SECTION 3

PROJECT NARRATIVE

I. Introduction and Project Background

This Supporting Documentation has been prepared by Pare Corporation (Pare) on behalf of the Town of Bristol (the Town) to supplement an Application for State Assent and Pre-construction Notification for the proposed boat ramp and dock improvements in Independence Park in Bristol, RI (Project Site). The Assent Application is being submitted pursuant to 650-RICR-20-00-1 Coastal Resources Management Council (CRMC) Coastal Management Program (Red Book). A Pre-construction Notification (PCN) application is being concurrently submitted to the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (33 USC 1344) and the Rivers and Harbors Act of 1899 (33 USC 403) under Rhode Island General Permit 5: Launching Ramps and Marine Railways.

Independence Park (the Park) is managed and maintained by the Town of Bristol under a leasing agreement from the State of Rhode Island. A copy of the leasing agreement between the Town and the State is included in Section 1 of this Supplemental Documentation. The Park is prominently located in Bristol's downtown waterfront neighborhood and provides public access to Bristol Harbor via a boat ramp, timber pier, floating timber dock, and pedestrian walkways which provide access to the shoreline. The ramp and pier have deteriorated over time and are currently in relatively poor condition.

The purpose of the proposed project is to improve public access to Bristol Harbor at Independence Park by replacing the boat ramp and dock and increase shoreline resiliency by supporting the proposed Independence Park Water Quality and Public Access Improvements Project which was submitted under separate Application for State Assent (referred to herein as the "Public Access Improvement Project"). The Public Access Improvement Project and this boat ramp and dock improvement project have been designed in parallel, and the two projects cannot be completed without the other. Due to separate funding sources and schedules, the projects are submitted under separate applications. Together, these projects will provide a significant public benefit by improving the existing access to Bristol Harbor.

II. Existing Conditions

a. Physical Setting

Independence Park is located in the northwestern corner of downtown Bristol at the southern terminus of the East Bay Bike Path. The park is located on two parcels. The proposed project is located entirely on Lot 12 of Bristol Assessors Map 8 (the site). The site property includes the northern portion of Independence Park and the southern end of the bike path. The southern portion of the park is located on Bristol Assessors Map 9, Lot 10.

Independence Park is bordered by Bristol Harbor to the west, Thames Street to the east, the East Bay Bike Path to the north, and a residential condominium association and Quito's restaurant to the south. Residential and commercial properties are located on the eastern side of Thames Street across from the park.

The site is located within Bristol's Waterfront zoning district and is developed with parking areas, a paved driveway, boat ramp, and wooden dock with timber pilings associated with the boat ramp. Paved walkways, kayak and dinghy racks, benches, signage, and a war memorial monument also occupy the site. Landscaped areas and manicured lawn comprise a significant portion of the site. A Memorial Tree is located at the Independence Park entrance sign.

b. Ramp, Pier, and Dock

The existing boat ramp was reconstructed in the mid-1990's (CRMC Application No. 95-8-52) and minor repairs have been made since. The existing ramp is approximately 47 feet wide and 84 feet long extending from the edge of the access driveway and parking lot to between elevation -3.0 and -4.0 (NAVD 88). Concrete slabs form the ramp surface and have been undermined resulting in the displacement separation of concrete slabs at the lower end of the ramp. Repairs to the ramp were performed in 2007 and again in 2008 when concrete slabs were displaced. The upper portion of the ramp above mean high water is in relatively good condition.

The timber pier and dock are supported by eleven (11) timber piles and are connected by an aluminum gangway. The timber pier and support piles have deteriorated, and the pier no longer has a level surface due to deterioration of the piles.

c. Wetlands and Floodplains

Coastal wetlands and shoreline features were defined and delineated in accordance with the Red Book by Pare on January 11, 2023. CRMC-regulated wetland types in the vicinity of the project site include **Tidal Waters**, **Manmade Shoreline**, **Coastal Beach**, **Coastal Bluff**, **Salt Marsh**, **Area Subject to Storm Flowage**, **200-foot Contiguous Area**, and **100-year Floodplain**. The CRMC-regulated types within the limit of disturbance for the proposed project are **Tidal Waters**, **Manmade Shoreline**, **Coastal Beach**, **200-foot**

Contiguous Area, and **100-year Floodplain**. The shoreline feature and coastal wetland edge were GPS-located by Pare with a sub-foot accuracy Trimble R12 GPS unit. Wetland flags were not placed in the field due to the absence of woody vegetation or structures to attach flagging to. Wetlands identified in the vicinity of the site are described below and shown on the project plans.

Tidal Waters

Bristol Harbor borders the site to the west and is classified as a Type 4 Water Use Category (Multi-purpose use) in the vicinity of the site. The remaining harbor consists of Type 2, 3, and 5 Waters. The southern portion of the park outside of the project limits borders Type 5 Waters (Commercial and Recreational Harbors). To establish the boundary of Tidal Waters and Waters of the United States (WOTUS) at the site, Pare used the average Highest Astronomical Tide (HAT) from the Conimicut Light tidal station to the north and Quonset tidal station to the south to determine the Highest Tide Line, the HTL generally aligns with elevation 3.4 (NAVD 88). Bristol Harbor substrate visible from land and the nearby dock consisted primarily of sand and gravel with interspersed rocks and boulders. A combination of Manmade Shoreline, Coastal Beach, and Coastal Bluff define the shoreline at the site as described below.

Manmade Shoreline

Manmade Shoreline is defined in *§ 1.1.2 (84)* of the Red Book as, *"those shorelines that are 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."* Manmade Shoreline on the site consists of stone sea walls, placed riprap, and a concrete boat ramp. A stone seawall establishes the shoreline along the southern portion of Independence Park and extends into the harbor as a pier. Placed riprap extends approximately 45 feet north from the pier before the shoreline feature transitions to a coastal beach which continues for approximately 150 feet to the boat ramp. The boat ramp is approximately 50 feet wide and constructed of concrete slabs. The top of the ramp aligns with the edge of the existing driveway and extends below MLW to between elevation -3.0 and -4.0. A dock supported by timber piles is located immediately north of the boat ramp. A stone sea wall defines the shoreline north of the dock continuing around the veteran's memorial and terminating just south of the existing dinghy rack. The inland edge of manmade shoreline aligns with the upper edge of the boat ramp where it meets the driveway, inland edge of the sea wall, and top of the placed riprap.

Coastal Beach

Coastal Beach is defined in *§ 1.1.2 (25)* of the Red Book as, *"expanses of unconsolidated, usually unvegetated sediment commonly subject to wave action, but may also include a vegetative beach berm. Beaches extend from mean low water landward to an upland rise, usually the base of a dune, headland bluff, or coastal protection structure, pilings, or foundation."* A coastal beach extends for approximately 150 feet on the site between the boat ramp and stone pier. The coastal beach consists of coarse sand and gravel and extends laterally from mean low water to a break in slope where there is a transition to compacted sand and gravel associated with vehicular use to access the nearby kayak racks. This transition demarcates the top of the coastal beach as shown on the Plans.

Area Subject to Storm Flowage

An informal eroded drainage channel, classified under the Regulations of the Rhode Island CRMC Freshwater Wetlands in the Vicinity of the Coast as an Area Subject to Storm Flowage (ASSF), was identified upgradient of the Coastal Beach. The centerline of the ASSF was GPS-located from the edge of the existing driveway, where it originates, to the inland edge of Coastal Beach. This area appears to convey drainage from the parking and driveway area to Bristol Harbor.

100-year Floodplain

According to the FEMA Flood Insurance Rate Map for the Town of Bristol, Rhode Island (Panel 44001C0014H, effective date July 7, 2013), the site is located entirely within a velocity zone (Zone VE: Area of 1% annual chance flood hazard with additional hazard from storm waves) with a reference elevation of 14.0 (NAVD88).

d. Drainage

A closed drainage system conveys stormwater runoff from Thames Street and Independence Park to three outfalls that discharge to Bristol Harbor. The northern-most outfall discharges just south of the bike path, a second outfall discharges below the war memorial monument, and the southernmost outfall discharges at the rip-rapped area where the beach meets the stone sea wall. Although there is an underground drainage system, the majority of runoff from the park sheet flows west directly to Bristol Harbor and has significantly eroded a channel into the gravel beach approximately 25 feet south of the boat ramp. Within the proposed project limits, there are currently no stormwater treatment best management practices (BMPs) that provide treatment of runoff generated by impervious surfaces associated with the boat ramp or timber pier.

e. Shellfish and Fisheries Habitat

The Rhode Island Department of Environmental Management (RIDEM) Division of Marine Fisheries (DMF) has been notified of the proposed boat ramp improvements. The applicant will continue to coordinate with DMF, and any shellfish identified within the limits of work shall be relocated to suitable habitat outside of the limit of disturbance prior to construction activities. Any shellfish relocation will be performed under the guidance and supervision of DMF.

A copy of the NOAA Essential Fish Habitat Mapper report and the NOAA Section 7 Mapper report are included in Section 6 of this application.

f. Other Environmental and Planning Considerations

According to the RIGIS data layer pertaining to rare and endangered species (natHeritage21), the project site is located within mapped Natural Heritage Area ID: 111. According to preliminary coordination conducted with Paul Jordan of RIDEM, manager of the Natural Heritage database, the area is designated for Gama-grass (Tripsacum dactyloides) a species of State Concern. Gama-grass was identified by Rhode

Island Natural History Survey in the nearby Silver Creek marsh complex located approximately a quarter mile northeast. The Natural Heritage Screening Report provided by Mr. Jordan is included in Section 7 of this application.

According to RIGIS data, there are no mapped eelgrass beds or submerged aquatic vegetation in the immediate vicinity of the site. Section 6 of this Assent Application describes preliminary coordination conducted with Rhode Island Division of Marine Fisheries in association with the project.

According to the Historic Districts data layer on RIGIS, the site is encompassed in the Bristol Waterfront Historic District (histdist.shp). Coordination with the Rhode Island Historic Preservation and Heritage Commission (RI HPHC) and the Narragansett Tribal Historic Preservation Officer (THPO) was conducted in advance of the project and is included as Section 5 of this Assent Application along with response received.

III. Proposed Project

The proposed project intends to replace the pre-existing boat ramp, pier, and floating dock located at Independence Park in Bristol, RI. The new boat ramp is proposed slightly north of the existing ramp and further into Tidal Waters in order to provide adequate ramp slope and distance below extreme low water. The existing timber pier will be removed and replaced with a concrete approach and timber floating dock. The concrete approach and boat ramp will connect to the pedestrian walkway and access drive proposed in the Public Access Improvement Project. This Boat Ramp Improvement project and Public Access Improvement project, although submitted separately due to different funding sources, are intrinsically connected. The top of the boat ramp and concrete approach have been designed to provide a flush connection with the pedestrian walkway and access drive designed for the Public Access Improvement Plans. All access ways proposed in this project have been designed in compliance with the Americans with Disabilities Act (ADA) Standards. Riprap shoreline protection will extend from the southern end of the boat ramp to the end of the parking lot approximately 125 feet south. The riprap slope is needed to provide stabilization and support for the proposed grade alterations for the access drive and parking lot.

The following provides a description of the major project elements, construction sequence, and construction methods for the project. Project Plans (site plans) are included as Section 7 of this Assent Application and illustrate the proposed work.

a. Erosion and Sedimentation Controls

Prior to the commencement of any earth disturbing activities temporary erosion and sedimentation controls and control of water measures will be installed. Erosion and sediment controls include a turbidity barrier that will encompass the work area located below MHW.

The project will share the construction entrance established at the existing park entrance for the Public Access Improvement Project. A designated concrete washout area, vehicle fueling area, and stockpile location will be established in the paved parking area. All of these areas will be encircled by compost filter sock. Temporary stabilization practices will also be practiced throughout construction in accordance with the Rhode Island Soil Erosion and Sediment Control Handbook. Proposed controls are shown on Sheet 2.0 of the Project Plans.

b. Demolition and Grading

The existing boat ramp, pier, and dock will be dismantled and removed from the site for legal disposal in accordance with local and state laws. Concrete ramp sections will be removed in addition to the underlying bedding stone. Once concrete ramp debris is fully removed, subgrade material will be removed to create a level surface and space for placement of new bedding stone.

Eleven (11) timber piles shall be removed entirely, if possible, using one of the three approved army corps removal methods (direct pull, vibratory pull, or clamshell pull). If piles are broken during removal,

they shall be cut off 3-feet below the mudline. The timber pier and floating dock will be disassembled and removed from tidal waters in addition to the aluminum gangway. The stone sea wall that borders the ramp and dock to the north will remain and be protected during construction.

Minimal earthwork will be required as part of the ramp replacement. Once the existing concrete slab is removed, subgrade material will be removed. The section of ramp proposed outside of the existing ramp footprint will require removal of substrate in Bristol Harbor to establish appropriate grades for the boat ramp. Excavation depths will vary with the most removal required at side slope and toe slope stabilization areas where riprap is proposed. Once proposed excavation depths are reached, sub-base material will be placed within the ramp footprint and graded to a 13% slope. Excavation work will be performed during low tides to minimize turbidity and sedimentation to Bristol Harbor.

c. Launching Ramp, Pier, and Dock Construction

Once the boat ramp grades are achieved, the proposed boat ramp and floating dock will be constructed as shown on the site plans. The proposed boat ramp will be shifted slightly north (15 feet± from southern edge of old ramp to southern edge of new ramp) and will extend approximately 40 feet± farther west into Bristol Harbor. The boat ramp must extend farther seaward to maintain a gradual slope while matching the elevated grade of the proposed access driveway and parking lot. The boat ramp width will reduce from 36.5-feet wide at the top of the ramp to 30-feet wide where it terminates in Bristol Harbor. A concrete slab will be cast in place at the transition from the driveway to the ramp. The remainder of the ramp will be constructed with precast concrete planks. Ramp side slopes and the toe slope will be stabilized with riprap which will taper into the stone sea wall and concrete approach north of the boat ramp. Riprap stabilization is required to prevent erosion and undermining of the ramp. Excavation and fill in tidal waters will be required to accomplish the proposed ramp replacement.

The proposed floating dock will be supported by eight (8) greenheart timber piles placed at 20-foot intervals along the northern side of the dock. The proposed floating dock will be 120-feet long from the concrete approach to its terminus and will be 10 feet wide. The dock will be constructed of six (6) 10'x 20' timber floats as shown on the Plans. The floats will be secured to timber piles with pile guides fitted with rub blocks. The new floating dock will require fill in tidal waters associated with the timber pilings; however, there will be a reduction in the number of piles from the existing dock and pile-supported pier.

A concrete approach will be constructed to provide access to the floating dock from the pedestrian walkway. The approach will be approximately 17 feet long and 2.5 feet above grade at maximum. The approach will be located upgradient of tidal waters but will impact the existing manmade shoreline.

d. Slope Stabilization – RipRap Slope

The proposed riprap slope will extend south from the boat ramp and continue along the eastern edge of the driveway to where the parking lot ends. The riprap slope is intended to provide structural shoreline stabilization for Independence Park. As part of the Public Access Improvement project, the driveway will be raised approximately one foot and requires stabilization measures to support the increase in elevation

and prevent erosion. A trench will be excavated along the edge of the driveway, upgradient of the coastal beach and high tide line, and bedding stone will be placed down. One layer each of Class IV (D50=15") and Class IX riprap (D50=36") will be set up against the sidewalk curb and subbase. Two sets of granite steps will interrupt the riprap slope to provide pedestrian access to the coastal beach from the parking area. Sheet 2.5 of the Plans shows the proposed riprap slope shoreline stabilization. All work conducted as part of the slope stabilization will occur upgradient of the HTL and coastal beach. A portion will impact the manmade shoreline where the existing boat ramp is located.

IV. Alternatives Analysis

Several alternatives were evaluated during the design process in order to select a design that both meets the project goals of enhancing public access and shoreline resiliency while also minimizing impacts to the coastal environment. A description of the alternatives, including the preferred alternative, are provided below.

In-kind Replacement

The existing boat ramp was a cast-in-place concrete slab that did not extend far enough into the water to safely launch boats during low tide. To cast a similar structure would involve excessive water control systems and dewatering, considering the larger footprint required. The proposed plan involves precast components that can more easily be slid into place and locked in without any water control systems or dewatering.

Ramp Replacement Only

Although replacing just the ramp is possible, the changes in grade and slope of the ramp would indicate greater concerns about scouring and slope protection. Adjacent riprap was found necessary to address these concerns and promote the longevity of the design. Additionally, the replacement of the adjacent pier was found necessary to maintain the ease of operation of the existing structure. Although by switching to floating pontoons, the pier is able to better accommodate launching throughout the tidal range, while reducing the footprint at the mudline.

Ramp and Pier Replacement (preferred alternative)

The preferred alternative, replacing the boat ramp and pier in the same location with a similar footprint and to match existing grade, presents a less intrusive approach to the coastal wetlands and while promoting constructability with surrounding infrastructure and the constructed environment. The boat ramp and pier rehabilitation has been designed to avoid impacts to wetlands, shoreline features, and tidal waters to the greatest extent practical while still achieving the project purpose.

V. Wetland Impacts

The proposed project encompasses a total work area of approximately 15,179 square feet (0.35± acres). Due to the water dependent nature of the project, unavoidable work will occur in tidal waters below the HTL, along the manmade shoreline, and within the 200-foot Contiguous Area. The proposed work area primarily consists of the existing boat ramp, floating dock, pier, and driveway. The area surrounding the ramp and dock will be impacted due to the expansion of the existing ramp and temporary construction access. The 100-year floodplain on the site is associated with coastal flooding and therefore, compensatory flood storage for the adjustments in boat ramp and concrete walk/approach grades is not proposed or feasible within the project site.

A summary of wetland impact areas is included in Table 1 below.

Table 1: Summary of wetland impact areas.

Resource Area	Permanent Impacts (ft^2)	Temporary Impacts (ft^2)	Total Impacts (ft^2)	Proposed Activities
Tidal Waters Bristol Harbor (Waters of the U.S.)	4547±	5047±	9594±	Temporary: Area needed for construction access and passive movement of workers. Permanent: Removal of existing pier, dock, and boat ramp. Excavation, grading, and installation of new pier, dock, and boat ramp.
Manmade Shoreline (linear feet)	88± lf	125± lf	213± lf	Temporary: Area needed for construction access and passive movement of workers. Permanent: Removal and replacement of boat ramp.
200-foot Contiguous Area	1537±	7587±	9124±	Temporary: Areas needed for passive construction access and installation of erosion and sedimentation controls. Permanent: Grading, installation of concrete approach and riprap slope for stabilization.

A brief description of work proposed within each resource area is included below.

Tidal Waters

Work below the HTL (tidal waters) will occur in the vicinity of the existing boat ramp, dock, and pier. The proposed work will result in a net fill in tidal waters although excavation will be required to remove the existing ramp and prepare the site for the proposed ramp. Removal of the existing ramp will require removal of the existing concrete planks and excavation of the bedding material as well as natural substrate within the footprint of the proposed ramp. The existing dock, piles, and pier will also be removed from tidal waters and legally disposed of offsite.

The proposed ramp shall extend approximately 43 feet downgradient from the lower edge of the existing ramp to approximately elevation -8.0 (NAVD 88) and shift slightly north from the existing ramp alignment. Materials placed in tidal waters for construction of the new ramp and dock will include stone bedding and riprap stone, seven (7) timber piles, and concrete. Table 2, below, provides a summary of the proposed fill volumes and area by material. Table 3, below, provides a summary of the excavation required to remove the existing ramp and prepare for installation of the new ramp. These tables are representative of total excavation and fill volumes. Based upon these values there will be a net fill of approximately 11 cubic yards (yd^3) in tidal waters.

Temporary disturbance in tidal waters will result from the active construction area contained by the turbidity barrier. No fill or excavation will occur outside of the proposed ramp and dock areas and once construction is complete the turbidity barrier will be removed.

Table 2: Summary of total fill volumes below the HTL of Bristol Harbor.

Resource Area	Fill Volume (yd^3)	Fill Area (ft^2)	Fill Material
Tidal Waters Bristol Harbor (Waters of the U.S.)	34±	22±	Timber piles.
Tidal Waters Bristol Harbor (Waters of the U.S.)	337±	*1055±	Riprap and stone bedding.
Tidal Waters Bristol Harbor (Waters of the U.S.)	92±	*3100±	Concrete ramp planks.

* Riprap, stone, and concrete fill areas overlap.

Table 3: Summary of excavation volumes below the HTL of Bristol Harbor.

Resource Area	Excavation Volume (yd^3)	Excavation Area (ft^2)	Material
Tidal Waters Bristol Harbor (Waters of the U.S.)	388±	5,479±	Gravel, sand, and sediment underlying the existing ramp and proposed ramp area.
Tidal Waters Bristol Harbor (Waters of the U.S.)	64±	2,580±	Existing concrete ramp.

Manmade Shoreline

Impacts to manmade shoreline includes removal and replacement of the existing concrete boat ramp and construction of the concrete approach and walkway. The proposed shoreline feature will remain manmade and will be elevated to match the grades of the proposed driveway improvements included in the

Independence Park Water Quality and Public Access Improvements project. The proposed ramp will be located north of the coastal beach in an area that exists entirely as manmade shoreline and work will avoid the coastal beach. The proposed riprap stabilization measures and granite stairs will be constructed upgradient of the coastal beach in order to prevent future erosion of Independence Park. The stone masonry sea walls to the north of the proposed ramp and dock will not be altered as part of the project.

200-foot Contiguous Area

Work within the 200-foot Contiguous Area will be limited to installation of a concrete approach, concrete walk, installation of the riprap enforced slope, and grading required to install these features. All work in the Contiguous Area will take place in existing developed areas associated with Independence Park. Temporary impacts associated with construction staging, concrete washout area, and stockpile area will also occur within the Contiguous Area.

V. Compliance with Regulatory Policies, Standards, and General Conditions

Due to the water dependent nature of the project, the proposed boat ramp and dock replacement includes unavoidable work in tidal waters of Bristol Harbor, along the manmade shoreline feature, within 100-year floodplain, and 200-foot Contiguous Area. Rehabilitation of the boat ramp and dock is proposed to improve functionality and accessibility of Independence Park to the public. According to §1.1.9 (B) and §1.1.11(B)(3), the Setback and Buffer Zone standards do not apply as the project involves a water dependent use and is a public shoreline access project. The following section demonstrates how the project meets the applicable CRMC policies and standards included in the Red Book.

§ 1.1.10 Climate Change and Sea Level Rise

The proposed project is for replacement of an existing boat ramp and dock in a densely developed area; therefore, methods to develop resilient solutions to climate change and sea level rise are restrained by the existing infrastructure at and surrounding Independence Park. Despite these restraints, sea level rise and climate change are primary reasons why the Town is proposing improvements to Independence Park. The elevation of the parking area and access drive will be raised approximately one foot as part of the Public Access Improvement Project to promote stormwater treatment and make the park more resilient to sea level rise. The boat ramp grades are designed to match the proposed driveway elevation and the riprap slope will prevent future erosion and provide shoreline protection upgradient of the coastal beach. The new ramp and dock have also been designed to be more resilient to erosion and prevent undermining which has led to deterioration of the existing ramp.

§ 1.2.3 Areas of Historic and Archaeological Significance

A letter with attachments was sent to the Rhode Island Historical Preservation & Heritage Commission (RIHPHC), dated November 22, 2022, and attached in Section 5 of this application. The letter included the boat ramp improvements as well as the Public Access Improvement Project. RIHPHC requested to continue consultation due to the project location within the Bristol Waterfront Historic District and scope of the overall Independence Park improvement project which includes the site work improvements included in a separate Assent application. The Narragansett Tribal Historic Preservation Office also requested to continue consultation and that Tribal Monitors should be present for any ground disturbance due to the cultural significance of the area. The THPO's response email and RIHPHC's response letter are included in Section 5 of this application. The Town is committed to working with the RIHPC and THPO to ensure the project does not result in significant effects to historic and culturally significant features and artifacts at the site.

§ 1.3.1 (A) Category B Requirements for work in Tidal and Coastal Pond Waters, on Shoreline Features and Their Contiguous Areas

Requirements for Category B Assent Applications for work in Tidal Waters (*§ 1.3.1 (A)(1)*) are addressed throughout this project narrative including the need of the proposed project, description of the coastal resource areas at the project site, and measures that will be taken to avoid and minimize impacts to tidal waters and shoreline features. The requirements not explicitly addressed in this narrative are addressed below.

a. *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.*

A completed Building Officials Form is included in Section 1 of this application. All work will be completed in accordance with local zoning ordinances, building codes, flood hazard standards, and all safety codes, fire codes, and environmental requirements as well as the Rhode Island State Building Code.

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

The proposed project will not result in significant impacts on erosion or deposition processes along the shoreline or in tidal waters. The project will not impact the coastal beach feature and work is concentrated to existing manmade features at the park. A primary project goal is to improve stabilization of the manmade shoreline and boat ramp to minimize future erosion. Deposition processes along the coastal beach and nearby salt marsh will not be impacted by the project. A turbidity barrier will encompass the work area within Tidal Waters to minimize construction phase sedimentation impacts to tidal waters.

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

The proposed construction will take place in the existing launching ramp and immediately surrounding areas. Existing public recreational uses at the site will not be altered by the project and long-term adverse impacts on diversity of plant and animal life are not anticipated to occur as a result of the proposed work. A shellfish survey and relocation shall be conducted in coordination with RIDEM DFW, and any shellfish identified within the project impact area will be relocated prior to construction. The project will avoid impacts to salt marsh, and there will not be significant impacts to fisheries habitat given the existing developed nature of the project area. Short term impacts generated during construction will be minimized by the turbidity barrier and

maintaining work to within the time of year window for tidal waters specified in the RI General Permits (October 15 – January 31).

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

The project will enhance public access to, or use of, tidal waters and/or the shore as this is a central project goal for the project.

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

The project is not anticipated to result in significant impacts to water circulation, flushing, turbidity, or sedimentation. The proposed control of water measures and sedimentation controls will minimize turbidity and sedimentation during construction. No long-term adverse impacts to turbidity or sedimentation will result from the project. The proposed riprap slope and grade alteration of the access driveway will reduce sedimentation to Bristol Harbor by re-directing stormwater away from the harbor and providing structural stabilization of the area upgradient of the coastal beach.

As part of the pier and dock improvements, there will be a reduction in four (4) timber piles associated with the dock and pier. The reduction in the number of piles and fill within tidal waters may help restore more natural circulation at the pier; however, no significant changes to circulation or flushing in Bristol Harbor are expected to occur from the project.

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

The proposed ramp improvements will not result in significant deterioration of the water quality in Bristol Harbor. As the proposed work will primarily take place within tidal waters with no proposed increase in impervious area, no stormwater treatment measures are proposed and there is not anticipated to be a deterioration in water quality discharged to the harbor from the project site. Stormwater generated by the parking area and Independence Park site will be treated by proposed stormwater management areas included in the Public Access Improvement Project.

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

Correspondence with RIHPHC and THPO's is included in Section 5. The project will continue to be coordinated with these entities to ensure there will be no significant impacts to areas of historical and archaeological significance.

h. 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.

The proposed project will temporarily reduce public access to water dependent uses and activities during construction. However, in the long-term, the project will enhance public access to water dependent uses by improving functionality and accessibility at the launching ramp and dock.

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

The project area will not diminish the existing scenery at the project site. The ramp and dock improvements as well as the riprap slope will enhance the existing scenery made up of the deteriorating pier, ramp, and dock.

§ 1.3.1 (B) Filling, Removing, Grading of Shoreline Features

The proposed ramp replacement will require removal, filling, and restoration of the manmade shoreline where the top of the existing boat ramp and pier meet the access driveway. The proposed work has been designed and shall be conducted in accordance with the standards and specifications set forth in the RIESCH. Disturbed portions of the shoreline will be promptly stabilized to prevent erosion and the proposed condition will provide greater erosion protection. Construction materials and demolition debris generated from removal of the existing ramp will be temporarily stored on site in the designated stockpile area prior to offsite disposal. No construction material or debris will be stored on the coastal beach during construction. Slopes on the project are proposed at a maximum of 13% and all fill used on the site will be clean and free of materials which may cause pollution of tidal waters. All concrete structures (boat ramp and concrete walkway/approach) will be constructed with Type II cement per sheet 1.0 of the site plans under "Concrete Notes".

§ 1.3.1 (D) (10) Recreational Boating Facilities, Launching Ramp Standards

The proposed boat ramp and dock improvements have been designed to meet the requirements for Limited Recreational Boating Facilities included in *§ 1.3.1(D) Recreational Boating Facilities (10) Launching ramp standards* as demonstrated below. The proposed dock replacement is to an existing functional dock; and therefore, the dock replacement appears to qualify as a Maintenance Activity as indicated in §1.3.1(D)(1)(g). The ramp and dock meet the Minimum Design Criteria included in §1.3.1(D)(1)(z) and all structural elements are designed in accordance with Minimum Design Loads for Buildings and Other Structures published by the American Society of Civil Engineers, and as required by RICRMP for float live load.

a. *All public launching ramps shall be designed to allow emergency vehicle turning at the top of the ramp. The ramp shall be designed with two (2) areas to allow vessel prep and tie down in close proximity of the haul/launch area. All parking for boat trailers shall be angled only, with a strong preference for pull through parking. All ramps shall have clearly marked parking for car top vessel parking.*

Ample space for emergency vehicles to turn at the top of the ramp is provided by the drive aisle and a 32-foot wide by 45-foot long no parking area intended for vehicle turn around. This is clearly shown on the Public Access Improvement Project Plans previously submitted to CRMC. Parking for trailers is provided on the western side of the Independence Park parking lot and vehicle parking for car top vessels is provided on the eastern side of the lot. Proper signage will be installed indicating trailer and vehicle only parking. The floating dock will provide at least two (2) areas to allow vessel prep and tie down next to the haul/launch area.

b. *Ramps shall be constructed at an angle no greater than fifteen percent (15%) from the horizontal. Where upland modification is necessary, the slope will be created, where possible, by cutting back into the upland, rather than by placing fill on a shoreline feature. Ramps shall be approximately even with beach grade.*

The ramp is proposed at an angle of 13% to meet the maximum slope standard of 15%. The top of the ramp will match the grade of the drive aisle which requires placement of fill on the shoreline feature. The fill is necessary to re-direct stormwater away from Bristol Harbor toward stormwater treatment areas.

c. *All new or reconstructed public ramps shall extend a sufficient distance inland to prevent washout at the inland edge and shall extend a minimum of four (4) feet beyond extreme low water. Single-lane ramp width shall not be less than fifteen (15) feet.*

The upgradient extent of the boat ramp is proposed as far inland as the site allows and the downgradient extent of the boat ramp (EL -7.4) is proposed approximately four feet below mean lower-low water for the site (EL -2.31). The ramp width is 15 feet at the downgradient end and 25 feet at the top of the ramp as shown on the plans.

d. *Side slopes of the ramp (above water line) shall be constructed of sloped riprap or, if the slope permits, vegetated.*

Ramp side slopes will be reinforced with riprap to prevent erosion or undermining of the ramp.

§ 1.3.1 (G) Shoreline Protection

Structural shoreline protection in the form of a riprap enforced slope along the existing edge of the paved Independence Park access drive. In the existing condition there is no shoreline protection provided along this section of Independence Park. The coastal beach transitions to compacted sand and gravel from vehicular use as there is no curb along the edge of pavement. Stormwater has also eroded a channelized

flow path along the top of the coastal beach. Given the constraints of the site and existing Park location, structural shoreline protection is the most practical and least intrusive method for shoreline protection. Non-structural shoreline protection or hybrid shoreline protection would require increased impacts to the public use of the coastal beach as well as use of Independence Park for recreational boaters. The proposed riprap slope is located in a previously disturbed area along the edge of an existing driveway and will not removal of coastal vegetation. The slope is also necessary to prevent erosion of the access drive and parking improvements included in the Independence Park Public Access Improvement Project which will provide treatment of stormwater generated by the driveway and parking area. Granite steps will be incorporated into the riprap slope to maintain existing public access to the coastal beach from Independence Park.

§ 1.3.1 (J) Filling in Tidal Waters

The proposed fill in tidal waters is the minimum necessary to improve the existing boat ramp, pier, and dock and to support the existing use of Independence Park for public recreation. The proposed design will provide a more durable and safe boat ramp and pier that also meets current standards. The proposed fill will not impact navigability or existing uses of Bristol Harbor which is a Type 4 Water in the vicinity of the site. A survey of the facility was performed by Principe Company, Inc. which references bathymetric survey of Bristol Harbor from December 2012. The facility avoids coastal wetland vegetation and known areas of submerged aquatic vegetation. No creosote will be applied to any of the dock structure. Greenheart timber piles with steel shoes will be utilized. The dock will remove four piles from the existing pier and dock.

§ 1.3.6 Enhancement of Public Access to the Shoreline

The primary project goal is to maintain and enhance public access to the shoreline by improving the Independence Park launching ramp and dock. Public access at Independence Park is currently hindered by the condition of existing infrastructure and the proposed project will provide significant accessibility and resiliency enhancements. Public parking for the launching ramp will be provided at Independence Park as shown in the site plans included with the Independence Park Water Quality and Public Access Improvements application. Public access and use of the ramp will be temporarily disrupted during construction; however, long term access will be significantly improved by the project.