



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

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

APPLICATION FOR STATE ASSENT

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

Project Location <u>Promenade St, Providence PL, Kinsley St, Providence RI</u> <small>No. Street City/Town</small>	File No. (CRMC USE ONLY) <div style="font-size: 1.5em; color: blue; text-align: center;">2021-08-018</div>
Owner's Name City of Providence	Plat: N/A Lot(s):
Mailing Address <u>444 Westminster St</u> <small>City/Town Providence State RI Zip Code 02903</small>	Contact No.: Jess Pflaumer Email Address: jpflaumer@providenceri.gov
Contractor RI Reg. # Address	Email address: Tel. No.
Designer <u>Horsley Witten Group</u> Address <u>55 Dorrance St Providence RI</u>	Tel. No. 401-272-1717
Name of Waterway Woonasquatucket River	Estimated Project Cost (EPC): 9,000,000. Application Fee: 42,250
Describe accurately the work proposed. (Use additional sheets of paper if necessary and attach this form.) The project proposes a multi-use trail connecting Eagle square to downtown Providence. The desing includes two kayak launches, green infrastructure, and two pocket parks.	

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): _____

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/mailling 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.

Name and contact information for all adjacent property owners is provided in the narrative Appendix.

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.

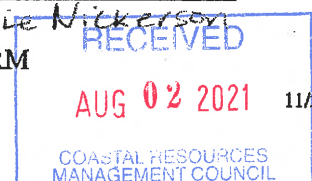
NOTE: The applicant acknowledges by evidence of their signature that they have reviewed the Rhode Island Coastal Resources Management Program, and have, where possible, adhered to the policies and standards of the program. Where variances or special exceptions are requested by the applicant, the applicant 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

Owner's Signature (sign and print) Bonnie Nickerson

PLEASE REVIEW REVERSE SIDE OF APPLICATION FORM

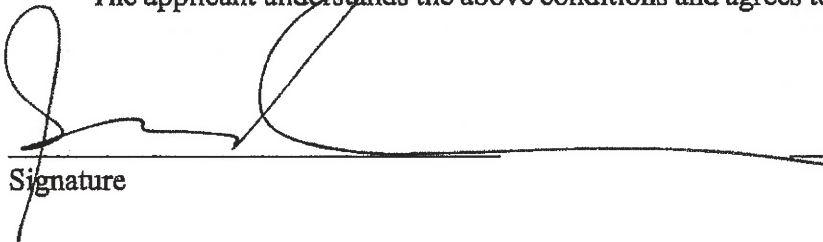
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STATEMENT OF DISCLOSURE AND APPLICANT AGREEMENT AS TO FEES

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.

 7/28/21

Signature

Date

Bonnie Nickerson, 444 Westminster St. Suite 3A Providence, RI 02903

Print Name and Mailing Address



July 30, 2021

Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, suite 3
Wakefield, RI 02879-1900



Re: Assent Application
Woonasquatucket River Greenway, Providence

To Whom It May Concern:

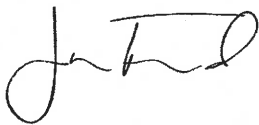
On behalf of the City of Providence, the Horsley Witten Group (HW) is pleased to submit the enclosed application for a Special Exception Assent Application for the Woonasquatucket River Greenway, located in Providence. Four sets of the following materials are enclosed for your review:

- Application Form
- Narrative, including:
 - Site photos
 - Building Form
 - Coastal Hazard Application
 - Abutting property owners
- Plan Set dated July, 2021 (46 sheets)
- Stormwater Report
- Operation and Maintenance Plan
- Soil Erosion and Sediment Control Plan

The application fee of \$42,250 will be provided under separate cover.

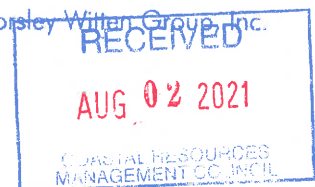
Thank you in advance for your attention to this matter. If you have any questions during review or require any additional information, please do not hesitate to contact me at 401-272-1717 or jford@horsleywitten.com.

Sincerely,
HORSLEY WITTEN GROUP, INC.



Jonathan A. Ford, P.E.
Senior Project Manager – Community Design

cc: Jessica Pflaumer, Martina Haggerty – City of Providence *via email*
Francisco Lovera, Dara Clough – McMahon Associates *via email*



COASTAL RESOURCES MANAGEMENT

PROGRAM (RICRMP) NARRATIVE

**Woonasquatucket Greenway
Promenade Street, Kinsley Avenue, & Eagle Street
Providence, Rhode Island**

Prepared for:

City of Providence



Prepared by:

Horsley Witten Group, Inc.

July 2021

Horsley Witten Group
Sustainable Environmental Solutions

55 Dorrance Street • Suite 200 • Providence, RI 02903
401-272-1717 • horsleywitten.com



Table of Contents

1.0 PROJECT DESCRIPTION..... 1

 1.1 Project Locations..... 1

 1.2 Existing Conditions..... 1

 1.3 Proposed Conditions..... 1

 1.3.1 Kayak Launches 2

 1.3.2 Construction Activities (#11) 3

2.0 RICMP SECTION 1.3.1 (A) NARRATIVE (#10)..... 4

3.0 RICMP SECTION 1.3.1 (B) 7

4.0 SPECIAL EXCEPTION 7

5.0 COASTAL HAZARD APPLICATION 8

APPENDICES

- Appendix A: River Bank Figure & Site Photos
- Appendix B: Resource Area Summary
- Appendix C: CRMC Building Official Form
- Appendix D: Coastal Hazard Application Worksheet
- Appendix E: List of abutting property owners
- Appendix F: Public Archaeology Laboratory (PAL) report

CONTACT:

Should any questions arise regarding the application, or questions regarding monitoring and permit compliance during construction the project engineer should be contacted:

Jonathan Ford, P.E.
Horsley Witten Group
55 Dorrance Street, Suite 200
Providence RI 02903
Phone: 401-272-1717
Email: Jford@horsleywitten.com



1.0 PROJECT DESCRIPTION

1.1 Project Location

This report provides a summary of the proposed Woonasquatucket Greenway improvements within and adjacent to the Woonasquatucket River, Promenade Street, Kinsley Avenue, and Eagle Street in Providence. The proposed project consists of mobility improvements to provide a protected pedestrian/bicycle urban trail between Providence Place Mall and Eagle Square, including new planted areas, two pocket parks, two kayak launches, and associated utility, stormwater control measures, and landscape improvements. The purpose of this report is to describe the pre- and post-development site conditions for the entire project, and address specific requirements for the CRMC application.

The Woonasquatucket River is a CRMC water use Class Type 4 (multi-purpose) and is one of 14 federally designated American Rivers. Its headwaters are located in North Smithfield. It flows through Providence, under the Providence Place Mall, continues southeast to join the Moshassuck River to form the Providence River and eventually the upper part of Narragansett Bay. At the project site the river is a relatively deep and wide (35-80 feet) perennial stream which flows through the project site within a well-defined channel from west to east. The riverbank is a freshwater resource that is directly associated with a tidal coastal river located seaward of the jurisdictional boundary that is regulated by the CRMC. Accordingly, the Woonasquatucket River has a riverbank wetland. The river is tidally influenced below (east of) the Rising Sun Dam – including within the entirety of the proposed limit of work.

The proposed improvements are located within existing City rights-of-way. Stormwater runoff is currently discharged directly to the Woonasquatucket River without treatment via existing City closed drainage system and pipe outfalls. Rhode Island Department of Transportation (RIDOT) jurisdiction within the project area is limited to the existing Promenade/Dean signal, I-95 offramps, and I-95 viaducts.

1.2 Existing Conditions

The project area consists of city streets, including paved travel way, concrete sidewalks, and limited grass tree lawns, and is located adjacent to the tidally influenced Woonasquatucket River. Portions of the project area are within the 100-year AE Flood Zone per FEMA Flood Insurance Rate Map 44007C0308J last revised October 2, 2015, and a much smaller portion is located within the Floodway (5,050 SF).

Stormwater runoff within the study area is typically conveyed to the Woonasquatucket River directly via catch basins with sumps, closed drainage system pipes, and stormwater outfalls to the river. The Woonasquatucket River is on the State of Rhode Island Impaired Waters Report (March 2018) 303(d) list for multiple impairments/causes. TMDLs exist for copper, lead, and zinc. Additional information related to existing and proposed drainage can be found in the **Woonasquatucket Greenway Stormwater Report**.

1.3 Proposed Conditions

The Applicant proposes to construct the following:

- A separated multi-use urban trail, converting an existing vehicular travel lane to a trail with associated pedestrian/bicycle, signage, and striping improvements and a vegetated buffer wherever possible;
- A new pocket park adjacent to Hemlock Street;
- A new pocket park at the Eagle Street/Kinsley Avenue intersection;
- A kayak launch adjacent to Kinsley Avenue near Sims Avenue;
- A kayak launch near Leland Street and Promenade Street;
- Street tree planting and associated improvements; and
- Green stormwater infrastructure bioretention systems.

Overall, the project area disturbed encompasses 5.9 acres with majority of the improvements taking place on existing paved roadway. Approximately 3.5 acres of the total disturbance consists of milling and resurfacing the existing road surface. The proposed stormwater management includes a green stormwater infrastructure (GSI) approach to capture, treat, infiltrate (where feasible), and detain runoff, when applicable and to the maximum extent practicable, by using pavement reduction and GSI practices incorporated into the overall site and landscape design. Additional information related to the design of these practices can be found in the **Woonasquatucket Greenway Stormwater Report**.

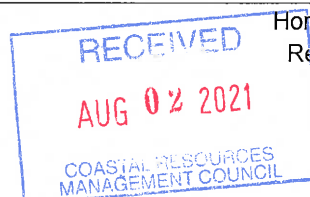
1.3.1 Kayak Launches

The two proposed kayak/non-motorized boat launches are located off Kinsley Avenue (Launch 1), and near the Leland Street and Promenade Street intersection (Launch 2). HW conducted extensive existing conditions review and alternatives investigation for potential launch locations, including mapping, multiple site walks, and a kayak tour. The existing conditions within the project areas include a vegetated bank with a slope ranging from 2:1 to 5:1. Even though they are steep, the selected locations are the most conducive areas for ramps in this section of the river. This is highlighted in the photos and figure provided in **Appendix A**. In the figure, the condition of the river banks in the project area is highlighted, noting selected ramp locations, photos of selected locations, sections of river bank with manmade structures and slopes that are 2:1 or steeper.

Within the limit of disturbance there is 665 SF of existing wetland within the limit of work for the two launches (305 SF at Launch 1 & 360 SF at Launch 2.) that will be disturbed during construction. After the launches are rebuilt approximately 510 SF of the wetlands will be restored, downhill from the ramps.

Shoreline Protection

Due to the steep slopes along the riverbank, shoreline protection is proposed for both launches. Permanent protection is proposed upslope in both locations. For Launch 1, walls are proposed to reduce the amount of cut into the bank, and to provide seating spaces along the edge of the ramp to further promote a comfortable public connection to the river. Due to the steepness of the existing slopes, some type of structural stabilization is needed to accommodate space for the ramp. By



utilizing the walls as proposed, the amount of disturbance and cut that would continue up the slope is minimized and public benefit is maximized.

For Launch 2, a flexible geotextile-soil bag system vegetated wall (FlexMSE) is proposed upslope from the ramp. In a few locations along this section the existing slope is currently 2:1. Utilizing the “bags” on the areas steeper than 2:1 along with an integral stabilizing seed mix, is proposed to better withstand flooding events. Temporary protection (erosion control blanket) is provided in all other areas within the floodway while plants become established.

1.3.2 Construction (Checklist Item 11)

Areas expected to be impacted during construction

The majority of the area that will be impacted during construction is within the existing street right-of-way. The only locations that are not, are the two kayak launches, the Hemlock Street Pocket Park, and any vegetation maintenance for viewshed establishment in the designated areas.

Time of Construction

The current schedule for the project assumes commencement of construction in the spring of 2022. and an approximately one-year construction schedule. The schedule still needs to be defined pending coordination with the City and selected contractor. Elements of the project may be bid separately to utilize various sources of funding, therefore the timeline may be extended. Up to a five-year permit duration was discussed with CRMC representatives during pre-application meetings.

Construction method (expected type of equipment)

Construction of the urban trail, street reconfiguration, green stormwater infrastructure, and planting will be typical of municipal street work – heavy equipment will be to be determined based on coordination with the selected contractor. Proposed hardscape elements along the riverbank (walls, launch areas, etc.) are proposed as poured-in-place concrete structures to help limit construction footprint within a tight area along the bank and reduce the amount of disturbance. Construction equipment in these areas will require a mini-rubber track based excavator and mini ATV construction vehicle for excavation, grading and hauling and placement of materials.

Utilities

Expected adjustments to utilities include rim adjustments for manholes and other utility structures; converting existing drainage inlets into manholes, providing new catch basins and tying into existing structures; relocating a hydrant near the Eagle Street intersection; and providing new light posts with associated electric connections. See the submitted plans for details. Although it is expected that the proposed drainage infrastructure will be in close proximity to other utilities, based on coordination with Narragansett Bay Commission, City of Providence, and National Grid, significant utility relocation other than electrical for lighting is not anticipated.

Shore Access

Currently there is minimal shore access along this section of the river because of the existing vehicular guardrail between the city street/sidewalks and the riverbank. Access will not become available until the entire project is complete and the riverbank is stabilized.

2.0 RICMP SECTION 1.3.1 (A) NARRATIVE (Checklist item 10)

2.1.1 Demonstrate the need for the proposed activity or alteration.

The roadway network surrounding this section of the Woonasquatucket River within the study area is the most direct connection between the west side of Providence and Downtown. The Woonasquatucket River Watershed Council (WRWC) currently maintains the River's waterfront and has worked on building public awareness to make the River a destination. However, despite these efforts, the corridor has remained vehicle-centric, discouraging multimodal use and continuing negative impacts on the health of the river. Providing an urban trail facility along the corridor to create a safe space for pedestrians and bicycles to travel along the River's waterfront will bring a sense of community to the area, allowing enjoyment of public spaces and celebration of public art. Additionally, incorporating public access to the river through the kayak launches provides an opportunity for residents in the area, which has a high percentage of low-income and minority populations, to connect with the river and its natural resources. The proposed improvements are a direct result of extensive prior planning in this area of the City, including the Great Streets Initiative and the EPA-funded Woonasquatucket Vision Plan.

2.1.2 Demonstrate all local zoning ordinances, building codes, and environmental requirements have or will be met.

DEM

Currently an application for a Water Quality Certificate (WQC) is being submitted to RIDEM with all required documentation: Site Plans, Stormwater Report, Operation and Maintenance Plan, SESC Plan, and Appendix A checklist.

RIPDES

The erosion control strategy for the site involves using techniques available in the RI Erosion and Sediment Control Handbook including silt sacks for every catch basin within the project limits and downgradient drainage area. Additionally, silt socks are proposed within the limit of work for any activity inside the existing guardrail for the pocket park and kayak launches. Notes are included requiring the contractor to monitor all devices and to stabilize exposed soil if exposed for more than 24 hours. The **Soil Erosion and Sediment Control Plan (SESC)** is enclosed and the selected contractor, City, and Engineer will coordinate the RIPDES Permit as required.

Army Corps of Engineers (USACE):

The project proposes less than 1,000 SF disturbance of existing wetland. A Pre-Construction Notification (PCN) under General Permit – 5. Boat Ramps and Marine Railways is anticipated due to work occurring in tidal waters and wetlands of the U.S. No further action is expected unless the CRMC/USACE determines further information is required.

Building Code

A CRMC Building Official form was submitted to appropriate parties and can be found in Appendix B.



2.1.3 Describe the boundaries of the coastal water and land area that is anticipated to be affected.

The two proposed kayak launches will affect area between the coastal water and land area as shown in the enclosed plans. Resources in these two locations are defined as freshwater wetlands in the vicinity of the Coast. These locations are mainly vegetated with a linear wetland along the entire river bank. In both locations the bank slopes are very steep and have been degraded over time; the wetland is limited to a narrow strip adjacent to the river. Both areas have a sharp drop in grade at the bankfull elevation interface with indications of erosion and undercutting. Photos of the two launch locations can be found in **Appendix A**.

2.1.4 Demonstrate that the alteration or activity will not result in significant impacts on erosion and/or deposition process along the shore and in tidal water.

In both proposed launch locations the changes to the riverbank will not result in significant impacts to cause erosion and/or modify sediment deposition processes along the shore and within tidal waters. Adjustments to the bank consist of cutting into the slope and restabilizing, with no fill proposed within the floodplain. In both launch locations, the proposed condition will be an improvement over existing stability and erosion conditions. For Launch 1, revegetation of a more gentle slope and the use of site walls will mitigate erosion and add stability. For Launch 2, revegetation and the use of the flexible geotextile-soil bag system vegetated wall (FlexMSE) in areas that exceed a slope of 2:1 will mitigate potential erosion and contribute to increased stability. Public access will be limited to the proposed launch locations and long-term oversight and maintenance by both the City and the Woonasquatucket River Watershed Council, a non-profit with resources and experience maintaining infrastructure within the corridor, will ensure erosion and or slope stabilization concerns will be monitored over time and remedied when needed.

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

The proposed project will not affect the abundance and diversity of plant and animal life because of the minimal amount of change proposed within and adjacent to the river. Currently there is 665 SF disturbance proposed for the wetland resources; however, 510 SF of that amount will be restored after construction. Additionally, a small area of the riverbed (140 SF) is being permanently adjusted, which will not significantly impact habitat value for wildlife use.

2.1.6 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.

Except for a few small openings near Eagle Street, public access to this stretch of the Woonasquatucket River is currently blocked by a vehicular guardrail. A primary goal of this project is providing better public access to the water, both visually through locating the urban trail on the river side of the streets, and physically with the addition of pocket parks and boat launches. Opening the guardrail in two locations, and providing the boat launches/ramps to the water will improve access to the river.

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

In both locations the changes to the river edge are minimal, with adjustments to the bank consisting of cutting into the slope and restabilizing the bank. Negligible changes in the immediate currents adjacent to the kayak launches may occur during high tide, however, no vertical structures (rails, docks, etc.) are proposed within the river.

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

The quality of water for the entire project will be improved. Overall, the project is reducing the amount of impervious area draining directly to the watershed by 15,594 SF (0.3%). Additionally, eleven GSI practices are proposed along the roadway, capturing and filtering water that previously ran directly into the river without treatment. The GSI practices treat the 1" water quality event for 164,001 SF of impervious area in the immediate drainage area. As noted in the drainage report, the project provides water quality treatment well in excess of the amount required as a redevelopment project.

For the proposed non-motorized boat launches, because the approach to both designs is to cut/bench into the existing bank and stabilize uphill areas, the resulting gentler slopes will encourage a more stable and naturalized wetland area. In locations where there is a steep slope, stabilization practices include the FlexMSE living wall and a site wall. These practices will stabilize the bank and discourage erosion. The proposed disturbance for the two proposed launches is minimal in comparison to the area of the project and the river as a whole.

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

There are historic properties located adjacent to the project. However, the majority of the project is within the city right-of-way and no historic properties will be affected by the proposed work. The Public Archaeology Laboratory (PAL) report, located in **Appendix F**, indicates that the Woonasquatucket River Greenway project is unlikely to cause any direct or indirect effects on historic archeological sites or architectural properties.

2.1.10 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.

Currently water dependent uses and activities cannot be accessed from the project area because of the existing vehicular guardrail and vehicular-oriented streets bordering the river. Access to the river in this location exists south of the mall (Waterplace) or north of Eagle Street – outside of the project limit of work. The proposed launches will encourage the use of the river for recreation, tourism, and other water dependent uses in an area where the population is significantly lacking access, and where connectivity to adjacent resources (the Woonasquatucket River corridor upstream, and downtown Providence downstream) has very high value.



2.1.11 Demonstrate that measures have been taken to minimize any adverse scenic impact.

Measures have been taken to minimize adverse scenic impacts by reducing the amount of bituminous pavement, opening views to the river, providing access points for the public with the two kayak launches, and incorporating canopy trees and vegetation to soften the streetscape and provide shade. Scenic impact will be significantly improved by adding the urban pedestrian/bicycle trail and associated buffers and planting adjacent to the river, in areas that are mostly vehicular-oriented in the existing condition. Additionally, the kayak launches are designed for as minimal disturbance as possible while still meeting ADA slopes.

3.0 RICMP SECTION 1.3.1 (B) FILLING, REMOVING OR GRADING OF SHORLINE FEATURES

3.1 Fill Slopes and Cut

No fill is proposed for either launch (no displacement of existing floodplain volume). Both designs propose cutting/benching into the riverbank so as to not impact the existing floodplain. In some locations, proposed slopes that exceed 30% cannot be avoided while maintaining the ADA accessible surface. In these locations additional stabilization methods are proposed.

3.2 Excess excavated materials.

A Remedial Action Work Plan and Soil Management Plan, currently under review by DEM, is being provided for the site to ensure all soils are being handled properly including any contaminated soils.

3.3 Vegetation Stabilization & soil amendments

All proposed earthwork within vicinity of the shoreline feature and upslope includes stabilization practices and revegetation. To ensure excessive nutrients are not applied to the recently seeded or planted areas soil test and recommended for soil amendments for the specific vegetation proposed are required for review prior to application of any amendments.

4.0 SPECIAL EXCEPTION

A special exception is requested for proposing structural fill within the wetlands. Though no displacement of existing floodplain volume is proposed, the non-motorized boat launches will require concrete ramps and slope stabilization as shown in the plans.

4.1 Public Purpose

As outlined above (2.1.1) this project provides a much-needed multi-use connection between the Woonasquatucket Greenway separated trail to the west (upstream) and downtown to the east (downstream). Additionally, the launches provide access to the river where there is none in an area that has a high percentage of low-income and minority populations. The project is the direct result of extensive public planning processes, including the Great Streets Initiative and the Woonasquatucket Vision Plan.

4.2 Minimize environmental Impacts & alternatives

The locations selected for the proposed kayak launches were based on riverbank material / slope and ease of public access constraints and opportunities, as determined by existing conditions survey, multiple site visits, and a kayak tour. As shown in the images and figures provided in **Appendix A**, majority of the riverbank, on either side of the river poses difficulty due to steep slopes, existing

infrastructure, and/or existing walls.

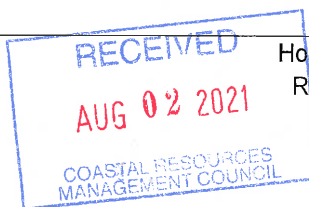
Additionally, the amount of disturbance required is determined by the design of the ADA accessible path. The street elevation at the top of the bank in both launch locations is between elevation 8 or 9. To reach the river elevation with a path that has the required 8% maximum slope and 5-foot landings creates a long linear ramp along the side of the bank – thus requiring the disturbance and cut as shown on the plans.

5.0 COASTAL HAZARD APPLICATION

The RI CRMC Coastal Hazard Application Worksheet was completed and is submitted as **Appendix D**. The Worksheet was completed as a guide to maximize the project’s resiliency to the impacts of climate change – specifically the effects of flooding and tidal changes related to sea level rise. The project proposes street a retrofit to accommodate multiple modes of travel by adding an urban trail, and in doing so will include depaving, GSI, and tree planting to reduce the effects of localized flooding and improve water quality. There are no existing or proposed building structures, marshes, wells, or septic systems within the project limit of work. Except for two proposed kayak/non-motorized boat launches, the entirety of the project is located within existing City streets, or City property and above current and future high tide elevation.

The project is proposed within a highly urban and currently disturbed setting and proposes improvements that will improve resiliency compared to the existing condition. There are not other alternatives to achieve the goals of this project; in fact, significant additional resources have been devoted to specifically address resiliency objectives and provide public benefit. A design life of 50 years (design life year is 2070) was utilized for the analysis to be conservative. Even with this relatively conservative design life, the streets within the limit of work will not be inundated. Existing drainage and sewer infrastructure within the corridor will likely be challenged by sea level rise in the future, which is outside the scope of this project except for the improvements provided by proposed depaving, GSI, and planting as noted.

The two proposed non-motorized boat launches have been sited to minimize impact as summarized in previous sections of this report. Their design is adaptable to daily tidal fluctuations and should continue to fulfill their intended function within their design life. As sea level rises access to the river can be provided at different points along the ramps. The ramps are designed to withstand daily tide and potential impacts within the floodway above current high tide, and will therefore continue do so (with typical routine maintenance as required) as high tide levels rises over time. Minor adjustments may be necessary over the long-term.



APPENDIX A

Riverbank Figure & Site Photos

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RECEIVED
 AUG 02 2021
 COASTAL RESOURCES
 MANAGEMENT COUNCIL



KAYAK LAUNCH 1



KAYAK LAUNCH 1



KAYAK LAUNCH 2



KAYAK LAUNCH 1



KAYAK LAUNCH 2



KAYAK LAUNCH 2

APPENDIX B

Resource Area Summary

RECEIVED

AUG 02 2021

CUNYAL RESOURCES
MANAGEMENT COUNCIL

JURISDICTIONAL AREAS

Horsley Witten Group, Inc. (HW) identified jurisdictional areas as regulated by Coastal Resources Management Council (CRMC) and delineated in the field the landward limits of coastal wetlands following the requirements of Section 200 of the Rhode Island Coastal Resources Management Program. Field delineations were conducted on June 10, 2019. The limits of riverbank wetlands were identified through onsite field assessment of top of riverbank. Additional jurisdictional 200-foot contiguous area was determined once all field data were collected. A brief description of these resources, including regulatory definitions, is provided below.

Shoreline Features

The resource areas identified within the project site are freshwater wetlands in the vicinity of the Coast. Consistent with the R.I.G.L. Sections 46-23-6, *freshwater wetlands seaward of the jurisdictional boundary that are regulated by the Coastal Resources Management Council in accordance with the "Rules and Regulations Governing the Protection and Management of Freshwater Wetlands in the Vicinity of the Coast."*

Coastal Wetlands (Regulation Section 210.3)

Coastal wetlands are defined under Section 210.3 as those which *"include salt marshes and freshwater or brackish wetlands contiguous to salt marshes or geographical features. Areas of open water within coastal wetlands are considered a part of the wetland. In addition, coastal wetlands also include freshwater and/or brackish wetlands that are directly associated with non-tidal coastal ponds and freshwater or brackish wetlands that occur on a barrier beach or are separated from tidal waters by a barrier beach."*

River & Riverbank Wetland (Act Section 2-1-20(9))

Rule 4.00 of the RIDEM Rules and Regulations defines a river as *"a body of water that is designated as a perennial stream by the United States Department of Interior Geologic Survey on 7.5-minute series topographic maps, and that is not a pond."*

In addition, Riverbank is defined under Rule 4.00 as *"that area of land within two hundred feet (200') of the edge of any flowing body of water having a width of ten feet (10') or more, and that area of land within one hundred feet (100') of the edge of any flowing body of water having a width of less than ten feet (10') during normal flow."*

The Woonasquatucket River is a CRMC water use Class Type 4 (multi-purpose) and is one of 14 federally designated American Rivers. Its headwaters are located in North Smithfield. It flows through Providence, under the Providence Place Mall, continues southeast to join other rivers to eventually form the upper part of Narragansett Bay. At the project site the river is a deep and wide (35-80 ft) perennial stream which flows through the project site within a well-defined channel from west to east. The riverbank is a freshwater resource that is directly associated with a tidal coastal river located seaward of the jurisdictional boundary that is regulated by the CRMC. Accordingly, the Woonasquatucket River has a riverbank wetland. The river is tidally influenced below (east of) the Rising Sun Dam.



While some stretches of the river have bulkheads and revetments, the majority of the river bank consists of riverbank wetlands and includes such species as black locust (*Robinia pseudoacacia*), red maple (*Acer rubrum*), box elder (*Acer negundo*), pin oak (*Quercus palustris*), cherry (*Prunus* sp.), slippery elm (*Ulmus rubra*), sycamore maple (*Acer pseudoplatanus*), white oak (*Quercus alba*), alder (*Alnus* sp.), black elderberry (*Sambucus nigra*), flowering dogwood (*Swida alternifolia*), tree-of-heaven (*Ailanthus altissima*), Japanese knotweed (*Fallopia japonica*), sweet-pepperbush (*Clethra alnifolia*), highbush blueberry (*Vaccinium corymbosum*), meadow rue (*Thalictrum* sp.), meadowsweet (*Spirea* sp.), golden threadleaf cypress (*Cupressaceae* sp.; planted), gray birch (*Betula populifolia*), ash (*Fraxinus* sp.), poison ivy (*Toxicodendron radicans*), sensitive fern (*Onoclea sensibilis*), jewelweed (*Impatiens capensis*), multiflora rose (*Rosa multiflora*) Virginia creeper (*Parthenocissus quinquefolia*). Most of the north side of the river is landscaped. Outside of the landscaped areas, similar species were observed as on the south side. Additionally, northern catalpa (*Catalpa speciosa*) and soft rush (*Juncus effuses*), were noted.

Wetland resources were flagged with blue tape RB1S-88S on the south side of the river. Several stretches of the Woonasquatucket River have manmade shoreline protection structures present. Specifically, between flags RB1 - RB5, 24S - 25S, and 33S - 35S, and 84S.

The north side of the river was flagged with blue tape and labeled RB1N - RB57N. Manmade shoreline structures were noted on the north side as well between flags 17N - 18N, 40N (landscaped office park) - 47N, and 52N - 57N.

Manmade Shorelines (Regulation Section 210.6)

Manmade shorelines are defined as “*those characterized by concentrations of shoreline protection structures and other alterations, to the extent that natural shoreline features are no longer dominant. They most commonly abut Type 3, 5, and 6 waters. The presence of isolated seawalls, bulkheads, and similar structures does not constitute a manmade shoreline, as the term is used in this Program.*”

Accordingly, the revetments associated with the Woonasquatucket River are not manmade shorelines because the bulkheads and revetments are intermittent and not contiguous. The natural shoreline features are dominant along this stretch of the river.

Areas Subject to Flooding

An Area Subject to Flooding is defined as an area that is “*included but not be limited to, flood plains, depressions of low-lying areas flooded by rivers, streams. Intermittent streams, or areas subject to storm flowage which collect, hold, or meter out storm and flood waters.*”

The majority of the site and the surrounding areas occur within Zone X, an area with reduced flood risk due to levee. However, the southwestern portion of the project occurs within a floodway (Zone AE, elevations 6 - 10 feet) (see Figures 3A and 3B). The river itself is mapped as a Zone AE, Regulatory Floodway.

Invasive Management

Several non-native and invasive plant species were observed including black locust, Japanese knotweed, sycamore maple, Norway maple, tree-of-heaven, box elder, Japanese barberry (*Berberis thunbergii* var. *atropurpurea*; planted), morning-glory (*Ipomoea* sp.), northern catalpa, multiflora rose, Oriental bittersweet. The Woonasquatucket River Watershed Council (WRWC) conducts invasive plant management to encourage and restore native plant. Part of their management plan includes the use of some chemicals in some areas.

The WRWC works with the Providence Forestry Department to remove black locust from the local area. The trees that are removed are upcycled and reused onsite for benches, planters, posts, etc.

