



Navigating our future.

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April 12, 2016

Secretary Matthew Beaton
Executive Office of Energy and Environmental Affairs
Attn: Alex Strycky, MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: Charlestown Bus Facility – Shoreline Stabilization and Yard Improvement Project (ENF)

Dear Secretary Beaton,

Thank you for the opportunity to comment on the Environmental Notification Form for the Charlestown Bus Facility Shoreline Stabilization and Yard Improvements Project. Boston Harbor Now is a recent merger between The Boston Harbor Association and the Boston Harbor Island Alliance.

Our comments during the MEPA process are limited to climate resilience. We will provide more extensive comments during the Chapter 91 licensing process. For example, the proposal includes an easement to DCR for a multi-use pathway along the Mystic River waterfront. As DCR was not present at the April 5th MEPA site visit, we have additional questions about the proposed easement, path design and other public benefits. This site has been identified in the Mystic River master plan as a critical link in an integrated network of pedestrian/bike paths. This proposal needs to reflect that larger context.

Project Purpose

Buses based in the MBTA’s Charlestown bus facility represent roughly 25% of the system’s buses and serve nearly 30% of its riders. Located on the west bank of the Mystic River just north of the Alford Street Bridge, the site is currently at risk of coastal flood damage due to its eroding shoreline and rising seas. Partial failure of the existing bulkhead has led to deep, expanding sinkholes and closure of an existing bus circulation lane due to safety concerns.

This project is designed to extend the usable lifespan of the facility, decrease untreated stormwater runoff, and provide a waterfront recreational pathway. Proposed filling along the riverbank outside the existing bulkhead will be partially mitigated through creating new wetland resource area habitat.

Proposed flood control measures

The proposed design involves a “hybrid” approach of green and grey infrastructure: a riprap revetment below mean higher high water (MHHW), native (presumably salt-tolerant) vegetation above MHHW, and a sea wall installed to a height three feet above the current (as of March 2016) FEMA 100-year coastal storm elevation of approximately 7.25 feet above high tide. DCR will be provided an easement to develop and manage a multi-use pathway on the river side of the seawall.

Risk management and projected sea level rise

The Charlestown bus maintenance facility was dedicated nearly forty years ago in late 1979. By 2079, this site will likely be part of a larger regional seawall protecting Boston’s low-lying filled tidelands from regular coastal flooding.

According to the 2013 National Climate Assessment, Boston Harbor could see between 1-2 feet of sea level rise by 2050 and 3-6 feet by 2100. These estimates, however, did not include glacial melt or the gravitational pull of the Greenland and Antarctic glaciers. UMass scientists working with the City of Boston on its Climate Ready Boston (CRB) vulnerability assessment included these additional sources of sea level rise in calculating a range of projected climate effects based on 1) future carbon emissions and 2) probability of occurring.

Using higher projections of future coastal flood levels is a more risk intolerant management decision. Given that the bus maintenance facility represents a critical piece of transportation infrastructure for Greater Boston communities, the MBTA should use the higher end of the Climate Ready Boston estimates of likely sea level rise once they are available later this year.

For example, CRB predicts that, if global carbon emissions remain high, sea levels in Boston Harbor could be up to 1.5 feet higher by 2050 and up to 7 feet higher by 2100. For planning purposes, we would encourage the MBTA to adopt projections in these ranges, rather than make less conservative assumptions about future carbon emissions.

At the MEPA site visit flood maps based on the same research were shown. These maps project:

- In 2013, a 0.1 to 0.5% (“1,000-year to 200-year flood”) annual chance of flooding on the north side of the site;

- In 2030, a 2 to 5% (“50-year to 20-year flood”) annual chance of flooding on the north side of the site; and
- In 2070, a 20% (“5-year flood”) annual chance of flooding the entire site.

Based on these projections, we believe that the proposed design for reinforcing the shoreline adjacent to the MBTA bus maintenance facility is sound, aesthetically appealing, and provides multiple benefits while decreasing short- and mid-term risks of coastal flood damage to this site.

Our key recommendation is to make sure that these improvements are made within the context of the future need for a regional coastal flood barrier. For example, could the proposed sea wall and recreational path together form a broader base for a higher flood barrier to be installed later as increased flood control measures are required?

Thank you for the opportunity to comment. We look forward to seeing this project move forward.

Sincerely,



Julie Wormser
VP for Policy and Planning



Jill Valdes Horwood
Waterfront Policy Analyst