwise noted.
K. Inactive utilities not in conflict with the proposed construction or any underground structures may be abandoned in place unless otherwise noted on the plans.
L. Active utility lines and structures encountered but not specifically noted on the plans shall be

located, and this information shall be provided to the Engineer and Owner. No work to relocate, remove or abandon these utilities shall be performed unless written approval from the utility companies and Engineer is obtained.

M. Contractor shall coordinate the cutting and capping of all existing utility connections with all applicable companies having jurisdiction.

END OF SECTION

SECTION 03 00 00
CONCRETE

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. Definitions
C. References and standards
D. Submittals
E. Delivery, storage and handling

1. 2 DESCRIPTION

A. This section specifies cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for all concrete related to the project including, but not limited to the following:
   a. Concrete Foundations for Stairs

1.3 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.

1.4 REFERENCES AND STANDARDS

A. ACI 301 - Specifications for Structural Concrete; Latest edition
B. ACI350/350R- Code Requirements for Environmental Engineering Concrete Structures- Latest edition
C. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement;
D. ACI 318 - Building Code Requirements for Structural Concrete and Commentary
E. ASTM C150/C150M - Standard Specification for Portland Cement; 2016
F. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field; 2015a (2016)e1
G. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2016
H. ASTM C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars; 2014
I. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2015

1.5 SUBMITTALS

A. Submit the following at least 30 days prior to any concrete placement
   a. Product Data: Catalog data sheets for each type of product indicated
      i. Admixtures
      ii. Form materials and form-release agents
      iii. Embedment
      iv. Curing compounds
      v. Bonding Agents

vi. Penetrating Sealant
vii. Adhesives and adhesive anchors
viii. Repair materials

b. Design Mixtures: Mix design for each strength and type of concrete. Submit a complete list of materials including type; brands; source and amount of cement, fly ash, pozzolans, ground slag and admixtures; and applicable reference specifications. Submit additional data regarding concrete aggregate if the source of aggregate changes. Include copies of test reports showing that the mix has been successfully tested to produce concrete with the properties specified.

c. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:
   i. Aggregates. Include service record data indicating absence of deleterious expansion of concrete due to alkali silica reactivity (ASR).

d. Material Test Certification: For each of the following, signed by manufacturers:
   i. Cementitious materials.
   ii. Admixtures
   iii. Galvanized steel reinforcement and accessories.
   iv. Bonding agents.
   v. Repair materials.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Reinforcing steel shall be transported to the site, stored, and covered in a manner which will ensure that no damage shall occur to it from moisture, dirt, grease, or any other cause that might impair bond to concrete. A sufficient supply of approved reinforcing steel shall be stored on the site at all times to ensure that there will be no delay of the work. Identification of steel shall be maintained after bundles are broken.

PART 2 PRODUCTS

2.1 SECTION INCLUDES

A. Threaded inserts and embedment's
B. Epoxy adhesive
C. Steel reinforcement
D. Concrete materials
E. Concrete mixtures
F. Fabricating reinforcement
G. Concrete mixing

2.2 THREADED INSERTS AND EMBEDMENTS

A. Threaded inserts and embedded items shall be hot dipped galvanized in accordance with ASTM A123 or A153 as applicable.

2.3 EPOXY ADHESIVE

A. Epoxy adhesive for reinforcing steel and shall meet the requirements of Epoxy coating shall conform to ASTM 884/A 884M-04 Class A Finish.

2.4 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A615/A 615M, Grade 60 (Grade 420), and epoxy coated.
B. Recommended nominal concrete cover over reinforcement shall be 3-inches
C. Mechanical Splice: Splice shall overlap by a minimum of 50 bar diameters

2.5 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
   a. Portland cement: ASTM C 150, Type II, gray.
   b. Normal-Weight Aggregates: ASTM C 33, Class 4S coarse aggregate or better, graded. Provide aggregates from a single source with documented service record data of at least 10 years' satisfactory service in similar applications and service conditions using similar aggregates and cementitious materials.
   c. Coarse aggregates for concrete shall consist of fragments of hard, angular, durable, insoluble crushed rock of the sizes herein specified. Select aggregate which is considered not susceptible to Alkali-Silica Reactivity (ASR) when tested in accordance with ASTM C295. Aggregate shall be free from dirt, clay, dust, alkali, perishable matter or other deleterious substances, and shall be free from injurious amounts of soft, friable, thin, elongated or laminated pieces. Coarse aggregates shall be washed and screened, or both if necessary, to remove fine materials and deleterious substances adhering to the aggregate. No more than 5 percent by weight shall consist of structurally weak particles. Aggregate for concrete, in general, shall conform to ASTM 33.
      i. The aggregates shall be well graded from coarse to fine and the gradation shall be within the limits prescribed in ASTM C33 at the time the materials enter the batching scales.
      ii. Coarse aggregate maximum size shall be 3/4-inch nominal for all concrete unless noted otherwise below in 2.8-B-1-c.
      iii. Coarse aggregate maximum size shall be 3/8-inch nominal for USCG Pier 2 pile jackets, City floating dock pipe pile concrete fill and concrete fill placed between steel soldier pile/plates and Maritime Gloucester Boathouse seawall.
      iv. In no case shall the maximum size of coarse aggregate exceed 1/5 the minimum dimension of the concrete member, nor 3/4 of the minimum clear distance between reinforcing bars or between bars and forms.
   d. Fine aggregates used for manufacturing concrete and mortar for all parts of the work shall consist of sand or other inert materials having similar characteristics, or a combination thereof, having acceptable gradation or particle sizes, and consisting of hard, strong, durable grains of quartz or other suitable hard rocks. Fine aggregates shall have a fineness modulus of 2.80 (+ 0.20), and shall not contain more than 3 percent by weight of material passing the number 100 sieve when graded in accordance with ASTM C33, and shall not contain more than 2 percent by weight of material passing the number 100 sieve when tested dry. Fine aggregates shall be moderately sharp particles, free from injurious amounts of dust, lumps, soft or flaky particles, shale, clay, decomposed grains, mica and ferruginous cemented sand. The particles shall be free from alkali and other surface coatings and shall not contain excessive amounts of organic matter, as determined by color test made in accordance with

ASTM C40. The total weight of fine aggregate shall not exceed 1200 lbs per cubic yard of concrete.

B. Water shall be potable, clear and free from oil, acid, alkali, organic matter, silt, detergents, or other deleterious substances. The amount of water, including surface or free moisture in the aggregates, shall be measured and controlled so that the water-cement ratio of each mix shall be accurately obtained.
C. No chlorides should intentionally be added. Total water-soluble chloride ion (ci) of concrete prior to exposure should not exceed 0.10% by weight of the cement for normal reinforced concrete and 0.06 percent by weight for prestressed concrete

2.6 CONCRETE MIXTURES

A. Concrete shall be proportioned, mixed and placed in accordance with ACI 318 "Building Code Requirements for Reinforced Concrete" and ACI 301 "Specifications for Structural Concrete for Buildings"
B. Proportion normal-weight concrete mixture as follows:
   a. Minimum Compressive Strength for Concrete is at the end of 28 days shall be 3,000 psi for all stair footings.
   b. Portland Cement Content: minimum 505 pounds per cubic yard
   c. Maximum Water-Cementitious Materials Ratio of 0.45
   d. Maximum Slump of 4"
   e. Air Entrained for 4 to 6%
   f. Limit water-soluble, chloride-ion content in hardened concrete to 0.10 percent by weight of cement.

2.7 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manuel of Standard Practice."

2.8 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information
   a. When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 SECTION INCLUDES

A. General concrete
B. Batching and mixing
C. Embedded items
D. Steel reinforcement
E. Concrete placement
F. Concrete protecting and curing

3.2 GENERAL CONCRETE

A. Areas of and placement are denoted on the Drawings. Review all proposed areas with Engineer prior to initiating work.
B. Place new reinforcing steel and place concrete as shown on Drawings and as

specified herein.

C. Clean up and dispose in a legal manner all removed concrete and steel waste.
D. Cleanout concrete trucks at locations designated by Engineer.
E. All work shall be shielded during concrete placement for the protection of ongoing and related work activities.
F. Concrete shall be cast against firm soil or compacted crushed stone as shown on the plans.
G. Concrete shall not be poured in water or on frozen
H. Ground and shall be protected from frost during construction.
I. All footing excavations shall be inspected by Engineer before any concrete is placed.
J. In hot weather concrete shall be protected in accordance with ACI 305R. In cold weather concrete shall be placed and cured in accordance with ACI 306.

3.3 BATCHING AND MIXING

A. Machine mix concrete. Begin mixing within 30 minutes after cement has been added to aggregate. Place concrete within a maximum of 90 minutes after the addition of cement to aggregate.

3.4 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

3.5 STEEL REINFORCEMENT

A. Steel Reinforcement shall be installed or placed as shown on the Drawings and the approved Shop Drawings. Placement and details of reinforcement not shown on the plans shall be in accordance with ACI 315 or ACI 318 and CRSI MSP-1. At time of concrete placement, all reinforcement shall be free from loose rust, scale, mud, oil, grease or any other contaminant that could affect bond with the concrete.
B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with ties and bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

3.6 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items are complete and that required inspections have been performed.
B. Do not add water to concrete during delivery, at Project site, or during placement unless accepted by Engineer.
C. Concrete shall be handled from the mixer to the place of final deposit as rapidly as practicable by methods which shall prevent the separation or loss of the ingredients. When concrete is conveyed by chuting, the plant shall be of such size and design as to insure a practically continuous flow in the chute. The slope of the chute shall be such that concrete of the required consistency flows without separation of the ingredients. The chute shall be flushed with water before and after each run; the water used for this purpose is not to be discharged inside the forms. Chutes shall be

U-shaped, designed for this function, and in general shall have a slope varying from 25º to 45º as measured from a horizontal plane. The maximum drop shall be no greater than 5 feet.

D. Concrete shall be placed either by pumping through a port near the bottom of the form or by tremie methods, in one continuous placement from the bottom.
E. Deposit concrete continuously in one layer.
   a. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
   b. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches (150 mm) into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete mixture but not cause constituent segregation.
   c. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
   d. Maintain reinforcement in position during concrete placement.
F. Cold-Weather Placement: Comply with ACI 306.1 and as outlined below. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
   a. Do not use frozen materials containing ice or snow, do not place concrete against frozen materials or in forms containing frozen materials.
   b. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
G. Hot Weather Placement: Comply with ACI 301 and as follows:
   a. Maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.

3.7 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing. Concrete and form temperature are to be maintained above 50 degrees Fahrenheit for a minimum of 7 days after placement.

END OF SECTION

SECTION 05 05 13
SHOP APPLIED COATINGS FOR METALS

PART 1- GENERAL

1.1 SECTION INCLUDES

A. Description
B. References and standards
C. Submittals

1.2 DESCRIPTION

A. This section specifies the requirements for shop application of protective coating for steel reinforcements and miscellaneous metals required to complete the Work.

1.3 REFERENCES AND STANDARDS

A. ASTM A153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
B. ASTM A239 – Standard Practice for Locating the Thinnest Spot in a Zinc (Galvanized) Coating on Iron or Steel Articles.
C. ASTM A775/A775M-22 Standard Specification for Epoxy-Coated Steel Reinforcing Bars.

1.4 SUBMITTALS

A. Action Submittals
    a. Product Data:
        i. Submit the following for each product at least 14 days prior to ordering:
            a) Manufacturer's printed Technical Data Sheets and Material.
            b) Manufacturer's printed product label and application instructions.
        ii. For products other than those expressly listed in this Section, submit the following for each product.
            a) Information adequate for the Engineer to compare the specified product and the proposed substitution; including, but not limited to, technical specifications, test data, references to product use in existing installations, or any other data required by the Engineer.

PART 2- PRODUCTS

2.1 SECTION INCLUDES

A. Coatings

2.2 COATINGS

A. The epoxy coating shall cover all reinforcing steel for the stair concrete foundations and shall be coated by the manufacturer of the coating materials and approved by the owner. Repair coatings shall be applied in accordance with the manufacturer's instructions and directions in accordance with ASTM A775/A775M-22 Standard Specification for Epoxy-Coated Steel Reinforcing Bars.
B. All miscellaneous hardware for the new stairs shall be hot dipped galvanized (HDG) for exterior, high humidity or extreme service (min. 4 mil thickness for marine environment). Clips, hangers, angles and other hardware requiring fabrication shall be fabricated complete with holes and welding prior to hot dip galvanizing. Hot dipped galvanizing shall be in accordance with ASTM

A123 for plates and fabrications and ASTM A153 for bolts and bolting hardware. See plans for additional information.

PART 3- EXECUTION

3.1 SECTION INCLUDES

A. Handling

3.2 HANDLING

A. Use nylon slings to handle coated steel during handling, shipment and delivery to the Site.
B. Do not handle or move coated steel until the coating has cured.
C. Coating damaged during handling, shipment or delivery to the Site or due to the Contractor's operation shall be repaired by the Contractor, as specified herein, at no cost to the Owner.

END OF SECTION

SECTION 05 05 23
METAL FASTENINGS

PART 1- GENERAL

1.1 SECTION INCLUDES

A. Description
B. References and standards
C. Quality assurance
D. Submittals
E. Product delivery, storage and handling

1.2 DESCRIPTION

A. This Section specifies the requirements for furnishing, installing, and testing all plates, bolts, nuts and washers and miscellaneous fasteners as shown on the Drawings.

1.3 REFERENCES AND STANDARDS

A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2015.
B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
C. ASTM A325 - Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength; 2014.
D. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
E. ASTM A572/A572M - Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel; 2015.
F. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015 (Errata 2016).

1.4 QUALITY ASSURANCE

A. Except as noted elsewhere, Work shall conform to the following codes and standards:
    a. American Society for Testing and Materials (ASTM).
    b. American Welding Society (AWS).
    c. American Institute of Steel Construction (AISC).

1.5 SUBMITTALS

A. Action Submittals
    a. Shop drawings for all shop fabricated items shall be submitted to the Engineer for approval before beginning fabrication.
B. Informational Submittals
    a. Certificate of compliance with applicable ASTM specifications for all galvanized items shall be submitted to the Engineer with all materials delivered to the fabricator or Site.
    b. Welding Certificates of welders.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

A. All parts provided under this specification shall be delivered, stored and handled so that they are not lost or damaged before installation in the Work.

PART 2- PRODUCTS

2.1 SECTION INCLUDES

A. Materials

2.2 MATERIALS

A. All threaded fasteners and anchors shall be hot-dipped galvanized steel in accordance with Section 05 05 13 – Shop Applied Coatings for Metals. Bolts shall conform to A307 Grade A with heavy hex nuts and hot dipped galvanized ogee or dock washers as specified on drawings. Bolt holes shall be a maximum of 1/16” larger than the bolt diameter specified.
B. Structural steel sections and miscellaneous shall conform to ASTM A572/A572M Grade 50 or greater for all other structural steel unless otherwise noted.
C. Bolts: ASTM A307 Grade A with heavy hexagonal heads, unless otherwise noted.
D. Nuts: ASTM A307 Grade A with heavy hexagonal heads, unless otherwise noted.
E. Washers: ASTM F436 oversized dock washers or ogee washers as indicated on the plans, unless otherwise noted.
F. Weld rods: ASTM A233, E70XX series electrodes as req'd for Conditions of intended use, unless otherwise noted.
G. All bolts, nuts, washers, clips, hangars, angles, threaded fasteners, anchors and miscellaneous metals shall be hot dipped galvanized in accordance with Section 05 05 13 – Shop Applied Coatings for Metals.

PART 3 -EXECUTTION

3.1 SECTION INCLUDES

A. Fabrication
B. Installation
C. Welding
D. Defective work

3.2 FABRICATION

A. Fabrication shall conform to AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, AISC 360-22 AISC Specification for Structural Steel Buildings (2022 edition), AISC 303-22 Code Standard Practice for Steel Buildings and bridges (2022 edition), and Rhode Island State Building Codes.
B. Workmanship shall be equal to standard commercial practice.
C. All materials shall be clean and straight. Each assembly shall be accurately fabricated to the lines and dimensions called for and shall be free from undue twists, bends, warping, distortion and other irregularities.
D. Assemblies shall be fabricated to within + or - 1/16" of their theoretical dimensions.

3.3 INSTALLATION

A. Installation shall conform to AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, AISC 303-22 Code Standard Practice for Steel Buildings and bridges (2022 edition), and Rhode Island State Building Codes
B. Parts covered by this specification shall be installed in the Work as shown on the Drawings.
C. No cutting or burning of steel shall be done to install fasteners without approval of the Engineer.

3.4 WELDING

A. All welding shall be performed by qualified welders. All welding and qualification of welders shall be executed in accordance with the requirements of the American Welding Society Structural Welding Code/AWS D1.1/D1.1M, latest edition. The expense of all testing and retesting to qualify welders shall be borne by the Contractor.
B. All welds shall be visually inspected by the Engineer.
    a. Defective welds shall be corrected as directed by the Engineer. Welds shall then be re-inspected by the testing agency. The expense of all corrective work and re-inspection shall be borne solely by the Contractor.

3.5 DEFECTIVE WORK

A. The following shall be grounds for rejection and replaced at no additional cost to the Owner:
    a. Any damaged parts.
    b. Any parts improperly installed in the Work.
    c. Any items found not to have the proper coating.
    d. Otherwise not according to Documents.

END OF SECTION

SECTION 06 13 00
HEAVY TIMBER CONSTRUCTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. References and standards
B. Summary
C. Product storage and handling
D. Submittals
E. Line and grade control
F. Observation by owners authorized representative

1.2 REFERENCES AND STANDARDS

A. Except as noted, Work shall conform to the latest editions and revisions of the following codes and standards:
   a. American Society for Testing and Materials (ASTM), latest
   b. National Design Specification for Wood Construction (NDS), latest
   c. International Building Code (IBC), latest
   d. Rhode Island State Building Code, latest

1.3 SUMMARY

A. Work included
   a. Contractor shall furnish all labor, equipment, materials, tools, supervision, and transportation necessary to perform all operations necessary to furnish and install all items consistent with this Section and as shown on the Drawings. These items include, but are not limited to, the following:
      i. Installation of the timber stairs, timber piles and appurtenant structures as shown on the Drawings
   b. All timber work shall be in accordance with the national forest products association National Design Specification for Wood Construction.
   c. All structural timber and timber piles described herein and shown on the Drawings shall be new materials consistent with the requirements of this Section and the Drawings.
   d. Contractor shall notify the Engineer a minimum of 48 hours prior to driving piles. Contractor shall stop driving pile if a loss of driving resistance is noted within the last 4 feet of driving and notify the engineer prior to proceeding with the work on the pile being driven.

1.4 PRODUCT STORAGE & HANDLING

A. All structural timber and timber piles stored on-site shall be carefully stored so as to prevent damage or deterioration of the material and its protective treatment.
B. Contractor shall stack lumber and timber off the ground on skids and under cover in a manner that prevents warping and allows shedding of water. Handle timber with rope or chain slings without dropping, breaking outer fibers, bruising, or penetrating the surface with tools. Do not use cant dogs, peaveys, hooks, or pike poles. Protect timber and hardware from damage.
C. Contractor shall stack piles during delivery and storage so that each of the piles is maintained in a straight position. Piles shall not be stacked more than 5 feet high. Piles shall not be dragged across

the ground. Contractor shall inspect piles for damage before transporting from the storage area to the driving area and immediately prior to driving. Bent piles shall be rejected. Contractor shall protect piles during handling and driving. Inspection and review of piles at the place of manufacture shall not be construed as acceptance.

D. Contractor shall be responsible for all damage to structural timber and timber piles until Final Acceptance, except as specified otherwise in this Specification.

1.5 SUBMITTALS

A. Structural Timber
   a. At least 30 days prior to material delivery Contractor shall submit certificates from the treatment plant or a qualified testing laboratory and/or lumber supplier attesting that:
      i. All timber is free from decay.
      ii. All timber has been treated in conformance with these Specifications.
      iii. All timber is of the grade and quality specified herein.

B. Timber Piles:
   a. Within 21 days of Notice to Proceed, Contractor shall submit a work plan, for approval by Engineer, for installation of timber piles at the location of the new stairs. The work plan shall address the following:
      i. Description of timber pile installation procedures including pile-driving equipment to be employed in the work, including pile hammer type, leads, followers (where allowed), maximum rated energy, rated energy per blow of hammer, cushion material and helmet, templates and false work to be used for support and layout of pile installation operations.
      ii. Contractor shall submit complete and fully descriptive information and data to demonstrate the materials and procedures to be used are in compliance with these specifications. Plant, materials, workmanship, finished products, and installation are subject to inspection at the site. Installation and testing shall not be performed unless in the presence of Engineer or Engineer's Representative.
      iii. Product Data: Certify that the following materials meet or exceed the specifications requirements outlined in Part 2 – Materials, by submitting a notarized copy of chemical and physical test results:
      iv. New CCA-treated Southern Yellow Pine timber piles: Contractor shall submit to Engineer for review triplicate copies of licensed independent testing laboratory certification that the piles were free from defects, were properly peeled, seasoned and otherwise prepared for the intended use.

1.6 LINE AND GRADE CONTROL

A. Contractor shall be responsible for establishing and maintaining line and grade control for all aspects of the Work and as specified on the Drawings and described in Section 02 21 00 – Surveys. All survey work conducted on the project shall correspond to the Site coordinate system and vertical datum as shown on the Drawings

B. Final grades for timber stairs and landings shall be within the following tolerances:
   a. Horizontal tolerance: 0.1 feet
   b. Vertical tolerance: 0.1 feet

C. Final Alignment for Timber Stairs
   a. Horizontal Tolerance:

i. A lateral deviation from the designed location shown on the Drawings at the cut-off elevation of not more than 2 inches will be permitted, unless noted otherwise on the Drawings.

b. Vertical Tolerance:
   i. Piles shall be driven with a maximum permissible vertical deviation of 2 inches in 10 feet, unless noted otherwise on the Drawings.
c. Contractor shall notify Engineer immediately if any piles exhibit vertical and/or lateral deviations beyond those stated above and on the Drawings. All deviations greater than 2 inches horizontally and 2 inches in 10 feet vertically, or as shown on the Drawings, shall be subject to approval by Engineer prior to acceptance.
d. The installation of replacement piles and other corrective measures shall in all cases be subject to approval of Owner, and shall be performed by Contractor at no additional cost to Owner.
e. Whenever misalignment of a pile or piles necessitates redesign of the pile supported structure, the cost of such redesign shall be deducted from sums otherwise due to Contractor under the Contract.

1.7 OBSERVATION BY OWNER'S AUTHORIZED REPRESENTATIVE

A. Observation and logging of all pile-driving operations will be provided by Engineer or his authorized representative. No piles shall be driven except in the presence of Engineer or his authorized representative.
B. Contractor shall cooperate with Engineer and Engineer's Representative and shall furnish all materials and facilities as may be required. Contractors shall provide to Engineer and Engineer's Representative free and safe access to the work at all times and shall employ safety equipment as required by OSHA.

PART 2 - PRODUCTS

2.1 SECTION INCLUDES

A. Treated structural timber
B. Timber piles

2.2 TREATED STRUCTURAL TIMBER

A. All timber work shall be in accordance with the national forest products association National Design Specification for Wood Construction.
B. Timber
   a. Timber and Lumber shall be of the nominal dimensions shown on the Drawings. All timber sizes are nominal unless noted otherwise in the Drawings or herein.
   b. All timber shall be stress graded lumber having the following structural properties:
      i. Southern Yellow Pile (S.Y.P.) #1 or Select Structural
         a) F_b = 1,400 psi
         b) F_v = 110 psi
   c. All timber shall be free from defect, which will materially impair strength and durability of timber member.
   d. All timber framing used for the project shall be straight in both longitudinal planes with no or minimal twist. Timber shall be inspected for crown prior to installation by the contractor and installed crown up where slight crown exists. Joints shall be saw cut and accurately and tightly fitted. The Engineer reserves the right to reject timber members and finish construction of

timber assemblies where, in the opinion of the Engineer, the design intent of the structure would be compromised due to the faulty timber, jointing, and or construction practices.

e. All nails & screws shall be as specified on drawings (stainless steel Grade 316 unless otherwise specified). Pre-drill undersize holes for nails through top ply only.

C. Preservative and Treatment
   a. All above-grade framing members and decking shall be treated with wood preservative (pressure treatment): FS TT-W-571 AWPA treatment C2 using chromated copper arsenate (1.0 CCA minimum retention). All holes and cuts shall be dressed with CCA. All posts supporting the structure shall be treated using a CCA with a minimum retention associated with direct burial.
   b. All new piles shall conform with the following:
      i. Timber, treated with chromated copper arsenate (minimum retention of 2.5 CCA)- all holes or cuts made in piles shall be dressed with CCA.- southern yellow pine conforming to the following minimum allowable stresses as determined in accordance with ASTM D-2899.

D. Fastenings
   a. All fastenings and related hardware shall conform to the requirements of Section 05 05 23 – Metal Fastenings.

2.3 TIMBER PILES

A. All new piles shall conform to the following:
   a. Timber treated with chromated copper arsenate (minimum retention of 2.5 CCA)
   b. All holes or cuts made in piles shall be dressed with CCA.
   c. Southern Yellow Pine conforming to the following minimum allowable stresses as determined in accordance with ASTM D-2899:
      i. Compression Parallel to Grain, F_{c_par} = 1,250 psi
      ii. Extreme Fiber Stress in Bending, F_b = 2,450 psi
      iii. Horizontal Shear, F_v = 115 psi
      iv. Compression Perpendicular to Grain, F_{c_per} = 230 psi
   d. Be free of defects, which will materially impair strength and durability of piles such as shakes and clusters of knots.
   e. Piles shall conform to the physical characteristics of round timber piles as described in ASTM D-25.
   f. Minimum butt diameter shall be 12" (8" tip min.), species shall be southern yellow pine.

B. All fastenings and related hardware shall conform to the requirements of Section 05 05 23 – Metal Fastenings.

PART 3 - EXECUTION

3.1 SECTION INCLUDES

A. Timber framing installation
B. Timber pile installation
C. Temporary support

3.2 TIMBER FRAMING INSTALLATION

A. Timber and lumber shall be accurately set in place and rigidly secured as shown on the Drawings.
B. Dress and sand woodwork until free from machine and tool marks, abrasions, raised grain, or other

defects that will show through the finish on surfaces exposed to view. Wherever possible, carry out sanding on a shop belt sander, not in the field. Sandpaper field joints and leave in perfect condition for finishing.

C. Make all joints tight, and form to conceal shrinkage, Glue all miters having a dimension of 4 inches or more from heel to point. Joints shall be glued tight and so formed as to conceal shrinkage. Cope trim at return sand miter at corners to produce tight-fitting joints with full surface contact throughout length of joint.
D. Make minimum of splices and joints in running trim, and where such splices and joints occur, fasten securely, with all exposed surfaces having smooth, continuous planes. Stagger joints in adjacent or relate members. Use scarf joints for end to end joints.
E. Woodwork shall be properly framed, closely fitted and accurately set to the required lines and levels and shall be rigidly secured in place. Shim as required using concealed shims to achieve specified tolerances.
F. Use construction details and fastener spacings indicated on Drawings.
G. During operation of finish carpentry, protect work of other trades against undue soilage and damage by the exercise of reasonable care and precautions. Repair or replace any work so damaged and soiled.

3.3 TIMBER PILE INSTALLATION

A. It is anticipated that piles will be installed using a vibratory hammer. Contractor shall submit proposed pile driving equipment to the Engineer a minimum of 30 days prior to any pile driving work.
B. Contractor shall have an impact hammer on site to be utilized if timber piles cannot be driven to the required tip elevations with the proposed vibratory hammer. The proposed impact hammer shall also be submitted to the Engineer for review.
C. All piles shall be driven before moving to other locations. Each pile shall be driven continuously and without voluntary interruption until the required penetration depth. Deviation from this procedure will be permitted only in case the driving is stopped by causes which reasonably could not have been anticipated.
D. No piles shall be driven unless witnessed by Engineer or Engineer's Representative.
E. All piles shall be driven to the minimum tip elevations indicated on the Drawings.
F. Special care shall be taken to avoid splitting of the timber piles during driving, including the use of bonding if necessary.
G. Contractor shall be particularly cautious if it is noted that the pile has met resistance suddenly. Care shall be taken not to overdrive the pile. If it is believed that sudden resistance is an obstruction above the bearing stratum, then the pile may be ordered removed for inspection.
H. Jetting of piles shall not be permitted.
I. Piles shall be driven as accurately as practicable in the correct locations true to line both laterally and longitudinally and to the vertical lines, all as shown on Drawings
J. Piles which are damaged or mislocated due to obstructions or Contractor’s error shall be withdrawn and replaced by new piles or shall be cut off and abandoned and additional piles driven, as directed by Engineer, all without additional cost to Owner.
K. Engineer may require any pile be withdrawn for inspection. Piles found to be in suitable condition shall be redriven and those found not suitable shall be replaced by new piles without additional cost to Owner.
L. Where obstructions interfere with driving piles at the locations and to the depth shown on the

Drawings, Contractor shall resort to all usual methods to install piles as required, including pre-augering, spudding, and excavation. If these methods prove unsuccessful, piles shall be drilled to achieve required penetration at the design locations, unless otherwise approved by Engineer. Piles abandoned because of obstructions shall be cut off or pulled out at the discretion of Engineer.

M. At no cost to Owner, piles broken during installation, including "brooming" of pile butts, shall be cut off and replaced at the discretion of Engineer. If requested, Contractor shall excavate to 10 feet to investigate suspect breaks. Piles with suspected breakage based on driving logs, but which cannot be verified because of depth, may be rejected at the discretion of Engineer.
N. Defective piles shall be replaced either by extracting the defective pile or by enlarging the group and driving additional piles, as Engineer may approve. Such replacement or addition shall be solely at the expense of Contractor and without compensation.
O. A pile exhibiting any one of the following conditions shall be deemed a defective pile:
    a. Piles exceeding the placement tolerance specified herein or noted on the Drawings, unless otherwise specifically accepted by Engineer. Piles exceeding the location tolerance shall be corrected by driving one or more additional piles, as directed by Engineer. Additional piles shall be provided at no cost to Owner.
    b. Any pile, which shows signs of being broken, split, or otherwise damaged during driving, including damage to the pile tip.
    c. Any pile damaged during transport, storage, handling and/or driving, which then cannot be properly installed.

3.4 TEMPORARY SUPPORT

A. Contractor shall be responsible to provide any temporary support or shoring required during construction.

END OF SECTION

SECTION 31 00 00
EARTHWORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Description
B. References and Standards
C. Quality Assurance
D. Line and Grade Control
E. Submittals
F. Project Conditions
G. Coordination

1.2 DESCRIPTION

A. Contractor shall furnish all labor, equipment, materials, tools, supervision, and transportation necessary to perform all earthwork necessary to complete the Work consistent with this Section and as shown on the Drawings. These earthwork activities include, but are not limited to, the following:
   a. Excavation of the existing slope to relocate the toe of the proposed revetment inland as shown on the Drawings and as required for revetment construction
   b. Excavation work required for fence installation and vegetated slope construction
   c. Construction of the sand berms at Crescent Park and Sabin Point
   d. Management and transport of all excavated materials consistent with the Contract Documents
   e. Furnish, and place all backfill materials as described herein and as shown on the Drawings.
   f. Subgrade preparation and placement of backfill to grades shown on the Drawings, and as further specified herein.
   g. All other earthwork activities necessary to perform the Work as shown on Drawings.
B. Contractor shall perform all Work necessary to support earthwork and other Site activities, including but not limited to the following:
   a. Protection and preservation of all existing fencing, pavements, utilities, adjacent structures and miscellaneous Site features to remain. Contractor shall be responsible for the repair of any damage to existing utilities, structures, or other features as a result of his/her operations to the satisfaction of the Owner at no additional cost to the Owner.
   b. Obtaining all required permits, licenses, and approvals of appropriate municipal, State, and utility authorities, prior to commencing the Work of this Section.
   c. Performing all appropriate subsurface utility mark outs prior to performing any intrusive Work and shall provide sufficient notification to DigSafe as required by Rhode Island state law. Contractor shall provide DigSafe notification number to the Owner along with documentation of clearance at least 5 days prior to the performance of any intrusive activities
   d. Providing products in sufficient quantities to meet the project requirements, and maintaining reasonable availability as necessary to eliminate construction delays.
   e. Dust and sediment control and maintenance of the Site and adjacent properties in a clean and unencumbered state as described in these Specifications.
   f. Demolition of Site structures and appurtenances consistent with Section 02 40 00 – Demolition and Structure Moving and as shown on the Drawings.
   g. Control and management of stormwater flows and run-off as required to complete the Work. It is the intent of these Specifications to limit the flow of stormwater into the Work Area.

h. Earthwork associated with Site restoration, including but not limited to installation of new fencing, final grading, installation of foundations for new stairs, placement of geotextiles, bedding stone, and revetment stone for the new revetment, subgrade preparation for new walkways, new utilities, erosion controls, and landscaping.

1.3 REFERENCES AND STANDARDS

A. All Work performed by Contractor shall be accomplished in accordance with all regulations and laws of local, State, and Federal agencies and utility companies.
B. Latest version of the American Society for Testing and Materials (ASTM) standards:
   a. ASTM D422 – Standard Test Method for Particle-Size Analysis of Soils.
   b. ASTM D1557 – Test for Moisture - Density Relations of Soils Using 10 lb Hammer and 18-inch Drop (Modified Proctor).
   c. ASTM D2216 – Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil.
   d. ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes.
   e. ASTM D2922 – Test for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
   f. ASTM D3017 – Test for Water Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
   g. ASTM D4318 – Test for Plastic Limit, Liquid Limit, and Plasticity Index of Soils.
C. Latest version of the American Association of State Highway and Transportation Officials (AASHTO) standards:
   a. AASHTO T88 – Particle Size Analysis of Soils.
   b. AASHTO T180 – Standard Specification for Moisture-Density Relations of Soils Using a 10 lb. Hammer and 18-inch Drop.
   c. AASHTO T 215 – Standard Method of Test for Permeability of Granular Soils (Constant Head).
D. Occupational Safety and Health Administration (OSHA) Regulation 29 CFR Part 1926 - Occupational Safety and Health.
E. The Rhode Island State Building Code, latest edition.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements:
   a. Laws and Regulations applying to the Work under this Section include, but are not limited to, the following:
      i. 29 CFR 1926.650 through 29 CFR 1926.652, Subpart P - Excavations.
      ii. RIDOT Standard Specifications and Standard Sheets.
      iii. RIDOT Standard Highway Specifications and Standard Details of Construction.
   b. Obtain required permits and approvals for excavation and fill Work.

1.5 LINE AND GRADE CONTROL

A. Contractor shall be responsible for establishing and maintaining line and grade control for all aspects of the Work as shown on the Drawings and described in Section 02 21 00 - Surveys. All survey Work conducted on the project shall correspond to the Site coordinate system and vertical datum as shown on the Drawings.
B. Tolerances for subgrade and final grades shall be as follows:
   a. Horizontal tolerance: to the nearest 0.1 feet

b. Vertical tolerance: to the nearest 0.1 feet

C. Engineer may perform spot survey checks and review As-Built Record Drawings, finish grades, etc. for each phase of the construction to verify the design grades have been established. Any data conflicts shall be addressed and corrected by Contractor at no additional cost to Owner.

1.6 SUBMITTALS

A. Informational Submittals:

a. Excavation and Backfill Work Plan: Submit acceptable plan for excavating, backfilling, and related Work, not less than 21 days prior to starting excavation Work. This plan shall include at a minimum the following:

i. Name of Contractor's "competent person" in responsible charge of excavation and fill Work.

ii. List of proposed equipment for excavation, dewatering, backfilling, and compaction Work.

iii. Proposed excavation, dewatering, backfilling, and compaction procedures. Where different procedures or equipment will be used for different types of material or at different locations at the Site, indicated where each procedure and equipment item will be used.

iv. Detailed schedule of excavation and backfill Work in accordance with the accepted Progress Schedule.

b. Delivery Tickets:

i. Submit copy of delivery ticket for each load of off-Site fill delivered to the Site. Each delivery ticket shall indicate Supplier name and source address, project name, contract number, date, material name, and quantity delivered.

1.7 PROJECT CONDITIONS

A. Coordinate Work with that of other trades affecting or affected by Work of this Section and cooperate with such trades to assure the steady progress of the Work.

B. Visit the Site to review all details of the Work and working conditions and to verify dimensions in the field including headroom and interferences from adjacent structures and utilities. Notify Engineer in writing of any discrepancy before performing any Work.

C. Maintain existing Site access as much as practical during earthwork. Restore Site access as necessary to provide adequate Site ingress/egress during construction. Contractor shall maintain public beach access during the work.

1.8 COORDINATION

A. Prior to the start of earthwork, Contractor shall arrange an on-Site meeting with Owner for the purpose of establishing Contractor’s schedule of operations, general procedures, and requirements and conditions related to the performance of the Work.

B. As construction proceeds, Contractor shall be responsible for notifying Engineer prior to the start of earthwork operations requiring observation.

PART 2 - PRODUCTS

2.1 SECTION INCLUDES

A. General

B. Site Materials

C. Import Materials

2.2 GENERAL

A. Revetment & Bedding Stone Materials: Refer to Section 31 31 19 – Revetments for materials and testing requirements.
B. Geotextiles: Refer to Section 31 05 19 - Geosynthetics for Earthwork for materials and testing requirements.

2.3 SITE MATERIALS

A. Suitable Site Materials: Suitable Site Materials consist of materials generated during excavation and grading to achieve subgrade elevations specified on the Drawings and deemed acceptable for re-use as on-Site fill by the Engineer. It is anticipated that on-site sands excavated from the existing slope will be re-used to re-grade beach, fill revetment stone matrix, and construct the proposed sand berms at Crescent Park and Sabin Point.
B. Unsuitable Site Materials: Unsuitable Site Materials consist of materials generated from on-Site sources that are classified by the Engineer as not meeting the requirements of Suitable Site Materials as specified herein. Identification of Unsuitable Site Materials will be at the sole discretion of Engineer. Unsuitable Site Materials shall be managed, handled, temporarily stockpiled, loaded, transported and legally disposed of in accordance with local, state and federal regulations.

2.4 IMPORT MATERIALS

a. Base course shall be gravel borrow conforming to RIDOT Bluebook M01.09, Table 1,I, "Gravel Borrow", 1A (<8% Passing the #200 Sieve).
B. Subbase shall be pervious fill conforming to RIDOT Bluebook M01.09, Table 1, IV, "Pervious Fill", Type D.

PART 3 - EXECUTION

3.1 SECTION INCLUDES

A. General
B. Excavation
C. Backfilling and Compaction
D. Field Quality Control
E. Maintenance

3.2 GENERAL

A. Provide Engineer with sufficient notice and with means to examine areas and conditions under which excavating, filling, and grading Work will be performed. Engineer will advise Contractor in writing when Engineer is aware of conditions that may be detrimental to proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions are corrected.
B. Contractor shall examine all Drawings and all other Sections of the Specifications for requirements therein affecting the Work of this Section.
C. The Work shall be carried out in such manner as to prevent undermining or disturbing any existing utilities, catch basins, fences, adjacent structures, or other features at or adjacent to the Site (unless otherwise scheduled to be removed and/or replaced as part of the Work). Contractor shall be responsible for the repair of any damage to existing utilities, structures, or other features as a result of his/her operations to the satisfaction of the Engineer and Owner at no additional cost to Owner.
D. Consult official records of existing utilities, both surface and subsurface, and their connection, to be fully informed on all existing conditions and limitations as they apply to this Work and its relation to other Work.

E. Field-locate and protect existing underground and overhead utilities to remain within the Limits of Work in accordance with the requirements of authorities having jurisdiction. If utilities are to remain in place, provide adequate means of protection during earthwork and construction operations including all coordination and costs associated with temporary support, disconnection, or re-routing of utilities. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult Engineer and Owner immediately for direction. Cooperate with Engineer and Owner in keeping services and facilities in operation. Repair damaged utilities to satisfaction of the Engineer. Do not interrupt existing utilities serving facilities occupied and used by others.

F. Protection of persons and property: Barricade open excavations as part of this Work and post with warning signs and lights in accordance with Occupational Safety and Health Administration (OSHA) Regulation 29 CFR Part 1926 - Occupational Safety and Health. Operate warning lights during hours from dusk to dawn each day and as otherwise required. Protect structures, utilities, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, dust, washout and other hazards created by earthwork operations.

3.3 EXCAVATION

A. General
   a. Perform all excavations to the limits and depths shown on the Drawings. Contractor shall not excavate beyond the limits necessary to complete the Work shown on the Drawings unless pre-approved by Engineer. Any unauthorized excavation shall be properly backfilled and compacted consistent with this Section and associated disposal cost for such excavated material shall be paid by Contractor at no additional cost to Owner.
   b. All excavation Work shall comply with the requirements of OSHA excavation safety standards (29 CFR Part 1926.650 Subpart P), and all other applicable federal, State, or local requirements. Where conflict between OSHA and State regulations exists, the more stringent requirements shall apply.
   c. Contractor shall perform the Work in a manner to maintain the stability of structures and utilities adjacent to the Work, insofar as structures or utilities may be jeopardized by excavation or associated Contractor operations. Contractor shall repair damage resulting from excavation or other construction activities in support of the Work to the original condition prior to damage, and repair to a condition approved by Engineer. Owner shall bear no costs associated with damage to, and subsequent repair of, such structures and utilities.
   d. Contractor shall limit the extent of open excavation areas within the Work limits and must at a minimum protect excavation areas left open during working and non-working hours with barricades equipped with flashing warning lights and protected with 6-foot high temporary chain link fencing consistent with the accepted Excavation and Backfill Work Plan and compliant with the requirements of OSHA.
   e. Contractor shall construct temporary slopes and/or provide excavation support to protect all excavated areas, as required for safety or compliance with OSHA requirements and consistent with the Engineer approved Excavation Plan, at no additional cost to Owner.
   f. Contractor shall not over excavate below proposed design grades for the purpose of obtaining borrow for use off-Site.
   g. Excavated materials shall be segregated based on observed impact as directed by Engineer. All excess material handling, management, and temporary stockpiling shall be performed consistent with the requirements of this Section, Section 01 57 00 - Temporary Controls and Section 02 40 00 – Demolition and Structure Moving.

B. Subgrade Preparation and Protection

a. Prior to fill placement, the subgrade shall be compact, dry, and free from debris, organic material, ice, and snow.
b. Proof-Rolling Subgrades:
    i. Prior to constructing pavements, proof-roll the subgrade surface with sufficient proof-rolling apparatus. Before starting proof-rolling, submit to and obtain acceptance from Engineer of proof-rolling apparatus and procedures to be used.
    ii. Proof-rolling operations shall be made in the presence of Engineer. Notify Engineer at least 24 hours in advance of start of proof-rolling operations.
    iii. Subgrades displaying pronounced elasticity or deformation, deflection, cracking, or rutting shall be stabilized as directed by Engineer. Unsuitable materials shall be undercut to the depth directed by the Engineer and replaced with compacted granular fill. Other suitable stabilization methods may be directed by Engineer.

a. 3. The Site shall be properly graded to limit surface water from entering the Work areas or ponding on the exposed soil subgrade. The exposed soil subgrade may be sensitive to disturbance and strength degradation in the presence of excess moisture. Construction traffic over the exposed soil subgrade shall be limited to the extent practical. The subgrade should also be considered frost susceptible.
b. 4. Above the groundwater table, excavations and backfilling shall be conducted in the dry to the extent practical.
c. 5. Contractor shall excavate in such a manner as to minimize disturbance of the underlying natural ground. Deterioration of the subgrade between excavation and initial fill placement shall be the responsibility of Contractor and shall be repaired at Contractor's expense.
d. 6. The subgrade shall be observed by Engineer prior to fill placement. Sufficient time must be given to Engineer to observe and perform any necessary tests on the subgrade.

C. Slope Stability
    a. Slope sides of manned excavations shall comply with OSHA requirements and local codes and ordinances having jurisdiction.
    b. Shore and brace where sloping is not possible either because of space restrictions or stability of material excavated.
    c. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.
D. Shoring and Bracing
    a. Provide shoring and bracing necessary to comply with OSHA requirements and local codes and authorities having jurisdiction.
    b. Coordinate shoring and bracing with the construction to be performed.
    c. Maintain shoring and bracing in excavations during all time periods when excavations are to be open. Extend shoring and bracing downward as excavation progresses.
    d. All shoring and bracing systems shall be designed, sealed, and stamped by a Professional Engineer registered in the State of Rhode Island. The design and plans will be reviewed for the general concept and arrangement with the understanding that it is the Contractor's submission of his proposed design and method to construct the Work as specified in the Contract Documents and that Contractor is responsible for the safety and successful design and construction of the Work and compliance with all requirements of the Contract Documents.
E. Disturbed Subgrade
    a. Should the subgrade become disturbed, saturated, or weave, Contractor shall take whatever means necessary to stabilize the subgrade at the discretion of the Engineer at no additional cost to Owner.
F. Material Stockpiling and Handling
    a. No materials should be stockpiled on the beach.

b. Contractor shall be responsible for excavating, stockpiling and transporting excess sand from the Crescent Park project to Sabin Point and the City of East Providence's yard on Forbes Street as directed by the Engineer and Owner. Appropriate quantity of sand required for construction of the Sabin Point berm(s) shall be transported to Sabin Point. The remainder of sand produced by excavation work at Crescent Park shall be transported and stockpiled at the City of East Providence's Forbes Street yard.
c. Contractor shall be responsible for the management, loading, transportation, and off-Site disposal, at no additional cost to the Owner, of any Suitable Site Materials that are re-classified as Unsuitable Site Materials due to Contractor's management procedures.
d. Contractor shall be responsible for scheduling off-Site disposal of stockpiled materials such that the quantity of the excess materials do not exceed the capacity of the stockpile area shown on the Drawings.
e. Contractor shall be responsible for all construction, protection, movement and maintenance of stockpiles for the duration of the project Work or until directed otherwise by the Engineer.
f. Individual stockpile sizes for all materials temporarily stored on-Site shall not exceed 500 cubic yards unless approved by Owner.

G. Cold-Weather Protection
a. Protect excavation bottoms and subgrades against freezing when atmospheric temperature is less than 32 degrees F.

3.4 BACKFILLING & COMPACTION

A. General
a. Backfill and compaction work is anticipated be limited to pavement subgrade preparation, if over excavation is required.

B. Backfilling
a. Unless otherwise specified herein, place acceptable backfill materials in 12 inch, or less, lift thicknesses when compacted by a vibratory roller or 6-inch lift thicknesses when compacted by a plate compactor to the required subgrade elevations and compact each layer to the required degree of compaction.
b. Backfill shall not be placed over a subgrade covered with standing water or that is frozen unless approved by Engineer. If there is standing water on the subgrade, the water shall be removed from the surface and any soft and yielding soil shall be removed or allowed to dry prior to backfill placement. If the subgrade is frozen it shall be thawed and re-compacted prior to placement of backfill.
c. Contractor shall backfill and restore all excavations and disturbed areas as shown on the Drawings. Any unauthorized excavation shall be properly backfilled consistent with the Drawings and associated disposal cost for such excavated material shall be paid by Contractor at no additional cost to Owner.

C. Placement & Compaction
a. Each lift shall be systemically compacted by approved compaction equipment to the density specified herein.
b. The Work area shall be graded, shaped and otherwise drained in such a manner as to minimize soil erosion, siltation of drainage channels, damage to existing vegetation and damage to property and waterways outside the Limits of Work.
c. Compaction equipment in open accessible areas shall consist of a vibratory roller having a minimum drum weight of 10,000 pounds and a dynamic force of at least 20,000 pounds, unless otherwise approved by the Engineer.
d. Compaction equipment in confined areas (in trenches and adjacent to walls) shall be accomplished by

hand-operated vibratory equipment with either a heavy plate compactor with 800 pound minimum force, or a double drum walk behind compactor with 1,000 pound minimum force, unless otherwise approved by the Engineer.

e. Contractor shall use mechanical equipment designed specifically for compaction. Engineer reserves the right to disapprove any device of inadequate capacity or, in his opinion of a type unsuited to the character of material being compacted.
f. Prior to the end of each work shift, a layer of fill shall not be left uncompacted. Prior to terminating operations for the day, the final layer of fill shall be compacted with a smooth-drum roller to the required degree of compaction.
g. Contractor shall not place a layer of compacted fill on snow, ice or frozen soil. Removal of these unsatisfactory materials will be required as directed by the Engineer at no additional cost to Owner.
h. The Engineer will be present during all compaction operations to visually verify subgrade compaction and suitability. Surface of subgrade after compaction shall be hard, uniform, smooth, stable, free of jagged or deleterious material, and true to grade. Any soft areas exhibiting excessive weaving or unsatisfactory material identified during compacting shall be removed and replaced consistent with the requirements of this section and re-compacted in accordance with this Section at no additional cost to the Owner.
i. Backfill soils shall be compacted to the densities specified herein and on the Drawings. Density is specified herein as a percentage of the maximum dry density achieved for a granular material when compacted as specified by ASTM D-1557, (Modified Proctor Test).
j. The density of ¾-inch and 1 ½-inch crushed stone shall not require measurement.

D. Compaction Density Requirements
   a. Compacted Pervious or Granular Fill: Compact to 95% maximum dry density.
   b. Onsite Sands used as Pervious or Granular Fill: Compact to 95% maximum dry density.
   c. Base and subbase courses below asphalt walkways shall be compacted to 95% maximum dry density.
E. Moisture Control
   a. Where subgrade soil material must be moisture-conditioned before compaction, uniformly apply water to the surface as needed to obtain required compaction.
   b. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to the specified density.

3.5 SAND BERM CONSTRUCTION & BEACH RE-GRADING

A. The sand berm for the Crescent Park shoreline protection systems will extend the full length of the new revetment. The toe of the sand berm shall generally be offset 10’ seaward of the toe of the new revetment with a maximum slope of 3H:1V and be constructed using excess on-site sand generated during construction. Where existing or proposed features interfere with the berm construction as shown (i.e. existing experimental erosion control areas, timber stairs, revetment ends, or high tide elevations at the time of construction), the Contractor shall notify the Engineer for review and approval prior to constructing the sand berm.
B. In addition to the sand berm construction at Crescent Park, after revetment construction, Contractor shall infill voids from the surface with excess on-site sand generated during construction. Conduct this activity at the existing revetment along the northern shoreline.
C. The sand berm at Sabin Point shall be installed to the limits and as shown on the Drawings.
D. Following completion of the sand berm construction, plant American beach grass spaced at 1’ on center in accordance with Section 32 90 00 – Landscape Work.
E. Install a post and rope fence seaward of the sand berm at Crescent Park and around the perimeter of the

sand berm at Sabin Point in accordance with the Drawings and Section 32 31 13 – Fences and Gates.

F. At Crescent Park, re-grade the beach between the toe of the sand berm and the high tide line to a maximum slope of 10H:1V, as is feasible.

G. Sand placement for beach re-grading, sand berm construction and infilling of revetment stones does not require moisture conditioning and compaction. Sand material shall be placed loosely and worked as needed to obtain the required footprint, elevations and slopes.

3.6 FIELD QUALITY CONTROL

A. If backfilling and compaction of materials is required below the asphalt walkways, the Engineer will provide field quality control testing. Contractor to provide a minimum of 14 days notice prior to commencing any backfilling and compaction work.

3.7 MAINTENANCE

A. Reconditioning Compacted Areas

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

END OF SECTION

SECTION 31 05 19
GEOSYNTHETICS FOR EARTHWORK

PART 1- GENERAL

1.1 SECTION INCLUDES

A. Description
B. References and standards
C. Submittals

1.2 DESCRIPTION

A. This Section includes descriptions of the geosynthetics necessary to complete the Work at the Site.
B. Contractor shall furnish all labor, materials, equipment, tools, supervision, and transportation necessary to install and geosynthetics, and perform geosynthetic testing and analysis to meet the testing requirements specified herein.
C. The final approval of all geosynthetics will be at the discretion of the Engineer.

1.3 REFERENCES AND STANDARDS

A. American Society for Testing and Materials (ASTM) Standards
   a. ASTM D5199 - Standard Test Method for Measuring the Nominal Thickness of Geosynthetics.
   b. ASTM D5261 - Standard Test Method for Measuring Mass per Unit Area of Geotextiles.
   c. GRI GM17 - Standard Specification for Test Methods, Test Properties and Testing Frequency for Linear Low-Density Polyethylene (LLDPE) Smooth Textured Geomembranes.
   d. GRI GT12 - Standard Specification for Test Methods and Properties for Nonwoven Geotextiles Used as Protection (or Cushioning) Materials.
B. All applicable American Society for Testing and Materials (ASTM)
C. Geosynthetic Accreditation Institute (GAI) – Laboratory Accreditation Program (LAP).
D. American Association for Laboratory Accreditation (A2LA).
E. National Transportation Product Evaluation Program (NTPEP).

1.4 SUBMITTALS

A. Informational Submittals:
   a. For each geosynthetic type specified in Part 2 of this Section, submit to Engineer for preapproval the following information and samples no less than 14 days before shipment of geosynthetics to the Site:
      i. Contractor shall submit a certificate stating the name of the Manufacturer, product name, style number, and chemical composition of materials and other pertinent information to fully describe materials specified in Part 2 herein
      ii. Geotextile certifications shall state that the furnished geotextile meets minimum average roll value (MARV) requirements of this Section as evaluated under the Manufacturer's quality control program. The certification shall be attested to by a person having legal authority to bind the Manufacturer. Certifications from Private Label distributors will not be accepted.
      iii. Contractor shall submit product data sheets from the Manufacturer that these materials meet or exceed the material requirements specified in Part 2 herein.

iv. Contractor shall submit Manufacturer's installation guidelines for materials specified in Part 2 herein.
v. Alternate geotextile materials shall not be used unless submitted to, and reviewed in writing, by Engineer. Engineer shall have absolute authority to reject or accept alternate materials based on the requirements of this Section.

PART 2- PRODUCTS

2.1 SECTION INCLUDES

A. Use of materials
B. Materials

2.2 USE OF MATERIALS

A. The following summarizes a list of geotextile filter fabrics to be used during the Work.
   a. Geotextile Filter Fabric (Mirafi® 140N, or Engineer approved equivalent).
      i. Locations of placement are over the excavated soil subgrade below the revetment bedding stone. Minimum of two layers of Mirafi® 140N over subgrade.
   b. Geotextile Filter Fabric (Mirafi® 600X, or Engineer approved equivalent).
      i. Locations of placement are over the excavated soil subgrade below the revetment bedding stone. Minimum of one layer of Mirafi® 600X, over the two layers of Mirafi® 140N.

2.3 MATERIALS

A. Geotextile Filter Fabric
   a. Mirafi 140N® Geotextile Filter Fabric shall be polypropylene (PP), needle punched, non-woven geotextile manufactured from continuous filaments, or Engineer-approved equal, and having properties that comply with the required property values listed in the table below:

Properties	Test Method	Units	Qualifier	Specified Value
Mass/Unit Area	ASTM D5261	oz/yd^2	MARV	4.8
Apparent Open Size	ASTM D4751	mm	MARV	0.21
Hydraulic Conductivity	ASTM D4491/D4491M	cm/sec	MARV	0.21
Puncture Strength	ASTM D4833/D4833M	lbs	MARV	65
Tensile Strength	ASTM D4632/D4632M	lbs	MARV	120

b. Mirafi 600X® Geotextile Filter Fabric shall be woven geotextile manufactured from polypropylene (PP) yarns, or Engineer-approved equal, and having properties that comply with the required property values listed in the table below:

Properties	Test Method	Units	Qualifier	Specified Value
Apparent Open Size	ASTM D4751	mm	MARV	0.425
Flow Rate	ASTM D4491/D4491M	l/min/m^2	MARV	163
Puncture Strength	ASTM D4833/D4833M	lbs	MARV	900
Tensile Strength	ASTM D4632/D4632M	lbs	MARV	315

c. The Geotextile Filter Fabric Manufacturer and/or Fabricator shall furnish materials whose "Minimum Average Roll Values" (MARV) meet or exceed the properties specified above, as well as a certification that the material properties meet or exceed the specified values. The Geotextile Filter Fabric shall be stock products. The Geotextile Filter Fabric Manufacturer and/or Fabricator shall not furnish products specifically manufactured to meet the specifications of this project unless authorized by Engineer.

d. In addition to the property values specified above, the Geotextile Filter Fabric shall:
   i. Retain their structure during handling, placement, and long-term service.
   ii. Withstand direct exposure to sunlight for a minimum of 30 days with no measurable deterioration.
   iii. Approved geotextiles are as follows:
      a) Mirafi® 140N
      b) Mirafi® 600X
   iv. Acceptable Manufacturers/Fabricators:
      a) TenCateTM Geosynthetics Americas
      b) Or Approved Equal

PART 3- EXECUTION

3.1 SECTION INCLUDES

A. Installation procedures

3.2 INSTALLATION PROCEDURES

A. The geotextiles shall be installed in accordance with the manufacturer's recommendations and these specifications.

END OF SECTION

SECTION 31 11 00
CLEARING AND GRUBBING

PART 1- GENERAL

1.1 SECTION INCLUDES

A. Description
B. Quality assurance

1.2 DESCRIPTION

A. Contractor shall furnish all labor, materials, tools, supervision, and equipment to remove, clear, and grub organic matter (trees, shrubs, brush, stumps, and root systems) and surface debris (including large stones, concrete, asphalt and boulders as necessary) as necessary to complete the Work.
B. The limits of clearing and grubbing shall be only as necessary to complete the Work. Contractor shall be responsible for all clearing and grubbing necessary to complete the Work. This includes, but is not limited to, clearing all surface vegetation and debris from the area designated on the Drawings, as “Contractors Staging Area”.
C. Organic matter and debris shall be removed in such a manner to protect adjacent structures and features that will not be removed or demolished during the Work including, but not limited to, existing structures, fencing, adjacent property structures, and overhead wires and utility poles.
D. No disturbance of surface or below grade materials shall be performed prior to installation of required erosion and sedimentation controls as shown on the Drawings and in accordance with Section 01 57 00 - Temporary Controls.
E. Contractor shall segregate, manage, stockpile, and subsequently dispose off-Site all organic matter generated during clearing and grubbing activities.
F. All tree trimming, limbing, clearing and removal shall be performed consistent with East Providence town ordinance Requirements. Only properly trained and qualified tree trimmers shall perform tree trimming within minimum approach distances.

1.3 QUALITY ASSURANCE

A. Regulatory Requirements
    a. Laws and Regulations applying to the Work under this Section include, but are not limited to, the following:
        i. Applicable City of East Providence Ordinances
        ii. RI DEM Tree Care and Maintenance

PART 2- PRODUCTS – NOT USED

PART 3- EXECUTION

3.1 SECTION INCLUDES

A. General
B. Tree/organic matter clearing/removal
C. Removal of surface debris

3.2 GENERAL

A. All Work shall be performed in accordance with all applicable regulations and laws of local, state, federal agencies and the Contractor's Health and Safety Plan.
B. Contractor shall be responsible for the protection of adjacent properties and Site features not scheduled for removal.
C. On-Site burning or re-use of wood waste, stumps or other organic materials will not be permitted.
D. Chipping and spreading of trees, brush and other organic matter will not be permitted.
E. Obtain and pay all fees associated with applicable permits.

3.3 TREE/ORGANIC MATTER CLEARING/REMOVAL

A. Contractor shall remove all trees as necessary to perform the Work within the Limits of Work.
B. Tree and larger limb removals shall be performed in sections as necessary to protect worker safety and prevent damage to existing Site features not scheduled for removal.
C. Limb and tree removal shall be controlled using proper rope size and rigging techniques to ensure cut materials are brought to ground level gently and in a safe manner.
D. Trees and shrubs to remain that are damaged during the Work shall be replaced by the Contractor at no additional cost to the Owner.
E. Do not remove trees without specific pre-approval by the Engineer and Owner.

3.4 REMOVAL OF SURFACE DEBRIS

A. Remove all miscellaneous debris from the ground surface within the Limits of Work, including but not limited to, concrete, asphalt, brick, and boulders.
B. Size materials to the extent practical, segregate, temporarily stage, and reuse as backfill as directed by the Engineer.
C. All surface debris deemed unsuitable for reuse by the Engineer shall be legally disposed of off-site in accordance with local, state, and federal regulations and laws.

END OF SECTION

SECTION 32 31 13
FENCES AND GATES

PART 1- GENERAL

1.1 SECTION INCLUDES

A. Description
B. Submittals

1.2 DESCRIPTION

A. Contractor shall furnish and/or provide all supervision, labor, tools, materials, equipment, services, and appurtenances necessary for, or incidental to, the installation of all fencing, hardware, and other accessories as shown on the Drawings and described herein.
B. All fencing shall be installed by Contractor consistent with the requirements of this Section, the Drawings, and in coordination with Engineer and the representatives of various property owners.
C. The following fence systems are anticipated for the project:
    a. Post and rail fence shall be constructed with a top and bottom rail (2 rails total). Post and rail fence shall be installed behind the proposed slope at Crescent Park.
    b. Post and rope fencing shall be installed around all sand berms at Crescent Park and Sabin Point.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's product data and specifications for the following fence systems:
    a. Post and rail fencing
    b. Post and rope fencing

PART 2- PRODUCTS

2.1 SECTION INCLUDES

A. Materials

2.2 MATERIALS

A. Post and Rail Fencing:
    a. Post and Rail fencing shall be installed behind the proposed vegetated slope at Crescent Park. Finished fence height shall be 36 inches.
        i. Post and rail fence shall be installed as a 2 rail system with a bottom and top rail. Bottom rail shall be approximately 12 inches above finished grade. Spacing between top and bottom rail shall be approximately 16 inches.
        ii. Posts shall be 6-inch diameter round or split rail posts, pre-routed for rail installation
        iii. Rails shall be 3 to 4 inches in diameter and 8 feet in length, and posts shall be installed at 8 feet on center, or as needed to accommodate the 8-foot rail length.
        iv. Post and rails shall be made from Cedar or Pressure Treated Pine graded for ground contact.
        v. Post shall be 6 feet in length to ensure a minimum of 36 inches of embedment below grade.

B. Post and Rope Fencing shall be installed around the proposed sand berms at Crescent Park and Sabin Point. Finished post height shall be 36 inches above grade.

a. Posts shall be 6-inch diameter round wood posts or 4-inch by 4-inch square posts.
b. Posts shall be spaced at 10 feet on center.
c. Posts shall be 6 feet in length to ensure a minimum of 36 inches of embedment below grade.
d. Posts shall be untreated timber made from Cedar.
e. Rope shall be 1.5 to 2 inches in diameter and shall be made from Manila or Sisal fiber.
f. Rope shall be threaded through the posts. Holes through posts for the rope shall be drilled approximately ½ inch larger than the rope diameter. Alternatively, rope can be connected to posts using stainless steel eye bolts.

C. All fasteners, brackets and hardware shall be hot dipped galvanized in accordance with Section 05 05 13 – Shop Applied Coatings for Metals.

PART 3 -EXECUTION

3.1 SECTION INCLUDES

A. Preparation
B. Installation

3.2 PREPARATION

A. Installation of fencing shall not be started until final grading has been completed.
B. Locate fencing as indicated on the drawings. Coordinate all final locations with the City.

3.3 INSTALLATION

A. Install fencing as indicated on Drawing and as specified herein.
B. Drive, or excavate and install posts to the required depths indicated on the Drawings and specified herein. If posts are excavated with a post hole digger system or similar, ensure posts are properly backfilled to ensure the posts are secure and cannot be easily moved.
C. Posts shall be installed at the spacing as indicated on the Drawings or specified herein.
D. Any damaged posts, rails or hardware shall be repaired and/or replaced at no additional cost to the Owner. Contractor shall inspect all fencing material prior to installation and any damaged material shall be discarded or returned to the manufacturer.

END OF SECTION

SECTION 32 90 00
LANDSCAPE WORK & PLANTINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. REFERENCES
C. QUALITY ASSURANCE
D. SUBMITTALS

1.2 DESCRIPTION

A. This Section of the Specification defines the requirements for furnishing and installing the vegetated slope and other landscaping, where shown on the Contract Documents, as specified herein, and as needed for a complete and proper execution.
B. The City of East Providence is partnering with the Nature Conservancy for construction of the vegetated slope at Crescent Park. This work includes the creation of a vegetated slope, using native coastal vegetation to stabilize the slope that will be left above the proposed stone revetment. The location and dimensions of this vegetated slope are specified in the Drawings. The intent of this landscaping work is to establish a coastal shrubland and grassland community dominated by low-growing native shrubs, grasses, and native forbs (such as goldenrod, milkweed, and asters). This vegetation will stabilize the bluff and provide ecological and wildlife benefits to this highly visited public park.

1.3 REFERENCES

A. American Association of Nurserymen's Standards for Nursery Stock (ANSI Z60.1), latest edition
B. RI DOT Standard Specifications for Road and Bridge Construction, latest edition.

1.4 QUALITY ASSURANCE

A. Codes and standards
   a. All work and materials shall conform to the latest applicable sections under the state's various jurisdictions.
   b. All work and materials shall also be in full accordance with other state, county, city, municipality, and the utility laws rules, and regulations.
B. Plants and plantings
   a. Shall conform to American Association of Nurserymen's Standards for Nursery Stock (ANSI Z60.1) for size, shape, number of leaders, branching patterns, health, etc. Plants shall be nursery grown under similar climatic conditions to those of the project locality for a minimum of two (2) years.
C. Source quality control
   a. Do not make substitutions. If specified landscape material is not obtainable, submit proof to Owner of non-availability and proposal for use of equivalent material.
   b. Provide stock true to botanical name.
D. Inspection
   a. Owner reserves the right to inspect and approve trees, shrubs and plantings at the place of growth for compliance with specification requirements for name, variety, sizes, and quality.

E. Line and grade control
   a. Contractor shall be responsible for establishing and maintaining line and grade control for all aspects of the Work and as specified on the Drawings and described in Section 02 21 00 – Surveys. All survey work conducted on the project shall correspond to the Site coordinate system and vertical datum as shown on the Drawings.
   b. Grade tolerances for the landscape work shall be within the following:
      i. Horizontal tolerance: 0.1 feet
      ii. Vertical tolerance: 0.1 feet

1.5 SUBMITTALS

A. To ensure the proposed work is successfully completed and consistent with the project's ecological design goals, the Contractor are asked to provide the following information to the Owner for review within 14 days of Notice to Proceed:
   a. Identification of subcontractors selected to design and install the vegetated slope with native shrubs, grasses, and forbs.
   b. Resumes and documentation of similar project experience from subcontractors, demonstrating expertise in planting native coastal shrubs, grasses, and forbs. along natural coastal landscapes in the region.
   c. Reach out for consultation with qualified botanists specializing in native coastal vegetation in the Rhode Island region and provide results of such consultation.
   d. Provide a list of native *straight species* (no cultivars; no "nativars") to be used for the project, along with conceptual layout designs. Plant material should be sourced from local genotypes within EPA Ecoregion 59, when possible, to ensure ecological integrity and site suitability. Forb species should be selected to ensure continuous bloom throughout the growing season, including early-blooming, mid-blooming, and late-blooming species.
   e. Provide a list of suppliers and sources that will be used to procure vegetation, including documentation of the provenance of plant material.
   f. Provide a 3-to-5-year management plan to the City of East Providence for caring and maintaining this vegetated habit post planting.

B. Additionally, submit to Engineer the following no later than 30 days prior to performing the work.
   a. Topsoil
      i. Name of supplier and source history.
      ii. Sample of topsoil.
   b. Plant Materials: Certificates of Inspection for landscape materials as required by governing authorities.
   c. Coir Logs: Cut sheets stating the name of the manufacturer, product name, installation instructions, and other pertinent information.
   d. Erosion Control Blanket: Cut sheets stating the name of the manufacturer, product name, installation instructions, and other pertinent information.
   e. Miscellaneous Landscape Materials and Miscellaneous Site Amenities: Cut Sheets stating the name of the manufacturer, product name, style number, and chemical composition of materials, installation instructions, and other pertinent information to fully describe materials.

PART 2 - PRODUCTS

2.1 SECTION INCLUDES

A. Plantings
B. Topsoil
C. Soil conditioners
D. Seed
E. Coir logs and erosion control blankets
F. Miscellaneous landscape materials

2.2 PLANTINGS

A. SLOPE VEGETATION SPECIES
   a. The intent of the vegetated slope work at Crescent Park is to establish a coastal shrubland and grassland community dominated by low-growing native shrubs, grasses, and native forbs. The purpose of the vegetation is to stabilize the bluff and provide ecological and wildlife benefits to the park.
   b. The proposed vegetated slope plantings should provide a combination of low-growing native shrubs, grasses, and native forbs. The intent is for these plantings to be planted together across the slope to create the desired shrubland result, rather than segregated into individual areas. Each 5 foot by 5 foot area on the slope should include low-growing native shurbs, grasses and native forbes.
   c. All shrubs, grasses and forbs shall be shipped in nursery containers, be healthy, vigorous, and free of insects or disease.
   d. Low Growing Native Shrubs
      i. Low-growing native shrubs should be planted at a 5’ staggard spacing vertically and horizontally across the slope.
      ii. Low-growing native shrubs shall be either Virginia Rose (*Rosa virginiana*), Bayberry (*Morella caroliniensis*), Beach Plum (*Prunus maritima*), or a mix of two or all of the specified species.
      iii. Imported low-growing native shrubs should have a minimum height of 15 to 24 inches.
   e. Native Grasses
      i. Native grasses should be planted at 12 inches on center vertically and horizontally across the slope.
      ii. Native grasses shall be a combination of Little Bluestem (*Schizachyrium scoparium*) and Switchgrass (*Panicum virgatum*).
   f. Native Forbs
      i. Native forbs should be planted throughout between the grasses and low-growing shrubs.
      ii. Native forbs should be a combination of approved Goldenrod species from the attached species list, Common Milkweed (*Asclepias syriaca*), and approved Aster species from the attached species list.
   g. Alternate Plantings
      i. Should the contractors designer and/or subcontractor want to deviate from the above specified plantings, an alternate planting plan should be provided to the Engineer and Owner for review and approval. It should be understood that the Nature Conservancy will also have review and approval authority of the alternate plan. Should the alternate plan not meet the requirements and expectations of the Engineer, Owner and/or the Nature Conservancy, the Contractor will be required to install the vegetated slope as specified herein.

B. SAND BERM VEGETATION
   a. After construction of the sand berms at Crescent Park and Sabin Point, Contractor shall plant American Beach Grass (*Ammophila breviligulata*).
      i. American Beach Grass (*Ammophila breviligulata*) shall be planted at 1' on center.
      ii. All grasses shall be shipped in nursery containers, be healthy, vigorous, and free of insects or disease.

C. DECIDUOUS TREES
   a. Provide trees of species listed or shown on the Drawings with branching configuration recommended by ANSI Z60.1 for type and species required. Provide single stem trees except where special forms are shown on the Drawings or listed. Trees must be designated at "No. 1 Grade".
   b. The tree root flare must be visible at the top of the root ball. Trees with buried root flares inside the nursery burlap will be rejected.
   c. Deciduous trees are to be Red Maple (Acer Rubrum) and should be plated at an approximate spacing of 50' on center along the new walking path. New trees should be planted a minimum of 10' offset from the edge of the new walking path.
   d. Red Maple (Acer Rubrum) trees should have a minimum caliper of 2.5 inches and a minimum root ball diameter of 30 inches.
   e. All Trees shall be shipped in nursery containers, be healthy, vigorous, and free of insects or disease.

D. QUALITY CONTROL
   a. Provide freshly dug native shrubs and trees. Do not prune prior to delivery. Do not bend or bind tie trees or shrubs in such manner as to damage bark, break branches, or destroy natural shape. Provide protective covering during delivery.
   b. Deliver trees and shrubs after preparation for planting has been completed and plant immediately. If planting is delayed more than six (6) hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist.
   c. Label at least one tree and one shrub of each variety with a securely attached waterproof tag bearing legible designation of a botanical and common name. Tag shall remain legible a minimum of 60 days.
   d. Plant material shall be good examples of their species or variety, with uniform, well developed branch structure. Trees shall have a balanced head and single leader.
   e. Trees shall be accordance with the American Standard of Nursery Stock of the American Association of Nurserymen.
   f. Plants shall be at least the minimum size indicated on the Drawings or specified herein. Larger stock is acceptable if approved by Owner, at no additional cost.
      i. Plant materials shall be freshly dug. No plants from cold storage or previously held in stock will be accepted.
      ii. All material shall be nursery grown. No collected material will be accepted.
      iii. Only materials grown with Hardiness Zones 1 through 5, as established by the Arnold Arboretum, Jamaica Plain, Massachusetts, or USDA zones 2-6 will be accepted. The Contractor shall certify in writing that the stock has been grown under zone 5 or hardier conditions.
      iv. Plant material shall be sound, healthy, and vigorous of growth, free of disease,

insect pests, eggs or larvae. All parts shall be moist and show active green cambium when cut.

E. WARRANTY
   a. The Contractor shall warranty all plantings and grasses for a period of one year after the date of substantial completion against defects including depth and unsatisfactory growth. During this time, the Contractor shall employ currently accepted horticultural practices to keep all installed plant material in a living, healthy condition up to the date of final acceptance, which will be one calendar year following the satisfactory completion of the planting activities.
   b. During the warranty period, the Contractor shall water, weed, cultivate, prune, mulch, and repair, replace, or readjust guy webbing and stakes, as may be required or as directed by the Engineer or Owner. The Contractor shall reshape plant saucers, repair washouts and gullies, replace lost mulch, keep all planting sites free from weeds, and do other work necessary to maintain the plant material in a healthy, growing condition.
   c. Any plant which is not healthy and growing vigorously after one year, as determined by the Engineer, shall be replaced by the Contractor, in kind, in accordance wit the requirements outlined herein, and on the Drawings.

2.3 TOPSOIL

A. Topsoil shall be good quality loam, friable, fertile and free of heavy clay, silt, stone, extraneous lime, plant roots, weeds, sticks and other foreign matter greater than ¾" diameter. It shall not contain noxious weeds (such as knotweed), and shall otherwise meet the requirements Section M.18.01 of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction.

2.4 SOIL CONDITIONERS

A. Fertilizer
   a. Fertilizer shall be a complete fertilizer, the elements of which are derived from organic sources. Fertilizer shall be a standard product complying with state and federal fertilizer laws.
   b. Fertilizer shall have a 10-10-10 or approved equivalent analysis. At least 40% of the fertilizers nitrogen shall be slow-release form.
   c. Fertilizer shall be delivered to the site, mixed as specified, in the original unopened standard size bags showing weight, analysis and name of Manufacturer. Containers shall bear the Manufacturer's guaranteed statement of analysis, or a Manufacturer's certificate of compliance covering analysis shall be furnished to Engineer. Store fertilizer in a weatherproof place and in such a manner that it will be kept dry and its effectiveness will not be impaired.

B. Lime
   a. Natural limestone (Dolomite) containing not less than 85% of total carbonates, ground so that not less than 90% passes a 10-mesh sieve and not less than 50% passes a 100-mesh sieve.

2.5 SEED

A. Seed mixture shall be URI #2 Improved Mix or approved equal. Seed shall be applied at a rate of 5 to 7 pounds per 1,000 square feet.

B. Seed shall be clean, dry, and free of weed seeds.
C. Alternatively, the Contractor may hydroseed using and equivalent mix.

2.6 COIR LOGS AND EROSION CONTROL BLANKET

A. The proposed vegetated slope above the revetment requires the use of an erosion blanket and two rows of coir logs.
B. Erosion Blanket
   a. The Erosion Blanket shall be the ERONET SC150 Erosion Control Blanket as manufactured by North American Green, or approved equivalent.
   b. The Erosion Blanket shall be installed in accordance with Manufacturer recommendations, and as indicated on the Drawings.
C. Coir Logs
   a. The Coir Logs shall be made from woven coconut fiber and shall be in accordance with Coastal Resource Management recommendations and requirements.
   b. Two rows of coir logs are required directly behind the top of the revetment.

2.7 MISCELLANEOUS LANDSCAPE MATERIALS

A. WATER
   a. Shall be free of substances harmful to plant growth. Hoses, pumps, sprinklers or other methods of transportation and dispensing shall be furnished by Contractor.
B. BARK MULCH
   a. Mulch shall be double-ground hemlock bark processed to yield fibrous, pliable slices not exceeding one half (1/2) inch in width and/or three inches in length. It shall have a ninety-eight (98) percent organic matter with pH range of 3.5 to 4.5. Moisture content of packaged material is not exceed thirty-five (35) percent. Mulch shall not contain an excess of wood fiber or an admixture of their materials as determined by Engineer.
C. PLANTING SOIL
   a. Planting soil mix for all tree pits shall consist of the following components:
      i. 40% sand
      ii. 30-40% compost
      iii. 20-30% topsoil
   b. Topsoil component shall be sandy loam or loamy sand.
   c. Topsoil component shall have 1.5% to 3% organic content and maximum of 500 ppm soluble salts.
   d. Planting soil mix shall be uniform, free of stones, stumps, roots, or similar objects larger than 2 inches.
   e. Clay content in planting soil mix shall not exceed 5%.

PART 3 EXECUTION

3.1 SECTION INCLUDES

A. General
B. Loam and Seed
C. Trees, Shrubs, Grasses and Slope Vegetation
D. Incorporation of Soil Amendments
E. Protection of Existing and New Vegetation

F. Installation of Erosion Blanket and Coir Logs
G. Maintenance
H. Acceptance of Plantings and Grass
I. Guarantee/Warranty Period

3.2 GENERAL

A. Perform landscape, planting, and restoration work in compliance with applicable requirements of governing authorities having jurisdiction.
B. Coordination: Coordinate all work of this section with related work of other sections. Failure to coordinate properly will not reduce the obligation to meet the standards of acceptance of the various elements of work contained herein.
C. SEQUENCING AND SCHEDULING
   a. No grass shall be begun until acceptance of fine grading by Engineer.
   b. No permanent planting shall be done in areas where construction operations may damage the work.
   c. All existing or new landscaped areas damaged by construction operations or other causes shall be repaired to Engineer's satisfaction, at no additional cost to Owner.
D. Planting Time: Plant grasses, flowers, trees, shrubs and live cuttings during recognized normal planting seasons. Recommended planting dates are March 15 to June 15 and September 15 to November 15. Planting outside of these windows will result in plantings being rejected.

3.3 LOAM AND SEED

A. After completion of rough grading, all disturbed areas designated for grass or previously grass-covered shall be brought to an elevation 4 inches below finished grade. Compacted subgrade shall be scarified to a depth of 12 inches using the teeth of a backhoe or approved method to result in uncompacted subsoil. The 6 inches of uncompacted topsoil is to be applied and raked to finish grade.
B. Prior to seeding or sodding, fertilizer shall be applied in accordance with this Section and the Drawings.
C. Seed shall be applied at a rate of 5 to 7 pounds per 1,000 square feet.
D. Recommended dates for seed placement are March 15 to June 15 and September 15 to November 15.
E. Contractor shall be responsible for maintaining the finish grade in all planting areas, and for performing any fine grading as may be necessary or incidental to the planting operations.

3.4 TREES, SHRUBS, GRASSES AND SLOPE VEGETATION

A. Install trees, shrubs, grasses and slope vegetation at the spacing and density requirements outlined in this Section and on the Drawings. Adjust spacing as necessary to evenly fill planting bed with indicated quantity of plants.
B. All trees and shrubs are to be installed according to nursery provider recommendations and requirements outlined in this Section. All materials and products necessary for the proper planting of shrubs shall be supplied by Contractor at no additional cost to Owner including but not limited to: topsoil, mulch, fertilizer, etc.
C. Excavate pits, beds, and trenches with vertical sides and with bottom of excavation slightly raised a center to provide proper drainage. Loosen hard subsoil in bottom of

excavation.

D. Balled and Burlapped Trees and Shrubs: Make excavations at least one (1) foot wider than the ball diameter.
E. Notify Engineer in writing of all soil or drainage conditions which Contractor considers harmful to growth of plant material. State condition and submit proposal for correcting condition, including additional cost, if any.
F. Test drainage of plant beds and pits by filling with water. Conditions permitting the retention of water for more than 24 hours shall be brought to the immediate attention of Engineer. State condition and proposal or correcting condition and obtain approval from Engineer before proceeding.
G. Balled and Burlapped Stock: Set plant plumb and in center of pit or trench with top of ball at same elevation as adjacent finished landscape grades. Remove burlap from sides of ball. Remove all metal baskets when set, place additional backfill around base and sides of ball, and work each layer to settle backfill and eliminate voids and air pockets. When excavation is approximately 2/3 full, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing final layer of backfill.
H. Bare Root Stock: Cut injured roots clean; do not break. Set roots on cushion of planting soil mixture. Spread roots and carefully work backfill around roots by hand and puddle with water until backfill layers are completely saturated. Plumb before backfilling and maintain plumb while working backfill around roots and placing layers above roots. Set collar at same grade as to finish landscape grades. Spread out roots without tangling or turning up to surface.
I. Dish top of backfill to allow for mulching.
J. Prune, thin out and shape trees and shrubs in accordance with standard horticultural practice. Prune trees to retain required height and spread. Unless otherwise directed by Engineer, do not cut tree leaders, and remove only injured or dead branches from flowering trees, if any. Prune shrubs to retain natural character and accomplish their use in the vegetated slope design.
K. Remove and replace excessively pruned or misformed stock resulting from improper pruning.
L. Inspect tree trunks for injury, improper pruning and insect infestation, and take corrective measures before wrapping.

3.5 INCORPORATION OF SOIL AMENDMENTS

A. Fertilizer
   a. Incorporate the fertilizer into the top 2 inches of the planting soils. Apply at a rate of 8 pounds per 1,000 square feet.
B. Lime
   a. Lime is to be applied at a rate of 1 ton per acre and uniformly incorporate into the top 2 inches of topsoil.

3.6 PROTECTION OF EXISTING AND NEW VEGETATION

A. All existing grass or vegetated areas shall be protected from unnecessary damage due to construction operations. Any damage to existing grass or vegetated areas shall be repaired by Contractor at no additional cost to Owner.
B. Existing grassed or vegetated areas within the Limits of Work shall be maintained

by Contractor.

C. Erect barricades and warning signs as required to protect newly seeded and newly planted areas. Maintain barricades until acceptance. At substantial completion Contractor shall install temporary snow fencing behind the proposed Vegetated Slope to prevent pedestrian access onto the slope until vegetation has taken and warranty period is complete.

3.7 INSTALLATION OF EROSION BLANKET AND COIR LOGS

A. Erosion Control Blanket
   a. Install erosion control blanket shall be installed and secured with 18 inch rebar staples in accordance with manufacturer's recommendations and the requirements outlined on the Drawings.

B. Coir Logs
   a. Install Coir Logs as shown on the Drawings. Coir logs to be secured with duckbill anchors with facing cables. Duckbill anchors shall be installed at a spacing of 4 feet on center.

3.8 MAINTENANCE

A. Maintenance shall be performed by the Contractor in accordance with the Warranty requirements outlined in this Section.

B. Contractor shall water, weed, cultivate, prune, mulch, and repair, replace, or readjust guy webbing and stakes, as may be required or as directed by the Engineer or Owner. The Contractor shall reshape plant saucers, repair washouts and gullies, replace lost mulch, keep all planting sites free from weeds, and do other work necessary to maintain the plant material in a healthy, growing condition.

C. Watering shall be done in a manner which will provide uniform coverage, prevent erosion due to application of excessive quantities over small areas, and prevent damage to the finished surfaces due to the watering equipment. Contractor shall furnish sufficient watering equipment to apply one complete coverage to the planted areas in an 8 hour period.

3.9 ACCEPTANCE OF PLANTINGS AND GRASS

A. General
   a. In order to receive a Certificate of Substantial Completion, Contractor shall establish an acceptable and satisfactory stand of grass at all seeded lawn areas.
   b. Engineer will have final authority on the acceptance of lawn areas and the determination of an acceptable and satisfactory stand of grass. To be acceptable, all areas of grass shall be well-rooted, thick in growth, uniformly healthy in color, texture, and growth pattern, and shall meet the following criteria:
      i. No bare spots,
      ii. No annual, perennial, or noxious weeds shall be evident.
   c. Plantings will be acceptable provided requirements, including maintenance, have been complied with. Any plant which is not healthy and growing vigorously after one year, as determined by the Engineer, will not be accepted and shall be replaced by the Contractor, in kind, in accordance with the requirements outlined herein, and on the Drawings.

B. INSPECTIONS
   a. Preliminary Inspection and Acceptance: After the completion of planting and all

other related operations Contractor shall make a written request to Engineer for a formal inspection of the work. If plant materials and workmanship are acceptable upon inspection, written notice will be given to Contractor stating that the work has received Preliminary Acceptance and that the establishment/warranty period has commenced from the date of the notice. Establishment/warranty period shall be one (1) year.

b. Final Inspection for Acceptance (After Warranty Period):
   i. A Final Inspection for acceptance of all plantings will be held after all adjustments required by the preliminary inspection for acceptance have been made. Contractor shall notify Engineer in writing requesting a final inspection to grant acceptance.
   ii. At the discretion of Engineer, acceptance may be granted to individual areas.
   iii. At time of Final Inspection, plant material shall be sound, healthy, and vigorous of growth, free of disease, inspect pests, eggs, or larvae. All parts shall be moist and show active green cambium when cut.
   iv. Following acceptance, Owner will assume responsibility for all lawn planting maintenance.

3.10 GUARANTEE/WARRANTY PERIOD

A. The Contractor shall warranty all plantings and grasses for a period of one year after the date of substantial completion against defects including depth and unsatisfactory growth. During this time, the Contractor shall employ currently accepted horticultural practices to keep all installed plant material in a living, healthy condition up to the date of final acceptance, which will be one calendar year following the satisfactory completion of the planting activities.

B. During the warranty period, the Contractor shall water, weed, cultivate, prune, mulch, and repair, replace, or readjust guy webbing and stakes, as may be required or as directed by the Engineer or Owner. The Contractor shall reshape plant saucers, repair washouts and gullies, replace lost mulch, keep all planting sites free from weeds, and do other work necessary to maintain the plant material in a healthy, growing condition.

C. Any plant which is not healthy and growing vigorously after one year, as determined by the Engineer, shall be removed promptly from the site and replaced by the Contractor, in kind, during the specified planting season, in accordance wit the requirements outlined herein, and on the Drawings.

D. Replacements shall be maintained and guaranteed as specified for the original plantings. If, at the end of the guarantee/warranty period for the replacement planting, the replacement is not in acceptable condition, Owner may elect to accept a credit in lieu of a second replacement.

E. Cost of replacement shall be borne by Contractor, except when need for such replacement can be shown to be due to vandalism or neglect by others.

F. At the end of the guarantee/warranty period Contractor shall remove and dispose of all stakes and guys, as a condition of final acceptance and release of retainage.

END OF SECTION

TNC COASTAL SHRUBLAND SPECIES LIST		
Common name	**Scientific name**	**Plant type**
Beach Grass	*Ammophila breviligulata*	grass
Big bluestem	*Andropogon gerardii*	Grass
Poverty oat-grass	*Danthonia spicata*	Grass
Wavy hair-grass	*Deschampsia flexuosa*	Grass
Purple love-grass	*Eragrostis spectabilis*	Grass
Greene's rush	*Juncus greenei*	Grass
Path Rush	*Juncus tenius*	Grass
Switchgrass	*Panicum virgatum*	Grass
Switchgrass	*Panicum virgatum*	Grass
Little Bluestem	*Schizachyrium scoparium*	Grass
Indian grass	*Sorghastrum nutans*	Grass
Sand Dropseed	*Sporobolus cryptandrus*	Grass
Round-headed bush-clover	*Lespedeza capitata*	Herbaceous
Common Yarrow	*Achillea millefolium*	Herbaceous
Pearly everlasting	*Anaphalis margaritacea*	Herbaceous
Pussytoes	*Antennaria plantaginifolia*	Herbaceous
Bearberry	*Arctostaphylos uva-ursi*	Herbaceous
Common Milkweed	*Asclepias syriaca*	Herbaceous
Butterfly Weed	*Asclepias tuberosa*	Herbaceous
Wild yellow indigo	*Baptisia tinctoria*	Herbaceous
New Jersey Tea	*Ceanothus americanus*	Herbaceous
Partidge Pea	*Chamaecrista fasciculata*	Herbaceous
Hyssop-leaved Thoroughwort	*Eupatorium hyssopifolium*	Herbaceous
Purple wood aster	*Eurybia spectabilis*	Herbaceous
Grass-leaved goldenrod	*Euthermia graminifolia*	Herbaceous
Fall sneezeweed	*Helenium autumnale*	Herbaceous
Spotted St. John's-wort	*Hypericum punctatum*	Herbaceous
Pale spiked lobelia	*Lobelia spicata*	Herbaceous
Wild bee-balm	*Monarda fistulosa*	Herbaceous
Evening primrose	*Oenothera biennis*	Herbaceous
Eastern prickly pear	*Opuntia humifusa*	Herbaceous
Foxglove beardtongue	*Penstemon digitalis*	Herbaceous
Northeastern beardtongue	*Penstemon hirsutus*	Herbaceous
Broad leaved - mountain mint -	*Pycnanthemum muticum*	Herbaceous
Narrow-leaved mountain mint	*Pycnanthemum verticillatum*	Herbaceous
White goldenrod	*Solidago bicolor*	Herbaceous
Wreath goldenrod	*Solidago caesia*	Herbaceous
Gray Goldenrod	*Solidago nemoralis*	Herbaceous
Licorice-scented goldenrod	*Solidago odora*	Herbaceous
Seaside goldenrod	*Solidago sempervirens*	Herbaceous
Showy goldenrod	*Solidago speciosa*	Herbaceous
Heart-leaved aster	*Symphyotrichum cordifolium*	Herbaceous
heath American-aster	*Symphyotrichum ericoides*	Herbaceous
Smooth American-aster	*Symphyotrichum laeve*	Herbaceous

Late purple aster	*Symphyotrichum patens*	Herbaceous
Awl American-aster	*Symphyotrichum pilosum*	Herbaceous
Wavy-leaved aster	*Symphyotrichum undulatum*	Herbaceous
Goat's Rue	*Tephrosia virginiana*	Herbaceous
Common low-bush blueberry	*Vaccinium angustifolium*	Herbaceous
Smooth arrowwood	*Viburnum dentatum*	Herbaceous
Eastern false willow	*Baccharis halimifolia*	Shrub
Black Huckleberry	*Gaylussacia baccata*	Shrub
sand false heather	*Hudsonia tomentosa*	Shrub
Evergreen Winterberry, Inkberry	*Ilex glabra*	Shrub
Small Bayberry	*Morella caroliniensis*	Shrub
Beach Plum	*Prunus maritima*	Shrub
Winged Sumac	*Rhus copallinum*	Shrub
Staghorn Sumac	*Rhus typhina*	Shrub
Carolina Rose	*Rosa carolina*	Shrub
Virginia Rose	*Rosa virginiana*	Shrub

SECTION 35 31 19
STONE REVETMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Description
B. References and Standards
C. Quality Assurance
D. Submittals

1.2 DESCRIPTION

A. This Section of the Specification defines the requirements for furnishing and installing stone to construct a revetment, where shown on the Contract Documents, as specified herein, and as needed for a complete and proper execution.
B. Contractor shall provide all labor, materials, tools, and equipment required for the completion of the following Work, as shown on the Contract Drawings and specified herein:
   a. Furnish, transport, and store/stockpile all stone.
      i. Contractor shall account for variations in quantities that may need to be considered as a result of settlement, variable stone sizes, variable width/length/height geometries, damaged stones, and/or other unforeseen field conditions. Additional quantities which may be required to achieve the design elevations shall be at no additional cost to the Owner.
   a. Install all stone to the grades specified on the Contract Drawings.
      i. Any required re-handling of stones shall be at the Contractor's own cost.
      ii. Any additional stone needed to account for the settlement or replacement of damaged or rejected stones, etc. to achieve the specified grades shall be at the Contractor's own cost.
   a. Provide tests, inspections, and analysis to ensure quality of the stone.
   b. Furnish all submittals required by this Section of the Specification.

1.3 REFERENCES AND STANDARDS

A. All Work performed by Contractor shall be accomplished in accordance with all regulations and laws of local, State, and Federal agencies and utility companies.
B. Latest version of the American Society for Testing and Materials (ASTM) standards:
   a. ASTM C88 - Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
   b. ASTM C127 - Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
   c. ASTM C170 - Standard Test Method for Compressive Strength of Dimension Stone, Compression testing rock/related materials, Dimension stone, Stone-dimension
   d. ASTM C535 - Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
   e. ASTM D75 - Standard Practice for Sampling Aggregates
   f. ASTM D422 – Standard Test Method for Particle-Size Analysis of Soils.
   g. ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes.
   h. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
   i. ASTM D4791 - Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated

Particles in Coarse Aggregate

j. ASTM D4992 - Standard Practice for Evaluation of Rock to be Used for Erosion Control
k. ASTM D5313 - Standard Test Method for Evaluation of Durability of Rock for Erosion Control Under Wetting and Drying Conditions
l. ASTM D5519 - Standard Test Methods for Particle Size Analysis of Natural and Man-Made Riprap Materials

C. The Rock Manual (CIRIA)
   a. CIRIA C683 – The Use of Rock in Hydraulic Engineering
D. Occupational Safety and Health Administration (OSHA) Regulation 29 CFR Part 1926 - Occupational Safety and Health.
E. The Rhode Island State Building Code, latest edition.

1.4 QUALITY ASSURANCE

A. Contractor specializing in performing the Work of this Section shall have at least five years minimum experience for constructing coastal structures including stone revetment structures of similar size. Contractor shall use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
B. Work of this Section shall be subject to inspections from the Engineer. The Contractor shall provide 48 hours' notice prior to performing any work for revetment structure.
C. Armor Stone:
   a. Armor stone will be tested during the construction if the Engineer determines that testing is necessary. If such tests are determined necessary, the testing will be performed in an approved testing laboratory in the State of Rhode Island at the Contractor's expense. Testing will be in accordance with the United States Army Corps of Engineers (USACE) requirements. The Contractor shall obtain, under the supervision of the Engineer, and deliver to the laboratory at the Contractor's expense, samples consisting of at least five (5) pieces of armor stone weighing a minimum of 100 pounds each. Tests to which the material may be subjected are indicated in Section 2.1 below. Stone will be inspected for quality, shape, and gradation during the loading at the source and unloading at the work site prior to placement.
D. Bedding Stone:
   a. Bedding stone gradation will be tested during construction if the Engineer determines that testing is necessary. If such tests are determined necessary, the testing will be performed in an approved testing laboratory in the State of Rhode Island at the Contractor's expense.
E. Construction Tolerances
   a. Variation in slope lines and grades from the indicated slope lines and grades shall be within the tolerances specified in the following table per CIRIA 2007 (CIRIA/CUR C683 Chapter 9):

Table 1: Construction Tolerances

Location of Stone	Tolerances
Bedding Stone	±0.3 feet
Armor Stone	±0.6 feet

   b. The above provided tolerances are for average difference between design profiles to actual profile (i.e., mean actual profile) over 50 ft length along the structure's axis. The tolerances on two consecutive mean actual profiles shall not be negative. Notwithstanding any accumulation of positive

tolerances on the underlayer, the thickness of layer shall not be less than 80% of the nominal thickness when calculated using mean actual profiles.

c. The intention is that the work shall be built generally to the required elevations, slope and grade and that the outer surfaces shall be even and present a neat appearance. Placed material not meeting these limits shall be removed or reworked as directed by the Engineer at no additional cost to the Owner.

F. Porosity of Armor Layer
   a. Stones shall be placed in a manner to ensure a tight matrix. The required porosity shall not exceed 37% of theoretical for the slope system. This will be calculated based on weight.

G. Line and Grade Control
   a. Contractor shall be responsible for establishing and maintaining line and grade control for all aspects of the Work as shown on the Drawings and described in Section 02 21 00 - Surveys. All survey Work conducted on the project shall correspond to the Site coordinate system and vertical datum as shown on the Drawings.
   b. If Engineer determines to be necessary, as-built surveys shall be performed and paid for by the Contractor to confirm line and grade controls. Cross sections shall be taken at every 25-foot station, elevations taken at 1-foot ranges between the landward edge of the revetment crest and toe of the slope. Spot elevations will be provided for the start of the revetment, start and end of the crest, and the toe of the revetment. When unusual site or geographic conditions exist, additional stations, ranges and elevations shall be taken for greater definition and accuracy.

1.5 SUBMITTALS

A. Informational Submittals:
   a. Revetment Construction Work Plan: Submit acceptable plan for revetment construction, and related Work, not less than 20 days prior to starting revetment Work. This plan shall include at a minimum the following:
      i. Name of Contractor's "competent person" in responsible charge of revetment Work.
      ii. List of proposed equipment for revetment Work.
      iii. Proposed revetment construction procedures.
      iv. Detailed schedule of revetment Work in accordance with the accepted Progress Schedule.
   b. Qualifications Statement:
      i. Revetment Contractor – Contractor performing revetment construction shall have a minimum of 5 years of experience successfully constructing stone revetments in coastal environments. Contractor shall provide a minimum of 3 successful revetment construction projects performed in the last 10 years. Client contact/reference contacts shall be provided for the example projects.
   c. Material Information Submittals: Provide material information for Revetment Stone, Bedding Stone and any other required materials. Material information shall include at a minimum the following:
      i. Stone source and any USACE certifications for use as armor stone
      ii. Stone acceptance criteria
      iii. Gradation of stone
   d. Delivery Tickets:
      i. Submit copy of delivery ticket for each load of revetment stone and bedding stone delivered to the Site. Each delivery ticket shall indicate Supplier name and source address, project name, contract number, date, material name, and quantity delivered.

B. Stone Placement Plan
   a. Submit a detailed stone placement plan for review and approval within 20 days of notice to proceed.

The Stone Placement Plan at a minimum shall include:

i. The method of transporting stone from the stone source to the construction site and the method of weighing stone for payment purposes.
ii. The method of offloading, stockpiling and transporting the stone to the revetment construction location. It is anticipated that all revetment stone will be transported to the Work area via Beach Road.
iii. The method of stone placement and the type of equipment to be utilized.
iv. The direction and area in which construction shall commence.

C. Stone Samples
   a. The Contractor will conduct a quarry investigation and evaluate the quality test data provided by the quarry to determine whether acceptable stone can be produced from the proposed source. A summary of the stone to be used for construction shall be submitted to the Engineer before the start of Construction. Summary shall include, at a minimum, stone source, stone acceptance criteria (see Table 2), and gradation of the stone, See Part 2 – Products for more details.
   b. Representative samples of all stone with photos shall be submitted for approval prior to delivery of any such material to the work site. Sources from which the Contractor proposes to obtain the material shall be selected well in advance of the time when the material will be required in the work. All samples shall be obtained by the Contractor under the supervision of the Engineer. Costs of obtaining and delivering the samples shall be at the expense of the Contractor. Alternatively, the Contractor can coordinate a site visit to the quarry with the Engineer to review and evaluate the proposed stones.

PART 2 - PRODUCTS

2.1 SECTION INCLUDES

A. Stone Materials
B. Armor Stone Field Testing
C. Armor Stone

2.2 STONE MATERIALS

A. Armor Stone Sources
   a. The new stone with gradation given in Paragraph 2.3 and 2.4 shall be furnished from a source designated by the Contractor and accepted by the Engineer, subject to the conditions herein stated. The Contractor will conduct a quarry investigation and evaluate the quality test data provided by the quarry to determine whether acceptable stone can be produced from the proposed source. Satisfactory service records on other work may be acceptable. In order for the stone to be acceptable on the basis of service records, stone of a similar size must have been placed in a similar thickness and exposed to weathering under similar conditions as are anticipated for this contract and must have satisfactorily withstood such weathering for a minimum of 20 years. If no such records are available, the Contractor will conduct laboratory tests to assure the acceptability of the stone. In addition to an acceptable service record, the Engineer has the option to elect to have representative samples taken and tested.
   b. Selection of Source
      i. Designate in writing only one source from which he/she proposes to furnish stone and notify the Engineer at least 60 working days before the stone leaves the quarry. It is the Contractor's responsibility to determine that the stone source selected is capable of providing the quality, quantities and gradation needed and at the rate needed to maintain the scheduled progress of the work. Samples for acceptance testing shall be provided in accordance with Subparagraph

"Stone Source Acceptance" below. If a source for the stone so designated by the Contractor is not accepted for use by the Engineer, the Contractor shall propose another source with no additional compensation.

c. Acceptance of Materials
   i. During the contract period, both prior to and after materials are delivered to the job site, visual inspections and measurements of the stone materials may be performed by the Engineer.
   ii. If the Engineer, during the inspections, finds that the stone quality, gradation or weights of stone being furnished are not as specified or are questionable, re-sampling and re-testing by the Contractor shall be required. Sampling of the delivered stone for testing and the manner in which the testing is to be performed shall be as directed by the Engineer. This additional sampling and testing shall be performed at the Contractor's expense when test results indicate that the materials do not meet specified requirements.
   iii. Any material rejected shall be removed or disposed of as specified and at the Contractor's expense.

B. Stone Sources Acceptance
   a. Suitability tests results obtained by the Contractor, shall be used to determine the acceptability of any stone source. No time extension or claim for costs will be allowed for the time or cost required to approve or reject alternate stone sources.

Table 2: Armor Stone Acceptance Criteria

Test	ASTM	Armor Stone
Unit Weight	C127	Greater than 160 pcf
Material	D4992	Granite, Limestone, Gneiss or Bluestone
Absorption	D6473	Less than 1%
Sulfate Soundness	C88	Less than 5% loss
LA Abrasion	C535	Less than 20% loss
Freeze and Thaw	D5312	Less than 10%
Wetting and Drying	D5313	Less than 1% loss
Petrography	C295	Interlocking crystalline

C. Stone Quality Testing During Construction
   a. The Contractor shall submit on a weekly basis, for all material delivered during the week, a certification that the material meets all the requirements of the contract specifications. During the course of the work, the stone shall be tested by the Contractor, if the Engineer determines that testing is necessary. If such tests are determined necessary, the testing will be done at an approved testing laboratory.
   b. The Contractor shall be required to obtain, under the supervision of the Engineer, samples of at least five (5) pieces of armor stone and 100 pounds of each under layer stone and deliver them at his own expense to the Contractor's approved testing laboratory in the State of Rhode Island. All tests shall be made by the Contractor at its own expense. Tests to which the material will be subject to are as indicated in subparagraph "Stone Sources Acceptance".
   c. All stone will be subject to inspection at the site of the work prior to placement.
   d. Any stone rejected at the site of work as not meeting the requirements of these specifications for quality, condition, gradation or otherwise shall be removed from the site by and at the expense of the Contractor. Stone of suitable quality shall be furnished and placed at no additional cost to the Owner.

D. Bedding Stone Requirements
   a. Bedding stone shall be placed over the geotextile fabrics below the armor stone. Bidding stone shall be 4" minus crushed stone material.

2.3 ARMOR STONE FIELD TESTING

A. If appropriate stone gradation is in question during the Work, a field gradation tests will be required for the armor stone. Labor, equipment and apparatus necessary for performing the tests shall be furnished by the Contractor. If the gradation test fails, additional gradation tests will be required at the Contractor's expense to delineate the limits of unacceptable stone. The additional gradation tests shall not count as part of the minimum number of gradation tests required. The unacceptable stone will either be reworked to bring the stone within the specified gradation or the stone will be removed from the project site at no additional expense to the Owner.
   a. Selection of Sample
      i. The Engineer shall notify the Contractor 24 hours in advance of each gradation test. Samples of armor stone gradation tests will be selected by the Engineer from material stockpiled at the jobsite or from material that has already been placed. The quantity selected for testing shall be of the more representative appearing material. The minimum sample size and the number of the tests required shall be as follows:
      ii. At least one gradation test shall be performed on each specified gradation prior to any placement of that material.
      iii. Table 3: Sample size for gradation

Gradation	Minimum Sample Size
Armor Stones	200 pieces

B. Gradation Test – Armor Stone
   a. A gradation test shall consist of weighing every stone in a representative sample to determine the amount of each stone between the various specified weights. The weights thus obtained are accumulated and expressed as a percent by weight of the total sample lighter than the various specified stone weight.
   b. Sample preparation, testing procedures, and computations for the armor stone gradation testing shall be performed as specified in EM 1110-2-1906 and as directed by the Engineer. If necessary, the Engineer may modify the routines of the sample preparation and testing procedure to suite field conditions.

C. Drop Test: If required by the Engineer, a drop test provides an immediate evaluation of the durability of very large stone during handling of the stone including placement into a structure. For comparability, the test stone(s) shall be dropped from an orange peel or by other means from a height not less than half the average diameter of the stone onto a rigid surface or second stone of comparable size. Dumping from a truck is not acceptable. The stone shall be examined carefully before as well as after the completion of the test. Failure criteria is the development of new cracks, opening of old cracks, and the loss of piece from the surface of the stone. Each stone shall be dropped a total of five times for evaluation purposes with examination after each drop. Contractor shall provide all necessary equipment and operating personnel to perform the testing. Costs of testing shall be borne by the Contractor.

2.4 ARMOR STONE

A. The armor stone shall be hard, durable, clean, close grained, free of cracks, seams, laminations , cleaves

or other imperfections which might adversely affect its durability when exposed to weathering and wave action of the inlet environment. Stones should be chemically stable in fresh or salt water and should not weather due to temperature changes or wet/dry cycles. All stones shall be roughly cube shaped with angular faces, with the least dimension of any stone no less than one-third of its greater dimension. Flat stones will not be accepted. All stones shall have a density of not less than 160 pounds per cubic foot (saturated, surface dry). The inclusion of objectionable quantities of dirt, sand, clay and rock fines will not be permitted.

B. The armor stone shall generally be placed in a two-layer thickness underlain by a 12-inch bedding layer.
C. The size of the armor stones shall be a maximum of 1.25W and a minimum of 0.75W (where "W" is the average weight specified for the project herein). Approximately 50 percent of the stones supplied for the project shall be equal to, or larger than W.
D. The specified Armor Stone W for the project is 3.5 ton.
E. All stones shall be marked with their weight at the quarry before loading. This shall be spray painted on the individual stones. Any stones not marked will be rejected and must be returned to the quarry.

PART 3 - EXECUTION

3.1 SECTION INCLUDES

A. Order of Work
B. Demonstration Section
C. Foundation Preparation
D. Placement
E. Placement Control

3.2 ORDER OF WORK

A. When work commences, it shall proceed continuously without skipping areas.

3.3 DEMONSTRATION SECTION

A. Prior to placement of stone, Contractor will construct a section of stone revetment to demonstrate proposed operations for production placement. The section shall demonstrate procedures and capability of grading and placing stone within the tolerances specified. The demonstration section shall be 30 feet in length and shall conform to all applicable specifications.
B. Methods and equipment employed for placement shall demonstrate the adequacy for use in placement of stone and shall conform to the requirements specified.
C. If removal of the demonstration section is required, it shall be conducted in such a manner as to maintain the integrity of the underlying subgrade. The Contractor shall make arrangements for disposal in areas not located on the site.

3.4 FOUNDATION PREPARATION

A. Excavation and Fill
    a. Areas where armor stone are to be placed shall be excavated, trimmed, filled and dressed as indicated in Section 31 00 00 Earthwork and on the Drawings.

3.5 PLACEMENT

A. Equipment used in placing the materials shall be approved by the Engineer. Care shall be taken to place the armor stone and underlayer stone so that it will form a compact mass and uniform blanket thickness to the indicated lines, slopes, and elevations. Filter fabric and bedding layer surfaces shall be maintained

free of erosion or damage until the armor stone has been satisfactorily placed; areas damaged or eroded shall be repaired or replaced to the original lines and grades. Embankment and shoreline stability during placement shall be the responsibility of the Contractor.

B. Base Preparation and Geotextile Placement
   a. Areas on which geotextile is to be placed shall be graded and/or dressed to conform to cross sections shown on the contract drawings within an allowable tolerance of plus 4.0 inches and minus 4 inches from the theoretical slope lines and grades. The prepared base shall be approved by the Engineer.
   b. The soil subgrade requires the use of geotextile fabrics and bedding stone before the armor stone placement. Three layers of geotextile fabric are required against all soil interfaces above 0.0' MLW. This shall be comprised of 2 layers of Mirafi 140N or equivalent placed on the soil with a layer of Mirafi 600X or equivalent placed above. The 140N is required to act as a filter to stop the migration of fine soil into/through the revetment stone. The 600X is required to protect the 140N from being damaged by the large stones and construction activity. Additional layers of geotextile fabric shall be required if it is determined that the 3 layer fabric system is being damaged during construction. Contractor shall not push or drag armor stone on filter fabric after placement. A minimum of 12" overlap at seams is required after all stone is in place. This will require an initial overlap of more than 12" prior to placement of stone. Fabric shall be installed loosely on the subgrade.
   c. Immediately prior to placing the geotextile, the prepared base will be inspected by the Engineer and no material shall be placed thereon until that area has been approved.

C. Bedding Stone
   a. In order to maintain the geotextile fabric on the slope prior to armor stone placement, a 12" layer of 4" rip rap bedding stone shall be installed on top of the Mirafi 600X fabric.
   b. Bedding stone shall be placed only after the base of the relocated slope is prepared and geotextile placement has been approved. The bedding stone shall be spread uniformly on the prepared base in a satisfactory manner to the indicated lines starting from the bottom of the area to be covered and continue up slope. Placing of materials by methods that tend to segregate particle sizes within the bedding stone layer will not be permitted. Compaction of the bedding stone ayer stone will not be required but it shall be finished to present a reasonably even surface free from mounds or long low ridges.
   c. No subsequent layer shall be placed until the levels, dimensions, and slope of the previous layers have been checked and approved by the Engineer. Should the Contractor continue placing subsequent layers without having obtained an approval, then the Engineer shall have the right to instruct the Contractor to remove, at his own expense, part or all of the subsequent layer or layers and to check that the underlying layer complies with the Specifications.
   d. If, during the course of construction, any stone already in place becomes covered with sand or other materials, to such an extent that, in the opinion of the Engineer, would impair the stability of the structure, the Contractor shall be required to remove, at his expense, the sand or other materials before placing any additional stone. If such covering by sand or other materials is the result of delays or other faults of the Contractor, its removal shall be performed by the Contractor at his own expense. The finished slope above water level shall be free of objectionable clusters or pockets and shall present a uniform rough appearance.

D. Armor Stone
   a. Armor stone shall be placed only after the upper underlayer stone has been approved.
   b. Armor stone shall be placed on the upper underlayer stone in such a manner as to produce a well-graded mass of stone with minimum voids and shall be constructed to the lines and grades indicated on contract drawings. Armor stones shall be placed in a tight manner to adjacent stones to avoid

large voids. This shall require the operator placing the stones to select stones with the appropriate geometry prior to placement. The porosity of the new armor layer shall not be greater than 37% after placement. Porosity if defined as the volume of the voids divided by the total volume multiplied by 100.

c. Armor stone shall be placed to its full course thickness in one operation and in such a manner as to avoid displacing the underlying material. The larger stones shall be well distributed, and the entire mass of stones shall be roughly graded to conform to the gradation specified in paragraph "Armor Stone".
d. Armor stone units in the cover layer shall be placed in an orderly manner to obtain good wedging or interlocking action between individual units. The same is required for the underlayer units. Armor stones in the top layer shall be placed to create a roughened surface at the top. They shall not be placed to create a smooth surface. A smooth surface would promote greater runup from waves. The surface should be irregular to better reduce wave energy in order to provide runup control and wave dissipation.
e. The finished slope shall be free from objectionable pockets of small stones, clusters of larger stones, or large voids. Selective placing may be required but only to the extent necessary to secure the results specified above. The desired distribution of the various sizes of armor stones throughout the mass shall be obtained, at the option of the Contractor, either by selective loading at the quarry or other source, by controlled dumping of successive loads during final placing, or by a combination of these methods.
f. Placing armor stone by dumping into chutes or by similar methods will not be permitted. Placing armor stone by dumping it at the top of the slope and pushing it down the slope will not be permitted.
g. At all times during placement, the Contractor shall have a person on the ground acting as a spotter to direct the operator of the stone-placing equipment as to where the armor stone should be placed to provide a compact mass. Armor stone shall be placed from bottom to top of slope.

E. Sand placement
   a. After revetment construction, infill voids visible from the surface with excess on-site sand generated during construction. Conduct this activity at the existing revetment along the northern shoreline also.
   b. Place sand in a manner that ensures complete filling of voids visible from surface. Puddling may be necessary to avoid large voids caused by bridging of the sand during backfilling.
F. Misplaced Stone
   a. Areas in the vicinity of completed stone protection shall be thoroughly examined and stone found outside the indicated cross section or limits of the stone protection shall be recovered and used in the work as specified herein.
G. Protection of uncompleted work is solely the Contractor’s responsibility and any repairs needed to the damaged portions of already completed work shall be at no cost to the Owner.
   a. The Contractor shall submit for the Engineer’s approval a detailed program concerning the temporary protective works the Contractor intends to execute, including the minimum stockpile intended to have on Site as a safeguard for this purpose. This program shall also include the activities the Contractor intends to carry out during the winter season, i.e., November through March.
   b. The Director’s Representative’s approval of the construction method and temporary protection of the construction shall not relieve the Contractor from his responsibility for the works. It is therefore pointed out that:
      i. In case of damage to the works under construction, the Contractor shall repair the damaged areas at his expense.
      ii. Before resumption of the works, the Contractor shall remove stone placed as temporary armor,

at his expense.

H. Working Area Signs
   a. The Contractor shall plan his operations in such a manner that any and all of his activities shall be limited to the working area allocated under his contract, as denoted on the Contract Drawings. This working area shall be available for the Contractor's operations under the conditions and coordination requirements as approved by the Engineer. The Contractor shall be permitted to commence his operations only upon the complete installation of the marking sign, etc. and obtaining approval from the Engineer. Contractor shall maintain pedestrian access on the beach below the high tide line at all times during the work.

3.6 PLACEMENT CONTROL

A. Quality Control Measures
   a. Establish and maintain quality control for all work performed at the job site under this section to assure compliance with contract requirements. Maintain records of the quality control tests, inspections and corrective actions. Quality control measures shall cover all construction operations including, but not limited to, the placement of all materials to the slope and grade lines shown and in accordance with this section.

B. Check Surveys
   a. Surveys made by the Contractor are required on each material placed (armor layer and underlayer) for determining that the materials are acceptably placed in the work. Make checks as the work progresses to verify lines, grades and thicknesses established for completed work. At least one (1) check survey as specified below shall be made for each twenty-five (25) foot section as soon as practicable after completion.
   b. Following placement of each type of material, the cross section of each step of the work shall be approved by the Engineer before proceeding with the next step of the work. Approval of cross sections based upon check surveys shall not constitute final acceptance of the work. Cross sections shall be taken on lines 25 feet apart, measured along the structure baseline, with readings at elevations 1-foot ranges between the top and toe of the slope. However, other cross section spacing and reading intervals may be used if determined appropriate by the Engineer. Additional elevations and soundings shall be taken as the Engineer may deem necessary or advisable.
   c. The surveys shall be conducted in the presence of an authorized representative of the Engineer, unless this requirement is waived by the Owner.
   d. The cost of all check surveys required to complete the Work shall be borne by the Contractor. The elevation of stone above the water surface shall be determined using a leveling instrument and a rod having a spherical end having a diameter equal to half of the nominal rock diameter of the armor stone (i.e., 0.5 Dn50) per CIRIA (2007). If approved by the Engineer other means may also be used.

END OF SECTION

BEACH ROAD STORMWATER MANAGEMENT IMPROVEMENTS PLANS IFC

BEACH ROAD STORMWATER MANAGEMENT IMPROVEMENTS

BEACH ROAD · EAST PROVIDENCE · RHODE ISLAND

STORMWATER BMP IMPLEMENTATION AND COASTAL RESTORATION

NOVEMBER 2022 (REVISED MAY 2023)

PREPARED FOR

CITY OF EAST PROVIDENCE
145 TAUNTON AVENUE
EAST PROVIDENCE, RHODE ISLAND

PREPARED BY

FUSS & O'NEILL
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
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DEAN E. J UDET
No. 758
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SHEET INDEX

SHEET No.	SHEET TITLE
GI-001	COVER SHEET
CN-001	GENERAL NOTES & LEGEND
CS-101	EXISTING CONDITIONS PLAN
CS-102	SITE PREPARATION AND SOIL EROSION & SEDIMENTATION CONTROL PLAN
CS-103	STORMWATER IMPROVEMENT PLAN AND PROFILE
CD-501 - CD-502	CONSTRUCTION DETAILS



LOCATION MAP
SCALE: 1" = 500'

PROJ. No.: 20140710.A11
DATE: NOVEMBER 2022

GI-001

File: j:\DWG\P2014\07\10A11\Civil\Plan\20140710A11_COV01.dwg Layout: GI-001 Plotted: 2023-05-24 5:08 PM Saved: 2023-05-24 5:08 PM User: samuda

LEGEND

EXIST	PROP	
		PROPERTY LINE/RIGHT-OF-WAY
	LOD	LIMIT OF DISTURBANCE
10+00	10+00	BASELINE
		EDGE OF WATER
		WETLAND SYMBOL
		GRAVEL PATH
		EDGE OF PAVEMENT
		BITUMINOUS CURB
MATCH LINE SEE SHEET 2 OF 2		MATCH LINE
		CHAIN LINK FENCE
		STOCKADE FENCE
		TREE LINE
		EXISTING TREE
		RETAINING WALL
2	4	MINOR CONTOUR
10	20	MAJOR CONTOUR
		BUILDING
		BOLLARD
		SIGN
+21.25	x21.25	SPOT ELEVATION
		DRAINAGE LINE
CB	CB	CATCH BASIN
DMH	DMH	DRAIN MANHOLE
SMH	SMH	SEWER MANHOLE
		FIRE HYDRANT
		LIGHT POST
		UTILITY POLE
		GUY POLE
		COMPOST FILTER TUBE

ABBREVIATIONS

GENERAL

APPROX	APPROXIMATE
BIT	BITUMINOUS PAVEMENT
BW	BOTTOM OF WALL
CC	CONCRETE CURB
CCB	CAPE CODE BERM
ELEV	ELEVATION
EXIST	EXISTING
GC	GRANITE CURB
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
PCC	PRECAST CONCRETE CURB
PROP	PROPOSED
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
TOS	TOP OF SLOPE
TW	TOP OF WALL
TYP	TYPICAL
VGC	VERTICAL GRANITE CURB

UTILITY

CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED POLYETHYLENE PIPE
DCB	DOUBLE CATCH BASIN
DI	DUCTILE IRON PIPE
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
HDPE	HIGH DENSITY POLYETHYLENE
HYD	HYDRANT
INV	INVERT ELEVATION
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UP	UTILITY POLE

LEGEND NOTE

SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SHOWN ON THE DRAWINGS TO SCALE OR TO THEIR ACTUAL DIMENSION OR LOCATION. COORDINATE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS, AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.

GENERAL NOTES

1. REFERENCES:
   A. THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES, 2021 EDITION, REVISIONS AND ALL CURRENT ADDENDA, ARE MADE A PART HEREOF, AS IF ATTACHED HERETO. ALL REFERENCES TO "STATE STANDARD SPECIFICATIONS" SHALL REFER TO THE LATEST EDITION OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES CONSTRUCTION.
   B. THE RHODE ISLAND EROSION CONTROL MANUAL, REVISIONS AND ALL CURRENT ADDENDA, ARE MADE A PART HEREOF, AS IF ATTACHED HERETO. ALL REFERENCES TO "EROSION CONTROL MANUAL" SHALL REFER TO THE LATEST EDITION OF THE RHODE ISLAND EROSION CONTROL MANUAL.
2. EXISTING CONDITIONS:
   A. EXISTING AND TOPOGRAPHICAL FEATURES WITHIN THE BEACH STREET RIGHT-OF-WAY WERE OBTAINED FROM AN EXISTING SURVEY PERFORMED BY THE CITY OF EAST PROVIDENCE TITLED "PROPOSED SEWER EXTENSION, HARDING AVENUE," LAST UPDATED AUGUST 6, 2014.
   B. AERIAL IMAGERY WAS OBTAINED FROM THE OFFICE OF GEOGRAPHIC AND ENVIRONMENTAL INFORMATION (RIGIS), RHODE ISLAND EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS (RI.GOV).
   C. PROPERTY LINES SHOWN ARE APPROXIMATE ONLY AND WERE OBTAINED FROM AN EXISTING SURVEY PERFORMED BY THE CITY OF EAST PROVIDENCE TITLED "PROPOSED SEWER EXTENSION, HARDING AVENUE," LAST UPDATED AUGUST 6, 2014.
   D. WETLAND FLAGS SHOWN WERE FLAGGED AND FIELD LOCATED BY NATURAL RESOURCE SERVICES, INC. (NRS) ON OCTOBER 4, 2022.
3. DATUM REFERENCE:
   A. ALL TOPOGRAPHIC INFORMATION INCLUDED HEREON IS IN REFERENCE TO NGVD29.
4. FLOOD ZONE INFORMATION:
   A. THE PROJECT SITE IS LOCATED WITHIN A 'VE (EL. 24)" FLOOD ZONE ASSOCIATED WITH THE PROVIDENCE RIVER AS DEPICTED ON FEMA FLOOD MAP NUMBER 44007C0338H (DATED SEPTEMBER 18, 2013).
5. UTILITIES:
   A. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE ONLY AND HAVE BEEN OBTAINED FROM SURVEY INFORMATION PROVIDED BY THE CITY OF EAST PROVIDENCE, FROM UTILITY MAPPING PROVIDED BY RHODE ISLAND ENERGY, FIELD OBSERVATIONS MADE FROM PREVIOUS DIG SAFE MARKINGS, AND FROM LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS MAY NOT BE ALL INCLUSIVE. "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS AND DEPTHS OF ALL EXISTING UTILITIES BOTH OVERHEAD AND UNDERGROUND PRIOR TO CONSTRUCTION OF THE SUBSURFACE INFILTRATION SYSTEM INCLUDING THE DEPTHS AND LOCATIONS WHERE UNDERGROUND UTILITIES WILL POTENTIALLY CONFLICT WITH THE INSTALLATION OF THE PROPOSED DRAINAGE SYSTEM AS INDICATED ON THESE PLANS. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR CITY WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.

GENERAL CONSTRUCTION REQUIREMENTS

1. THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER IN WRITING OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.
2. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AS REQUIRED TO FIT WORK PROPERLY. RECHECK MEASUREMENTS BEFORE CONSTRUCTING EACH WORK ITEM. WHERE PORTIONS OF THE WORK ARE INDICTED TO FIT TO OTHER CONSTRUCTION, VERIFY DIMENSIONS OF OTHER CONSTRUCTION BY FIELD MEASUREMENTS BEFORE FABRICATION. COORDINATE FABRICATION SCHEDULE WITH CONSTRUCTION PROGRESS TO AVOID DELAYING THE WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY ADDITIONAL LOCAL PERMITS, INSPECTIONS, BONDS, ETC. AND OTHER APPROVAL RELATED ITEMS THAT MAY BE REQUIRED. APPLICATION FEES SHALL BE PAID BY OWNER. NO CONSTRUCTION SHALL COMMENCE UNTIL SUCH PERMITS HAVE BEEN SECURED AND THE CONTRACTOR HAS SUPPLIED THE REQUIRED NOTICES.
4. METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS FOR THIS PROJECT SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE LOCAL MUNICIPALITY AND THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION.
5. VERIFY SPACE REQUIREMENTS AND DIMENSIONS OF ITEMS SHOWN ON DRAWNGS. CHECK THE LOCATION, LEVEL AND GRADE, OF EVERY MAJOR ELEMENT AS THE WORK PROGRESSES.
6. ESTABLISH BENCHMARKS AND CONTROL POINTS IN ADDITION TO THOSE INDICATED TO SET LINES, GRADES, AND LEVELS AT EACH STAGE OF CONSTRUCTION. LOCATE THE WORK AND COMPONENTS OF WORK ACCURATELY, IN CORRECT ALIGNMENT AND ELEVATION, AS INDICATED.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, WITH MATCHING MATERIALS, ANY PAVEMENT, WALKS, SIGNS,UTILITIES, STRUCTURES, NON-PAVED AREAS, VEGETATION, EXISTING FEATURES, ETC. THAT AE DAMAGED DURING CONSTRUCTION AND THAT ARE NOT SCHEDULED TO BE REMOVED, REPLACED, RESET, OR DISTURBED BY PROPOSED CONSTRUCTION ACTIVITIES.
8. COMPLY WITH MANUFACTURERS' WRITTEN INSTRUCTIONS AND RECOMMENDATIONS FOR INSTALLING MATERIALS AND PRODUCTS.
9. INSTALL PRODUCTS AT THE TIME AND UNDER CONDITIONS THAT WILL ENSURE THE BEST POSSIBLE RESULTS. MAINTAIN CONDITIONS REQUIRED FOR PRODUCT PERFORMANCE UNTIL SUBSTANTIAL COMPLETION.
10. CONDUCT CONSTRUCTION OPERATIONS SO NO PART OF THE WORK IS SUBJECTED TO DAMAGING OPERATIONS OR LOADING IN EXCESS OF THAT EXPECTED DURING NORMAL POST-CONSTRUCTION CONDITIONS.
11. USE PRODUCTS, CLEANERS, AND INSTALLATION MATERIALS THAT ARE NOT CONSIDERED HAZARDOUS.
12. CONTRACTOR AGREES THAT IT ASSUMES SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE CONTRACT OWNER, PROPERTY OWNERS AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM "THE SOLE NEGLIGENCE OF THE CONTRACT OWNER, PROPERTY OWNER OR THE ENGINEER."
13. DEVIATIONS OR CHANGES FROM THESE PLANS WILL NOT BE ALLOWED UNLESS APPROVED BY THE ENGINEER/OWNER.
14. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
15. CONTRACTOR SHALL IDENTIFY TREES TO BE REMOVED PRIOR TO CONSTRUCTION AND MARK THEM WITH CONSTRUCTION TAPE FOR REVIEW BY THE OWNER/ENGINEER. TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHEREVER FEASIBLE. CONTRACTOR SHALL NOT REMOVE TREES UNTIL REVIEWED AND APPROVED BY THE OWNER/ENGINEER.
16. THE CONTRACTOR SHALL RESTORE DISTURBED LANDSCAPE AREAS TO ORIGINAL CONDITION (I.E. SEEDED, SODDED, PLANTED) UNLESS OTHERWISE DIRECTED WITHIN CONTRACT DOCUMENTS.
17. ALL EXCESS EXCAVATED MATERIALS, EXCESS FILL, EXCESS CONSTRUCTION MATERIALS, DEBRIS, AND WASTE SHALL BE REMOVED FROM THE SITE AND SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS.
18. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, FIRE HYDRANTS, AND UTILITIES WITHOUT APPROPRIATE PERMITS.
19. WORK IS RESTRICTED TO THE HOURS OF 7 AM TO 5 PM ON MONDAY THROUGH FRIDAY, EXCLUDING HOLIDAYS, UNLESS OTHERWISE APPROVED BY THE OWNER.
20. ALL FILL SHALL BE CLEAN AND FREE OF MATERIALS WHICH MAY CAUSE POLLUTION OF TIDAL WATERS.
21. ALL EXCESS EXCAVATED MATERIALS, EXCESS FILL, EXCESS CONSTRUCTION MATERIALS, AND DEBRIS SHALL BE REMOVED FROM THE SITE AND SHALL NOT BE DISPOSED IN TIDAL WATERS OR ON THE COASTAL FEATURE.

UTILITY COORDINATION REQUIREMENTS

1. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AND UTILITY COMPANIES TO LOCATE ALL EXISTING UTILITIES, AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT ITS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
3. THE LOCATION OF EXISTING UNDERGROUND INFRASTRUCTURE, UTILITIES, CONDUITS, AND LINES ARE SHOWN ON THESE PLANS IN AN APPROXIMATE WAY ONLY AND ARE BASED ON RESEARCH OF AVAILABLE UTILITY RECORDS (AS NOTED) AND MAY NOT BE LIMITED TO THOSE SHOWN HEREIN. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM THE CONTRACTOR'S FAILURE TO LOCATE SAID INFRASTRUCTURE AND UTILITIES EXACTLY. IF FIELD CONDITIONS DIFFER FROM PLAN INFORMATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AND UTILITY COMPANIES TO LOCATE ALL EXISTING UTILITIES, AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
4. BEFORE BEGINNING SITE WORK, THE CONTRACTOR SHALL INVESTIGATE AND VERIFY THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND OTHER CONSTRUCTION AFFECTING THE WORK. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS (INCLUDING TEST PITS AT POTENTIAL UTILITY CONFLICT LOCATIONS AS INDICATED ON THE PLANS) AND LOCATE EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF NECESSARY. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
5. MATERIALS AND METHODS OF CONSTRUCTION ASSOCIATED WITH THE ADJUSTMENT AND/OR REMOVAL AND RELOCATIONS OF UNDERGROUND UTILITIES SHALL BE IN ACCORDANCE WITH THE UTILITY OWNER'S RULES AND REGULATIONS. THE CONTRACTOR SHALL NOTIFY AFFECTED PROPERTY OWNERS AT LEAST 48 HOURS IN ADVANCE OF ANY DISRUPTIONS OR AS OTHERWISE REQUIRED BY THE RESPECTIVE UTILITY OWNER.

PROTECTION OF WORK REQUIREMENTS

1. THE WORK AND SITE SHALL BE PROTECTED AT ALL TIMES UNTIL FINAL ACCEPTANCE BY THE OWNER. CARE SHALL BE EXERCISED WHILE OPERATING EQUIPMENT ON AND ADJACENT TO THE WORK AREA. THE CONTRACTOR SHALL BE RESPONSIBLE TO ASSURE THE UTILIZED EQUIPMENT DOES NOT CAUSE DAMAGE TO EXISTING FEATURES.
2. ACCESS TO VARIOUS PORTIONS OF THE SITE SHALL BE UNDERTAKEN IN SUCH A MANNER THAT THE WORK AND SITE ARE PROTECTED AT ALL TIMES. ACCESS WAYS SHALL BE CONSTRUCTED, MAINTAINED, AND PROTECTED WITH SEDIMENT CONTROLS TO PREVENT DAMAGE FROM EROSION DURING MAJOR STORM EVENTS.
3. PLACEMENT AND COMPACTION OF FILL MATERIALS SHALL BE COMPLETED IN SUCH A MANNER THAT THE WORK AND ADJACENT ROADWAYS ARE PROTECTED FROM DAMAGE AT ALL TIMES.
4. BACKFILL OPERATIONS SHALL PROCEED TO RAISE THE GROUND SURFACE UNIFORMLY AND SHAPED TO PROVIDE POSITIVE DRAINAGE AT ALL TIMES. CONSTRUCT AND MAINTAIN ON THE SITE, ALL DITCHES AND CHANNELS NECESSARY TO KEEP THE SITE IN A DRY AND WORKABLE CONDITION. WHERE WATER IS FLOWING OR OTHERWISE INFILTRATING INTO AN EXCAVATION, PROVIDE FOR PUMPING AND OTHER DRAINAGE FACILITIES, INCLUDING EROSION AND SEDIMENT CONTROLS, TO DIVERT WATER FROM SUCH EXCAVATION.
5. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING OF FOOTINGS AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES, FOUNDATIONS AND STRUCTURES.

CONTROL OF WATER

1. IT IS NOT ANTICIPATED THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION.
2. TEMPORARY STORMWATER BYPASS CONVEYANCE SYSTEMS (THAT MAY BE REQUIRED) TO DISCHARGE STORMWATER THROUGH THE SITE (AND AROUND PROPOSED WORK) DURING CONSTRUCTION SHALL BE INSTALLED, OPERATED, MAINTAINED AND REMOVED IN SUCH A MANNERS TO PROTECT THE WORK AND EXISTING FEATURES FROM DAMAGE AT ALL TIMES UNTIL FINAL ACCEPTANCE BY THE OWNER.
3. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING OF FOOTINGS AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES, FOUNDATIONS AND STRUCTURES.
4. IT IS NOT ANTICIPATED THAT THE PUMPING OF GROUNDWATER WILL BE REQUIRED FOR DE-WATERING. HOWEVER, DURING OR FOLLOWING RAINFALL EVENTS, THE PUMPING OF STANDING WATER IN EXCAVATION AREAS MAY BE REQUIRED. IF REQUIRED, PUMP DISCHARGES SHALL BE MANAGED SUCH THAT THESE DO NOT CAUSE EROSION OF SOILS OR DO NOT RESULT IN THE DISCHARGE OF SEDIMENT LADEN WATER. PUMPED WATER SHALL BE DISCHARGED THROUGH AN APPROVED SEDIMENT CONTROL DEVICE (E.G. FILTER BAG) TO PROPERLY FILTER TURBID WATER THAT IS LOCATED ON A CRUSHED STONE IN A DEWATERING AREA TO AVOID SCOUR OR SUSPENSION OF SOIL AT THE DISCHARGE. WATER SHALL NOT BE DISCHARGED ONTO FILL OR BACKFILL AREAS. IF NEEDED, DEWATERING AREA WITH FILTER BAGS SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES INCLUDED THE APPLICABLE DETAILS FOUND IN THE MANUFACTURER'S SPECIFICATIONS AND/OR IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (AS AMENDED).
5. PROTECT CONSTRUCTED WORK ON THE SITE DURING STORM AND FLOOD CONDITIONS.
6. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLAN OR AS REQUIRED BY SITE CONDITIONS. ALL EROSION CONTROL DEVICES WILL BE MAINTAINED THROUGHOUT CONSTRUCTION.

EROSION AND SEDIMENT CONTROL

1. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLAN OR AS REQUIRED BY SITE CONDITIONS. ALL EROSION CONTROL DEVICES WILL BE MAINTAINED THROUGHOUT CONSTRUCTION.
2. DISTURBANCE OF SOIL SURFACES IS REGULATED BY STATE LAW AND LOCAL ORDINANCE. ALL WORK SHALL COMPLY WITH THE FOLLOWING CRITERIA AND OTHER PERMIT CONDITIONS TO PREVENT OR MINIMIZE SOIL EROSION AND SEDIMENTATION TO OFF-SITE AREAS.
3. THE CONTRACTOR SHALL COMPLY WITH THE LATEST EDITION OF THE "RHODE ISLAND EROSION CONTROL MANUAL" IN CONSTRUCTING THE EROSION AND SEDIMENT CONTROLS INDICATED ON THE PLANS. ALL EROSION AND SEDIMENT CONTROL MEASURES OR WORKS AND REHABILITATION MEASURES MUST CONFORM TO OR EXCEED THE SPECIFICATIONS OR STANDARDS SET OUT IN THIS DOCUMENT.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE TIMELY INSTALLATION, INSPECTION, MAINTENANCE, AND/OR REPLACEMENT OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES SHOWN ON THESE PLANS TO ENSURE PROPER OPERATION THROUGHOUT THE LIFE OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF PERMANENT MEASURES UNTIL CONSTRUCTION OF THE PROJECT IS COMPLETED OR UNTIL IT IS ACCEPTED BY THE OWNER. REMOVE EROSION AND SEDIMENTATION CONTROLS AFTER STABLE VEGETATIVE GROWTH IS ESTABLISHED.
5. THE CONTRACTOR SHALL INSPECT EROSION AND SEDIMENT CONTROL DEVICES ON A WEEKLY BASIS, AFTER EACH STORM EVENT THAT GENERATES AT LEAST 0.25 INCHES OF RAINFALL OVER A 24-HOUR PERIOD, AND AT LEAST DAILY DURING PROLONGED RAINFALL. CLEAN OUT ACCUMULATED SEDIMENT BEHIND CONTROLS. REPAIR OR REPLACE CONTROLS PROMPTLY AS NEEDED. REMOVE ACCUMULATED SEDIMENT FROM BEHIND PERIMETER CONTROLS WHEN ONE-HALF OF THE ORIGINAL HEIGHT OF THE PERIMETER CONTROLS BECOME FILLED WITH SEDIMENT. REMOVE SEDIMENT FROM CATCH BASIN INLET PROTECTION IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. DISPOSE OF REMOVED SEDIMENT IN ON-SITE FILL AREAS OR LAWFULLY OFF-SITE.
6. TREES AND OTHER EXISTING VEGETATION NOT WITHIN THE LIMITS OF DISTURBANCE SHALL BE PROTECTED FROM DAMAGE. VEGETATED AREAS AND/OR TREES DAMAGED THAT ARE NOT PLANNED FOR REMOVAL SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE CITY.
7. TEMPORARY VEGETATIVE COVER SHALL BE APPLIED TO ANY DISTURBED AREAS THAT HAVE NOT YET REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN SEVEN (7) DAYS AFTER CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN THIRTY (30) DAYS. TEMPORARY VEGETATIVE COVER SHALL CONSIST OF 40% ANNUAL RYEGRASS AND 60% PERENNIAL RYEGRASS FROM APRIL 1 TO NOVEMBER 15 AND WINTER RYEGRASS BETWEEN NOVEMBER 15 AND MARCH 31. SEED AT A RATE OF 75 LBS/ACRE BY HAND.
8. PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED TO ALL DISTURBED AREAS THAT HAVE REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS PERMANENTLY CEASED. RECOMMENDED PERMANENT SEEDING DATES ARE APRIL 1 TO MAY 31 AND AUGUST 15 TO OCTOBER 15. PERMANENT VEGETATIVE COVER SEED MIXTURES AND APPLICATION RATES SHALL BE IN ACCORDANCE WITH THE STORMWATER IMPROVEMENT PLANS. ALL PLANTINGS AND SEED SHALL BE COVERED BY A ONE-YEAR WARRANTY PERIOD; RE-SEEDING/RE-PLANTING SHALL BE COMPLETED TO ENSURE STABLE VEGETATIVE COVER IS ESTABLISHED OVER ALL DISTURBED AREAS.
9. IF PERMANENT SEEDING CANNOT BE COMPLETED IMMEDIATELY OR WITHIN THE RECOMMENDED SEEDING DATES, TEMPORARY BIODEGRADABLE EROSION CONTROL BLANKETING (CONTAINING NO PLASTIC COMPONENTS) OR MULCHING SHALL BE SPREAD/INSTALLED OVER ALL UPLAND DISTURBED AREAS TO PROTECT THE SITE UNTIL ARRIVAL OF THE NEXT RECOMMENDED SEEDING PERIOD. MULCHING OR BLANKETING SHOULD BE INSTALLED AS SOON AS POSSIBLE IF SEEDING IS INSTALLED BETWEEN OCTOBER 1 AND MARCH 31, BUT NOT MORE THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED UNLESS THE ACTIVITY IS TO RESUME WITHIN THIRTY (30) DAYS. IF PERMANENT SEEDING IS INSTALLED IN JULY AND AUGUST, APPLY WATER TO SEEDED AREAS ON A DAILY BASIS.
10. ANY DISTURBED AREAS WHICH DO NOT HAVE ADEQUATE VEGETATIVE STABILIZATION BY NOVEMBER 15TH MUST BE STABILIZED THROUGH THE USE OF NON-VEGETATIVE EROSION CONTROL MEASURES. IF WORK CONTINUES WITHIN ANY OF THESE AREAS DURING THE PERIOD FORM OCTOBER 15TH THROUGH APRIL 15TH, CARE MUST BE TAKEN TO ENSURE THAT ONLY THE AREA REQUIRED FOR THAT DAY'S WORK IS EXPOSED, AND ALL ERODIBLE SOILS MUST BE RESTABILIZED WITHIN 5 WORKING DAYS.
11. BLANKETING OR MULCHING MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. WHERE EROSION IS OBSERVED, ADDITIONAL MULCH MUST BE APPLIED OR BLANKETING REPAIRED OR REPLACED. INSPECTIONS SHALL TAKE PLACE UNTIL VEGETATION IS THOROUGHLY ESTABLISHED.
12. THE USE PHOSPHATE BASED FERTILIZERS IS PROHIBITED.
13. GOOD HOUSEKEEPING: THE PROJECT SITE SHALL PROVIDE FOR THE MINIMIZATION OF EXPOSURE OF CONSTRUCTION DEBRIS (INCLUDING, BUT NOT LIMITED TO, INSULATION, WIRING, PAINTS AND PAINT CANS, SOLVENTS, WALL BOARD, ETC.) TO PRECIPITATION BY MEANS OF DISPOSAL AND/OR PROPER SHELTER OR COVER. CONSTRUCTION WASTE MUST BE PROPERLY DISPOSED OF IN ORDER TO AVOID EXPOSURE TO PRECIPITATION AT THE END OF EACH WORKING DAY.
14. STORAGE AND DISPOSAL: MATERIALS WHICH COULD BE A POTENTIAL SOURCE OF STORMWATER POLLUTION SUCH AS GASOLINE, DIESEL FUEL, HYDRAULIC OIL, ETC., WILL BE STORED AT THE END OF EACH DAY IN A LOCKED STORAGE TRAILER OR COVERED LOCATION AND TAKEN OFF-SITE AND PROPERLY DISPOSED OF. ALL TYPES OF WASTE GENERATED AT THIS SITE WILL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND/OR REGULATIONS.
15. SPILL/LEAK PROTECTION AND RESPONSE: FUEL VEHICLES AND EQUIPMENT AWAY FROM THE WETLAND AND DRAINAGE SYSTEM AND PREVENT CONTAMINATION OF SOIL, GROUNDWATER OR SURFACE WATER FROM SPILLS OR LEAKS.. DEPLOY BOOMS AND OTHER CONTAINMENT/CLEANUP MEASURES IN THE EVENT OF A SPILL OR LEAK. NOTIFY LOCAL FIRE DEPT. AND RIDEM IMMEDIATELY OF ANY SPILLS.
16. TRACKING AND DUST CONTROL: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ADJACENT ROADS WHERE CONSTRUCTION VEHICLES HAVE TRACKED SEDIMENT FROM THE PROJECT, CONTROL DUST, AND TAKE ALL NECESSARY MEASURES TO ENSURE THAT THE SITE AND ALL ADJACENT ROADS BE MAINTAINED IN A MUD- AND DUST-FREE CONDITION AT ALL TIMES THROUGHOUT THE LIFE OF THE CONTRACT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO THE SURROUNDING ROADWAYS MUST BE REMOVED IMMEDIATELY AT THE END OF EACH WORKING DAY. DUST CONTROL MAY ALSO INCLUDE APPLICATION OF CONTROLLED AMOUNTS OF WATER ONTO AFFECTED AREAS OR OTHER CONTROL MEASURES APPROVED BY THE ENGINEER.
17. DURING THE WINTER, SNOW SHALL BE STOCKPILED IN SHOULDER AREAS ALONG BOTH SIDES OF THE ROADWAY. DO NOT STOCKPILE SNOW AT WESTERN END OF ROADWAY.

CONSTRUCTION SEQUENCE

CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT ARE EXPECTED TO COMMENCE IN SPRING/EARLY SUMMER OF 2023 AND WILL BE COMPLETED BY END OF FALL 2023. SOME OF THE CONSTRUCTION ACTIVITIES MAY OCCUR CONCURRENTLY WITH OTHER CONSTRUCTION ACTIVITIES. THE GENERAL SEQUENCE FOR EACH PHASE OF CONSTRUCTION IS AS FOLLOWS:

1. PRIOR TO STARTING CONSTRUCTION , SUBMIT A NOTICE OF CONSTRUCTION FORM TO RIDEM (FOUND AT HTTPS: //DEM.RI.GOV/SITES/G/FILES/XKGBUR861/FILES/PROGRAMS/BENVIRON/WATER/PERMITS/SWCOORD/SOC.PDF).
2. INSTALL 12" (WIDE) BY 18" (LONG) RIDEM PERMIT SIGN CONSTRUCTED OF WEATHER RESISTANT MATERIALS THAT INCLUDES "DEM WQC/STW #22-241."
3. INSTALL PERIMETER SEDIMENT CONTROL BARRIERS AND OTHER SEDIMENT EROSION CONTROL MEASURES. SEDIMENT EROSION CONTROL MEASURES WILL BE MAINTAINED OR REPLACED AS REQUIRED THROUGHOUT CONSTRUCTION PERIOD. ANY TEMPORARY SOIL STOCKPILE AREAS DURING CONSTRUCTION WILL ALSO BE ENCOMPASSED BY PERIMETER CONTROLS.
4. CONFIRM EXISTING SITE CONDITIONS AND IDENTIFY TREES AND OTHER EXISTING FEATURES (STRUCTURES, UTILITIES, ETC.) THAT ARE NOT DESIGNATED FOR REMOVAL. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
5. COMPLETE DEMOLITION ACTIVITIES IN ACCORDANCE WITH THE PROJECT'S SITE PREPARATION & SOIL EROSION AND SEDIMENTATION CONTROL PLAN.
6. INSTALL CURBING AT NEW WESTERN END OF ROADWAY AND SAND-FILLED SCOUR/EROSION PROTECTION RIPRAP EDGE ALONG SEAWARD BASE OF CURBING.
7. INSTALL SUBSURFACE INFILTRATION SYSTEM AND ASSOCIATED DRAINAGE COMPONENTS (INCLUDING DEEP-SUMP CATCH BASINS WITH PRETREATMENT DEVICES). DO NOT DISTURB EXISTING INLETS UNTIL ALL PROPOSED DRAINAGE COMPONENTS ARE IN-PLACE AND READY TO RECEIVE RUNOFF. IDEALLY, THIS WORK WILL BE PERFORMED WHEN DRY CONDITIONS ARE EXPECTED. BACKFILL AND INSTALL GRAVEL BASE OVER SYSTEM. WHEN INSTALLING SUBSURFACE INFILTRATION SYSTEM, CARE MUST TAKEN TO AVOID OVER COMPACTION OF SUBGRADE. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS/RECOMMENDATIONS. DO NOT OPERATE HEAVY CONSTRUCTION EQUIPMENT ABOVE CHAMBERS UNTIL A MINIMUM OF SIX INCHES OF CRUSHED STONE HAS BEEN INSTALLED OVER THE CHAMBERS.
8. PERFORM ANY FINAL GRADING WITHIN COASTAL RESTORATION AREA AND RESTORE IN ACCORDANCE WITH THE PLANS.
9. PERFORM ANY FINAL GRADING OF ROADWAY BASE AND ADJACENT NON-PAVED, SHOULDER AREAS; AND INSTALL NEW PAVEMENT AND ROADWAY BERM.
10. RESTORE NON-P

APPROXIMATE TIDAL ELEVATIONS

MHHW EL. = 3.2' (NGVD29)
MHW EL. = 3.0' (NGVD29)
MLW EL. = -1.5' (NGVD29)
MLLW EL. = -1.6' (NGVD29)

BASED ON TIDAL DATA OBTAINED FOR PROVIDENCE RIVER (STA. 8454000) IN PROVIDENCE, RHODE ISLAND FROM NOAA'S TIDES & CURRENT WEBSITE FOR THE 1983-2001 TIDAL EPOCH. NAVD88 DATUM ELEVATIONS WERE ADJUSTED BY +0.8 FEET TO CORRESPOND TO NGVD29 DATUM ELEVATIONS.

PROVIDENCE RIVER (TYPE 2 WATERS)

APPROX. MEAN HIGH WATER LINE (TYP.)

APPROX. COASTAL FEATURE DELINEATION (BY NATURAL RESOURCE SERVICES, INC.)

CF1 CF2 CF3 CF4

313/11/005 N/F WYLE MULKIE

313/11/001 N/F RORY & JUDITH WHIPPLE

313/11/002 N/F ELIZABETH NEEDHAM

313/11/3 N/F BEDROS BEDROSIAN ESTATE

313/11/004 N/F GERALD H. & DARLENE M. PERRY

#109 #33 #28

HARDING AVENUE

BEACH ROAD

PARKING GRAVEL/STONE

ASPHALT PARKING

CONC WALL

CONC WALL w/ CLF

PAVEMENT EDGE

ABANDONED GAS MAIN

1.25" SDR 11 HDPE

WATER MAIN

2" SDR 11 HDPE

4" PE GAS

ABANDONED 3" STEEL GAS MAIN

4"PE GAS MAIN

UP#5 UP#2 UP#1

GRAN RIP-RAP

BRUSH

SIGN

DECK

GATE

TP-1

BENCH MARK
TOP SPINDLE HYD
ELEV=22.69(NGVD29)

PROP. SMH CLEANOUT
RIM=13.56
INV=10.06
(SEE DETAIL)

PROP. SMH CLEANOUT
RIM=18.92
INV=15.92
(SEE DETAIL)

313/12/001 N/F CITY OF EAST PROVIDENCE

414/13/007 N/F CITY OF EAST PROVIDENCE

LIMITS OF COASTAL FEATURE (TYP.)

50-FOOT SETBACK (TYP.)

PROJECT LIMIT OF DISTURBANCE (TYP.)

APPROX. TEST PIT LOCATION (TP-1)

200-FOOT RICRMC JURISDICTION (TYP.)

NOTES:

1. THE PROJECT'S LIMIT OF DISTURBANCE AREA IS APPROXIMATELY 4,600 SQUARE FEET (OR 0.11 ACRES).
2. THE LOCATION OF EXISTING UNDERGROUND INFRASTRUCTURE, UTILITIES, CONDUITS, AND LINES ARE SHOWN ON THESE PLANS IN AN APPROXIMATE WAY ONLY AND ARE BASED ON RESEARCH OF AVAILABLE UTILITY RECORDS (AS NOTED WITHIN THE GENERAL NOTES AND LEGEND) AND MAY NOT BE ALL INCLUSIVE.
3. BEFORE BEGINNING SITE WORK, THE CONTRACTOR SHALL CONFIRM LOCATIONS AND DEPTHS OF SAID INFRASTRUCTURE, UTILITIES, AND OTHER EXISTING CONSTRUCTION ITEMS EXACTLY SUFFICIENTLY AHEAD OF INSTALLATION OF THE SUBSURFACE INFILTRATION SYSTEM AND ASSOCIATED IMPROVEMENTS TO PERMIT REVISIONS TO THE PLANS IF NECESSARY. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AND UTILITY COMPANIES TO LOCATE ALL EXISTING UTILITIES AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
4. THE LIMITS OF THE COASTAL FEATURE (CF1-CF4), WHICH IN THIS CASE REPRESENTS THE EDGE OF COASTAL BEACH, WAS DELINEATED AND FIELD-LOCATED BY NATURAL RESOURCE SERVICES, INC. (NRS) ON OCTOBER 4, 2022.

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.	5/16/2023	MINOR NOTE REVISIONS AND CLARIFICATIONS FOR CONSTRUCTION	SDA	DEA

SEAL
DEAN E. AUDET
No. 7581
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SEAL

SCALE:
HORZ.: 1"= 10'
VERT.:
DATUM:
HORZ.:
VERT.:
10 5 0 10
GRAPHIC SCALE

FUSS & O'NEILL
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
401.861.3070
www.fando.com

CITY OF EAST PROVIDENCE

EXISTING CONDITIONS PLAN

BEACH ROAD STORMWATER MANAGEMENT IMPROVEMENTS

EAST PROVIDENCE RHODE ISLAND

PROJ. No.: 20140710.A11
DATE: NOVEMBER 2022

CS-101

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LAYER STATE:
MS VIEW:

DEMOLITION AND EROSION CONTROL NOTES:

1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL EXCAVATE A TEST PIT TO CONFIRM PRESENCE OF ABANDONED GAS MAIN WITHIN THE LIMITS OF THE PROPOSED INFILTRATION SYSTEM AND TO DETERMINE ITS ACTUAL DEPTH AND EXTENTS. ABANDONED GAS MAIN TO REMAIN SHALL BE SEALED AND ABANDONED SECTION OF GAS MAIN SHALL BE REMOVED IN ACCORDANCE WITH RI ENERGY STANDARD PRACTICES.

   1.1. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL/TRANSPORT OF SECTION OF ABANDONED GAS MAIN TO BE REMOVED AND DISPOSED TO EITHER RHODE ISLAND ENERGY'S 642 ALLENS AVENUE FACILITY OR ITS 477 DEXTER STREET FACILITY IN PROVIDENCE, RHODE ISLAND. PRIOR TO REMOVING THE GAS MAIN, THE CONTRACTOR SHALL NOTIFY RHODE ISLAND ENERGY IN-HOUSE CONSTRUCTION SUPERVISOR FOR THE CITY OF EAST PROVIDENCE TO COME, TEST, AND CONFIRM THAT THE MAIN EXPOSED IS ABANDONED. THE CONTRACTOR WILL SEAL ENDS OF PIPE TO BE TRANSPORTED TO EITHER RHODE ISLAND ENERGY'S ALLENS AVENUE FACILITY OR ITS DEXTER STREET FACILITY. THE PIPES SHALL BE PLACED IN THE RED OPEN TOP "PIPE TO BE CLEANED" CONTAINER(S) AT THE FACILITIES. RHODE ISLAND ENERGY WILL THEN HANDLE THE CLEANING AND PROPER DISPOSAL.

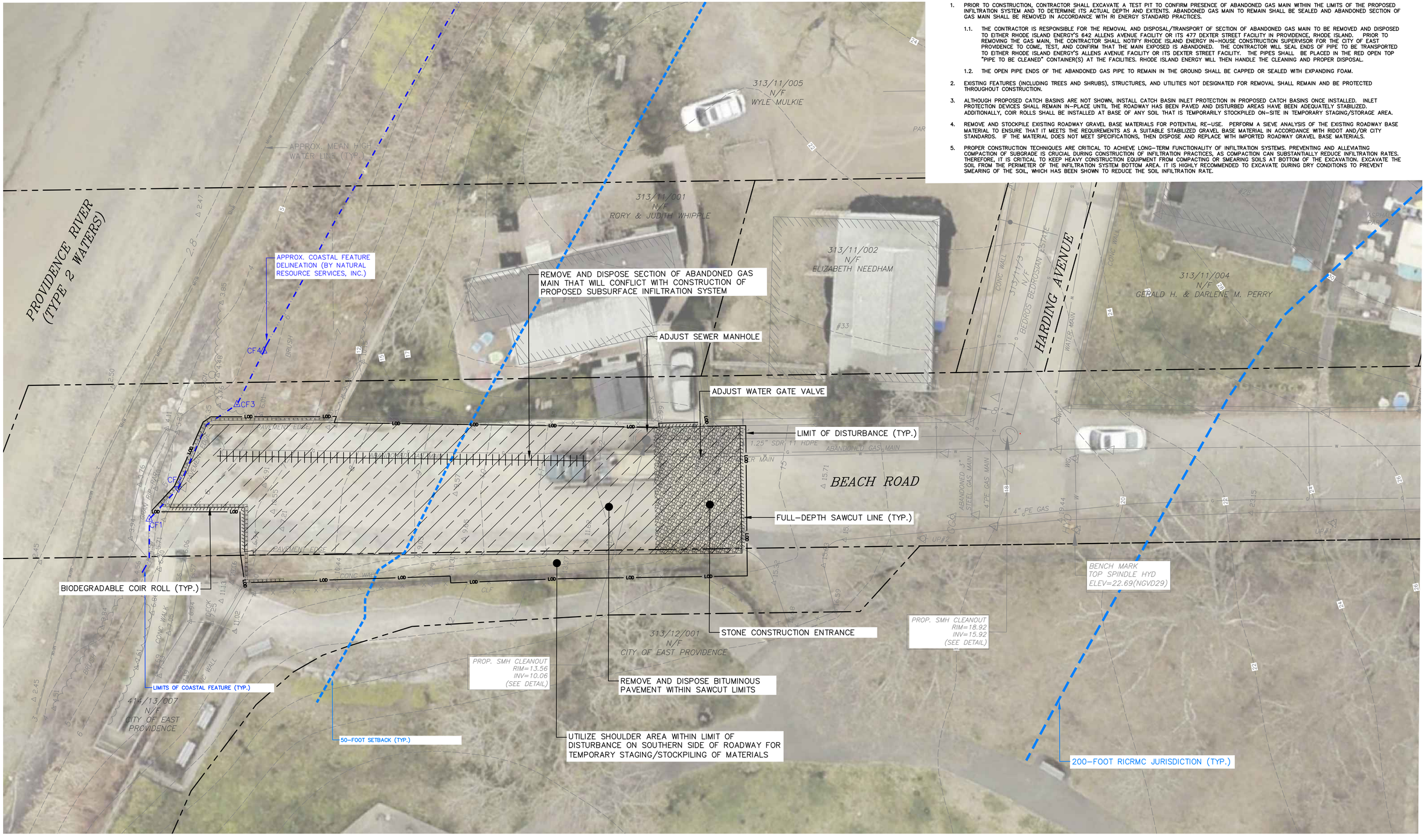
   1.2. THE OPEN PIPE ENDS OF THE ABANDONED GAS PIPE TO REMAIN IN THE GROUND SHALL BE CAPPED OR SEALED WITH EXPANDING FOAM.

2. EXISTING FEATURES (INCLUDING TREES AND SHRUBS), STRUCTURES, AND UTILITIES NOT DESIGNATED FOR REMOVAL SHALL REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION.

3. ALTHOUGH PROPOSED CATCH BASINS ARE NOT SHOWN, INSTALL CATCH BASIN INLET PROTECTION IN PROPOSED CATCH BASINS ONCE INSTALLED. INLET PROTECTION DEVICES SHALL REMAIN IN-PLACE UNTIL THE ROADWAY HAS BEEN PAVED AND DISTURBED AREAS HAVE BEEN ADEQUATELY STABILIZED. ADDITIONALLY, COIR ROLLS SHALL BE INSTALLED AT BASE OF ANY SOIL THAT IS TEMPORARILY STOCKPILED ON-SITE IN TEMPORARY STAGING/STORAGE AREA.

4. REMOVE AND STOCKPILE EXISTING ROADWAY GRAVEL BASE MATERIALS FOR POTENTIAL RE-USE. PERFORM A SIEVE ANALYSIS OF THE EXISTING ROADWAY BASE MATERIAL TO ENSURE THAT IT MEETS THE REQUIREMENTS AS A SUITABLE STABILIZED GRAVEL BASE MATERIAL IN ACCORDANCE WITH RIDOT AND/OR CITY STANDARDS. IF THE MATERIAL DOES NOT MEET SPECIFICATIONS, THEN DISPOSE AND REPLACE WITH IMPORTED ROADWAY GRAVEL BASE MATERIALS.

5. PROPER CONSTRUCTION TECHNIQUES ARE CRITICAL TO ACHIEVE LONG-TERM FUNCTIONALITY OF INFILTRATION SYSTEMS. PREVENTING AND ALLEVIATING COMPACTION OF SUBGRADE IS CRUCIAL DURING CONSTRUCTION OF INFILTRATION PRACTICES, AS COMPACTION CAN SUBSTANTIALLY REDUCE INFILTRATION RATES. THEREFORE, IT IS CRITICAL TO KEEP HEAVY CONSTRUCTION EQUIPMENT FROM COMPACTING OR SMEARING SOILS AT BOTTOM OF THE EXCAVATION. EXCAVATE THE SOIL FROM THE PERIMETER OF THE INFILTRATION SYSTEM BOTTOM AREA. IT IS HIGHLY RECOMMENDED TO EXCAVATE DURING DRY CONDITIONS TO PREVENT SMEARING OF THE SOIL, WHICH HAS BEEN SHOWN TO REDUCE THE SOIL INFILTRATION RATE.



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No. 7581
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SEAL

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GRAPHIC SCALE

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317 IRON HORSE WAY, SUITE 204
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CITY OF EAST PROVIDENCE

SITE PREPARATION AND SOIL EROSION & SEDIMENTATION CONTROL PLAN

BEACH ROAD STORMWATER MANAGEMENT IMPROVEMENTS

EAST PROVIDENCE RHODE ISLAND

PROJ. No.: 20140710.A11
DATE: NOVEMBER 2022

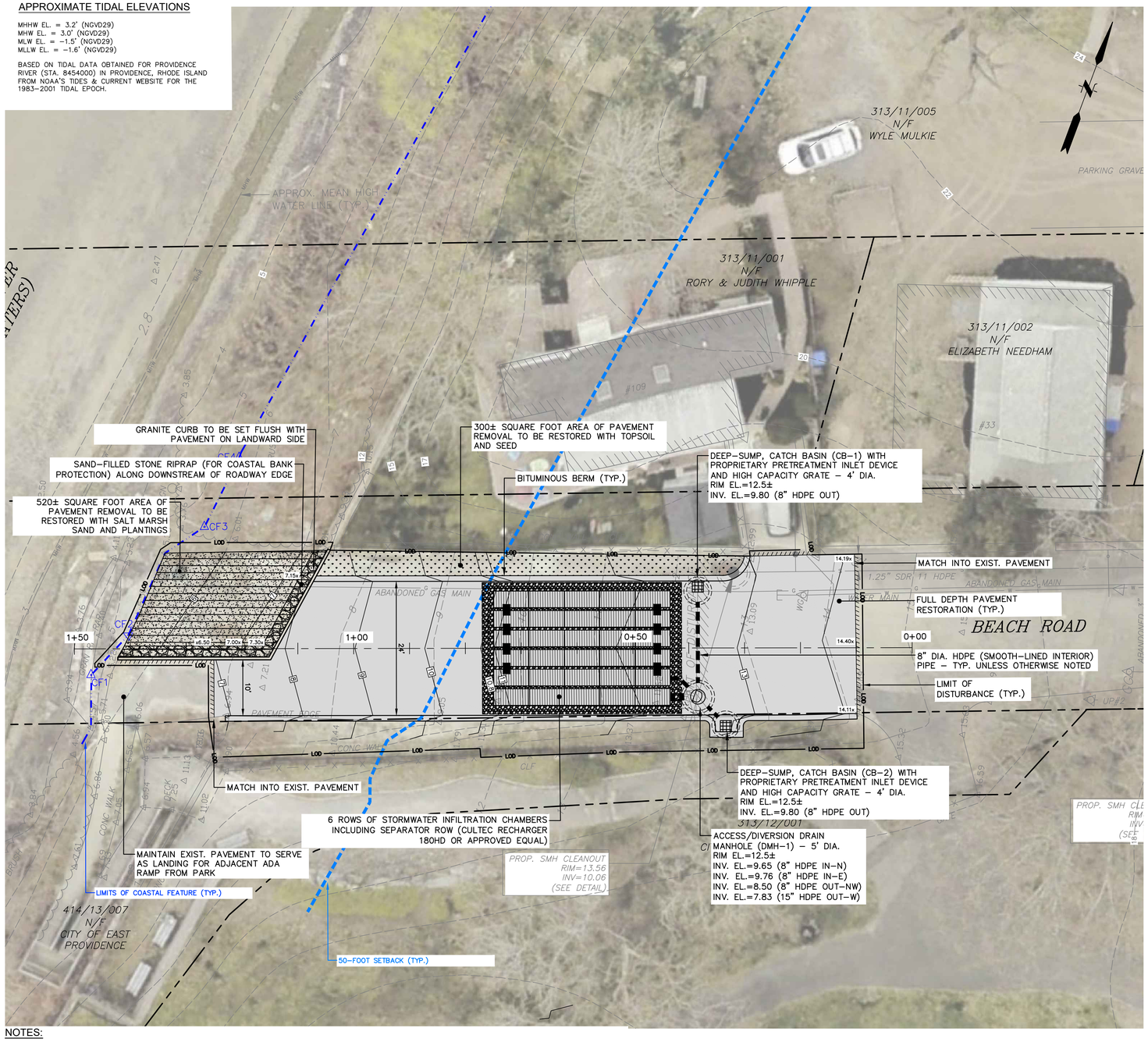
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APPROXIMATE TIDAL ELEVATIONS

MHHW EL. = 3.2' (NGVD29)
MHW EL. = 3.0' (NGVD29)
MLW EL. = −1.5' (NGVD29)
MLLW EL. = −1.6' (NGVD29)

BASED ON TIDAL DATA OBTAINED FOR PROVIDENCE RIVER (STA. 8454000) IN PROVIDENCE, RHODE ISLAND FROM NOAA'S TIDES & CURRENT WEBSITE FOR THE 1983–2001 TIDAL EPOCH.

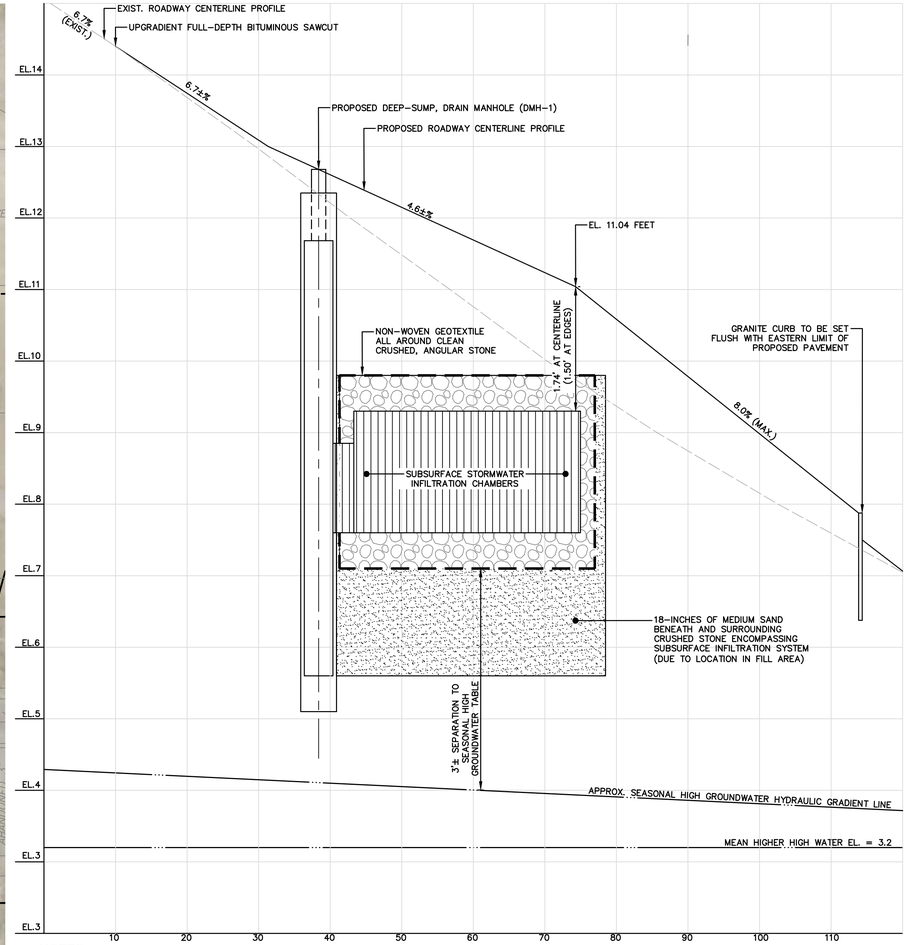


NOTES:

1. SEED MIX IN DISTURBED ROADWAY SHOULDER AREAS, UPGRADIENT OF COASTAL RESTORATION AREA, SHALL CONSIST OF MIXTURE OF TYPE 1 (BOTH PARK SEED MIX FOR FLAT AREAS AND SLOPE SEED MIX FOR SLOPED AREAS) AND TYPE 3 (TEMPORARY) SEED MIX IN ACCORDANCE WITH SECTIONS M.18.10.2/M.18.10.3 AND M.18.10.5, RESPECTIVELY, OF THE RIDOT STANDARD SPECIFICATIONS. THE TYPE 3 (TEMPORARY) SEED MIX SHALL ASSIST IN DEVELOPING A QUICKER STAND OF VEGETATION TO AID IN MINIMIZING THE EROSION POTENTIAL UNTIL THE TYPE 1 SEED MIXES FULLY ESTABLISH.
2. THE SEEDING APPLICATION RATES FOR THE SHOULDER AREAS UPGRADIENT OF THE COASTAL RESTORATION AREA SHALL BE:
   – 150 LBS PER ACRE FOR TYPE 1 SEED MIX; AND
   – 75 LBS PER ACRE FOR TYPE 3 SEED MIX.

A STORMWATER IMPROVEMENT PLAN

SCALE: 1"= 10'

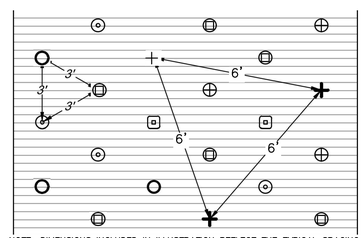


NOTES:

1. SUBSURFACE INFITLRATION SYSTEM HYDRAULIC CONNECTOR PIPES AND INSPECTION PORTS NOT SHOWN FOR CLARITY. SEE DETAIL SHEET CD–502 FOR LOCATIONS.
2. FILTER FABRIC TO EXTEND BENEATH HYDRAULIC CONNECTOR PIPES AND INLET IN ADDITION TO FABRIC SURROUNDING SEPARATOR ROW NOT SHOWN FOR CLARITY. SEE DETAIL SHEET CD–502 FOR LOCATIONS.

B ROADWAY AND SUBSURFACE INFILTRATION SYSTEM IMPROVEMENTS PROFILE

SCALE: HOR. 1"= 10' ; VER. 1"= 1'



NOTE: DIMENSIONS INCLUDED IN ILLUSTRATION REFLECT THE TYPICAL SPACING ARRANGEMENT FOR PLUG AND POTTED PLANTINGS. IT DOES NOT REFLECT THE ACTUAL NUMBER OF PLANTINGS TO BE INSTALLED.

ONE LAYER OF 100% BIOIDEGRADABLE EROSION CONTROL BLANKET AND ONE LAYER OVERLAY OF 900g COIR BLANKET ANCHORED @ 36"O.C. VEGETATED WITH NEW COASTAL SALT TOLERANT SEED MIX APPLIED @ 35 LB/ACRE (BY NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL) AND FOLLOWING PLUG AND POTTED PLANTINGS:

PLUG PLANTING @ 36" ON–CENTER

⊙	PANICUM VIRGATUM	SWITCHGRASS
○	SORGHASTRUM NUTANS	INDIAN GRASS
⊕	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM
▣	ANDROPOGON GERARDI	BIG BLUESTEM
▫	SOLIDAGO SEMPERVIRENS	SEASIDE GOLDENROD

POTTED PLANTING 1–2 GALLONS @ 6' ON–CENTER

+	IVA FRUTESCENS	HIGH TIDE BUSH	PROJECT TOTAL: 32

PAVEMENT REMOVAL AND COASTAL ZONE RESTORATION DETAIL

SCALE: NOT TO SCALE

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SEAL

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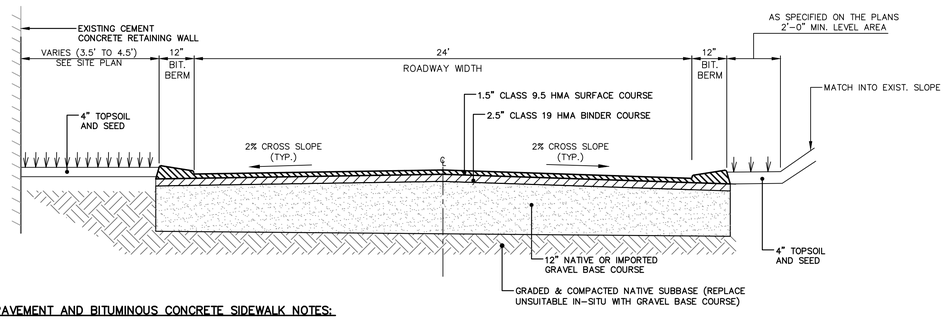
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CITY OF EAST PROVIDENCE
STORMWATER IMPROVEMENT PLAN AND PROFILE
BEACH ROAD STORMWATER MANAGEMENT IMPROVEMENTS
EAST PROVIDENCE RHODE ISLAND

PROJ. No.: 20140710.A11
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CS–103

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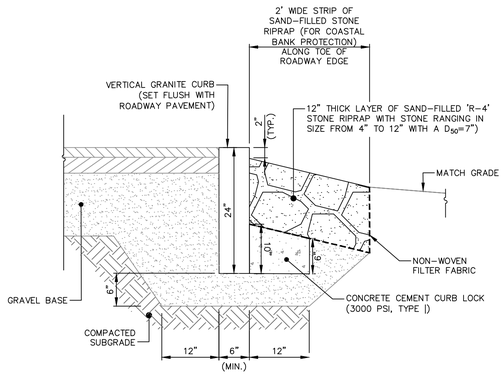


ROADWAY PAVEMENT AND BITUMINOUS CONCRETE SIDEWALK NOTES:

1. HOT MIX ASPHALTS (HMS) SHALL BE BASED ON AASHTO "SUPERPAVE" ASPHALT DESIGNATIONS, AS ADOPTED BY RIDOT. ALL PAVEMENT MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH SECTIONS 401 AND M.03 OF THE STANDARD SPECIFICATIONS.
2. ALL OTHER ROADWAY MATERIALS, INCLUDING GRAVEL, CONCRETE AND BERM/CURBING SHALL CONFORM TO THE LATEST EDITION OF THE RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
   2.1. GRAVEL BASE COURSE SHALL CONFORM TO THE GRADATION REQUIREMENTS LISTED IN M01.09, TABLE I, COLUMN 1B.
   2.2. BITUMINOUS CONCRETE SURFACE COURSE AND BERM SHALL CONFORM TO CLASS 9.5 HMA IN ACCORDANCE WITH SECTION 401.02.3 AND M09.04, RESPECTIVELY.
   2.3. BITUMINOUS CONCRETE BINDER COURSE SHALL CONFORM TO CLASS 19.0 HMA IN ACCORDANCE WITH SECTIONS 401.02.3 AND 906.03.3.
3. CONTRACTOR SHALL PROVIDE ANY AND ALL LABORATORY AND FIELD TESTING REQUIRED BY THE TOWN TO DEMONSTRATE/VERIFY THAT MATERIALS CONFORM TO APPLICABLE STANDARDS. MATERIALS FOUND NOT TO CONFORM TO APPLICABLE STANDARDS SHALL BE COMPLETELY REMOVED AND REPLACED WITH SUITABLE MATERIALS.
4. THE CITY SHALL RESERVE THE RIGHT TO MODIFY THE REQUIRED MATERIAL THICKNESSES AND OTHER DIMENSIONS IN SPECIFIC INSTANCES WHERE NON-TYPICAL ROAD LOADINGS AND/OR VEHICLE VOLUMES ARE ANTICIPATED.

FULL DEPTH PAVEMENT RESTORATION TYPICAL SECTION

NOT TO SCALE

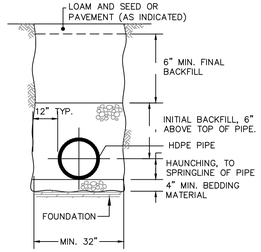


NOTES:

1. NEW CURBING INSTALLED ADJACENT TO EXISTING CURBING SHALL MATCH THE EXISTING REVEAL OR A MINIMUM OF 4 INCHES, WHICHEVER IS GREATER. IF ADJACENT EXISTING REVEAL IS LESS THAN 4 INCHES, THE FIRST SECTION OF NEW CURB SHALL TRANSITION TO 4-INCH REVEAL. GRANITE CURBING AND CONSTRUCTION METHODS SHALL CONFORM TO SECTION 906 AND SUBSECTION M09.01 OF THE STANDARD SPECIFICATIONS.
2. GRAVEL BASE SHALL BE WELL GRADED AND MEET THE GRADATION REQUIREMENTS SPECIFIED IN TABLE 1, COLUMN 1B IN SUBSECTION M.01.09 OF RIDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. GRAVEL BASE SHALL BE INSTALLED IN 6-INCH LIFTS AND COMPACTED TO 95-PERCENT MODIFIED PROCTOR.
3. UNSUITABLE MATERIAL WITHIN SUBGRADE SHALL BE REMOVED AND REPLACED WITH GRAVEL BASE.
4. CEMENT CONCRETE USED FOR CURB LOCK AND CONSTRUCTION METHODS SHALL CONFORM TO CLASS A (3,000 PSI) CONCRETE IN ACCORDANCE WITH SECTIONS 601 AND 906.02.5 OF THE STANDARD SPECIFICATIONS.

GRANITE CURB (USED AS END OF PAVEMENT EDGE PROTECTION MEASURE)

NOT TO SCALE

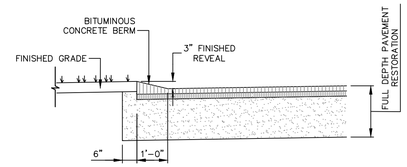


NOTES:

1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
2. BEDDING: SUITABLE MATERIAL SHALL BE CLASS II AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
3. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS II AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
4. THE MINIMUM TRENCH WIDTH FOR 8" HDPE PIPING SHALL BE 32".
5. BEDDING MATERIAL AND INITIAL BACKFILL: ALL BEDDING MATERIAL AND INITIAL BACKFILL SHALL BE CLEAN, FREE OF DEBRIS AND RUBBLE, AND FREE OF MATERIALS WHICH MAY CAUSE POLLUTION OF SURFACE WATERS AND GROUNDWATER.

STORM DRAIN TRENCH FOR HDPE PIPE

NOT TO SCALE

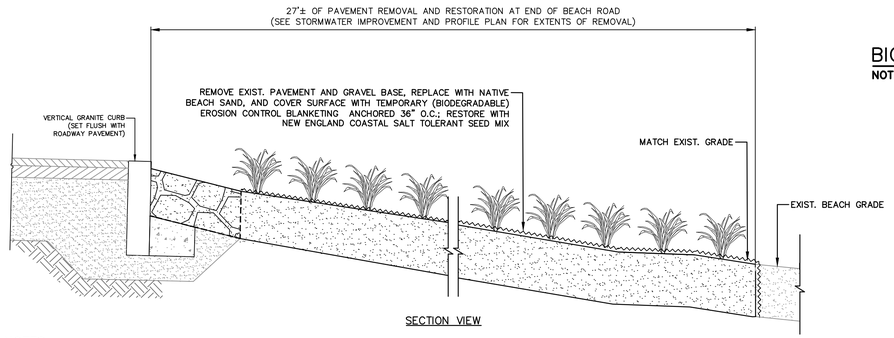


BITUMINOUS BERM NOTE:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 (I.E. 906.02.3) OF THE RIDOT STANDARD SPECIFICATIONS.

BITUMINOUS CONCRETE BERM (R.I. STD. 7.5.1)

NOT TO SCALE



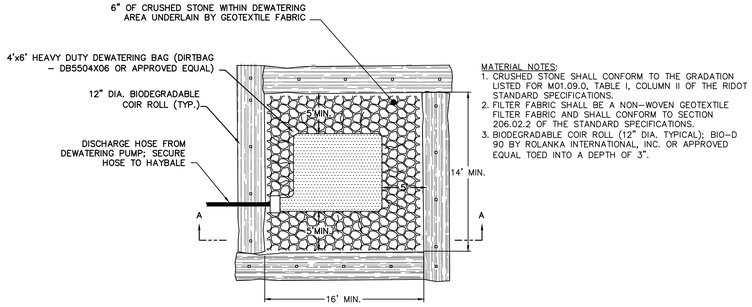
SECTION VIEW

NOTES:

1. TEMPORARY (BIODEGRADABLE) EROSION CONTROL BLANKETING SHALL CONSIST OF ONE LAYER OF 100% BIODEGRADABLE EROSION CONTROL BLANKET (EC-2B OR APPROVED EQUAL) AND ONE LAYER OF WOVEN 900G COIR BLANKET (GEO-TEX CY-900 OR APPROVED EQUAL). ALL STAKES USED TO SECURE BLANKETING SHALL BE HARDWOOD OR BIODEGRADABLE.
2. RESTORATION SEED MIX SHALL BE APPLIED AT 35 LB/ACRE AND SHALL CONSIST OF NEW ENGLAND COASTAL SALT TOLERANT SEED MIX (BY NEW ENGLAND WETLAND PLANTS, INC.) OR APPROVED EQUAL.
3. REFER TO STORMWATER IMPROVEMENT AND PROFILE PLAN FOR PLUG AND POTTED PLANTING TYPES AND SPACINGS.

AREA OF PAVEMENT REMOVAL AND RESTORATION ALONG COASTAL FEATURE

NOT TO SCALE



PLAN

MATERIAL NOTES:

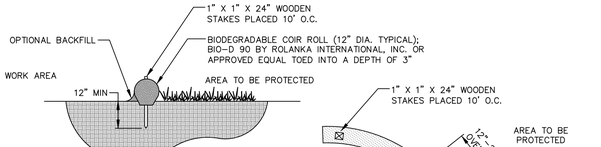
1. CRUSHED STONE SHALL CONFORM TO THE GRADATION LISTED FOR M01.09.0, TABLE I, COLUMN II OF THE RIDOT STANDARD SPECIFICATIONS.
2. FILTER FABRIC SHALL BE A NON-WOVEN GEOTEXTILE FILTER FABRIC AND SHALL CONFORM TO SECTION 206.02.2 OF THE STANDARD SPECIFICATIONS.
3. BIODEGRADABLE COIR ROLL (12" DIA. TYPICAL): BIO-D 90 BY ROLANKA INTERNATIONAL, INC. OR APPROVED EQUAL TOED INTO A DEPTH OF 3".

DEWATERING BAG NOTES:

1. THE DEWATERING BAG, DIRTBAG® DB55 OR APPROVED EQUAL, SHALL BE HEAVY DUTY AND CONSIST OF A NONWOVEN BAG SEWN WITH A DOUBLE NEEDLE MATCHING USING A HIGH STRENGTH THREAD.
2. EACH DEWATERING BAG SHALL HAVE A FILL SPOUT LARGE ENOUGH TO ACCOMMODATE A 4-INCH DISCHARGE HOSE. THE BAG SHALL BE PROVIDED WITH STRAPS TO SECURE THE HOSE AND PREVENT PUMPED WATER FROM ESCAPING WITHOUT BEING FILTERED.
3. MAINTAIN DEWATERING BAG(S) AS NECESSARY TO EFFICIENTLY FILTER SEDIMENT OR PASS WATER AT A REASONABLE RATE. USE OF EXCESSIVE FLOW RATES OR OVERFILLING DIRTBAG® WITH SEDIMENT WILL CAUSE RUPTURES OF THE BAGS OR FAILURE OF THE HOSE ATTACHMENT STRAPS.
4. DISPOSE OF DEWATERING BAG(S) AND CONTENTS AT OFF-SITE DISPOSAL FACILITY IN ACCORDANCE WITH THE LOCAL, STATE, AND FEDERAL REGULATIONS AND AS DIRECTED BY ENGINEER.
5. INSTALL DEWATERING BAG AND CRUSHED STONE BEDDING WITH A SLOPE SO INCOMING WATER FLOWS DOWNHILL THROUGH THE BAG WITHOUT CREATING MORE EROSION. STRAP THE NECK OF DEWATERING BAG TIGHTLY TO THE DISCHARGE HOSE.

DEWATERING AREA WITH FILTER BAG (IF NECESSARY)

NOT TO SCALE



SECTION

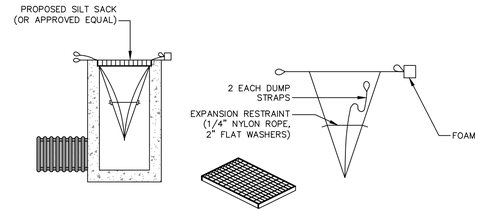
PLAN

NOTES:

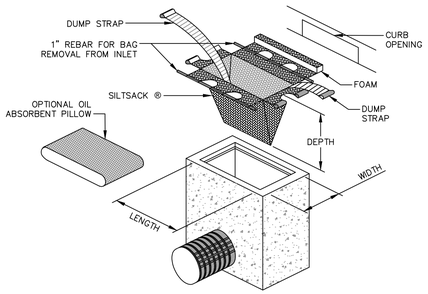
1. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS.
2. COIR ROLL SHALL BE 100% BIODEGRADABLE.

BIODEGRADABLE COIR ROLL

NOT TO SCALE

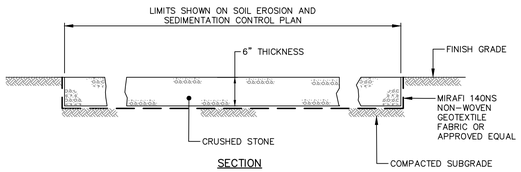


INSTALLATION DETAIL BAG DETAIL



CATCH BASIN INLET PROTECTION

NOT TO SCALE



SECTION

NOTES:

1. MAINTAIN CONSTRUCTION ENTRANCE IN GOOD CONDITION THROUGHOUT CONSTRUCTION PERIOD.
2. ANY PAVED AREAS, ADJACENT TO THE CONSTRUCTION ENTRANCE SHALL BE SWEPT DAILY TO REMOVE ANY MATERIAL THAT MAY BE TRACKED ONTO PAVEMENT.
3. REMOVE STONE, FABRIC, AND TRACKED MATERIALS FOLLOWING CONSTRUCTION ACTIVITIES AND RESTORE AREA TO ORIGINAL CONDITION.
4. CRUSHED STONE SHALL CONFORM TO THE GRADATION LISTED FOR M01.09.0, TABLE I, COLUMN II OF THE RIDOT STANDARD SPECIFICATIONS.

TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.	5/16/2023	MINOR NOTE REVISIONS AND CLARIFICATIONS FOR CONSTRUCTION	SDA	DEA

DEAN E. J. UDET — No. 7581 — REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SEAL

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317 IRON HORSE WAY, SUITE 204
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CITY OF EAST PROVIDENCE

CONSTRUCTION DETAILS

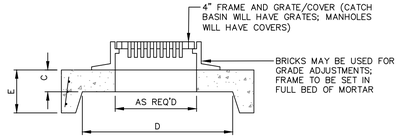
BEACH ROAD STORMWATER MANAGEMENT IMPROVEMENTS

EAST PROVIDENCE RHODE ISLAND

PROJ. No.: 20140710.A11
DATE: NOVEMBER 2022

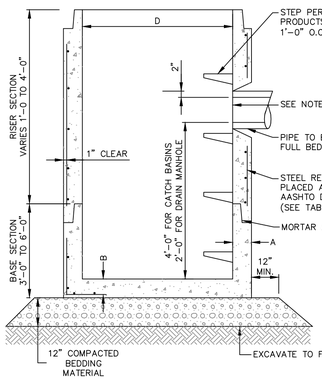
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PC3: NONE STB/CTB: FO.STB
LAYER STATE:
MS VIEW:



ALTERNATE TOP SLAB

(STEEL REINFORCED FOR HS-25 LOADING)



SECTION

NOTES:

1. SEE TABLE 1 FOR STEEL REINFORCEMENT REQUIREMENTS.
2. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTER LINE OF PIPE.
3. SHALL BE IN ACCORDANCE WITH SECTIONS 702 & M04.03 OF THE RIDOT STANDARD SPECIFICATIONS. ALL CONCRETE TO BE AIR ENTRAINED WITH 4,000 PSI MINIMUM 28-DAY COMPRESSIVE STRENGTH.
4. FOR CATCH BASIN, FRAME & GRATE SET TO BE EJ MODEL 00552060C13 FOUR FLANGE OR APPROVED EQUAL AND SHALL CONFORM TO SECTION M.04 OF THE RIDOT STANDARD SPECIFICATIONS. FRAME SHALL HAVE A HEIGHT OF 4 INCHES.
5. FOR DRAIN MANHOLE, FRAME & COVER SHALL HAVE A CLEAR OPENING 30-INCH (MIN.) DIAMETER AND SHALL BE V1600-4 SERIES (MODEL NO. 00147953A01) AS MANUFACTURED BY EAST JORDAN IRON WORKS OR APPROVED EQUAL AND SHALL CONFORM TO SECTION M.04 OF THE RIDOT STANDARD SPECIFICATIONS. FRAME SHALL HAVE A HEIGHT OF 4 INCHES.
6. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
7. ONE POUR MONOLITHIC BASE SECTION.
8. CONCRETE SHALL BE COMPRESSIVE STRENGTH 4000 PSI CEMENT (SEE MASSDOT SPECIFICATIONS FOR DESIGN REQUIREMENTS).
9. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
10. THE CENTERLINE OF OPENING MUST BE WITHIN 2'-0" FROM STEPS. STEPS SHALL CONFORM TO R.I. STD. 5.3.0 AND SHALL BE INSTALLED AT CASTING PLANT.
11. CATCH BASIN DESIGN SHALL CONFORM TO ASTM C-478 FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTION.
12. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
13. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHODS, SEE RIDOT STANDARD SPECIFICATIONS.

TABLE 1

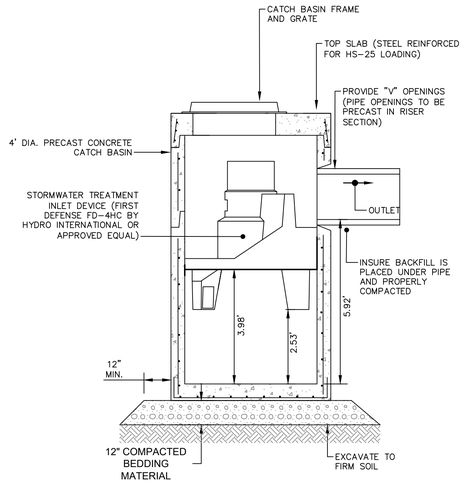
STRUCTURE DIAMETER (D)	A	B	C	E	CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED *
4'-0"	5"	6"	8"	12"	0.12 SQ. IN./LIN. FT.
5'-0"	6"	8"	8"	14"	0.15 SQ. IN./LIN. FT.

NOTE:

CONTRACTOR SHALL CONFIRM RIM, PIPE INVERTS, PIPE DIAMETER, AND PIPE ORIENTATION (WITH MANUFACTURER AND TOWN) VIA SUBMITTAL PRIOR TO RELEASE OF UNITS TO FABRICATION.

PRECAST CONCRETE DEEP-SUMP CATCH BASIN OR DRAIN MANHOLE

NOT TO SCALE

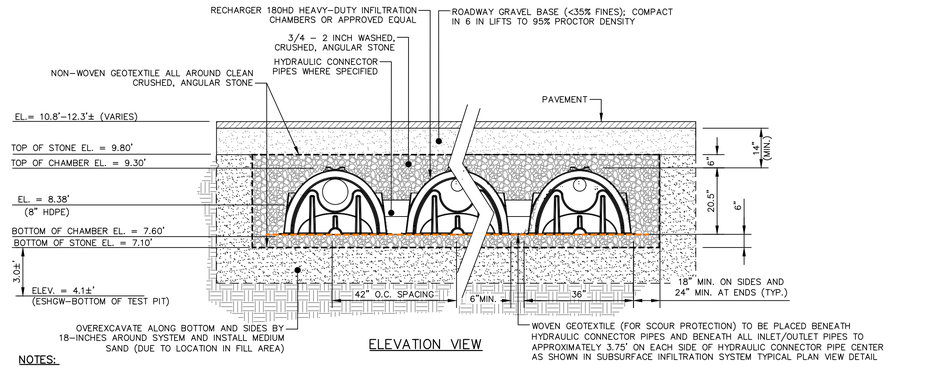


NOTE:

CONTRACTOR SHALL CONFIRM RIM, PIPE INVERTS, PIPE DIAMETER, AND PIPE ORIENTATION (WITH MANUFACTURER AND ENGINEER) VIA SUBMITTAL PRIOR TO RELEASE OF UNITS TO FABRICATION.

DEEP-SUMP, CATCH BASIN WITH PROPRIETARY PRETREATMENT INLET DEVICE

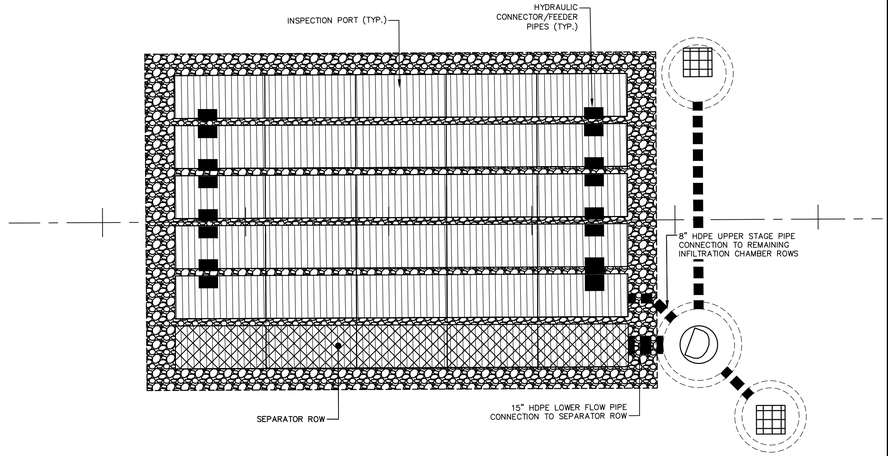
NOT TO SCALE



ELEVATION VIEW

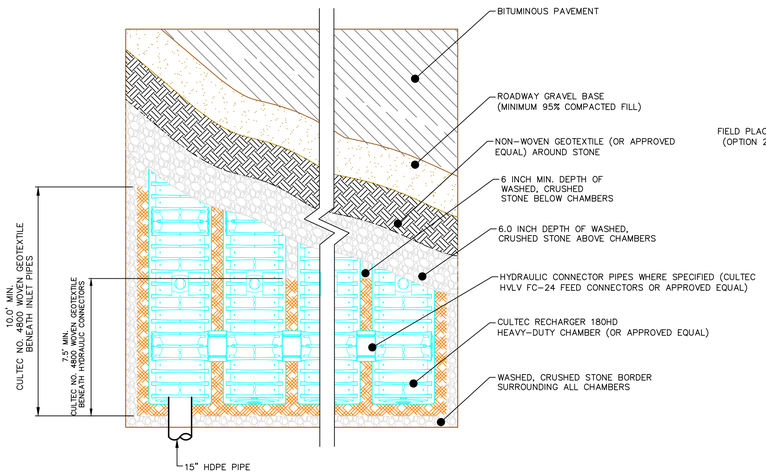
NOTES:

1. CONTRACTOR SHALL PROVIDE SUBMITTAL TO CITY PRIOR TO RELEASE OF SYSTEM TO FABRICATION.
2. WASHED, CRUSHED ANGULAR STONE SHALL CONFORM TO GRADATION REQUIREMENTS LISTED IN TABLE I, COLUMN II OF THE RIDOT STANDARD SPECIFICATIONS.
3. MEDIUM SAND SHALL BE A CLEAN, WASHED SAND CONFORMING TO GRADATION REQUIREMENTS LISTED IN TABLE 1, COLUMN 1A OF THE RIDOT STANDARD SPECIFICATIONS.
4. WOVEN GEOTEXTILE SHALL BE CULTEC NO. 4800 WOVEN GEOTEXTILE (OR APPROVED EQUAL).
5. NON-WOVEN GEOTEXTIEL SHALL BE CULTEC NO.410 FILTER FABRIC (OR APPROVED EQUAL).



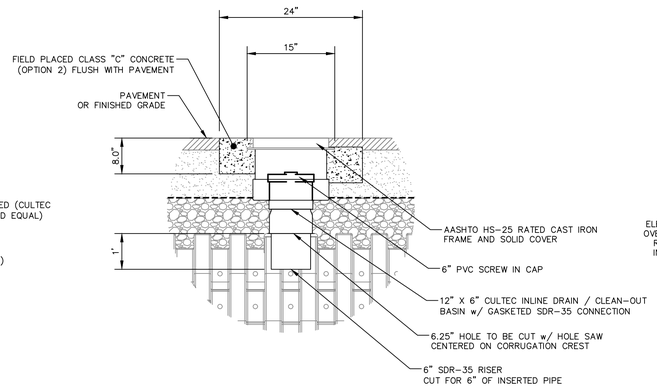
SUBSURFACE INFILTRATION SYSTEM CROSS SECTION AND PLAN VIEW

NOT TO SCALE



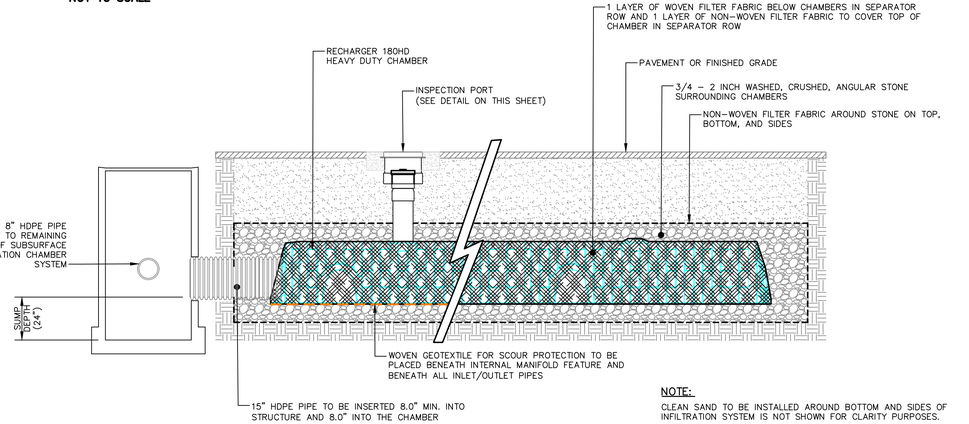
SUBSURFACE INFILTRATION SYSTEM TYPICAL PLAN VIEW

NOT TO SCALE



SUBSURFACE INFILTRATION SYSTEM INSPECTION PORT DETAIL

NOT TO SCALE



NOTE:

CLEAN SAND TO BE INSTALLED AROUND BOTTOM AND SIDES OF INFILTRATION SYSTEM IS NOT SHOWN FOR CLARITY PURPOSES.

SUBSURFACE INFILTRATION SYSTEM SEPARATOR ROW

NOT TO SCALE

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CITY OF EAST PROVIDENCE

CONSTRUCTION DETAILS

BEACH ROAD STORMWATER MANAGEMENT IMPROVEMENTS

EAST PROVIDENCE RHODE ISLAND

PROJ. No.: 20140710.A11
DATE: NOVEMBER 2022

CD-502

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