

September 30, 2024

Kevin Aguiar, P.E.
Senior Vice President
BETA Group, Inc.
701 George Washington Highway
Lincoln, RI 02865

**Re: Tidewater Landing Phase 1B (Eastern Side of Seekonk River)
Wetlands Assessment Letter of Findings**

Dear Mr. Aguiar:

BETA Group, Inc. (BETA) Wetland Scientists visited the property located south of 45 Division Street in Pawtucket, Rhode Island (the Site) on September 5, 2024 to assess the Site for the presence of jurisdictional wetland resources under the Rhode Island Freshwater Wetlands Rule (250-RICR-150-15-3), the Rhode Island Coastal Resources Management Council (CRMC) "Red Book" (650-RICR-20-00-1), and the Rhode Island Rules and Regulations Governing the Protection and Management of Freshwater Wetlands in the Vicinity of the Coast (650-RICR-20-00-9). Wetland delineations were conducted at the Site in accordance with the above-referenced rules and regulations and, where applicable, in accordance with the 1987 publication *Corps of Engineers Wetlands Delineation Manual*.

The approximately 4.31-acre Site is situated along the eastern bank of the Seekonk River and includes three (3) parcels identified by the Pawtucket Assessor's Office as Parcels 23-599, 23-672, and 23-673. The Site consists of historically disturbed/filled areas, vegetated areas, remnants of retaining walls, footpaths, and several human encampments. According to FEMA Flood Insurance Rate Map (FIRM) Community Panel 44007C0307J, the Site is partially located within a Zone AE Flood Hazard with a base flood elevation of 12 feet (NAVD88) and a Zone VE Flood Hazard with a base flood elevation of 13 feet (NAVD88) (Attachment D). Portions of the Site upgradient of these Flood Hazards are mapped as a 0.2% chance flood hazard.

According to the Natural Resources Conservation Service (NRCS), soils at the Site consist of Hinckley loam sand, 8 to 15 percent slopes; and Merrimac-Urban land complex, 0 to 8 percent slopes (Attachment F). BETA's field work generally confirmed these soil types at the Site.

Representative photographs of the Site are included in Attachment A.

RHODE ISLAND CRMC JURISDICTIONAL AREAS

According to 650-RICR-20-00-1, the Rhode Island CRMC has jurisdiction over activities "...within, above, or beneath the tidal waters below the mean high water mark extending out to the extent of the state's jurisdiction in the territorial sea, and those occurring on coastal features or within all directly associated contiguous areas which are necessary to preserve the integrity of coastal resources, or any portion of which extends onto the most inland shoreline feature or its two hundred (200) foot contiguous area, or as otherwise set out in the Coastal Resources Management Program..."

CRMC mapping indicates that waters at the Site are classified as Type 4 – Multi Purpose Waters and Type 6 – Industrial Waterfronts and Commercial Navigation Channels (Attachment E). In addition, the entirety of the Site is located within the boundaries of the Metro Bay Special Area Management Plan (SAMP). This Site is subject to a Preliminary Determination issued by the CRMC on May 6, 2021 (Attachment B), which provides the following statement relevant to the Site:

"...and the Phase 2 coastal feature (eastern side, north to south) shall be the inland edge of the existing structure section large retaining wall, the coastal bluff and/or the coastal wetland. The coastal bluff is on the southern section of Parcel 4 and on Parcel 6 the feature is located at approximately contour line 6', transitioning at the wetland edge."

BETA identified the following areas that are subject to regulation by the CRMC:

MANMADE SHORELINES (650-RICR-20-00-1 SECTION 1.2.2 F.)

According to the definitions provided in 650-RICR-20-00-1, manmade shorelines are defined 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."

BETA observed manmade shorelines along the Seekonk River, a tidal river, within the northern portion of the Site. Manmade shoreline at the Site consists of a large retaining wall situated parallel with the Seekonk River. The CRMC Preliminary Determination for the Site (Attachment B) states that the large retaining wall situated within the northern portion of the Site is the limit of the CRMC-jurisdictional coastal feature. Based on field observations and a review of topographic mapping, it appears that manmade shoreline transitions to coastal bluff directly south of the onsite parking area.

Survey location of the wall within the northern extent of the Site is required to determine the boundary of the manmade shoreline at this location. Manmade shorelines are subject to the 200-foot contiguous area measured horizontally inland from their location which determines CRMC jurisdiction for proposed project activities.

COASTAL WETLANDS (650-RICR-20-00-1 SECTION 1.2.2 C.)

According to the definitions provided in 650-RICR-20-00-1, coastal wetlands are defined as:

"...salt marshes and freshwater or brackish wetlands contiguous to salt marshes or physiographical 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."

BETA observed one (1) area of salt marsh along the Seekonk River within the southwestern portion of the Site. The definitions provided in 650-RICR-20-00-1 define salt marsh as:

*"...areas regularly or irregularly inundated by salt water through either natural or artificial water courses and where one or more of the following species predominate: smooth cordgrass (*Spartina alterniflora*), salt meadow grass (*Spartina patens*), spike grass (*Distichlis spicata*), black rush (*Juncus gerardi*), saltwort (*Salicornia* spp.), sea lavender (*Limonium carolinianum*), saltmarsh bulrush (*Scirpus* spp.), high tide bush (*Iva frutescens*). Saltmarsh includes both high saltmarsh and low saltmarsh defined as follows:*

a. High salt marsh is defined as that portion of the saltmarsh that is typically flooded by spring, moon, or other flooding tides but otherwise is not flooded on a daily basis. The vegetative composition of high salt marsh typically consists of one or more of the

following: salt meadow grass (Spartina patens); short-form Spartina alterniflora spike grass (Distichlis spicata); black rush (Juncus gerardi); tall reed (Phragmites communis); Sea Lavender (Limonium carolinianum); tall cordgrass (Spartina pectinata); saltmarsh bulrushes (Scirpus spp.); and high tide bush (Iva frutescens).

b. Low salt marsh is defined as that portion of the saltmarsh that is flooded daily and the vegetative composition typically consists predominantly of smooth cordgrass (Spartina alterniflora)."

This area was delineated with pink flagging labeled WF1-100 to WF1-112 and consists primarily of a sparsely vegetated and channelized portion of salt marsh between dense stands of knotweed. A monoculture of common reed (*Phragmites australis*) is present adjacent to the Seekonk River. Soils generally consist of histosols with a mild hydrogen sulfide odor, and indicators of hydrology including drift patterns, saturation, and groundwater at the soil surface were observed.

In order to determine the regulatory boundary of salt marsh, the spring high tide elevation must be depicted on a topographic plan of the Site. According to the National Oceanic and Atmospheric Administration (NOAA), the estimated spring high tide for the Site is 3.78 feet (NAVD88)¹. Any area of coastal wetland upgradient of the spring high tide elevation, but below the flagged coastal wetland boundary, would be categorized as a contiguous brackish wetland. According to preliminary topographic survey data, this coastal feature appears to be located entirely below the spring high tide elevation and is therefore considered salt marsh.

The topographic depressions north and south of the WF1 Series salt marsh were also assessed for coastal wetland indicators. While soils in these areas would qualify as hydric (depleted matrices below dark surfaces), the vegetative community is entirely dominated by Japanese knotweed (*Reynoutria japonica*), an upland species. In addition, the presence of sandy mineral soils (likely fill) adjacent to the histosol soils within the wetland suggests that these areas are less influenced by tidal inundation and have been degraded by adjacent anthropogenic activities. Therefore, these areas would not qualify as wetlands under present day existing conditions; however, they are located within the coastal bluff as noted in the next section of this report.

Coastal wetlands (i.e., salt marsh) are subject to the 200-foot contiguous area measured horizontally inland from their location, which determines CRMC jurisdiction for proposed project activities.

COASTAL HEADLANDS, BLUFFS, AND CLIFFS (650-RICR-20-00-1 SECTION 1.2.2 D.)

According to the definitions provided in 650-RICR-20-00-1, coastal headlands, bluffs, and cliffs are defined as:

"...elevated landforms on headlands directly abutting coastal waters, a beach, coastal wetland, and rocky shores."

According to the CRMC Preliminary Determination issued for the Site (Attachment B), a coastal bluff located approximately at elevation 6 feet (NAVD88) is present at the Site outside of the limits of manmade shorelines and coastal wetlands. BETA observed this elevation to generally correspond with the boundary of the coastal bluff in the field. Coastal bluff at the Site consists

¹<https://tidesandcurrents.noaa.gov/datums.html?datum=NAVD88&units=0&epoch=0&id=8454000&name=Providence&state=RI>

primarily of gravelly fill soils and is vegetated by species including Norway maple (*Acer platanoides*), red maple (*Acer rubrum*), white oak (*Quercus alba*), Asiatic bittersweet (*Celastrus orbiculatus*), and roundleaf greenbrier (*Smilax rotundifolia*).

Coastal bluffs are subject to the 200-foot contiguous area measured horizontally inland from their location, which determines CRMC jurisdiction for proposed project activities.

BUFFER ZONE (650-RICR-20-00-1 SECTION 1.1.11)

According to the definitions provided in 650-RICR-20-00-1, buffer zone is defined as “...land area on or contiguous to a shoreline feature that is retained in its natural undisturbed condition.”. Section 1.1.11 of 650-RICR-20-00-1 indicates that the Site would be subject to a 125-foot buffer zone due to its 4.31-acre size² and its classification as a Type 3 and 6 Water. However, as noted in the regulations, these buffer zone widths are intended for residential lots and shall be used as a reference for commercial/industrial lots. CRMC ultimately determines buffer zone widths for commercial/industrial lots on a case-by-case basis.

Buffer zone is present upgradient of the manmade shoreline, the coastal wetland, and the coastal bluff and consists of historically disturbed areas that are vegetated with species including Norway maple, staghorn sumac (*Rhus typhina*), Japanese knotweed, roundleaf greenbrier, and mugwort (*Artemisia vulgaris*).

RHODE ISLAND FRESHWATER WETLANDS RULE JURISDICTIONAL AREAS

Freshwater wetlands subject to 250-RICR-150-15-3 and/or 650-RICR-20-00-9 were not observed at the Site. Although additional topographic depressions were observed along the western portion of the Site, these areas did not qualify as wetlands (freshwater or brackish) due to the presence of gravelly fill with shallow refusal and predominately upland vegetative communities.

RHODE ISLAND NATURAL HERITAGE AREAS

RIDEM GIS data indicates that the entirety of the Site is located within a Natural Heritage Area due to the presence of state-listed rare, threatened or endangered plant and animal species. According to the Natural Heritage Report acquired for the Site (Attachment G), the following species of concern are potentially present at the Site:

- Northern Diamondback Terrapin (*Malaclemys terrapin*)
- Salt Reedgrass/Big Cordgrass (*Spartina cynosuroides*)
- Tall White/Foxglove Beard-tongue (*Penstemon digitalis*)

These species were not observed at the Site by BETA; however, a more detailed wildlife evaluation would be required to confirm the current presence or absence of these species.

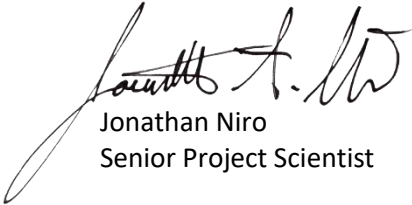
SUMMARY

BETA has identified areas regulated by the CRMC under 650-RICR-20-00-1 at the Site and has identified and delineated their boundaries as described above.

² The “lot size” is a combination of all three (3) lots at the Site per Section 1.1.11, which states that “In critical areas and when the property owner owns adjoining lots, these lots shall be considered as one lot for the purposes of applying the values contained in Table 4 of this Part and ensuring that the appropriate buffer zone is established”.

Should you have any questions, please do not hesitate to reach out to us at our office.

Very truly yours,
BETA Group, Inc.



Jonathan Niro
Senior Project Scientist

cc: Laura Krause (BETA)
Marylou Armstrong, LSP (BETA)
Arek Galle, RLA (BETA)
Randy Collins, RLA (BETA)
Maxwell Lambert (BETA)

Enclosures:

Attachment A – Photographic Documentation
Attachment B – CRMC Preliminary Determination for D2021-02-063
Attachment C – Site Figures
Attachment D – FEMA FIRMette
Attachment E – Providence, Pawtucket and East Providence (Metro Bay – North) Water Type
Classification
Attachment F – Custom Soil Resource Report for State of Rhode Island: Bristol, Kent, Newport,
Providence, and Washington Counties
Attachment G – Natural Heritage Report dated August 29, 2024

Job No: 24.11433.00

Photo 1



View of the large retaining wall at the northern extent of the Site that constitutes manmade shoreline—facing northeast.

Photo 2



Typical view of the vegetated portions of the coastal bluff—facing west.

PHOTOGRAPHIC DOCUMENTATION
Tidewater Landing Phase 1B—Wetlands Assessment
Pawtucket, Rhode Island
Photographs Documented September 5, 2024

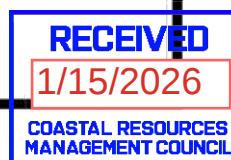


Photo 3



Typical view of the coastal wetland delineated at the southern extent of the Site—facing west.

Photo 4



View of a stand of common reed (*Phragmites australis*) at the western extent of the wetland (background) and the dense stand of adjacent Japanese knotweed (*Reynoutria japonica*) - facing west.

PHOTOGRAPHIC DOCUMENTATION

Tidewater Landing Phase 1B—Wetlands Assessment

Pawtucket, Rhode Island

Photographs Documented September 5, 2024

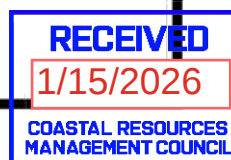


Photo 5



View decomposed organics within the delineated wetland.

Photo 6



Typical view of a low-lying area within the central portion of the Site that did not qualify as a wetland—facing east.

PHOTOGRAPHIC DOCUMENTATION
Tidewater Landing Phase 1B—Wetlands Assessment
Pawtucket, Rhode Island
Photographs Documented September 5, 2024

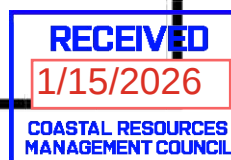
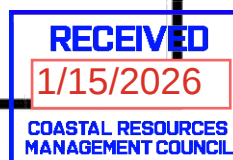


Photo 7



View of an unidentified mammalian den and sand along the northwestern portion of the coastal bluff—
facing east.

PHOTOGRAPHIC DOCUMENTATION
Tidewater Landing Phase 1B—Wetlands Assessment
Pawtucket, Rhode Island
Photographs Documented September 5, 2024



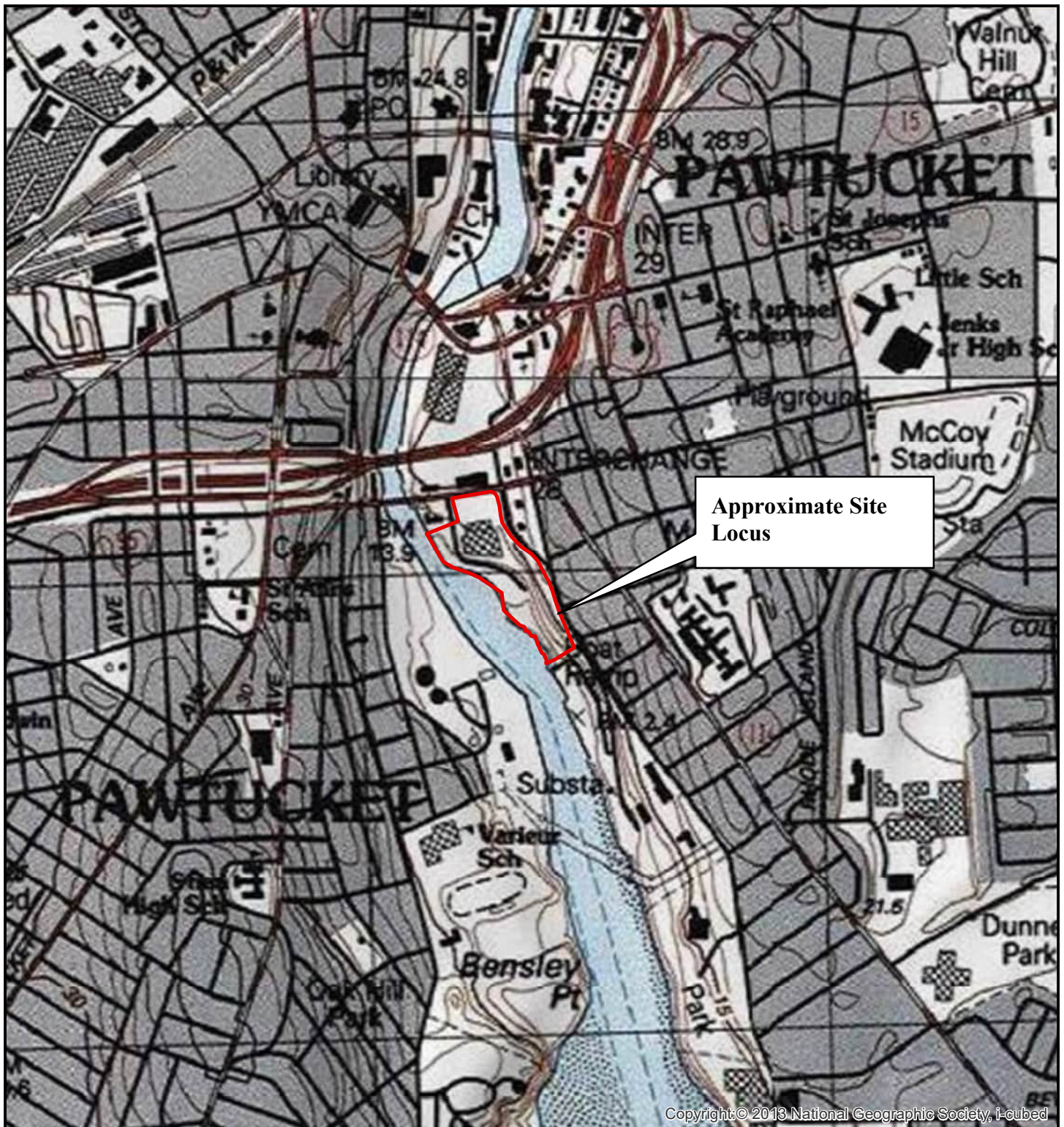
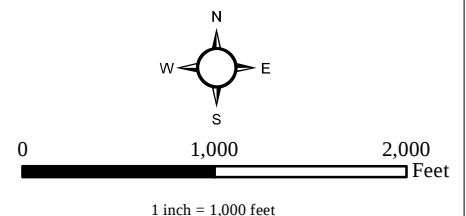


Figure 1
Topographic Site Locus
Tidewater Landing Phase 1B
Pawtucket, RI



Data Source: MassGIS USGS Topographic

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1/15/2026

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