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July 24, 2023

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
EXPANDED ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Gibson Park Resiliency Project
PROJECT MUNICIPALITY : Revere
PROJECT WATERSHED : North Coastal
EEA NUMBER : 16711
PROJECT PROPONENT : City of Revere
DATE NOTICED IN MONITOR : June 7, 2023

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62L) and Section 11.06 of the MEPA Regulations (301 CMR 11.00), I have reviewed the Expanded Environmental Notification Form (EENF), and hereby determine that this project **requires** the submission of an Environmental Impact Report (EIR). In accordance with Section 11.06(8) of the MEPA regulations, the Proponent requested that I allow a Single EIR to be submitted in lieu of the usual two-stage Draft and Final EIR process. As discussed below, while I acknowledge the resiliency and recreational benefits that the project is intended to offer, comments submitted by Agencies raise concerns about the success of the shoreline protection features to provide near- and long-term resiliency, the precise extent of wetlands impacts, and compliance with regulatory standards. A complete review of impacts should be conducted to ensure a sustainable project design that protects and enhances environmental resources. A thorough review also ensures that public funds are expended in a manner that maximizes benefits over the long term, particularly when considering future climate conditions. Accordingly, I am denying the EIR request; the Proponent should submit a DEIR in accordance with the Scope included in this Certificate.

Project Description

As described in the EENF, the project consists of redeveloping the existing Gibson Park into an up-to-date multi-program recreational facility, incorporating nature-based resiliency measures to protect the park and the adjacent Riverside neighborhood from both tidal and storm flooding events. Specific park improvements include a new multi-purpose natural-turf field, upgraded tennis courts, high mast lighting (to allow for more nighttime sports activities), and expanded walking paths with educational signage. The City of Revere (the Proponent) also recently acquired the former North Shore Boatworks Property (the Boatworks Property) and proposes to remediate and rehabilitate the site into a community boating facility focused on rowing and kayaking activities. Rehabilitation activities on the Boatworks Property will include reconstruction of the dilapidated revetment structure; elevating the first floor and mechanical systems of the existing building; and installing a new boardwalk, gangway, and floating dock system in the Pines River. In order to address flooding issues along Mills Avenue, the project proposes the beneficial reuse of materials excavated from Gibson Park, placed within geotextile bags, to form a berm between the roadway and the Pines River. The berm would tie into the reconstructed revetment on the Boatworks Property, extending south along Mills Avenue, in order to provide a uniform line of flood protection along the ocean's edge. The berm will be vegetated with native, coastal flora and would require new granite curbing along the edge of Mills Avenue to protect the berm during snow removal operations. Additionally, small, concrete wingwalls will be installed at intervals along the Mills Avenue berm to maintain current access points to the waterfront but also allow the Proponent to use either flashboards or deployable barriers in advance of a flooding event. Additional features proposed by the project include creating offline subsurface stormwater storage underneath the multi-purpose athletic field; decentralizing the stormwater management with raingardens and bioswales; creating access to the park from North Shore Road; and providing additional parking at the Boatworks Property.

According to the EENF, the primary goals of the project are to provide a more resilient, natural interface of the land and the river; provide off-line subsurface stormwater storage and to create decentralized stormwater management facilities; help alleviate flooding in the area while maintaining this parcel for optimal, multi-modal recreational uses; keep the rising sea levels out of the adjacent residential neighborhood; and allow the Boatworks Property to be safely redeveloped for highly sustainable public use.

Project Site

The project site encompasses approximately 9.15 acres and consists of the existing Gibson Park, the Boatworks Property, and Mills Avenue. Gibson Park is an actively used recreational facility, whose amenities include a baseball/softball field, two sets of double tennis courts, a half-court basketball court, a community garden, a playground, walking paths, memorial benches and parking. Gibson Park is bordered to the north by the Gibson Point development, to the east by North Shore Road, to the west by the Pines River, and to the south by the Boatworks Property. The Boatworks Property has been historically used as a boatyard, providing boat haul-out, storage and repair facilities for recreational and commercial vessels. The waterfront structures at the Boatworks Property consist of armor stone, dilapidated timber bulkheads, and a stone revetment. The Project site also extends 2,400 linear feet(1f) down Mills Avenue along the interface of the roadway and the coastal edge of the Pines River.

State and local wetland resource areas located within the project area include Land under the Ocean (LUO), Coastal Beach, Coastal Dune, Barrier Beach, Land Containing Shellfish, Fish Runs, Salt Marsh, Isolated Vegetated Wetland (IVW), Riverfront Area (RA), and Land Subject to Coastal Storm Flowage (LSCSF). According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (Panel No. 25025C0028J and 25025C0036J, effective March 16, 2016), the majority of the project site is located within Coastal Zone AE with a Base Flood Elevation (BFE) of 10 ft NAVD88. The project site is also located within filled and flowed tidelands as well as the Rumney Marshes Area of Critical Environmental Concern (ACEC).

According to the Massachusetts Natural Heritage and Endangered Species Program (NHESP) Atlas (15th Edition), the site is not located within Estimated or Priority Habitats of Rare Species. The project site also does not contain any structures listed in the State Register of Historic Places or the Massachusetts Historical Commission's (MHC) Inventory of Historic and Archaeological Assets of the Commonwealth.

The project site is located within an EJ Population characterized as Minority and Income within the City of Revere. The site is located within one mile of three additional EJ Populations characterized as Minority (2) and Minority and Income (1) within the City of Revere, three EJ Populations characterized as Minority within the City of Saugus, and two EJ Populations characterized as Minority and Income (1) and Minority and English Isolation (1) within the City of Lynn. The site is also located within five miles of numerous additional EJ Populations.¹ As described below, the EENF identified the "Designated Geographic Area" (DGA) for the project as one mile around EJ Populations, included a review of potential impacts and benefits to the EJ Populations within this DGA, and described public involvement efforts undertaken to date.

Environmental Impacts and Mitigation

Potential environmental impacts associated with the project include the direct alteration of 6.11 acres of land as well as temporary and permanent impacts to wetland resources areas present on the project site including 329,925 square feet (sf) of Coastal Dune (16,130 sf permanent, 313,795 sf temporary), 128 sf of Coastal Beach (64 sf permanent, 64 sf temporary), 238,135 sf of RA (17,800 sf permanent, 220,335 sf temporary), and 358,660 sf of temporary impacts to LSCSF. The project will also generate 1,140 gallons per day (gpd) in water demand and wastewater generation, and create 22 parking spaces. Additionally, the entire project site is located within the Rumney Marshes ACEC.

Measures to avoid, minimize, and mitigate environmental impacts include improvements to site resiliency through construction of a flood protection berm; construction of a stormwater management system; use of erosion and sedimentation controls during construction; and removal of invasive species. Additional measures should be described in the DEIR in response to comments, as discussed below.

Jurisdiction and Permitting

This project is subject to MEPA review because it requires Agency Action and meets/exceeds the MEPA review thresholds at 301 CMR 11.03(3)(b)(1)(a) for the alteration of a coastal dune, barrier beach or coastal bank; 301 CMR 11.03(11)(b) for any project of ½ or more acres within a designated

¹ The EEA EJ Mapper is available at: <https://www.mass.gov/info-details/environmental-justice-populations-in-massachusetts>

ACEC, unless the project consists solely of one single family dwelling; and 301 CMR 11.03(3)(b)(1)(f) for the alteration of ½ or more acres of any other wetlands. The project is required to prepare an EIR pursuant to 301 CMR 11.06(7)(b) because it is located within a DGA of one or more EJ Populations.

The project will require a M.G.L. Chapter 91 (c. 91) License from the Massachusetts Department of Environmental Protection (MassDEP). The project will also require an Order of Conditions (OOC) from the Revere Conservation Commission (or in the case of an appeal, a Superseding Order of Conditions from MassDEP) and Site Plan Review from the Revere Site Plan Review Committee. Additionally, the project will require a Public Benefit Determination (PBD) from the Secretary of the Executive Office of Energy and Environmental Affairs (EEA).

The project will require a National Pollutant Discharge Elimination System (NPDES) Construction General Permit, for the disturbance of greater than one acres of land, from the U.S. Environmental Protection Agency (EPA). The project will also require the submittal of a Pre-Construction Notification (PCN) to the U.S. Army Corps of Engineers (ACOE) seeking authorization under the General Permits for Massachusetts in accordance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. Additionally, the project may require Federal Consistency Review by the Massachusetts Office of Coastal Zone Management (CZM).

The project has received a Municipal Vulnerability Grant from EEA for design and permitting, and is seeking other forms of Financial Assistance. Therefore, MEPA jurisdiction is broad in scope and extends to all aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment as defined in MEPA regulations.

Request for a Single EIR

The MEPA regulations at 301 CMR 11.06(8) indicate that a Single EIR may be allowed provided I find that the EENF:

- a. describes and analyzes all aspects of the project and all feasible alternatives, regardless of any jurisdictional or other limitation that may apply to the Scope;
- b. provides a detailed baseline in relation to which potential environmental impacts and mitigation measures can be assessed; and,
- c. demonstrates that the planning and design of the project use all feasible means to avoid potential environmental impacts.

To support a Single EIR request for any Project for which an EIR is required in accordance with 301 CMR 11.06(7)(b), I must also find that the EENF:

- d. describes and analyzes all aspects of the Project that may affect Environmental Justice Populations located in whole or in part within the Designated Geographic Area around the Project; describes measures taken to provide meaningful opportunities for public involvement by Environmental Justice Populations prior to filing the expanded ENF, including any changes made to the Project to address concerns raised by or on behalf of Environmental Justice Populations; and provides a detailed baseline in relation to any

existing unfair or inequitable Environmental Burden and related public health consequences impacting Environmental Justice Populations in accordance with 301 CMR 11.07(6)(n)1.

Consistent with this request, the EENF was subject to an extended comment period under 301 CMR 11.05(9).

Review of the EENF

The EENF included a project description, alternatives analysis, Stormwater Report, existing and proposed conditions plans, estimates of project-related impacts, and an identification of measures to avoid, minimize and mitigate environmental impacts. It included a description of measures taken to enhance public involvement by EJ Populations and a partial baseline assessment of any existing unfair or inequitable Environmental Burden and related public health consequences impacting EJ Populations in accordance with 301 CMR 11.07(6)(n)1.). Consistent with the MEPA Interim Protocol on Climate Change Adaptation and Resiliency, the EENF contained an output report from the Climate Resilience Design Standards Tool prepared by the Resilient Massachusetts Action Team (RMAT) (the “MA Resilience Design Tool”),² together with information on climate resilience strategies to be undertaken by the project.

The Proponent provided supplemental information on June 30, 2023 which included updates to the EENF, a table quantifying impacts to each wetland resource area present on the project site, and a supplemental EJ analysis. For purposes of clarity, all supplemental information provided by the Proponent are included in references to the “EENF,” unless otherwise indicated.

Alternatives Analysis

As described below, the EENF evaluated two to four alternatives for each of the project components (including the living shoreline; berm along Mills Avenue; Salt Marsh creation; elevated walkway; Boatworks Property upgrades; multi-purpose field; and stormwater conveyance along Thayer Avenue) to meet the project goals based on environmental impacts, resiliency, community input, and cost. The EENF indicates that the No-Action alternative was eliminated as it would not achieve the project’s goals and would leave the community vulnerable to increasingly frequent and intense flooding events. Additionally, all alternatives considered for the Mills Avenue berm include the installation of concrete-walled access points along the alignment to provide access for residents to the shoreline.

The following summarizes alternatives considered for each of the project components below:

Living Shoreline

Alternative 1 would involve utilizing riprap or stone as the seaward toe of the living shoreline. This would provide a natural material, whose weight and angularity provide the toe and when sized appropriately are affective at reducing wave energy. Although, this alternative would have similar initial construction costs as the Preferred Alternative, the riprap/stone feature does not provide much habitat benefit and will not self-accrete to work with rising sea levels.

² Available at: https://resilientma.mass.gov/rmat_home/designstandards/

Alternative 2 would involve utilizing shellfish beds as the seaward toe of the living shoreline. Shellfish beds are a natural part of a low marsh system, are effective at reducing wave energy, stabilizing a slope, and will naturally self-accrete to rise with rising sea levels. However, due to the designation of the project site as a Conditionally Prohibited Shellfish Area, the propagation and ongoing presence of edible shellfish would create a potential public health concern. Additionally, this alternative has the highest initial expense of the alternatives considered.

The Preferred Alternative (as described herein) would involve utilizing coir logs as the seaward toe of the living shoreline. Typically comprised of native materials like coconut husks, coir logs would be staked in place and provide temporary stabilization for the plantings to establish. Although the coir logs would naturally degrade over time and do not provide a long-term solution for rising sea level, they were selected as the Preferred Alternative due to having lowest construction costs, lowest short-term operation and maintenance costs, and providing some habitat benefits.

Mills Avenue Berm

Alternative 1 would involve the installation of interlocking, concrete Jersey Barriers. The use of Jersey Barriers would have the lowest initial construction costs and could be more easily maintained by the Revere Department of Public Works (DPW). Additionally, while this alternative would provide some resiliency protection from floodwaters, presuming that the barriers could be installed in an interlocking manner with rubber joints, the barriers would act as a floodwall resulting in potential wave deflection and would negatively impact the viewshed along Mills Avenue.

Alternative 2 would involve the creation of a vegetated berm using geotubes, which are fabricated geotextile bags that use a woven, plastic geotextile to contain materials and prevent erosion along the slope. Although these materials are robust and can withstand and protect the shoreline in various wave energy and storm conditions, they are made of synthetic materials and have comparable construction costs as the Preferred Alternative.

Alternative 3 would involve the creation of a vegetated berm using Envirolok geobags, which are fabricated geotextile bags that are designed to be planted and vegetated creating a vegetated slope. The woven geobags and the layering system that is used for implementation of this alternative would result in a very robust and strengthened slope, withstanding wave action and storm surge, even before vegetation is established or when lost. However, similar to Alternative 2, they are fabricated of synthetic materials and have comparable construction costs as the Preferred Alternative.

The Preferred Alternative (as described herein) would involve the creation of a vegetated berm using coir mats and envelopes, which are natural fiber woven fabrics, typically made from coconut husk fibers, that are planted with deep rooted native plants and used to stabilize the ground surface while plants become established. Because the coir mats and envelopes are made of natural fibers, they will typically degrade within five to seven years, relying on the vegetation to maintain the stability of the slope. Although the coir mats and envelopes do not provide the same long-term strength and resistance to wave action as the other alternatives, they are made of natural fiber materials, have comparable initial construction costs, and would result in less wave deflection impacts when compared against the mostly vertical concrete structures. As discussed below, Agencies note concerns with the design of the

Preferred Alternative, specifically with respect to causing potential scour and erosion of the adjacent coastal resources, and its ability to provide the desired resiliency outcomes.

Salt Marsh Creation

Alternative 1 would involve creating Salt Marsh along the entire shoreline of Gibson Park. This alternative would require converting areas of Coastal Beach to Salt Marsh. Additionally, this alternative would have high construction costs and would be influenced by the tidal cycle, making it slower and more difficult to execute.

Alternative 2 would involve expanding the Salt Marsh in the two areas where it currently is present by creating more low and high marsh by dredging adjacent areas. This alternative has the potential to impact to the low marsh, which is currently healthy and propagating. Additionally, this alternative would have high construction costs and would be influenced by the tidal cycle, making it slower and more difficult to execute.

Alternative 3 would involve expanding the Salt Marsh in the two areas where it currently exists by removing invasive species and creating more surface-water flushing by dredging adjacent areas. This alternative would require the treatment and/or removal of Phragmites as well as minimal dredging in areas surrounding the Salt Marsh to provide additional flushing.

The Preferred Alternative (as described herein) would involve taking no immediate action to expand the Salt Marsh but allowing for the marsh to migrate upgradient with rising sea levels. This would involve some invasive species management and longer-term planning for park and recreational activities. The Preferred Alternative would also have the lowest costs as it does not require any direct work on the Salt Marsh. The Preferred Alternative was selected based on prior input from Agencies, which advised against lowering site grades to plant salt marsh as it would not improve the site's overall resiliency to flooding.

Elevated Walkway

Alternative 1 would involve constructing an elevated walkway down from Gibson Point over the existing low marsh. While this alternative would provide direct public access to the marsh, the existing low marsh in this area appears healthy and would be impacted by the construction of the walkway and by subsequent shading. Additionally, this alternative would have higher construction costs than the Preferred Alternative and would require construction sequencing around the tide cycle.

Alternative 2 would involve constructing an elevated walkway down from Gibson Point over an area populated by invasives species. This alternative would route the elevated walkway through portions of Gibson Park that are populated by Phragmites. Although Phragmites are considered an invasive species, this alternative would still have direct impacts to wetlands vegetation. Additionally, this alternative would have higher construction costs than the Preferred Alternative and would require construction sequencing around the tide cycle.

Alternative 3 would involve constructing an elevated walkway in the upland area away from the Salt Marsh. While this alternative would have the least amount of impact on the Salt Marsh, it would also be located further from the water, reducing educational opportunities and access by the public.

The Preferred Alternative (as described herein) would involve constructing an elevated walkway at the Boatworks Property, connecting Gibson Park directly to the proposed community rowing center and gangway dock float system. The Preferred Alternative would provide safe controlled access to the waterfront, is located in area already used for water access, and would not have the same direct impacts to Salt Marsh as compared to Alternatives 1 and 2. As discussed below, Agencies note concern about the potential direct and indirect impacts on the adjacent Salt Marsh associated with construction and potential shading.

Boatworks Property Upgrades

Alternative 1 would involve constructing a small, short-term revetment at the Boatworks Property to provide access to the watersheet without any upgrades to the dilapidated on-site revetment. This alternative would have the lowest construction costs but does not incorporate any resiliency measures and would leave the project site and neighborhood vulnerable to flooding and storm surge events.

Alternative 2 would involve a complete reconstruction of the dilapidated revetment at the Boatworks Property by installing a riprap and concrete revetment wall with a small vessel launch and rowing access system. Although this alternative would have similar construction costs compared to the Preferred Alternative, the vessel launch area would create a flood pathway into the neighborhood, decreasing the resiliency of the project site.

Alternative 3 would involve a partial reconstruction of the dilapidated revetment at the Boatworks Property by installing a rip rap and concrete revetment wall to provide rowing access from the top of the wall without any vessel launch infrastructure. While this alternative has lower costs compared to the Preferred Alternative, it would require construction beyond the currently licensed footprint of the former revetment.

The Preferred Alternative (as described herein) would involve a complete reconstruction of the dilapidated revetment at the Boatworks Property to provide rowing access direct from the community rowing facility and new vessel launching infrastructure. The Preferred Alternative was selected as it would provide the greatest site resiliency by creating a direct flood barrier and would connect to the Mills Avenue berm, creating a contiguous line of protection, while facilitating access to the waterfront. As discussed below, Agencies express significant concerns about the selection of the Preferred Alternative for its potential to impact adjacent resource areas, including by filling Salt Marsh, and for potential inconsistency with regulatory standards.

Multi-purpose field

Alternative 1 would involve installing a synthetic field surface for the multi-purpose field. The synthetic-turf field would be designed with a large, crushed stone reservoir below it to ensure it is well

draining; however, it would require an infill material that would be at risk of floating away during an inundation cycle. In addition, a synthetic-turf field would likely to have a higher-implementation cost.

The Preferred Alternative (as described herein) would involve maintaining a natural grass surface for the multi-purpose field. In comparison to Alternative 1, the natural turf field would be designed with a sandy sublayer to provide proper drainage and there would be no risk of the infill floating away during periodic inundation events.

Thayer Avenue Stormwater Management

Alternative 1 would involve constructing a sub-surface, trench drain system to convey the stormwater away from the Riverside Neighborhood and into the subsurface storage system under the multi-purpose sports field. The trench drain system would be open-air and require either a steel or concrete mesh set of plates or a hood structure to cover the trench along its entire length to decrease the amount of debris entering the system. This alternative would likely have a higher cost due to a wider excavation area and because the materials are not readily used and may require custom fabrication. Additionally, this alternative would require more frequent maintenance to remove any sediment or debris that has accumulated in the fall or winter.

The Preferred Alternative (as described herein) would involve constructing a standard catch-basin/drainage pipe system to convey the stormwater away from the Riverside Neighborhood and into the subsurface storage system under the multi-purpose sports field. The catch basins would be located in targeted low points along the re-graded roadway and would be equipped with a deep-sumps and outlet hoods to capture sediment and debris. The Preferred Alternative would likely have a lower cost as the materials are readily available and because of the shallow excavation profile of the pipe trench. Additionally, the Preferred Alternative would be easier to maintain for the DPW, which maintains similar infrastructure throughout the City of Revere. As discussed below, Agencies have expressed concerns regarding the pre-treatment of stormwater prior to final discharge as well as the potential impacts said discharge may have on the Rumney Marshes ACEC.

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As detailed below, comments from Agencies suggest additional alternatives for how the project can provide resiliency to Gibson Park and the adjacent shoreline. In particular the alternatives analysis should be expanded to include alternative designs for the expanded parking area and the shoreline protection features. The alternatives analysis should be supplemented in accordance with the Scope.

Environmental Justice (EJ) / Public Health

As noted above, the project site is located within an EJ Population characterized as Minority and Income within the City of Revere. The site is located within one mile of three additional EJ Populations characterized as Minority (2) and Minority and Income (1) within the City of Revere, three EJ Populations characterized as Minority within the City of Saugus, and two EJ Populations characterized as Minority and Income (1) and Minority and English Isolation (1) within the City of Lynn. The site is also located within five miles of numerous additional EJ Populations. Spanish, Portuguese, Mon-

Khmer/Cambodian, and Arabic were identified as languages being spoken by 5% or more of Limited English Proficiency (“LEP”) residents within one mile of the project site.

The EENF described public involvement activities conducted prior to filing, including advanced notification of the project to a list of community-based organizations (CBOs) and tribes/indigenous organizations (the “EJ Reference List”) provided by the MEPA Office. The Proponent circulated an EJ Screening Form with an overview of the project to these entities and information on ways to request a community meeting. According to the EENF, public involvement activities began in 2020 during which four public meetings were held (November 12, 2020, November 19, 2020, December 3, 2020, and December 10, 2020) as part of the Riverfront Master Plan planning process. Subsequently, the Proponent received two Municipal Vulnerability Grants and held six additional public meetings (three in early 2021 and three in early 2022) to identify vulnerabilities, evaluate potential mitigation measures, and discuss the components and strategies of the Gibson Park project. A copy of the EENF and supporting documentation were distributed to the EJ Reference List. During the MEPA review period, the Proponent offered to provide language interpretation services upon request (no such requests were received). The Proponent should continue the same level of public engagement activities throughout the remainder of the MEPA process.

The EENF contains a baseline assessment of any existing unfair or inequitable Environmental Burden and related public health consequences impacting EJ Populations in accordance with 301 CMR 11.07(6)(n)1. and the MEPA Interim Protocol for Analysis of EJ Impacts. According to the EENF, the data surveyed show some indication of an existing “unfair or inequitable” burden impacting the identified EJ Populations. The DPH EJ Tool identifies one municipality (Revere) within the one-mile DGA in which the EJ Populations are located as exhibiting “vulnerable health EJ criteria”; this term is defined in the DPH EJ Tool to include any one of four environmentally related health indicators that are measured to be 110% above statewide rates based on a five-year rolling average.³ Specifically, Revere meets the “vulnerable health EJ criteria” for the following parameters:

- heart attack hospitalization
- childhood lead exposure
- childhood asthma emergency department visits

Although the EENF included a figure detailing sources of potential pollution near the project site, based on the mapping layers available in the DPH EJ Tool, it did not provide a narrative description of the estimated number and type of mapped facilities/infrastructure within the area in accordance with the MEPA Interim Protocol for Analysis of Project Impacts on Environmental Justice Populations. This information should be supplemented in accordance with the Scope.

The EENF states that while EJ Populations within the DGA may exhibit some existing unfair or inequitable environmental burden, the project is not expected to materially exacerbate such existing conditions. Rather, the project is intended to provide direct benefits to both EJ and non-EJ Populations by providing flood protection and upgraded drainage infrastructure to reduce the frequency of flooding

³ See <https://matracking.ehs.state.ma.us/Environmental-Data/ej-vulnerable-health/environmental-justice.html>. Four vulnerable health EJ criteria are tracked in the DPH EJ Viewer, of which two (heart attack hospitalization and childhood asthma) are tracked on a municipal level and on a census tract level, and two (childhood blood lead, and low birth weight) are tracked only on a census tract level.

events; maintaining emergency access to the neighborhood for first responders; removing contaminated soils and converting a former commercial property into a community boating center; enhancing public access to the waterfront; and upgrading recreational facilities. The project also includes planting of native vegetation and removal of existing impervious surfaces that are expected to address the project's exposure to extreme heat. As discussed below, the project is proposing to add a significant berm feature along Mills Avenue, and make other design features to improve the resiliency of the site. However, the potential for causing erosion and scour onto off-site resource areas should be further explored and appropriate mitigation proposed in the DEIR. As discussed below, Agency comments also raise questions about the effectiveness of the Mill Street berm in providing flood protection under future climate conditions, as well as other features that may impact adjacent wetland resource areas.

Land Alteration, Impervious Surfaces, and Stormwater

As noted above, the project will result in the direct alteration of 6.11 acres of land and will remove approximately 1.41 acres of impervious surfaces. Land alteration will result from project related activities including construction of a playground, tennis courts, a community garden, a multi-purpose field, high mast lighting (to allow for more nighttime sports activities), and expanded walking paths with educational signage. The reduction in impervious surface will primarily result from the conversion of hard packed gravel on the Boatworks Property to a vegetated surface and the slight narrowing of Mills Avenue to facilitate construction of the vegetated berm. Additionally, the project will create an additional 22 parking spaces, bringing the total parking available to 56 parking spaces available at the park, including four accessible spaces (two at Gibson Park and two at the Boatworks Property).

According to the EENF, stormwater runoff from the project will be managed through a combination of subsurface storage and infiltration chambers, raingardens, and bioswales. One of the key stormwater features proposed as part of the project is the pump chamber and subsurface storage system under the multi-purpose field which has been designed to also manage stormwater runoff from the adjacent neighborhood. The stormwater management system primarily consists of four different subsurface chamber systems (SCS) designed to retain, detain, and infiltrate runoff:

- SCS 1 will manage stormwater from the Boatworks Property, providing 427.5 cubic feet (cf) of storage volume, and will be equipped with an overflow connected to the reconstructed outfall pipe at the southern end of Gibson Park for larger storm events.
- SCS 2 will manage stormwater from the new parking area at the Boatworks Property and the relocated tennis courts, providing 2,060 cf of storage volume with pretreatment bring provided through raingardens at the edge of the parking and tennis court.
- SCS 3 will manage stormwater from the re-graded and re-piped drainage network along Mills and Thayer Avenues, providing 3,055 cf of storage volume and acting as a retention buffer for the pump system during large rainfall events.
- SCS 4 will be located underneath the multipurpose field and is intended to provide offline storage, of up to 86,698 cf, for major rainfall events during the higher end of the tidal cycles and to provide groundwater recharge. Due to the ability to service the area with gravity, SCS 4 will be serviced by the dual duplex stormwater pump system to move water into the system.

The project also incorporates low impact development (LID) features to help manage stormwater through the use of raingardens and bioswales. Raingardens will be installed in three areas of the project site, including the southeastern corner of the Boatworks Property, the northwestern corner of the Boatworks Property's parking area, and to the west of the relocated tennis courts. Stormwater runoff entering the raingardens will be filtered through the hardwood bark mulch before being collected and then conveyed downstream by the underdrain system. Bioswales will be installed throughout the project site to increase hydraulic retention time and promote recharge and filtering of stormwater. The bioswales are also equipped with overflow grates for larger storm events but it is anticipated that they would provide pretreatment of early event/first flush stormwater runoff.

Comments provided by MassDEP state that the EENF lacks information about the dynamics of the dual duplex stormwater pump system and the how pumps will be sequenced to avoid coinciding with peak times in various storm events. Although the EENF states that groundwater was observed to be at approximately elevation 3.5 ft NAVD88, with no fluctuation based on the tides, MassDEP notes it is unclear whether the infiltration system meets the required two feet of separation from the bottom of the infiltration chambers to groundwater. If this distance is less than four feet, a mounding analysis is required to determine the extent of the recharge area. MassDEP also notes that it is also unclear whether the expected tidal conditions over the life of the project will interfere with the water table elevation and negatively impact the function of the system.

Comments provided by CZM state that at a pre-application site visit an existing damaged outfall was observed on the Coastal Beach at the southern end of Gibson Park. According to the EENF, the outfall will be reconstructed in order to provide an overflow connection to the stormwater system on the Boatworks Property; however, additional details are needed to understand the existing condition of the outfall, what work is proposed, and the new volumes and velocities that can be expected to be associated with discharge from the rebuilt system. In addition, CZM states more information on the subsurface stormwater management system is needed to understand the interaction with the groundwater table under existing and expected tidal conditions; how the grading proposed for the structure will affect the shoreline management features; and how the system is designed to avoid inundation by tidal waters.

According to the Stormwater Report included with the EENF, the Proponent evaluated precipitation depth and peak intensities, utilizing precipitation data (2yr – 3.2"; 10yr – 4.6"; 25yr – 5.5"; and 100yr – 6.6") for a 24-hour storm event. The stormwater management system has been designed to convey and provide groundwater recharge for stormwater runoff up to the current 10-year storm event (4.6") for both the project site and parts of the adjacent neighborhood. The stormwater management system will also provide at least 80% total suspended solids (TSS) removal and there will be a reduction in peak rates of runoff for all storms analyzed, including up to the current 10-yr, 24-hour storm event. Additionally, as noted above, the site is located within the Rumney Marshes ACEC, which would be considered a critical area under the Massachusetts Stormwater Management Standards (SMS) and require the use of the specific source control and pollution prevention measures.

Comments provided by MassDEP state that it is also unclear whether infiltration out of the storage chambers is the only treatment that stormwater will receive prior to discharge to the ACEC. Comments provided by CZM also state that additional information is needed to assess whether the subsurface area is just storage or will also treat the stormwater before it is discharged to the ACEC. Additionally, as noted in comments provided by Massachusetts Division of Marine Fisheries (DMF), the

delayed discharge of storm water stored in the proposed subsurface recharge chambers following storm events may impact the safety of shellfish harvest in the Pines River. DMF states that further details regarding storm water treatment associated with the subsurface recharge chambers should be provided along with a Draft Stormwater Operation and Maintenance Plan and total suspended solids removal rates. Responses to these comments should be provided in the DEIR.

Wetlands and Fisheries

As noted above, wetland resource areas are located on and adjacent to the project site. According to the EENF, the project will result in the permanent alteration of 16,130 sf of Coastal Dune, 64 sf of Coastal Beach, and 17,800 sf of RA. The project will also result in the temporary alteration of 313,795 sf of Coastal Dune, 64 sf of Coastal Beach, 220,335 sf of RA, and 358,660 sf of LSCSF. As part of the project, the dilapidated revetment wall spanning the length of the Boatworks Property will be rebuilt (up to elevation 13 ft NAVD88) to provide better flood protection for the neighborhood and connect to the other resiliency features being constructed at Gibson Park and along Mills Avenue. Additionally, the former Boatworks Property building will be redeveloped into a community boating facility, with a first-floor elevation of 14 ft NAVD88, focused on rowing and kayaking activities and will include a gangway down to a floating dock system in the Pines River which will be seasonal and anchored to the bottom by helical piles and mooring chains. As stated above, the Revere Conservation Commission (or MassDEP in the case of an appeal) will review the project for its consistency with the WPA, the Wetland Regulations (310 CMR 10.00) and associated performance standards, the SMS, and local bylaws.

Resource Area Delineation and Site Grading

Comments provided by CZM state the resource area identified in the EENF as Bordering Vegetated Wetland (BVW) or coastal BVW along the shoreline of the Pines River landward of the Salt Marsh and the Coastal Beach is Coastal Dune. BVW is a freshwater wetland that borders a fresh body of water, which is not the case in this location. This entire site is a Barrier Beach, and the subject landform slopes up from the landward edge of the coastal beach to form a mound or ridge that is vegetated with multiple species, including Phragmites, consistent with a Coastal Dune resource area. The presence of Phragmites in this area does not indicate a BVW. Additionally, some of the resource areas along the seaward edge of Mills Avenue are incorrectly identified as coastal bank, rather than Coastal Dune. The coastal edge here is comprised of Coastal Dune, Coastal Beach, and Salt Marsh. The DEIR should reflect that change for this shoreline, and the narrative should demonstrate that the shoreline treatment design for the project is consistent with the performance standards for Coastal Dunes.

As noted in comments provided by CZM, most of the project site is within the Limit of Moderate Wave Action (LiMWA) associated with a FEMA Coastal AE Zone (elevation 10 ft NAVD88). Coastal A Zones are predicted to have 1.5-to-3-ft breaking waves during a 1% annual chance coastal storm; therefore, the project site is likely to be exposed to moving water during a coastal storm. CZM states that a supplemental analysis is needed to compare the existing and proposed floodplain functions on the site to ensure that the project does not exacerbate flooding impacts and preserves or improves floodplain function for the design life of the project. Although the site has been previously altered, the project should be designed to at least maintain the existing ability of the floodplain to provide the functions of storm damage prevention and flood control. The ability of the site to move, shift, and erode is critical as it helps dissipate wave energy, slow down flood waters, and allow water to infiltrate. The Proponent

should consider designing the parking surface with gravel, pea stone, or shell instead of pavement to allow the landform to slow down flood water except for the two spaces intended for parking for visitors with disabilities.

Flood Protection at Boatworks Property

As noted above, the project proposes the creation of a vegetated area along the shoreline north of the Boatworks Property to provide continuous shoreline protection to buffer wave impacts, flooding, and erosion seaward of the multi-use athletic field. CZM notes that to best protect the Proponent's investment in the park and enhance the protection of the adjacent neighborhood, this area should be designed as an enhanced dune with a mix of sand, gravel, and cobble, to mirror the conditions of the existing beach. The dune should be vegetated with salt tolerant, native, erosion control vegetation with deep roots to stabilize the sediments and provide better erosion control and be constructed landward of the high tide line between the field and the shoreline to improve its longevity. In addition, comments from CZM encourage planning for marsh migration wherever possible on this site, as the Sea Level Affecting Marshes Model shows that this site has excellent potential for marsh migration over time. However, to facilitate marsh migration, the project proposes the removal of mature trees from the northwestern corner of the park would eliminate the natural benefits they provide.

The project proposes to continue the shoreline protection onto the Boatworks Property by reconstructing the dilapidated revetment. Comments provided by CZM state that additional information is needed to clearly identify the existing resource areas outside the permitted footprint of the existing structure, including Coastal Beach, Coastal Dune, Salt Marsh, and LSCSF. The EENF also lacks sufficient details of the connections with the adjacent protection features at Gibson Park and Mills Avenue. In addition, comments provided by MassDEP note that there appear to be areas of Salt Marsh located within the footprint of the revetment proposed to be rebuilt on the Boatworks Property. Filling Salt Marsh in an ACEC or Outstanding Resource Water is not allowed under the WPA regulations pursuant to 310 CMR 10.24(5)(a) and, in MassDEP's opinion, there is no permitting pathway to fill Salt Marsh in order to rebuild this revetment. CZM and MassDEP recommend evaluating alternative, permissible revetment designs that tie into the adjacent shoreline treatments without causing scour. DMF also recommends that additional alternative flood protection measures and elevated walkway designs be considered for this location.

As part of the improvements to the Boatworks Property, the project proposes to install a new gangway and float system extending into the Pines River. As noted in comments provided by the DMF, the Pines River provides essential habitat for the spawning and early development of winter flounder (*Pseudopleuronectes americanus*). The tidal flats at the project site have also been mapped by DMF as habitat for soft shell clam (*Mya arenaria*) within shellfish growing area N26.1, classified as Conditionally Restricted for shellfish harvest. Tidal flats provide one of the most productive marine habitats for numerous marine species and are designated "special aquatic sites" under the Federal Clean Water Act. According to the EENF, the proposed floats will rest on the tidal flats at the low end of the tidal range. Grounded floats can disturb bottom sediments, resulting in turbidity and direct impacts to benthic habitat. DMF notes that the proposed float does not maintain the recommended minimum clearance of at least 1.5 ft (18 inches) above the substrate in all coastal or estuarine habitats, and at least 2.5 ft (30 inches) above the substrate over mapped shellfish habitat, at mean low water (MLW). This should be addressed in the DEIR in accordance with the Scope.

Mill Street Berm

In order to maintain a continuous line of protection, the project also proposes a 2,400 linear feet vegetated berm extending south from the reconstructed revetment on the Boatworks Property along Mills Avenue adjacent to the Pines River. Based on the proposed design presented in the EENF, CZM notes that regular tidal inundation and exposure to sunlight can cause coir to break down rapidly, and the coir-wrapped sediment design of the berm can act like a solid structure, resulting in reflection and scour adjacent to the structure that can lower the beach elevation seaward of it. In addition, the proposed concrete wing wall access points and deployable barriers could cause scour and erosion where these access ways intersect the coir berm structures, reducing the effectiveness of the system in preventing flooding and causing erosion of the adjacent beach. CZM recommends that additional alternatives that are more likely to withstand the conditions on the site should be considered, such as including reducing the road width to the maximum degree practicable to enable a shift of the shoreline treatment further landward and create a more natural berm that can blend into the existing shoreline. Where appropriate, a properly sized cobble berm located at the seaward toe of a natural berm could provide more stability at the interface with the Coastal Beach. For either design, a fully vegetated berm is recommended. Comments provided by MassDEP concur that the design of the berm to be made of the coir-wrapped sediment can cause it to act like a solid structure, resulting in reflection and scour adjacent to the structure that can lower the beach elevation seaward of it. MassDEP also concurs with CZM's comments regarding berm construction.

Waterways / Public Benefit Determination (PBD)

According to the EENF, portions of the project site are located seaward of the Historic High-Water Line and Mean High Water Line; therefore, the project is subject to c.91 jurisdiction and the Waterways Regulations at 310 CMR 9.00. Specifically, the EENF estimates there will be 52,400 sf of temporary impacts and 17,900 sf of permanent impacts to the area subject to c.91 jurisdiction. Additionally, the EENF states that a number of c.91 Licenses have been issued for the Boatworks Property to authorize the coastal engineering structures, floats, dredging, and 6,000 sf of dock space. Comments from the MassDEP Waterways Regulation Program (WRP) affirm that the project will require a c.91 License and state that the project will be required to comply with the standards at 310 CMR 9.32(1)(e) and 310 CMR 9.40, in addition to all other applicable standards in the Waterways Regulations. The DEIR should demonstrate how the project complies with these standards.

Consistent with the provisions of *An Act Relative to Licensing Requirements for Certain Tidelands* (2007 Mass. Acts, c. 168, § 8) (the Act), as codified in M.G.L. c. 91, § 18B, I must conduct a Public Benefit Review for projects in tidelands that are required to file an EIR.

The legislation states the following regarding the PBD:

“In making said public benefit determination, the secretary shall consider the purpose and effect of the development; the impact on abutters and the surrounding community; enhancement to the property; benefits to the public trust rights in tidelands or other associated rights, including, but not limited to, benefits provided through previously obtained municipal permits; community activities on the development site; environmental protection and preservation; public health and

safety; and the general welfare; provided further, that the secretary shall also consider the differences between tidelands, landlocked tidelands and great pond lands when assessing the public benefit and shall consider the practical impact of the public benefit on the development.”

The project is required to prepare an EIR under 301 CMR 11.06(7)(b) of the MEPA regulations because it is located within one mile of one or more EJ Populations. The DEIR should include a discussion of how the project complies with the PBD (301 CMR 13.00) criteria in accordance with the Scope.

Area of Critical Environmental Concern (ACEC)

According to the EENF, the entire project site is located within the Rumney Marshes ACEC which contains over 1,000 acres of saltmarsh, tidal flats, shallow subtidal channels, and abutting upland, and has been characterized by the U.S. Fish and Wildlife Service as one of the most biologically significant estuaries in Massachusetts north of Boston. The Rumney Marshes ACEC was designated due to the significance of its coastal wetland resource areas for the protection of public and private water supplies; the prevention of pollution; flood control; the prevention of storm damage; and the protection of land containing shellfish and fisheries.⁴ However, the designation does contain an exclusion along the Pines River stating, “The Pines River is predominantly a recreational boating area and taken within the context of the Saugus/Pines system, it is the more appropriate location to allow the development of new or expanded recreational boating facilities.” The EENF states that the project is in keeping with the ACEC designation report as it will redevelop the Boatworks Property into a public waterfront access facility, by providing a safer controlled access point for recreational kayakers and canoers. The DEIR should describe how the other components of the project are consistent with the designation report.

In 2002, a Final Salt Marsh Restoration Plan (SMRP) was issued to assist in the identification and prioritization of Salt Marsh restoration sites within the Rumney Marshes ACEC for both proactive and compensatory mitigation. The EENF states that the project is consistent with the goals of the SMRP as the project provides a pathway for the marsh to migrate as the sea levels rise by implementing invasive species management and engaging in long-term planning for park and recreational activities. The EENF also states that the project is consistent with the SMRP because it counteracts the loss of habitat by controlling invasive species within the ACEC; improving water quality, by providing water quality treatment for all impervious runoff, promoting recharge into the groundwater table and only discharging treatment settled runoff; reducing impervious area and implementing significant infrastructure to mitigate the effects of flooding; and improving recreational and educational opportunities, open space, and scenic quality. The DEIR should describe how each of these stated benefits directly supports Salt Marsh restoration as opposed to general benefits to the Rumney Marshes ACEC.

Climate Change

Adaptation and Resiliency

Effective October 1, 2021, all MEPA projects are required to submit an output report from the MA Resilience Design Tool to assess the climate risks of the project. Based on the output report

⁴ The Designation Report is available at: <https://www.mass.gov/service-details/rumney-marshes-acc>.

attached to the EENF, the project has a “High” exposure rating based on the project’s location for the sea level rise/storm surge, extreme precipitation (urban flooding), and extreme heat climate parameters. The project also has a “Moderate” exposure rating for the extreme precipitation (riverine flooding) parameter. Additionally, the project location scores “High” in ecosystem benefits.

According to the output report, the primary “assets” identified by the Proponent are the Rumney Marshes ACEC and Mills Avenue.⁵ Work in the Rumney Marshes ACEC was characterized as a natural resources project and received a standard recommendation of a 20-yr (5%) return period design storm as of 2030 for sea level rise/storm surge and a 25-yr (4%) return period design storm as of 2030 for extreme precipitation, which were provided as a consideration for users and not a formal standard. The Mills Avenue work associated with stormwater storage was characterized as a stormwater utility infrastructure project and received a recommendation of a 200-yr (0.5%) return period design storm as of 2050 for sea level rise/storm surge and a 50-yr (2%) return period design storm as of 2050 for extreme precipitation, based on self-assessed criticality. Because the report did not include all proposed project elements, such as the flood protection measures and park improvements, user inputs should be revised, and a new output report should be generated and attached to the DEIR in accordance with the Scope. The recommended 2050 planning horizon also appears correlated to user inputs indicating a 10-to-30-year useful life. Useful life assumptions should be revised, so as to distinguish between short term components and project components that are intended to have long-term utility.

The MA Resilience Design Tool output indicates that the project site has a history of coastal flooding, is exposed to the 1% annual coastal flood event as early as 2030, and is located within the predicted mean high-water shoreline by 2030. These factors are indicated in the Tool as contributing to the High exposure for the sea level rise/storm surge climate parameter. According to the MA Resilience Design Tool output report, the projected maximum water surface elevation associated with a 200-year storm event in 2050 is 12.1 ft NAVD 88, with an area weighted average elevation of 12.1 ft NAVD88. The maximum wave action water elevation associated with a 200-year storm event in 2050 is 14.4 ft NAVD88, with an area weighted average elevation of 13.5 ft NAVD88. According to the EENF, the proposed vegetated berm along Mills Avenue, which is intended to be a short-term measure (to provide a 10-year horizon protection), will be constructed to elevation 10.3 ft NAVD 88, which is anticipated to provide protection up to the 2030 10-year storm event. However, in order to maintain current access to the waterfront, concrete wingwall access points will be constructed within the berm. The wingwalls will be constructed such that the DPW can install either flashboards or deployable barriers in advance of a storm/high tide event, thereby providing a consist line of protection. Comments provided by MassDEP state that more details should be provided to support the justification of designing the berm up to only the 2030 10-year storm event.

As noted above, the boat storage building at the Boatworks Property is located within a Coastal Dune in the Coastal A Zone. Comments provided by the Massachusetts Water Resources Commission (WRC), CZM, and MassDEP state that the Massachusetts Building Code (the Code) standards for Flood Resistant Construction apply to structures that are newly built or substantially improved within the floodplain. Agencies also note that the building should be elevated on open pilings at least two feet above the existing grade and two feet above the FEMA base flood elevation, with the area under the

⁵ The MA Resilience Design Tool output report was generated in May 2022 and does not extend across the entire project area.

building open/free of obstruction to allow the Coastal Dune to provide the beneficial functions of storm damage prevention and flood control.

The MA Resilience Design tool output indicates that maximum annual daily rainfall exceeds 10 inches within the overall project's useful life; the project site is anticipated to have a 10-to-30-day increase in days over 90 degrees Fahrenheit within project's useful life, and the project site has a history of flooding. These factors are indicated in the Tool as contributing to the High exposure for the extreme precipitation (urban flooding) and extreme heat climate parameter as well as the Moderate exposure for the extreme precipitation (riverine flooding) climate parameter. According to the MA Resilience Design Tool output, the projected 24-hour precipitation depth associated with a 2050 50-year storm event is 8.7 inches. Therefore, it appears that the stormwater system, which is designed to convey and provide recharge for the current 10-year storm event (4.6") would not be resilient to the future (2050) 50-year storm event as recommended by the Tool.

Hazardous Waste

According to the EENF, due to the historic use of the Boatworks Property, there are latent potential risks resulting from the possible leaching of contaminants, such as heavy metals, volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and petroleum hydrocarbons into the soils and/or groundwater. As part of its due diligence efforts in obtaining the property, the Proponent received a Phase 1 Environmental Site Assessment report that found no recognized environmental conditions. However, additional sampling in five different locations throughout the Boatworks Property and Gibson Park revealed that PCBs were present in soils at the Boatyard Property at concentrations of up to 0.557 milligrams per kilogram (mg/kg).⁶ Additional soil investigations identified concentrations of PCBs in the soil ranging from not detected (ND) to a maximum concentration of 100 mg/kg. The site has been assigned a Release Tracking Number (RTN-3-37877) in accordance with the Massachusetts Contingency Plan (MCP) and M.G.L. c.21e. Additionally, based on these results, the site exceeds the thresholds of the EPA's Toxic Substances Control Act (TSCA) and has been registered with the EPA. The EENF states the project will remediate the contamination by removing the impacted soils from the site in accordance with both EPA and MassDEP regulations.

Water and Wastewater

As noted above, the project will generate approximately 1,140 gpd in new water demand and wastewater flow. As noted in comments provided by the Massachusetts Water Resources Authority (MWRA) the site is served by a sanitary sewer system owned and operated by Revere that conveys flows to MWRA's Revere Extension Sewer, which in turn conveys flows from Revere, Chelsea and other communities to MWRA's Chelsea Branch Sewer and Chelsea Creek Headworks. During large storms, sanitary flows and infiltration and inflow (I/I) from Revere and other community wastewater collection systems, together with sanitary flows and stormwater from Chelsea's combined sewer system can overwhelm the capacity of MWRA's Chelsea Branch Sewer, contributing to combined sewer overflow (CSO) discharges to Chelsea Creek. To ensure that the project's new wastewater flow does not increase surcharging and overflows in large storms, the Proponent should offset the project's wastewater flows with infiltration and inflow ("I/I") removal in accordance with the Revere's policies and

⁶ Pursuant to the Massachusetts Contingency Plan (MCP) at 310 CMR 40.1600, the reportable concentration of PCBs is 1 mg/kg.

regulations. In addition, MWRA is in the design and permitting phase of its Section 56 Water Pipeline Replacement Project, which involves installation of new water pipeline under the mouth water of the Saugus River, from the Point of Pines neighborhood in Revere to Lynn. The purpose of this project is to ensure water system redundancy and resiliency by replacing a portion of MWRA's existing Section 56 water pipeline, generally located in Route 1A/The Lynnway, which was removed from the General Edwards Bridge due to severe corrosion. I encourage the Proponent to coordinate closely with the MWRA to ensure the success of both projects.

Construction Period

According to the EENF, the project is expected to commence in the September 2024 and will be completed in three phases, as funding becomes available. Phase 1 will include the excavation of the new multi-purpose field at Gibson Park, the construction of the vegetated berm along Mills Avenue, and the restoration of the Boatworks Property revetment wall. Phase 2 will include the installation of the subsurface storage system and other stormwater improvements at Gibson Park, soil remediation at the Boatworks Property, and construction of the new public access to the waterfront. Phase 3 will include the construction of the remaining public recreational facilities, including the redeveloped community boating center, kayak and rowing launch, and the new tennis courts. The EENF also states that construction trailers will need be placed on the site and are expected to remain in place for at least 18 months.

Comments provided by CZM state that additional details on the proposed phasing are needed in order to demonstrate that each phase can be completed independently of the others. In particular, the EENF states that the first phase will include the excavation of the field at Gibson Park, and the second phase will include the construction of the subsurface stormwater improvements in this location. Excavation of the field and construction of the stormwater subsurface storage should occur during the same phase of development so that no excavated area is left open for any extended length of time.

Comments provided by the WRC state that for floodplain management purposes, structures, including construction trailers, placed for more than 180 days are not considered to be temporary structures and must meet the requirements for new buildings in the floodplain.

Comments provided by DMF state that construction activity in intertidal habitat, including staging of construction material and equipment as well as equipment transit to and from the construction site, should be avoided to the greatest extent practicable. As much work as possible should be conducted from the upland portion of the project site to minimize impacts and avoid compaction of sediment in mapped shellfish habitat. Any work in the intertidal zone should be limited to low tide such that work is conducted in the "dry".

SCOPE

General

The DEIR should follow Section 11.07 of the MEPA regulations for outline and content and provide the information and analyses required in this Scope. It should clearly demonstrate that the Proponent will avoid, minimize, and mitigate Damage to the Environment to the maximum extent practicable through project alternatives and design.

Project Description and Permitting

The DEIR should include a complete project description of the preferred alternative for each of the proposed elements of the project, with accompanying plans depicting the preferred alternative at a reasonable scale. The DEIR should describe any changes to the project since the filing of the EENF. The DEIR should identify, describe, and assess the environmental impacts of any changes to the project that have occurred between the preparation of the EENF and DEIR. The DEIR should also include an updated list of required Permits, Financial Assistance, and other state, local and federal approvals and provide an update on the status of each of these pending actions. The DEIR should include a description and analysis of applicable statutory and regulatory standards and requirements, and a discussion of the project's consistency with those standards.

The DEIR should include revised site plans for existing and post-development conditions. Plans should clearly identify buildings, impervious areas, wetland resource areas, coastal engineering structures, and stormwater and utility infrastructure. Plans should include tidal datums relative to the location of each of the proposed project components, and the narrative should describe the total permanent and temporary impacts on resource areas resulting from the proposed project.

The information and analyses identified in this Scope should be addressed within the main body of the DEIR and not in appendices. In general, appendices should be used only to provide raw data, such as wetland delineations, drainage calculations, TSS removal rates, that is otherwise adequately summarized with text, tables and figures within the main body of the DEIR. Information provided in appendices should be indexed with page numbers and separated by tabs, or, if provided in electronic format, include links to individual sections. Any references in the DEIR to materials provided in an appendix should include specific page numbers to facilitate review.

The Proponent is strongly encouraged to consult with state agencies, including CZM, DMF, and MassDEP regarding stormwater and impacts to wetland and coastal resource areas prior to submitting the DEIR. The DEIR should provide an update on any such coordination and identify any changes made to the project design in response to this consultation.

Alternatives Analysis

The DEIR should provide a supplemental alternatives analysis that describes alternatives for how the project can provide resiliency to Gibson Park and the adjacent shoreline. In particular, the alternatives analysis should be expanded to include alternative designs for the expanded parking area

and the shoreline protection features. The DEIR should describe each of the alternatives considered; redefine the Preferred Alternative for each component of the project; describe the reason(s) that the Preferred Alternative was chosen for each of the components of the project; and detail how each Preferred Alternative avoids, minimizes, or mitigates resource area impacts. The alternatives analysis should support the selection of the Preferred Alternative for each project component that includes all feasible measures to avoid Damage to the Environment, or to the extent Damage to the Environment cannot be avoided, to minimize and mitigate Damage to the Environment to the maximum extent practicable.

The DEIR should consider alternative designs for the parking surface with gravel, pea stone, or shell instead of pavement to allow the landform to slow down flood water except for the two spaces intended for parking for visitors with disabilities. The DEIR should also evaluate additional flood protection measures alternatives at the Boatworks Property, including but not limited to relocating the revetment landward of the Salt Marsh and utilizing nature-based solutions such replacing the hard, vertical structure with a vegetated berm. To the extent that a permissible revetment design is advanced, the DEIR should detail how the revetment reconstruction has been redesigned to reduce end effects and end-scouring erosion, with tapering of the ends.

The DEIR should investigate additional alternatives for the vegetated berm along Mills Avenue that are more likely to withstand the conditions on the site, including reducing the road width to the maximum degree practicable to enable a shift of the shoreline treatment further landward and create a more natural berm that can blend into the existing shoreline. Where appropriate, a properly sized cobble berm located at the seaward toe of a natural berm could provide more stability at the interface with the Coastal Beach. For either design, a fully vegetated berm is recommended. The DEIR should also evaluate alternatives to the concrete wing-wall access points to avoid potential scour and erosion of the adjacent, off-site coastal resources. The Proponent should coordinate with CZM, and MassDEP to develop the revised alternatives analysis.

Environmental Justice (EJ) / Public Health

The DEIR should include a separate section on “Environmental Justice,” and contain a description of measures the Proponent has taken, and intends to undertake, to promote public involvement by EJ Populations during the remainder of the MEPA review process and subsequent permitting, including a discussion of any of the best practices listed in the MEPA EJ Public Involvement Protocol that the project intends to employ or has employed by the time of the DEIR filing. The DEIR, or a summary thereof, should be distributed to the EJ Reference List, and an updated list should be obtained from the MEPA Office prior to filing the DEIR so as to ensure that organizational contacts are up to date. The Proponent should continue robust outreach and engagement prior to filing the DEIR, and should conduct one or more community meetings prior to filing the DEIR.

The DEIR should supplement the EJ analysis presented in the EENF. Specifically, it should include a narrative description of the potential sources of pollution within the DGA, based on mapping layers available through the DPH EJ Tool. To the extent further design changes are made, the DEIR should update its analysis of the project’s impacts to determine whether the project may result in disproportionate adverse effects, or increase the risks of climate change, on the identified EJ Population, in accordance with 301 CMR 11.07(6)(n)2. and the MEPA Interim Protocol for Analysis of EJ Impacts.

The DEIR should also estimate the number of construction period truck trips that are anticipated for the project, and indicates whether routes of travel will extend through the identified EJ population within one mile of the site. As discussed above, the DEIR should evaluate alternative resiliency design features to avoid potential scour and erosion or loss of the adjacent, off-site coastal resources. The DEIR should propose appropriate mitigation for any off-site impacts resulting from the project, and should address comments regarding the effectiveness of the Mill Street berm in providing flood protection for the surrounding communities.

Land Alteration, Impervious Surfaces, and Stormwater

The DEIR should provide an updated Stormwater Report that includes details about the function of the stormwater system, including interaction with the groundwater table under existing and expected tidal conditions over the design life of the project, to ensure that increasing water table elevation will not interfere with the function of the system. It should also demonstrate that the infiltration system meets the required two feet of separation from the bottom of the infiltration chambers to groundwater. If this distance is less than four feet, the DEIR should contain a mounding analysis. The DEIR should include a demonstration of how the underground storage facility will function, including how the system is designed to avoid inundation by tidal waters which will overwhelm it. The DEIR should also include information about the dynamics of dual duplex stormwater pump system and the how pumps will be sequenced to avoid coinciding with peak times during various storm events.

The DEIR should include cross-sectional plans, at a legible scale, showing how far the proposed underground structure below the playing field will be from the beach/dune interface along the shoreline, and how the grading proposed for the structure will affect the shoreline management features that are proposed. The DEIR should provide details to clarify the existing condition of the outfall located north of the Boatworks Property, including plans and photographs, and provide plans with cross-sections of the proposed system and outfall relative to resource area boundaries and tidal datum. The DEIR should calculate the new volumes and velocities that can be expected to be associated with discharge from the rebuilt system, given the new catchment area, storage tank, and system design, and consider how the outfall can be designed to minimize impacts on the existing resource areas. Given that this outfall is not currently functioning, the DEIR should demonstrate that the reconstructed stormwater system to be connected in this location is not a new stormwater outfall in the ACEC.

The DEIR should identify the source of the precipitation depth data used in the Stormwater Report. The DEIR should include a plan and narrative depicting the catchment area intended to be attenuated in the subsurface storage chambers, indicating which stormwater connections are associated directly with each of the storage chambers, and clarifying whether the subsurface area is just storage or will also treat the stormwater before it is discharged to the ACEC. The DEIR should describe all proposed pre-treatment BMPs within the stormwater treatment train and provide a draft stormwater Operation and Maintenance Plan and total suspended solids removal rates. Additionally, the Proponent should coordinate with DMF regarding stormwater discharge from the proposed subsurface recharge chambers and its potential impact on fisheries resources. The DEIR should provide an update on any such coordination and identify any changes made to the project design in response to this consultation.

Wetlands and Fisheries

The DEIR should provide the areas of impact to each affected resource area, provide plans with accurate resource area delineations of a reasonable scale to show where these will occur, and specify and describe which impacts are temporary versus permanent. The DEIR should also include accurate resource area identifications so that the appropriate performance standards can be identified and met. In particular, the resource area impact chart included in the supplemental filing indicates an additional 14,763 sf of temporary impacts and 8,088 sf of permanent impacts to areas identified as “below spring high tide,” but does not specify whether these additional impacts are to Coastal Beach or Salt Marsh. The DEIR should include the High Tide Line on plans and specify what resource area(s) are associated with these areas. Similarly, some areas on the plan are depicted as “seagrass.” The vegetation and associated resource areas in each of these areas should be correctly identified. The DEIR should demonstrate that all components of the project are designed to meet the appropriate performance standards for the relevant resource areas.

The DEIR should include a separate grading plan showing the existing and proposed grades, with representative cross-sections through the project site that also show existing and proposed grades in order to understand possible changes to flooding patterns on the site from the project changes. The DEIR should include an analysis to compare the existing and proposed floodplain functions on the site to ensure that the project does not exacerbate flooding impacts and preserves or improves floodplain function for the design life of the project. I refer the Proponent to the *Floodplain Function* section of CZM’s comment letter which specifically details the information that should be provided. The DEIR should also clarify the total existing area of impervious surface on the site versus the total impervious area proposed on the site and demonstrate that the impervious area has been minimized to the maximum extent feasible and should also explain whether the area of the subsurface stormwater holding tanks is factored as pervious or impervious, and why. The DEIR should also evaluate retaining the mature trees at the northern end of Gibson Park to retain the natural benefits provided, including shade to reduce heat island effects, reducing erosion, and uptake of stormwater to help reduce flooding.

The DEIR should include a narrative to describe the existing and proposed conditions for the area along the shoreline north of the Boatworks Property, as well as detailed plans in plan view and cross-sections showing existing and proposed conditions, including grade changes. The narrative should include details of the invasive species treatment and removal and the proposed restoration and monitoring plan for the dune. I refer the Proponent to the StormSmart Properties Fact Sheet #1: Artificial Dunes and Dune Nourishment for more information about best practices for dune nourishment.

The DEIR should include cross-sections and plan view details of the proposed bulkhead replacement at the Boatworks Property, with specific attention to proposed impacts to existing resource areas outside the permitted footprint of the existing structure, including Coastal Beach, Coastal Dune, Salt Marsh, and LSCSF. Permanent and temporary impacts to all wetland resource areas should be specified. The DEIR should also include details of the connections with the adjacent protection features at Gibson Park and Mills Avenue should be described and shown on plans of a reasonable scale, including cross-sections at representative points. The DEIR should also describe what work will be undertaken on the boat storage building and demonstrate how the work will comply with the Code and the performance standards for Coastal Dune at 310 CMR 10.28. The DEIR should include building plans for the boat storage facility, including cross-sections through the proposed buildings with ground

and first-floor elevations. The DEIR should also demonstrate that relevant utilities will be elevated on open pile-supported platforms to be resilient in a Coastal A Zone and protect the storm damage and flood control functions of the underlying dune. As noted, the DEIR should evaluate alternative revetment designs including relocating the revetment landward of the Salt Marsh; utilizing nature-based solutions such as a vegetated berm; downsizing the extent of the bulkhead structure; and tapering of the ends of the revetment where it connects to the other shoreline protection components to address potential end effects and end-scouring erosion. The DEIR should present all design details and resource area impacts associated with all alternative designs considered.

DMF also notes that the current elevated walkway design does not meet the recommended height-to-width (H:W) ratio of 1.5:1 between the base of horizontal stringers and Salt Marsh. The DEIR should evaluate alternative designs for the elevated walkway that meet the minimum 1.5:1 H:W ratio to reduce shading and potential marsh loss, as well as an alternative where the decking is relocated to avoid impacting Salt Marsh. To the extent that alternative designs are dismissed, the DEIR should support the selection of the Preferred Alternative and propose mitigation for potential impacts to Salt Marsh due to shading.

The DEIR should evaluate extending the float structures into deeper waters or the use of float stops in order to maintain a 2.5 ft clearance above the substrate at MLW. DEIR should include cross-sections of the planned float structures, including tidal datums, surrounding grades, and wetland resource areas. The DEIR should identify potential mitigation measures for any loss of shellfish habitat associated with the float structures.

Waterways / Public Benefit Determination (PBD)

The DEIR should include all historic c.91 Licenses and/or Permits as well as a plan overlaying the authorized footprint areas on existing conditions to provide a clear showing that the area where the revetment is proposed to be reconstructed is accurately defined. The DEIR should also detail how the proposed project demonstrates compliance with the applicable standard in the Waterways Regulations, in particular the standards at 310 CMR 9.32(1)(e) and 310 CMR 9.40.

The DEIR should include a discussion of how the project complies with the PBD (301 CMR 13.00) criteria. The DEIR should also include information regarding the public benefits associated with the project.

Area of Critical Environmental Concern (ACEC)

The DEIR should clarify how each of the proposed project component alternatives would avoid or minimize impacts to the Rumney Marshes ACEC and present mitigation proposals for unavoidable impacts. The DEIR should describe how each component of the project components support the intent and the protections afforded by its designation. The DEIR should also provide an updated narrative describing how the project is consistent with the goals of the SMRP based on any changes in project design. Specifically, the DEIR should describe how each of the stated project benefits directly supports Salt Marsh restoration as opposed to general benefits to the Rumney Marshes ACEC.

Climate Change

As noted, the MA Resilience Design Tool output report only assess the Rumney Marshes ACEC as a natural resource asset and Mills Avenue as a stormwater utility infrastructure asset. The Proponent should revise the user inputs into the MA Resilience Design Tool to accurately reflect the project components and generate a new report. User inputs should also be revised to provide more accurate useful life estimates based on short-term versus long-term project components. Based on the revised output report, the DEIR should examine whether the design is anticipated to meet future climate conditions. The DEIR should address the recommended design standards provided by the Tool output, including whether the elevation of the shoreline protection structures, and boat storage building will meet recommended “water surface elevation” or “wave action water elevation” levels as of 2030, 2050, and 2070, and should discuss the strategies that the project is employing to improve climate resiliency. The DEIR should discuss compliance with Code requirements in relation to all proposed new structures.

The DEIR should include more detail on the composition and construction of the proposed berm along the edge of Mills Avenue that is proposed to reduce flooding of the adjacent neighborhood up to the 2030 10-year storm event. I refer the Proponent to the *Resilience* section of CZM’s comment letter which specifically details the information that should be provided. The DEIR should also provide additional details to support the justification of designing the berm up to only the 2030 ten-year storm event.

As discussed above, the project also proposes significant stormwater infrastructure to address stormwater flooding. The DEIR should address the functioning of the stormwater management system during storm events, including under future climate conditions. The DEIR should address the design recommendations provided by the MA Resilience Design Tool in the revised output report for the stormwater management system asset. The DEIR should clarify what design storm the stormwater system will accommodate under current and proposed conditions (e.g., the current 10-year storm), and how that compares to recommended return period provided by the MA Resilience Design Tool. To the extent design changes are made with Agency input, the DEIR should address how these design changes will affect the efficacy of the stormwater management system. The DEIR should discuss whether the stormwater system could be upgraded to meet future climate conditions, and if not, describe the constraints that make such upgrades infeasible and whether the project will be designed to allow for future upgrades over time.

Construction Period

The DEIR should provide details of the proposed phasing, including all the planned components of the project, and demonstrate that each phase can be completed independently of the others. The DEIR should also identify the interim conditions of the project site between phases and describe specific measures to ensure the portions of the site remaining in an unfinalized condition are sufficiently stabilized. The DEIR should describe all construction activity proposed within intertidal habitat, including staging of construction material and equipment as well as equipment transit to and from the construction site.

The DEIR should describe how construction activities will be managed in accordance with applicable MassDEP regulations regarding Air Pollution Control (310 CMR 7.01, 7.09-7.10), and Solid Waste Facilities (310 CMR 16.00 and 310 CMR 19.00, including the waste ban provision at 310 CMR 19.017). The DEIR should describe all construction-period impacts and mitigation relative to wetlands, stormwater, noise, air quality, traffic, and water quality. It should describe truck routes and other mitigation measures that may be implemented to minimize impacts to residential areas by trucks travelling to the site during the construction period. Construction equipment should use engines meeting Tier 4 federal emissions standards, or if unavailable, confirm that the project will require its construction contractors to use Ultra Low Sulfur Diesel fuel, and discuss the use of after-engine emissions controls, such as oxidation catalysts or diesel particulate filters. The DEIR should describe how the project will comply with all said applicable requirements.

The DEIR should provide detailed information regarding the project's generation, handling, recycling, and disposal of construction and demolition debris (C&D) and identify measures to reduce solid waste generated by the project. I strongly encourage the Proponent to commit to C&D recycling activities as a sustainable measure for the project. The DEIR should describe stormwater management measures that will be implemented during construction. It should describe potential construction period dewatering activities and associated permitting (i.e., NPDES) and identify mitigation measures. All construction-period mitigation measures should be listed in the draft Section 61 Findings.

Mitigation and Draft Section 61 Findings

The DEIR should include a separate chapter summarizing all proposed mitigation measures including construction-period measures. This chapter should also include a comprehensive list of all commitments made by the Proponent to avoid, minimize and mitigate the environmental and related public health impacts of the project, and should include a separate section outlining mitigation commitments relative to EJ Populations. The filing should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation. The list of commitments should be provided in a tabular format organized by subject matter (wetlands, waterways, fisheries, environmental justice, etc.) and identify the Agency Action or Permit associated with each category of impact. Draft Section 61 Findings should be separately included for each Agency Action to be taken on the project. The filing should clearly indicate which mitigation measures will be constructed or implemented based upon project phasing to ensure that adequate measures are in place to mitigate impacts associated with each development phase.

Responses to Comments

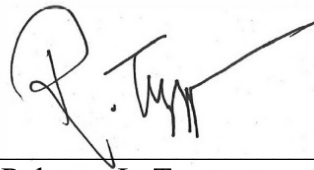
The DEIR should contain a copy of this Certificate and a copy of each comment letter received. In order to ensure that the issues raised by commenters are addressed, the DEIR should include a comprehensive response to comments that specifically address each issue raised in the comment letter; references to a chapter or sections of the DEIR alone are not adequate and should only be used, with reference to specific page numbers, to support a direct response. This directive is not intended, and shall not be construed, to enlarge the scope of the DEIR beyond what has been expressly identified in this certificate.

Circulation

In accordance with 301 CMR 11.16(3), the Proponent should circulate the DEIR to each Person or Agency who commented on the EENF, each Agency from which the Project will seek Permits, Land Transfers or Financial Assistance, and to any other Agency or Person identified in the Scope. Pursuant to 301 CMR 11.16(5), the Proponent may circulate copies of the DEIR to commenters in in a digital format (e.g., CD-ROM, USB drive), by directing commenters to a project website address, or electronically. However, the Proponent must make a reasonable number of hard copies available to accommodate those without convenient access to a computer and distribute these upon request on a first-come, first-served basis. A copy of the DEIR should be made available for review in the Revere Public Library.

July 24, 2023

Date



Rebecca L. Tepper

Comments received:

- 7/17/2023 Massachusetts Department of Environmental Protection (MassDEP) Waterways Program
- 7/17/2023 Massachusetts Water Resources Commission (WRC)
- 7/17/2023 Massachusetts Division of Marine Fisheries (DMF)
- 7/17/2023 Massachusetts Office of Coastal Zone Management (CZM)
- 7/17/2023 Massachusetts Department of Environmental Protection (MassDEP)
- 7/19/2023 Massachusetts Water Resources Authority (MWRA)

RLT/NJM/njm



MEMORANDUM

TO: Rebecca L. Tepper, Secretary, EEA
ATTN: Nicholas Moreno, MEPA Office
FROM: Lisa Berry Engler, Director, CZM
DATE: July 17, 2023
RE: EEA-16711, Gibson Park Resiliency Project; Revere

The Massachusetts Office of Coastal Zone Management (CZM) has completed its review of the above-referenced Expanded Environmental Notification Form (EENF), noticed in the *Environmental Monitor* dated June 7, 2023, and recommends that the following issues are addressed in the Draft Environmental Impact Report (DEIR) filing for the project.

Project Description

The proposed project includes several components to redesign and improve the coastal resiliency of a public park and redevelop an existing boatyard adjacent to the Pines River in Revere. These components include the creation of several offline subsurface stormwater storage/infiltration chambers underneath a proposed new athletic field and redeveloped boatyard, installation of a dual stormwater pump system to move stormwater upgradient from the adjacent neighborhood to the proposed stormwater storage under the field, creation of rain gardens and bioswales, removal of *Phragmites* along the shoreline and restabilizing the water's edge, expanded parking, park improvements including a new multi-purpose field, pickleball courts, relocated and new tennis courts and additional walking paths. It also includes an expansion of park facilities to include the former North Shore Boatworks property, an expanded rebuild of a dilapidated revetment and seawall, a new gangway and float system, upgraded drainage infrastructure on Mills and Thayer Avenues, a new standby generator, upgraded lighting, and a proposed 1,200-foot-long vegetated storm surge protection berm along the Mills Avenue shoreline. The project proposes to add fill to raise the site to approximately 10 feet (NAVD88) to accommodate a 2030 10-year flood elevation. Most of the site is within the Limit of Moderate Wave Action (LiMWA) associated with a FEMA coastal AE Zone (elevation 10 NAVD88). According to the supplemental information submitted on June 30, 2023, the project will temporarily impact 313,795 square feet (sf) of Coastal Dune, 296,500 sf of Land Subject to Coastal Storm Flowage (LSCSF), 220,335 sf of Riverfront Area, 64 sf of Coastal Beach, and 76,970 sf of buffer zone to Salt Marsh. Expected permanent impacts include 13,650 sf of Coastal Dune, 17,800 sf of Riverfront Area, 64 sf of Coastal Beach, and 13,650 to buffer zone to Salt Marsh. The supplemental information states that there will be temporary impacts to 52,400 sf and permanent impacts to 17,900 sf of area subject to Chapter 91 jurisdiction. The entire site is within the Rumney Marshes Area of Critical Environmental Concern (ACEC).

Project Comments

Preferred Project Description

The project includes many different components across the site that may have different impacts on a variety of coastal resource areas, depending on the alternatives chosen for implementation, however, the EENF does not include a project description that describes which of the proposed alternatives for each component is planned for implementation by this project. The DEIR should include a complete project description of the preferred alternative for each of the proposed elements of the project, with accompanying plans depicting the preferred alternative at a



reasonable scale. The plans should include all resource areas and tidal datums relative to the location of each of the proposed project components, and the narrative should describe the total permanent and temporary impacts on resource areas resulting from the proposed project.

Resource Areas

The DEIR should provide the areas of impact to each affected resource area, provide plans with accurate resource area delineations of a reasonable scale to show where these will occur, and specify and describe which impacts are temporary versus permanent. The DEIR should also include accurate resource area identifications so that the appropriate performance standards can be identified and met. The resource area impact chart included in the supplemental filing indicates an additional 14,763 sf of temporary impacts and 8,088 sf of permanent impacts to areas identified as “below spring high tide,” but does not specify whether these additional impacts are to coastal beach or salt marsh. The DEIR should include the High Tide Line on plans and specify what resource area(s) are associated with these areas. Similarly, some areas on the plan are depicted as “seagrass.” Based on the site visit and discussion during the MEPA consultation, this area is a salt marsh. The vegetation and associated resource areas in each of these areas should be correctly identified. The entire proposed project is within a barrier beach resource area, which is comprised of a coastal beach or coastal dune and is often bordered by a salt marsh on the landward edge. The DEIR should demonstrate that all components of the project are designed to meet the appropriate performance standards for the relevant resource areas.

As discussed during the pre-application site visit on April 24 and at the MEPA consultation meeting on June 27, the resource area identified in the EENF as Bordering Vegetated Wetland (BVW) or coastal BVW along the shoreline of the Pines River landward of the salt marsh and the coastal beach is coastal dune. BVW is a freshwater wetland that borders a fresh body of water, which is not the case in this location. This entire site is a barrier beach, and the subject landform slopes up from the landward edge of the coastal beach to form a mound or ridge that is vegetated with multiple species, including *Phragmites*, consistent with a coastal dune resource area. The presence of *Phragmites* in this area does not indicate a BVW. The plans in the DEIR should reflect that change for this shoreline, and the narrative should demonstrate that the shoreline treatment design for the project is consistent with the performance standards for coastal dunes.

Some of the resource area along the seaward edge of Mills Avenue is incorrectly identified as coastal bank, rather than coastal dune. The coastal edge here is comprised of coastal dune, coastal beach, and salt marsh. These should be accurately depicted on plans of reasonable scale to depict the extent of each, and the impacts of proposed activities in this area.

Alternatives Analysis

One of the primary goals of the project is to provide coastal resiliency to the adjacent neighborhood. The redevelopment of Gibson Park provides the community with an opportunity to design the park to provide an improved buffer for storms. The DEIR alternatives analysis for how Gibson Park and the adjacent shoreline can provide resiliency should be expanded to include more options as recommended below. The DEIR should include an alternatives analysis that describes each of the alternatives considered for each component, the preferred alternative, the reason(s) that the preferred alternative was chosen for each of the components of the project, and how each avoids, minimizes, or mitigates resource area impacts.

Floodplain Function

As discussed at the MEPA consultation meeting, most of the project site is within the LiMWA associated with a FEMA coastal AE Zone (elevation 10 NAVD88) as mapped by FEMA on the Flood Insurance Rate Maps. Coastal A Zones are predicted to have 1.5-to-3-foot breaking waves in a 1% chance coastal storm, so the site is likely to be exposed to moving water in a storm event. To understand possible changes to flooding patterns on the site from the project changes, the DEIR should include a separate grading plan showing the existing and proposed grades, with representative cross-sections through the project site that also show existing and proposed grades. The DEIR should include an analysis to compare the existing and proposed floodplain functions on the site to ensure that the project does not exacerbate flooding impacts and preserves or improves floodplain function for the design life of the project. The information provided should include:

- Plans depicting how coastal floodwaters will flow onto and off the site referenced to current topography and the proposed grading plan.
- Associated narrative analysis of floodplain functions under existing and proposed conditions.
- Identification of potential increases or changes in velocity, reflection, or channelization of floodwaters within the site or onto adjacent parcels.
- Description of how the proposed design of the site avoids, minimizes, and mitigates these impacts for current and predicted conditions for the design life of the project.
- Specifications for the type and amount of fill proposed.
- Demonstration that the sediment is compatible with the beach and dune system.

The DEIR should clarify the total existing area of impervious surface on the site versus the total impervious area proposed on the site and demonstrate that the impervious area has been minimized to the maximum extent and should also explain whether the area of the subsurface stormwater holding tanks is factored as pervious or impervious, and why.

Although the site has been previously altered, the project should be designed to at least maintain the existing ability of the floodplain to provide the functions of storm damage prevention and flood control. The ability of the site to move, shift, and erode is critical as it helps dissipate wave energy, slow down flood water, and allow water to infiltrate. The proponent should consider designing the parking surface with gravel, pea stone, or shell instead of pavement to allow the landform to slow down flood water except for the two spaces intended for parking for visitors with disabilities.

Shoreline Management

The project proposes the creation of a vegetated berm along the shoreline north of the boatyard property to provide continuous shoreline protection to buffer wave impacts, flooding, and erosion seaward of the multi-use athletic field. To best protect the City's investment in the park and enhance the protection of the adjacent neighborhood, this berm should be designed as an enhanced dune with a mix of sand, gravel, and cobble, to mirror the conditions of the existing beach. The dune should be vegetated with salt tolerant, native, erosion control vegetation with deep roots to stabilize the sediments and provide better erosion control and be constructed landward of the high tide line between the field and the shoreline to improve its longevity. The DEIR should include a narrative to describe the existing and proposed conditions for this area, as well as detailed plans in plan view and cross-sections showing existing and proposed conditions, including grade changes. The narrative should include details of the invasive species treatment and removal and the proposed restoration and

monitoring plan for the dune. More information about best practices for dune nourishment is available in [StormSmart Properties Fact Sheet #1: Artificial Dunes and Dune Nourishment](#).

The EENF states that the project proposes to allow a portion of the park at the northeast corner to flood over time such that the existing salt marsh may migrate landward in this location as the sea level rises. This approach is supported wherever possible on this site, as the Sea Level Affecting Marshes Model shows that this site has excellent potential for marsh migration over time. At the pre-application meeting, the proponent stated that the existing mature trees at the northwestern corner of the park may be removed and replaced with new plantings elsewhere, as they are likely to be subject to inundation from sea level rise over time. Mature trees provide valuable shade to reduce heat island effects, reduce erosion, and take up stormwater to help reduce flooding significantly better than younger, freshly planted ones. To maximize these natural benefits, mature trees on the site should be retained for as long as possible.

Stormwater Management

The project includes significant stormwater infrastructure to address stormwater flooding needs on the park site as well as for portions of the adjacent neighborhood. The DEIR should include:

- Details about the function of the stormwater system, including interaction with the groundwater table under existing and expected tidal conditions over the design life of the project, to ensure that increasing water table elevation will not interfere with the function of the system.
- Plan and narrative depicting the catchment area intended to be attenuated in the subsurface storage tank, indicating which stormwater connections are associated directly with this storage, and clarifying whether the subsurface area is just storage or will also treat the stormwater before it is discharged to the ACEC.
- Cross-sectional plan showing how far the proposed underground structure below the playing field is from the beach/dune interface along the shoreline, and how the grading proposed for the structure will affect the shoreline management features that are proposed.
- Demonstration of how the underground storage facility will function, including how the system is designed to avoid inundation by tidal waters which will overwhelm it.

At the pre-application site visit, an existing damaged outfall was noted just north of the boatyard property on the coastal beach that was thought to have been used previously to drain a portion of the ballpark. The DEIR should provide details to clarify the existing condition of this outfall, including plans and photographs, and provide plans with cross-sections of the proposed system and outfall relative to resource area boundaries and tidal datum. The DEIR should calculate the new volumes and velocities that can be expected to be associated with discharge from the rebuilt system, given the new catchment area, storage tank, and system design, and consider how the outfall can be designed to minimize impacts on the existing resource areas. Given that this outfall is not currently functioning, the DEIR should demonstrate that the reconstructed stormwater system to be connected in this location is not a new stormwater outfall in the ACEC.

Resilience

The DEIR should demonstrate that relevant utilities will be elevated on open pile-supported platforms to be resilient in a Coastal A Zone and protect the storm damage and flood control functions of the underlying dune.

The DEIR should include more detail on the composition and construction of the proposed berm along the edge of Mills Avenue that is proposed to reduce flooding of the adjacent neighborhood up to the 2030 10-year storm event. The DEIR should include:

- Plans showing the intersections of the berm with the coastal beach, Mills Avenue, and areas to be maintained for access should be depicted and described on the plans.
- Plans and cross-sections depicting the proposed construction of the berm and how it will blend with the street on one side and the coastal dune or beach on the other along the entire length of Mills Avenue as shoreline conditions vary considerably along its length.
- Description of how potential impacts to areas of fronting salt marsh from the proposed design will be avoided.

The DEIR should include an analysis of additional alternatives that are more likely to withstand the conditions on the site. Regular tidal inundation and exposure to sunlight can cause coir to break down rapidly, and the coir-wrapped sediment design of the berm can act like a solid structure, resulting in reflection and scour adjacent to the structure that can lower the beach elevation seaward of it. The concrete wing wall access points and deployable barriers proposed could cause scour and erosion where these access ways intersect the coir berm structures, reducing the effectiveness of the system in preventing flooding and causing erosion of the adjacent beach. The DEIR should investigate additional alternatives, including reducing the road width to the maximum degree practicable to enable a shift of the shoreline treatment further landward and create a more natural berm that can blend into the existing shoreline. Where appropriate, a properly sized cobble berm located at the seaward toe of a natural berm could provide more stability at the interface with the coastal beach. For either design, a fully vegetated berm is recommended.

Boatyard

The DEIR should include cross-sections and plan view details of the proposed bulkhead replacement at the boatyard, with specific attention to proposed impacts to existing resource areas outside the permitted footprint of the existing structure, including beach, dune, salt marsh, and LSCSF. Permanent and temporary impacts should be specified. Details of the connections with the adjacent protection features at Gibson Park and Mills Avenue should be described and shown on plans of a reasonable scale, including cross-sections at representative points. The shoreline at the northern end of the existing shoreline structures has retreated landward. The bulkhead structures should be downsized, pulled landward, and designed to tie into the adjacent shoreline treatments without scour.

The boat storage building proposed in a dune in the Coastal A Zone should be elevated on open pilings at least two feet above the existing grade and two feet above the FEMA base flood elevation, with the area under the building open/free of obstruction to allow the coastal dune to provide the beneficial functions of storm damage prevention and flood control. Building plans, including cross-sections through the proposed buildings with ground and first-floor elevations, should be included in the DEIR.

According to the plans in the EENF and confirmed by the proponent, the proposed floats will ground out at low tide due to extensive low tide flats in this location. The DEIR should include details of how this impact will be minimized, including the use of float stops to ensure that floats are 18” above the mudflat at low tide. DEIR should include cross-sections of the planned float structures.

Phasing

According to the EENF, the project will likely be constructed in three phases, as funding becomes available. The DEIR should provide details of the proposed phasing, including all the planned components of the project, and demonstrate that each phase can be completed independently of the others. For example, the EENF states that the first phase will include the excavation of the field at Gibson Park, and the second phase will include the construction of the subsurface stormwater improvements in this location. Excavation of the field and construction of the stormwater subsurface storage should occur during the same phase of development so that no excavated area is left open for any extended length of time.

Federal Consistency Review

The proposed project may be subject to CZM federal consistency review, and if so, must be found to be consistent with CZM's enforceable program policies. For further information on this process, please contact Robert Boeri, Project Review Coordinator, at robert.boeri@mass.gov, or visit the CZM website at www.mass.gov/federal-consistency-review-program.

LE/kg/rh

cc: Jill Provencal, Phil DiPietro, DEP NERO
Daniel Padien, Christine Hopps, DEP Waterways
Elle Baker, Frank Stringi, Revere
Kathryn Glenn, Rebecca Haney, Robert Boeri, CZM



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

July 17, 2023

Rebecca L. Tepper, Secretary
Executive Office of
Energy & Environmental Affairs
100 Cambridge Street
Boston MA, 02114

RE: Revere
Gibson Park Resiliency Project
EEA# 16711

Attn: MEPA Unit

Dear Secretary Tepper:

The Massachusetts Department of Environmental Protection Northeast Regional Office (MassDEP-NERO) has reviewed the Expanded Environmental Notification Form (EENF) for the proposed Gibson Park Resiliency project in Revere. MassDEP provides the following comments.

Wetlands

The project site encompasses the 9.15-acre Gibson Park parcel located at 0 and 1 Hayes Avenue in Revere. The 1.187-acre former North Shore Boatworks Property, now acquired by the City, is located adjacent to and south of the Gibson Park Property at 29 Thayer Ave, and an approximately 2,400-foot-long portion of the west side alignment of Mills Avenue. Gibson Park is bordered to the west by the Pines River, and to the south by the former Boatworks Site. The project consists of the redevelopment of Gibson Park into a recreational facility and includes work along Mills Avenue to install a flood berm, reconstruction of the municipal stormwater system, and use of a pump station/sub-grade holding tank. The project will result in the new alteration of 6.11 acres of land.

The EENF indicates that the project meets or exceeds the following review thresholds: 301 CMR 11.03(3)b(1)a - alteration of coastal dune, barrier beach or coastal bank and 301 CMR

This information is available in alternate format. Please contact Melixza Esenyie at 617-626-1282.
TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

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11.03(11)(b) – any project within a designated ACEC. The EENF indicates that the project requires a MassDEP Waterways License and has received an EEA MVP Grant. Because the Project is located within 1 (one) mile of an EJ Population an Environmental Impact Report (EIR) is required.

The project will permanently impact 307,875 square feet (sf) of Coastal Dunes and Barrier Beach, and 278,500 sf of Land Subject to Coastal Storm Flowage (LSCSF). Additionally, the project will alter wetland resource areas located within an Area of Critical Environmental Concern (ACEC).

The parcel on which the project is proposed is mapped as a Barrier Beach as defined in and regulated by 310 CMR 10.29. By definition of 310 CMR 10.29(2), barrier beach is made up of “coastal beaches and coastal dunes extending roughly parallel to the trend of the coast.” In this case there is coastal beach on the site with all remaining portions of the site classified as coastal dune. This Barrier Beach is significant to storm damage prevention and flood control, so the project must comply with the Performance Standards for work on dunes specified at 310 CMR 10.28(3) through (5). The project must also comply with the standards in the building code for work in dunes, which includes elevating structures on open pilings.

The EENF acknowledges that the Resource Areas at the site include Land under the Ocean, Coastal Beach, Coastal Dune, Barrier Beach, Land Containing Shellfish, Fish Runs, Salt Marsh, Bordering Vegetated Wetland (BVW), Isolated Vegetated Wetland (IVW), and Riverfront Area. The entire survey area is located within LSCSF, which is elevation 10.0 NGVD 88, and an ACEC. Approximately 600 cubic yards of soils at the site contain PCBs and must be remediated in accordance with EPA and MassDEP Regulations.

The borings and the soils report indicate that the sediments at the site consist of marine deposits made up of sand, gravel, and peat. Such a soil profile is typical of dune sediments on developed barrier beaches. Dunes on previously developed sites sometimes lose their ability to exchange sand and sediment by wind and wave action but maintain their function to dissipate storm energy and provide storm damage prevention and flood control. The proposed development of this site should protect the functions of storm damage prevention and flood control on the site to the maximum extent possible.

The former North Shore Boatworks property located south of the existing park is now controlled by the City of Revere and will be added to the park. The existing building at the former Boatworks site will be used as a community rowing facility and public space. The coastal dune at the site is comprised of unconsolidated sediments that will move in response to flood related energy in a manner likely to destabilize solid foundations. A solid fill foundation is proposed for the reconstructed Boatworks building. This removal and replacement of dune sediments for the construction of the foundation will change its critical characteristics pursuant to 310 CMR 10.28 including its form, shape, volume, and ability to move landward or laterally. The replacement of dune sediments and installation of the proposed solid fill foundation will diminish the dune’s ability to reduce storm damage and provide flood control in contravention of the Performance Standards at 310 CMR 10.28 (3). This may result in storm or wave energy being reflected onto adjacent areas and structures. The site is partially located within and adjacent to LSCSF. The depth

of flooding is likely to be exacerbated by climate change impacts, which should be appropriately considered in the design of the building and the site. Therefore, options should be explored that will elevate the building on piers above the dune surface. Because the site is a coastal dune, it is MassDEP's understanding that the building is also required to be constructed on open pilings under the State Building Code.

The dilapidated revetment at the former Boatworks Property is proposed to be rebuilt. There appear to be areas of salt marsh in the footprint of the proposed rebuilt revetment. Filling salt marsh in an ACEC/ORW is not allowed under the Wetlands Protection Act Regulations pursuant to 310 CMR 10.24(5)(a). In MassDEP's opinion there is no permitting pathway to fill saltmarsh to rebuild this revetment. If the salt marsh issue can be resolved, revetment reconstruction in that area will have to be redesigned to reduce end effects and end-scouring erosion, with tapering of the ends.

The proposal to treat and manage stormwater on the site proposes to construct a subsurface stormwater storage area underneath the athletic field consisting of four different subsurface storage chamber systems designed to detain and infiltrate runoff, with 92,000 cubic feet of storage proposed. One of the systems contains 64 rows of 35 Cultec Recharge chambers that would provide the vast majority of storage volume at 86,697.9 cf. and is intended to provide offline storage of major rainfall events during the higher end of the tidal cycles as well as provide groundwater recharge. The system is proposed to be serviced by a dual duplex stormwater pump system. There is no information in the EENF about the dynamics of this system and how pumps will be sequenced to avoid coinciding with peak times in various storm events. According to the EENF the system not only serves the park but portions of the adjacent neighborhood. According to the EENF, groundwater was observed to be at approximately elevation 3.5 ft NAVD88, with no fluctuation based on the tides. It is unclear whether the infiltration system meets the required two feet of separation from the bottom of the infiltration chambers to groundwater. If this distance is less than four feet, a mounding analysis is required, but the EENF does not indicate whether one has been performed. It is also unclear whether the expected tidal conditions over the life of the project will interfere with the water table elevation and negatively impact the function of the system. It is unclear whether infiltration out of the storage chambers is the only treatment that stormwater will receive prior to discharge to the ACEC. The stormwater treatment train does not appear to include pre-treatment BMPs.

A vegetated berm is proposed to be constructed by removing two feet of pavement from the edge of the existing road and wrapping sediments, excavated from Gibson Park, in layers of coir fabric with vegetation for its construction. More cross-sections of the berm for the whole length of Mills Avenue should be provided reflecting the changing shoreline conditions along its 1,200 foot length. Intersections of the berm with the coastal beach, Mills Avenue, and openings in the berm to be maintained for access should be shown and described. Plans and cross-sections should show the proposed berm and how it will blend with the street and the coastal dune or beach. More details should be developed relating to the justification of designing the berm up to only the 2030 ten-year storm event.

The EENF indicates that higher high tides will reach this berm regularly. Regular tidal inundation and exposure to sunlight can cause coir to break down rapidly. As discussed at the

MEPA site visit, the design of the berm to be made of the coir-wrapped sediment can cause it to act like a solid structure, resulting in reflection and scour adjacent to the structure that can lower the beach elevation seaward of it. Scour and erosion are likely to be a particular challenge where access ways intersect the coir berm structures. During the site visit meeting CZM staff suggested that a properly sized cobble berm located at the seaward toe of a natural berm could provide more stability and that all alternatives should include a fully vegetated berm. MassDEP concurs with CZMs comments regarding berm construction.

The MassDEP appreciates the opportunity to comment on this proposed project. Please contact Kristin.Divris@mass.gov at (508) 887-0021 for further information on wetlands issues. If you have any general questions regarding these comments, please contact me at John.D.Viola@mass.gov or at (857) 276-3161.

Sincerely,

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

John D. Viola
Deputy Regional Director

cc: Brona Simon, Massachusetts Historical Commission,
Eric Worrall, Kristin Divris, Jill Provencal, Phil DiPietro, MassDEP-NERO



The Commonwealth of Massachusetts

Division of Marine Fisheries

(617) 626-1520 | www.mass.gov/marinefisheries



MAURA T. HEALEY
Governor

KIMBERLEY DRISCOLL
Lt. Governor

REBECCA L. TEPPER
Secretary

THOMAS K. O'SHEA
Commissioner

DANIEL J. MCKIERNAN
Director

July 17, 2023

Rebecca L. Tepper, Secretary
Executive Office of Energy and Environmental Affairs
ATTN: MEPA Office, Nicholas Moreno
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: EEA#16711 Expanded Environmental Notification Form

Dear Secretary Tepper:

Massachusetts Division of Marine Fisheries (MA DMF) staff have reviewed the Expanded Environmental Notification Form (EENF) submitted by the City of Revere for the proposed Gibson Park Resiliency Project. The project consists of the installation of stormwater control features at Gibson Park including subsurface storage/infiltration chambers, a stormwater pump system, raingardens, and bioswales and upgrades to stormwater infrastructure and the installation of a vegetated storm surge protection berm along Mills Avenue and Thayer Avenue; removal of invasive *Phragmites australis* from the Gibson Park shoreline; creation of an additional 21 parking spaces at the former Boatworks; relocation and improvement of park features; repair of the revetment along the former Boatworks property; and redevelopment of the former Boatworks building as a community boating facility including a gangway down to a 2,335 sf seasonal floating dock system on the 9.15 acre site. The project also includes 800 cubic yards of dredging associated with the repair of the revetment.

The project site is situated along the Pines River in the Rumney Marshes Area of Critical Environmental Concern. The Rumney Marshes ACEC is one of the most biologically significant estuaries in MA north of Boston. Salt marshes are significant to the protection of marine fisheries because they support the base of coastal food webs and provide spawning, nursery, and forage habitat. The Pines River provides essential habitat for the spawning and early development of winter flounder (*Pseudopleuronectes americanus*) [1]. The tidal flats at the project site have been mapped by MA DMF as habitat for soft shell clam (*Mya arenaria*) within shellfish growing area N26.1, classified as Conditionally Restricted for shellfish harvest. In addition, tidal flats provide one of the most productive marine habitats for numerous marine species and are designated "special aquatic sites" under the Federal Clean Water Act.

MA DMF provides the following comments for your consideration.

- **Storm water discharge impacts to Shellfish:**
 - The delayed discharge of storm water stored in the proposed subsurface recharge chambers following storm events may impact the safety of shellfish harvest in the Pines River. MA DMF recommends further details regarding storm water

treatment associated with the subsurface recharge chambers be provided in subsequent Environmental Impact Reports including a draft storm water Operation and Maintenance Plan and total suspended solids removal rates and further coordination with MA DMF be conducted regarding storm water discharge from the proposed subsurface recharge chambers.

- **Revetment impacts to Salt Marsh:**

- The proposed repair of the revetment along the shoreline of the former Boatworks may negatively impact adjacent salt marsh habitat by reducing tidal inundation of the salt marsh. MA DMF recommends an alternative analyses of flood/storm surge protection measures at this location including but not limited to relocating the revetment landward of the salt marsh and utilizing nature-based solutions such as a vegetated berm be included subsequent Environmental Impact Reports. Construction activity in intertidal habitat, including staging of construction material and equipment as well as equipment transit to and from the construction site, should be avoided to the greatest extent practicable. As much work as possible should be conducted from the upland portion of the project site to minimize impacts and avoid compaction of sediment in mapped shellfish habitat. Any work in the intertidal zone should be limited to low tide such that work is conducted in the “dry”.

- **Boardwalk impacts to Salt Marsh:**

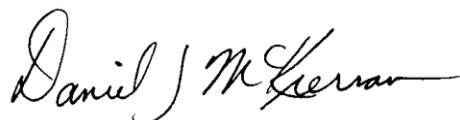
- MA DMF conducted two field studies to assess the relationship between shading, marsh growth, and deck design; these studies collectively indicated that a height-to-width (H:W) ratio of 1.5:1 between the base of horizontal stringers and salt marsh reduced shading and marsh loss relative to the typically required 1:1 H:W ratio [2,3]. Current plans do not meet the 1.5:1 H:W ratio recommendation. MA DMF recommends a minimum 1.5:1 H:W ratio be established for decking across the full extent that overlies the salt marsh or decking be relocated to avoid impacting salt marsh.

- **Float impacts to Shellfish and Coastal Beach:**

- Grounded floats can disturb bottom sediments, resulting in turbidity and direct impacts to benthic habitat. To minimize impacts, MA DMF recommends that the bottom of a proposed float be at least 1.5 feet (18 inches) above the substrate in all coastal or estuarine habitats, and at least 2.5 feet (30 inches) above the substrate over mapped shellfish habitat, at MLW [4,5]. The float as proposed does not maintain this minimum clearance at MLW; MA DMF recommends the float be extended into deeper waters or float stops be installed to maintain a 2.5-foot clearance above the substrate at MLW; mitigation may be required for shellfish habitat loss associated with float structures at the state or federal levels of the permitting process.

Thank you for considering our comments. Questions about this review may be directed to Forest Schenck in our Gloucester office at Forest.Schenck@Mass.gov.

Sincerely,



Daniel J. McKiernan
Director

DM/fs/sd

Cc.

R. Joyce, MA DMF
E. Reiner, EPA
K. Glenn, CZM
R. Haney, CZM
P. Maniccia, ACOE
J. McAllister, McAllister Marine Engineering

References:

- [1] Evans, NT, KH Ford, BC Chase and JJ Sheppard (2011). Recommended Time of Year Restrictions (TOYs) for Coastal Alteration Projects to Protect Marine Fisheries Resources in Massachusetts. Technical Report DMF TR-47.
- [2] Logan, J.M., A. Davis, C. Markos, K.H. Ford. 2018. "Effects of docks on salt marsh vegetation: An evaluation of ecological impacts and the efficacy of current design standards." *Estuaries and Coasts* 41:661–675.
- [3] Logan, J.M., S. Voss, A. Davis, K.H. Ford. 2018. "An experimental evaluation of dock shading impacts on salt marsh vegetation in a New England estuary." *Estuaries and Coasts* 41:13–24.
- [4] Bliven, S. and S. Pearlman. 2003. A guide to permitting small pile-supported docks and piers. Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Wetlands/Waterways Program.
- [5] Logan, J.M., A. Boeri, J. Carr, T. Evans, E.M. Feeney, K. Frew, F. Schenck, and K.H. Ford. 2022. A review of habitat impacts from residential docks and recommended Best Management Practices with an emphasis on the northeastern United States. *Estuaries Coasts* 45: 1189–1216.



Department of Environmental Protection

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Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

Memorandum

To: Nicholas Moreno, Executive Office of Energy and Environmental Affairs

From: Christine Walsh, Waterways Regulation Program, MassDEP

Cc: Daniel J. Padien, Program Chief, Waterways Regulation Program, MassDEP

Re: Comments from the Chapter 91 Waterways Regulation Program
EEA #16711 – Environmental Notification Form
Gibson Park Resiliency Project

Date: June 17, 2023

The Department of Environmental Protection Waterways Regulation Program (the “Department”) has reviewed the above referenced Environmental Notification Form (ENF) #16711 submitted by McAllister Marine Engineering on behalf of the City of Revere (the “Proponent”) for the Gibson Park Resiliency Project at North Shore Road, Hayes Avenue, and Mills Avenue in Revere, within the Rumney Marshes Area of Critical Environmental Concern (ACEC). The Proponent proposes to improve flood protection and expand and improve public recreational areas.

Chapter 91 Jurisdiction

As identified in the ENF, portions of the project site are located seaward of the Historic High Water Line and Mean High Water Line, which collectively establish the landward boundary of Chapter 91 Jurisdiction. Therefore, a Chapter 91 license is required for the project.

Regulatory Review

The Department did not identify any substantive concerns regarding the proposed project. However, the Proponent is reminded that in order to be eligible for licensing, the project is required to comply with the standards at 310 CMR 9.32(1)(e) and 310 CMR 9.40, in addition to all other applicable standards at 310 CMR 9.00.

If there are any questions regarding the Department’s comments, please contact Christine Walsh at Christine.Walsh@mass.gov.



THE COMMONWEALTH OF MASSACHUSETTS
WATER RESOURCES COMMISSION
100 CAMBRIDGE STREET, BOSTON MA 02114

July 17, 2023

Secretary Rebecca L. Tepper
Executive Office of Energy and Environmental Affairs
Attn: Nicholas Moreno, MEPA Office
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

Re: MEPA File No. 16711 – Revere

Dear Secretary Tepper:

The Water Resources Commission (WRC) staff has reviewed the Expanded Environmental Notification Form (EENF) and Proposed Environmental Impact Report (PEIR) for the Gibson Park Resiliency Project in Revere.

As proposed, the Project involves activities within a 100-year floodplain as delineated on the current effective Flood Insurance Rate Map (FIRM) for Suffolk County, dated March 16, 2016. In its role as the state coordinating agency for the National Flood Insurance Program (NFIP), I submit the following comments on behalf of the WRC.

WRC's Flood Hazard Management Program (FHMP), under agreement with the Federal Emergency Management Agency (FEMA), is the state coordinating agency for the NFIP. As such, the FHMP provides technical assistance to communities that participate in the NFIP related directly to the program and also related to floodplain management in general. Communities that participate in the NFIP are required by FEMA, as a condition of their participation, to regulate development within the 100-year floodplain in a manner that meets or exceeds the minimum standards established by FEMA, located at 44 CFR 60.3. Participating communities such as Revere are required to adopt the NFIP requirements through locally enforceable measures. In Massachusetts, many of the requirements contained in 44 CFR 60.3 are enforced through existing state regulations such as the State Building Code (780 CMR) and Wetlands Protection Act regulations (310 CMR 10.00). Communities typically adopt the remainder of the requirements as part of a zoning ordinance or other locally enforceable measure. Revere has a zoning ordinance that includes a Floodplain District section which has been accepted by FEMA as meeting their requirements under the NFIP.

In our role as NFIP coordinator, the FHMP offers comments on the proposed Project's relationship to many of the above regulations and requirements. The FHMP does not administer any of these requirements and therefore does not provide official determinations as to compliance with them; rather, our comments are provided as an overview of the requirements and the documentation that the FHMP believes may be necessary to demonstrate compliance with these requirements.

The Gibson Park Resiliency Project will reduce impervious surfaces, build additional stormwater controls, and renovate existing recreational structures in the park. The proposed work includes the installation of a

vegetated berm along Mills Avenue, the creation of subsurface stormwater storage, the installation of a stormwater pumping system and emergency generator, and the redevelopment of an existing building into a community boating center. All of these are approaches that the WRC supports and commends the city on. Construction trailers will also be placed on the site that are expected to remain in place for 18 months. Based on information submitted with the EENF and PEIR, the entire project is located within a 100-year floodplain on the current effective FIRM, with work within the coastal AE zone with a base flood elevation of 10 feet NAVD88. Because of its location in the 100-year floodplain, compliance with the requirements of several federal, state and local measures related to floodplain development is required.

The project proposes to elevate the community boating center to a height of 14.0 feet NAVD88 on piles. Building Code standards for Flood Resistant Construction apply to structures that are newly built or substantially improved within the 100-year floodplain. For new or substantially improved structures located in A zones, the Building Code requires that the lowest floor be elevated to at least the base flood elevation plus one foot. (See ASCE 24-14 Chapter 2.).

The proposal includes placement of construction office trailers in the AE zone. For floodplain management purposes, structures, including trailers, placed for more than 180 days are not considered to be temporary structures and must meet the requirements for new buildings in the floodplain. This will include elevation to the level required in ASCE 24-14 Chapter 2, and other requirements.

Additionally, projects within the 100-year floodplain involving any federal action (e.g., permit, funding) must also comply with federal Executive Order 11988, Floodplain Management. This executive order requires an eight-step decision-making process which includes analysis of alternatives, avoiding impacts when possible, and minimizing impacts when avoidance is not possible. Because this project requires a Section 404 permit from the Army Corps of Engineers and a National Pollutant Discharge Elimination System (NPDES) Permit, along with other federal approvals, compliance with this process is necessary. Compliance with these orders can involve design and construction to a higher standard, to be determined by the applicable federal agency. Also, the proponent should be aware that climate change can bring further impacts to the proposed development.

Thank you for the opportunity to comment on the EENF and PEIR. If you have any questions regarding these comments, or to request additional information or coordination with the FHMP, please contact Nadia Madden at (774) 261-1813 or at nadia.madden@mass.gov.



Vandana Rao, PhD
Executive Director, MA Water Resources Commission

cc: Nadia Madden, Department of Conservation and Recreation
Eric Carlson, Department of Conservation and Recreation
Joy Duperault, Department of Conservation and Recreation
Brian Bower, Revere Acting Inspector of Buildings



MASSACHUSETTS WATER RESOURCES AUTHORITY

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July 19, 2023

Rebecca Tepper, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge St, Suite 900
MEPA Office, Nicholas Moreno
Boston, MA 02114

Subject: EOEEA #16711 – Expanded Environmental Notification Form
Gibson Park Resiliency Project, Revere, MA

Dear Secretary Tepper,

The Massachusetts Water Resources Authority (MWRA) appreciates the opportunity to comment on the Expanded Environmental Notification Form (EENF) submitted by the City of Revere (the “Proponent” or “Revere”) for Gibson Park Resiliency Project (the “Project”) in Revere, Massachusetts. The Project site includes the existing 6.22-acre Gibson Park and the former North Shore Boatworks Property at 29 Thayer Avenue, which was recently acquired by Revere. The Project aims to provide nature-based interventions to the area, which has historically faced tidal and storm flooding events.

The ENF reports that the Project will generate approximately 1,140 gallons per day of new wastewater flow. The site is served by a sanitary sewer system owned and operated by Revere that conveys flows to MWRA’s Revere Extension Sewer, which in turn conveys flows from Revere, Chelsea and other communities to MWRA’s Chelsea Branch Sewer and Chelsea Creek Headworks. During large storms, sanitary flows and infiltration and inflow (I/I) from Revere and other community wastewater collection systems, together with sanitary flows and stormwater from Chelsea’s combined sewer system can overwhelm the capacity of MWRA’s Chelsea Branch Sewer, contributing to combined sewer overflow (CSO) discharges to Chelsea Creek. To ensure that the Project’s new wastewater flow does not increase surcharging and overflows in large storms, the Proponent should offset the Project’s wastewater flows with infiltration and inflow (“I/I”) removal in accordance with the Revere’s policies and regulations.

MWRA prohibits the discharge of groundwater and stormwater into the sanitary sewer system, pursuant to 360 C.M.R. 10.023(1) except in a combined sewer area when permitted by the Authority and the local community. The Project site has access to separate sewer and storm drain systems. Therefore, the discharge of groundwater or stormwater to the sanitary sewer system associated with this Project is prohibited.

MWRA is in the design and permitting phase of its Section 56 Water Pipeline Replacement Project, which involves installation of new water pipeline under the mouth water of the Saugus River, from the Point of Pines neighborhood in Revere to Lynn. The purpose of this Project is to ensure water system redundancy and resiliency by replacing a portion of MWRA’s existing Section 56 water pipeline, generally located in Route 1A/The Lynnway, which was removed from the General Edwards Bridge due to severe corrosion.

MWRA suggests close coordination with Revere to ensure the success of both this Gibson Park Resiliency Project and MWRA's Section 56 Water Pipeline Replacement Project.

On behalf of the MWRA, thank you for the opportunity to provide comments on this Project. Please do not hesitate to contact Katie Ronan of my staff at (857) 289-1742 with any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Rebecca Weidman", with a long horizontal flourish extending to the right.

Rebecca Weidman

Director

Environmental and Regulatory Affairs

cc: John Viola, MassDEP