



U.S. Department
of Transportation
Federal Transit
Administration

REGION I
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Massachusetts,
New Hampshire,
Rhode Island, Vermont

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January 16, 2025

Phil Eng
CEO and General Manager
Massachusetts Bay Transportation Authority
10 Park Plaza
Boston, Massachusetts 02116

**Re: Draw One Bridge Replacement Project – Environmental Assessment
Finding of No Significant Impact**

Dear Phil Eng:

Based on a review of the environmental documentation submitted by the Massachusetts Bay Transportation Authority (MBTA), the Federal Transit Administration (FTA) has issued the Finding of No Significant Impact (FONSI) for the Draw One Bridge Replacement Project (the “Proposed Project”) enclosed as an Attachment.

By issuing this FONSI, the FTA affirms MBTA has fulfilled its requirements under the National Environmental Policy Act (NEPA) for the Proposed Project, as defined in the Environmental Assessment (EA).

Please be advised that in accordance with 23 CFR 771.121, MBTA is required to transmit a notice of availability of this FONSI to all affected Federal, State and local governmental entities; the FTA further requests that it be posted on the project website. Please also note that the standard terms and conditions of the FTA's Federal grant contracts applicable to the Proposed Project require MBTA to undertake any mitigation actions as identified in the FONSI and the Environmental Assessment.

This determination applies only to the Proposed Project as described in the aforementioned correspondence and supporting materials. Any changes to the Proposed Project not outlined in this documentation, including the disclosure of new information or previously unidentified environmental concerns, may require re-evaluation of this action.

This FONSI does not provide FTA commitment that future Federal funds will be approved for the Proposed Project. Any costs incurred under the FTA pre-award authority must meet all Federal requirements prior to those costs being incurred in order to retain eligibility of those costs for future FTA grant assistance.

Thank you for your cooperation in meeting the requirements of NEPA. We appreciate your efforts in advancing this important transit project.

Sincerely,

A handwritten signature in brown ink, appearing to read "P. S. Butler", with a long horizontal flourish extending to the right.

Peter S. Butler
FTA Regional Administrator
FTA Region 1

Attachment

FEDERAL TRANSIT ADMINISTRATION

REGION 1

Finding of No Significant Impact

Project: Draw One Bridge Replacement Project
Bridge No. B-16-479

Applicant: Massachusetts Bay Transportation Authority

Project Location: Cambridge and Boston, Massachusetts

1. Introduction

This document provides the basis for a determination by the Federal Transit Administration (FTA) of a Finding of No Significant Impact (FONSI) for the Draw One Bridge Replacement Project (Proposed Project). This determination is made in accordance with the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321, et seq; the FTA's implementing procedures at 23 CFR Part 771; Section 4(f) of the US DOT Act of 1966, 49 U.S.C. § 303 and 23 U.S.C. § 138; and the National Historic Preservation Act of 1966 (NHPA), 54 U.S.C. §§ 300101 et seq.

The FTA, as the lead federal agency, and the Massachusetts Bay Transportation Authority (MBTA), as the local project sponsor, prepared an Environmental Assessment (EA) to comply with NEPA. The EA describes potentially significant impacts on the human and natural environment and adverse effects to historic properties that would result from the Proposed Project. The EA was prepared pursuant to 23 CFR § 771.119 and published by the FTA on December 7, 2024. This FONSI is prepared by the FTA pursuant to 23 CFR § 771.121. The full text of the Draw One Bridge Replacement Project EA (January 2025), accompanying EA documentation including appendixes, and all documentation of public comment and responses to comments as provided by MBTA, are incorporated by reference into this FONSI.

The FTA is aware of the November 12, 2024 decision in *Marin Audubon Society v. Federal Aviation Administration*, No. 23-1067 (D.C. Cir. Nov. 12, 2024). To the extent that a court may conclude that the Council on Environmental Quality (CEQ) regulations implementing NEPA are not judicially enforceable or binding on this agency action, the FTA has nonetheless elected to follow those regulations at 40 CFR Parts 1500-1508, in addition to the FTA's regulations implementing NEPA at 23 CFR Part 771 to meet the agency's obligations under NEPA, 42 U.S.C. §§ 4321 et seq.

2. Description of Project

2.1 Proposed Action

With federal assistance provided by the FTA, the MBTA proposes to replace the Draw One Bridge, which carries Amtrak passenger and MBTA commuter rail traffic over the Charles River in the cities of Boston and Cambridge, Massachusetts.¹ The existing two two-track bascule bridge spans still in use, as well as the supporting infrastructure of the two disused spans, would be replaced with three two-track, standalone vertical lift bridge structures within the footprint of the existing bridges. The new bridge structures would carry six tracks, rather than the four on the current crossings. The Proposed Project would also replace the Boston and Main Railroad (B&MRR) Signal Tower A and modify the Massachusetts Department of Conservation and Recreation (DCR)-owned North Bank Bridge, which crosses the MBTA Right-of-Way (ROW) north of the Draw One Bridge. The existing signal system and switch heaters associated with the Draw One Bridge would be replaced, and a new drainage system would be installed.

2.2 Context and Existing Conditions

The existing Draw One Bridge consists of two adjacent, two-track, bridge spans crossing the Charles River, with a timber trestle approach structure to the north and a precast concrete approach structure to the south. As originally constructed in 1930-1931, Draw One comprised four steel bascule bridges crossing the Charles River.² In 1969, the superstructures of the two westerly bridges, Spans 3 and 4, were dismantled. The concrete caissons supporting Spans 3 and 4 remain in place, along with the rest pier³ and portions of timber piers.

The remaining usable bridge spans consist of two Scherzer-type rolling lift bascule bridges.⁴ Each bridge span has two tracks, for a total of four tracks crossing the Charles River. Each bridge span includes a steel through truss bascule span and a track girder span. The substructure consists of concrete-filled steel caissons. Structural steel beams are embedded in the upper portion of the caissons. The northern approach structure consists of seven spans of timber trestle supported on timber piles. The southern approach structure, which was reconstructed in 1985 after a fire damaged the original timber trestle, consists of 19 spans of precast concrete slabs and girders supported on a combination of timber piles and steel H piles.

Signal Tower A is located just north of the Draw One Bridge, east of the tracks. The structure was built in 1930 and housed the control system for bridge operations as well as the electric room and an overlook room for the bridge operator. The building is severely deteriorated and contains asbestos; to protect

¹ DCR's Cross River Pedestrian and Bicycle Crossing project is an entirely separate project from, and not part of, the Proposed Draw One Bridge Replacement Project considered herein. Refer to **Appendix A**, "Responses to Comments on the Draft EA," for additional information provided in response to comments received during the public review period for the Draft EA that pertained specifically to this separate project.

² Rare Old Bridges Replaced in B. & M. Railroad Terminal Improvements at Boston, *Engineering News-Record* 107 (5 November 1931):718-722.

³ A rest pier is a pier designed to carry the load of a bridge's swing span when in the closed position.

⁴ The existing bridge spans are double-track structures in the form of single-leaf rolling-lift bascules, a design made famous by the Scherzer Rolling Lift Bridge Company of Chicago.

operations staff, a temporary control tower was built in 2018. This 14-foot-high structure consists of an observation deck supported by a steel frame on a ten-by-ten-foot concrete pad. Conduits below grade connect the temporary control tower to the equipment “left in place” in the adjacent Signal Tower A.

2.3 Purpose and Need

Replacement of the Draw One Bridge is critical to keep the MBTA system in a state of good repair and improve the reliability and safety of MBTA commuter rail and Amtrak services. The bridge is a crucial rail link between Boston and greater New England. Tens of thousands of people use these services every week, travelling for purposes including work, school, recreation, culture, and medical care, mainstays of the regional economy. Safe and reliable rail options make it easier for commuters and other travelers to keep their cars at home and off congested freeways and city streets limit greenhouse gas emissions and contributes to better air quality.

Through a decade-long series of detailed inspections, MBTA determined that the Draw One Bridge suffers from structural deficiencies that severely reduce the reliability of commuter rail service and negatively affect navigation access along the Charles River. Service has been regularly disrupted during the past several years by signal-related delays, crossing gate failures, and emergency repairs of steel structural elements, usually undertaken on weekends. Structural, mechanical, and electrical deficiencies also reduce the reliability of the bridge operating system, disrupting marine traffic in the Charles River.

In addition, the structural integrity of the existing Signal Tower A building is failing, and the building is at the end of its useful life. Structural problems include several cracks in the brick masonry that prohibit its rehabilitation. The building contains asbestos-containing materials (ACM) and lead-contaminated paint (LCP), which presents a safety concern for workers and prevents its use, requiring them to work from a separate temporary control tower. Signal Tower A must be replaced with a new, safe, permanent facility designed and situated to support the operations of the proposed three-span bridge structure.

The purpose of the Proposed Project is to keep this portion of the rail system in a state of good repair and improve the reliability and safety of MBTA commuter rail and Amtrak services by:

1. Replacing the current two-span bridge – which is classified as both functionally and operationally obsolete and approaching the end of its useful life – with three new spans, which would stand within the same footprint as the historic bridge structures and carry two additional tracks across the Charles River, connecting to North Station; and
2. Replacing the existing signal tower and temporary control tower with a new Tower A to serve the operations of this new bridge.

2.4 Alternatives Considered

The MBTA considered two alternatives for the Proposed Project: Build and No Build (No Action).

2.4.1 Build Alternative

MBTA has studied the Draw One Bridge in detail to determine the viability of ongoing repair and the feasibility of rehabilitation (i.e., partial reconstruction), rather than replacement. MBTA determined that full replacement would be required and that fewer than four tracks over the river would be insufficient to

provide reliable service into the station in both the construction period and in the future operational condition. Additional permanent tracks would be required during bridge replacement to avoid service disruptions.

The build alternative consists of three standalone vertical lift bridge structures, each supporting two bridge tracks over the Charles River and providing access to at least four North Station tracks. The three standalone movable bridge spans would enhance the flexibility of rail operations. During construction, one new bridge would be constructed and commissioned, then each of the existing bridge spans would be replaced in successive stages so that four tracks across the Charles River would remain operational at all times. Once construction is complete, any one bridge can be removed from service for maintenance or repair, leaving four tracks in operation and, in turn, allowing access to at least eight station tracks at any time.

2.4.2 No Build (No Action) Alternative

The No Action Alternative represents conditions in the future without the Draw One Bridge Replacement Project. Under the No Action Alternative, the existing bridge crossings and Signal Tower A would remain in service in perpetuity while receiving periodic maintenance to maintain operations.

The No Action Alternative was not advanced for further evaluation because it would not meet the purpose and need. However, the EA analyzes the No Action Alternative because it provides a baseline for understanding how the Draw One Bridge Replacement Project may affect such conditions in the future.

3. Summary of Agency Coordination and Public Involvement

The FTA and MBTA developed a Public Involvement Program (PIP) to coordinate engagement with stakeholders and members of communities potentially affected by the Proposed Project (e.g., residents, businesses, commuters, etc.), elected representatives of those communities, as well as federal, state, and local government agencies.

3.1 Agency Coordination

The FTA facilitated Section 106 consultation with the Massachusetts Historical Commission (MHC), the Massachusetts State Historic Preservation Office (SHPO), in early 2020 and held an initial meeting with MHC and additional Section 106 consulting parties – including the Boston Office of Historic Preservation and the Cambridge Historical Commission – on February 4, 2020. Most recently, the FTA met with the Section 106 consulting parties on May 2, 2024, May 30, 2024, and September 5, 2024 to discuss the proposed mitigation measures in the draft MOA. Refer to [Section 5.2, “Section 106 Consultation,”](#) for additional information related to Section 106 consultation and mitigation measures that would be implemented with the Proposed Project.

MBTA distributed an introductory email on May 13, 2024, to Amtrak, Boston Duck Tours Company, Boston Sand & Gravel, the Charles River Boat Company, the Massachusetts Department of Transportation (MassDOT), Massachusetts General Hospital (MGH), and the State Police to describe the Proposed Project

and provide an opportunity to request individual follow-up meetings. In response, MBTA delivered a presentation to these groups, with the exception of the State Police, to discuss project alternatives, resources that may be affected by construction and operations, measures to minimize or mitigate adverse environmental impacts, and other environmental review and agency consultation requirements for the Proposed Project. MBTA distributed the presentation to the State Police via email as they were unable to attend this initial meeting.

The Massachusetts Department of Conservation and Recreation (DCR) is a state agency that manages state parks and oversees more than 450,000 acres in Massachusetts. The agency owns and manages several publicly-owned, public parks and recreational facilities in the vicinity of the project. MBTA met with DCR on June 5, 2024 and again on November 20, 2024, to provide an overview of the Proposed Project and discuss the potential use of Section 4(f) properties under the jurisdiction of DCR and proposed mitigation measures.

3.2 Public Engagement

An initial public meeting was held June 6, 2024. The purpose of that meeting was to introduce the Proposed Project and obtain feedback from the public on the proposed design and potential impacts.

Public engagement and agency coordination for the Draw One Bridge Replacement Project EA were conducted pursuant to the requirements of NEPA. The EA was made available for public comment from Friday, December 6, 2024 at 12:00 PM through January 6, 2025 at 12:00 PM. A legal notice of availability was published in *The Boston Globe* on December 7, 2024 and in *The Boston Herald* on December 8, 2024.

The EA was made available for public review at the following locations

- FTA Region 1 Office Kendall Square | 220 Binney Street Suite 940 Cambridge, MA 02142
- State Transportation Building | MBTA Draw One Bridge Replacement Program, 10 Park Plaza, Boston, MA 02116
- Boston City Hall | One City Hall Plaza, Boston, MA 02201
- Boston Public Library | 700 Boylston Street, Boston, MA 02116
- Cambridge City Hall | 795 Massachusetts Avenue, Cambridge, MA 02139
- Cambridge Public Library | 45 Pearl Street, Cambridge, MA 02139

The EA was made available online via the project website at: www.MBTA.com/DrawOne.

Additionally, a link to the EA on the project website was forwarded to federal, state, and local agencies; to interested parties; and to Cooperating Agencies (the United States Coast Guard [USCG] and the United States Army Corps of Engineers [USACE]) and one Participating Agency (the Federal Railroad Administration [FRA]) on December 13, 2024.

A virtual public hearing was held via Zoom on Thursday, January 2, 2025, from 6 PM to 7:30 PM, and an open house was held on Friday, January 3, 2025, from 4 PM to 6 PM at the Lewis Room of the Cambridge Public Library - Central Square Branch, 45 Pearl Street, Cambridge, MA.

Written comments on the EA were received from one Federal agency, 15 municipal agencies and/or departments, 15 non-governmental organizations, 360 individuals, and one business. Additionally, six

individuals, consisting of one City representative and the public, provided testimony at the public hearing. In sum, MBTA identified 387 individual comments received on the EA. These comments and MBTA responses to those comments are documented in **Appendix A**.

Over 360 comments were non-substantive in nature that were not related to the action described and analyzed in the EA.

MBTA identified and responded to all written and oral comments received on the EA as part of an appendix to the Final EA. These comments and MBTA's responses to comments were compiled and formally submitted by MBTA to the FTA together with other materials supporting the EA on January 15, 2025, and they are enclosed as **Appendix A** of this FONSI.

The FTA did not receive any comments that required reviewing and re-assessing environmental impact analyses and determinations made in the Draft EA.

4. Summary of Environmental Impacts and Mitigation

The Draw One Bridge Replacement Project would return rail infrastructure over the Charles River to a state of good repair and enhance the reliability and safety of passenger and commuter rail for people living and working in or visiting greater Boston and the New England coast.

The Draw One Bridge Replacement Project has been expressly planned and designed to support MBTA's commitment to maintaining current levels of MBTA and Amtrak train service and preserving the on-time performance of the trains arriving at and departing from North Station. The Proposed Project, therefore, would minimize impacts to commuter rail users to the greatest extent practicable.

Construction of the Proposed Project would include the demolition of the Draw One Bridge and Signal Tower A, both of which are eligible for listing in the National Register of Historic Places (NRHP). This significant adverse impact to these historic architectural resources would be permanent, and it would be unavoidable. However, this significant adverse impact would be minimized through the mitigation measures agreed to by the Section 106 consulting parties in the executed Memorandum of Agreement.

MBTA will use the FTA's Project Management Plan to track mitigation plans and permit conditions, as developed in final design, to which MBTA has committed, working in coordination with the cities of Cambridge and Boston, the local community, and regulatory agencies.

4.1 Mitigation Measures to Minimize Harm

The mitigation measures and other features of the Proposed Project that reduce environmental impacts, to which the FTA and MBTA have committed in the EA and FONSI, are included in a summary table of potential environmental impacts and mitigation measures (see **Appendix B**). MBTA will implement the mitigation measures described in the EA and in this FONSI. MBTA will design and incorporate into the Draw One Bridge Replacement Project the mitigation measures presented in the EA and this FONSI. The FTA will require in any grant documents for the Proposed Project that it be built in a manner consistent with that described in the EA and that all committed mitigation be implemented in accordance with the EA and this FONSI. The FTA will require MBTA to submit written reports on its progress in implementing

the mitigation commitments. The FTA will monitor this progress through quarterly reviews of the project's progress.

5. Determinations and Findings

5.1 Federal Uniform Relocation and Real Property Act Compliance

The Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970 (the Uniform Act), as amended, and its implementing regulations, 49 CFR 24, ensure the fair and equitable treatment of persons whose real property is acquired or who are displaced as a result of a federal or federally-assisted project. The Uniform Act, as amended, and its implementing regulations will be followed for property acquisitions required to construct the proposed project.

5.1.1 Property Acquisitions

The Draw One Bridge Replacement Project would require the acquisition of two permanent easements: 1) a 0.003-acre (131 square feet [sf]) portion of currently unmaintained, sparsely vegetated land adjacent to the east side of the MGH administrative building just west of MBTA ROW in order to meet the required 12-foot horizontal clearance from track centerline, and 2) a 0.019-acre (828 sf) area in the proposed South Bank Park for the installation of a new manhole in approximately the same location as an existing manhole to provide phosphorus filtration to the existing MBTA drainage system.

The Draw One Bridge Replacement Project would require five temporary construction easements, including one for the use of MGH administrative building parking lots, three at existing DCR parklands, and one at the future DCR South Bank Park to stage construction equipment and materials and provide construction access.

In addition, MBTA would temporarily use Boston Sand & Gravel property for construction access pursuant to a license agreement, executed in 2001, granting MBTA the right to enter their property for access to and egress from Signal Tower A and MBTA ROW. Further, modifications to the DCR-owned North Bank Bridge required as part of the Draw One Bridge Replacement Project would include the relocation of two existing piers currently located within MBTA ROW as well as the construction of one additional pier. All three new bridge piers would also be located within MBTA ROW. As such, alteration to the existing DCR/MBTA property use agreement for the North Bank Bridge would be required.

Modifications to the North Bank Bridge undertaken as part of the Draw One Bridge Replacement Project may require multiple temporary closures of the boat launch ramp located in North Point Park, west of the MBTA ROW on the north shore of the Charles River, which is used by DCR, the State Police, and the Boston Duck Tours Company. The boat launch ramp is not accessible to the public. If closures of the ramp are determined to be necessary, MBTA will coordinate these closures during construction with each affected party to avoid impacts to their use of the ramp.

The Draw One Bridge Replacement Project would also remove the MGH floating dock and approach ramp adjacent to the MGH administrative building on the south shore of the Charles River to facilitate construction access throughout the construction duration. The MGH-owned floating dock and approach ramp formerly served the prior owner (Spaulding Rehabilitation) and are currently unused. As part of the

Proposed Project, MBTA would reinstall the MGH floating dock and approach ramp in coordination with MGH when the area is no longer required for construction access.

MBTA will follow the Uniform Act for property acquisitions required to construct the proposed Project. The proposed Project would not result in any residential or commercial displacements; therefore, relocation assistance services are not required. In accordance with Federal guidelines, the MBTA will pay fair market value for any easements located on parcels in private ownership, if any, that need to be acquired.

5.2 Section 106 Consultation

Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (54 U.S.C. 300101) requires that federally funded or permitted projects consider the effects of their undertakings on historic and archaeological resources listed in or eligible for listing in the NRHP. Federal agencies must coordinate with the State Historic Preservation Office (SHPO) and potentially affected Tribes to determine whether an undertaking will impact historic and archeological resources. During Section 106 consultation, the FTA engaged the Wampanoag Tribe of Gay Head (Aquinnah), Stockbridge-Munsee Tribe, Narragansett Tribe, and Mashpee Wampanoag Tribe.⁵ These tribes were invited to all meetings of Section 106 consulting parties and copied on all Section 106 consultation prior to executing the MOA. The FTA did not receive any comments from the Tribes invited to participate in Section 106 consultation for the Undertaking.

An analysis of the Proposed Project's potential effects on historic and archaeological resources has been prepared in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations at 36 CFR 800.

Construction of the Proposed Project would include demolition of the NRHP-eligible Draw One Bridge and Signal Tower A, which would constitute an Adverse Effect to historic resources because it would result in the "physical destruction of or damage to all or part of the property." The SHPO concurred with this finding in a letter dated June 12, 2023.

In accordance with 36 CFR 800.6, an MOA was executed on December 18, 2024, among the FTA, MBTA, SHPO/MHC, the Boston Office of Historic Preservation, the Cambridge Historical Commission, and DCR that identifies the measures to be taken to address adverse effects to these historic architectural resources; it was filed with the Advisory Council on Historic Preservation (ACHP) on January 10, 2025 (see **Appendix C**). The final MOA contains the following mitigation measures:

- Historic American Engineering Record (HAER) documentation for Draw One Bridge, including interpretive narratives describing the history of the bridge spans, focusing on construction, and detailed descriptions of engineering and functional elements, historic plans, photographs, and other documents meeting the appropriate HAER archival standards;
- Historical Architectural Building Survey (HABS) documentation for Signal Tower A, including drawings, history, and photographs;

⁵ In a separate Section 106 consultation in June 2024, the Stockbridge-Munsee Tribe informed the FTA that the Tribe has revised their area of interest in Massachusetts. The Stockbridge-Munsee Tribe is no longer interested in participating in Section 106 consultation for projects in Middlesex County and Suffolk County. As a result of this new information, the Tribe was removed from subsequent Section 106 consultation for the Undertaking.

- Two Interpretive Displays, one on the Draw One Bridge and one on Signal Tower A, in both Cambridge and Boston; a video, available for public viewing online, showing trains crossing the Draw One Bridge and the bridge structures being raised and lowered. The video of the trains crossing and the bridges being raised and lowered shall be linked to a QR code that will be linked to from the interpretive displays;
- A historic context study of bridges across the Charles River, potentially coordinated with Boston's Museum of Science to host an exhibit;
- The potential salvage of significant architectural and engineering features of the Draw One Bridge and Signal Tower A; and
- Provision of design plans to SHPO/MHC, the Boston Office of Historic Preservation, the Cambridge Historical Commission, and DCR for review and comment at certain specific intervals of the design process.

The executed MOA was filed with the Advisory Council on Historic Preservation (ACHP) on January 10, 2024. The ACHP acknowledged receipt of the executed MOA on January 13, 2024. Stipulation XI of the agreement requires MBTA to submit annual reports on the status of fulfilling its mitigation requirements to all signatories to the MOA.

5.3 Section 4(f)

Pursuant to Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966, codified at 49 U.S.C. § 303 and 23 U.S.C. § 138, USDOT agencies may not approve transportation projects that require use of: 1) publicly owned parks and recreational areas of national, State, or local significance; 2) publicly owned wildlife and waterfowl refuges of national, State, or local significance; or 3) historic sites of national, State, or local significance regardless of ownership of such resources unless a determination is made that there is no feasible and prudent alternative and that all possible planning has been done to minimize harm to Section 4(f) land(s) resulting from such use, or that the use of the property, taking into account avoidance, minimization and mitigation measures, will have a *de minimis* impact. A *de minimis* impact is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

Appendix J of the EA included an Analysis of Potential Use of Section 4(f) Properties, the findings of which are summarized below.

There are nine publicly owned parks and recreational areas – each of which is considered a Section 4(f) resource – in the immediate vicinity of the Project Limits,⁶ including Galvin Memorial Park, the Lynch Family Skatepark, Paul Revere Park, North Point Park, and the North Bank Bridge to the north of the Charles River, as well as Nashua Street Park, the Gridley Locks Footpath, the proposed-but-not-yet-constructed South Bank Park, and a pier and riverfront walkway on the southern bank of the Charles River.

The Proposed Project would not affect Galvin Memorial Park, the Lynch Family Skatepark, and Nashua Street Park. However, with the implementation of measures to minimize harm, the following six Section

⁶ The Project Limits encompass the areas where the replacement bridge and new Tower A building and any other permanent infrastructure would be located, as well as any existing infrastructure to be removed as part of the Proposed Project.

4(f) properties would experience *de minimis* impacts as a result of the Proposed Project: Paul Revere Park, North Point Park, the North Bank Bridge, the Gridley Locks Footpath, the proposed-but-not-yet-constructed South Bank Park, and the pier and riverfront walkway. Therefore, pursuant to the definition of a *de minimis* impact at 23 CFR 774.17 and having fulfilled the coordination requirements at 23 CFR 774.3(b) and 23 CFR 774.5(b)(2)(ii) the FTA has made a *de minimis* impact determination for these six Section 4(f) properties.

DCR concurred with FTA on January 8, 2025, that the Proposed Project would not adversely affect the recreational activities, features, or attributes that qualified the properties for Section 4(f) protection (see **Appendix D**). Measures to minimize harm to parklands and public recreation areas in the vicinity of the Proposed Project have been developed with and agreed upon by MBTA and DCR. Potential measures to minimize harm may include signed detours for pedestrians and bicyclists posted for each walking/biking path affected during construction activities. Regrading; seeding; planting trees, shrubs, and other permanent plantings; and/or general landscaping are other possibilities for areas disturbed by construction.

Consistent with 23 CFR 774.13(a)(2), the existing NRHP-eligible Draw One Bridge spans and Signal Tower A are excepted from Section 4(f) consideration as 4(f) resources because the Proposed Project comprises the replacement of line elements for existing railroad and commuter rail system operations.

5.4 Floodplains

As portions of the Project Limits are located within the 100-year floodplain (one percent annual-chance flood event), the Draw One Bridge Replacement Project is subject to the provisions of Executive Order 11988 and USDOT Order 5650.2 on Floodplain Management. The Proposed Project would not be considered a significant encroachment onto the floodplain because it comprises the replacement of MBTA infrastructure already located within a floodplain and would not result in adverse impoundment, diversion, higher flood levels, or contamination of floodwaters. Further, given the minor modifications to the floodplain that would result with the Draw One Bridge Replacement Project, and its location within the already lock-controlled Charles River basin and upstream of the Gridley Locks, adverse impacts to the floodplain or flooding of areas adjacent to the study area are not expected.

Although the Proposed Project has been designed in accordance with MBTA's Flood Resiliency Design Directive and Drainage Design Directive, and with a Design Flood Elevation (DFE) of 13.1 feet, sea level rise would remain a flood risk to the proposed new Draw One Bridge and Signal Tower A given track profile limitations.

5.5 Air Quality Conformity

The Federal Clean Air Act (CAA) regulates air quality in the United States. Among other things, it requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS), identify areas not in attainment of the NAAQS, and review/approve State Implementation Plans (SIPs) for achieving those standards. In addition to the CAA, other major regulations applicable to the Project Limits that pertain to the potential air quality impacts of transportation projects include:

- The General Conformity Rule, 40 CFR Part 93 Subpart B; and
- Air Pollution Control, CMR 310 CMR 7.00.

The Draw One Bridge Replacement Project would comply with the Transportation Conformity Rule and is not expected to cause any air quality impacts as result of operational emissions as there would be no projected increase in diesel passenger train operations.

Construction of the Proposed Project would generate emissions from diesel- and gasoline-powered construction equipment, diesel-powered generators, diesel trucks, marine-based diesel equipment and tugboats, and heavy-duty trucks transporting excavated material and delivering construction materials. Building demolition, ground clearing, site preparation, grading, transportation and stockpiling of materials, and on-site equipment movement could result in fugitive dust emissions.

Construction activities would be performed in accordance with established best management practices (BMPs) (e.g., water suppression, use of tarping on trucks hauling loose materials, etc.). Emissions from construction activities are expected to be minimal and are not expected to substantially affect ambient air quality. Construction-period emissions associated with the Proposed Project are not predicted to exceed the General Conformity Rule's *de minimis* emission thresholds. Thus, construction air quality impacts are anticipated to be minor.

5.6 Noise and Vibration Findings

The broad steps outlined in FTA's Transit Noise and Vibration Impact Assessment Manual (FTA 2018) were followed to evaluate the Proposed Project, and construction noise for each stage was calculated using specific source levels and methods provided in the Federal Highway Administration Roadway Construction Noise Model (RCNM). The screening procedure was used to identify which noise- or vibration-sensitive uses could potentially be affected by the Proposed Project and the detailed noise/vibration impact assessment procedures were used to identify potential noise and vibration impacts. The construction noise criteria applicable to the Proposed Project are based on City of Boston noise limits.⁷

The analysis conservatively assumes that all construction equipment, except for pile driving, would operate simultaneously throughout each respective phase of construction and at the construction location closest to each receptor point. Pile driving is allowed as long as it occurs during weekdays between the hours of 7 AM and 6 PM. Based on the results of the analysis, the Proposed Project would result in construction noise impacts that would require mitigation.

Temporary construction vibration levels were predicted for the most vibration-intensive equipment (such as pile drivers) used throughout each respective phase of construction. The analysis conservatively assumes that all buildings are Category III for the damage assessment.⁸ Annoyance thresholds are 80 VdB for places where people sleep, 83 VdB for institutional uses, and 84 VdB for offices. Construction vibration predictions indicate that impacts would occur during all construction stages and would require mitigation.

⁷ While Cambridge regulates construction noise via their noise ordinance, which limits construction noise to certain time periods that vary for weekends, Saturdays and holidays, and Sundays, the City of Boston's criteria are associated with quantitative impact threshold metrics and are therefore more readily applicable to analysis. However, the City of Boston does not regulate pile driving.

⁸ Vibration Category III comprises institutional uses, including buildings with primarily daytime and evening use. This category includes schools, libraries, and churches.

However, while the analysis assumptions are conservative, the primary cause of noise and vibration impacts would be the use of heavy equipment and pile driving, which would progress across the Project Limits and would not occur continuously throughout the construction period.

In addition, changing the railroad alignment would shift commuter and Amtrak trains closer to some noise- and vibration-sensitive receptors (e.g., the MGH administration building, which comprises only administrative offices, not medical uses), though this change in alignment is not expected to result in exceedances of the applicable impact criteria. Based on the conducted analysis, FTA finds the Proposed Project with mitigation measures described herein would not result in significant long-term noise or vibration impacts.

5.7 Environmental Justice Findings

Per Executive Order 14096 on Environmental Justice (EJ), a disproportionate adverse effect on an environmental justice population is an adverse effect that is predominantly borne by a minority and/or low-income population or will be appreciably greater for the minority and/or low-income population than for the non-minority and/or non-low-income population. Effects that may occur as a result of a proposed action may be considered in the context of associated mitigation measures and offsetting benefits when determining whether disproportionate adverse effects may be likely to occur.

The Project Limits touch both the City of Cambridge and the City of Boston and are located entirely in an area that can be considered an EJ community based on State guidance. Therefore, any adverse effects from the construction or operation of the Draw One Bridge Replacement Project would occur in an environmental justice community.

However, the Proposed Project would not disproportionately affect EJ communities. The Proposed Project would replace an existing bridge on an existing rail corridor and would represent an overall benefit to the entire community. It is important to the region's continued economic prosperity. The improved safety and reliability of the Draw One Bridge would benefit EJ communities, which comprise a substantial portion of the local community. The long-term benefits of the Proposed Project would accrue not only to the local EJ communities working, living near, or commuting to/from North Station, but also to EJ communities throughout the region that depend on the regional rail accessibility provided by the Draw One Bridge and the regional economic benefits accruing from its continued usage. Based on the analysis, FTA finds the Proposed Project would not result in disproportionately adverse effects on minority or low-income populations.

5.8 Executive Order 11990, Wetlands Protection

The USDOT seeks to assure the protection, preservation, and enhancement of the nation's wetlands to the fullest extent practicable during the planning, construction, and operation of transportation facilities and projects. (DOT Order 5660. 1A; Executive Order 11990).

The Project Limits are situated in the lower portion of the Charles River Basin, which separates Boston and Cambridge. Although historically tidal, the Basin has been cut off from the ocean by a system of locks and dams – the Charles River Dam and Locks. The locks are approximately 900 feet downstream of the Project Limits, near the North Washington Street (Route 99) bridge. There are no tidal flows that reverse the general downstream passage of water from the Charles River upstream of the Charles River Dam and

Locks, including within the Project Limits. However, depending on tides, when the locks are opened, there is an upstream incursion of salt water along the bottom of the river, which extends into the lower Basin of the Charles River to varying degrees.

Construction would require both dredging and filling within the Charles River, which would result in sediment disturbance and the production of dredge spoil. Filling would consist primarily of installation of drilled shafts and tremie pour⁹ behind “king” pile abutments along the riverbanks. The estimated total temporary surface area disturbance of the riverbed associated with demolition and construction is approximately 30,912 square feet (0.71 acre), and the estimated total area of permanent fill in the riverbed would be approximately 11,411 square feet (0.26 acre). If determined necessary, cofferdams would be installed to support the removal of caissons supporting the former bridge piers and minimize disturbance and dispersal of river sediments. Cofferdam installation would be conducted from a barge prior to the construction of the temporary trestles, and any cofferdams would be removed following caisson removal.

Given the slow water flow velocities and the impounding nature of the river’s lock and dam system, it is not anticipated that the Boston Inner or Outer harbors would experience elevated total suspended sediment levels. Multiple discrete dredging events would occur over the construction duration, but no single dredging event is expected to generate a significant amount of sediment.

These temporary and permanent construction activities will require a USACE Section 404 permit and a Massachusetts Department of Environmental Protection (MassDEP) Section 401 Water Quality Certification (WQC). Mitigation measures to address the required fill within the riverbed will be completed prior to construction as part of the USACE permitting process.

5.9 Endangered Species Act (ESA)

The Endangered Species Act of 1973, as amended (ESA), intends to protect threatened and endangered species and the ecosystems on which they depend. The ESA requires a Federal agency to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any listed species or result in direct mortality or destruction or adverse modification of critical habitat of listed species. This requirement is fulfilled under Section 7 of the ESA by review of the proposed actions and consultation with the appropriate agency responsible for the conservation of the affected species. Mitigation may be required to avoid jeopardizing listed species or their habitat.

The determination of the Draw One Bridge Replacement Project’s potential effects on ESA-listed species with potential occurrence in the Action Area¹⁰ was undertaken by evaluating the stressors associated with construction activities when added to existing or baseline conditions. Once a potential effect was identified, it was then assessed to determine the nature of the effect and to characterize the effect in terms of the categories specified in ESA implementing regulations. Effects can be insignificant in that they

⁹ Tremie pour is a method to pour concrete underwater to lessen concrete washout from the surrounding water.

¹⁰ The *Action Area* is defined in 50 CFR 402.02 as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” For the Proposed Project, the Action Area has been defined to consider three primary potential effects: turbidity resulting from increased suspended sediments; hydroacoustic noise from pile driving; and construction vessel transit activity.

are so small they cannot be meaningfully measured, detected, or evaluated; extremely unlikely to occur; or wholly beneficial.

Based on the analysis and consultation process, FTA determined the Proposed Project may affect, but is not likely to adversely affect, the following seven species: Atlantic sturgeon, shortnose sturgeon, North Atlantic right whale, leatherback turtle, loggerhead turtle, Kemps ridley turtle, and green turtle. The Proposed Project would have no effect on the fin whale because it would not occur in the Action Area. Supporting rationale for the effects analysis includes the following:

- Only the Atlantic and shortnose sturgeons have potential to occur throughout the Action Area, and the potential for occurrence is unlikely due to the generally low quality of the aquatic habitat. The North Atlantic right whale and four sea turtles would not occur above the Charles River Dam and Locks and are unlikely to occur in the Boston Harbor or downstream areas, although transient individuals could be present.
- The quality of aquatic habitat in the Charles River is not suitable for breeding activities and is marginally suitable for foraging. The sturgeons could use the river for migration or movement and potentially foraging, but would not breed or lay eggs in the river.
- Potential effects from the Draw One Bridge Replacement Project relate to increased turbidity during in-water construction activities; noise generated by pile driving and other construction activities; vessel strikes in the Boston Harbor and upstream into the river; and habitat modification from dredging, demolition activities, and installation of new bridge components in the river. The multi-year schedule for construction would spread out some of the effects, and various conservation measures, such as time of year (TOY) restrictions and sediment control, would minimize or avoid some effects. Overall, these effects would be insignificant and discountable with little potential to adversely affect the listed species that could be found in the Action Area.

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) System data report did not identify any endangered species or critical habitats in the vicinity of the Project Limits, nor did it identify birds of conservation concern protected under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act that have the potential to occur within the vicinity of the Project Limits.

Following submittal of consultation request documentation on December 2, 2024, and December 19, 2024, NOAA Fisheries provided concurrence with FTA's conclusion that the Draw One Bridge Replacement Project would not be likely to adversely affect any ESA-listed species or designated critical habitat in a letter dated January 10, 2025 (see **Appendix E** of this FONSI).

5.10 Essential Fish Habitat (EFH)

An Essential Fish Habitat (EFH) Evaluation was prepared in accordance with Section 305(b)(2)-(4) of the Magnuson-Stevens Act (MSA) to assess the potential impacts to EFH species. The Proposed Project would have temporary and permanent effects on the EFH within the Project Activity Area¹¹ and on National

¹¹ The *Project Activity Area* is defined as the surrounding waterbodies within a ¼-mile radius from the center of the Project Limits.

Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) Trust Resource Species that could occur in the Project Activity Area.

Though construction activities, like most anthropogenic development activities, are known to have an adverse effect on EFH and fish species, they would be minimized by the employment of various conservation measures. Furthermore, the physical barrier of the Charles River Dam and Locks reduces the likelihood that EFH species would be present in the Project Limits, and the slow water speed allows suspended solids to drop from the water and continually build up upstream of the dam, which would not allow vegetative habitats to develop. The Proposed Project may have adverse, but not substantial, effects on EFH species, because the impacts would be avoided, minimized, and offset (see **Appendix B** of this FONSI).

For NOAA Fisheries Trust Resource Species, a similar conclusion can be drawn, as the Draw One Bridge Replacement Project would implement various measures to minimize the effects of major silt producing activities or high noise levels. The passage past the work site would not be more than 25 percent restricted to allow upstream and downstream migrating fish sufficient room to move through the work site. Construction activities that produce potentially harmful effects on migrating fish would be intermittent over the course of any given day, and the days of a week; for example, nighttime work would occur on a very limited basis, if at all.

Therefore, the Proposed Project would likely have only a minor adverse impact, which is not substantial enough to measurably affect population levels of any species, on EFH and fish species as well as NOAA Fisheries Trust Resource Species. Measures to minimize and mitigate impacts would be implemented, further reducing the impacts to these species (see **Appendix B** of this FONSI).

In a letter dated January 13, 2025, NOAA Fisheries indicated that the EFH assessment for the Draw One Bridge Replacement Project included sufficient minimization and avoidance measures (see **Appendix F** of this FONSI).

5.11 Maritime Navigation

The Proposed Project would decrease the current unlimited Draw One Bridge clearance to a minimum vertical clearance of 32.2 feet and a 45-foot horizontal clearance, consistent with clearances provided both upstream and downstream of the Draw One Bridge. USCG has made a preliminary determination that the replacement bridge with the proposed clearances will meet current and future navigation needs. Therefore, the proposed replacement spans would provide sufficient vertical and horizontal clearance for marine traffic and improve the reliability of navigation beneath the bridge, and therefore the future with the Proposed Project would represent an improvement over existing conditions and the No Action Alternative, both of which represent a continuation of infrastructure deterioration, operational deficiencies, and safety concerns.

In addition, construction activities and sequencing in the Charles River would minimize conflicts with navigational traffic. The navigation channel may be temporarily closed, or its width reduced, to allow for staging of construction barges at least five times throughout construction; these closures would be up to approximately one week at a time, totaling up to approximately two months. However, MBTA would coordinate the timing and length of these temporary channel closures with USCG and DCR, and mariners

would be notified as needed. Safety measures (e.g., lighting on barges) would be implemented in coordination with USCG.

5.12 Coastal Zone

A small portion of the Project Limits – the east end of the North Bank Bridge at Paul Revere Park – is located within the Massachusetts Coastal Zone; therefore, the Proposed Project is subject to Federal Consistency Review under the Massachusetts Office of Coastal Zone Management’s (CZM) coastal program. Neither construction nor operation of the Proposed Project is anticipated to result in significant adverse effects related to the coastal zone, given that it would be consistent with Massachusetts coastal program policies (e.g., to reduce threats related to coastal hazards). A Federal Consistency Review will be prepared and submitted to CZM during the Proposed Project’s final design phase to facilitate CZM’s review and concurrence prior to construction.

5.13 Permits

As described in Section 8, “Federal, State, and Local Permits and Approvals,” of the EA, MBTA will be required to obtain all necessary federal and state permits and approvals prior to the project’s start of construction. **Appendix G** includes a list of required federal and state permits and approvals.

6. Conclusion

FTA served as the Lead Federal Agency under NEPA for the project. MBTA submitted an EA in compliance with NEPA (42 USC 4321 *et. seq.*); NEPA’s implementing regulations (40 CFR Part 1500 *et. seq.*); and FTA’s regulations (23 CFR Part 771). The EA describes the project’s potential effects and proposed mitigation measures to reduce impacts.

FTA has reviewed the EA and supporting documents, public and agency comments, and responses to comments. Pursuant to 23 CFR 771.121, FTA finds there are no significant impacts on the environment associated with the development and operation of the Proposed Project as described in the EA and established mitigation measures. Preparation of an Environmental Impact Statement (EIS) is not warranted.

Appendices:

Appendix A – Responses to Comments on the Draft EA

Appendix B – Summary of Potential Project Impacts and Benefits and Proposed Measures to Avoid, Minimize, or Mitigate

Appendix C – Section 106 Agreement Document (Executed MOA)

Appendix D – DCR Concurrence with FTA Section 4(f) *de minimis* Determination

Appendix E – NOAA Fisheries ESA Section 7 Consultation

Appendix F – NOAA Fisheries EFH Consultation

Appendix G – Permits and Approvals

FEDERAL TRANSIT ADMINISTRATION
REGION 1

Finding of No Significant Impact

Project: Draw One Bridge Replacement Project
Bridge No. B-16-479

Applicant: Massachusetts Bay Transportation Authority

Project Location: Cambridge and Boston, Massachusetts

Approved:



Peter S. Butler
Regional Administrator
Federal Transit Administration, Region 1

Date:

1/16/25

Concur:



Charles J. Dyer
Regional Counsel
Federal Transit Administration, Region 1

Date:

1/16/2025