

CRMC DECISION WORKSHEET

Hearing Date:	
Approved as Recommended	
Approved w/additional Stipulations	
Approved but Modified	
Denied	Vote

APPLICATION INFORMATION						
File Number	Town	Project Location		Category	Special Exception	Variance
2023-06-125	East Providence	Booth Avenue		B	X	<input type="checkbox"/>
		Plat	13			
		Owner Name and Address				
Date Accepted	6/29/2024	City of East Providence		Work at or Below MHW		X
Date Completed	2/8/2024	145 Taunton Ave East Providence, RI 02914		Lease Required		<input type="checkbox"/>

PROJECT DESCRIPTION

Repair and add protection to the existing eroded bluff located at 0 Booth Avenue. Work includes installing geotextile reinforced mechanically stabilized earth slope (MSE) with slope dimensions of 2:1 (horizontal to vertical). The MSE slope will present a natural slope (i.e. no manmade structure will be visible). The design allows for implementing native vegetation combined with coir logs, jute mat reinforcement, which will satisfy slope stability requirements. This will restore the toe of the slope to its approximate historic position and will provide the desired protection for Booth Avenue and its utilities.

A riprap sill (a constructed marsh with an artificial sill to reduce potential future erosion) will be installed to provide erosion protection and additional habitat for marine fauna. Other features include an infiltrating Best Management Practice (BMP) for stormwater management and the installation of a "pocket" park.

KEY PROGRAMMATIC ISSUES

Coastal Feature: Sparsely vegetated coastal bluff

Water Type: Type 1, Conservation Areas, Bullocks Cove

Red Book: 1.1.8, 1.2.1.B, 1.2.2.D, 1.3.1.A, 1.3.1.F and 1.3.1.G

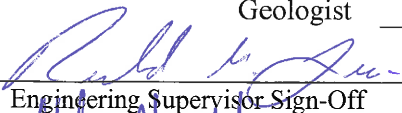
SAMP: None


Variations and/or Special Exception Details: A Special Exceptions is required for the construction of shoreline protection adjacent to Type 1 waters per CRMP Red Book § RICMRP, Specifically, 1.3.1.G.3. Shoreline Protection, Prohibitions


STAFF RECOMMENDATION(S)


Engineer RML Recommendation: Approval

Geologist EAH Recommendation: Approval

 2/16/24
Engineering Supervisor Sign-Off date

 2/16/24
Supervising Biologist Sign-off date

 16 Feb 24
Executive Director Sign-Off date

 2/16/24
Staff Sign off on Hearing Packet (Eng/Bio) date



STATE OF RHODE ISLAND
COASTAL RESOURCES MANAGEMENT COUNCIL
INTER-OFFICE MEMORANDUM

DATE: February 8, 2024
TO: Jeffrey M. Willis, Executive Director
FROM: Richard M. Lucia, P.E, Environmental Engineer IV
Emily Hall, Coastal Geologist II
SUBJECT: CRMC File No. **2023-06-125**

Applicant's Name: **City of East Providence**

Project: Repair and add protection to the existing eroded bluff located at 0 Booth Avenue. Work includes installing geotextile reinforced mechanically stabilized earth slope (MSE) with slope dimensions of 2:1 (horizontal to vertical). The MSE slope will present a natural slope (i.e. no manmade structure will be visible). The design allows for implementing native vegetation combined with coir logs, jute mat reinforcement, which will satisfy slope stability requirements. This will restore the toe of the slope to its approximate historic position and will provide the desired protection for Booth Avenue and its utilities.

A riprap sill (a constructed marsh with an artificial sill to reduce potential future erosion) will be installed to provide erosion protection and additional habitat for marine fauna. Other features include an infiltrating Best Management Practice (BMP) for stormwater management and the installation of a "pocket" park.

Location: Booth Avenue, East Providence, plat 13, lot 9
Water Type/Name: Type 1, Conservation Areas, Bullocks Cove
Coastal Feature: The sparsely vegetated coastal bluff

Plans Reviewed: "City of East Providence, Rhode Island, Booth Avenue Slope Stabilization, September 2023 RICRMC Permit Submission, For Regulatory Review Only..." last revised Jan. 3, 2024, by Wright-Pierce, stamped by Derick B. Hopkins, P.E.

STAFF REPORT

A-Introduction/History:

The project is located along the seaward section of Booth Avenue, East Providence. Booth Avenue is lined with single family dwellings on the landward side of the road and a coastal bluff on the water side. The shoreline consists of a sparsely vegetated bluff and is designated Type 1, Conservation Area, per the RICRMP. Based on a staff investigation it is clear the excessive erosion at the site is caused by the concentrated tidal flow from the existing bike path culvert to the west. Without some type of shoreline stabilization, the road (Booth Avenue) and the existing underground water and gas line will eventually fail. This slope failure will likely undermine the roadway and make this section inaccessible to traffic.

Name: City of East Providence
CRMC File No.: 2023-06-125
Staff Report

To gain CRMC staff guidance for the current project, the applicant submitted a preliminary determination application for the proposed project (PD 2020-09-039). A public notice for this project was issued on 10/2/2023, there were no comments or objections submitted for this project to CRMC.

B-Review of Applicable Regulatory Requirements:

As described in the consultant's narrative, the slope that borders the Booth Avenue road has eroded from the high tide events which results in a concentrated flow through the existing bike path culvert. The impact of these flows has resulted in erosion of the slopes toe which has migrated landward. This has caused the undermining of several trees requiring the City of East Providence to move its Right-of-Way fencing bordering the roadway landward.

The City is concerned not only with the road pavement but the existing utilities, which include overhead electrical and underground gas and water lines along Booth Avenue. Due to site constraints, there is no alternative to move this road and/or utilities.

After evaluation and guidance from CRMC and RIDEM, a geotextile reinforced mechanically stabilized earth slope (MSE) has been proposed to meet the natural slope (2:1) of the bluff. The earth slope shall be revegetated with native salt tolerant plants. The toe will be stabilized with riprap and a riprap sill will be installed to provide further erosion protection and habitat for marine fauna. The original sill design was the use of "Oyster Castles" but a review of the existing conditions at the site found that the use of these structures may provide for erosion protection but would most likely not accommodate the growth of shellfish (i.e. required salinity, lack of existing oysters in the local, water depths, cost, etc.). Therefore, it was decided to keep the sill to protect from tidal currents but use riprap which may provide better habitat for marine fauna.

Another positive feature of the project, although not required, is the installation of a bioretention basin to replace the existing corrugated metal pipe on the site. This should provide a higher level of water quality treatment as compared to the present condition.

Additionally, a small "pocket" park, which includes a pathway, benches, and a viewing point to the cove will be constructed. This will add to public access to the shore and improve views along this stretch of the cove.

Section 1.3.1.G Shoreline Protection

The proposed shoreline protection will incorporate the use of geotextiles to create a Mechanically Stabilized Earth slope. The slope will be planted with native shrub vegetation. The geotextiles being utilized are non-biodegradable (polypropylene) and therefore do not meet the definition of nonstructural shoreline protection. *Section 1.1.2.(97) Definitions: "Nonstructural shoreline protection" means practices that use only native or sustainable vegetation and biodegradable materials, except for any anchoring or connective components, the purpose or effect of which is to reduce the erosion of coastal features.*

As such this is considered a hybrid structural shoreline protection abutting Type 1, waters and thus prohibited by the RICMRP, Specifically, 1.3.1.G.3. Shoreline Protection, Prohibitions:

“a. The Council shall prohibit new hybrid and structural shoreline protection on barriers classified by the CRMC as undeveloped, moderately developed, and developed as well as shorelines abutting Type 1 water...,”, and

b. The Council shall prohibit the use of hybrid or structural shoreline protection to protect undeveloped land or structures not integral to the primary structure.

c. Filling on a coastal feature or tidal waters beyond that which is consistent with § 1.3.1(G)(5)(a) of this Part is prohibited.

d. Shoreline protection is prohibited when proposed to be used to regain property lost through historical erosion or storm events, unless the project is a marsh sill designed for wave attenuation as part of a marsh creation, enhancement, or restoration project.”

Although the applicant has attempted to provide a marsh sill to provide for selected marsh restoration, the remainder of the slope is being protected by the geotextiles to create a structural shoreline protection. Based on all the above the project requires a Special Exception. It is the staff opinion that this project appears to meet the criteria for a special exception since it’s an activity associated with public infrastructure. Also, all environmental impacts will have been minimized to the greatest extent practicable. Please see below for Special Exception criteria.

C-Special Exceptions:

A Special Exceptions is required for the construction of shoreline protection adjacent to Type 1 waters per CRMP Red Book § RICMRP, Specifically, 1.3.1.G.3. Shoreline Protection, Prohibitions.

In order for a special exception be granted to a prohibited activity 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 meet the following:

§1.1.8.(A)(1)(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;

§1.1.8.(A)(2) All reasonable steps shall be taken to minimize environmental impacts and/or use conflict.

§1.1.8.(A)(3) There is no reasonable alternative means of, or location for, serving the compelling public purpose cited.

With regard to the required Special Exception:

Special Exception Criteria 1 § 1.1.8(A) (1) and (a): As stated in the applicant’s consultants email dated 1/8/2023:

“The project is required to safeguard public infrastructure. The slope between Booth Avenue and Bullocks cove is actively eroding. This erosion threatens Booth Avenue, the water and gas mains contained within Booth Avenue and the overhead electric located between Booth Avenue and the slope. If the slope continues to erode and damages the Booth Avenue or the associated utilities, multiple landowners could suffer the loss of water, gas, electricity, or access to their properties. Due to the nature of the area no other alternatives exist other than to repair and protect the existing slope so that erosion is no longer actively occurring. Due to the facts stated above the project serves a compelling public purpose that benefits the public as a whole and meets the requirements of 1.1.8.A.1.a”

CRMC staff concurs with the above statement and that it represents a compelling public purpose.

Special Exception Criteria 2 § 1.1.8(A)(2) : CRMC Staff opinion that all reasonable steps have been taken to minimize environmental impacts.

Special Exception Criteria 3 § 1.1.8(A)(3) : CRMC Staff concludes that there does not appear to be any reasonable alternatives means of, or location for, serving the compelling public purpose cited. It is the opinion of CRMC reviewing staff that the applicant has met all the requirements for the granting of a special exception identified in CRMP Red Book § 1.1.8 and therefore, there are no objections to the granting of the Special Exception

Section 1.3.6 Protection and Enhancement of Public Access to the Shore:

The existing slope has no public access points and is blocked from public access with a chain link fence. Additionally, the existing slope is too steep for public use.

As stated above a pocket park is proposed that will be available to the public, which will provide an access point to the slope and include a pathway, benches and a viewing point of the cove. Overall, this project will improve public access and will improve scenic viewing opportunities.

E-Recommendations and Conclusion:

In reviewing this project, the staff engineer, and staff geologist have no objections to the installation of a hybrid structure. It is the staff opinion that a strictly non-structural shoreline protection would have a short design life based on observation of the high flow occurring at the site. Overall the applicant has worked closely with CRMC staff from preliminary stages to final design in order to best meet RICRMP regulations. Based on the above, CRMC staff recommend approval of the project. Furthermore, it is the opinion of CRMC reviewing staff that the project is consistent with Special Exception criteria for the granting of a prohibited activity.

Signed  Staff Engineer

Signed  Staff Geologist