



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
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APPLICATION FOR STATE ASSENT

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

Project Location <u>14 West Beach Road, New Shoreham</u> No. Street City/Town	File No. (CRMC USE ONLY) 2024-09-029
Owner's Name <u>Town of New Shoreham (Maryanne Crawford, Town Manager)</u>	Plat: AP 2 Lot(s): 39, 40 & 48-1
Mailing Address <u>P.O. Box 220, New Shoreham, RI 02807</u> Address City/Town, State Zip Code	Owner's Contact: Number: 401-466-3210 Email Address: mcrawford@newshorehamri.gov
Contractor RI Reg. # <u>TBD</u> Address	Email address: Tel. No. <u>TBD</u>
Designer <u>Fairbanks Engineering</u> Address <u>42 Cobblestone Hill Rd., Exeter, RI 02822</u>	Tel. No. <u>401-474-2361</u>
Name of Waterway <u>Block Island Sound</u>	Estimated Project Cost (EPC): <u>\$1,000,000</u> Application Fee: <u>Waived</u>
Provide Below a Description of Work As Proposed (required). The Town of New Shoreham is asking to complete the stone revetment work along the seaward side slope of the existing municipal landfill (which is closed). This work was approved by CRMC per A2016-02-090 but the entire project was not completed due to funding issues. The work completed to date is the toe portion of the revetment (lower portion of the slope). Coastal storm waves have overtopped the stone and caused erosion of the earth slope. The Town is asking to complete the project as originally intended to protect the earth slope and buried landfill materials from damage and exposure.	

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): 1978-12-007, A2016-02-090

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.

AP-2, Lot 41: West Beach Acres HOA c/o Gregory & Leslie Drummond - PO Box 1435, Summit, NJ 07902 me

AP 2, Lot 38-1: US Fish & Wildlife - 300 West Gate Center Drive, Hadley, MA 01035 me

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

Maryanne Crawford
Owner Name (PRINT)

Maryanne Crawford
Owner's Signature (SIGN)

PLEASE REVIEW REVERSE SIDE OF APPLICATION FORM



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.

Maryanne Crawford
Owner Signature

8/27/2024
Date

Maryanne Crawford, P.O. Box 220, Block Island, RI 0280
Print Name and Mailing Address



Fairbanks Engineering Corporation
Geotechnical & Marine Engineers

August 27, 2024

CATEGORY “B” APPLICATION FOR CRMC ASSENT FOR THE REPAIR OF THE SHORELINE SLOPE WITH A STONE REVETMENT SYSTEM AT THE HISTORIC LANDFILL AS ALLOWED BY CRMC ASSENT 2016-02-090 WHICH HAS EXPIRED

OWNER: *Town of New Shoreham*

LOCATION: 14 West Beach Road, New Shoreham, RI 02807

CRMC APPLICATION – PROJECT NARRATIVE

Description of Work:

The existing historic landfill's shoreline slope is subject to large waves during coastal storms. The frequency of these storms appears to have worsened due to impacts of sea level rise and climate change. The 4 large coastal storms that impacted the site in the past 2 winters caused slope damage. The project proposes to expand the existing stone revetment system further up the slope to elevation 18.0 ft. This portion of the slope is currently grass covered. This extent and height of revetment was originally approved by CRMC per Assent 2016-02-090 which included a special exception. Due to funding issues the Town was not able to complete the entire revetment project and only constructed the toe portion of the revetment located along the base of the slope which extends up to about elevation 10.0 ft. A CRMC Assent modification was obtained to reflect this work scope change. The intent of this project is to expand the stone revetment to the limits originally approved by CRMC. This is necessary to protect the earth slope (and the landfill debris buried below the slope) from erosion and damage which could expose landfill debris to the beach area during coastal storm events (as was the case after hurricane Sandy). Damage has been caused along the slope already with the most severe damage being along the south end of the landfill.

The site is located along Block Island Sound (Atlantic Ocean). The waters are classified as CRMC Type 1 Conservation Areas (Section 1.2.1, B). The landfill is no longer active and has been closed but continues to operate as the transfer station for the Town. Hurricane Sandy resulted in severe damage to the landfill slope in 2012 and was the impetus for the CRMC application and ultimate approval of Assent 2016-02-090 to repair and stabilize the shoreline slope of the landfill using a stone revetment system.

The property is recorded on plat card no. 2, lots 39, 40, and 49-1 in the land evidence records, New Shoreham, Rhode Island at the Town Hall. The property is served by Town electric (Block Island Power).

The proposed stone revetment work is located on an earth slope that is well above normal low and high tide influences. Erosion at the coastline is an ongoing issue along many areas of



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Block Island but the beach has remained relatively stable since the revetment toe construction was completed in 2016/17.

The proposed work includes excavation of the grassed area above the existing revetment section. The new revetment is designed in accordance with the US Army Corps of Engineers design requirements for the FEMA 100-year (1%) significant design wave. The design also reflects a 2-foot sea level rise in the existing predicted 100-year (1%) still water level elevation. All excess soil materials excavated will be stockpiled onsite near the existing transfer station building area which is away from the ocean. The Town will reuse this soil for other municipal projects as necessary. All other excess materials and/or landfill, and/or unsuitable materials will be disposed offsite in accordance with applicable state and federal law requirements.

The proposed project is not allowed per CRMC's CRMP (Redbook) and as such the Town is seeking a special exception. The project qualifies for a special exception because it meets the compelling public purpose criteria as a public project designed to stabilize an eroding slope of a closed landfill as a means to allow continued public lateral access across the area.

Project Specifics:

Water Use Category:	Type 1
Shoreline Feature:	Headland Bluff (landfill slope which is actually manmade)
Water Use Map:	Block Island (New Shoreham) Quadrangle
Lot Size:	10 ± Acres (approximate entire landfill area)
Setback (Section 1.1.9):	50- foot setback
Alteration or Activity:	Expand existing stone revetment shoreline protection system
Project Footprint:	9,800 ± SF
Flood Zone:	VE13 (EL13) per FIS and VE12 (EL12) per FIRM along slope; (FIS No. 44009CV001C, dated April 3, 2020)
Base Flood Elevation	EL 13 FT (VE13) per FIS/EL 12 FT (VE12) per FIRM - NAVD88 (Stillwater EL 7.9 ft NAVD88)
Fill to be Deposited:	No fill will be deposited below MHW as part of this project.

Section 1.1.8 – Special Exception Requested:

The applicant is seeking permission to expand structural shoreline protection which is not allowed in Type 1 waters per the CRMC CRMP (Redbook) regulations and as such requires a special exception. The project meets the standard for special exception under compelling public purpose.

The applicant is requesting the following special exception activity:

- Special exception to allow expansion of structural shoreline protection in Type 1 water



1.1.8 Special Exception

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 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©(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.*

Response: The project meets the requirements of “c” above. The improvements are meant to ensure pedestrian access along the shoreline is maintained in a safe manner. Without the expanded shoreline protection damage to the slope could result in debris on the beach and instability of the slope supporting the pedestrian lateral access walkway constructed and maintained by the Town.

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

Response: The construction has been minimized to the extent feasible to ensure adequate protection of the slope per the US Corps of Engineers design requirements and the FEMA Flood Study 100-year (1%) storm wave conditions. These requirements were reviewed and agreed to between the Town and CRMC as part of the approved 2016-02-091 Assent. This application only seeks permission to complete the stone revetment work that was previously approved per Assent 2016-02-091.

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

Response: Given the location, project constraints, and high energy coastal storm waves there are no feasible alternatives to the work proposed to provide the level of protection necessary.

Section 1.3.1 – Category B Requirements (UpLand):

This section of the regulations may not apply to this project because the proposed work is generally confined to the slope area along the shoreline and not the upland area above the slope. However, this section has been included because some construction activities may be staged or performed from the upland area of the landfill site.

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

Response: The proposed stone revetment is required to provide adequate protection to the existing earth slope which has been damaged and eroded by coastal storm waves. Given the high energy environment (FEMA VE13 high velocity zone) only large stone is suitable to protect the slope from the wave forces.

- 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;*

Response: All work will comply with local, state, and federal requirements. The new stone revetment is designed to meet the requirements of the US Army Corps of Engineers Shoreline Protection Manual, and Coastal Construction Manual. A Building Permit will be obtained from the town of New Shoreham as applicable.

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

Response: The work will be conducted on the upland slope area above the existing stone revetment adjacent to CRMC Type 1 waters. Adjacent to and below the existing structural shoreline protection system the shoreline is sandy beach. The existing structural shoreline protection was constructed per Assent 2016-02-090.

- 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;*

Response: The proposed stone revetment work is located on a slope above an existing stone revetment system that is already in place. The new work will start at around elevation +10.0 ft (NAVD88 datum), which is well above MHW. The existing slope area is generally grass covered. As such, the work proposed is completely located in the upland area of the existing slope, and will have little to no impact on future erosion and/or deposition processes. As such the proposed work will have

minimal impacts on normal deposition processes along the shore and in tidal waters since.

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

Response: The expanded stone revetment section will replace existing grass up to elevation +18.0 ft+- but the existing grass will remain above this elevation. There will be no significant impact on plant or animal life from the proposed project. The new revetment section is expected to provide more habitat for small animal life.

- 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;*

Response: The project is proposed in part to ensure public access is maintained and not adversely impacted at the site. Therefore the project does not interfere with access to, and use of, the shoreline by the public.

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

Response: As previously mentioned the work proposed is well above MHW on an upland portion of slope. As such the project will not result in impacts to 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;*

Response: No deterioration of water quality is expected as a result of the project. No change to stormwater runoff or impacts will result as a result of this project.

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

Response: Although Block Island has a rich cultural history dating back to the Niantic Indians, areas of important historic and archaeological significance will not be affected by the stone revetment 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;*

Response: The stone revetment project will not adversely impact water dependent uses at this site. The existing conditions along the shoreline at the beach interface will remain as it is currently. The public will have the same access to the

shoreline as what currently exists. No commerce is affiliated with the project area and, as stated, the project stands to pose significant public benefits in protecting the landfill from erosion.

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

Response: The expansion of manmade features (stone revetment) further up the existing landfill slope is an unavoidable component given the high energy nature of the coastal storm waves that impact this area. However, the applicant contends that the stone revetment shall have a similar aesthetic to the stone revetment that exists along the toe of slope. The applicant also contends the aesthetic is better than a failed and eroded earth slope that could result in exposed landfill debris. The later issue was well documented during landfill debris cleanup along the beach in this area as a result during hurricane Sandy damage.

1.3.1 B – Filling, Removing, or Grading of Shoreline Features:

3. Standards

- a. *The following standards apply in all cases where filling, removal, or grading is undertaken:*

- (1) *Fill slopes shall have a maximum grade of thirty percent (30%);*

Response: There will be no creation of new fill slopes as part of this project. The existing slopes will be maintained as is and the proposed work would be to replace the earth slope with a stone revetment. The stone revetment would not be subject to erosion. Any areas above the top of the new stone revetment disturbed by construction would be revegetated to meet existing conditions. This is generally Beachgrass on the slope and normal grass on the flatter areas above the top of slope. Grass/lawn areas above the slope generally have a gradient much less than 30% while the slope has a gradient in excess of 30%.

- (2) *All excess excavated materials, excess fill, excess construction materials, and debris shall be removed from the site and shall not be disposed in tidal waters or on a coastal feature;*

Response: All excess materials, fill & debris will be removed from the site & disposed of off-site. Except that some of the loam and suitable excavated soils may be stockpiled for use at the east side of the landfill site (near the building) for use by the Town as needed.



- (3) *Disturbed uplands adjacent to a construction site shall be graded and re-vegetated or otherwise stabilized to prevent erosion during or immediately after construction. Nutrients shall be applied at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters;*

Response: Disturbed areas due to the construction will be graded & stabilized to prevent erosion & be vegetated to avoid nutrient runoff. There will also be erosion controls placed along the top of the downgradient slope to control erosion until vegetation is reestablished.

- (4) *Removal or placement of sediments along jetties or groins may be permitted only as part of an approved dredging or beach nourishment project (see § 1.3.1(I) of this Part);*

Response: Not applicable

- (5) *All fill shall be clean and free of materials which may cause pollution of tidal waters;*

Response: All fill proposed in association with site construction shall be clean & free of contaminants.

- (6) *Cutting into rather than filling out over a coastal bank is the preferred method of changing upland slopes; and*

Response: The project proposes to do this just this. The existing slope will be excavated to remove existing soil materials to allow the stone revetment to be constructed so as to match the existing slope profile when complete.

- (7) *Limit the application, generation, and migration of toxic substances and ensure that toxic substances are properly stored and disposed of onsite in accordance with all applicable federal, state, and local requirements.*

Response: Toxic substances & materials, (none are anticipated), in association with the project construction will be properly stored away from stormwater inlets & top of the coastal slope and away from the surface waters & disposed of as required. If landfill debris is encountered during excavation it will be separated for loading onto trucks and disposal offsite.

- b. *The following upland and shoreline earthwork standards shall be required in those cases where the Council determines that additional measures are warranted in order to*



protect the environment of the coastal region. Such requirements shall be listed on Assents as stipulations.

c. For earthwork on shoreline features:

- (1) Prior to initiation of construction, the contractor may be required to meet on site with the CRMC staff to discuss and clarify the conditions of the permit.*

Response: So noted.

- (2) A re-vegetation plan shall be submitted for review and approval when construction is undertaken on a barrier beach. This plan shall describe plant material, methods of planting, time of planting, soil amendments, and maintenance.*

Response: This is not a barrier beach so N/A.

- (3) Construction materials and excavated soils shall not be placed or stored on any shoreline feature excepting developed barrier beaches and manmade shorelines.*

Response: No construction materials or soils shall be stored on the shoreline feature except as approved by CRMC for the construction of the revetment.

- (4) All disturbed soil shall be graded shall be graded smooth to a maximum 3:1 slope and re-vegetated immediately after construction, or temporarily stabilized with mulch, jute matting, or similar means until seasonal conditions permit such re-vegetation.*

Response: The existing slopes are 2.5:1 and will be maintained. The stone revetment is not a concern for erosion. The vegetated slope areas are covered by Beachgrass which has performed well and is healthy. The intent would be to impact these grassed areas as little as possible during construction. But if they are damaged/impacted they will be replanted in kind and protected from erosion as necessary until the grass has regrown.

- (5) In sensitive areas, work shall be carried out from areas above the slope from coastal features. Machinery and construction equipment shall normally not be allowed to operate on a coastal wetland. For unavoidable work on a coastal wetland, a protective cover shall be deployed to minimize disturbance.*

Response: There are no coastal wetlands along the proposed slope construction area. The work will be undertaken from both the top and bottom of slope areas as necessary to accommodate construction.



- (6) *In instances where CRMC permits temporary disturbance of a coastal feature, shoreline slope, buffer zone, or area of beach grass, the disturbed area shall be completely restored by the owner under the guidance of CRMC staff.*

Response: So noted.

- (7) *Concrete structures which come in contact with salt water shall be constructed with concrete which utilizes a Type II or Type V air entraining Portland cement or an equivalent that is resistant to sulfate attacks of seawater.*

Response: So noted.

d. For upland earthwork measures shall be taken to minimize erosion:

- (1) *A line of staked hay bales or other erosion preventing devices (including diversion ditches, check dams, holding ponds, filter barrier fabric, jute or straw mulch) shall be placed at the downslope perimeter of the proposed area of construction prior to any grading, filling, construction, or other earthwork. Hay bales shall be toed-in to a depth of 3 to 4 inches, and maintained by replacing bales where necessary until permanent re-vegetation of the site is completed. No soils or other materials are authorized to pass beyond the bale line;*

Response: Soil Erosion & sediment control measures will be applied to project perimeter and stormwater practices. This includes a line a staked erosion control along the top of the existing slope and at the interface between the earth slope and the new stone revetment.

- (2) *All slopes shall be returned to the original grade unless otherwise specified;*

Response: So noted and that is the requirement of the project.

- (3) *Where natural or manmade slopes are or have become susceptible to erosion, the slopes shall be graded to a suitable slope and re-vegetated with thick rooting brush vegetation. Mulch shall be applied as necessary to provide protection against erosion until the vegetation is established;*

Response: Not Applicable

- (4) *Construction shall be timed to accommodate stream and/or runoff flow and not allow flows over exposed, un-stabilized soils, or into or through the excavation. Flows shall not be restricted in such a manner that flooding or inhibition or normal flushing occurs;*

Response: Permanent & temporary stormwater and erosion control measures shall be employed to control construction runoff and sediment. Practices shall be completed and/or restored to design conditions following construction.

- (5) *Any pumping of groundwater which may be necessary for de-watering shall be discharged into sediment traps consisting of a minimum of staked hay bale rings enclosing crushed stone or trap rock of a size sufficient to disperse inflow velocity. Hay bales shall be recessed 4 to 6 inches into the soil and maintained; and*

Response: Dewatering practices that may be necessary will be applied as required.

- (6) *There shall be no discharge of sediment laden waters into storm drains. Storm drains shall be surrounded by staked hay bales to intercept sediment.*

Response: Refer to responses a (7), d (1,4,5)

e. ***For any disturbance of steep slopes (over 15 percent):***

- (1) *Where such construction is allowed, the following shall be observed:*

(AA) *No fill shall be allowed on the slope;*

(BB) *Excavation shall be kept to an absolute minimum; and*

(CC) *Vegetative cover on the slope shall be permanently maintained to the maximum extent physically possible.*

Response: The proposed project replaces existing soil material on the slope with stone revetment. The proposed excavation is the minimum required to allow construction of the stone revetment system. The existing vegetative cover on the slope is not meant to be disturbed but if it is it will be replaced in kind.

- (2) *Where the potential for damage to a slope exists from runoff, staked hay bales, berms, or similar diversions shall be placed at the top and toe of the slope. Collected water shall be suitably discharged through properly constructed drains or swales. Wherever possible, drainage swales shall be constructed along and adjacent to property lines so as to avoid drainage onto adjacent properties. Swales shall be capable of handling runoff from a ten (10) year rainfall occurrence.*

Response: Stormwater best practices are proposed to collect water at the site as necessary including erosion controls along the top of slope. Any collected stormwater at the property would be treated to remove sediment before discharge.

- (3) *For excavations on slopes or directly adjacent to coastal features, the excavated materials shall be cast upslope of the trench or excavation so as to minimize downslope runoff of sediment.*

Response: Refer to responses a(7), d(1,4,5)

- (4) *Pedestrian access over steep shoreline slopes and banks shall be in the form of field stone or similar stabilized paths or elevated stairs. Access over bluffs shall be with elevated stairs only.*

Response: Generally Not Applicable but the existing walkway along the top of the slope will be repaired to restore exiting conditions as necessary if any damage/impact occurs during construction.

1.3.1 G – Shoreline Protection:

4. Additional Category B Requirements:

b. Applicants for structural shoreline protection measures to control erosion shall, on the basis of sound professional information, demonstrate in writing all of the following:

- (1) *An erosion hazard exists due to natural erosion processes and the proposed structural shoreline protection has a reasonable probability of controlling this erosion problem.*

Response: The existing earth slope above the existing stone revetment is actively eroding due to wave impacts during coastal storms. The new stone revetment system has been designed in accordance with the requirements of the US Army Corps of Engineers Shore Protection manual for the 100-year (1%) storm's significant wave height. The new stone revetment system will eliminate the earth slope erosion currently occurring and in addition ensure the landfill debris buried below the slope does not become exposed with the potential to wash onto the adjacent beach area. This issue occurred after hurricane Sandy exposed significant landfill debris due to the slope erosion.

- (2) *Nonstructural and hybrid shoreline protection has not worked in the past or will not work in the future because these methods are not suitable for the present site conditions.*

Response: The site is located along Block Island Sound with nearly unlimited fetch conditions. Large coastal waves impact the area routinely. The site is a V13

zone indicating high energy wave impact during the FEMA 100-year (1%) storm event. Nonstructural and hybrid shoreline protection system are unable to provide adequate protection from storm waves in V-zones.

- (3) *There are no particle or reasonable alternatives to the proposed activity such as the relocation of existing structures that mitigate the need for structural shoreline protection.*

Response: The alternative to remove the landfill was investigated as part of the application for Assent 2016-02-090. The logistics, environmental impact, and overall cost determined this alternate to be unrealistic.

- (4) *The proposed structure is not likely to increase erosion or disrupt shoreline sediment dynamics that sustain adjacent natural shoreline features, or adversely affect the stability of the shoreline on either side of the project.*

Response: The proposed stone revetment is being constructed well above MHW and above an existing stone revetment section constructed along the lower slope per Assent 2016-02-090. As such the proposed stone revetment section will decrease erosion on the earth slope, and have no impact existing sediment dynamics and/or shoreline stability.

- (5) *There is no #5.*

Response: N/A.

- (6) *Describe the long-term maintenance program for the structure including storm damage, the ability to rebuild the structure following storm damage and financial commitments to pay for said maintenance.*

Response: The Town of New Shoreham is committed to maintaining the shoreline revetment as required. This new application is testament to this issue. The Town has the ability to raise funds and apply for grants as necessary to fund future maintenance work. Town workers and engineers routinely walk the beach area, especially after coastal storms, to inspect conditions along the slope and revetment system.

- (7) *New structural shoreline protection shall be designed and certified by a registered professional engineer.*

Response: The new stone revetment system has been designed by a Professional Engineer registered in the state of Rhode Island. The design is in accordance with the requirements of the US Army Corps of Engineers Shore Protection manual for the FEMA 100-year (1%) significant wave height.



(8) *Describe all likely impacts that the structural shoreline protection may have on the continued public lateral beach access. If lateral public access will be impacted at any time, a lateral public access plan shall be provided, except where preempted by federal law (e.g., U.S. Coast Guard maritime Security (MARSEC)).*

Response: The site is located along Block Island Sound with nearly unlimited fetch conditions. Large coastal waves impact the area routinely. The site is a V13 zone indicating high energy wave impact during the FEMA 100-year (1%) storm event. Nonstructural and hybrid shoreline protection system are unable to provide adequate protection from storm waves in V-zones.

5. Standards

a. *All applicable standards for earthwork in 1.3.1(B) of this Part shall be met. The base of the seawall, bulkhead, revetment or toe-of-slope protection for hybrid shoreline protection must be located as close as practicable to the shoreline feature it is designed to protect. Nonstructural, hybrid and structural shoreline protection shall be placed landward of coastal wetlands unless the project is a marsh sill designed for wave attenuation as part of a marsh creation, enhancement, or restoration project.*

Response: Earthwork requirements so noted.

b. *The ends of nonstructural, hybrid and shoreline protection structures shall be tied into adjacent structures. Where there are no adjacent structures, the new structure shall gradually return to the slope of the feature and be so designed to minimize erosion around the back of the structure.*

Response: This is not applicable for the work proposed but the existing stone revetment system along the lower portion of the siting slope was designed in accordance with these requirements per Assent 2016-02-090.

c. *For a practice to be considered hybrid shoreline protection, stone may only be used for toe-of-slope protection or intertidal sill creation. For the purposes of this section, toe-of-slope protection shall not extend more than two (2) feet vertically from the bottom of the bank or scarp along low energy shorelines (i.e., fetch less than 1.5 miles) and four (4) feet vertically from bottom of bank or scarp along high energy shorelines (i.e., fetch greater than 1.5 miles). Stone may be gathered from the coastal beach directly in front of the and no more than twenty-five (25) feet seaward of the proposed hybrid shoreline protection to be used for toe-of-slope protection or intertidal sill construction. However, no materials may be gathered seaward of the mean high water elevation.*

Response: N/A.

- d. *All anchoring and connecting components for non-structural, hybrid and structural shoreline protection shall be clearly shown on site plans. All anchoring and connecting components shall be removed upon exposure unless being repaired or replaced as part of CRMC approved maintenance.*

Response: N/A.

- e. *The base of all shoreline protection built on unconsolidated sediments shall extend to a depth equivalent to mean low water or to an appropriate depth as determined by the methods detailed in the most recent version of the U.S Army Corps of Engineers Coastal Construction Manual. Where practicable, the base shall extend to a depth of three (3) feet below the area of disturbance .*

Response: N/A for the proposed stone revetment work but the existing stone revetment section was designed in accordance with these requirements.

- f. *To promote good drainage behind seawalls and bulkheads, and to minimize the flow of sediment into waterways and avoid the loss of backfill, all backfill must contain less than 10% silt. If sediment in the area is fine grained, a filtering layer shall be placed behind and/or beneath the structure, consisting of suitably graded stone or rock chips or geotextile fabric. Weep holes shall be provided for drainage in sea walls and bulkheads. The use of grout or concrete within, behind, or over revetments is not permitted.*

Response: N/A.

- g. *Where feasible, the areas in back of structural shoreline protection shall be level for a distance equivalent to its height.*

Response: The landfill area above the top of the slope is relatively flat for a distance greater than required above.

- h. *The slope of revetments shall not exceed 1:1 and the slope of non-structural and non-structural components of hybrid shoreline protection and associated soil shall not exceed 2:1.*

Response: This standard is exceeded with the new revetment system and earth slope above being 2.5H:1V.

- i. *Riprap revetments shall be constructed of angular stone with a minimum unit weight of 165 lbs./cubic foot (such as granite). The size of the stone shall be dependent upon the site's exposure to wave energy in accordance with the US Army Corps of Engineers Coastal Construction Manual.*

Response: The new revetment design meets the above requirements.

- j. *Applications for structural shoreline protection shall be designed and stamped by a registered professional engineer.*

Response: The new revetment system has been designed by a Professional Engineer licensed in the state of Rhode Island.

- k. *Applicants for hybrid shoreline protection, as provided for in 1.3.1(G)(4)(a) of this Part, and include small-scale toe-of-slope protection as part of a hybrid protection project shall be designed by an appropriate design professional (e.g., registered professional engineer, landscape architect, or land surveyor).*

Response: N/A.

- l. *Concrete used for sea wall construction along the shore and in tidal waters shall be resistant to the sulfate attack of seawater; Type 2 or Type 5 air entraining Portland cement or an equivalent shall be used.*

Response: N/A.

- m. *All shoreline protection construction activities shall minimize any adverse impact to water quality such as disturbance of sediment.*

Response: This standard is met. Erosion controls shall be used to control sediment during construction

- n. *Applicants shall provide appropriate on-site lateral shoreline access of a similar type and level to that which will be impacted by the proposed project. Applicants shall submit a plan detailing the lateral public access over or around the landward side of proposed structure.*

Response: The existing lateral access pathway across the site will be protected and maintained throughout construction. If there is a time when construction impacts this walkway path a detour will be provided along the beach area..

- o. *The seaward extent of the toe of shoreline protection shall be tied into an existing shoreline feature (e.g., bluff, revetment, seawall, etc.) within the applicants property.*

Response: N/A for the proposed stone revetment work but the existing stone revetment section meets this requirement.



- p. *All previously required coastal buffer zones or existing areas of natural vegetation landward of the shoreline protection structure must be preserved, or replaced where disturbed, and retained in an undisturbed condition.*

Response: Generally N/A but all existing vegetation will be maintained per existing conditions above and adjacent to the new revetment section.

- q. *Where no buffer zone or natural vegetation exists, an area no less than fifteen (15) feet wide immediately landward of the shoreline protection structure shall be restored to native, deep rooted (i.e., tree shrub) vegetation to minimize erosion from upland stormwater flows and overtopping storm surge.*

Response: Generally N/A because the revetment has been designed for sea level rise and storm wave run up. The existing earth slope above will be comprised of Beachgrass to match existing conditions.

- r. *A twenty-five (25) foot setback shall be maintained between the buffer zone or natural vegetation and nearby structures, excluding any associated residential structures as defined in 1.1.2 of this Part.*

Response: N/A.

1.3.5 Policies for Protection and Enhancement of the Scenic Value of the Coastal Region

The primary goal of all Council efforts to preserve, protect, and where possible, restore scenic value of the coastal region is to retain the visual diversity and often unique visual character of the Rhode Island coast...

The Applicant's is aligned with this intent also and although the project will expand the existing shoreline protection system it will enhance the scenic value by eliminating potential slope erosion and failures caused by storm related wave damage to the slope which could also expose buried landfill debris. The upper part of the slope will continue to be vegetated with Beachgrass enhancing the scenic quality.

1.3.6 Protection and Enhancement of Public Access to the Shore

As a trustee of Rhode Island's coastal resources and in accordance with state and federal mandates, the Council has the responsibility to ensure that public access to the shore is protected, maintained and, where possible, enhanced for the benefit of all.

CRMC Narrative – Landfill Slope Repairs
Town of New Shoreham
P.O. Box 220, New Shoreham, RI



The Applicant's is aligned with this intent and as such created enhanced public access in the form of a pedestrian walkway along the top of the slope. This was created as part of the existing stone revetment shoreline protection system construction completed in 2016/17. This work was approved by CRMC Assent 2016-02-090. The Town's intent for the proposed work is to ensure this access is maintained in a safe manner by removing the slope instability potential that would result from erosion caused by storm wave impacts.

Conclusion

The Town of New Shoreham is seeking permission from CRMC to expand the existing stone revetment system along the earth slope of the revetment. This work had been approved previously by CRMC Assent 2016-02-090 which included a special exception. However, due to budget issues the entire project was not completed and only the lower (toe) portion of the revetment system was constructed in 2016/17. The original Assent has expired, and the Town is asking for permission to continue the work originally approved. This new work will be undertaken over several years as monies are available. The work will start at the south end of the landfill where slope damage is the most severe and continue north. Once complete the new stone revetment system will provide protection along the entire shoreline slope of the landfill from wave related damage caused by up to the FEMA 100-year (1%) coastal storm.

Project Contact Personnel:

The responsible contact persons for the Project who will be able to answer questions pertaining to this application and permit compliance during construction will be the following:

Owner:	Town of New Shoreham	
Attn:	Maryanne Crawford, Town Manager	Phone: (401) 466-3210
Address:	P.O. Box 220 New Shoreham, Rhode Island 02807	
Engineer:	Robert W. Fairbanks, P.E.	Phone: (401) 294-3484
	Fairbanks Engineering Corporation	
Address:	42 Cobblestone Hill Road Exeter, Rhode Island 02822	
Engineer:	James J. Geremia, P.E.	Phone: (401) 454-7000
	James J. Geremia & Associates, Inc.	
Address:	272 West Exchange St., Suite 201 Providence, Rhode Island 02903	

S:\Jobs\14012.00 BI Landfill Slopes\Toe Repair 2024\CRMC Narrative Landfill Slope Repairs 2024.docx

CRMC Narrative – Landfill Slope Repairs
Town of New Shoreham
P.O. Box 220, New Shoreham, RI

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CRMC CATEGORY B APPLICATION
LANDFILL STORM DAMAGE SLOPE REPAIRS
AP 02, LOTS 039, 040, & 048-1, NEW SHOREHAM, RI



Photo 1: Overview of south end of the landfill slope - note erosion behind revetment



Photo 2: Overview of south end of landfill slope – note erosion/scarp behind revetment



CRMC CATEGORY B APPLICATION
LANDFILL STORM DAMAGE SLOPE REPAIRS
AP 02, LOTS 039, 040, & 048-1, NEW SHOREHAM, RI



Photo 3: Overview of south corner of landfill slope at shoreline – note cobble wash into revetment and erosion/scarp above revetment



Photo 4: Note erosion/scarp behind revetment stone caused by storm waves

CRMC CATEGORY B APPLICATION
LANDFILL STORM DAMAGE SLOPE REPAIRS
AP 02, LOTS 039, 040, & 048-1, NEW SHOREHAM, RI



Photo 5: Note erosion and possible revetment stone movement caused by storm waves



Photo 6: Overview of south corner of landfill slope at shoreline – note cobble wash into revetment and erosion/scarp above revetment

CRMC CATEGORY B APPLICATION
LANDFILL STORM DAMAGE SLOPE REPAIRS
AP 02, LOTS 039, 040, & 048-1, NEW SHOREHAM, RI



Photo 7: Typical revetment toe stone section



Photo 8: Overview of revetment stone – note erosion/scarp behind revetment caused by storm waves

CRMC CATEGORY B APPLICATION
LANDFILL STORM DAMAGE SLOPE REPAIRS
AP 02, LOTS 039, 040, & 048-1, NEW SHOREHAM, RI



Photo 9: Erosion of earth slope and vegetation above revetment stone caused by storm waves



Photo 10: Erosion of earth slope and vegetation above revetment stone caused by storm waves

CRMC CATEGORY B APPLICATION
LANDFILL STORM DAMAGE SLOPE REPAIRS
AP 02, LOTS 039, 040, & 048-1, NEW SHOREHAM, RI



Photo 11: Overview of Block Island Sound from the walkway at the top of the landfill slope



Photo 12: Overview of the north corner of the revetment at the landfill looking south

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



FROM: Building Official DATE: _____

SUBJ: Application of: Town of New Shoreham

Location: Town Landfill (14 West Beach Road)

Address: 14 West Beach Road Plat No. 2 Lot No. 39, 40, 48-1

To Construct: To repair the existing shoreline slope at the landfill by expanding the existing stone revetment system further up the slope to El +18.0 ft (NAVD88)

I hereby certify that I have reviewed _____ foundation plan(s).

_____ plan(s) for entire structure

☒ site plans

Titled: Block Island Landfill Slope Repairs,
Town of New Shoreham, RI (6 sheets including cover)

Date of Plan (last revision): 8-15-24

✓ and find that the issuance of a local building permit is not required as in accordance with Section 105.7 of the Rhode Island State Building Code.

_____ 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.

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

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

_____ 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 _____.

CM 8-28-2024
Building Official's Signature Date

N/A 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.

Maintenance Repairs
JBO

Joseph 8-30-24
Zoning Officer's Signature Date





TOWN of NEW SHOREHAM

Tax Assessor Office

TELEPHONE (401) 466-3217

FAX (401) 466-2752

TTY 711

jwholey@newshorehamri.gov

August 27, 2024

TO WHOM IT MAY CONCERN:

Per deed recorded in **Book 46 on Page 209 Dated June 1, 1976**, the owner of **Plat 02 Lots 039**

Plat 02 lot 040 dated August 1, 1985 and plat 02 lot 048-01 dated June 1, 1978, the owner is:

Town of New Shoreham

With a mailing address of

PO Box 220

16 Old Town Road

Block Island RI 02807

Respectfully submitted,

Joan Wholey

Clerk, Board of Assessors

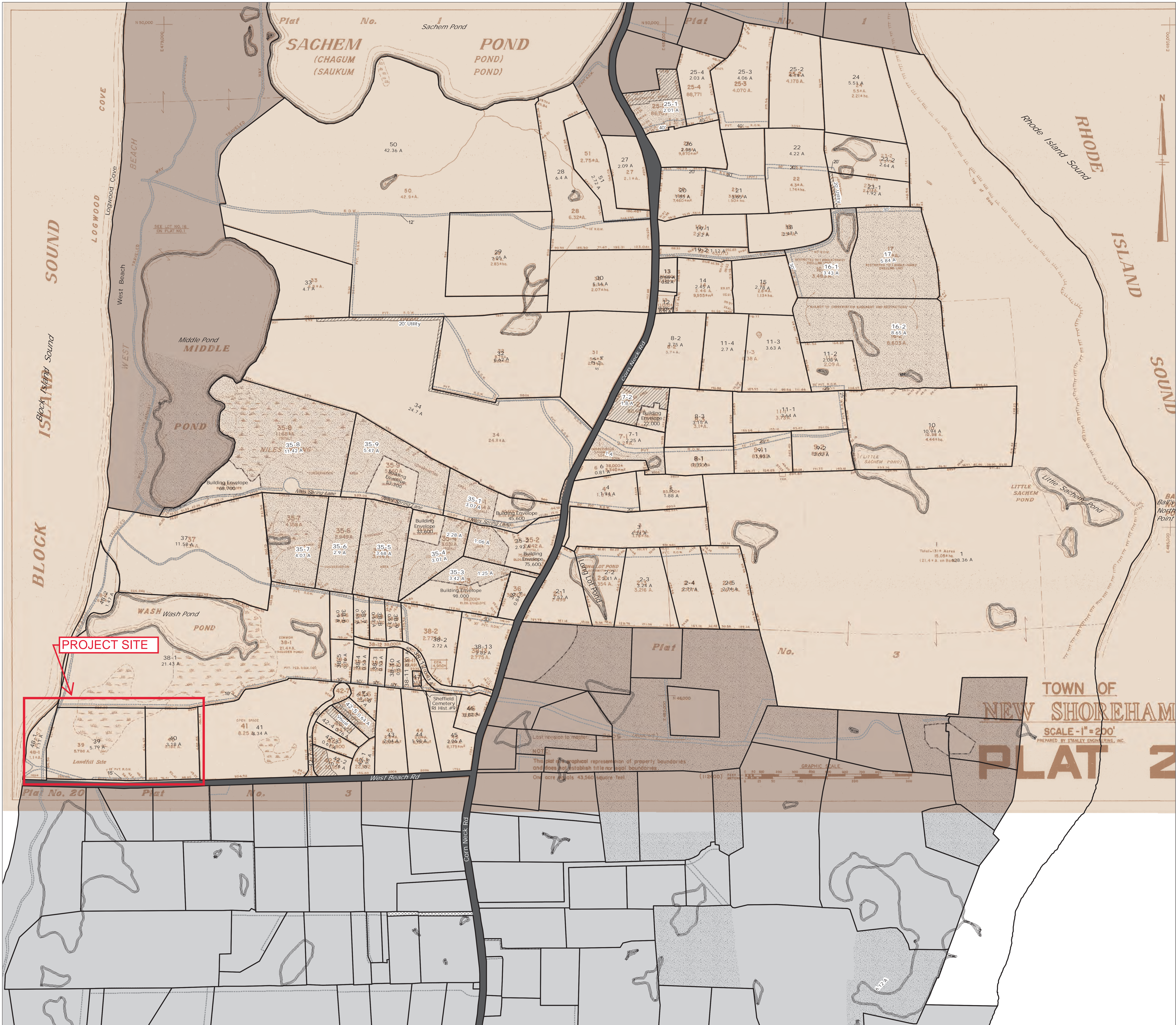
assessor@new-shoreham.com

401-466-3217



P.O. BOX 220

BLOCK ISLAND • RHODE ISLAND • 02807



Town of New Shoreham Tax Assessor's Map

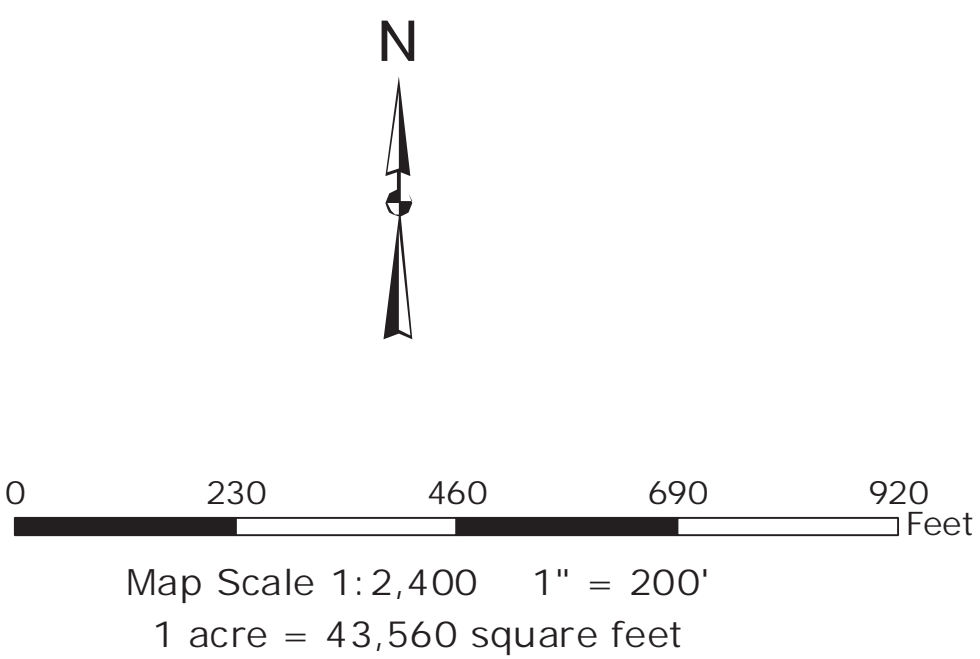
As of December 31, 2009

Published: 5/6/2009
Revised: 9/12/2009

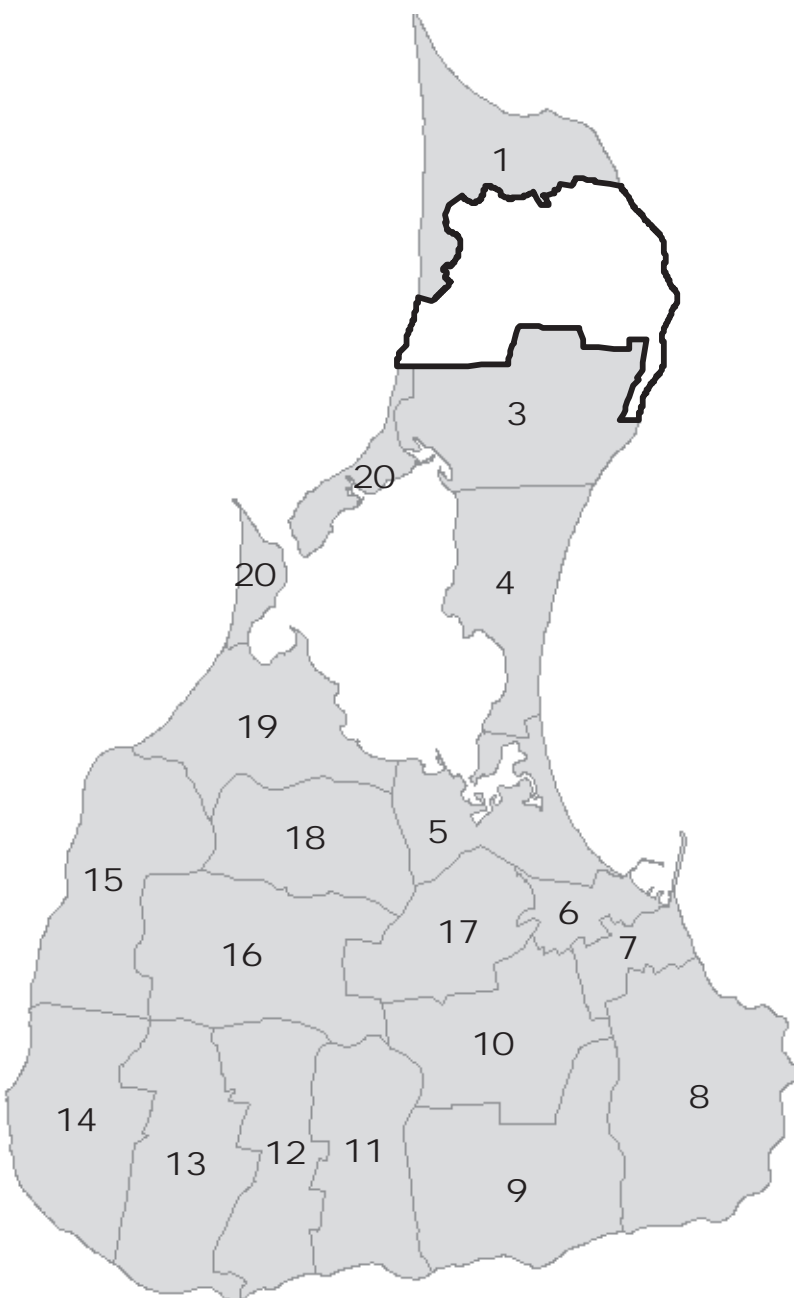
This map was produced from the Town of New Shoreham Geographic Information System, using these data sources:

- Parcel boundaries, rights of way, conservation restrictions, building envelopes and non-conservation easements digitized from the December 31, 2005 maps prepared by Stanley Engineering, Inc.
- Revisions sourced from the Assessor's database and land evidence records
- Ponds and Swamps digitized from 1997 aerial photography

This map is a cartographic representation of geographic data for assessment purposes only and does not establish title or legal boundaries. The area values displayed on the map are derived from the digital data and do not necessarily reflect the area used for assessment purposes or recorded on legal instruments.



- Parcel
- Right of Way (private unless otherwise labeled)
- Conservation Restriction (easement unless otherwise labeled)
- Building Envelope
- Non-conservation Easement
- Pond or Swamp (digitized from 1997 aerial photos)
- Land Not Associated with a Parcel (shown with solid lines on source maps without plat lot designation)



TOWN OF NEW SHOREHAM
PLAT 2

RICRMC COASTAL HAZARD ANALYSIS WORKSHEET

APPLICANT NAME: Town of New Shoreham

PROJECT SITE ADDRESS: 14 West Beach Road, New Shoreham

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.
- ☐ 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**)
- ☐ C. Add the number of years you identified in 1B to the current year. (For example, if you are completing this form in the year 2020, and you want your project to last 30 years, your design life year will be 2050.)

FFE **OR** ft

LHSM elevation ft

Design Life: 30 yrs

Design Life Year: 2055

- ☐ 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	0.71	1.11	1.60	2.29	3.17	4.19	5.35	6.47
	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Source: Sea Level Rise (SLR) Projections (Feb. 2022). NOAA High Curve, Newport, RI Tide Gauge. All values are expressed in feet relative to NAVD88. https://sealevel.nasa.gov/task-force-scenario-tool?psmsl_id=351

NOTE: The present National Tidal Datum Epoch (NTDE) is 1983 through 2001. The NOAA 2017 data use a baseline starting at 2000, and the NOAA 2022 data use a baseline starting at 2020. Between 1991 and 2020 there was an annual average of 4.03 mm/year of sea level rise at the Newport (8452660) tide station based on the trends data from the Permanent Service for Mean Sea Level (<https://www.psmsl.org/products/trends/>). Because the PSMSL trends are based on a minimum 30 years of data we will assume a similar trend applies to the shorter 20 year period of 2000 to 2020. Thus, there was approximately 8.06 cm (3.39 inches) of sea level rise during the period 2000 to 2020. Accordingly, the MHHW elevation of 3.85 feet at the Newport station (Epoch 1983-2001) would be adjusted an additional 3.39 inches to 4.13 feet MHHW. For reference, NAVD88 at Newport is 2.04 feet.

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 up to the closest of these sea level rise (SLR) numbers: 1ft, 2ft, 3ft, 5ft, 7ft, 10ft, or 12ft
- ☐ C. Does the STORMTOOLS SLR map layer you circled above expose your project site to future tidal inundation? **CHECK YES or 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.

2 ft

☐ YES

☒ NO

****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. 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
- ☐ B. Click on the map at project site to identify **STORMTOOLS Design Elevation (SDE)**

from the pop up box. Enter the SDE value: undefined ft

- Storm tools did not provide a value for this item.

RECEIVED

9/4/2024

COASTAL RESOURCES
MANAGEMENT COUNCIL

RICRMC 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.

Transect Number: 291
Erosion Rate: 1.6 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 Erosion Multiplier	1.34	1.45	1.57	1.70	1.84	2.00
	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

C. COMPLETE EROSION SETBACK CALCULATION:

Historic shoreline change rate, STEP 4A	Design Life, STEP 1C	Projected Future Erosion Multiplier, STEP 4B	Erosion Setback (ft) 4A x 1C x 4B
1.6	X 30	X 1.34	= 64.32

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. OTHER SITE CONSIDERATIONS: CERl & SLAMM

☐ A. Use the **Coastal Environmental Risk Index (CERl)** map (See Tab 5A on the viewer) to enter your address and CHECK the level of projected damage to your location, as indicated on the map that corresponds to the design life identified in STEP 1.

CERl Level: Moderate ☐ High ☐ Severe ☐ Extreme ☐ Inundated by 2100 ☐ Not applicable ☒

☐ B. **Sea Level Affecting Marshes Model (SLAMM)** (See Tab 5B on the Viewer) - 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.l\(1\)\(f\)](#). This step may be skipped for other projects. 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 3-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 ☐

☐ C. 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 watertable/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: 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: 8-27-24

OWNER'S SIGNATURE: _____

DATE: 8-27-24