State of Rhode Island and Providence Plantations
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

APPLICATION FOR STATE ASSENT

To perform work regulated by the provisions of Chapter 279 of the Public Laws of 1971 Amended.

Project Location	100 Sand Hill Cove Rd (No. Street)	Narragansett (City/Town)	File No. (CRMC USE ONLY): 2022-01-010
Owner's Name	RI Department of Environmental Management		Plat: J; G Lot(s): 35: 175
Mailing Address	235 Promenade Street (Address)	Providence, RI 02908 (City/Town, State Zip Code)	Owner's Contact: Number: (401)222-2776 x74312 Email Address: david.decost@dem.ri.gov
Contractor RI Reg. #		Address: *contractor to be selected	Email address: Tel. No.
Designer	Pare Corporation	Address: 10 Lincoln Rd, Suite 210 Foxboro MA 02035	Tel. No. 508-543-1755
Name of Waterway	Point Judith Harbor of Refuge		Estimated Project Cost (EPC): $5.5 million Application Fee: Fee exempt

Provide Below a Description of Work As Proposed (*required*).

The steel sheet pile bulkhead retaining the Roger Wheeler State Beach is in a state of disrepair as reported by the RIDEM. RIDEM proposes to construct a new concrete boardwalk supported by precast concrete piles on one side of the boardwalk and a new concrete retaining wall integrated into the existing steel sheet pile wall with a pier consisting of concrete beams and decking. The new concrete piles will be placed to the north of the existing sheet pile wall on land currently occupied by the southernmost portion of the beach parking lot; thus providing support for the new boardwalk without encroaching onto the beach, and utilizing an existing impervious area

Have you or any previous owner filed an application for and/or received an assent for any activity on this property?
(If so please provide the file and/or assent numbers): See Attachment A

Is this site within a designated historic district? ○ YES ◉ NO

Is this application being submitted in response to a coastal violation? ○ YES ◉ NO

If YES, you must indicate NOV or C&D Number: _____

Name/mailing addresses of adjacent property owners whose property adjoins the project site. Accurate mailing addresses will insure proper notification. _____ Applicant must initial to certify accuracy of adjacent property owners and accuracy of mailing addresses.

Abutters and addresses are listed on the attached "Attachment B - Abutters" and shown on "Figure 3 - Abutters"

STORMTOOLS (Http://www.beachsamp.org/resources/stormtools/) is a planning tool to help applicants evaluate the impacts of sea level rise and storm surge on their projects. The Council encourages applicants to use STORMTOOLS to help them understand the risk that may be present at their site and make appropriate adjustments to the project design.

NOTE: The applicant acknowledges by evidence of their signature that they have reviewed the Rhode Island Coastal Resources Management Program, and have, where possible, adhered to the policies and standards of the program. Where variances or special exceptions are requested by the applicant, the applicant will be prepared to meet and present testimony on the criteria and burdens of proof for each of these relief provisions. The applicant also acknowledges by evidence of their signature that to the best of their knowledge the information contained in the application is true and valid. If the information provided to the CRMC for this review is inaccurate or did not reveal all necessary information or data, then the permit granted under this application may be found to be null and void. Applicant requires that as a condition to the granting of this assent, members of the CRMC or its staff shall have access to the applicant's property to make on-site inspections to insure compliance with the assent. This application is made under oath and subject to the penalties of perjury. 08/04

Arthur Zeman
Owner Name (PRINT)

Arthur Zeman Digitally signed by Arthur Zeman Date: 2021.12.23 10:11:01 -05'00'
Owner's Signature (SIGN)

PLEASE REVIEW REVERSE SIDE OF APPLICATION FORM

RECEIVED
1/4/2022
COASTAL RESOURCES MANAGEMENT COUNCIL

PARE PROJECT NO. 19131.00

RHODE ISLAND COASTAL RESOURCES MANAGEMENT COUNCIL

APPLICATION FOR STATE ASSENT

ROGER WHEELER STATE BEACH BOARDWALK
Narragansett, Rhode Island

Prepared for:

RIDEM
235 Promenade St
Providence, RI 02908

DECEMBER 2021

December 30, 2021

Mr. Jeffery Willis, Executive Director
Rhode Island Coastal Resources Management Council
Oliver Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879

RE: **CRMC Application for State Assent**
Roger Wheeler State Beach Boardwalk
Narragansett, Rhode Island
Pare Project No. 19131.00

Dear Mr. Willis:

On behalf of the State of Rhode Island Department of Environmental Management (RIDEM), and in accordance with the Coastal Resources Management Program, Pare Corporation (Pare) is submitting the attached Application for State Assent for a new proposed boardwalk and bulkhead improvements at Roger Wheeler State Beach in Narragansett, RI.

Enclosed for your review are three (3) sets of the following:

- Executed Application Form and other administrative documentation;
- A Narrative Project Description, a Site Location Map and other graphics, and Site Photographs;
- A copy of the Preliminary Determination Report of Findings, and correspondence with RIHPHC;
- A Soil Erosion and Sediment Control Plan; and
- Full-sized sets of Plans, dated December 2021, detailing existing conditions and proposed work.

The steel sheet pile bulkhead retaining the Roger Wheeler State Beach is in a state of disrepair as reported by the RIDEM. The sand from the beach is continuously being swept into the parking lot, requiring a substantial cleanup effort from State crews. RIDEM's goal is to replace the existing stockade fence with a new sand barrier to minimize the amount of sand that is transported to the parking lot, while maintaining a view of the water/beach from a new boardwalk, intended to enhance the public access and use of the beach.

RIDEM proposes to construct a new boardwalk comprised of precast piles, beams, and deck panels to be installed along the north side of the existing bulkhead over the existing impervious bituminous parking lot. A cast-in-place concrete wall will be constructed along the existing steel sheet pile wall alignment to support the south side of the boardwalk. Any excess soils excavated, will be temporarily stockpiled encircled by compost filter socks to prevent erosion. The stockpiled soil is

intended to be reused as backfill. Crushed stone will be placed underneath the boardwalk for drainage purposes and electrical conduits will be attached on the underside of the boardwalk to increase electrical capacity.

Ancillary "bump-outs" along the southern side of the board walk include two shade structures, two patios, and two foot-wash stations. In addition to these bump-outs, numerous stairs and ramps will be located throughout the length of the boardwalk to provide ADA accessible access to boardwalk and shoreline.

Due to the configuration of the existing bulkhead, RIDEM is unable to meet the 50-foot construction setback requirement of the CRMP and hereby requests a variance from this requirement per section 1.1.7(A) of the CRMP. Additionally, the work proposed includes work on the beach bordering Type 1 waters, which is prohibited per section 1.2.2 (A)(b). RIDEM requests a Special Exception to allow the work to proceed. Consistency is demonstrated in the narrative section of this application.

The applicant is a state entity and the project will result in a significant public benefit, and therefore a waiver of the customary filing fee is requested in accordance with CRMC Management Procedures Section 1.4.2(D).

Thank you for your consideration and please feel free to contact our office with any questions regarding the submittal.

Sincerely,

Sarah Pierce
Senior Environmental Scientist/ GIS Specialist

Enclosures
SJP

cc: RIDEM Division of Planning and Development, c/o David DeCost

Y:\JOBS\19 Jobs\19131.00 RIDEM-Design Svcs Roger Wheeler Bulkhead Restor-RI\Permitting\RICRMC\Cat B Assent\Cover Letter.doc

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SECTION 1

Administrative Documentation

STATEMENT OF DISCLOSURE AND APPLICANT AGREEMENT AS TO FEES

The fees which must be submitted to the Coastal Resources Management Council are based upon representations made to the Coastal Resources Management Council by the applicant. If after submission of this fee the Coastal Resources Management Council determines that an error has been made either in the applicant's submission or in determining the fee to be paid, the applicant understands that additional fees may be assessed by the Coastal Resources Management Council. These fees must be paid prior to the issuance of any assent by the Coastal Resources Management Council.

The applicant understands the above conditions and agrees to comply with them.

Arthur Zeman Digitally signed by Arthur Zeman Date: 2021.12.23 10:11:16 -05'00'

Owner Signature

12/23/2021

Date

Arthur Zeman 235 Promenade Street Providence, RI 02908

Print Name and Mailing Address

/ajt 03-2020

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1/4/2022
COASTAL RESOURCES MANAGEMENT COUNCIL

Attachment A – Previous Permits

Roger Wheeler State Beach Boardwalk
Application for State Assent

Name: Department of Environmental Management
Location: Roger Wheeler State Beach

File No	Permit Decision Date
2013-05-123	May 22, 2013
2013-03-108	Mar 13, 2013
2013-01-091	Jan 24, 2013
1992-01-054	Jan 24, 1992
1990-03-038	Feb 05, 1993
1990-01-062	Jan 30, 1990
1990-01-055	Jan 30, 1990
1987-09-085	Oct 20, 1987
1985-05-060	Jun 13, 1985

Name: Department of Environmental Management
Location: 100 Sand Hill Cove Road

File No	Permit Decision Date
2020-09-150	Nov 05, 2020
2016-04037	May 02, 2016
2012-05-024	May 07, 2012

Name: Department of Environmental Management
Location: Sand Hill Cove Road

File No	Permit Decision Date
2000-03-018	Mar 27, 2000
1996-06-031	Aug 27, 1996
1993-03-036	Apr 19, 1993
1988-02-054	Apr 29, 1988
1988-03-027	Apr 04, 1988
1973-11-001	Nov 28, 1973

Name: Department of Environmental Management
Location: Wheeler Sand Hill Cove Road

File No	Permit Decision Date
1987-04-077	May 07, 1987

Attachment B – Abutters

Roger Wheeler State Beach Boardwalk
Application for State Assent

Map-Lot	Address	Owner	Owner Mailing Address
J-30-1	104 Sand Hill Narragansett, RI 02882	Barnet, Helen	1810 Cutlass Cove Dr Vero Beach, FL 32963
N-8	21 Stanton Ave Narragansett, RI 02882	Lenhart, William J & Judith E	6 Geranium Court Homosassa, FL 34446
N-9	23 Stanton Ave Narragansett, RI 02882	Lamagna, John T	15 Little Lake Rd Ossining, NY 10562
N-10	27 Stanton Ave Narragansett, RI 02882	Kleniewski Rev Trust, Paul F	27 Stanton Ave Narragansett, RI 02882
N-12	33 Stanton Ave Narragansett, RI 02882	Cohn, Fred P	57 Hickory Dr New Canaan, CT 06840
N-47	37 Stanton Ave Narragansett, RI 02882	Kolodner, Anna	26 Columbia St Brookline, MA 02446
N-48	41 Stanton Ave Narragansett, RI 02882	Ocean View Realty, LLC	26 Columbia St Brookline, MA 02446
N-49	43 Stanton Ave Narragansett, RI 02882	Giardino, David A	55 Rock Way East Greenwich, RI 02818
N-50	47A Stanton Ave Narragansett, RI 02882	34 Green Meadow, LLC	459 Allen St Britain, CT 06053
N-51	49 Stanton Ave Narragansett, RI 02882	Joerg, Edwin T	1411 Washington Valley Rd Bridgewater, NJ 08807
N-52	51 Stanton Ave Narragansett, RI 02882	Mcdonald, Thomas F	51 Stanton Ave Narragansett, RI 02882
N-53	53 Stanton Ave Narragansett, RI 02882	Pantaleo, Alicia Rev Trust	44 Harrisons Trail Hopewell Junction, NY 12533
N-54	55 Stanton Ave Narragansett, RI 02882	Petronio, Patricia S Irrev TR	55 Stanton Ave Narragansett, RI 02882
N-176	98 Sand Hill Narragansett, RI 02882	Forsyth, Catherine	507 Coudert Place Wycoff, NY 07481

TOWN OF NARRAGANSETT
Town Hall • 25 Fifth Avenue • Narragansett, RI 02882-3699
Tel. (401) 789-1044 TDD (401) 782-0610 Fax (401) 783-9637

FINANCE DEPARTMENT

October 27, 2021

Coastal Resources Management Council
Oliver Stedman Government Center
4800 Tower Hill Road
Wakefield, RI 02879

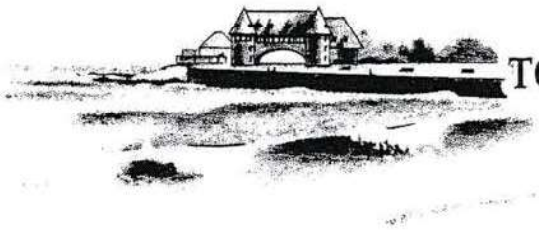
Dear Sir/Madam:

This is to verify that The State of Rhode Island, RI Dept. of Environmental Management is the owner of Assessor's Map J Lot 35 located at 0 Sand Hill Cove Road in the Town of Narragansett.

Sincerely,

Erica Brooks

Erica Brooks
Tax Assessor Clerk



TOWN OF NARRAGANSETT

Town Hall • 25 Fifth Avenue • Narragansett, RI 02882-3699
Tel. (401) 789-1044 TDD (401) 782-0610 Fax (401) 783-9637

FINANCE DEPARTMENT

October 27, 2021

Coastal Resources Management Council
Oliver Stedman Government Center
4800 Tower Hill Road
Wakefield, RI 02879

Dear Sir/Madam:

This is to verify that The State of Rhode Island, RI Dept. of Environmental Management is the owner of Assessor's Map N Lot 175 located at Galilee Road in the Town of Narragansett.

Sincerely,

Erica Brooks

Erica Brooks
Tax Assessor Clerk

TO: **Coastal Resources Management Council**
4808 Tower Hill Road Suite 3
Wakefield, RI 02879
Phone: (401) 783-3370

FROM: Building Official DATE: **October 19, 2021**

SUBJ: Application of: Rhode Island Department of Environmental Management

Location: Roger Wheeler State Beach

Address: 100 Sand Hill Cove Rd Plat No. J; G Lot No. 35; 175

To Construct: A new concrete boardwalk supported by precast concrete piles on one side of the boardwalk and a new concrete retaining wall integrated into the existing steel sheet pile wall with a pier consisting of concrete beams and decking.

I hereby certify that I have reviewed _____ foundation plan(s).
_____ plan(s) for entire structure
__X__ site plans
Titled: Roger Wheeler State Beach Bulkhead Design

Date of Plan (last revision): **May 2021**

___ and find that the issuance of a local building permit is not required as in accordance with Section _____ of the Rhode Island State Building Code.

__X__ and find that the issuance of a local building permit is required. I hereby certify that this permit shall be issued once the applicant demonstrates that the proposed construction/activity fully conforms to the applicable requirements of the RISBC.

__NA__ and find that a Septic System Suitability Determination (SSD) must be obtained from the RI Dept. of Environmental Management.

__NA__ and find that a Septic System Suitability Determination (SSD) need not be obtained from the RI Dept. of Environmental Management.

__NA__ and find that said plans conform with all elements of the zoning ordinance, and that if said plans require zoning board approval, that the applicant has secured such approval and that the requisite appeal period has passed with no appeal filed or appeal is final. The Zoning Board approval shall expire on _____.

_____ 10.19.21
Building Official's Signature Date

__NA__ and find that said plans conform with all elements of the zoning ordinance, and that if said plans require zoning board approval, that the applicant has secured such approval and that the requisite appeal period has passed with no appeal filed or appeal is final.

_____
Zoning Officer's Signature Date

rev. 5/11/2001

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1/4/2022
COASTAL RESOURCES MANAGEMENT COUNCIL

CRMC File Number:

RI CRMC COASTAL HAZARD APPLICATION WORKSHEET

APPLICANT NAME: Rhode Island Department of Environmental Management

PROJECT SITE ADDRESS: 100 Sand Hill Cove Road

STEP 1. PROJECT DESIGN LIFE

☐ A. For properties in a FEMA-designated **A,** or **X** Zone, provide the first floor elevation (FFE) of the proposed structure referenced to NAVD88, **OR**
For properties in a FEMA-designated **V** or **Coastal A** Zone, please provide the elevation of the lowest horizontal structural member (LHSM) referenced to NAVD88.

FFE _____ ft

OR

LHSM elevation 12.2 ft

☐ B. How long do you want your project to last? Identify the expected design life for the project (CRMC recommends a **minimum of 30 years**)

Design Life: 40 yrs

☐ C. Add the number of years you identified in 1B to the current year.

Design Life Year: 2061

☐ D. **CHECK** beneath the sea level rise (SLR) projection that matches or comes closest to project design life year.

Year	2030	2040	2050	2060	2070	2080	2090	2100	
SLR	1.47	2.13	3.05	4.00	5.15	6.49	7.94	9.41	
	○	○	○	○	○	○	○	○	○

Source: Sea Level Rise (SLR) Projections (Feb. 2017). NOAA High Curve, 83% Confidence Interval. Newport, RI Tide Gauge. All values are expressed in feet relative to NAVD88. http://www.corpsclimate.us/ccaceslcurves.cfm

NOTE: The STORMTOOLS sea level rise scenarios depict how high the water will be above the average height of the daily high tide over the 19-year period between 1983 and 2001. There have been between 4 and 5 inches of sea level rise in Rhode Island since then. The higher modeled water level accounts for the uncertainties in ice sheet and ocean dynamics.

STEP 2. SITE ASSESSMENT

☐ A. Open *RICRMC Coastal Hazard Mapping Tool*. Following the tutorial along the left side of the screen, enter the project site address and turn on the sea level layer closest to the number you circled in 1D.

☐ B. **ENTER** the STORMTOOLS SLR map layer closest to the SLR value you checked in Step 1D above. If the value falls between the available STORMTOOLS SLR map layers, round to the closest of these sea level rise (SLR) numbers: 1ft, 2ft, 3ft, 5ft, 7ft, 10ft, or 12ft

5 ft

☐ C. Does the STORMTOOLS SLR map layer you circled above expose your project site to future tidal inundation? **CHECK YES or NO**

◉ YES
○ NO

☐ D. List any **roads or access routes** that are potentially inundated from SLR. To do this, ZOOM OUT from your project location, change BASEMAP on the viewer to "street view" – see Step 2A.

Sand Hill Cove Road

Please be advised that CRMC staff may also review the implications of sea level rise in combination with nuisance storm flooding and discuss these potential project concerns with the applicant. Nuisance flooding impacts may be viewed in STORMTOOLS here.

STEP 3. STORMTOOLS DESIGN ELEVATION (SDE)

☐ A. Select your SLR Scenario using the tabs along the top of the online map (*NOTE: RECOMMENDED scenario is 100-year storm plus 3-feet of sea level rise*). Follow the tutorial included along the left panels of the viewer to enter the address of your project site. Select the tab across the top that corresponds to the sea level rise projection you identified in STEP 1. Enter your address on the map, and then click on the project site to identify **STORMTOOLS Design Elevation (SDE)** from the pop-up box. **Enter the SDE value:**

27.5 ft

RI CRMC COASTAL HAZARD APPLICATION WORKSHEET

STEP 4. SHORELINE CHANGE

■ A. Using the *CRMC Shoreline Change maps*, indicate the transect number closest to your site, and erosion rate listed for that transect. **NOTE: Transects are not available for every site. If this is the case, please enter N/A.**

Transect Number: 715

Erosion Rate: -2.7 **ft/year**

B. **CHECK** below the Projected Erosion Rate that corresponds to the design life you identified above.

Year	2050	2060	2070	2080	2090	2100
Projected Future ErosionMultiplier	1.34	1.45	1.57	1.70	1.84	2.00
	○	◉	○	○	○	○

Source: Projected Shoreline Change Rate multipliers. (Oakley et al., 2016)

C. **COMPLETE EROSION SETBACK CALCULATION:**

Historic shoreline change rate, STEP 4A		Design Life, STEP 1B		Projected Future Erosion Multiplier, STEP 4B		Erosion Setback (ft) 4A x 1B x 4B
-2.7	X	40	X	1.45	=	156.6

***NOTE:** Setbacks are required per the CRMC Red Book, Section 1.1.9. **A minimum setback of 50-feet is required**, but a greater setback may be necessary and/or desirable based on this analysis.*

STEP 5. CERI & OTHER SITE CONSIDERATIONS

■ A. If you live in a community where a Coastal Environmental Risk Index (CERI) has been completed (Barrington, Bristol, Charlestown, Narragansett, South Kingstown, Warren, Warwick, Westerly), CHECK the level of projected damage to your location, as indicated on the map that corresponds to the design life identified in STEP 1.

CERI Level:	Moderate	High	Severe	Extreme	Inundated by 2100	Not applicable
	○	○	○	◉	○	○

■ B. Consider and discuss with your design consultant other forces or factors that might impact the development, such as coastal habitats, shoreline features, public access, wastewater, storm water, depth to water table/groundwater dynamics, saltwater intrusion, or other issues not listed above. In addition, pressure from rising sea levels will result in rising subsurface groundwater levels ultimately effecting wells and septic systems.

STEP 6. LARGE PROJECTS

This step is for Large Projects and Subdivisions only, six (6) or more units, as defined by the CRMC Red Book Section 1.1.6.I(1)(f). This step may be skipped for other projects.

■ A. Use the Sea Level Affecting Marshes Model (SLAMM) Maps to assess potential impacts to large projects and subdivisions from salt marsh migration resulting from projected sea level rise. CRMC SLAMM maps can be accessed here. The CRMC recommends using the 5-foot SLR projection within SLAMM to assess future potential project impacts on migrating marshes. Does the SLAMM map that corresponds to the design life you identified in STEP 1 expose your project site to future salt marsh migration? **CHECK YES or NO**

◉ **YES** ○ **NO**

STEP 7: DESIGN EVALUATION

■ A. Using Chapter 7 of the RI Shoreline Change SAMP as a guide, investigate mitigation options for the exposure identified above and include that in the final application.

This fully completed Coastal Hazard Application Guidance worksheet must accompany the application. If you are a design or engineering professional, please print and sign here that you have discussed the findings of this worksheet with the Owner.

DESIGN/ENGINEER SIGNATURE: _____ **DATE:** 12/10/2021

OWNER'S SIGNATURE: Arthur Zeman Digitally signed by Arthur Zeman Date: 2021.12.23 10:12:59 -05'00' **DATE:** _____

SECTION 2

Narrative Project Description

I. Introduction

This Application for State Assent has been prepared on behalf of the Rhode Island Department of Environmental Management (RIDEM) for the proposed construction of a new boardwalk and improvements to the Roger Wheeler State Beach steel sheet pile bulkhead in Narragansett. The intent of this project is to reinforce the existing manmade shoreline and to improve the aesthetics of, accessibility to, and use of the beach and Point Judith Harbor of Refuge.

RIDEM is proposing to encase the existing bulkhead in concrete, construct a new boardwalk atop the bulkhead, and provide minor miscellaneous site improvements. Existing site conditions, proposed work, and conformance with the Coastal Resource Management Program (CRMP) and Salt Pond SAMP are discussed in greater detail herein.

II. Existing Conditions

Roger Wheeler State Beach, or Sand Hill Cove as it was known until 1970, is located at 100 Sand Hill Cove Rd along the southern coast of Narragansett. The beach, it's associated parking lot, and recreational facilities occupy portions of Assessor's Map J Lot 35 and Map N Lot 175. The site is bordered by Sand Hill Cove Road to the north, the harbor to the south, and residential properties to the east and west.

The property became the first state beach when 27 acres were transferred to the Metropolitan Park Commission in 1929. Since that time, the beach has transferred ownership to the RIDEM Division of Parks and Recreation, which has carried out several redesigns and renovations to the beach facilities. In the mid 1990's, these improvements included a new pavilion, shower facilities, a concession building, a life-guard tower, and an environmental education area. These facilities bisect a 1,400± foot long steel sheet pile bulkhead which defines the upper limits of the beach and prevents sand from entering the nearly 13-acre parking lot. In 1992, a cedar fence was installed along the steel portion of the bulkhead to reinforce it for protection from sand. Several sand fences are staggered along the upper portion of the beach as well. The top of the sheet pile bulkhead ranges in

elevation from 7.4 at the western limits to 8.6 at the eastern limits. Access from the parking lot to the beach is provided by several sections of stairs and ramps located along the bulkhead. A maintenance ramp offers authorized vehicle access to the beach at the easternmost limits of the bulkhead. The beach itself extends an average of 200 ft from the bulkhead to Mean High Water (MHW El. 3.0). Three stone jetties extend into the harbor approximately from the MHW elevation at the beach.

Coastal features within the project area consist of a steel sheetpile bulkhead classified as Manmade Shoreline, as defined in Section 1.2.2(F) of the CRMP. An associated 200-foot Contiguous Area extends landward from the upper edge of this steel sheet piling. The site is located on a CRMC designated Developed Barrier bordering Type 1 Waters of Point Judith Harbor of Refuge. Roger Wheeler Beach, designated as a Coastal Beach, lies between the Harbor and the manmade shoreline. Dune areas are located to the southeast of the eastern limits of the existing bulkhead and access ramp but are entirely outside of the proposed work area.

The site is entirely outside of any Natural Heritage Area (RIGIS 2019); however, RIDEM is aware of piping plover nesting areas at the beach, which are fenced off during the year for breeding. Piping plovers have historically nested in the parking lot medians as well, prompting the closure of the lot. On February 16, 2021, under direction from State Fish and Wildlife staff, Pare emailed the US Fish and Wildlife Service (USFWS) Region 5 Migratory Bird office requesting information regarding any permitting considerations for work near piping plover habitat. Due to Covid19, the USFWS is short staffed and was unable to respond to our inquiries prior to the submission of this application. Regardless, the applicant proposes to restrict construction to timeframes outside of plover nesting habitat and will take practicable measures to ensure the species is not affected by the construction of the proposed project. Should the USFWS provide any requirements or guidance after the submission of this application, the applicant will incorporate the agency's input into the proposed project.

According to the FEMA Flood Insurance Rate Maps for the area (Map Numbers 44009C0307J & 44009C0326J, effective date October 16, 2013), mapped Floodplain located at the project site lies in Zone AE (14-foot elevation, NAVD 88). The site is also located entirely within an Otherwise Protected Area (OPA) dated 11/16/1991.

III. Proposed Project

Under current conditions, the bulkhead and fence are not sufficiently preventing sand from being blown into the parking lot, which requires a substantial cleanup effort from State crews. RIDEM's goal is to replace the existing stockade fence with a new sand barrier to minimize the amount of sand that is transported to the parking lot, while maintaining a view of the water/beach from the new boardwalk.

Due to existing site constraints, the project will require a variance for the 50-foot construction setback requirement as defined in 1.1.9(C) of the CRMP. Information regarding how the project complies with variance criteria is provided in Section V "Consistency with Coastal Resources Management Program" below.

Prior to the commencement of construction, security and erosion control measures will be installed around the limit of disturbance. This work is inclusive of setting up a perimeter chain-link security fence within the beach parking lot and on the beach with construction access gates to allow entry and exit to project related personnel only. Hay bales with wooden stakes will be installed on the seaward side of the construction site to for sediment and erosion control. Demolition of timber and concrete ramps/stairs, bituminous asphalt pavement, and existing light posts within the area of the proposed boardwalk will be staged to maintain access to the beach from the parking lot.

A new boardwalk comprised of precast piles, beams, and deck panels will be installed along the north side of the existing bulkhead over the existing impervious bituminous parking lot. A cast-in-place concrete wall will be constructed along the existing steel sheet pile wall alignment to support the south side of the boardwalk. Any excess soils excavated will be temporarily stockpiled encircled by compost filter socks to prevent erosion. The stockpiled soil is intended to be reused as backfill. Crushed stone will be placed underneath the boardwalk for drainage purposes and electrical conduits will be attached on the underside of the boardwalk to increase electrical capacity.

The boardwalk will consist of the following ancillary items and work:

On the landward side (north of the bulkhead):

- New sidewalks, curbing, and handicap access ramps providing access from the parking lot to the sidewalks.
- Five sets of concrete steps supported on concrete piles.
- Two concrete ramps supported on concrete piles.
- Eight raised flower plants installed within a new concrete sidewalk.
- An existing fire hydrant will be relocated into the concrete walkway east of the pavilion.
- New parking spots will be designated and painted.

On the seaward side (south of the bulkhead):

- Two 24-foot square timber shade structures supported on a concrete pile supported precast concrete deck.
- Two 45-foot by 28-foot patios with timber benches will be supported by concrete piles.
- Six sets of concrete steps will be constructed from the boardwalk to the ground supported on concrete piles.
- Two foot-washing stations will be incorporated into 10-foot by 12-foot concrete patios. Crushed stone drainage ditches will be installed underneath the foot-wash stations to collect water.
- Four concrete ramps supported on concrete piles.

IV. Alternatives Analysis

The selected approach fulfills the project goals while avoiding and minimizing impacts to coastal resources and public access restrictions. Alternatives considered are as follows:

Schematic Design Alternative 1 – Timber Boardwalk: A new timber boardwalk supported by timber piles, framing, and decking; repairs made to the existing steel sheet pile bulkhead; new concrete pile cap; and a new timber sand fence system along the concrete cap to prevent the migration of sands.

The primary advantages of Alternative 1 are:

- No demolition or earthwork below MHW required;
- Cheapest alternative;
- Timber members typical sizes for replacement; and
- Additional storage space for parks and recreation

The primary disadvantages of Alternative 1 are:

- Shorter design life;
- Continued maintenance of existing SSP required;
- Maintenance and replacement of timber members required over time;
- Reconfiguration and/or removal of parking spaces may be required; and
- Pile spacing smaller for timber piles than concrete.

Schematic Design Alternative 2 – Concrete Boardwalk: A new concrete boardwalk supported by precast concrete piles, beams, and decking (or permatrak decking); a new steel or fiberglass reinforced sheet pile bulkhead; a concrete backstop to reinforce the sheet piles at the sand accumulation zone; new a concrete pile cap with railing and sand grate tied into the concrete decking; 20x20 timber shade structures and pavilions; and a decorative aluminum sand fence along the railing.

The primary advantages of Alternative 2 are:

- No demolition or earthwork below MHW required;
- Concrete boardwalk and piles have longer design life than timber members;
- No sand fence required; and
- Concrete boardwalk and piles have greater load capacity than timber members.

The primary disadvantages of Alternative 2 are:

- Shallow bedrock encountered in portion of site. Use of FRP piling may run into constructability issues;
- Use of steel sheet piling will require maintenance over time; and
- Concrete more expensive than timber members.

Schematic Design Alternative 3 – Concrete Boardwalk with Sand Dune: A new concrete boardwalk supported by precast concrete piles, beams, and decking (or permatrak decking); new vegetated sand dunes along the beach with timber pile supported walkover structure to prevent the migration of sands.

The primary advantages of Alternative 3 are:

- No demolition or earthwork below MHW required;
- Concrete boardwalk and piles have longer design life than timber members;
- No sand fence required;
- Vegetated dune is a soft natural solution to sand migration; and
- Concrete boardwalk and piles have greater load capacity than timber members.

The primary disadvantages of Alternative 3 are:

- Vegetated dune takes time and maintenance to become established;
- Approximately 55,600 sf of beach space will be utilized by the dune;
- Reconfiguration and/or removal of parking spaces may be required for fire code depending on local jurisdiction; and
- Concrete more expensive than timber members.

Schematic Design Alternative 4 (selected approach) – Concrete Boardwalk with Concrete Wall: A new concrete boardwalk supported by precast concrete piles on one side of the boardwalk and a new concrete retaining wall integrated into the existing steel sheet pile wall with a pier consisting of concrete beams and decking (or permatrak decking); sand grate tied into the concrete decking; timber stairs and ramps; and a decorative aluminum sand fence.

The primary advantages of Alternative 4 are:

- No demolition or earthwork below MHW required;
- Concrete boardwalk and piles have longer design life than timber members;
- No sand fence required;
- Concrete boardwalk and piles have greater load capacity than timber members; and
- Continued maintenance of existing SSP won't be required.

The primary disadvantages of Alternative 4 are:

- Concrete more expensive than timber members; and
- Most expensive alternative.

Alternative 4 was selected primarily for its resiliency to coastal flooding and wave action. The final design was altered slightly from the schematic design to ensure the precast concrete piles were installed on the parking lot side of the bulkhead to avoid the loss of coastal beach.

V. Consistency with Coastal Resources Management Program

RIDEM received a Preliminary Determination Report of Findings from CRMC dated November 5, 2020. The letter summarizes CRMC's review of the conceptual plans for the project and outlines which sections of the CRMP are applicable to the project as a Category B Assent. Consistency with these requirements in accordance with the CRMP are addressed herein. Additional applicable sections of the CRMP not identified in the Report of Findings are addressed in a further section.

Section 1.1.2 Definitions

All applicable definitions pertaining to the site and project are in accordance with this section.

Section 1.1.5 Review Categories and Prohibited Activities in Tidal Waters and on Adjacent Shoreline Features

This project falls within several review categories in accordance with the activity matrix for Type 1 waters including: recreational structures on a developed barrier (B); recreational structures on a manmade shoreline (B), and recreational structures on beaches (P). Portions of the proposed project include shade structures and patios over the coastal beach; however, as identified above, this activity is prohibited in accordance with Section 1.2.2(A)(1)(b). Therefore, RIDEM hereby formally requests a Special Exception as defined in 1.1.8. Conformance with conditions of this section is demonstrated in a separate section herein.

Section 1.1.6: Applications for Category A and Category B Council Assents

This application contains all pertinent information to demonstrate that the project conforms to requirements of a Category B Assent.

Section 1.1.7 Variances

Due to existing site constraints, RIDEM hereby requests a variance for the 50-foot construction setback requirement as defined in 1.1.9(C). RIDEM also requests a variance for a public access plan as the proposed project will improve public access to the coastal resources. Criteria to meet the variance request per section 1.1.7(A) are addressed and met below:

1. **The proposed alteration conforms with applicable goals and policies of the Coastal Resources Management Program.**
   The bulkhead improvements and boardwalk are allowable and would not detract from the goals and policies of the Coastal Resource Management Program.

2. **The proposed alteration will not result in significant adverse environmental impacts or use conflicts, including but not limited to, taking into account cumulative impacts.**
   The bulkhead improvements will not result in significant adverse environmental impacts as it conforms with uses of the surrounding waters. No eelgrass beds are located within or in the vicinity of the proposed expansion and the project is not located within any Natural Heritage Areas.

3. **Due to conditions at the site in question, the applicable standard(s) cannot be met.**
   Given the location of the existing bulkhead, work within the 50-foot construction setback is unavoidable. Construction on the bulkhead and boardwalk will involve minor encroachment onto the coastal beach, alteration to the manmade shoreline (bulkhead), and work along the landward face of the bulkhead within the 50-foot construction setback.

4. **The modification requested by the applicant is the minimum variance to the applicable standard(s) necessary to allow a reasonable alteration or use of the site.**

   The limits of proposed work reflect the minimum amount of disturbance while achieving the project goals. Due to the site-specific nature of the work, no other location or alternatives are feasible.

5. **The requested variance to the applicable standard(s) is not due to any prior action of the applicant or the applicant's predecessors in title. With respect to subdivisions, the Council will consider the factors as set forth in § 1.1.7(B) of this Part below in determining the prior action of the applicant.**

   This request for variance pertains to the currently proposed boardwalk and bulkhead improvements and is not the result of any prior action of the applicant or the applicant's predecessors in title.

6. **Due to the conditions of the site in question, the standard(s) will cause the applicant an undue hardship. In order to receive relief from an undue hardship an applicant must demonstrate inter alia the nature of the hardship and that the hardship is shown to be unique or particular to the site. Mere economic diminution, economic advantage, or inconvenience does not constitute a showing of undue hardship that will support the granting of a variance.**

   As previously stated, request for variance is due solely to the existing constraints of the site and the nature of the work. The bulkhead was constructed in accordance with all applicable state and local regulations. Because the work is site and feature dependent, the work cannot be performed elsewhere while achieving the project goals. If left in its current condition, the existing bulkhead will continue to deteriorate and cause additional impacts to the site which will ultimately require remediation.

Section 1.1.8 Special Exceptions

As detailed in 1.2.2 (A)(b), alterations to beaches adjacent to Type 1 waters are prohibited. Due to the location of the existing bulkhead, alterations are necessary to fulfil the goals of the project. Therefore, RIDEM hereby requests a Special Exception in accordance with 1.1.8 and complies with the applicable requirements of 1.1.8(A) as follows:

1. **The proposed activity serves a compelling public purpose which provides benefits to the public as a whole as opposed to individual or private interests. The activity must be one or more of the following:**

    a. An activity associated with public infrastructure such as utility, energy, communications, transportation facilities, however, this exception shall not apply to activities proposed on all classes of barriers, barrier islands or spits except as provided in § 1.2.2(C)(4) (i) of this Part;

    b. A water-dependent activity or use that generates substantial economic gain to the state; and/or

    c. An activity that provides access to the shore for broad segments of the public.

    The proposed bulkhead improvements fit the description of 1(c), "an activity that provides access to the shore for broad segments of the public." As a public beach, the Roger Wheeler State Beach has provided public access to the shore for over 50 years. Improvements to the bulkhead and the addition of the boardwalk atop the bulkhead will encourage continued and enhanced use of the area.

2. **All reasonable steps shall be taken to minimize environmental impacts and/or use conflict.**

The proposed improvements are designed to improve the existing function of the bulkhead and provide additional public access to and use of the Beach via the new boardwalk. Environmental impacts are minimal, as the limits of disturbance are confined to the existing paved parking area, bulkhead, and a small area over the coastal beach along the bulkhead.

3. **There is no reasonable alternative means of, or location for, serving the compelling public purpose cited.**

Due to the site-specific nature of the project, this criterion is met. The existing bulkhead and fence do not function in the capacity required to prevent the migration of sand.

Section 1.2.1 Tidal and Coastal Pond Waters (B) Type 1 Conservation Areas

The policies for activities in and adjacent to Type 1 waters aim to protect from "activities and uses that have the potential to degrade scenic, wildlife, and plant habitat values, or which may adversely impact water quality or natural shoreline types." As discussed above herein, the proposed project intends to provide improvements to a previously developed manmade shoreline and regularly maintained coastal beach. Aside from activities which require variances described in other sections, the project conforms to these policies for Type 1 waters. The project area does not contain significant habitat for wildlife or plants. All construction related activities will occur outside of nesting and breeding timeframes for piping plover, which are a know species in the project vicinity. Furthermore, the proposed work will not result in any point source discharges or substantial increases in stormwater runoff. No work within Type 1 waters is proposed; the proposed project is located approximately 200 feet landward of MHW. As described below, the proposed project will not negatively impact the scenic quality of the area and will greatly benefit public use of the coastal features at the beach.

Section 1.2.2 (A) Shoreline Features – Coastal Beaches

As detailed in 1.2.2 (A)(b), alterations to beaches adjacent to Type 1 waters are prohibited. Conformance with the requirements of a Special Exception in accordance with 1.1.8 are demonstrated above.

Section 1.2.2 (B) Shoreline Features – Barrier Islands and Splits

Roger Wheeler Beach is listed as a Developed Barrier in Table 5 of Section 1.2.2(B)(3). The Council's goal for barriers of this designation is "to ensure that the risks of storm damage and erosion for the people inhabiting these features are minimized, that activities that may reduce the effectiveness of the barrier as a storm buffer are avoided, and that associated wetlands and ponds are protected." The proposed improvements are designed with storm damage and sea level rise in mind. Resilience to storms was a primary factor in determining materials and construction techniques.

Section 1.3.1 (A) Category B Requirements

a. Demonstrate the need for the proposed activity or alteration;

Under current conditions, the Roger Wheeler State Beach bulkhead and fence are not sufficiently preventing sand from being blown into the parking lot, which requires a substantial cleanup effort from State crews. A new bulkhead will address this issue. The new boardwalk atop the bulkhead will improve public access to and use of the beach.

b. Demonstrate that all applicable local zoning ordinances, building codes, flood hazard standards, and all safety codes, fire codes, and environmental requirements have or will be met; local approvals are required for activities as specifically prescribed for nontidal portions of a project in §§ 1.3.1(B), (C), (F), (H), (I), (K), (M), (O) and (Q) of this Part; for projects on state land, the state building official, for the purposes of this section, is the building official;

The project will comply with all State and local building codes. The State Building Official's Form is included in Section 1 of the Assent Application documentation. The site is located entirely within Zone AE, however none of the proposed work will increase flood hazards or alter the existing tidal flood zone.

c. Describe the boundaries of the coastal waters and land area that is anticipated to be affected;

Coastal features within the project area consist of a steel sheet pile bulkhead, classified as Manmade Shoreline, as defined in Section 1.2.2(F) of the CRMP. An associated 200-foot Contiguous Area extends landward from the upper edge of this bulkhead. The lower edge of the bulkhead borders a Coastal Beach, as defined in Section 1.2.2(A) of the CRMP. These features are located landward of waters of Point Judith Harbor of Refuge classified as Type 1: Conservation Area, as shown on Figure 2, attached in Section 3 of this application. Work associated with this project will not affect the tidal waters.

d. Demonstrate that the alteration or activity will not result in significant impacts on erosion and/or deposition processes along the shore and in tidal waters;

The proposed work will reinforce the existing manmade shoreline which will prevent the coastal beach from eroding landward.

e. Demonstrate that the alteration or activity will not result in significant impacts on the abundance and diversity of plant and animal life;

The site and nearby areas are currently used for recreational activities and do not contain significant habitat. The project is in the vicinity of known piping plover nesting areas and all measures to avoid these areas will be taken prior to and during construction activities. Therefore, impacts to plant and animal life are not anticipated.

f. Demonstrate that the alteration will not unreasonably interfere with, impair, or significantly impact existing public access to, or use of, tidal waters and/or the shore;

The proposed boardwalk and bulkhead improvements will significantly benefit public access to the shore, as the newly constructed boardwalk will be utilized by visitors to Roger Wheeler State Beach. The beach will remain accessible during construction.

g. Demonstrate that the alteration will not result in significant impacts to water circulation, flushing, turbidity, and sedimentation;

The proposed project is located entirely outside of tidal waters and therefore will not impact water circulation, flushing, turbidity, and sedimentation.

h. Demonstrate that there will be no significant deterioration in the quality of the water in the immediate vicinity as defined by DEM;

It is not anticipated that there will be any impact to water quality. Construction-phase erosion and sediment controls are proposed to minimize the possibility of sediment discharge to the Harbor, and construction equipment will be properly maintained to prevent pollution of groundwater and surface water. The project itself will not introduce pollutants to surface or ground waters.

i. Demonstrate that the alteration or activity will not result in significant impacts to areas of historic and archaeological significance;

The project is not located in or near any areas of historic and archaeological significance. As described in a letter dated March 9, 2021 (included in Section 6 of this submission), the Rhode Island Historical Preservation and Heritage Commission (RIHPHC) concludes that no historic properties will be affected by the project.

j. Demonstrate that the alteration or activity will not result in significant conflicts with water dependent uses and activities such as recreational boating, fishing, swimming, navigation, and commerce, and;

The project conforms with the existing water use and will improve water dependent uses and activities. Public access and use of the shore will be greatly improved by the addition of a new boardwalk at the beach.

k. Demonstrate that measures have been taken to minimize any adverse scenic impact (see § 1.3.5 of this Part).

The project will enhance the aesthetics of the bulkhead and will result in a positive scenic impact.

Section 1.3.1(C) Residential, Commercial, Industrial, and Recreational Structures

The proposed project meets the policies of 1.3.1 (C) as demonstrated herein. As described previously, the proposed project has been designed with coastal resiliency in mind and will not affect flooding at or in the vicinity of the site. The new boardwalk and associated ramps and stairways will significantly improve public access to the beach and associated coastal features.

Section 1.3.1 (F) Treatment of Sewage and Stormwater

The proposed project will not require the treatment of sewage or stormwater, as it is limited to Bulkhead repairs and the construction of a boardwalk.

Salt Ponds Region Special Area Management Plan (SAMP)

A majority of the policies within the Salt Pond SAMP pertain to Onsite Wastewater Treatment Systems (OWTS), subdivisions, and/or major land developments and are therefore not applicable to this project. The project site is designated under the SAMP as Developed Beyond Carrying Capacity. The bulkhead improvements project conforms with the policies for this land use type identified in section 3.4.3(C) of the SAMP. As described in other sections, a variance for work within the buffer zone is requested in this application and complies with the conditions listed in 1.1.11. Due to the existing bulkhead's location within a flood zone, the proposed improvements were designed foremostly with resiliency in mind. The proposed bulkhead and boardwalk have a 50-year design life.

Additional Sections of the CRMP

Section 1.1.10 Climate Change and Sea level Rise

Because the entire site is located below the 100-year floodplain, work within that zone is unavoidable; however, none of the proposed renovations or improvements necessarily increase the site's vulnerability to sea level rise. The materials and methods of construction for the bulkhead and boardwalk were chosen with resiliency in mind. The CRMC Coastal Hazard Application Worksheet is included in this submission.

Section 1.3.5 Guidelines for the Protection and Enhancement of Scenic Value of the Coastal Region

The project is consistent with current development on the site and will not have an adverse impact on the scenic value of the Point Judith Harbor of Refuge and associated coastal resources. The project includes elements specifically proposed to improve the visual condition of the site. The project is not anticipated to adversely impact the scenic values of the coastline.

Section 1.3.6 Protection and Enhancement of Public Access to the Shore

The project will significantly improve public access to the shore by providing an improved sand barrier to prevent the buildup of windswept beach sand along stairs and other points of access to the beach. In addition, the new boardwalk will encourage enhanced use of existing facilities at the beach and new patios with benches and timber shade structures will provide scenic lookouts atop the boardwalk. Improved stairways and ramps will offer ADA-compliant access to all visitors of the beach.

SECTION 3

Figures

RIGIS

SITE LOCATION MAP

SCALE:1"=2,000'

N W E S

8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
(401) 334-4100

10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
(508) 543-1755

PARE PROJECT No. 19131.00 OCTOBER 2021

FIGURE 1

ROGER WHEELER STATE BEACH BOARDWALK
NARRAGANSETT, RI

ANNOTATED AERIAL PHOTOGRAPH

SCALE: 1 ' = 200 "

N
W E
S

8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
(401) 334-4100

10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
(508) 543-1755

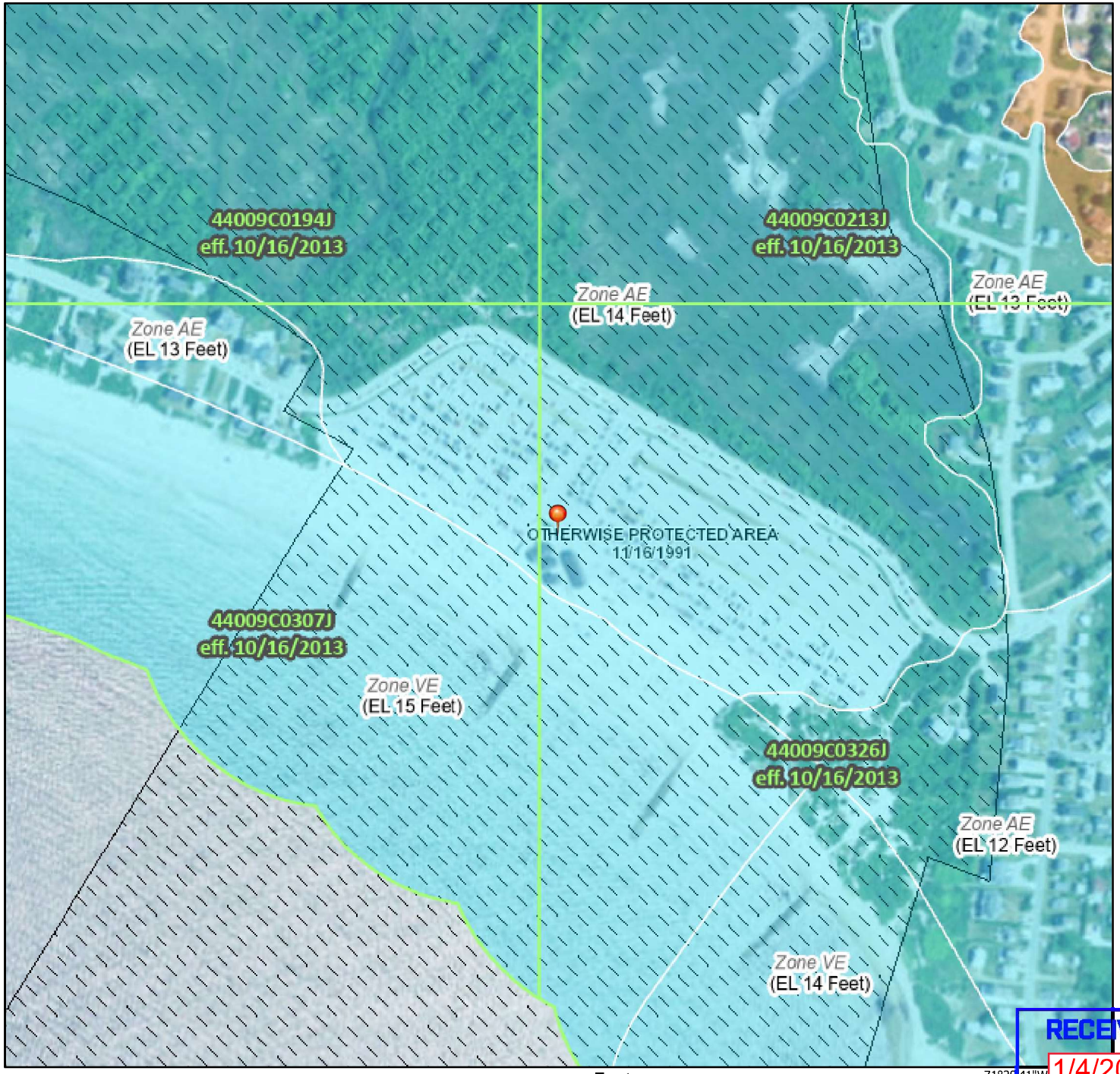
PARE PROJECT No. 19131.00 OCTOBER 2021

FIGURE 2

ROGER WHEELER STATE BEACH BOARDWALK
NARRAGANSETT, RI

National Flood Hazard Layer FIRMette

71°30'18"W 41°22'38"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

71°29'41"W

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/19/2021 at 4:39 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

FIGURE 3

SECTION 4

Annotated Site Photographs

Photo 1: Typical view of existing steel sheet pile bulkhead with wooden fence above.

Photo 2: Example of sand drifts at stairs and along bulkhead impeding foot traffic.

Photo 3: Existing concession building and environmental education area at center of beach along the existing bulkhead.

Photo 4: Proximity of play structure to parking lot and concession building.

Photo 5: Easternmost extents of bulkhead, facing east.

Photo 6: Panorama of eastern beach limits including maintenance ramp (to remain).

SECTION 5

Copy of Preliminary Determination Report of Findings

RHODE ISLAND COASTAL RESOURCES MANAGEMENT COUNCIL
REPORT OF FINDINGS -- PRELIMINARY DETERMINATION

STATEMENT OF LIMITATIONS

The contents of this staff determination report shall be valid only for the period on and preceding the date of this report. This report is neither an approval nor denial of the subject proposal. It is an evaluation of CRMC regulations in effect as of **November 5, 2020** as they pertain to the below stated proposal, including preliminary staff recommendations.

Modifications to the below stated proposal may, upon the discretion of the CRMC, render this determination null and void.

APPLICANT INFORMATION

NAME: **Department of Environmental Management** **CRMC FILE NO.** D2020-09-150
LOCATION/POLE: 100 Sand Hill Cove Road
CITY/TOWN: Narragansett **PLAT:** J **LOT:** 35

CONTACT PERSON(S) & ADDRESS:

Department of Environmental Management
Division of Planning and Development
235 Promenade Street
Providence, RI 02908

PRELIMINARY REVIEW INFORMATION

PROPOSAL:

PLAN(S) REVIEWED:

INVESTIGATOR	DATE	TIME
Ross Singer	11/2/20	10:00 am

MEASUREMENTS & OBSERVATIONS: General Observation

PREVIOUS CRMC ACTIONS FOR SITE: 1996-06-031

Preliminary Buffer and Setback Requirements:

SETBACK (ref. Section 1.1.7 Red Book) 50 feet
BUFFER (ref. Section 1.1.9 Red Book) N/A

Note: **Setbacks** apply to "construction related activities" including filling, removing, and grading (ref: Red Book Section 1.3.1(B)). The coastal program requires a minimum setback of either 50', or the buffer zone width plus 25' (whichever is greater). Work within this minimum setback will require a variance per Section 1.1.5 of the Red Book. All variances must be requested in writing. No construction or construction related work shall occur within the required setback (exemptions include structural shoreline protection, outfalls and water dependant uses). Work within the required setback may require a Category "B" review (public notice and decision by the full coastal council) and would likely result in adverse CRMC staff recommendations to the Coastal Council during the review process.

NAME: **Department of Environmental Management**
CRMC FILE NUMBER: **D 2020-09-150**

Buffer zones are areas that must be retained in, or allowed to revert to, "an undisturbed natural condition." All structures (excluding accessory structures) should be setback a minimum of 25' from the buffer zone to allow for access, fire protection and maintenance without infringement into the buffer.

If applicable, the plan must show "area of land within 50 feet" in accordance with Rule 5.04 of The Rules and Regulations Governing the Protection and Management of Freshwater Wetlands in the Vicinity of the Coast (the Rules), and label this area as a "buffer zone" in accordance with Rule 5.14. In addition, no activities (such as: drainage, grading, filling, etc.) may affect the freshwater wetland or the buffer zone. Where such alterations occur, or are proposed, an application shall be submitted in accordance with CRMC's Freshwater Wetland Rules.

Coastal Hazard: In accordance with Section 1.1.10, the applicant is encouraged to utilize CRMC's "STORMTOOLS" mapping feature to better understand the impact of current and future Sea Level Rise and Storms on the subject property. Also, in accordance with Section 1.1.6(I), the applicant is required to complete a "Coastal Hazards Worksheet" to further understand the impact of climate change on a proposal (http://www.crmc.ri.gov/coastalhazardapp.html). While the RICRMP does not yet require structures to be designed for SLR scenarios, the applicant should consider SLR, Climate Change, and design life expectations in design planning.

Coastal feature verification shall be valid for one-year from the date of this Determination or until an erosion event (e.g., due to storm event, landslide, man-induced alteration, etc.) occurs that alters the coastal feature.

SUMMARY OF FINDINGS

CRMC JURISDICTION: YES NO
TYPE WATER: 1; Point Judith Harbor of Refuge

For the purpose of this review the coastal feature(s) shall be the developed barrier beach; and the inland edge of coastal(s) feature shall be the inland edge of the beach at the parking lot bulkhead.

Applicability of CRMP and SAM Plans (as amended):

Red Book Sections: 1.1.2, 1.1.5, 1.1.6, 1.1.1.5, 1.1.7, 1.2.1, 1.2.2(A), 1.2.2(B), 1.2.2(G), 1.3.1(A), 1.3.1(C), 1.3.1(F)

SAMP: Salt Pond SAMP

STAFF CONCERNS/COMMENTS/INFORMATION REQUIREMENTS:

The proposed project consists of an expansion of the public recreational structure located at Roger Wheeler State Beach. The proposed boardwalk, shade structures, patios and stairways are shown on the plans to be located along the existing bulkhead bordering the parking lot. The Site is located on a CRMC designated Developed Barrier bordering Type 1 Waters of Point Judith Harbor of Refuge. In accordance with Table 1 in section §1.1.5 of the Red Book, this project will require a Category B review.

The proposed project will require a Variance to the 50 foot construction setback as defined in §1.1.9(C). The six criteria listed in § 1.1.7(A) must be addressed in the application.

Portions of the project including the shade structures and patios are proposed to be located over the existing coastal beach. In accordance with § 1.2.2(A)(1)(b), alterations on coastal beaches bordering

NAME: **Department of Environmental Management**
CRMC FILE NUMBER: **D 2020-09-150**

Type 1 waters are prohibited. A Special Exception may be required as defined in § 1.1.8. The applicant must demonstrate that the proposed activity serves a compelling public purpose, all reasonable steps are taken to minimize environmental impacts, and there is no reasonable alternative means of, or location for, serving the compelling public purpose cited.

Stormwater runoff generated from all new impervious surfaces must be addressed in accordance with §1.3.1(F) and the most recent version of the RIDEM Rhode Island Stormwater Design and Installation Standards Manual. (250-RICR-150-10-8)

An erosion and sediment control plan (ESCP) must be prepared in accordance with the standards contained in § 1.3.1(B)

A CRMC Coastal Hazards Analysis Application is required for the proposed project.

SIGNATURE: _____ STAFF ENGINEER

SECTION 6

Copy of Correspondence with RIHPHC

PARE CORPORATION
CELEBRATING 50 YEARS

February 5, 2021

Rhode Island Historical Preservation & Heritage Commission
150 Benefit Street
Providence, Rhode Island 02908

Re: **Cultural Resource Coordination**
Roger Wheeler State Beach Bulkhead Improvements
Narragansett, Rhode Island
(Pare Project No. 19131.00)

Dear Reviewer,

On behalf of the State of Rhode Island Department of Environmental Management (Owner), Pare Corporation (Pare) respectfully submits this letter and supporting documentation in connection with the proposed Roger Wheeler State Beach bulkhead improvement project in Narragansett, Rhode Island (Map J, Lot 35 and Map G, Lot 175). This information is provided for your review in compliance with the regulations governing Section 106 of the National Historic Preservation Act.

The steel sheet pile bulkhead retaining the Roger Wheeler State Beach is in a state of disrepair as reported by the RIDEM. The sand from the beach is continuously being blown into the parking lot, requiring a substantial cleanup effort from State crews. RIDEM's goal is to replace the existing stockade fence with a new sand barrier to minimize the amount of sand that is transported to the parking lot, while maintaining a view of the water/beach from a new boardwalk, intended to enhance the public access and use of the beach.

RIDEM proposes that the new concrete boardwalk be supported by precast concrete piles on one side of the boardwalk and a new concrete retaining wall integrated into the existing steel sheet pile wall with a pier consisting of concrete beams and decking. The new boardwalk is to match the elevation of the existing boardwalk surrounding the existing beach pavilion. The new concrete piles will be placed to the north of the existing sheet pile wall on land currently occupied by the southernmost portion of the beach parking lot; thus providing support for the new boardwalk without encroaching onto the beach, and utilizing an existing impervious area.

Work is being coordinated with the CRMC as a Category B State Assent application.

On behalf of the RIDEM, we respectfully request information from the Rhode Island Historical Preservation & Heritage Commission related to cultural resources that may be affected by the proposed work. Written comments should be submitted to Sarah Pierce at Pare Corporation via email at spierce@parecorp.com, or by mail to the following address: Pare Corporation, 8 Blackstone Valley Place, Lincoln RI 02865 Attn: Sarah Pierce, Senior Environmental Scientist.

Thank you for your consideration. If you have any questions or require additional information, please feel free to contact me at 401-334-4100 or by email at: spierce@parecorp.com.

Sincerely,

Sarah Pierce
Senior Environmental Scientist

cc: RIDEM Division of Planning and Development, c/o David DeCost

* Attachments: Annotated Site Photographs
Figure 1 – Site Location Map
Plan Sheets: Existing Conditions Plan (sheet 2.0), Proposed Site Plan (sheet 3.0)

Y:\JOBS\19 Jobs\19131.00 RIDEM-Design Svcs Roger Wheeler Bulkhead Restor-RI\Permitting\HPHC Coordination\Coordination_Letter _RIHPHC_.Doc

*redundant attachments omitted in this submission

STATE OF RHODE ISLAND

HISTORICAL PRESERVATION & HERITAGE COMMISSION

Old State House 150 Benefit Street Providence, RI 02903

Telephone 401-222-2678
TTY 401-222-3700

Fax 401-222-2968
www.preservation.ri.gov

9 March 2021

Via email: spierce@parecorp.com

Sarah Pierce
Senior Environmental Scientist
Pare Corporation
10 Lincoln Road, Suite 210
Foxboro, Massachusetts 02035

Re: RIHPHC Project No. 15303 - Pare Project No. 19131.00
Roger Wheeler State Beach bulkhead improvements
Sand Hill Cove Road
Narragansett, Rhode Island

Dear Ms. Pierce:

The Rhode Island Historical Preservation and Heritage Commission (RIHPHC) staff has reviewed the information that you provided for the above-referenced project. The State of Rhode Island Department of Environmental Management is proposing a project to improve the bulkhead at Roger Wheeler State Beach, in Narragansett, Rhode Island. The project will include, but is not limited to, the replacement of an existing stockade fence with a sand barrier and the construction of a new boardwalk supported in part by a new concrete retaining wall.

Based on our review of available information, it is the conclusion of the RIHPHC that no historic properties will be affected by the project.

These comments are provided in accordance with the Rhode Island Historic Preservation Act and Rhode Island General Laws. If you have any questions, please contact RIHPHC Deputy Director Jeffrey Emidy at 401-222-4134 or jeffrey.emidy@preservation.ri.gov.

Sincerely,

FOR

J. Paul Loether
Executive Director
State Historic Preservation Officer

210309.02jde

SECTION 7

Soil Erosion and Sediment Control Plan

PARE PROJECT NO. 19131.00

SOIL EROSION AND SEDIMENT CONTROL PLAN

ROGER WHEELER STATE BEACH BOARDWALK
NARRAGANSETT, RHODE ISLAND

Assessors Map J35;G175

Roger Wheeler State Beach
Narragansett, Rhode Island

Prepared for:

Rhode Island Department of Environmental Management
Division of Planning and Development
235 Promenade Street
Providence RI, 02908

Prepared by:

Pare Corporation
10 Lincoln Road, Suite 210
Foxboro, MA 02035

December 21, 2021

Soil Erosion and Sediment Control Plan

For:

Roger Wheeler State Beach Boardwalk

100 Sand Hill Cove Road

Narragansett, RI

J35;G175

Owner:	RI Department of Environmental Management Project Manager: David DeCost david.decost@dem.ri.gov
Operator: *TO BE DETERMINED UPON CONTRACT AWARD*	Company Name Name Address City, State, Zip Code Telephone Number Email Address
Estimated Project Dates:	Start Date: November 2022 Completion Date: May 2023
SESC Plan Prepared By:	Pare Corporation Brian Dutra 10 Lincoln Road; Suite 210 Foxboro, MA 02035 (508)543-1755 bdutra@parecorp.com
SESC Plan Preparation Date:	12/21/21
SESC Plan Revision Date:	

OPERATOR CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that it is the responsibility of the owner/operator to implement and amend the Soil Erosion and Sediment Control Plan as appropriate in accordance with the requirements of the RIPDES Construction General Permit.

Operator Signature: Date

Contractor Representative: Name

Contractor Title: Title

Contractor Company Name: Company Name (if applicable)

Address: Mailing Address

Phone Number: Phone Number

Email Address: Email

TABLE OF CONTENTS

INTRODUCTION

The purpose of erosion, runoff, and sedimentation control measures is to prevent pollutants from leaving the construction site and entering waterways or environmentally sensitive areas during and after construction. This SESC Plan has been prepared prior to the initiation of construction activities to address anticipated worksite conditions. The control measures depicted on the site plan and described in this narrative should be considered the minimum measures required to control erosion, sedimentation, and stormwater runoff at the site. Since construction is a dynamic process with changing site conditions, it is the operator's responsibility to manage the site during each construction phase so as to prevent pollutants from leaving the site. This may require the operator to revise and amend the SESC Plan during construction to address varying site and/or weather conditions, such as by adding or realigning erosion or sediment controls to ensure the SESC Plan remains compliant with the RIPDES Construction General Permit. Records of these changes must be added to the amendment log attached to the SESC Plan, and to the site plans as "red-lined" drawings. Please Note: **Even if practices are correctly installed on a site according to the approved plan, the site is only in compliance when erosion, runoff, and sedimentation are effectively controlled throughout the entire site.**

It is the responsibility of the site owner and the site operator to maintain the SESC Plan at the site, including all attachments, amendments and inspection records, and to make all records available for inspection by RIDEM during and after construction. (RIPDES CGP - Part III.G)

The site owner, the site operator, and the designated site inspector are required to review the SESC Plan and sign the Party Certification pages (Section 8). The primary contractor (if different) and all subcontractors (if applicable) involved in earthwork or exterior construction activities are also required to review the SESC Plan and sign the certification pages before construction begins.

Any questions regarding the SESC Plan, control measures, inspection requirements, or any other facet of this document may be addressed to the RIDEM Office of Water Resources, at 401-222-4700 or via email: water@dem.ri.gov.

SECTION 1: SITE DESCRIPTION

1.1 Project/Site Information

Project/Site Name:

- Roger Wheeler State Beach Boardwalk
- The proposed Roger Wheeler State Beach Boardwalk project includes encasing the existing bulkhead in concrete, constructing a new boardwalk atop the bulkhead, and providing minor miscellaneous site improvements. Project Street/Location:

The following are estimates of the construction site area:

- Total Project Area 5.71 acres
- Total Project Area to be Disturbed 0.92 acres

☐ Yes ☒ No The Limits of Disturbance have been marked in the field

1.3 Natural Heritage Area Information

RIPDES CGP - Part III.H

RIDEM Rhode Island Natural Heritage Program mailto:plan@dem.ri.gov

Are there any Natural Heritage Areas being disturbed by the construction activity or will discharges be directed to the Natural Heritage Area as a result of the construction activity?

☐ Yes ☒ No

If yes, describe or refer to documentation which determines the likelihood of an impact on this area and the steps that will be taken to address any impacts.

1.4 Historic Preservation/Cultural Resources

Are there any historic properties, historic cemeteries or cultural resources on or near the construction site?

☐ Yes ☒ No

Describe how this determination was made and summarize state or tribal review comments:

- RIHPHC and the Narragansett Tribe were provided project notification in pre-application processes. In their responses RIHPHC indicated that there will be no adverse effect on historic properties. The Narragansett Tribe is in support of the project, al

If yes, describe or refer to documentation which determines the likelihood of an impact on this historic property, historic cemetery or cultural resource and the steps taken to address that impact including any conditions or mitigation measures that were approved by other parties.

SECTION 2: EROSION, RUNOFF, AND SEDIMENT CONTROL

RIPDES Construction General Permit – Part III.J.1 – Erosion, Runoff, and Sediment Controls

2.1 Avoid and Protect Sensitive Areas and Natural Features

Areas of existing and remaining vegetation and areas that are to be protected as identified in the Section 1.6 of the SESC Plan must be clearly identified on the SESC Site Plans for each Phase of Construction. Prior to any land disturbance activities commencing on the site, the Contractor shall physically mark limits of disturbance (LOD) on the site and any areas to be protected within the site, so that workers can clearly identify the areas to be protected.

Feature Requiring Protection	Construction Phase #	Method of Protection	Sheet #
Adjacent saltwater wetlands	1	Silt fence, straw bales, compost filter socks	2.1,2.2

2.2 Minimize Area of Disturbance

Will >5 acres be disturbed in order to complete this project?

☐ Yes ☒ No

Will <5 acres be disturbed or will disturbance activities be completed within a six (6) month window?

☒ Yes ☐ No

Based on the answers to the above questions will phasing be required for this project?

☐ Yes ☒ No

PHASING PLAN

The following are estimates of each phase of the construction project:

Phase No. or Identifier	1
Total Area of Phase	5.71 acres
Area to be Disturbed	0.92 acres

Description of Construction Sequencing for Phase 1

Phase I will involve the contractor encasing the existing bulkhead in concrete, constructing a new boardwalk, and providing minor miscellaneous site improvements. The landward side of the boardwalk will be supported by concrete piles and seaward side will be supported by a concrete retaining wall. Below is

the proposed construction sequence which is general in nature and intended to provide an overview of the major project elements. It is not to be construed to dictate the contractor's means and methods. Although arranged sequentially, some of the work items may be undertaken coincidentally.

1. *Establish construction access, install erosion controls, security fence, and traffic control signage throughput project site.*
2. *Remove and dispose of existing pavement, stairs, fence, ramps, railings, on top of and connected to the existing boardwalk. Then demolish the existing boardwalk northwest and northeast of the pavilion.*
3. *Install concrete piles along the landward side of demolished boardwalk.*
4. *Construct a continuous retaining wall along the seaward side of the proposed boardwalk.*
5. *Construct a precast concrete deck for the new boardwalk supported by the retaining wall and piles. Then install electrical conduit underneath the boardwalk and handrails on both sides of the boardwalk.*
6. *Install landward and seaward concrete ramps and steps.*
7. *Install timber shade structures, patio with benches, and foot washing stations on the seaward side of the boardwalk.*
8. *Install concrete sidewalk with ramps and raised planters adjacent to the boardwalk on the landward side.*
9. *Return staging area to preconstruction condition.*
10. *Demobilize*

2.3 Minimize the Disturbance of Steep Slopes

Are steep slopes (>15%) present within the proposed project area?

☐ Yes ☒ No

2.4 Preserve Topsoil

Site owners and operators must preserve existing topsoil on the construction site to the maximum extent feasible and as necessary to support healthy vegetation, promote soil stabilization, and increase stormwater infiltration rates in the post-construction phase of the project.

Will existing topsoil be preserved at the site?

☒ Yes ☐ No

Beach sand in the proposed retaining wall area will be excavated, stockpiled, and then spread out over the length of the beach. Any unsuitable beach material will be used as backfill for the wall footing. See Sheet 3.1 of the Project Drawings.

Soil compaction must be minimized by maintaining limits of disturbance throughout construction. In instances where site soils are compacted the site owner and operator must restore infiltration capacity of the compacted soils by tilling or scarifying compacted soils and amending soils as necessary to ensure a minimum depth of topsoil is available in these areas. In areas where infiltrating stormwater treatment

practices are located compacted soils must be amended such that they will comply the design infiltration rates.

Topsoil on site consists of beach sand. Beach sand will be spread out to meet the existing slope on Roger Wheeler State Beach.

2.5 Stabilize Soils

Upon completion and acceptance of site preparation and initial installation of erosion, runoff, and sediment controls and temporary pollution prevention measures, the operator shall initiate appropriate temporary or permanent stabilization practices during all phases of construction on all disturbed areas as soon as possible, but not more than fourteen (14) days after the construction activity in that area has temporarily or permanently ceased.

Any disturbed areas that will not have active construction activity occurring within 14 days must be stabilized using the control measures depicted in the SESC Site Plans, in accordance with the *RI SESC Handbook*, and per manufacturer product specifications.

Only areas that can be reasonably expected to have active construction work being performed within 14 days of disturbance will be cleared/grubbed at any one time. It is NOT acceptable to clear and grub the entire construction site if portions will not be active within the 14-day time frame. Proper phasing of clearing and grubbing activities shall include temporary stabilization techniques for areas cleared and grubbed that will not be active within the 14-day time frame.

All disturbed soils exposed prior to October 15 of any calendar year shall be seeded by that date if vegetative measures are the intended soil stabilization method. Any such areas that do not have adequate vegetative stabilization, as determined by the site operator or designated inspector, by November 15, must be stabilized through the use of non-vegetative erosion control measures. If work continues within any of these areas during the period from October 15 through April 15, care must be taken to ensure that only the area required for that day's work is exposed, and all erodible soil must be restabilized within 5 working days. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed (i.e. construction of a motocross track).

Describe controls (i.e., temporary seeding with native vegetation, hydroseeding, mulching, application of rolled erosion control products, etc.) including design specifications and details that will be implemented to stabilize exposed soils where construction activities have temporarily or permanently ceased.

Temporary Vegetative Control Measures

- N/A No temporary vegetative control measures will be used onsite.

Temporary Non-Vegetative Control Measures

- Silt fences, straw bales, and compost filter socks are proposed and were selected for their proven efficiency in trapping sediments, their ease of installation, and their low impact to the site.

Permanent Vegetative Control Measures

- N/A – No vegetation exists on site. The landward side of the site is covered by asphalt and the seaward side of the is comprised of beach sand.

Permanent Non-Vegetative Control Measures

- A reinforced concrete wall will provide soil stabilization along the sand located on the seaward side of the existing bulkhead.

2.6 Protect Storm Drain Outlets

Temporary or permanent outlet protection must be used to prevent scour and erosion at discharge points through the protection of the soil surface, reduction in discharge velocities, and through the promotion of infiltration. Outlets often have high velocity, high volume flows, and require strong materials that will withstand the forces of stormwater. Storm drain outlet control measures also offer a last line of protection against sediment entering environmentally sensitive areas.

All stormwater outlets that may discharge sediment-laden stormwater flow from the construction site must be protected using the control practices depicted on the approved plan set and in accordance with the *RI SESC Handbook*.

Will temporary or permanent point source discharges be generated at the site as the result of construction of sediment traps or basins, diversions, and conveyance channels?

☐ Yes ☒ No

Insert textDue to the nature of the project, stormwater treatment practices are not proposed.

2.7 Establish Temporary Controls for the Protection of Post-Construction Stormwater Treatment Practices

Temporary measures shall be installed to protect permanent or long-term stormwater control and treatment measures as they are installed and throughout the construction phase of the project so that they will function properly when they are brought online.

Will long-term stormwater treatment practices be installed at the site?

☐ Yes ☒ No

Due to the nature of the project, stormwater treatment practices are not proposed.

2.8 Divert or Manage Run-on from Up-gradient Areas

Is stormwater from off-site areas anticipated to flow onto the project area or onto areas where soils will be disturbed?

☐ Yes ☒ No

Pre-Construction and Construction sub-watershed maps are included for each phase in this SESC Plan submittal.

Structural control measures will be used to limit stormwater flow from coming onto the project area, and to divert and slow on-site stormwater flow that is expected to impact exposed soils for the purpose of minimizing erosion, runoff, and the discharge of pollutants from the site.

Control measures shall be installed as depicted on the approved plan set and in accordance with the *RI SESC Handbook* or the *RI Department of Transportation Standard Specifications for Road and Bridge Construction*. **Run-on and Run-off Management**				
Construction Phase #	On-site or Off-site Run-on?	Control measure	Identified on Sheet #	Detail(s) is/are on Sheet #

N/A – stormwater from off-site areas are not anticipated to flow onto the project area or onto areas where soils will be disturbed

2.9 Retain Sediment Onsite through Structural and Non-Structural Practices

SEDIMENT BARRIERS must be installed along the perimeter areas of the site that will receive stormwater from disturbed areas. This also may include the use of sediment barriers along the contour of disturbed slopes to maintain sheet flow and minimize rill and gully erosion during construction. Installation and maintenance of sediment barriers must be completed in accordance with the maintenance requirements specified by the product manufacturer or the *RI SESC Handbook*.

Will sediment barriers be utilized at the toe of slopes and other downgradient areas subject to stormwater impacts and erosion during construction?

☒ Yes ☐ No

Will sediment barriers be utilized along the contour of slopes to maintain sheet flow and minimize rill and gully erosion during construction?

☒ Yes ☐ No

Compost filter socks, silt fences, and straw bales are proposed

SEDIMENT BARRIERS			
Construction Phase #	Sediment Barrier Type	Sediment Barrier is Labeled on Sheet #	Detail is on Sheet #
1	On-Site	Silt Fence, Straw bales, compost filter sock	2.2

INLET PROTECTION will be utilized to prevent soil and debris from entering storm drain inlets. These measures are usually temporary and are implemented before a site is disturbed. ALL stormwater inlets &/or

catch basins that are operational during construction and have the potential to receive sediment-laden stormwater flow from the construction site must be protected using control measures outlined in the *RI SESC Handbook*.

For more information on inlet protection refer to the *RI SESC Handbook*, Inlet Protection control measure.

Maintenance

The operator must clean, or remove and replace the inlet protection measures as sediment accumulates, the filter becomes clogged, and/or as performance is compromised. Accumulated sediment adjacent to the inlet protection measures should be removed by the end of the same work day in which it is found or by the end of the following work day if removal by the same work day is not feasible.

Do inlets exist adjacent to or within the project area that require temporary protection?

☒ Yes ☐ No

The following lists the proposed storm drain inlet types selected from Section Six of the *RI SESC Handbook*. Each row is unique for each phase and inlet protection type.

INLET PROTECTION			
Construction Phase #	Inlet Protection Type	Inlet Protection is labeled on Sheet #	Detail(s) is/are on Sheet #
1	Temporary Inlet Protection (Siltsack)	2.1	2.2

Temporary Inlet protection silt sacks will be installed over the drainage catchbasins and shall be cleaned of silt and debris on a regular basis.

CONSTRUCTION ENTRANCES will be used in conjunction with the stabilization of construction roads to reduce the amount of sediment tracking off the project. This project has avoided placing construction entrances on poorly drained soils where possible. Where poorly drained soils could not be eliminated, the detail includes subsurface drainage.

Any construction site access point must employ the control measures on the approved SESC site plans and in accordance with the *RI SESC Handbook*. Construction entrances shall be used in conjunction with the stabilization of construction roads to reduce the amount of mud picked up by construction vehicles. All construction access roads shall be constructed prior to any roadway accepting construction traffic.

The site owner and operator must:

1. Restrict vehicle use to properly designated exit points.

2. Use properly designed and constructed construction entrances at all points that exit onto paved roads so that sediment removal occurs prior to vehicle exit.

3. When and where necessary, use additional controls to remove sediment from vehicle tires prior to exit (i.e. wheel washing racks, rumble strips, and rattle plates).

4. Where sediment has been tracked out from the construction site onto the surface of off-site streets, other paved areas, and sidewalks, the deposited sediment must be removed by the end of the same work day in which the track out occurs. Track-out must be removed by

sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal.

Will construction entrances be utilized at the proposed construction site?

☐ Yes ☒ No

CONSTRUCTION ENTRANCE			
Construction Phase #	Soil Type at the Entrance	Entrance is located on Sheet #	Detail is on Sheet #

If No, discuss rationale.

N/A – Construction vehicles can enter the site from the public entry and exit into the parking lot

STOCKPILE CONTAINMENT will be used onsite to minimize or eliminate the discharge of soil, topsoil, base material or rubble, from entering drainage systems or surface waters. All stockpiles must be located within the limit of disturbance, protected from run-on with the use of temporary sediment barriers and provided with cover or stabilization to avoid contact with precipitation and wind where and when practical.

Stock pile management consists of procedures and practices designed to minimize or eliminate the discharge of stockpiled material (soil, topsoil, base material, rubble) from entering drainage systems or surface waters.

For any stockpiles or land clearing debris composed, in whole or in part, of sediment or soil, you must comply with the following requirements:

1. Locate piles within the designated limits of disturbance.
2. Protect from contact with stormwater (including run-on) using a temporary perimeter sediment barrier.
3. Where practicable, provide cover or appropriate temporary vegetative or structural stabilization to avoid direct contact with precipitation or to minimize sediment discharge.
4. NEVER hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet, or surface water.
5. To the maximum extent practicable, contain and securely protect from wind.

STOCKPILE CONTAINMENT

Construction Phase #	Run-on measures necessary? (yes/no)	Stabilization or Cover Type	Stockpile Containment Measure	Sheet #
1	No	Mulch, seed mix, or tarp	Geotextile and straw bales	6.2

CONSTRUCTED SEDIMENT STRUCTURES

TEMPORARY SEDIMENT TRAPS will be utilized onsite. There will be no disturbed drainage areas greater than one acre that will be exposed for longer than six months. Design and sizing calculations in accordance with the *RI SESC Handbook*, Section Six are found in __Insert Text___ of this SESC Plan. A summary of the calculations are provided below:

Are temporary sediment traps required at the site?

☐ Yes ☒ No

SEDIMENT TRAPS				
Construction Phase #	Exposed Area (acres)	Trap #	Sheet #	Detail found on Sheet#

Trap #	Wet Storage Volume (cu.ft)	Dry Storage Volume (cu.ft.)	Cleanout Depth (ft)	Provide Reference to Location of Supporting Design and Sizing Calculations

All traps will be functional and installed prior to disturbance in the contributing drainage area. Access for sediment removal is provided on the plans with cleanout depth requirements. The removed sediment will be utilized onsite or disposed of properly off-site.

N/A – The site is relatively flat, and the nature of work is not expected to generate excess soil

TEMPORARY SEDIMENT BASIN(S) will be utilized onsite. Every effort must be made to prevent erosion and control it near the source.

Are temporary sediment basins required at the site?

☐ Yes ☒ No

Less than 1 acre of site will be disturbed at a time.

There will be disturbed areas greater than 5 acres and/or disturbed areas greater than one acre but exposed for longer than six months. The basins have been located to intercept runoff only from disturbed areas and minimize interference with other construction activities and construction of utilities. They have been located outside of any natural buffers. The dam height is less than six feet and holds less than fifteen (15) acre-ft.

Modeling, Design and Sizing calculations in accordance with the *RI SESC Handbook*, Section Six are found in of this SESC Plan. The designs were also prepared to satisfy Section 3.3.7.13 of the Stormwater Manual and will control Temporary Increases in Stormwater Velocity, Volume, and Peak Flows. A summary of the assumptions and calculations are provided below:

TEMPORARY SEDIMENT BASINS				
Construction Phase #	Exposed Area (acres)	Basin #	Sheet #	Detail found on Sheet#

SEDIMENT BASIN #1 Pre-Development					
Pre-Construction Cover Type	Contributing Area (acres)	Soil Type	Curve Number	Tc (minutes)	10- Year Type III (cfs, at time t, acre feet)
				Total Pre-Construction Volume (cuft):	
During Construction					
Construction Cover Type	Contributing Area	Erosion Rates	Curve Number	Tc (minutes)	10-Year Type III (cfs, at time t, acre feet)
				Total Runoff Volume During Construction (cuft):	
Basin #1					
Pre-Construction Peak Discharge (cfs)	Wet Storage Volume (cuft)	Sediment Storage Volume (cuft)	Residence Storage Volume (cuft)	Outlet Max Discharge Rate (cfs)	Emergency Spillway Discharge Capacity (cfs)

All sediment basins will be functional and installed prior to disturbance in the contributing drainage area. Access for sediment removal is provided on the plans with cleanout depth specifications. The removed sediment will be utilized onsite or properly disposed of off-site.

2.10 Properly Design Constructed Stormwater Conveyance Channels

Are temporary stormwater conveyance practices required in order to properly manage runoff within the proposed construction project?

☐ Yes ☒ No

The conveyance will be maintained as depicted on SESC Site Plans and in accordance with the *RI SESC Handbook* and if applicable.

2.11 Erosion, Runoff, and Sediment Control Measure List

It is expected that this table and corresponding Inspection Reports will be amended as needed throughout the construction project as control measures are added or modified.

Phase No. #1		
Location/Station	**Control Measure Description/Reference**	**Maintenance Requirement**
Perimeter (See Sheet 2.1, 2.2)	Straw bales, silt fence. Section Six, Sediment Control Measures – Straw Wattles, Compost Tubes and Fiber Rolls – *RI SESC Handbook*.	Inspection should be made after each storm event and repair or replacement should be made promptly as needed. Straw bales must be replaced after 3 months in use. Clean out of accumulated sediment behind the silt fence/straw bale if sediment accumulates to at least ½ of the original height of the barrier becomes filled with sediment. Straw bales should be inspected regularly, and sediment shall be cleared often to prevent buildup or damages.
Entrances to the Site (See Sheet 2.1, 2.2)	Wash sediment of vehicle tires. Section Six: Sediment Control Measures – Construction Entrances –*RI SESC Handbook*.	The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto pave surfaces. Roads adjacent to entrance shall be clean at the end of each day. If maintenance alone is not enough to prevent excessive track out, modify construction access road surface, or install washrack or mudrack.
Stockpiles (See Sheet 2.2)	Stockpile Management. Section Three: Pollution Prevention and Good Housekeeping – Stockpile and Staging	Inspections should be made weekly during the rainy season and bi-monthly during the non-rainy season.

	Area Management – *RI SESC Handbook*.	

SECTION 3: CONSTRUCTION ACTIVITY POLLUTION PREVENTION

The purpose of construction activity pollution prevention is to prevent day to day construction activities from causing pollution.

This section describes the key pollution prevention measures that must be implemented to avoid and reduce the discharge of pollutants in stormwater. Example control measures include the proper management of waste, material handling and storage, and equipment/vehicle fueling/washing/maintenance operations.

Where applicable, include *RI SESC Handbook* or the *RI Department of Transportation Standard Specifications for Road and Bridge Construction* (as amended) specifications.

3.1 Existing Data of Known Discharges from Site

Are there known discharges from the project area?

☐ Yes ☒ No

Describe how this determination was made:

- Site Survey and field observation

If yes, list discharges and locations:

Is there existing data on the quality of the known discharges?

☐ Yes ☒ No

If yes, provide data:

3.2 Prohibited Discharges

The following discharges are prohibited at the construction site:

- Contaminated groundwater, unless specifically authorized by the DEM. These types of discharges may only be authorized under a separate DEM RIPDES permit.
- Wastewater from washout of concrete, unless the discharge is contained and managed by appropriate control measures.
- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials.
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance. Proper storage and spill prevention practices must be utilized at all construction sites.
- Soaps or solvents used in vehicle and equipment washing.
- Toxic or hazardous substances from a spill or other release.

All types of waste generated at the site shall be disposed of in a manner consistent with State Law and/or regulations.

Will any of the above listed prohibited discharges be generated at the site?

☒ Yes ☐ No

Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance. Proper storage and spill prevention practices will be utilized at the construction site. See Section 3.4 in this SESC Report for specific measures

Concrete washout areas shall be utilized during construction. Proper storage and spill prevention practices shall be utilized to prevent discharges from construction vehicle operations.

3.3 Proper Waste Disposal

Building materials and other construction site wastes must be properly managed and disposed of in a manner consistent with State Law and/or regulations.

- A waste collection area shall be designated on the site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterbody or storm drain.
- All waste containers shall be covered to avoid contact with wind and precipitation.
- Waste collection shall be scheduled frequently enough to prevent containers from overfilling.
- All construction site wastes shall be collected, removed, and disposed of in accordance with applicable regulatory requirements and only at authorized disposal sites.
- Equipment and containers shall be checked for leaks, corrosion, support or foundation failure, or other signs of deterioration. Those that are found to be defective shall be immediately repaired or replaced.

Is waste disposal a significant element of the proposed project?

☐ Yes ☒ No

Any earthwork materials to be disposed must be done at a permitted location. Construction dumpsters will provide a means of disposal for construction materials.

3.4 Spill Prevention and Control

All chemicals and/or hazardous waste material must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. All areas where potential spills can occur and their accompanying drainage points must be described. The owner and operator must establish spill prevention and control measures to reduce the chance of spills, stop the source of spills, contain and clean-up spills, and dispose of materials contaminated by spills. The operator must establish and make highly visible location(s) for the storage of spill prevention and control equipment and provide training for personnel responsible for spill prevention and control on the construction site.

Are spill prevention and control measures required for this particular project?

☒ Yes ☐ No

Spills related to construction vehicles and materials shall be prevented by the following procedures:

1. No vehicles shall be left unattended in project areas, which, in the event of a hazardous material spill, would flow into any portion of the drainage system.
2. Vehicles shall be fueled in areas and using procedures that will not lead to a discharge of fuel into Waters of the State.
3. In the event of a release of hazardous material, the equipment operator shall take all measures to stop and/or contain the leak and without exacerbating the release and attempt to remove equipment from areas likely to cause a discharge of hazardous materials into Water of the State. Further, site supervisors, and the Owner and his Representative shall be contacted and, should it be determined that the spill is of a reportable quantity, the RIDEM shall be notified. A licensed hazardous waste remediation contractor shall be engaged to remediate any such spills in accordance with RIDEM Regulations and procedures.

Any hazardous materials used for construction shall be stored away from the drainage system components and protected from precipitation. In the event of a release beyond the ability of construction staff to contain, emergency services of the Town of Narragansett, and the State of Rhode Island, and a licensed hazardous waste remediation contractor shall be contacted for assistance.

To prevent pollution of surface waters, the following construction procedures shall be prohibited:

1. Dumping of or discharging of spoil material or excessively turbid water into any drainage structures, stream corridor, any wetland, or any surface waters.
2. Indiscriminate, arbitrary or capricious operations of equipment in any drainage structures, stream corridors, any wetlands, or any surface waters.
3. Pumping of silt-laden water from trenches or other excavations into any drainage structures, surface waters, any stream corridors or any wetlands. All disposal of silt-laden water shall be carried out within the use of approved filter basins.
4. Disposal of trees, brush, and other debris in any stream corridors, any wetlands, any surface waters, or at unspecified locations.
5. Disposal of excess or unsuitable excavation material in wetlands or floodplain areas, even with permission of the property owner.
6. Open burning of project debris.
7. Location of storage stockpiles in environmentally sensitive areas.

3.5 Control of Allowable Non-Stormwater Discharges

Are there allowable non-Stormwater discharges present on or near the project area?

☐ Yes ☒ No

List of allowable non-stormwater discharge(s) and the associated control measure(s):

Are there any known or proposed contaminated discharges, including anticipated contaminated dewatering operations, planned on or near the project area?

☐ Yes ☒ No

If yes, list the discharge types and the RIPDES individual permit number(s) or RIPDES Remediation General Permit Authorization number(s) associated with these discharges.

3.6 Control Dewatering Practices

Site owners and operators are prohibited from discharging groundwater or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation, unless such waters are first effectively managed by appropriate control measures.

Examples of appropriate control measures include, but are not limited to, temporary sediment basins or sediment traps, sediment socks, dewatering tanks and bags, or filtration systems (e.g. bag or sand filters) that are designed to remove sediment. Uncontaminated, non-turbid dewatering water can be discharged without being routed to a control.

At a minimum the following discharge requirements must be met for dewatering activities:

1. Do not discharge visible floating solids or foam.
2. To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. In no case will surface waters be considered part of the treatment area.
3. At all points where dewatering water is discharged, utilize velocity dissipation devices.
4. With filter backwash water, either haul it away for disposal or return it to the beginning of the treatment process.
5. Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
6. Dewatering practices must involve the implementation of appropriate control measures as applicable (i.e. containment areas for dewatering earth materials, portable sediment tanks and bags, pumping settling basins, and pump intake protection.)

Is it at all likely that the site operator will need to implement construction dewatering in order to complete the proposed project?

☒ Yes ☐ No

- Dewatering activities may be necessary for installation of the concrete retaining wall on the seaward side of the boardwalk. Based upon soil boring information, dewatering may need to occur at the elevation where the footing is proposed. All proposed dewatering activities are to comply with the RI SESC Handbook.

3.7 Establish Proper Building Material Staging Areas

All construction materials that have the potential to contaminate stormwater must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. Designated areas shall be approved by the site owner/engineer. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in the discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

Materials stored on the site will be protected from exposure to precipitation throug the use of tarps or other overhead cover. All construction debris shall be properly disposed of and/or covered at the end of each working day to avoid contact with precipitation.

3.8 Minimize Dust

Dust control procedures and practices shall be used to suppress dust on a construction site during the construction process, as applicable. Precipitation, temperature, humidity, wind velocity and direction will determine amount and frequency of applications. However, the best method of controlling dust is to prevent dust production. This can best be accomplished by limiting the amount of bare soil exposed at one time. Dust Control measures outlined in the *RI SESC Handbook* shall be followed. Other dust control methods include watering, chemical application, surface roughening, wind barriers, walls, and covers.

Dust shall be controlled by watering or other approved methods as necessary or as directed by the owner or owner's representative.

3.9 Designate Washout Areas

At no time shall any material (concrete, paint, chemicals) be washed into storm drains, open ditches, streets, streams, wetlands, or any environmentally sensitive area. The site operator must ensure that construction waste is properly disposed of, to avoid exposure to precipitation, at the end of each working day.

Will washout areas be required for the proposed project?

☒ Yes ☐ No

Washout shall remain within specified locations (i.e. concrete washout area) on site as shown on Sheet 2.1 and detailed on Sheet 2.2. Washout areas shall be constructed and maintained in accordance with the RI SESC Handbook. When temporary concrete washout facilities are no longer required for work, the hardened concrete, slurries, and liquids shall be removed and properly disposed of.

3.10 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

Vehicle fueling shall not take place within regulated wetlands or buffer zone areas, or within 50-feet of the storm drain system. Designated areas shall be depicted on the SESC Site Plans, or shall be approved by the site owner.

Vehicle maintenance and washing shall occur off-site, or in designated areas depicted on the SESC Site Plans or approved of by the site owner. Maintenance or washing areas shall not be within regulated wetlands or buffer zone areas, or within 50-feet of the storm drain system. Maintenance areas shall be clearly designated, and barriers shall be used around the perimeter of the maintenance area to prevent stormwater contamination.

Construction vehicles shall be inspected frequently for leaks. Repairs shall take place immediately. Disposal of all used oil, antifreeze, solvents and other automotive-related chemicals shall be according to applicable regulations; at no time shall any material be washed down the storm drain or in to any environmentally sensitive area.

See Section 3.4 of this report.

3.11 Chemical Treatment for Erosion and Sediment Control

Chemical stabilizers, polymers, and flocculants are readily available on the market and can be easily applied to construction sites for the purposes of enhancing the control of erosion, runoff, and sedimentation. The following guidelines should be adhered to for construction sites that plan to use treatment chemicals as part of their overall erosion, runoff, and sedimentation control strategy.

The U.S. Environmental Protection Agency has conducted research into the relative toxicity of chemicals commonly used for the treatment of construction stormwater discharges. The research conducted by the EPA focused on different formulations of chitosan, a cationic compound, and both cationic and anionic polyacrylamide (PAM). In summary, the studies found significant toxicity resulting from the use of chitosan and cationic PAM in laboratory conditions, and significantly less toxicity associated with using anionic PAM. EPA's research has led to the conclusion that the use of treatment chemicals for erosion, runoff, and sedimentation control requires proper operator training and appropriate usage to avoid risk to aquatic species. In the case of cationic treatment chemicals additional safeguards may be necessary.

Application/Installation Minimum Requirements

If a site operator plans to use polymers, flocculants, or other treatment chemicals during construction the SESC plan must address the following:

1. Treatment chemicals shall not be applied directly to or within 100 feet of any surface water body, wetland, or storm drain inlet.

2. Use conventional erosion, runoff, and sedimentation controls prior to and after the application of treatment chemicals. Use conventional erosion, runoff, and sedimentation controls prior to chemical addition to ensure effective treatment. Chemicals may only be applied where treated stormwater is directed to a sediment control (e.g. temporary sediment basin, temporary sediment trap or sediment barrier) prior to discharge.

3. Sites shall be stabilized as soon as possible using conventional measures to minimize the need to use chemical treatment.

4. Select appropriate treatment chemicals. Chemicals must be selected that are appropriately suited to the types of soils likely to be exposed during construction and to the expected turbidity, pH, and flow rate of stormwater flowing into the chemical treatment system or treatment area. **Soil testing is essential. Using the wrong form of chemical treatment will result in some form of performance failure and unnecessary environmental risk.**

5. Minimize discharge risk from stored chemicals. Store all treatment chemicals in leak-proof containers that are kept under storm-resistant cover and surrounded by secondary containment structures (e.g., spill berms, decks, spill containment pallets), or provide equivalent measures, designed and maintained to minimize the potential discharge of treatment chemicals in stormwater or by any other means (e.g., storing chemicals in covered areas or having a spill kit available on site).

6. Use chemicals in accordance with good engineering practices and specifications of the chemical provider/supplier. You must also use treatment chemicals and chemical treatment systems in accordance with good engineering practices, and with dosing specifications and sediment removal design specifications provided by the supplier of the applicable chemicals, or document specific departures from these practices or specifications and how they reflect good engineering practice.

Will chemical stabilizers, polymers, flocculants or other treatment chemicals be utilized on the proposed construction project?

☐ Yes ☒ No

No, to the best of our knowledge

Treatment Chemical SESC Plan Weekly Inspection Report Documentation Requirements

1. Document the type and quantity of treatment chemicals applied.

2. List the date, duration of discharge, and estimated discharge rate.

3. Provide an estimate of the volume of water treated.

4. Provide an estimate of the concentration of treatment chemicals in the discharge, with supporting calculations.

3.12 Construction Activity Pollution Prevention Control Measure List

It is expected that this table will be amended as needed throughout the construction project.

Phase No. #		
Location/Station	**Control Measure Description/Reference**	**Maintenance Requirement**
Concrete Washout Area (See Sheet 2.2)	Concrete washout area. Section Three: Pollution Prevention and Good Housekeeping, Concrete Washout, *RI SESC Handbook*	Verify that concrete washout container(s) are in place prior to pouring concrete. Inspect daily to verify continued proper conformance. Check remaining capacity during pour operations. Check for leaks periodically.
Street Sweeping	Street Sweeping. Section Three: Pollution Prevention and Good Housekeeping, Street Sweeping, *RI SESC Handbook*.	Public roads adjacent to the construction site shall be swept at the end of each day. Construction site shall be swept when sediment is visible.
Dust Control	Spill Prevention and Control. Section Three: Pollution Prevention and Good Housekeeping, Dust Control, *RI SESC Handbook*.	Exposed area shall be limited during construction. All exposed areas shall be inspected daily.
Waste Management	Waste Management. Section Three: Pollution Prevention and Good Housekeeping, Waste Management, *RI SESC Handbook*.	All loose trash and debris must be disposed of properly at the end of each working day.
Spill Prevention and Control	Spill Prevention and Control. Section Three: Pollution Prevention and Good Housekeeping, Spill Prevention and Control Plans, *RI SESC Handbook*.	All construction vehicles shall be regularly inspected for leaks and repaired as necessary. Spills shall be cleaned in accordance with RI SESC Handbook.

SECTION 4: CONTROL MEASURE INSTALLATION, INSPECTION, and MAINTENANCE

4.1 Installation

Complete the installation of temporary erosion, runoff, sediment, and pollution prevention control measures by the time each phase of earth-disturbance has begun. All stormwater control measures must be installed in accordance with good judgment, including applicable design and manufacturer specifications. Installation techniques and maintenance requirements may be found in manufacturer specifications and/or the *RI SESC Handbook*.

Installation of requirements of temporary erosion, runoff, sediment, and pollution prevention control measures are shown in the plan Sheet 2.2 and are described in the project specifications.

4.2 Monitoring Weather Conditions

Anticipating Weather Events - Care will be taken to the best of the operator's ability to avoid disturbing large areas prior to anticipated precipitation events. Weather forecasts must be routinely checked, and in the case of an expected precipitation event of over 0.25-inches over a 24-hour period, it is highly recommended that all control measures should be evaluated and maintained as necessary, prior to the weather event. In the case of an extreme weather forecast (greater than one-inch of rain over a 24-hour period), additional erosion/sediment controls may need to be installed.

Storm Event Monitoring For Inspections - At a minimum, storm events must be monitored and tracked in order to determine when post-storm event inspections must be conducted. Inspections must be conducted and documented at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event, which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff or snowmelt.

The weather gauge station and website that will be utilized to monitor weather conditions on the construction site is as follows:

The closest weather gauge station located in Narragansett RI (Weather Station ID KRINARRA37) shall be used to monitor weather conditions and storm events at the site and can be found on www.wunderground.com

4.3 Inspections

Minimum Frequency - Each of the following areas must be inspected by or under the supervision of the owner and operator at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event, which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff or snowmelt:

a. All areas that have been cleared, graded, or excavated and where permanent stabilization has not been achieved;

b. All stormwater erosion, runoff, and sediment control measures (including pollution prevention control measures) installed at the site;

c. Construction material, unstabilized soil stockpiles, waste, borrow, or equipment storage, and maintenance areas that are covered by this permit and are exposed to precipitation;

d. All areas where stormwater typically flows within the site, including temporary drainage ways designed to divert, convey, and/or treat stormwater;

e. All points of discharge from the site;

f. All locations where temporary soil stabilization measures have been implemented;

g. All locations where vehicles enter or exit the site.

Reductions in Inspection Frequency - If earth disturbing activities are suspended due to frozen conditions, inspections may be reduced to a frequency of once per month. The owner and operator must document the beginning and ending dates of these periods in an inspection report.

Qualified Personnel – The site owner and operator are responsible for designating personnel to conduct inspections and for ensuring that the personnel who are responsible for conducting the inspections are "qualified" to do so. A "qualified person" is a person knowledgeable in the principles and practices of erosion, runoff, sediment, and pollution prevention controls, who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of the permit.

Recordkeeping Requirements - All records of inspections, including records of maintenance and corrective actions must be maintained with the SESC Plan. Inspection records must include the date and time of the inspection, and the inspector's name, signature, and contact information.

General Notes

- A separate inspection report will be prepared for each inspection.
- The Inspection Reference Number shall be a combination of the RIPDES Construction General Permit No - consecutively numbered inspections. ex/ Inspection reference number for the **4**th inspection of a project would be: RIR10####-**4**
- Each report will be signed and dated by the Inspector and must be kept onsite.
- Each report will be signed and dated by the Site Operator.
- The corrective action log contained in each inspection report must be completed, signed, and dated by the site operator once all necessary repairs have been completed.
- It is the responsibility of the site operator to maintain a copy of the SESC Plan, copies of all completed inspection reports, and amendments as part of the SESC Plan documentation at the site during construction.

Failure to make and provide documentation of inspections and corrective actions under this part constitutes a violation of your permit and enforcement actions under 46-12 of R.I. General Laws may result.

4.4 Maintenance

Maintenance procedures for erosion and sedimentation controls and stormwater management structures/facilities are described on the SESC Site Plans and in the *RI SESC Handbook*.

Site owners and operators must ensure that all erosion, runoff, sediment, and pollution prevention controls remain in effective operating condition and are protected from activities that would reduce their effectiveness. Erosion, runoff, sedimentation, and pollution prevention control measures must be maintained throughout the course of the project.

Note: It is recommended that the site operator designates a full-time, on-site contact person responsible for working with the site owner to resolve SESC Plan-related issues.

4.5 Corrective Actions

Per RI SESC Handbook – Part D:

If, in the opinion of the designated site inspector, corrective action is required, the inspector shall note it on the inspection report and shall inform the site operator that corrective action is necessary. The site operator must make all necessary repairs whenever maintenance of any of the control measures instituted at the site is required.

In accordance with the *RI SESC Handbook*, the site operator shall initiate work to fix the problem immediately after its discovery, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance.

When installation of a new control or a significant repair is needed, site owners and operators must ensure that the new or modified control measure is installed and made operational by no later than seven (7) calendar days from the time of discovery where feasible. If it is infeasible to complete the installation or repair within seven (7) calendar days, the reasons why it is infeasible must be documented in the SESC Plan along with the schedule for installing the control measures and making it operational as soon as practicable after the 7-day timeframe. Such documentation of these maintenance procedures and timeframes should be described in the inspection report in which the issue was first documented. If these actions result in changes to any of the control measures outlined in the SESC Plan, site owners and operators must also modify the SESC Plan accordingly within seven (7) calendar days of completing this work.

SECTION 5: AMENDMENTS

Per RIPDES Construction General Permit – Part III.F:

This SESC Plan is intended to be a working document. It is expected that amendments will be required throughout the active construction phase of the project. **Even if practices are installed on a site according to the approved plan, the site is only in compliance when erosion, runoff, and sedimentation are effectively controlled throughout the entire site for the entire duration of the project.**

The SESC Plan shall be amended within seven (7) days whenever there is a change in design, construction, operation, maintenance or other procedure which has a significant effect on the potential for the discharge of pollutants, or if the SESC Plan proves to be ineffective in achieving its objectives (i.e. the selected control measures are not effective in controlling erosion or sedimentation).

In addition, the SESC Plan shall be amended to identify any new operator that will implement a component of the SESC Plan.

All revisions must be recorded in the Record of Amendments Log Sheet, which is contained in Attachment G of this SESC Plan, and dated red-lined drawings and/or a detailed written description must be appended

to the SESC Plan. Inspection Forms must be revised to reflect all amendments. Update the Revision Date and the Version # in the footer of the Report to reflect amendments made.

All SESC Plan Amendments, except minor non-technical revisions, must be approved by the site owner and operator. Any amendments to control measures that involve the practice of engineering must be reviewed, signed, and stamped by a Professional Engineer registered in the State of RI.

The amended SESC plan must be kept on file at the site while construction is ongoing and any modifications must be documented.

Attach a copy of the Amendment Log.

SECTION 6: RECORDKEEPING

RIPDES Construction General Permit – Parts III.D, III.G, III.J.3.b.iii, & V.O

It is the site owner and site operator's responsibility to have the following documents available at the construction site and immediately available for RIDEM review upon request:

- A copy of the fully signed and dated SESC Plan, which includes:
  - A copy of the General Location Map
    INCLUDED AS ATTACHMENT A
  - A copy of all SESC Site Plans
    INCLUDED AS ATTACHMENT B
  - A copy of the RIPDES Construction General Permit *(To save paper and file space, do not include in DEM/CRMC submittal, for operator copy only)*
    INCLUDED AS ATTACHMENT C
  - A copy of any regulatory permits (RIDEM Freshwater Wetlands Permit, CRMC Assent, RIDEM Water Quality Certification, RIDEM Groundwater Discharge Permit, RIDEM RIPDES Construction General Permit authorization letter, etc.) *(To be provided when received)*
    INCLUDED AS ATTACHMENT D
  - The signed and certified NOI form or permit application form *(if required as part of the application, see RIPDES Construction General Permit for applicability)*
    INCLUDED AS ATTACHMENT E
  - Completed Inspection Reports w/Completed Corrective Action Logs
    INCLUDED AS ATTACHMENT F
  - SESC Plan Amendment Log
    INCLUDED AS ATTACHMENT G

SECTION 7: PARTY CERTIFICATIONS

RIPDES Construction General Permit – Part V.G

All parties working at the project site are required to comply with the Soil Erosion and Sediment Control Plan (SESC Plan including SESC Site Plans) for any work that is performed on-site. The site owner, site operator, contractors and sub-contractors are encouraged to advise all employees working on this project of the requirements of the SESC Plan. A copy of the SESC Plan is available for your review at the following location: Onsite, or may be obtained by contacting the site owner or site operator.

The site owner and site operator and each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement.

I acknowledge that I have read and understand the terms and conditions of the Soil Erosion and Sediment Control (SESC) Plan for the above designated project and agree to follow the control measures described in the SESC Plan and SESC Site Plans.

Site Owner:

Rhode Island Department of Environmental Management Arthur Zeman, Division of Planning and Development 235 Promenade Street
Providence, RI 02908
401-222-2776 ext 2777702

Arthur Zeman — Digitally signed by Arthur Zeman Date: 2021.12.23 10:08:18 -05'00'

signature/date

Site Operator:
Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

signature/date

Designated Site Inspector:
Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

signature/date

SubContractor SESC Plan Contact:
Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

signature/date

LIST OF ATTACHMENTS

Attachment A - General Location Map

Attachment B - SESC Site Plans

Attachment C - Copy of RIPDES Construction General Permit and Authorization to Discharge *(To save paper and file space, do not include in DEM/CRMC submittal, for operator copy only)*

Attachment D - Copy of Other Regulatory Permits

Attachment E - Copy of RIPDES NOI *(if required as part of application, see RIPDES Construction General Permit for applicability)*

Attachment F - Inspection Reports w/ Corrective Action Log

Attachment G - SESC Plan Amendment Log

APPENDIX A

General Location Map

RIGIS

SITE LOCATION MAP

SCALE:1"=2,000'

N W E S

8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
(401) 334-4100

10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
(508) 543-1755

PARE PROJECT No. 19131.00 OCTOBER 2021

FIGURE 1

ROGER WHEELER STATE BEACH BOARDWALK
NARRAGANSETT, RI

APPENDIX B

Soil Erosion and Sediment Control Site Plans

GENERAL NOTES:

1. FOR THE PURPOSE OF THIS PROJECT

   OWNER – DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
   235 PROMENADE STREET, FL. 3
   PROVIDENCE, RI 02908

   ENGINEER – PARE CORPORATION
   10 LINCOLN ROAD, SUITE 210
   FOXBORO, MA 02035

   CONTACT – J. MATTHEW BELISLE, P.E., SENIOR VICE PRESIDENT
   BRIAN DUTRA, P.E., PROJECT ENGINEER

2. ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE RHODE ISLAND STATE BUILDING CODE, ALL FEDERAL AND MUNICIPAL BUILDING CODES, AND THE SPECIFICATIONS INCLUDED IN THIS CONTRACT. THESE PLANS ARE INCOMPLETE UNLESS ACCOMPANIED BY THE SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS.

3. THE BASE PLAN WAS DEVELOPED BASED UPON PLAN ENTITLED "EXISTING CONDITIONS AND TOPOGRAPHY PLAN ROGER WHEELER STATE BEACH" PREPARED BY NARRAGANSETT ENGINEERING INC. OF PORTSMOUTH, RI DATED MARCH 2021. ANY DISCREPANCIES ON THESE PLANS WITH REGARD TO DIMENSIONS OR CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PORTION OF WORK.

4. HORIZONTAL DATUM: RHODE ISLAND STATE PLANE – NAD83
   VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS ESTABLISHED BY NOS TIDAL BENCH MARK

5. INFORMATION REGARDING THE LOCATION OF SURROUNDING STRUCTURES AND UTILITIES IS FURNISHED SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR AND SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL CONDUCT ITS OWN INDEPENDENT EXAMINATION OF SITE CONDITIONS FOR THE PURPOSE OF BIDDING, FABRICATION, AND CONSTRUCTION ASSOCIATED WITH THE PROJECT. ANY RELIANCE UPON INFORMATION MADE AVAILABLE BY THE OWNER OR THE ENGINEER SHALL BE AT THE CONTRACTOR'S RISK.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS. PLANS SHALL NOT BE SCALED FOR DIMENSIONS.

7. CONSTRUCTION SHALL BE MADE FROM APPROVED SHOP DRAWINGS ONLY.

8. NOTES, TYPICAL DETAILS, AND SCHEDULES AFFLY TO ALL WORK UNLESS OTHERWISE NOTED. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTING SHOP DRAWINGS FOR REVIEW.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL PROJECT DEMOLITION AND EXCESS MATERIAL IN ACCORDANCE WITH RHODE ISLAND, LOCAL, AND FEDERAL LAWS.

10. THE CONTRACTOR SHALL PROTECT ALL ADJACENT STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ALL DAMAGE TO ADJACENT STRUCTURES AND UTILITIES AT NO ADDITIONAL COST TO THE OWNER.

11. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL VISIT THE SITE AND SHALL NOTIFY THE ENGINEER OF ANY ADDITIONAL UTILITIES, STRUCTURES, OR ANY OTHER ELEMENTS WHICH MAY IMPEDE WORK. UTILITY AND/OR STRUCTURE RELOCATIONS, IF NECESSARY, SHALL BE COORDINATED THROUGH THE OWNER'S ENGINEER.

12. THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. BEFORE COMMENCING SITE WORK IN ANY AREA, CONTACT "DIG SAFE" AT 1-888-DIG-SAFE TO ACCURATELY LOCATE ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, 72 HOURS PRIOR TO COMMENCING WORK. ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS OF SUCH DAMAGE SHALL BE THE CONTRACTOR'S RESPONSIBILITY. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR TOWN WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE PROPERLY NOTIFIED.

13. THE CONTRACTOR SHALL FOLLOW ALL OSHA, FEDERAL, STATE, AND LOCAL STANDARDS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL SITE SAFETY PROCEDURES AND PRACTICES REGARDLESS OF THE PRESENCE OF THE OWNER OR ENGINEER.

14. ALL CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE LIMITS OF WORK AND TEMPORARY EASEMENTS DEFINED HEREIN.

15. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A CONSTRUCTION SCHEDULE TO THE OWNER WITHIN 5 DAYS OF THE NOTICE OF AWARD. THE CONTRACTOR SHALL UPDATE SCHEDULE AS NEEDED THROUGHOUT THE COURSE OF WORK.

16. THE CONTRACTOR SHALL STAGE ALL EQUIPMENT IN THE DESIGNATED STAGING AREA. ALL GREASING AND REFUELING ACTIVITIES SHALL OCCUR IN THE STAGING AREA. ALL NECESSARY MEASURES SHALL BE TAKEN TO PREVENT BY ANY METHOD, OIL, CONSTRUCTION DEBRIS, STOCKPILED MATERIALS, AND OTHER MATERIALS ON THE SITE, FROM ENTERING THE WATERWAY. STAGING/LAYDOWN AREAS, AS APPROVED BY THE ENGINEER, SHALL BE RESTORED BY THE CONTRACTOR TO THE EXISTING CONDITION. IN ADDITION, THE CONTRACTOR SHALL REPLACE ALL DAMAGED MATERIALS AS A RESULT OF HIS OPERATIONS, TO THE SATISFACTION OF THE ENGINEER.

17. THE CONTRACTOR SHALL MAINTAIN A SECURE SITE AND PROVIDE APPROPRIATE SAFETY MEASURES TO PREVENT ACCIDENTS. THE SAFETY MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FENCES, FLASHING WARNING LIGHTS, AND POLICING IF NECESSARY.

18. IN CASE OF CONTRADICTION BETWEEN THE DRAWINGS, THE SPECIFICATIONS, AND THE CODES, OR IF ANY CHANGE IS REQUIRED, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY. NO CHANGE SHALL BE MADE WITHOUT WRITTEN APPROVAL OF THE ENGINEER.

19. UPON COMPLETION OF THE PROJECT, CONTRACTOR IS TO PROVIDE A POST CONSTRUCTION SURVEY AND TWO AS-BUILT PLAN SETS TO THE OWNER DEPICTING ANY FIELD CHANGES OF DIMENSION OR DETAIL, LOCATION OF UNDERGROUND STRUCTURES AND/OR UTILITIES. CONSTRUCTION DEVIATIONS, CHANGES DUE TO FIELD OR CHANGE ORDER, AND DETAILS NOT ON THE ORIGINAL DRAWINGS.

20. NO WORK SHALL BE COMPLETED UNTIL EACH OF THE FOLLOWING CONDITIONS ARE MET:
    - RIPDES PERMIT IS RECEIVED FROM RIDEM
    - NOTICE OF ASSENT IS RECEIVED FROM CRMC
    - THE OWNER DIRECTS THE WORK TO BE COMPLETED

21. CONTRACTOR SHALL PROVIDE A TRAFFIC MANAGEMENT PLAN FOR THE PROPOSED WORK.

DEMOLITION NOTES:

1. ALL DEMOLITION SHALL BE COORDINATED WITH THE OWNER PRIOR TO START OF WORK.
2. THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION OF STRUCTURES, PAVEMENT AND CONCRETE MATERIALS, AND UTILITIES WITH APPROPRIATE PROPOSED SITE GENERAL, GRADING, UTILITY, AND LANDSCAPE DRAWINGS.
3. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO ANY DEMOLITION OR CONSTRUCTION. ANY DISCREPANCIES RELATING TO THE DRAWINGS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. ALL NOTED UTILITIES TO BE REMOVED AND DISPOSED OF, RELOCATED OR CAPPED REPRESENT ALL KNOWN SITE CONDITIONS TO BE DEMOLISHED. CONTRACTOR TO COORDINATE ALL UNFORESEEN CONDITIONS WITH THE OWNER, ENGINEER, AND/OR RESPECTIVE UTILITY COMPANIES PRIOR TO PROCEEDING WITH WORK.
5. CONTRACTOR TO BE AWARE OF SELECTIVE DEMOLITION AT ALL SECTIONS OF WORK. CONTRACTOR WILL BE RESPONSIBLE FOR REPLACEMENT IN-KIND OF ALL WORK INADVERTENTLY REMOVED AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR SHALL REMOVE ITEMS TO BE DEMOLISHED AS INDICATED ON THE DRAWINGS WITH CARE AND NOT TO DAMAGE ADJACENT STRUCTURES. THE WORK AREA WILL BE LEFT READY TO RECEIVE NEW WORK.
7. WATER, SEWER, DRAINAGE, GAS, AND OTHER SITE UTILITIES SERVICING THE EXISTING FACILITIES ARE TO REMAIN ACTIVE THROUGHOUT CONSTRUCTION. THERE SHALL BE NO INTERRUPTION OF UTILITY SERVICE DURING CONSTRUCTION OPERATIONS WITHOUT APPROVAL FROM THE OWNER.
8. ALL UTILITIES REMOVED FROM THE SITE SHALL BE CUT AND CAPPED AT THE LIMIT OF DISTURBANCE UNLESS OTHERWISE NOTED.
9. PAVEMENT DEMOLITION SHALL BE SAWCUT AND DISPOSED OF PROPERLY.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OFFSITE DISPOSAL OF ALL PROJECT DEMOLITION MATERIAL, TRASH, AND DEBRIS IN ACCORDANCE WITH LOCAL AND STATE LAWS.
11. REFER TO SPECIFICATION SECTION 02100–"DEMOLITION AND REMOVAL" FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

EROSION CONTROL NOTES:

1. THE CONTRACTOR AND RELEVANT SUBCONTRACTORS SHALL READ AND UNDERSTAND THE RIDEMC ASSENT PERMIT AND THE SITE SPECIFIC SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC) PREPARED FOR THE PROJECT. ALL EROSION CONTROL SHALL BE IN ACCORDANCE WITH THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST REVISION.
2. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE CONDITIONS ISSUED FOR THE PROJECT BY RIDEMC AND BE RESPONSIBLE FOR CONFORMANCE WITH ALL PERMIT REQUIREMENTS AND CONSTRUCTION DOCUMENTS.
3. SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE PROVIDED IN ACCORDANCE WITH THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK", AND THE NOTES AND DETAILS SHOWN IN THIS PLAN SET.
4. THE CONTRACTOR SHALL SCHEDULE HIS/HER WORK TO ALLOW THE FINISHED SUBGRADE ELEVATIONS TO DRAIN PROPERLY WITHOUT PONDING. SPECIFICALLY, ALLOW WATER TO ESCAPE WHERE PROPOSED CURB MAY RETAIN RUNOFF PRIOR TO APPLICATION OF SURFACE PAVING. PROVIDE TEMPORARY POSITIVE DRAINAGE, AS REQUIRED, TO STABILIZED DISCHARGE POINTS. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY UTILITY CONNECTIONS.
5. CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL DEVICES FOR THE DURATION OF THE PROJECT.
6. CONTRACTOR SHALL PREVENT SEDIMENT FROM ENTERING ANY WATERWAY VIA DISCHARGES THROUGH ANY DRAINAGE STRUCTURES OR RUNOFF FROM WITHIN THE LIMITS OF WORK.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, RESTORING AND REPAIRING ALL DAMAGE AS A RESULT OF UNAUTHORIZED WORK OR DISCHARGES AT NO ADDITIONAL COST TO THE OWNER.
8. THE LIMITS OF EROSION CONTROL BARRIERS SHALL BE MODIFIED OR EXPANDED AS FIELD CONDITIONS WARRANT.
9. ALL EROSION CONTROL BARRIERS SHALL BE INSPECTED AT LEAST ONCE PER WEEK AND AFTER EACH STORM EVENT OF 0.25 INCH OR GREATER. ANY DAMAGED AREAS OF THE EROSION CONTROL BARRIER SHALL BE REPAIRED WITHIN 24 HOURS OF DISCOVERY.
10. DISCHARGE OF TURBID WATER TO ANY WATERWAY IS PROHIBITED
11. CONSTRUCTION SITE WASTE MATERIALS SHALL BE PROPERLY CONTAINED ONSITE AND DISPOSED OFF SITE IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE REGULATIONS.
12. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF COMPLETION OF WORK IN THAT AREA. THE CONTRACTOR SHALL NOT REMOVE ANY STRAW BALES, SILT FENCE OR OTHER EROSION CONTROLS UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED.
13. ALL ON-SITE AND OFF-SITE DRAINAGE STRUCTURES AND PIPING SHALL BE JETTED AND CLEANED UPON COMPLETION OF THE SITE WORK.

SPILL PREVENTION AND CONTROL NOTES:

1. SPILLS AND LEAKS SHALL BE AVOIDED THROUGH FREQUENT INSPECTION OF EQUIPMENT AND MATERIAL STORAGE AREAS, AND SHALL BE REMEDIATED AND REPAIRED AS NECESSARY.
2. HAZARDOUS MATERIAL STORAGE TO BE PLACED ONLY IN DESIGNATED AREAS. MATERIAL STORAGE AREAS SHALL BE ROUTINELY INSPECTED FOR LEAKY CONTAINERS, OPEN CONTAINERS, OR IMPROPER STORAGE TECHNIQUES THAT MAY LEAD TO SPILLS OR LEAKS.
3. APPROPRIATE SPILL REMEDIATION PROCEDURES AND SUPPLIES SHALL BE READILY AVAILABLE ON-SITE. TOOLS AND SUPPLIES SHALL BE CLEARLY MARKED SO THAT ALL PERSONNEL CAN LOCATE AND ACCESS THESE SUPPLIES.
4. SPILL REMEDIATION SHALL BE PERFORMED IMMEDIATELY. CONTRACTOR SHALL FOLLOW PROPER RESPONSE PROCEDURES IN ACCORDANCE WITH ANY APPLICABLE REGULATORY REQUIREMENTS.
5. AT NO TIME SHALL SPILLS BE DIVERTED TOWARD STORM DRAINS OR TO ANY WATERWAY.
6. EQUIPMENT/VEHICLE FUELING AND REPAIR/MAINTENANCE OPERATIONS SHALL TAKE PLACE ONLY WITHIN DESIGNATED STAGING AREAS.
7. THE EQUIPMENT OPERATOR SHALL FULLY MONITOR FUELING OPERATIONS TO EQUIPMENT AND VEHICLES AT ALL TIMES.
8. ANY SPILLAGE SHALL BE IMMEDIATELY CLEANED WITH SPILL KITS KEPT ON SITE.
9. IN THE CASE OF SMALL AMOUNTS OF SOIL CONTAMINATION, SUCH SOIL SHALL BE PLACED IN 55 GALLON DRUMS FOR DISPOSAL BY A LICENSED HAZARDOUS WASTE HAULER.
10. IN THE CASE OF A LARGE AMOUNT OF SOIL CONTAMINATION OR DISCHARGE TO THE WATERWAY, RHODE ISLAND DEM AND APPLICABLE AGENCIES SHALL BE NOTIFIED AS REQUIRED. A HAZARDOUS WASTE REMEDIATION FIRM SHALL BE CONTRACTED TO REMOVE AND DISPOSE OF THE CONTAMINATED MATERIAL OR CONTAIN THE SPILL AT NO ADDITIONAL COST.

GRADING AND UTILITY NOTES

1. ALL EXISTING CONDITIONS SHOWN SHALL BE CONSIDERED APPROXIMATE AND ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED. NO FIELD ADJUSTMENTS IN THE LOCATION OF SITE ELEMENTS SHALL BE MADE WITHOUT THE ENGINEERS APPROVAL.
2. ALL WORK PERFORMED AND ALL MATERIALS FURNISHED SHALL CONFORM WITH THE LINES AND GRADES ON THE PLANS AND SITE WORK SPECIFICATIONS, UNLESS OTHERWISE DIRECTED.
3. AT ALL LOCATIONS WHERE EXISTING CURBING OR PAVEMENT ABUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. BLEND NEW PAVEMENT AND CURBS SMOOTHLY INTO EXISTING BY MATCHING LINES, GRADES AND JOINTS.
4. ALL EXISTING AND PROPOSED UTILITY COVERS, GRATES, ETC. SHALL BE ADJUSTED TO BE FLUSH WITH THE SURROUNDING SURFACE OR PAVEMENT FINISH GRADE OF THIS CONTRACT. RIM ELEVATIONS OF STRUCTURES AND MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH AND CONSISTENT WITH THE PROPOSED FINAL GRADES.
5. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION OF PRIVATE UTILITIES BY THE UTILITY COMPANIES AS REQUIRED, INCLUDING OBTAINING ALL PERMITS. ALL COSTS AND FEES BY PRIVATE UTILITY COMPANIES TO BRING SERVICE TO THE SITE SHALL BE PAID FOR BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL PROTECT ALL UNDERGROUND DRAINAGE SEWER AND UTILITY FACILITIES FROM EXCESSIVE VEHICULAR LOADS DURING CONSTRUCTION. ANY DAMAGE TO THESE FACILITIES RESULTING FROM CONSTRUCTION LOADS WILL BE RESTORED TO ORIGINAL CONDITION AT NO COST TO THE OWNER.
7. DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES BY PROVIDING TEMPORARY SUPPORTS OR SHEETING AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
8. SITE GRADES SHALL CONFORM WITH ADA REQUIREMENTS.
9. CONTRACTOR IS REQUIRED TO APPLY FOR, OBTAIN, AND PAY ALL FEES ASSOCIATED WITH CONSTRUCTION PHASE PERMITS. PERMITS MAY INCLUDE, BUT NOT LIMITED TO:
   - RHODE ISLAND STATE BUILDING OFFICIAL
   - TOWN OF NARRAGANSETT DEPARTMENT OF PUBLIC WORKS PERMITS

TIMBER NOTES

1. ALL NEW LUMBER SHALL BE SOUTHERN YELLOW PINE, VISUALLY GRADED NO. 1 (F_b=1,350 PSI), UNLESS SPECIFIED OTHERWISE.
2. NEW LUMBER SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA STANDARD U1-11, UC3B WHEN NOT IN CONTACT WITH GROUND, UC4B FOR GROUND CONTACT, PERMANENT, OR INCIDENTAL.
3. ALL FIELD CUTS AND BOLT HOLES SHALL BE PROTECTED IN ACCORDANCE WITH AWPA STANDARD M4.
4. LUMBER DIMENSIONS PROVIDED IN THE PLANS ARE DRESSED SIZES UNLESS SPECIFIED OTHERWISE.

CONCRETE NOTES

1. CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF ACI 318 – "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND THE RHODE ISLAND STATE BUILDING CODE.
2. CONCRETE SHALL BE PLACED UNDER THE SUPERVISION OF THE APPROVED TESTING AGENCY.
3. CONCRETE SHALL BE NORMAL WEIGHT, WITH TYPE II CEMENT, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 5,000 PSI–TYPICAL. ALL CONCRETE DESIGN MIXES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
4. ALL CONCRETE SHALL BE AIR–ENTRAINED WITH AN AIR CONTENT OF 6% +/– 1%.
5. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾" x 45 DEGREES UNLESS NOTED OTHERWISE.
6. WHEN CONCRETE IS PLACED AGAINST PREVIOUSLY HARDENED CONCRETE, THE INTERFACE SHALL BE CLEAN, FREE OF LAITANCE AND INTENTIONALLY ROUGHENED OR RAKED TO FULL AMPLITUDE OF APPROXIMATELY 1/4 INCH.
7. CONCRETE WASHOUT OPERATIONS TO OR WITHIN THE WATERWAY MUST NOT TAKE PLACE AT ANY TIME.

REINFORCING STEEL NOTES

1. REINFORCING BARS SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 – "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND THE RHODE ISLAND STATE BUILDING CODE.
2. COMPLETE SHOP DRAWINGS AND SCHEDULES OF ALL REINFORCING STEEL SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF THAT PORTION OF THE WORK. ALL ACCESSORIES MUST BE SHOWN ON THE SHOP DRAWINGS.
3. REINFORCING BARS SHALL BE EPOXY COATED AND CONFORM TO ASTM A615 OR A706 (WELDABLE) GRADE 60.
4. ALL SUPPORTS SUCH AS CHAIRS, BOLSTERS, SPACERS, BLOCKS AND HANGERS SHALL BE OF NON–CORROSIVE MATERIAL. BLOCKS SHALL BE MADE OF 4,000 PSI (UN–REINFORCED) CONCRETE.
5. UNLESS NOTED ON THE DRAWINGS, THE MINIMUM CONCRETE PROTECTION (CLEAR COVER) FOR CAST–IN–PLACE CONCRETE COVER SHALL BE AS FOLLOWS:
   A. FORMED CONCRETE EXPOSED TO EARTH OR WATER: 3"
   B. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 4"
6. MINIMUM REINFORCEMENT DEVELOPMENT LENGTH SHALL BE IN ACCORDANCE WITH ACI 318 FOR CLASS B LAPS UNLESS NOTED OTHERWISE.
7. ALL REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS, AROUND CORNERS, AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS.

PRESTRESSED CONCRETE PILES

1. ALL REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS, AROUND CORNERS, AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS.

   STRUCTURAL DEEP FOUNDATION (PILING) DESIGN IS BASED UPON THE USE OF PILES WITH THE FOLLOWING CAPACITIES;

   PRESTRESSED CONCRETE:
   VERTICAL COMPRESSIVE = 27 KIPS
   LATERAL = 55PSF (LS), ACTING CONCURRENTLY WITH EITHER LOAD ABOVE
   ALL LOADS ARE APPLIED AT THE TOP OF THE PILE, UNLESS NOTED OTHERWISE.

   THIS WILL REQUIRE PRESTRESSED CONCRETE PILES WITH THE FOLLOWING PROPERTIES;
   12" PRESTRESSED CONCRETE PILE = (78) 35'–0"
   16" PRESTRESSED CONCRETE PILE = (88) 35'–0"
2. ALL PRESTRESSED PILES WILL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER OF RECORD, TO INCLUDE CALCULATIONS EXECUTED BY A LICENSED PROFESSIONAL ENGINEER, IN ACCORDANCE WITH THE LOAD REQUIREMENTS LISTED IN THIS NOTE. REFER TO THE SUBSURFACE INVESTIGATION BORING LOGS BY PARE CORPORATION, PROJECT NUMBER 19131.00, DATED BETWEEN JANUARY 15 2020 AND JANUARY 16 2020 FOR ADDITIONAL INFORMATION.
3. PILING IS TO BE HANDLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, SUCH THAT NO DAMAGE IS INCURRED.
4. PILING DESIGN IS TO INCLUDE LONGITUDINAL STRANDS WHICH WILL DEVELOP THE SPECIFIED CAPACITIES. SPIRAL WIRE REINFORCING SHALL MEET THE REQUIREMENTS OF ASTM A82, BE A MINIMUM OF 5 GAGE, AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 70 KSI
5. PILES SHALL BE DRIVEN BY A SINGLE OR DOUBLE ACTING STEAM, DIESEL, OR AIR HAMMER WITH A MINIMUM OF 15,000 FT–LBS OF ENERGY. LEADS SHALL BE FIXED TO THE BOOM AT THE TOP, AND TO THE CRANE AT THE BOTTOM; NO SWINGING LEADS ARE PERMITTED.
6. ONCE PILE DRIVING HAS STARTED, DRIVE ALL PILES CONTINUOUSLY UNTIL THEY ARE AT THE REQUIRED TIP ELEVATION.
7. FINAL PILE LOCATION SHALL BE WITHIN 3" OF THE DESIGN LOCATION.

DESIGN CRITERIA

SNOW LOADS (IBC SECT 1608)
SNOW LOAD P = 30 P/SF

WIND LOADS ASCE 7–16
MEAN ROOF HEIGHT = 16.5 FEET
BASIC WIND SPEED = 121 MPH

FLOOD LOADS (FEMA COASTAL CONSTRUCTION MANUAL FIRMETTE FLOOD ZONE VE
TOTAL BREAKING WAVE LOAD = 7530 PLF

EARTHQUAKE LOADS (IBC SECT. 1614)
MAPPED ACCELERATIONS: S_S = 0.164g s
S_1 = 0.058g 1

SITE CLASS D, F_a = 1.0 S_{MS} = 0.262g
F_v = 2.4 S_{M1} = 0.140g

DESIGN SPECTRAL RESPONSE ACCELERATIONS AT
5% DAMPENING, S_{DS} = 0.175g
S_{D1} = 0.093g

D1 GENERAL DESIGN RESPONSE SPECTRAL
ACCELERATION, PGA = 0.158g
8. SEISMIC DESIGN CATEGORY B

ABBREVIATIONS

- (BCP) = BITUMINOUS CONCRETE PAVEMENT
- (CM) = SAWCUT AND MATCH EXISTING GRADES
- (CW) = CEMENT CONCRETE SIDEWALK (STANDARD)
- (GV) = GATE VALVE (SEE DETAIL)
- (JB) = SPEAKER JUNCTION BOX
- (R&C) = REMOVE AND DISPOSE
- (SCW) = STRIPED CROSS WALK (SEE DETAIL)
- (SHP) = HANDICAP EPOXY RESIN PAVEMENT MARKING
- (SW) = 6" SOLID WHITE EPOXY RESIN PAVEMENT MARKING
- (SW12) = 12" SOLID WHITE EPOXY RESIN PAVEMENT MARKING
- (TIP) = TEMPORARY INLET PROTECTION
- (7.10) = R.I. STD. CONCRETE CURB DETAIL
- (9.9.3) = R.I. STD. CONSTRUCTION ACCESS DETAIL
- (45.10) = R.I. STD. CEMENT CONCRETE SIDEWALK DETAIL
- (45.30) = R.I. STD. WHEELCHAIR RAMP DETAIL

RIDOT STANDARD DETAILS CAN BE FOUND AT THE FOLLOWING WEBSITE:
HTTP://WWW.DOT.RI.GOV/DOCUMENTS/DOINGBUSINESS/BLUEBOOK.PDF

LEGEND

EXISTING		PROPOSED
	TREELINE	
	CONCRETE WALL	
	RETAINING WALL	
52	CONTOUR 1'	52
55	CONTOUR 5'	55
	SPOT ELEVATION	XXX.XX
ZONE "C"	FLOOD ZONE BOUNDARY	
	AREAS OF 0.2% CHANCE FLOOD (SEE FEMA MAP)	
	AREAS OF ROCKS, BOULDERS & OUTCROPS	
	HORIZONTAL CONTROL	
	VERTICAL CONTROL	
	EDGE OF PAVEMENT	
	CURBING	
D	DRAIN LINE	D
G	FUEL LINE	G
W	WATER LINE	W
E	ELECTRIC LINE	E
S	SEWER PUMP OUT LINE	S
	DRAIN MANHOLE	DMH
	CATCH BASIN	CB
	SIGN	
	CHAIN LINK FENCE	
	DUMPSTER ENCLOSURE	
	BITUMINOUS PAVEMENT (SEE LABEL FOR TYPE)	
	CONCRETE WALK (SEE LABEL FOR TYPE)	
	EROSION CONTROL	
LOD	LIMIT OF DISTURBANCE	LOD
	SAWCUT	
TC/BC = TOP OF CURB/ BOTTOM OF CURB		
	FUEL MANHOLE	

TIDAL REFERENCE

- EL. 16.0
- EL. 15.0 — +15.0 FEMA FLOOD ELEVATION (ZONE VE)
- EL. 14.0
- EL. 13.0
- EL. 12.0
- EL. 11.0
- EL. 10.0
- EL. 9.0
- EL. 8.0
- EL. 7.0
- EL. 6.0
- EL. 5.0
- EL. 4.0
- EL. 3.0
- EL. 2.0 — +1.81 MEAN HIGHER–HIGH WATER (MHHW)
- +1.277 MEAN HIGH WATER (MHW)
- EL. 1.0
- EL. 0.0 — +0.00 NAVD 88
- –0.312 MEAN SEA LEVEL (MSL)
- EL. –1.0
- EL. –2.0 — –1.721 MEAN LOW WATER (MLW)
- –1.843 MEAN LOWER–LOW WATER (MLLW)

DATUM INFORMATION

NOAA VERTICAL DATUM

90% DESIGN SUBMISSION
NOT FOR CONSTRUCTION

PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
508-543-1755

DRAWN

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

ROGER WHEELER STATE BEACH
BOARDWALK
NARRAGANSETT, RHODE ISLAND
RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

J. MATTHEW BELISLE
No. 7587
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

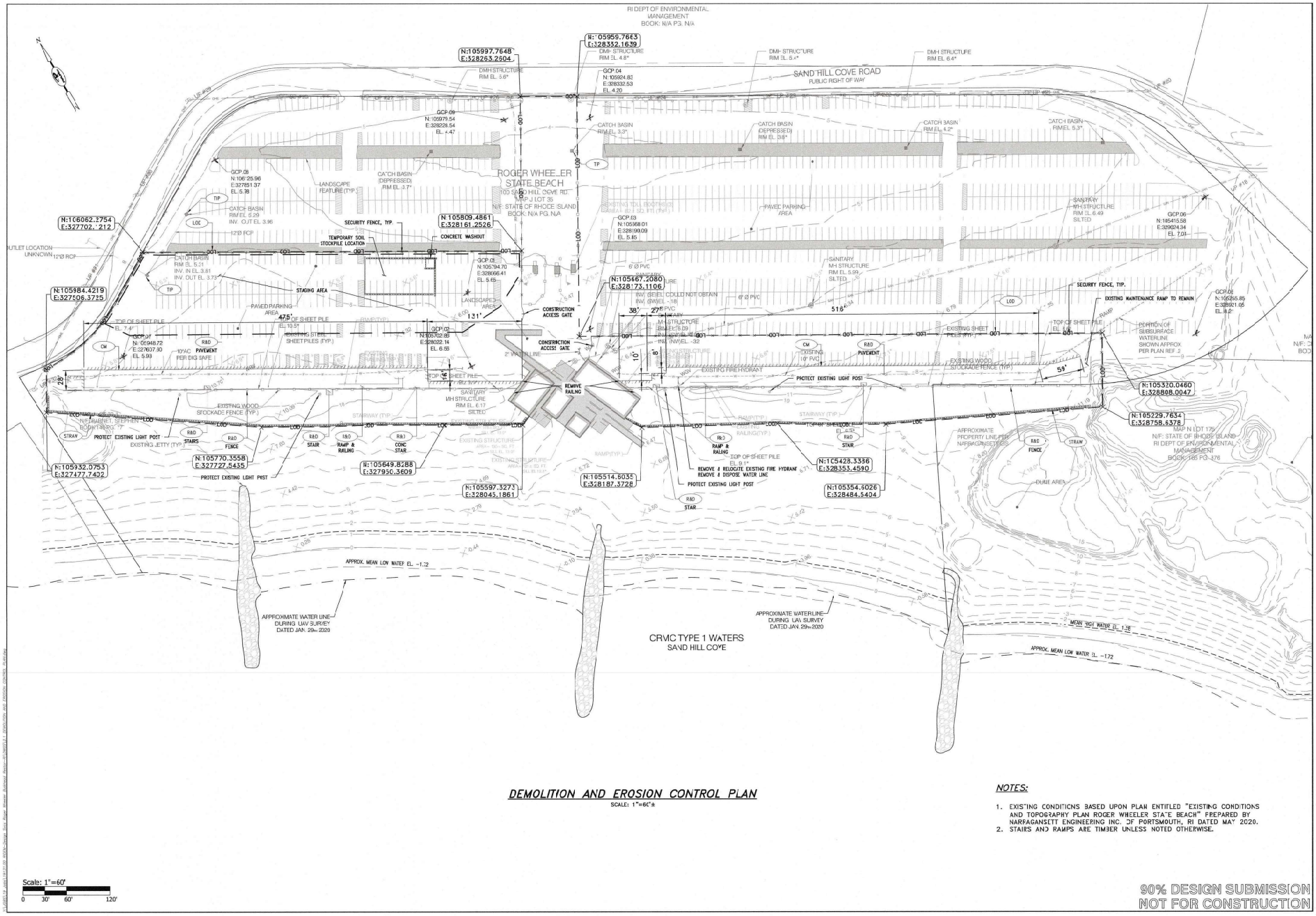
RECEIVED 1/4/2022 COASTAL RESOURCES MANAGEMENT COUNCIL

REVISIONS:

PROJECT NO.:	19131.00
DATE:	DECEMBER 2021
SCALE:	AS NOTED
DESIGNED BY:	KAD
CHECKED BY:	BMD
DRAWN BY:	LMC
APPROVED BY:	JMB

GENERAL NOTES AND LEGEND

SHEET NO.: 1.0



DEMOLITION AND EROSION CONTROL PLAN

SCALE: 1"=60'±

NOTES:

1. EXISTING CONDITIONS BASED UPON PLAN ENTITLED "EXISTING CONDITIONS AND TOPOGRAPHY PLAN ROGER WHEELER STATE BEACH" PREPARED BY NARRAGANSETT ENGINEERING INC. OF PORTSMOUTH, RI DATED MAY 2020.
2. STAIRS AND RAMPS ARE TIMBER UNLESS NOTED OTHERWISE.

90% DESIGN SUBMISSION
NOT FOR CONSTRUCTION

PARE
PARE CORPORATION
ENGINEERS · SCIENTISTS · PLANNERS
10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
508-541-1755

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

ROGER WHEELER STATE BEACH BOARDWALK

NARRAGANSETT, RHODE ISLAND

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

J. MATTHEW EELMAN
No. 7587
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

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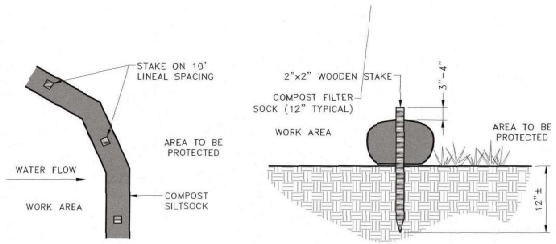
DEMOLITION AND EROSION CONTROL PLAN

SHEET NO.: 2.1

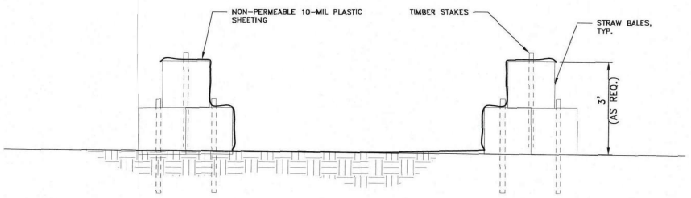


NOTES:

1. COMPOST/ SOIL/ ROCK/ SEED FILL TO MEET APPLICATION REQUIREMENTS.
2. COMPOST MATERIAL TO BE REMOVED OR DISPERSED ON SITE AS DETERMINED BY ENGINEER.

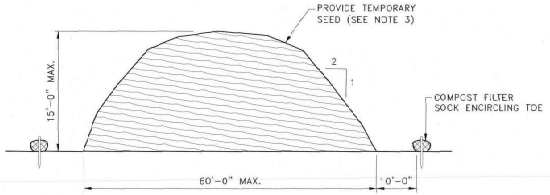
COMPOST FILTER SOCK DETAIL

NOT TO SCALE



CONCRETE WASHOUT

NOT TO SCALE

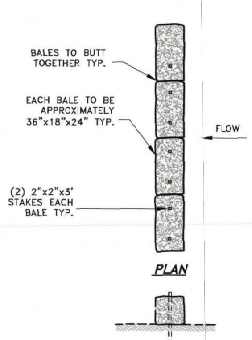


NOTES:

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL PREPARE A PLAN SHOWING THE PROPOSED LOCATION OF ALL STOCKPILE AREAS.
2. STOCKPILE AREA SHALL NOT EXCEED SPECIFIED DIMENSIONS WITHOUT APPROVAL FROM ENGINEER.
3. STOCKPILED ERODIBLE MATERIAL THAT WILL NOT BE USED FOR GREATER THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEED IMMEDIATELY FOLLOWING PLACEMENT. USE RIDOT STD. M.18.10.5 SEED MIX. USE MADOT STD. M.6.03.1 EROSION SEED.

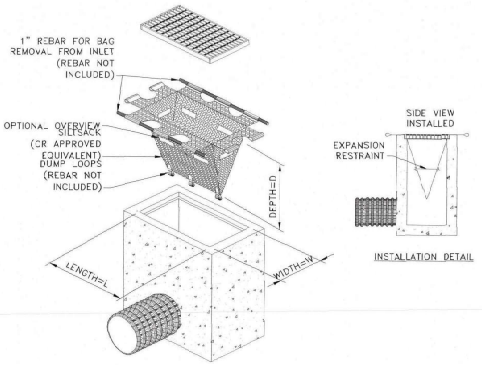
ERODIBLE MATERIAL STOCKPILE

NOT TO SCALE



STRAW BALE DETAIL

NOT TO SCALE



NOTES:

1. INLET PROTECTION SHALL BE CLEANED OF SILT AND DEBRIS ON A REGULAR BASIS AS REQUIRED BY PROJECT SPECIFIC SWPPP.
2. INSPECTIONS SHALL BE DONE AFTER EACH RAIN EVENT AND AT A MINIMUM EVERY TWO WEEKS AND AS REQUIRED BY PROJECT SPECIFIC SWPPP.

TIP

TEMPORARY INLET PROTECTION

NOT TO SCALE

90% DESIGN SUBMISSION
NOT FOR CONSTRUCTION

PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
508-543-1155

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

ROGER WHEELER STATE BEACH
BOARDWALK
NARRAGANSETT, RHODE ISLAND

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

RECEIVED
1/4/2022
COASTAL RESOURCES MANAGEMENT COUNCIL

J. MATTHEW BELISLE
No. 7587
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

REVISIONS:

PROJECT NO.:	19131.00
DATE:	DECEMBER 2021
SCALE:	AS NOTED
DESIGNED BY:	KAD
CHECKED BY:	BMD
DRAWN BY:	LMC
APPROVED BY:	JMB

EROSION CONTROL DETAILS

SHEET NO.:
2.2

APPENDIX C

Copy of RIPDES Construction General Permit and Authorization to Discharge

(To save paper and file space, this is not included in DEM submittal, a copy will be provided to the operator)

APPENDIX D

Copy of Regulatory Permits

(Copies will be provided when received)

APPENDIX E

Copy of RIPDES NOI
(Copies will be provided when received)

APPENDIX F

Inspection Reports w/ Corrective Action Log

SESC Plan Inspection Report

Project Information			
Name	**Roger Wheeler State Beach Boardwalk**		
Location	**100 Sand Hill Cove Road**		
DEM Permit No.			
Site Owner	RI Department of Environmental Management		
Site Operator			

Inspection Information			
Inspector Name	Name	Phone	Email
Inspection Date		**Start/End Time**	
Inspection Type ❑ **Weekly** ❑ **Pre-storm event** ❑ **During storm event** ❑ **Post-storm event** ❑ **Other**			

Weather Information
Last Rain Event **Date:** **Duration (hrs):** **Approximate Rainfall (in):**
Rain Gauge Location & Source:
Weather at time of this inspection:

Check statement that applies then sign and date below:

☐ **I, as the designated Inspector, certify that this site has been inspected as required by regulation and I have determined that maintenance and corrective actions are not required at this time.**

☐ **I, as the designated Inspector, certify that this site has been inspected as required by regulation and I have made the determination that the site requires corrective actions. The required corrective actions are noted within this inspection report.**

	Print Name	Signature	Date
Inspector:			

The Site Operator acknowledges by his/her signature, the receipt of this SESC Plan inspection report and its findings. He/she acknowledges that all recommended corrective actions must be completed and documentation of all such corrective actions must be made in this inspection report per applicable regulations.

	Print Name	Signature	Date
Operator:			

Site-specific Control Measures

Number the structural and non-structural stormwater control measures identified in the SESC Plan and on the SESC Site Plans and list them below (add as necessary). Bring a copy of this inspection form and any applicable SESC Site Plans with you during your inspections. This list will assist you to inspect all control measures at your site.
FILL THIS TABLE USING THE SESC PLAN TABLES 2.11 & 3.12.

	Location/Station	Control Measure Description	Installed & Operating Properly?	Assoc. Photo/ Figure #	Corrective Action Needed (Yes or No; if 'Yes', please detail action required)
1	See 2.1	Compost Filter Sock/Silt Fence, straw bales	❑Yes ❑No		
2	See 2.1	Construction Entrances	❑Yes ❑No		
3	See 2.1 and 2.2	Stockpile Management	❑Yes ❑No		
4	See 2.1 and 2.2	Concrete Washout	❑Yes ❑No		
5	See 2.1	Temporary Inlet Protection	❑Yes ❑No		
6			❑Yes ❑No		
7			❑Yes ❑No		
8			❑Yes ❑No		
			❑Yes ❑No		
	Attention Operator:	**You must modify this inspection form as the project progresses, control measure locations change, and amendments to the SESC Plan are instituted in the field.**	❑Yes ❑No		
10			❑Yes ❑No		
11			❑Yes ❑No		
12			❑Yes ❑No		

	Location/Station	Control Measure Description	Installed & Operating Properly?	Assoc. Photo/ Figure #	Corrective Action Needed (Yes or No; if 'Yes', please detail action required)
13			❑Yes ❑No		
14			❑Yes ❑No		
15			❑Yes ❑No		
16			❑Yes ❑No		
17			❑Yes ❑No		
18			❑Yes ❑No		
19			❑Yes ❑No		
20			❑Yes ❑No		
21			❑Yes ❑No		
22			❑Yes ❑No		
23			❑Yes ❑No		
24			❑Yes ❑No		
25			❑Yes ❑No		

General Site Issues

*Below are some general site issues that should be assessed during inspections. Please **customize** this list as needed for conditions at the site.*

	Compliance Question		Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
1	Have all control measures been installed as specified in the RISESC Handbook and prior to any earth disturbing activities?	❑Yes ❑No ❑ N/A		
2	Are appropriate limits of disturbance (LOD) established?	❑Yes ❑No ❑ N/A		
3	Are controls that limit runoff from exposed soils by diverting, retaining, or detaining flows (such as check dams, sediment basins, etc.) in place?	❑Yes ❑No ❑ N/A		
4	Are all temporary conveyance practices installed correctly and functioning as designed?	❑Yes ❑No ❑ N/A		
5	Has maintenance been performed as required to ensure continued proper function of all temporary conveyances practices?	❑Yes ❑No ❑ N/A		
6	Were all exposed soils seeded by October 15th?	❑Yes ❑No ❑ N/A		
7	Have soils been stabilized where earth disturbance activities have permanently or temporarily ceased on any portion of the site and will not resume for more than 14 days?	❑Yes ❑No ❑ N/A		
8	In instances where adequate vegetative stabilization was not established by November 15th, have non-vegetative erosion control measures must be employed?	❑Yes ❑No ❑ N/A		
9	If work is to continue from October 15th through April 15th, are steps taken to ensure that only the day's work area will be exposed and all erodible soil is stabilized within 5 working days?	❑Yes ❑No ❑ N/A		
10	Have inlet protection measures (such as fabric drop inlet protection, curb drop inlet protection, etc.) been properly installed?	❑Yes ❑No ❑ N/A		
11	Has the operator cleaned and maintained inlet protection measures when needed?	❑Yes ❑No ❑ N/A		
12	Has the operator removed accumulated sediment adjacent to inlet protection measures within 24 hours of detection?	❑Yes ❑No ❑ N/A		

	Compliance Question		Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
13	Has the operator properly installed outlet protection (such as riprap, turf mats, etc.) at all temporary and permanent discharge points?	❑Yes ❑No ❑ N/A		
14	Are all outlet protection measures functioning properly in order to reduce discharge velocity, promote infiltration, and eliminate scour?	❑Yes ❑No ❑ N/A		
15	Have all discharge points been inspected to ensure the prevention of scouring and channel erosion?	❑Yes ❑No ❑ N/A		
16	Have sediment controls been installed along perimeter areas that will receive stormwater from earth disturbing activities?	❑Yes ❑No ❑ N/A		
17	Is the operator maintaining sediment controls in accordance with the requirements in the *RI SESC Handbook*?	❑Yes ❑No ❑ N/A		
18	Have temporary sediment barriers been installed around permanent infiltration areas (such as bioretention areas, infiltration basins, etc.)?	❑Yes ❑No ❑ N/A		
19	Have staging areas and equipment routing been implemented to avoid compaction where permanent infiltration areas will be located?	❑Yes ❑No ❑ N/A		
20	Are surface outlet structures (such as skimmers, siphons, etc.) installed for each temporary sediment basin? [Exception: frozen conditions]	❑Yes ❑No ❑ N/A		
21	Have all temporary sediment basins or traps been inspected and maintained as required to ensure proper function?	❑Yes ❑No ❑ N/A		
22	Does the project include the use of polymers, flocculants, or other chemicals to control erosion, sedimentation, or runoff from the site?	❑Yes ❑No ❑ N/A		
23	Are all chemicals being managed in accordance with Appendix J of the *RISESC Handbook* and current best management practices?	❑Yes ❑No ❑ N/A		
24	Has the site operator taken steps to **prohibit** the following pollutant discharges on the site?			
a	Contaminated groundwater.	❑Yes ❑No ❑ N/A		

	Compliance Question		Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
b	Wastewater from washout of concrete; unless properly contained, managed, and disposed of.	❑Yes ❑No ❑ N/A		
c	Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction products.	❑Yes ❑No ❑ N/A		
d	Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.	❑Yes ❑No ❑ N/A		
e	Soaps or solvents used in vehicle and equipment washing.	❑Yes ❑No ❑ N/A		
f	Toxic or hazardous substances from a spill or other release.	❑Yes ❑No ❑ N/A		
25	Is the operator using properly constructed entrances/exits to the site so sediment removal occurs prior to vehicles exiting?	❑Yes ❑No ❑ N/A		
26	If needed, are additional controls (such as rumble strips, rattle plates, etc.) in place to remove sediment from tires prior to exiting?	❑Yes ❑No ❑ N/A		
27	Is sediment track-out being removed by the end of the same workday in which it occurs (via sweeping, shoveling, or vacuuming)?	❑Yes ❑No ❑ N/A		
28	Are all wastes generated at the site being managed and properly disposed of by the end of each workday?	❑Yes ❑No ❑ N/A		
29	Are all chemicals and hazardous waste materials stored properly in covered areas and surrounded by containment control systems?	❑Yes ❑No ❑ N/A		
30	Has the operator established highly visible locations for the storage of spill prevention and control equipment on the construction site?	❑Yes ❑No ❑ N/A		
31	Are allowable non-stormwater discharges being managed properly with adequate controls?	❑Yes ❑No ❑ N/A		
32	Is the site operator properly managing groundwater or stormwater that is removed from excavations, trenches, or similar points of accumulation?	❑Yes ❑No ❑ N/A		
33	Are proper procedures and controls in place for the storage of materials that may discharge pollutants if	❑Yes ❑No ❑ N/A		

	Compliance Question		Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
	exposed to stormwater?			
	Are stockpiles located within the limits of disturbance?	❑Yes ❑No ❑ N/A		
	Are stockpiles being protected from contact with stormwater using a temporary sediment barrier?	❑Yes ❑No ❑ N/A		
	Where needed, has cover or appropriate temporary vegetative or structural stabilization been utilized for stockpiles?	❑Yes ❑No ❑ N/A		
	Is the operator effectively managing the generation of dust through the use of water, chemicals, or minimization of exposed soil?	❑Yes ❑No ❑ N/A		
	Are designated washout areas (such as wheel washing stations, washout for concrete, paint, stucco, etc.) clearly marked on the site?	❑Yes ❑No ❑ N/A		
	Are vehicle fueling and maintenance areas properly located to prevent pollutants from impacting stormwater and sensitive receptors?	❑Yes ❑No ❑ N/A		
	(Other)			

(add more as necessary)

General Field Comments:

Photos:
(Associated photos – each photo should be dated and have a unique identification # and written description indicating where it is located within the project area. If a close up photo is required, it should be preceded with a photo including both the detail area and some type of visible fixed reference point. Photos should be annotated with Station numbers and other identifying information where needed.)

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

(add more as necessary)

Corrective Action Log

TO BE FILLED OUT BY SITE OPERATOR

Describe repair, replacement, and maintenance of control measures, actions taken, date completed, and note the person that completed the work.

	Location/Station	Corrective Action	Date Completed	Person Responsible
Operator Signature:			**Date:**	

APPENDIX G

SESC Amendment Log

Amendment Log

TO BE FILLED OUT BY SITE OPERATOR

Describe amendment(s) to be made to the SESC Plan, the date, and the person/title making the amendment. ALL amendments must be approved by the Site Owner.

#	Date	Description of Amendment	Amended by: Person/Title	Site Owner Must Initial
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Add more lines/pages as necessary

SECTION 8

Project Plans, prepared by Pare Corporation

(Bound Separately)

Index of Drawings

Sheet No.	Dwg. No.	Description
1	-	COVER SHEET
2	1.0	GENERAL NOTES AND LEGEND
3	2.0	EXISTING SITE PLAN
4	2.1	DEMOLITION AND EROSION CONTROL PLAN
5	2.2	EROSION CONTROL DETAILS
6	3.0	PROPOSED SITE PLAN
7	3.1	PROPOSED SECTIONS AND DETAILS
8	3.2	TIMBER SHADE STRUCTURE DETAILS
9	3.3	VIEWING PLATFORM SECTION
10	3.4	STAIR AND RAMP DETAILS
11	4.0	HANDRAIL DETAILS
12	4.1	MISCELLANEOUS DETAILS
13	4.2	MISCELLANEOUS WATER DETAILS

STATE OF RHODE ISLAND

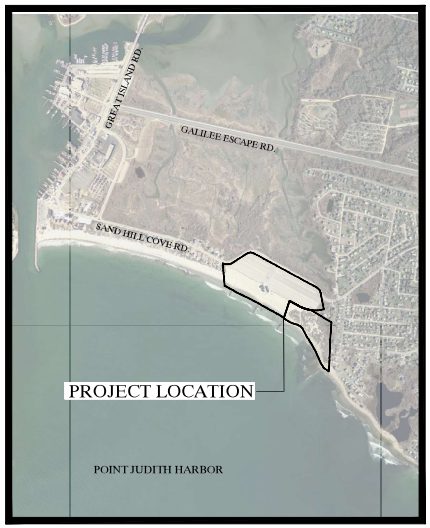
D ■ E ■ M

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
DIVISION OF PLANNING AND DEVELOPMENT

ROGER WHEELER STATE BEACH BOARDWALK

NARRAGANSETT, RHODE ISLAND

Pare Project No. 19131.00



Locus Map

Scale: 1"=1000'

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
508-543-1755

DECEMBER 2021

J. MATTHEW BELLISLE
No. 7587
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

90% DESIGN SUBMISSION
NOT FOR CONSTRUCTION

GENERAL NOTES:

1. FOR THE PURPOSE OF THIS PROJECT

   OWNER – DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
   235 PROMENADE STREET, FL. 3
   PROVIDENCE, RI 02908

   ENGINEER – PARE CORPORATION
   10 LINCOLN ROAD, SUITE 210
   FOXBORO, MA 02035

   CONTACT – J, MATTHEW BELLISLE, P.E., SENIOR VICE PRESIDENT
   BRIAN DUTRA, P.E., PROJECT ENGINEER

2. ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE RHODE ISLAND STATE BUILDING CODE, ALL FEDERAL AND MUNICIPAL BUILDING CODES, AND THE SPECIFICATIONS INCLUDED IN THIS CONTRACT. THESE PLANS ARE INCOMPLETE UNLESS ACCOMPANIED BY THE SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS.
3. THE BASE PLAN WAS DEVELOPED BASED UPON PLAN ENTITLED "EXISTING CONDITIONS AND TOPOGRAPHY PLAN ROGER WHEELER STATE BEACH" PREPARED BY NARRAGANSETT ENGINEERING INC. OF PORTSMOUTH, RI DATED MARCH 2021. ANY DISCREPANCIES ON THESE PLANS WITH REGARD TO DIMENSIONS OR CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PORTION OF WORK.
4. HORIZONTAL DATUM: RHODE ISLAND STATE PLANE – NAD83
   VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS ESTABLISHED BY NOS TIDAL BENCH MARK
5. INFORMATION REGARDING THE LOCATION OF SURROUNDING STRUCTURES AND UTILITIES IS FURNISHED SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR AND SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL CONDUCT ITS OWN INDEPENDENT EXAMINATION OF SITE CONDITIONS FOR THE PURPOSE OF BIDDING, FABRICATION, AND CONSTRUCTION ASSOCIATED WITH THE PROJECT. ANY RELIANCE UPON INFORMATION MADE AVAILABLE BY THE OWNER OR THE ENGINEER SHALL BE AT THE CONTRACTOR'S RISK.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS. PLANS SHALL NOT BE SCALED FOR DIMENSIONS.
7. CONSTRUCTION SHALL BE MADE FROM APPROVED SHOP DRAWINGS ONLY.
8. NOTES, TYPICAL DETAILS, AND SCHEDULES APPLY TO ALL WORK UNLESS OTHERWISE NOTED. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTING SHOP DRAWINGS FOR REVIEW.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL PROJECT DEMOLITION AND EXCESS MATERIAL IN ACCORDANCE WITH RHODE ISLAND, LOCAL, AND FEDERAL LAWS.
10. THE CONTRACTOR SHALL PROTECT ALL ADJACENT STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ALL DAMAGE TO ADJACENT STRUCTURES AND UTILITIES AT NO ADDITIONAL COST TO THE OWNER.
11. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL VISIT THE SITE AND SHALL NOTIFY THE ENGINEER OF ANY ADDITIONAL UTILITIES, STRUCTURES, OR ANY OTHER ELEMENTS WHICH MAY IMPEDE WORK. UTILITY AND/OR STRUCTURE RELOCATIONS, IF NECESSARY, SHALL BE COORDINATED THROUGH THE OWNER'S ENGINEER.
12. THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. BEFORE COMMENCING SITE WORK IN ANY AREA, CONTACT "DIG SAFE" AT 1–888–DIG–SAFE TO ACCURATELY LOCATE ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, 72 HOURS PRIOR TO COMMENCING WORK. ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS OF SUCH DAMAGE SHALL BE THE CONTRACTOR'S RESPONSIBILITY. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR TOWN WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE PROPERLY NOTIFIED.
13. THE CONTRACTOR SHALL FOLLOW ALL OSHA, FEDERAL, STATE, AND LOCAL STANDARDS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL SITE SAFETY PROCEDURES AND PRACTICES REGARDLESS OF THE PRESENCE OF THE OWNER OR ENGINEER.
14. ALL CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE LIMITS OF WORK AND TEMPORARY EASEMENTS DEFINED HEREIN.
15. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A CONSTRUCTION SCHEDULE TO THE OWNER WITHIN 5 DAYS OF THE NOTICE OF AWARD. THE CONTRACTOR SHALL UPDATE SCHEDULE AS NEEDED THROUGHOUT THE COURSE OF WORK.
16. THE CONTRACTOR SHALL STAGE ALL EQUIPMENT IN THE DESIGNATED STAGING AREA. ALL GREASING AND REFUELING ACTIVITIES SHALL OCCUR IN THE STAGING AREA. ALL NECESSARY MEASURES SHALL BE TAKEN TO PREVENT BY ANY METHOD, OIL, CONSTRUCTION DEBRIS, STOCKPILED MATERIALS, AND OTHER MATERIALS ON THE SITE, FROM ENTERING THE WATERWAY. STAGING/LAYDOWN AREAS, AS APPROVED BY THE ENGINEER, SHALL BE RESTORED BY THE CONTRACTOR TO THE EXISTING CONDITION. IN ADDITION, THE CONTRACTOR SHALL REPLACE ALL DAMAGED MATERIALS AS A RESULT OF HIS OPERATIONS, TO THE SATISFACTION OF THE ENGINEER.
17. THE CONTRACTOR SHALL MAINTAIN A SECURE SITE AND PROVIDE APPROPRIATE SAFETY MEASURES TO PREVENT ACCIDENTS. THE SAFETY MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FENCES, FLASHING WARNING LIGHTS, AND POLICING IF NECESSARY.
18. IN CASE OF CONTRADICTION BETWEEN THE DRAWINGS, THE SPECIFICATIONS, AND THE CODES, OR IF ANY CHANGE IS REQUIRED, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY. NO CHANGE SHALL BE MADE WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
19. UPON COMPLETION OF THE PROJECT, CONTRACTOR IS TO PROVIDE A POST CONSTRUCTION SURVEY AND TWO AS–BUILT PLAN SETS TO THE OWNER DEPICTING ANY FIELD CHANGES OF DIMENSION OR DETAIL, LOCATION OF UNDERGROUND STRUCTURES AND/OR UTILITIES, CONSTRUCTION DEVIATIONS, CHANGES DUE TO FIELD OR CHANGE ORDER, AND DETAILS NOT ON THE ORIGINAL DRAWINGS.
20. NO WORK SHALL BE COMPLETED UNTIL EACH OF THE FOLLOWING CONDITIONS ARE MET:
    * RIPDES PERMIT IS RECEIVED FROM RIDEM
    * NOTICE OF ASSENT IS RECEIVED FROM CRMC
    * THE OWNER DIRECTS THE WORK TO BE COMPLETED
21. CONTRACTOR SHALL PROVIDE A TRAFFIC MANAGEMENT PLAN FOR THE PROPOSED WORK.

DEMOLITION NOTES:

1. ALL DEMOLITION SHALL BE COORDINATED WITH THE OWNER PRIOR TO START OF WORK.
2. THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION OF STRUCTURES, PAVEMENT AND CONCRETE MATERIALS, AND UTILITIES WITH APPROPRIATE PROPOSED SITE GENERAL, GRADING, UTILITY, AND LANDSCAPE DRAWINGS.
3. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO ANY DEMOLITION OR CONSTRUCTION. ANY DISCREPANCIES RELATING TO THE DRAWINGS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. ALL NOTED UTILITIES TO BE REMOVED AND DISPOSED OF, RELOCATED OR CAPPED REPRESENT ALL KNOWN SITE CONDITIONS TO BE DEMOLISHED. CONTRACTOR TO COORDINATE ALL UNFORESEEN CONDITIONS WITH THE OWNER, ENGINEER, AND/OR RESPECTIVE UTILITY COMPANIES PRIOR TO PROCEEDING WITH WORK.
5. CONTRACTOR TO BE AWARE OF SELECTIVE DEMOLITION AT ALL SECTIONS OF WORK. CONTRACTOR WILL BE RESPONSIBLE FOR REPLACEMENT IN–KIND OF ALL WORK INADVERTENTLY REMOVED AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR SHALL REMOVE ITEMS TO BE DEMOLISHED AS INDICATED ON THE DRAWINGS WITH CARE AND NOT TO DAMAGE ADJACENT STRUCTURES. THE WORK AREA WILL BE LEFT READY TO RECEIVE NEW WORK.
7. WATER, SEWER, DRAINAGE, GAS, AND OTHER SITE UTILITIES SERVICING THE EXISTING FACILITIES ARE TO REMAIN ACTIVE THROUGHOUT CONSTRUCTION. THERE SHALL BE NO INTERRUPTION OF UTILITY SERVICE DURING CONSTRUCTION OPERATIONS WITHOUT APPROVAL FROM THE OWNER.
8. ALL UTILITIES REMOVED FROM THE SITE SHALL BE CUT AND CAPPED AT THE LIMIT OF DISTURBANCE UNLESS OTHERWISE NOTED.
9. PAVEMENT DEMOLITION SHALL BE SAWCUT AND DISPOSED OF PROPERLY.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OFFSITE DISPOSAL OF ALL PROJECT DEMOLITION MATERIAL, TRASH, AND DEBRIS IN ACCORDANCE WITH LOCAL AND STATE LAWS.
11. REFER TO SPECIFICATION SECTION 02100–"DEMOLITION AND REMOVAL" FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

EROSION CONTROL NOTES:

1. THE CONTRACTOR AND RELEVANT SUBCONTRACTORS SHALL READ AND UNDERSTAND THE RICRMC ASSENT PERMIT AND THE SITE SPECIFIC SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC) PREPARED FOR THE PROJECT. ALL EROSION CONTROL SHALL BE IN ACCORDANCE WITH THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST REVISION.
2. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE CONDITIONS ISSUED FOR THE PROJECT BY RICRMC AND BE RESPONSIBLE FOR CONFORMANCE WITH ALL PERMIT REQUIREMENTS AND CONSTRUCTION DOCUMENTS.
3. SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE PROVIDED IN ACCORDANCE WITH THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK", AND THE NOTES AND DETAILS SHOWN IN THIS PLAN SET.
4. THE CONTRACTOR SHALL SCHEDULE HIS/HER WORK TO ALLOW THE FINISHED SUBGRADE ELEVATIONS TO DRAIN PROPERLY WITHOUT PONDING. SPECIFICALLY, ALLOW WATER TO ESCAPE WHERE PROPOSED CURB MAY RETAIN RUNOFF PRIOR TO APPLICATION OF SURFACE PAVING. PROVIDE TEMPORARY POSITIVE DRAINAGE, AS REQUIRED, TO STABILIZED DISCHARGE POINTS. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY UTILITY CONNECTIONS.
5. CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL DEVICES FOR THE DURATION OF THE PROJECT.
6. CONTRACTOR SHALL PREVENT SEDIMENT FROM ENTERING ANY WATERWAY VIA DISCHARGES THROUGH ANY DRAINAGE STRUCTURES OR RUNOFF FROM WITHIN THE LIMITS OF WORK.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, RESTORING AND REPAIRING ALL DAMAGE AS A RESULT OF UNAUTHORIZED WORK OR DISCHARGES AT NO ADDITIONAL COST TO THE OWNER.
8. THE LIMITS OF EROSION CONTROL BARRIERS SHALL BE MODIFIED OR EXPANDED AS FIELD CONDITIONS WARRANT.
9. ALL EROSION CONTROL BARRIERS SHALL BE INSPECTED AT LEAST ONCE PER WEEK AND AFTER EACH STORM EVENT OF 0.25 INCH OR GREATER. ANY DAMAGED AREAS OF THE EROSION CONTROL BARRIER SHALL BE REPAIRED WITHIN 24 HOURS OF DISCOVERY.
10. DISCHARGE OF TURBID WATER TO ANY WATERWAY IS PROHIBITED.
11. CONSTRUCTION SITE WASTE MATERIALS SHALL BE PROPERLY CONTAINED ONSITE AND DISPOSED OFF SITE IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE REGULATIONS.
12. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF COMPLETION OF WORK IN THAT AREA. THE CONTRACTOR SHALL NOT REMOVE ANY STRAW BALES, SILT FENCE OR OTHER EROSION CONTROLS UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED.
13. ALL ON–SITE AND OFF–SITE DRAINAGE STRUCTURES AND PIPING SHALL BE JETTED AND CLEANED UPON COMPLETION OF THE SITE WORK.

SPILL PREVENTION AND CONTROL NOTES:

1. SPILLS AND LEAKS SHALL BE AVOIDED THROUGH FREQUENT INSPECTION OF EQUIPMENT AND MATERIAL STORAGE AREAS, AND SHALL BE REMEDIATED AND REPAIRED AS NECESSARY.
2. HAZARDOUS MATERIAL STORAGE TO BE PLACED ONLY IN DESIGNATED AREAS. MATERIAL STORAGE AREAS SHALL BE ROUTINELY INSPECTED FOR LEAKY CONTAINERS, OPEN CONTAINERS, OR IMPROPER STORAGE TECHNIQUES THAT MAY LEAD TO SPILLS OR LEAKS.
3. APPROPRIATE SPILL REMEDIATION PROCEDURES AND SUPPLIES SHALL BE READILY AVAILABLE ON–SITE. TOOLS AND SUPPLIES SHALL BE CLEARLY MARKED SO THAT ALL PERSONNEL CAN LOCATE AND ACCESS THESE SUPPLIES.
4. SPILL REMEDIATION SHALL BE PERFORMED IMMEDIATELY. CONTRACTOR SHALL FOLLOW PROPER RESPONSE PROCEDURES IN ACCORDANCE WITH ANY APPLICABLE REGULATORY REQUIREMENTS.
5. AT NO TIME SHALL SPILLS BE DIVERTED TOWARD STORM DRAINS OR TO ANY WATERWAY.
6. EQUIPMENT/VEHICLE FUELING AND REPAIR/MAINTENANCE OPERATIONS SHALL TAKE PLACE ONLY WITHIN DESIGNATED STAGING AREAS.
7. THE EQUIPMENT OPERATOR SHALL FULLY MONITOR FUELING OPERATIONS TO EQUIPMENT AND VEHICLES AT ALL TIMES.
8. ANY SPILLAGE SHALL BE IMMEDIATELY CLEANED WITH SPILL KITS KEPT ON SITE.
9. IN THE CASE OF SMALL AMOUNTS OF SOIL CONTAMINATION, SUCH SOIL SHALL BE PLACED IN 55 GALLON DRUMS FOR DISPOSAL BY A LICENSED HAZARDOUS WASTE HAULER.
10. IN THE CASE OF A LARGE AMOUNT OF SOIL CONTAMINATION OR DISCHARGE TO THE WATERWAY, RHODE ISLAND DEM AND APPLICABLE AGENCIES SHALL BE NOTIFIED AS REQUIRED. A HAZARDOUS WASTE REMEDIATION FIRM SHALL BE CONTRACTED TO REMOVE AND DISPOSE OF THE CONTAMINATED MATERIAL OR CONTAIN THE SPILL AT NO ADDITIONAL COST.

GRADING AND UTILITY NOTES

1. ALL EXISTING CONDITIONS SHOWN SHALL BE CONSIDERED APPROXIMATE AND ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED. NO FIELD ADJUSTMENTS IN THE LOCATION OF SITE ELEMENTS SHALL BE MADE WITHOUT THE ENGINEERS APPROVAL.
2. ALL WORK PERFORMED AND ALL MATERIALS FURNISHED SHALL CONFORM WITH THE LINES AND GRADES ON THE PLANS AND SITE WORK SPECIFICATIONS, UNLESS OTHERWISE DIRECTED.
3. AT ALL LOCATIONS WHERE EXISTING CURBING OR PAVEMENT ABUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. BLEND NEW PAVEMENT AND CURBS SMOOTHLY INTO EXISTING BY MATCHING LINES, GRADES AND JOINTS.
4. ALL EXISTING AND PROPOSED UTILITY COVERS, GRATES, ETC. SHALL BE ADJUSTED TO BE FLUSH WITH THE SURROUNDING SURFACE OR PAVEMENT FINISH GRADE OF THIS CONTRACT. RIM ELEVATIONS OF STRUCTURES AND MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH AND CONSISTENT WITH THE PROPOSED FINAL GRADES.
5. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION OF PRIVATE UTILITIES BY THE UTILITY COMPANIES, AS REQUIRED, INCLUDING OBTAINING ALL PERMITS. ALL COSTS AND FEES BY PRIVATE UTILITY COMPANIES TO BRING SERVICE TO THE SITE SHALL BE PAID FOR BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL PROTECT ALL UNDERGROUND DRAINAGE, SEWER AND UTILITY FACILITIES FROM EXCESSIVE VEHICULAR LOADS DURING CONSTRUCTION. ANY DAMAGE TO THESE FACILITIES RESULTING FROM CONSTRUCTION LOADS WILL BE RESTORED TO ORIGINAL CONDITION AT NO COST TO THE OWNER.
7. DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES BY PROVIDING TEMPORARY SUPPORTS OR SHEETING AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
8. SITE GRADES SHALL CONFORM WITH ADA REQUIREMENTS.
9. CONTRACTOR IS REQUIRED TO APPLY FOR, OBTAIN, AND PAY ALL FEES ASSOCIATED WITH CONSTRUCTION PHASE PERMITS. PERMITS MAY INCLUDE, BUT NOT LIMITED TO:
   - RHODE ISLAND STATE BUILDING OFFICIAL
   - TOWN OF NARRAGANSETT DEPARTMENT OF PUBLIC WORKS PERMITS

TIMBER NOTES

1. ALL NEW LUMBER SHALL BE SOUTHERN YELLOW PINE, VISUALLY GRADED NO. 1 (F_b=1,350 PSI), UNLESS SPECIFIED OTHERWISE.
2. NEW LUMBER SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA STANDARD U1–11, UC3B WHEN NOT IN CONTACT WITH GROUND, UC4B FOR GROUND CONTACT, PERMANENT, OR INCIDENTAL.
3. ALL FIELD CUTS AND BOLT HOLES SHALL BE PROTECTED IN ACCORDANCE WITH AWPA STANDARD M4.
4. LUMBER DIMENSIONS PROVIDED IN THE PLANS ARE DRESSED SIZES UNLESS SPECIFIED OTHERWISE.

CONCRETE NOTES

1. CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF ACI 318 – "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND THE RHODE ISLAND STATE BUILDING CODE.
2. CONCRETE SHALL BE PLACED UNDER THE SUPERVISION OF THE APPROVED TESTING AGENCY.
3. CONCRETE SHALL BE NORMAL WEIGHT, WITH TYPE II CEMENT, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 5,000 PSI–TYPICAL. ALL CONCRETE DESIGN MIXES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
4. ALL CONCRETE SHALL BE AIR–ENTRAINED WITH AN AIR CONTENT OF 6% +/– 1%.
5. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾" x 45 DEGREES UNLESS NOTED OTHERWISE.
6. WHEN CONCRETE IS PLACED AGAINST PREVIOUSLY HARDENED CONCRETE, THE INTERFACE SHALL BE CLEAN, FREE OF LAITANCE AND INTENTIONALLY ROUGHENED OR RAKED TO FULL AMPLITUDE OF APPROXIMATELY 1/4 INCH.
7. CONCRETE WASHOUT OPERATIONS TO OR WITHIN THE WATERWAY MUST NOT TAKE PLACE AT ANY TIME.

REINFORCING STEEL NOTES

1. REINFORCING BARS SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 – "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND THE RHODE ISLAND STATE BUILDING CODE.
2. COMPLETE SHOP DRAWINGS AND SCHEDULES OF ALL REINFORCING STEEL SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF THAT PORTION OF THE WORK. ALL ACCESSORIES MUST BE SHOWN ON THE SHOP DRAWINGS.
3. REINFORCING BARS SHALL BE EPOXY COATED AND CONFORM TO ASTM A615 OR A706 (WELDABLE) GRADE 60.
4. ALL SUPPORTS SUCH AS CHAIRS, BOLSTERS, SPACERS, BLOCKS AND HANGERS SHALL BE OF NON–CORROSIVE MATERIAL. BLOCKS SHALL BE MADE OF 4,000 PSI (UN–REINFORCED) CONCRETE.
5. UNLESS NOTED ON THE DRAWINGS, THE MINIMUM CONCRETE PROTECTION (CLEAR COVER) FOR CAST–IN–PLACE CONCRETE COVER SHALL BE AS FOLLOWS:
   A. FORMED CONCRETE EXPOSED TO EARTH OR WATER: 3"
   B. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 4"
6. MINIMUM REINFORCEMENT DEVELOPMENT LENGTH SHALL BE IN ACCORDANCE WITH ACI 318 FOR CLASS B LAPS UNLESS NOTED OTHERWISE.
7. ALL REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS, AROUND CORNERS, AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS.

PRESTRESSED CONCRETE PILES

1. ALL REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS, AROUND CORNERS, AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS.

   STRUCTURAL DEEP FOUNDATION (PILING) DESIGN IS BASED UPON THE USE OF PILES WITH THE FOLLOWING CAPACITIES;

   PRESTRESSED CONCRETE:
   VERTICAL COMPRESSIVE = 27 KIPS
   LATERAL = 55PSF (US), ACTING CONCURRENTLY WITH EITHER LOAD ABOVE
   ALL LOADS ARE APPLIED AT THE TOP OF THE PILE, UNLESS NOTED OTHERWISE.

   THIS WILL REQUIRE PRESTRESSED CONCRETE PILES WITH THE FOLLOWING PROPERTIES;
   12" PRESTRESSED CONCRETE PILE = (76) 35'–0"
   16" PRESTRESSED CONCRETE PILE = (88) 35'–0"
2. ALL PRESTRESSED PILES WILL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER OF RECORD, TO INCLUDE CALCULATIONS EXECUTED BY A LICENSED PROFESSIONAL ENGINEER, IN ACCORDANCE WITH THE LOAD REQUIREMENTS LISTED IN THIS NOTE. REFER TO THE SUBSURFACE INVESTIGATION BORING LONGS BY PARE CORPORATION, PROJECT NUMBER 19131.00, DATED BETWEEN JANUARY 15 2020 AND JANUARY 16 2020 FOR ADDITIONAL INFORMATION.
3. PILING IS TO BE HANDLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, SUCH THAT NO DAMAGE IS INCURRED.
4. PILING DESIGN IS TO INCLUDE LONGITUDINAL STRANDS WHICH WILL DEVELOP THE SPECIFIED CAPACITIES. SPIRAL WIRE REINFORCING SHALL MEET THE REQUIREMENTS OF ASTM A82, BE A MINIMUM OF 5 GAGE, AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 70 KSI
5. PILES SHALL BE DRIVEN BY A SINGLE OR DOUBLE ACTING STEAM, DIESEL, OR AIR HAMMER WITH A MINIMUM OF 15,000 FT–LBS OF ENERGY. LEADS SHALL BE FIXED TO THE BOOM AT THE TOP, AND TO THE CRANE AT THE BOTTOM; NO SWINGING LEADS ARE PERMITTED.
6. ONCE PILE DRIVING HAS STARTED, DRIVE ALL PILES CONTINUOUSLY UNTIL THEY ARE AT THE REQUIRED TIP ELEVATION.
7. FINAL PILE LOCATION SHALL BE WITHIN 3" OF THE DESIGN LOCATION.

DESIGN CRITERIA

SNOW LOADS (IBC SECT 1608)
SNOW LOAD: P = 30 P/SF

WIND LOADS ASCE 7–16
MEAN ROOF HEIGHT = 16.5 FEET
BASIC WIND SPEED = 121 MPH

FLOOD LOADS (FEMA COASTAL CONSTRUCTION MANUAL FIRMETTE FLOOD ZONE VE
TOTAL BREAKING WAVE LOAD = 7530 PLF

EARTHQUAKE LOADS (IBC SECT. 1614)
MAPPED ACCELERATIONS: S_S = 0.164g s
S_1 = 0.058g 1

SITE CLASS D, F_a = 1.0 S_MS = 0.262g
F_v = 2.4 S_M1 = 0.140g

DESIGN SPECTRAL RESPONSE ACCELERATIONS AT
5% DAMPENING, S_DS = 0.175g
S_D1 = 0.093g

D1 GENERAL DESIGN RESPONSE SPECTRAL
ACCELERATION, PGA = 0.158g
8. SEISMIC DESIGN CATEGORY B

ABBREVIATIONS

BCP	= BITUMINOUS CONCRETE PAVEMENT
CM	= SAWCUT AND MATCH EXISTING GRADES
CW	= CEMENT CONCRETE SIDEWALK (STANDARD)
GV	= GATE VALVE (SEE DETAIL)
JB	= SPEAKER JUNCTION BOX
R&D	= REMOVE AND DISPOSE
SCW	= STRIPED CROSS WALK (SEE DETAIL)
SHP	= HANDICAP EPOXY RESIN PAVEMENT MARKING
SW	= 4" SOLID WHITE EPOXY RESIN PAVEMENT MARKING
SW12	= 12" SOLID WHITE EPOXY RESIN PAVEMENT MARKING
TIP	= TEMPORARY INLET PROTECTION
7.1.0	= R.I. STD. CONCRETE CURB DETAIL
9.9.0	= R.I. STD. CONSTRUCTION ACCESS DETAIL
43.1.0	= R.I. STD. CEMENT CONCRETE SIDEWALK DETAIL
43.3.0	= R.I. STD. WHEELCHAIR RAMP DETAIL

RIDOT STANDARD DETAILS CAN BE FOUND AT THE FOLLOWING WEBSITE:
HTTP://WWW.DOT.RI.GOV/DOCUMENTS/DOINGBUSINESS/BLUEBOOK.PDF

LEGEND

EXISTING		PROPOSED
	TREELINE	
	CONCRETE WALL	
	RETAINING WALL	
	CONTOUR 1'	52
	CONTOUR 5'	55
	SPOT ELEVATION	XXX.XX
	FLOOD ZONE BOUNDARY	
ZONE "X"	AREAS OF 0.2% CHANCE FLOOD (SEE FEMA MAP)	
	AREAS OF ROCKS, BOULDERS & OUTCROPS	
H1	HORIZONTAL CONTROL	
V1	VERTICAL CONTROL	
	EDGE OF PAVEMENT	
	CURBING	
	DRAIN LINE	
	FUEL LINE	
	WATER LINE	
	ELECTRIC LINE	
	SEWER PUMP OUT LINE	
	DRAIN MANHOLE	
	CATCH BASIN	
	SIGN	
	CHAIN LINK FENCE	
	DUMPSTER ENCLOSURE	
	BITUMINOUS PAVEMENT (SEE LABEL FOR TYPE)	
	CONCRETE WALK (SEE LABEL FOR TYPE)	
	EROSION CONTROL	
	LIMIT OF DISTURBANCE	
	SAWCUT	
	TC/BC	= TOP OF CURB/ BOTTOM OF CURB
	FUEL MANHOLE	Ⓕ

TIDAL REFERENCE

EL. 16.0
EL. 15.0 — +15.0 FEMA FLOOD ELEVATION (ZONE VE)
EL. 14.0
EL. 13.0
EL. 12.0
EL. 11.0
EL. 10.0
EL. 9.0
EL. 8.0
EL. 7.0
EL. 6.0
EL. 5.0
EL. 4.0
EL. 3.0
EL. 2.0 — +1.81 MEAN HIGHER–HIGH WATER (MHHW)
+1.277 MEAN HIGH WATER (MHW)
EL. 1.0
EL. 0.0 — +0.00 NAVD 88
–0.312 MEAN SEA LEVEL (MSL)
EL. –1.0
EL. –2.0 — –1.721 MEAN LOW WATER (MLW)
–1.843 MEAN LOWER–LOW WATER (MLLW)

DATUM INFORMATION

NOAA VERTICAL DATUM

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PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
508-543-1755

D E M

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

ROGER WHEELER STATE BEACH BOARDWALK

NARRAGANSETT, RHODE ISLAND

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

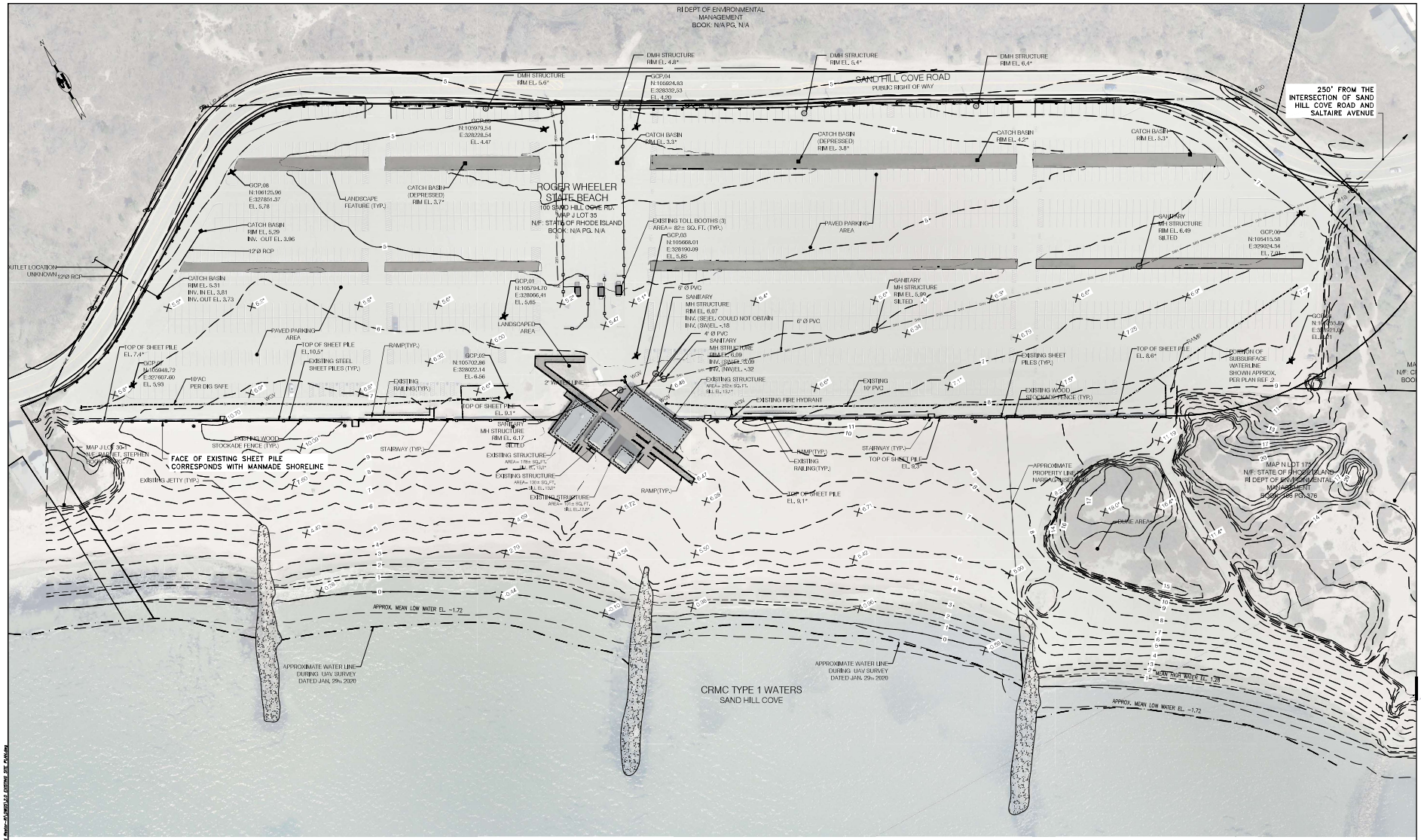
J. MATTHEW BELLISLE
No. 7587
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

REVISIONS:

PROJECT NO.:	19131.00
DATE:	DECEMBER 2021
SCALE:	AS NOTED
DESIGNED BY:	KAD
CHECKED BY:	BMD
DRAWN BY:	LMC
APPROVED BY:	JMB

GENERAL NOTES AND LEGEND

SHEET NO.: 1.0



EXISTING SITE PLAN

SCALE: 1"=60'±

NOTES:

1. EXISTING CONDITIONS BASED UPON PLAN ENTITLED "EXISTING CONDITIONS AND TOPOGRAPHY PLAN ROGER WHEELER STATE BEACH" PREPARED BY NARRAGANSETT ENGINEERING INC. OF PORTSMOUTH, RI DATED MAY 2020.

Scale: 1"=60'
0 30' 60' 120'

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BOARDWALK
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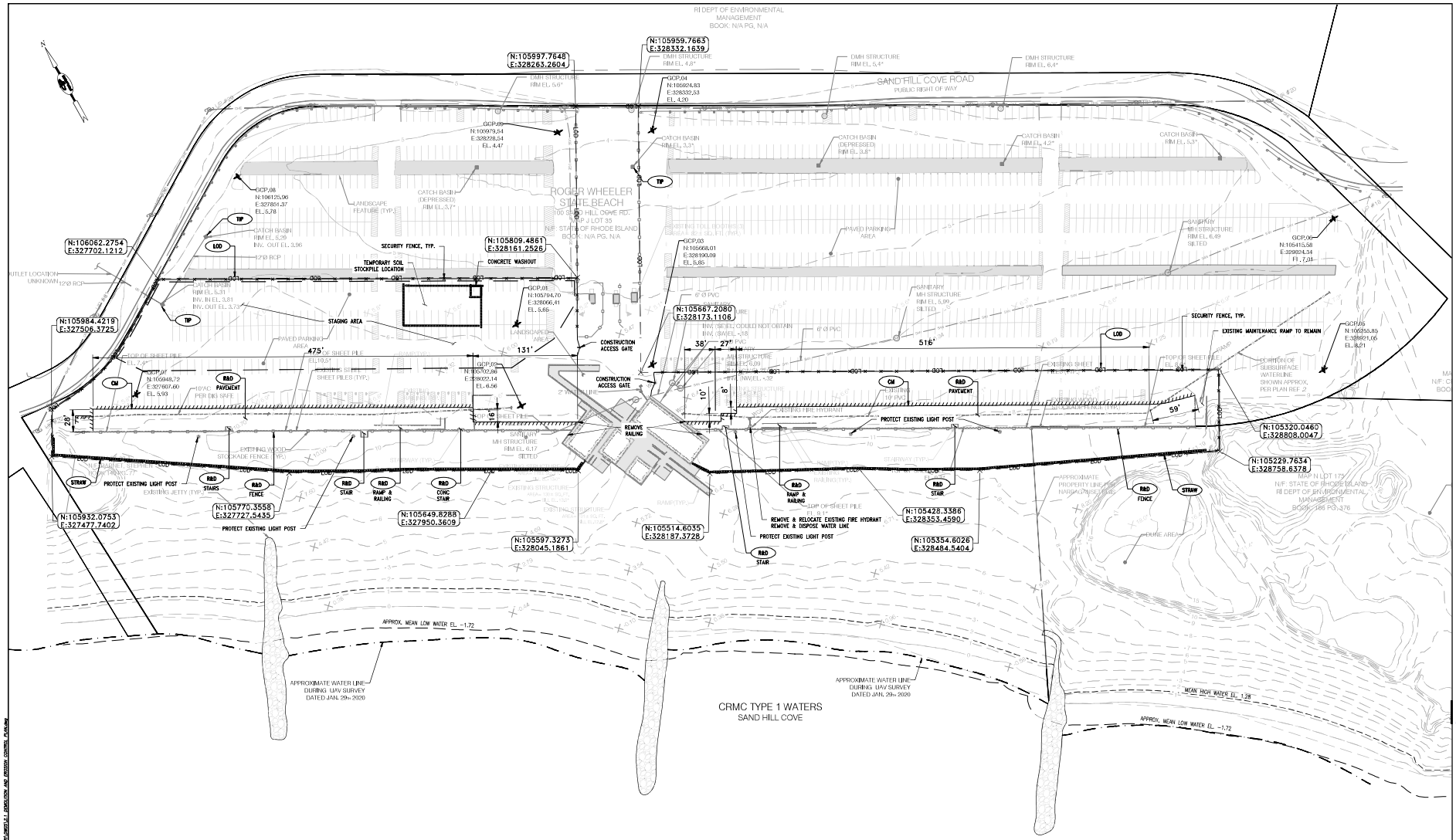
APPROVED BY:	JMB

EXISTING SITE PLAN

SHEET NO.:
2.0



DEMOLITION AND EROSION CONTROL PLAN

SCALE: 1"=60'±

Scale: 1"=60'
0 30' 60' 120'

NOTES:

1. EXISTING CONDITIONS BASED UPON PLAN ENTITLED "EXISTING CONDITIONS AND TOPOGRAPHY PLAN ROGER WHEELER STATE BEACH" PREPARED BY NARRAGANSETT ENGINEERING INC. OF PORTSMOUTH, RI DATED MAY 2020.
2. STAIRS AND RAMPS ARE TIMBER UNLESS NOTED OTHERWISE.

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SCALE ADJUSTMENT GUIDE
0" 1"
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ROGER WHEELER STATE BEACH
BOARDWALK
NARRAGANSETT, RHODE ISLAND
RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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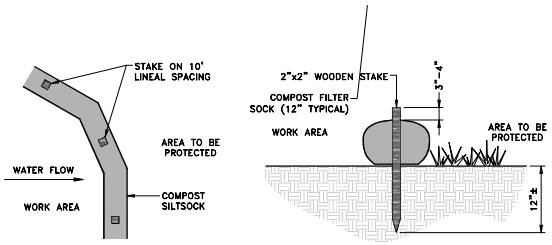
DEMOLITION AND EROSION CONTROL PLAN

SHEET NO.
2.1

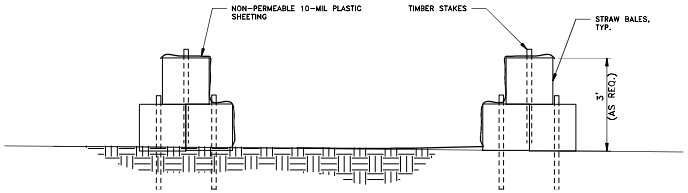


NOTES:

1. COMPOST/ SOIL/ ROCK/ SEED FILL TO MEET APPLICATION REQUIREMENTS.
2. COMPOST MATERIAL TO BE REMOVED OR DISPERSED ON SITE AS DETERMINED BY ENGINEER.

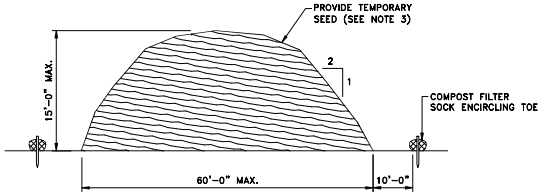
COMPOST FILTER SOCK DETAIL

NOT TO SCALE



CONCRETE WASHOUT

NOT TO SCALE

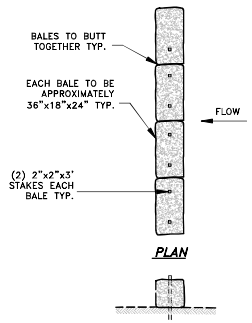


NOTES:

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL PREPARE A PLAN SHOWING THE PROPOSED LOCATION OF ALL STOCKPILE AREAS.
2. STOCKPILE AREA SHALL NOT EXCEED SPECIFIED DIMENSIONS WITHOUT APPROVAL FROM ENGINEER.
3. STOCKPILED ERODIBLE MATERIAL THAT WILL NOT BE USED FOR GREATER THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEED IMMEDIATELY FOLLOWING PLACEMENT. USE RIDOT STD. M.18.10.5 SEED MIX. USE MADOT STD. M.6.03.1 EROSION SEED.

ERODIBLE MATERIAL STOCKPILE

NOT TO SCALE

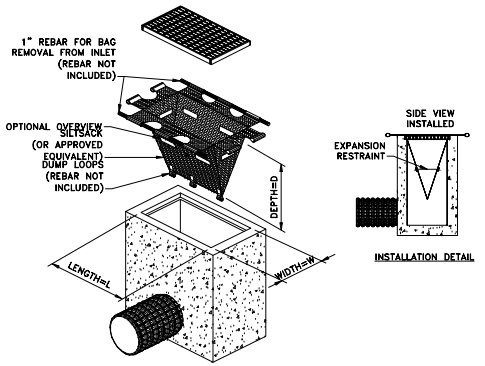


PLAN

ELEVATION

STRAW BALE DETAIL

NOT TO SCALE



INSTALLATION DETAIL

NOTES:

1. INLET PROTECTION SHALL BE CLEANED OF SILT AND DEBRIS ON A REGULAR BASIS AS REQUIRED BY PROJECT SPECIFIC SWPPP.
2. INSPECTIONS SHALL BE DONE AFTER EACH RAIN EVENT AND AT A MINIMUM EVERY TWO WEEKS AND AS REQUIRED BY PROJECT SPECIFIC SWPPP.

TIP **TEMPORARY INLET PROTECTION**

NOT TO SCALE

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SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

ROGER WHEELER STATE BEACH
BOARDWALK
NARRAGANSETT, RHODE ISLAND
RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

J. MATTHEW BELLISLE
No. 7587
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

RECEIVED 1/4/2022 COASTAL RESOURCES MANAGEMENT COUNCIL

REVISIONS:		

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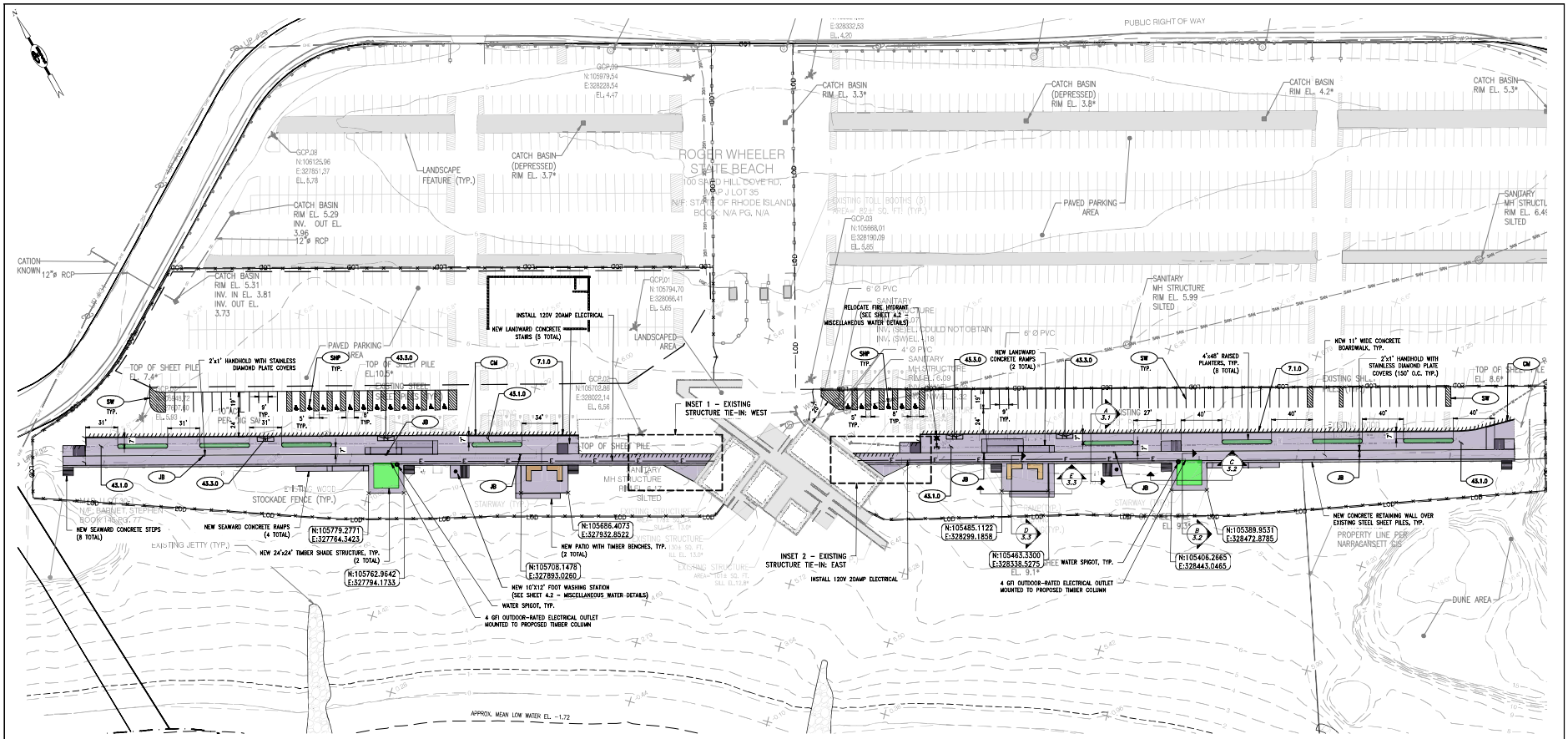
DATE:	DECEMBER 2021
SCALE:	AS NOTED
DESIGNED BY:	KAD
CHECKED BY:	BMD
DRAWN BY:	LMC
APPROVED BY:	JMB

EROSION CONTROL DETAILS

SHEET NO.: 2.2

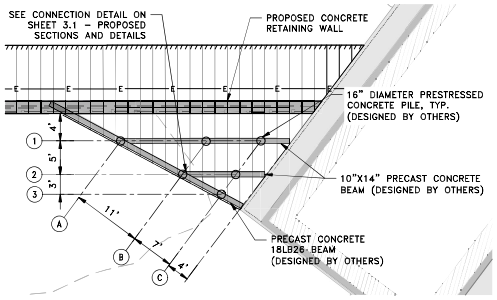


PROPOSED SITE PLAN

SCALE: 1"=50'±

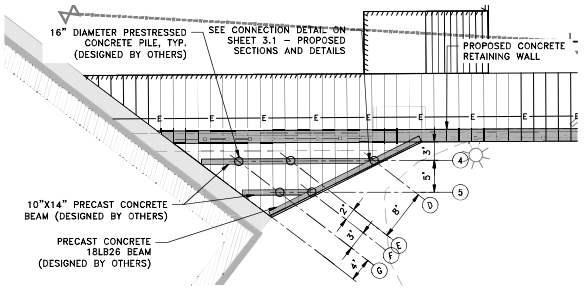
GENERAL SCOPE OF WORK

1. PRIOR TO PROJECT COMMENCEMENT, NOTIFY AND COORDINATE WITH ALL STATE LOCAL AND FEDERAL AUTHORITIES AS REQUIRED.
2. MOBILIZE CONSTRUCTION EQUIPMENT AND PERSONNEL TO THE SITE. INSTALL EROSION CONTROL AND TEMPORARY SECURITY FENCING. UTILIZATION OF A STAGING AREA WILL BE COORDINATED WITH THE OWNER OR ENGINEER AS APPROPRIATE AND NECESSARY. LOCATE/VERIFY EXISTING UTILITIES WITHIN THE PROPOSED AREAS OF WORK. MARK UTILITIES AND MAINTAIN UTILITY MARKS FOR THE DURATION OF THE PROJECT.
3. MOVE EXISTING HYDRANT TO PROPOSED LOCATION.
4. REMOVE AND DISPOSE EXISTING RAMPS AND STAIRS ALONG THE EXISTING STEEL SHEET PILE WALL. SAWCUT AND REMOVE PAVEMENT WITHIN THE AREA OF THE PROPOSED SIDEWALK.
5. CONSTRUCT NEW CONCRETE PIER INCLUDING THE INSTALLATION OF NEW PILES, CONCRETE RETAINING WALL, STRINGERS, DECKING, RAMPS, STAIRS, ALUMINUM FENCING/RAILS, BENCHES, TIMBER SHADE STRUCTURES, AND APPURTENANCES.
6. REGRADE AND PLACE CONCRETE SIDEWALK, PLANTINGS, AND CURB ALONG THE PARKING LOT. PAINT OVER EXISTING STRIPING AND PAINT NEW STRIPING/MARKS AS INDICATED ON THE DRAWINGS.
7. PERFORM SITE CLEANUP, RESTORATION, OF STAGING AREAS AS NECESSARY PERFORM FINAL WALK THROUGH WITH KEY PROJECT PERSONNEL UPON COMPLETION.
8. COMPLETE DEMOBILIZATION AND PROJECT CLOSEOUT INCLUDING NEW SITE SURVEY AND AS-BUILT DRAWINGS.



INSET 1 - EXISTING STRUCTURE TIE-IN: WEST

SCALE: 1"=10'±



INSET 2 - EXISTING STRUCTURE TIE-IN: EAST

SCALE: 1"=10'±

Scale: 1"=50'

0 25' 50' 100'

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SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

ROGER WHEELER STATE BEACH BOARDWALK

NARRAGANSETT, RHODE ISLAND

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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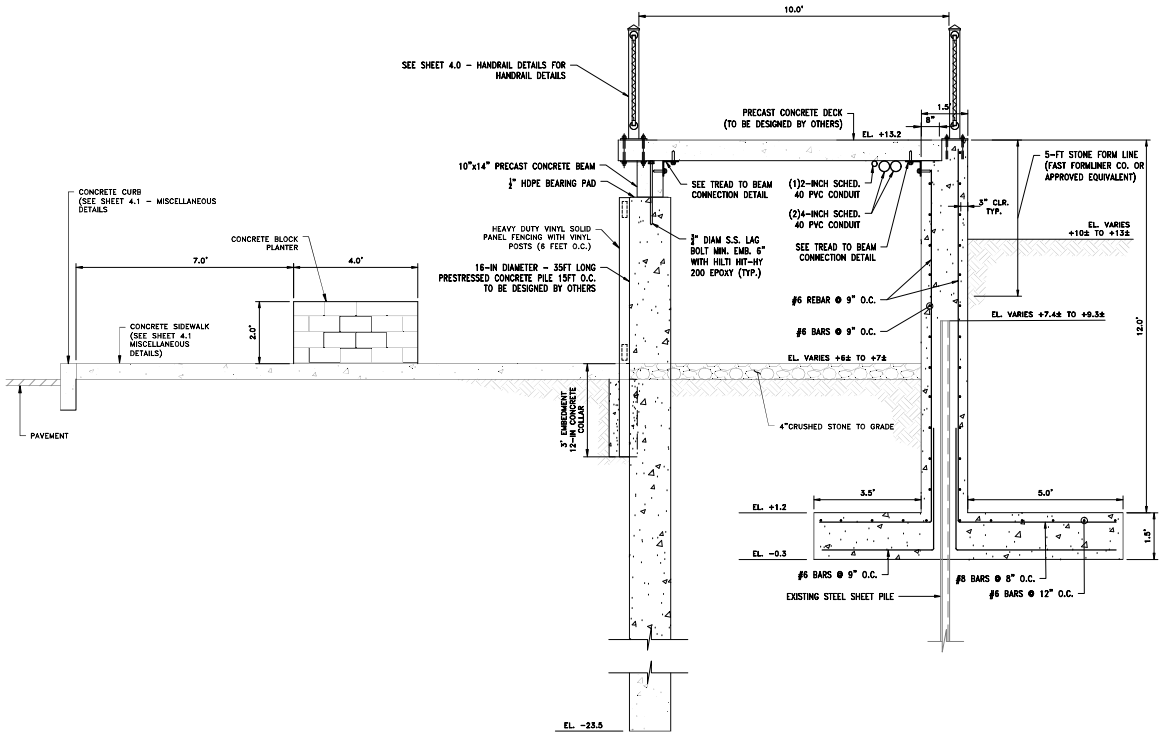
APPROVED BY:	JMB

PROPOSED SITE PLAN

SHEET NO.: 3.0

T:\19131.00 Jobs\19131.00 RIDEM-Design Svcs Roger Wheeler Bulkhead Master-M\DWGS\3.0 PROPOSED SITE PLAN.dwg

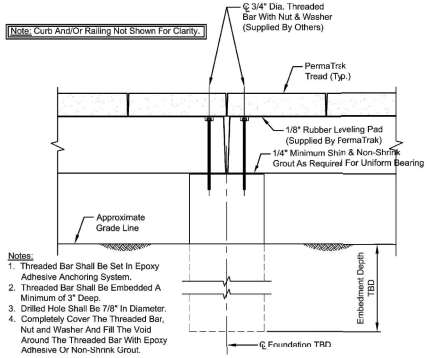


A 3.0 SECTION A

SCALE: 1"=2'-0"

NOTES

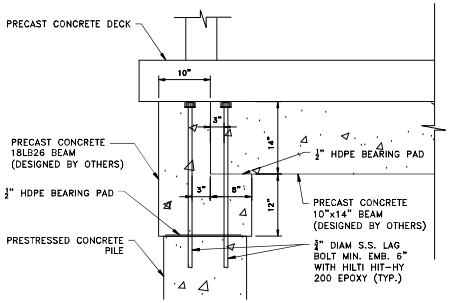
1. PRECAST ELEMENTS INCLUDING CONCRETE DECK, CONCRETE BEAMS, AND PILES TO BE DESIGNED BY OTHERS.
2. CONCRETE DECK SHALL BE STAMPED WITH TIMBER GRAIN ALONG EXPOSED FACES (EXCLUDING BOTTOM).



Notes:
1. Threaded Bar Shall Be Set In Epoxy Adhesive Anchoring System.
2. Threaded Bar Shall Be Embedded A Minimum of 3" Deep.
3. Drilled Hole Shall Be 7/8" In Diameter.
4. Completely Cover The Threaded Bar, Nut and Washer And Fill The Void Around The Threaded Bar With Epoxy Adhesive Or Non-Shrink Grout.

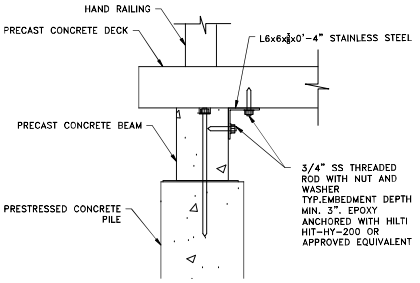
TYPICAL PIER CONNECTION DETAIL

Scale: Not To Scale



EXISTING STRUCTURE TIE-IN PLATFORM CONNECTION DETAIL

SCALE: 1"=1'



TREAD TO BEAM/CONCRETE WALL CONNECTION

SCALE: 1"=1'

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DESIGN

SCALE ADJUSTMENT GUIDE
0" 1"
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BOARDWALK
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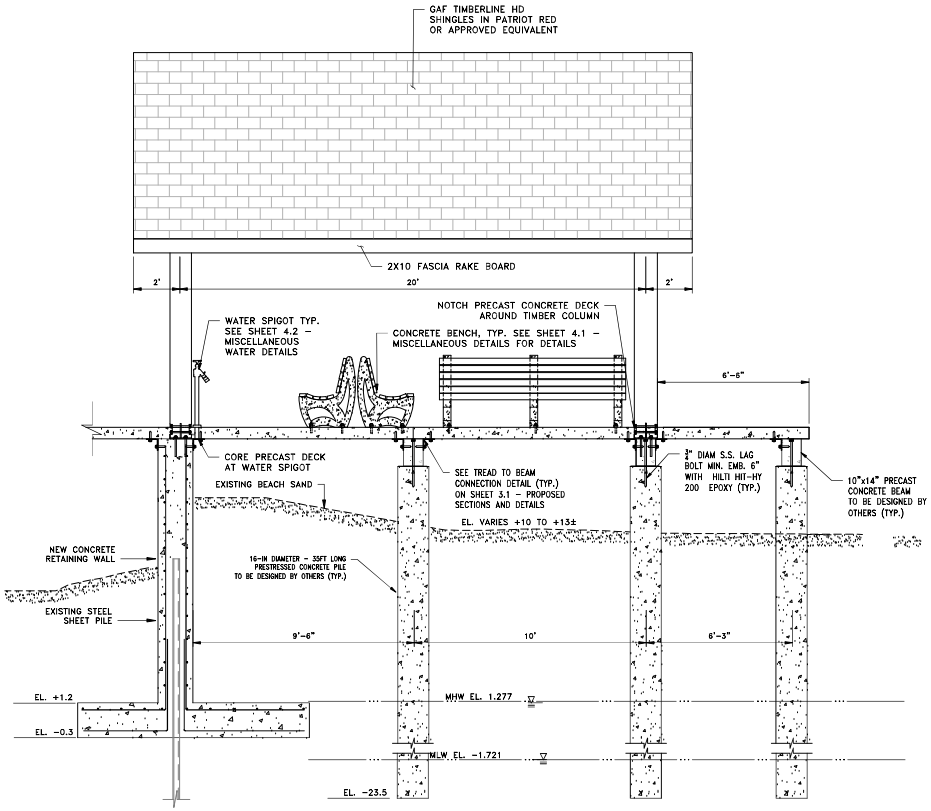
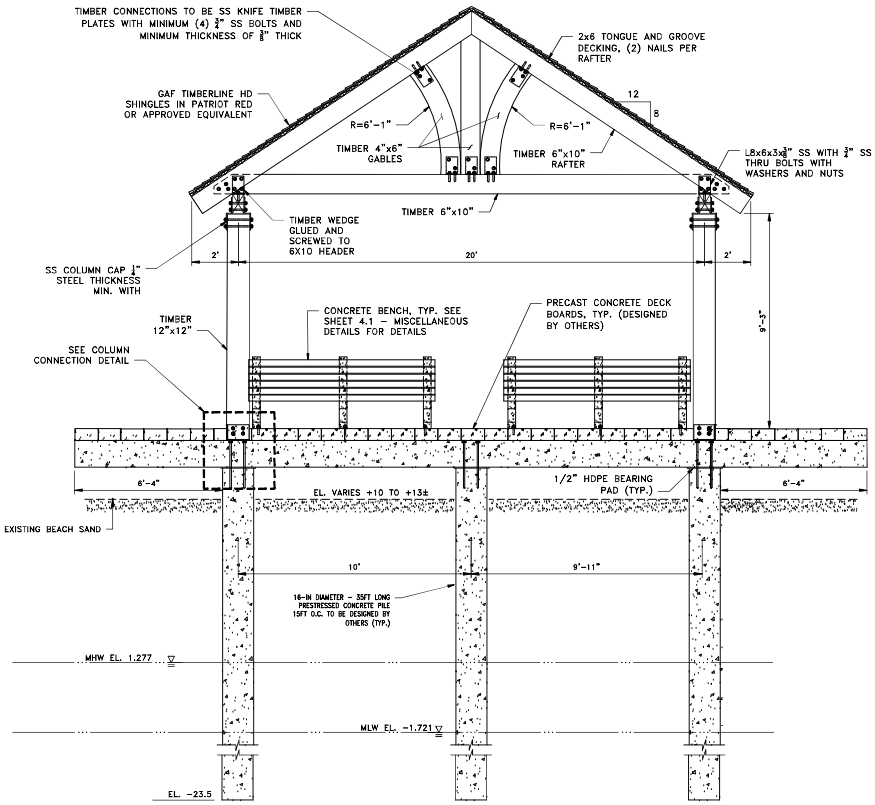
PROPOSED SECTIONS AND DETAILS

SHEET NO.: 3.1

T:\2019\19 Jobs\19131.00 RIDEM-Design Svcs Roger Wheeler Bulkhead Master-M\LWG\3.1 PROPOSED SECTIONS AND DETAILS.dwg



E 3.0 **SECTION B**
SCALE: 3/8"=1'-0"



D 3.0 **SECTION C**
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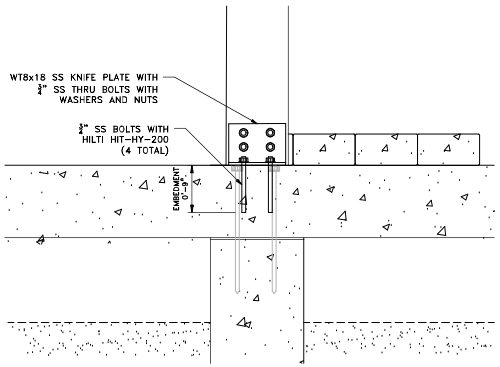
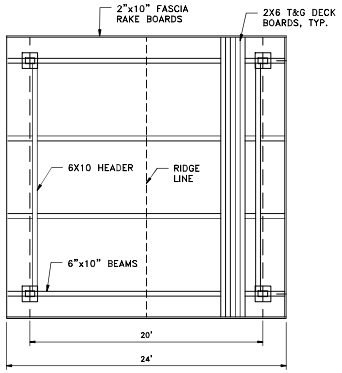


COLUMN CONNECTION DETAIL
SCALE: 1" = 1'-0"



ROOF FRAMING PLAN
SCALE: 3/16" = 1'-0"

NOTES:

1. PROPOSED RAIL AND LATTICE NOT SHOWN FOR CLARITY.
2. TIMBER MEMBERS SHALL BE STRUCTURAL NO. 1 SOUTHERN YELLOW PINE DESIGNED FOR 30 PSF LIVE LOAD AND A NET UPLIFT OF 57 PSF (ULTIMATE WIND PRESSURE). UNLESS NOTED AS "SERVICE LOAD" ON THESE PLANS, DESIGN WIND LOADS ARE IN ACCORDANCE WITH ASCE 7-16 AND SHALL BE FACTORED AS REQUIRED FOR ASD OR STRENGTH DESIGN METHODS.

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SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

ROGER WHEELER STATE BEACH BOARDWALK

NARRAGANSETT, RHODE ISLAND

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

J. MATTHEW BELLISLE
No. 7567
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
1/4/2022
COASTAL RESOURCES MANAGEMENT COUNCIL

REVISIONS:		

PROJECT NO.:	19131.00
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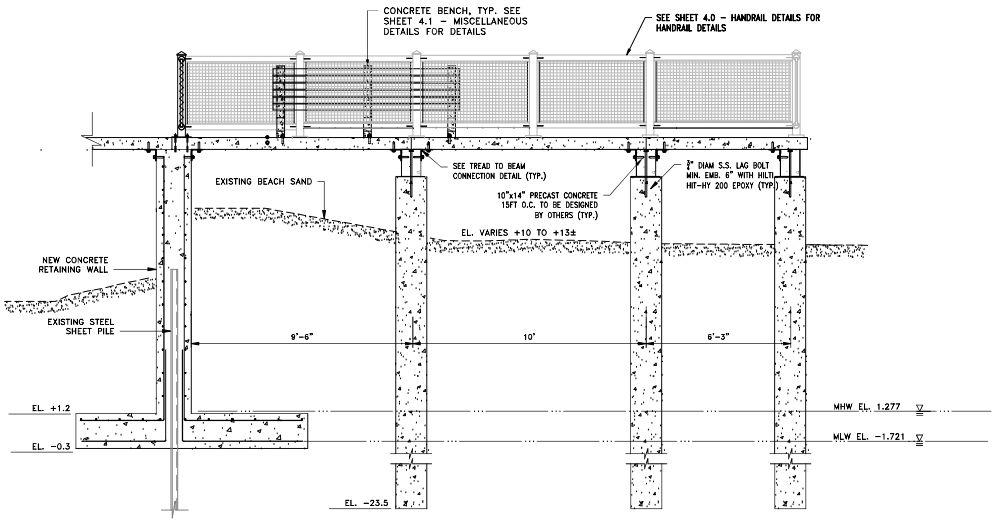
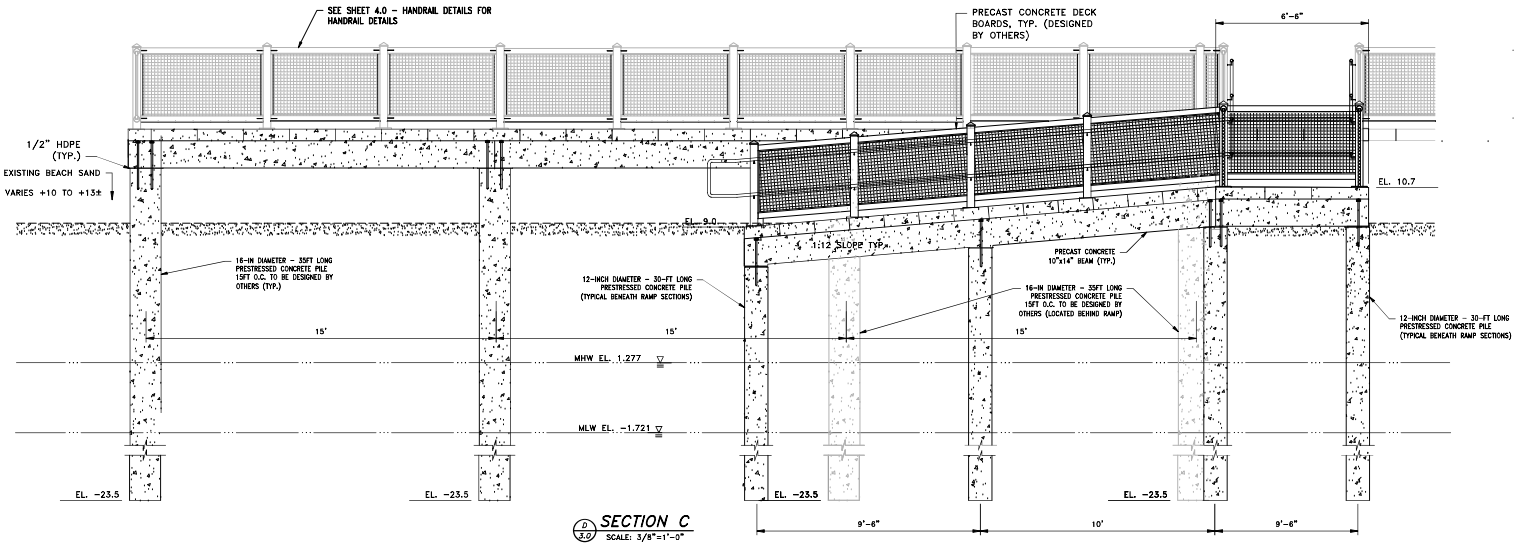
DRAWN BY:	LMC
APPROVED BY:	JMB

TIMBER SHADE STRUCTURE DETAILS

SHEET NO.: 3.2



D/3.0 SECTION D
SCALE: 3/8"=1'-0"



D/3.0 SECTION C
SCALE: 3/8"=1'-0"

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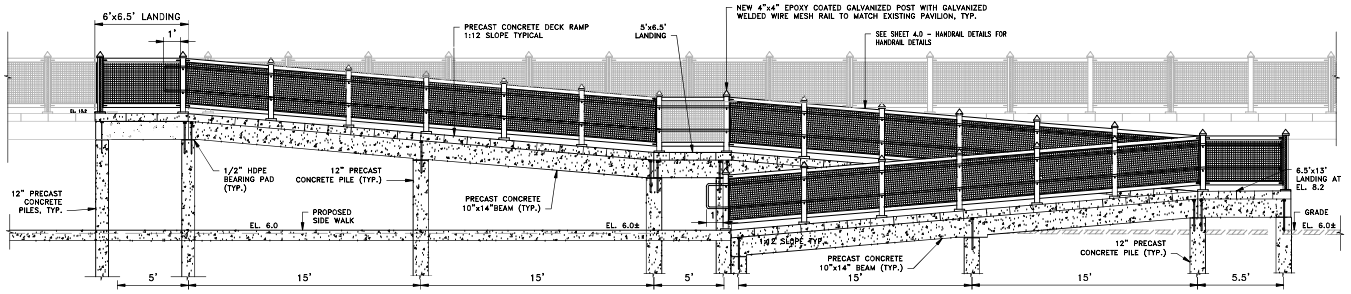
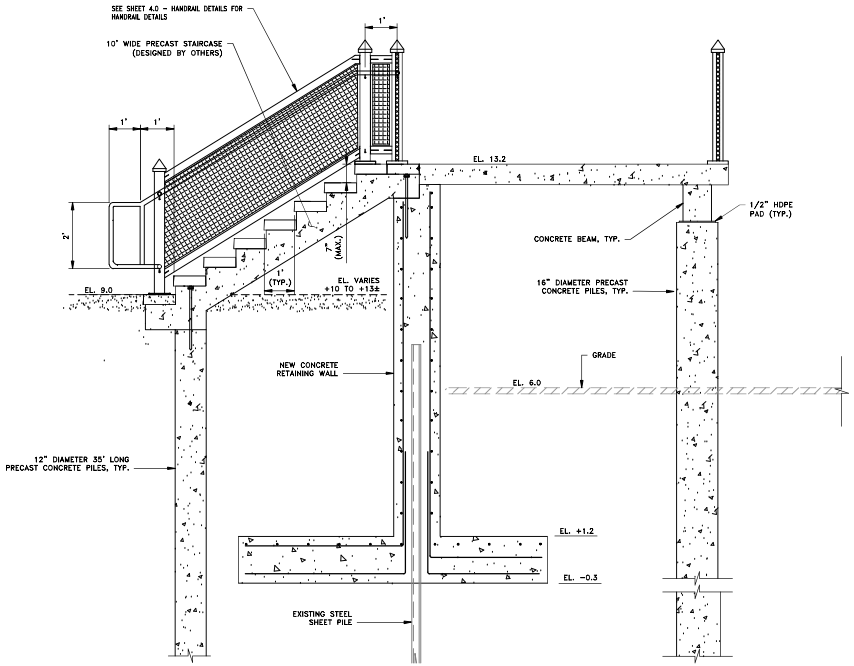
VIEWING PLATFORM SECTIONS

SHEET NO.: 3.3



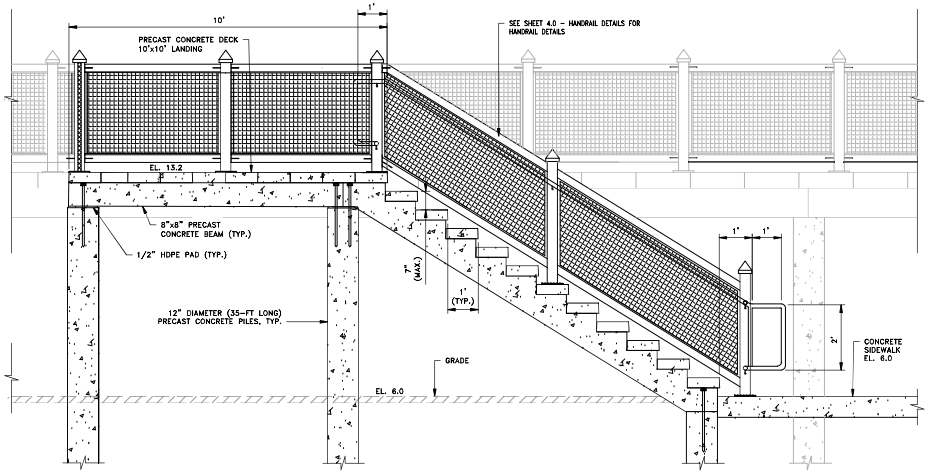
SECTION VIEW RAMPS (TYP. 2 PLACES)

SCALE: 1"=4'



SEAWARD STAIR SECTION (TYP 6 PLACES)

SCALE: 1"=2'



LANDWARD STAIR SECTION (TYP 6 PLACES)

SCALE: 1"=2'

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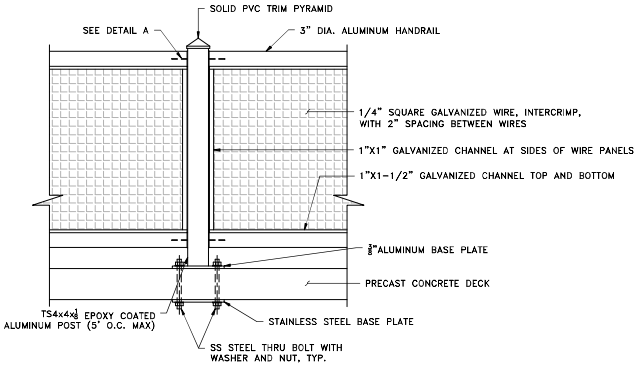
STAIRS AND RAMP DETAILS

SHEET NO.:
3.4

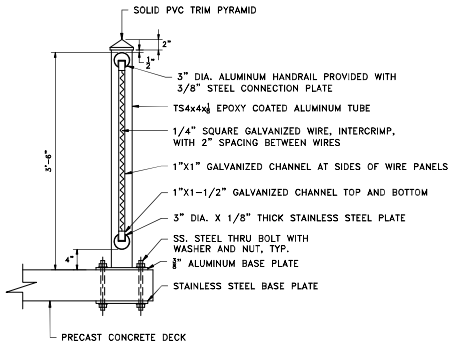


NOTE:

RAIL COLUMNS SHALL BE SPACED 5' O.C., MAX.

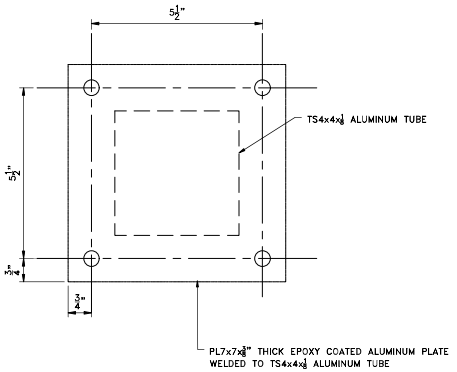
ALUMINUM RAIL ELEVATION DETAIL

SCALE: 1"=1'-0"



RAIL SECTION DETAIL

SCALE: 1"=1'-0"

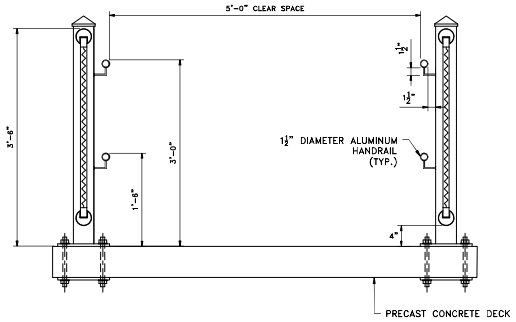


NOTE:

ANGLE OF PLATE TO CONFORM TO ANGLE OF RAILS.

DETAIL A

SCALE: 6"=1'



TYPICAL HANDRAIL DETAIL

SCALE: 1"=1'-0"

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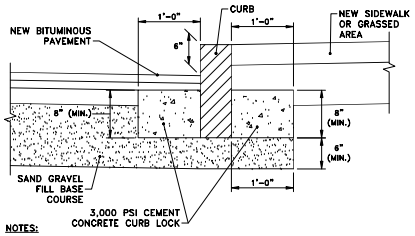
HANDRAIL DETAILS

SHEET NO.:
4.0

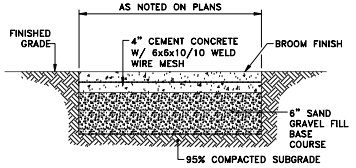


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. PROVIDE CEMENT CONCRETE CURB LOCK ON ALL CURBS

CURB SETTING DETAIL

NOT TO SCALE

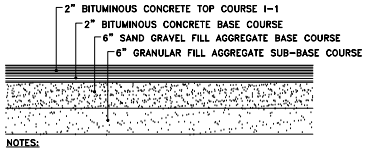


NOTES:

1. CONCRETE SIDEWALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 905 OF THE RI STANDARD SPECIFICATIONS.
2. WIRE MESH SHALL BE IN ACCORDANCE WITH SECTION M.05.02 OF THE RI STANDARD SPECIFICATIONS.

TYPICAL CEMENT CONCRETE SIDEWALK

NOT TO SCALE

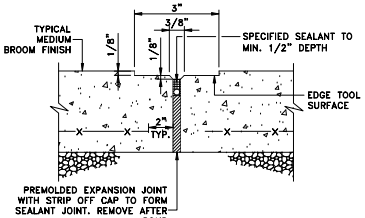


NOTES:

1. ASPHALT EMULSION TACK COAT IS TO BE APPLIED BETWEEN BITUMINOUS LAYERS

PAVEMENT DETAIL

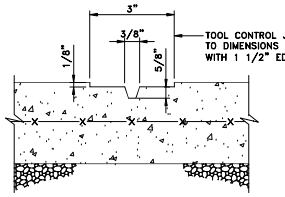
NOT TO SCALE



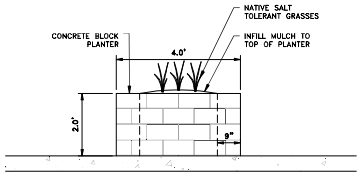
EXPANSION JOINT AT 20' O.C. (TYP)

NOTES:

1. EXPANSION JOINTS (E.J.) 20 FEET O.C. UNLESS OTHERWISE NOTED.
2. CONTROL JOINTS (C.J.) 5 FEET O.C. UNLESS OTHERWISE NOTED.
3. WHERE EXISTING AND NEW CONCRETE SIDEWALKS MEET, SAWCUT EXISTING WALK AND INSTALL EXPANSION JOINT AND DOWELS AS SHOWN. DRILL EXISTING CONCRETE WALK EDGE TO RECEIVE STEEL DOWELS AT EXPANSION JOINT.
4. REFER TO LANDSCAPE PLANS FOR LOCATIONS.

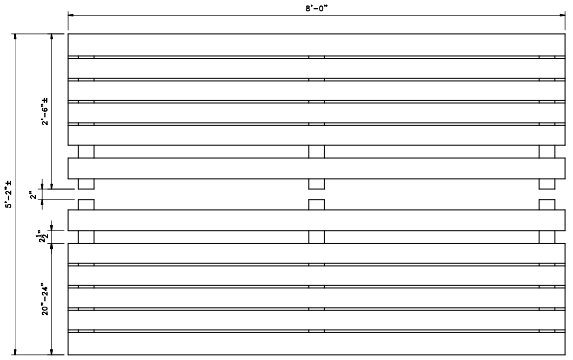


CONTROL JOINT AT 5' O.C. (TYP)

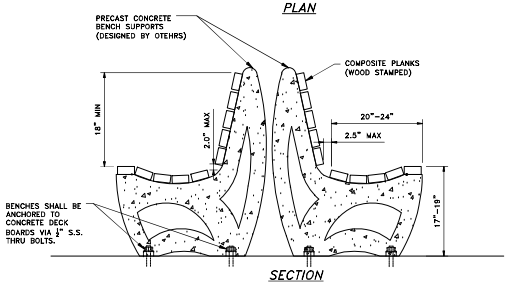


PLANTER DETAIL

SCALE: 1"=2'



PLAN



SECTION

CONCRETE BENCH DETAIL

SCALE: 1"=1'

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RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

J. MATTHEW BELLISLE
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MISCELLANEOUS DETAILS

SHEET NO.:
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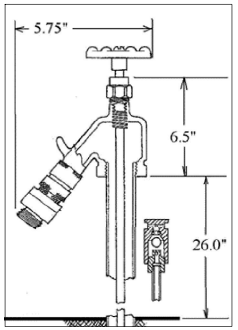
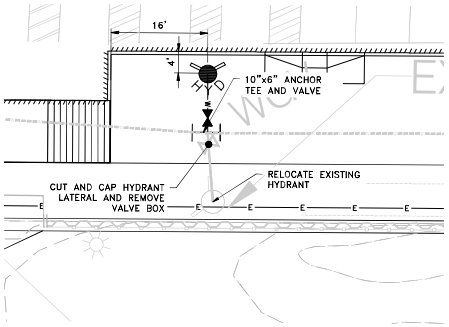


WATER SPIGOT DETAIL

NOT TO SCALE

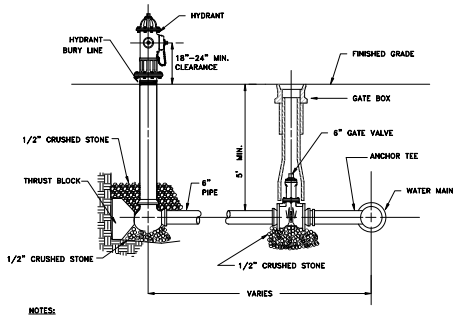
NOTE:

HOSE BIB SHALL BE EQUIPPED WITH WATER FAUCET LOCK.



HYDRANT RELOCATION PLAN

SCALE: 1"=10'

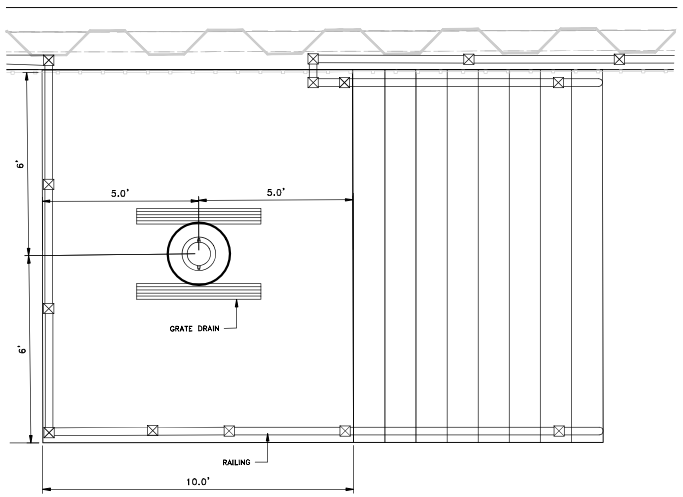


NOTES:

1. ALL HYDRANT, VALVE, AND TEE JOINTS TO BE RESTRAINED MECHANICAL JOINTS.
2. DEPTH OF HYDRANT BURY SHALL SUIT INSTALLED DEPTH OF COVER OVER WATER MAIN. INSTALL RISERS AS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
3. 6" PIPE MATERIAL TO MATCH WATER MAIN MATERIAL.

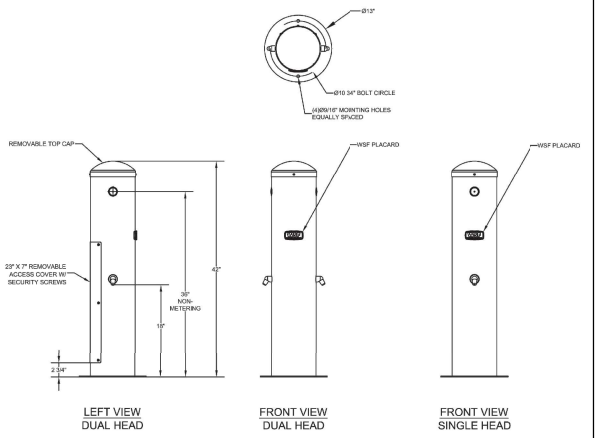
HYDRANT ASSEMBLY DETAIL

NOT TO SCALE



FOOT WASHING STATION PLAN

SCALE: 1"=10'

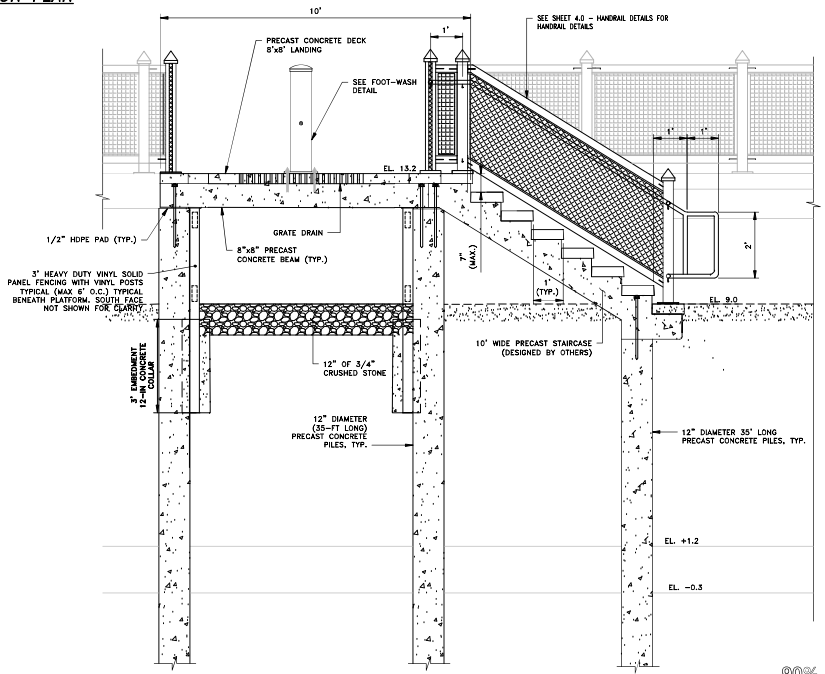


FOOT WASHING CONNECTION DETAIL

NOT TO SCALE

NOTE:

1. FOOT WASH STATION SHALL BE WILLOUGHBY WOOFS SERIES STAINLESS STEEL OUTDOOR FOOT SHOWER OR PRE-APPROVED EQUIVALENT.



FOOT WASHING STATION DETAIL

SCALE: 1"=2'-0"

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MISCELLANEOUS WATER DETAILS

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