



Cape Cod Bridges Program

Bourne, Massachusetts

Appendix 5.1

Sagamore Bridge: Section 4(f) Programmatic Evaluation for a Historic Bridge

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
ACHP	Advisory Council on Historic Preservation
CFR	Code of Federal Regulations
FHWA	Federal Highway Administration
MassDOT	Massachusetts Department of Transportation
MHC	Massachusetts Historical Commission
MRER/EA	Major Rehabilitation Evaluation Report/Environmental Assessment
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
Program	Cape Cod Bridges Program
SHPO	State Historic Preservation Officer
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation

1 Introduction

As a U.S. Department of Transportation (USDOT) financially supported transportation program through the Federal Highway Administration (FHWA), the Cape Cod Bridges Program (Program) is subject to the regulatory requirements of Section 4(f) of the U.S. Department of Transportation Act of 1966 (USDOT Act), as amended.¹ Section 4(f) of the USDOT Act, commonly referred to as Section 4(f), protects publicly owned parks, recreation areas, and wildlife and waterfowl refuges of national, state, or local significance, or any publicly or privately owned historic site listed or eligible for listing in the National Register of Historic Places (NRHP) from “use” by transportation projects that receive funding from or require approval by an agency of the USDOT. FHWA’s regulations for implementing Section 4(f) are available at Title 23 Code of Federal Regulations (CFR) 774.

Sagamore Bridge is a historic site that is eligible for listing on the NRHP; therefore, it qualifies for protection under Section 4(f). The construction and operation of the Program would demolish the bridge, thereby resulting in an “Adverse Effect” to the bridge under Section 106 of the National Historic Preservation Act (NHPA), and a “use” of the bridge under Section 4(f).

This appendix presents an evaluation of the use of Sagamore Bridge under Section 4(f). FHWA and the Massachusetts Department of Transportation (MassDOT) have conducted extensive planning and as a result of review under Section 4(f) and Section 106 of the NHPA, FHWA has determined that the proposed use of Sagamore Bridge meets the criteria for [Programmatic Section 4\(f\) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges](#) (Nationwide Historic Bridges Programmatic Evaluation).² There are no feasible and prudent alternatives to the use of the Section 4(f) resource and the proposed activity includes all possible planning to minimize harm to the Section 4(f) resource.

2 Applicability

The Section 4(f) Regulations at 23 CFR 774.3(d) provide the authority to develop programmatic Section 4(f) evaluations as a time-saving alternative to individual evaluations for certain types of uses. The Nationwide Historic Bridges Programmatic Evaluation may be applied by FHWA when a proposed action will “use” a bridge that is on, or eligible for listing on, the NRHP and when the action will impair the historic integrity of the bridge, either by rehabilitation or demolition. The following presents the specific criteria for the Nationwide Historic Bridges Programmatic Evaluation for Sagamore Bridge:

1. The bridge is to be replaced or rehabilitated with Federal funds.

The replacement of Sagamore Bridge will be supported in part with funds issued by USDOT.

¹ 49 U.S. Code Section (USC) 303, 23 USC 138

² 48 FR 38135-03. https://archives.federalregister.gov/issue_slice/1983/8/22/38134-38140.pdf#page=2.

2. The project will require the use of a historic bridge structure that is on or is eligible for listing on the NRHP.

The replacement of Sagamore Bridge will demolish the existing Sagamore Bridge, resulting in the use of a historic bridge structure. Sagamore Bridge was determined eligible for listing on the NRHP on March 6, 1991.

3. The bridge is not listed as a National Historic Landmark.

Sagamore Bridge is not listed as a National Historic Landmark by the National Park Service.

4. The FHWA Division Administrator determines that the facts of the project match those set forth in the sections of this document labeled Alternatives, Findings, and Mitigation.

This Nationwide Historic Bridges Programmatic Evaluation has been prepared to comply with the requirements as identified in 23 CFR 774 and Section 4(f) guidance documents.

5. Agreement among the FHWA, the State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP) has been reached through procedures pursuant to Section 106 of the NHPA.

FHWA, MassDOT, U.S. Army Corps of Engineers (USACE), and the Massachusetts SHPO [have developed](#) a Programmatic Agreement for the Program to resolve adverse effects to Sagamore Bridge under Section 106 of the NHPA. Documentation of the agreement among FHWA, MassDOT, USACE, and the Massachusetts SHPO [is](#) provided in the combined Final Environmental Impact Statement and Record of Decision. [The](#) Programmatic Agreement is provided as **Attachment 1**.

3 Description of Sagamore Bridge

Sagamore Bridge (Bridge B-17-005) carries U.S. Route 6 across Cape Cod Canal, Sandwich Road, and the Massachusetts Coastal Railroad in the town of Bourne, Barnstable County, Massachusetts. Along with Bourne Bridge, USACE constructed Sagamore Bridge between 1933 and 1935 during an extensive reconstruction of Cape Cod Canal to its current width and depth. Both bridges were funded under the National Industrial Recovery Act of 1933 and constructed through the Depression-era Public Works Administration. Sagamore Bridge is a three-span, 1,408-foot-long steel riveted Warren continuous truss bridge. According to the original USACE design drawings, Sagamore Bridge is comprised of three continuous spans with span lengths of 396 feet, 616 feet, and 396 feet.

Sagamore Bridge was determined eligible for inclusion in the NRHP on March 6, 1991. It is included in the Massachusetts Historical Commission's (MHC) Inventory of Historic and Archaeological Assets of the Commonwealth (MHC Inventory), which is managed through the online Massachusetts Cultural Resources Information System, as BOU.918. Additionally, it is a contributing resource to the NRHP-eligible Cape Cod Canal Historic District. **Section 4.16, Cultural Resources**, provides additional details about the historic bridge. [Exhibit 1](#) presents a view of Sagamore Bridge.

Exhibit 1. View of Sagamore Bridge, facing southeast



Source: Massachusetts Department of Transportation, 2024

4 Impacts, Use, and Section 4(f) Determination

FHWA and USACE, in consultation with SHPO, have determined that demolition of Sagamore Bridge has an Adverse Effect on the NRHP-eligible bridge structure in accordance with 36 CFR 800.5(a)(2)(i), resulting in a use of a Section 4(f)-protected property.

5 Avoidance Alternatives Evaluation

5.1 Summary of Requirements

Avoidance alternatives have been evaluated for the application of the Nationwide Historic Bridges Programmatic Evaluation in compliance with Section 4(f) of the USDOT Act. According to 23 CFR 774.17, alternatives that compromise the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need are not considered prudent.

The Nationwide Historic Bridges Programmatic Evaluation identifies the following avoidance alternatives to be evaluated, as an all-inclusive list:

- Do Nothing.

- Build on a new location without affecting the historic integrity of the old bridge, as determined by procedures implementing NHPA.
- Rehabilitate the historic bridge without affecting the historic integrity of the structure, as determined by procedures implementing the NHPA.

Section 5.1.1 through Section 5.1.3 describe the specific factors presented in the Nationwide Historic Bridges Programmatic Evaluation, whereby alternatives would not be considered feasible and prudent.

5.1.1 Do-Nothing Alternative

The Programmatic Evaluation requires an evaluation of the Do-Nothing Alternative, noting that this alternative is not feasible and prudent for the following reasons:

- Maintenance – This alternative would not correct the situation that causes the bridge to be considered structurally deficient or deteriorated, citing that normal maintenance is not considered adequate.
- Safety – This alternative would not correct the situation causing the bridge to be considered deficient.

5.1.2 Build on New Location Without Using the Old Bridge

The Programmatic Evaluation requires an evaluation of an alternative that constructs a bridge on a new location or parallel to the old bridge without using the old bridge, noting that this alternative is not feasible and prudent if one or more of the following would apply:

- Terrain – The present bridge structure has already been located at the only feasible and prudent site. To build a new bridge at another site will result in extraordinary bridge and approach engineering and construction difficulty or costs or extraordinary disruption to established traffic patterns.
- Adverse Social, Economic, or Environmental Effects – Building a new bridge away from the present site would result in social, economic, or environmental impact of extraordinary magnitude.
- Engineering and Economy – Where difficulty associated with the new location is less extreme than those encountered above, a new site would not be feasible and prudent where cost and engineering difficulties reach extraordinary magnitude.
- Preservation of Old Bridge – It is not feasible and prudent to preserve the existing bridge, even if a new bridge were to be built at a new location.

5.1.3 Rehabilitation Without Affecting the Historic Integrity of the Bridge

The Programmatic Evaluation requires an evaluation of an alternative that rehabilitates the existing bridge without affecting the historic integrity of the bridge, noting that this alternative is not feasible and prudent if one or more of the following would apply:

- (a) The bridge is so structurally deficient that it cannot be rehabilitated to meet minimum acceptable load requirements without affecting the historic integrity of the bridge.
- (b) The bridge is seriously deficient geometrically and cannot be widened to meet the minimum required capacity of the highway system on which it is located without affecting the historic integrity of the bridge.

5.2 Evaluation of Cape Cod Bridges Program Avoidance Alternatives

As part of the alternatives analyses conducted for the Program, FHWA and MassDOT screened the Universe of Alternatives presented in USACE’s Major Rehabilitation Evaluation Report/Environmental Assessment (MRER/EA) to determine those reasonable alternatives to be carried forward for evaluation in the Environmental Impact Statement. MassDOT documented its extensive alternatives analysis in the following reports, provided as **Appendix 3.1, Alternatives Assessments Technical Report**:

- Cape Cod Bridges Program Alternatives Analysis Report (February 2024, updated July 2025)
- Cape Cod Bridges Program Highway Interchange Approach Options Detailed Assessment Report (July 2025)

Of the 12 alternatives comprising the Universe of Alternatives, **Table 1** lists the alternatives that would avoid a Section 4(f) use of the Sagamore Bridge and are consistent with the alternatives identified in the Nationwide Historic Bridge Programmatic Evaluation.

Table 1. Avoidance Alternatives

Nationwide Historic Bridges Programmatic Evaluation – Avoidance Alternatives Required for Consideration	Applicable Avoidance Alternative
Do Nothing	No Build Alternative
Build on New Location without Using the Old Bridge	New Third Highway Bridge Alternative, consisting of building an additional highway bridge on a new location
Rehabilitation without Affecting the Historic Integrity of the Bridge	Major Rehabilitation of Both Bridges Alternative

The following sections discuss the evaluation of avoidance alternatives for the Section 4(f) use of Sagamore Bridge.

5.3 No Build Alternative

The No Build Alternative was presented as the Base Condition in the MRER/EA's Universe of Alternatives. For the No Build Alternative, USACE would implement continued maintenance and repairs to Sagamore Bridge, as needed to maintain safety (Fix as Fails). In this scenario, Sagamore Bridge would retain its current configuration of substandard lane widths, inadequate safety barriers, minimal pedestrian and bicycle accommodations and steep approach grades. No major rehabilitation efforts involving extensive repairs and replacement of major bridge components would occur. Structural components would be repaired, and critical elements would be replaced only when inspections indicate unsatisfactory reliability ratings.

As the bridge ages, routine maintenance and minor component replacements would result in unacceptable structural conditions. As a result, it is likely that lower vehicle weights, traffic volume restrictions, and speed limits would be required and posted to maintain continued bridge safety. The component deficiencies of the 90+-year-old bridge and its increasingly frequent maintenance needs would continue to impede mobility and accessibility for road users crossing Cape Cod Canal. Further, the No Build Alternative would result in unacceptable safety and operational problems.

In the MRER/EA, USACE concluded that for the Base Condition (No Build Alternative), there would be no adverse effect on the NRHP-eligible Sagamore Bridge (and therefore, no Section 4(f) use would occur), as there would be no change in the bridge's appearance or location and the bridge would continue to be maintained and repaired.³

While the No Build Alternative would avoid use of the NRHP-eligible Sagamore Bridge, it would not be a feasible and prudent alternative regarding maintenance and safety considerations. Sagamore Bridge, serving traffic since 1935, has deteriorated over time and is classified as functionally obsolete, as it does not meet current MassDOT bridge and highway design standards for travel lane widths, median barrier separation, shoulder widths, and roadway grades. While Sagamore Bridge was not classified as "structurally deficient" as of the USACE's September 2021 inspection, several gusset plates connecting the truss members within the superstructure exhibited advanced section loss and deformation due to corrosion. Severe deterioration or warping of gusset plates could lead to localized failures and, in extreme cases, a progressive collapse of the steel truss superstructure. Further, deterioration was noted in certain areas of the deck, superstructure, and substructure, and fatigue sensitive details were identified in the Fracture Critical Member inspection. The fix as fails maintenance approach of the No Build Alternative would not address these deficient structural components as a matter of course.

As further described in **Chapter 2, Program Purpose and Need**, the No Build Alternative would not meet the purpose and need. Therefore, the No Build Alternative is not a feasible and prudent alternative.

³ U.S. Army Corps of Engineers. Cape Cod Canal Highway Bridges, Bourne, Massachusetts, Major Rehabilitation Evaluation Report and Environmental Assessment, EA-46. March 2022.

5.4 New Third Highway Bridge Alternative

Construction of a New Third Highway Bridge was presented as an alternative in the MRER/EA's Universe of Alternatives based on MassDOT's conceptual development in its 2019 Cape Cod Canal Transportation Study. In this alternative, a new mid-canal bridge crossing extending from State Route 25 north of Cape Cod Canal to U.S. Route 6 south of the canal would be provided, and USACE would implement an ongoing program of inspection, maintenance, and repairs of the existing Sagamore and Bourne Bridges through their remaining life (No Build Alternative).

The New Third Highway Bridge Alternative would result in environmental impact of extraordinary magnitude. Based on conceptual level design, MassDOT determined that the New Third Highway Bridge Alternative would require major infrastructure construction, as well as redesign and realignment of regional highways and local roadways on both the Cape Cod and mainland sides of the canal. The roadway infrastructure necessary to accommodate a new mid-canal crossing would result in extensive impacts to sensitive environmental resources, including anticipated impacts to more than seven acres of wetlands, over 53 acres of State-protected Article 97 open space, over 51 acres of rare species habitat, and over 54 acres of an Area of Critical Environmental Concern (ACEC).⁴ Further, permanent impacts to Article 97 property would require authorization of the Massachusetts Legislature, adding substantial complexity to this alternative.

Additionally, the New Third Highway Bridge Alternative would not provide a solution for addressing the underlying structural and roadway design deficiencies of the existing highway bridge and its approaches. Sagamore Bridge would retain its current configuration of substandard lane widths, inadequate safety barriers, minimal pedestrian and bicycle accommodations, and steep approach grades. The component deficiencies of the 90+-year-old bridge and its increasingly frequent maintenance needs would continue to impede mobility and accessibility for road users crossing Cape Cod Canal via Sagamore Bridge.

Similar to the No Build Alternative, in the New Third Highway Bridge Alternative, there would be no effect on Sagamore Bridge; the bridge would continue to be maintained and repaired, and there would be no change in the bridge's appearance or location.

While the New Third Highway Bridge Alternative would avoid use of the NRHP-eligible Sagamore Bridge, it is not a feasible and prudent alternative as it would not meet the purpose and need for the Program, and it would also have extensive adverse environmental effects. **Table 2** summarizes MassDOT's reasons for eliminating the New Third Highway Bridge Alternative as a feasible and prudent avoidance alternative according to the criteria described in **Section 5.1.2**.

⁴ MassDOT, Office of Transportation Planning, Cape Cod Canal Transportation Study, Chapter 4, Alternatives Development, Public-Private Partnership Alternatives.

Table 2. Assessment of the New Third Highway Bridge Alternative as a Feasible and Prudent Avoidance Alternative

It is not feasible and prudent to avoid Section 4(f) property by constructing at a new location if:	New Third Highway Bridge Alternative
(b) Adverse Social, Economic, or Environmental Effects – Building a new bridge away from the present site would result in social, economic, or environmental impact of extraordinary magnitude.	Based on conceptual level design, the Massachusetts Department of Transportation determined that the New Third Highway Bridge Alternative would require major infrastructure construction, as well as redesign and realignment of regional highways and local roadways on both the Cape Cod and mainland sides of the canal. The roadway infrastructure necessary to accommodate a new mid-canal crossing would result in extensive impacts to sensitive environmental resources, including over seven acres of wetlands impacts; over 53 acres of impacts to State-protected open space, over 51 acres of impacts to rare species habitat, and over 54 acres of impacts to a designated Area of Critical Environmental Concern.

5.5 Major Rehabilitation of Both Bridges Alternative

The Major Rehabilitation Alternative was presented as a reasonable alternative in the MRER/EA's Universe of Alternatives that met USACE's project purpose and need. For the Major Rehabilitation Alternative, USACE would implement a program of repairs and major rehabilitation for both Sagamore and Bourne Bridge to maintain safety and avoid future restrictions on bridge weight postings. Major rehabilitation would involve substantial repairs and replacement of major bridge components such as connections between the spans and the piers/abutments, hangers that connect deck and truss sections, fracture-critical gusset plates that tie truss members together, and substructure members of the decks. The ongoing program of continual inspection, maintenance, and repairs also would continue throughout the remaining life of the bridges.

[In the MRER/EA, USACE concluded that the major rehabilitation of Sagamore Bridge would not change the appearance or location of the bridge and would have no adverse effect on the bridge. While changes would be made to the bridge, it would have the same appearance following rehabilitation, as materials would be replaced in-kind. SHPO concurred with USACE's determination on August 22, 2019.](#)

[Sagamore Bridge is classified as functionally obsolete as it does not meet current MassDOT bridge and highway design standards for travel lane widths, median barrier separation, shoulder widths, and roadway grades. In the Major Rehabilitation Alternative, Sagamore Bridge would not be brought up to current FHWA and MassDOT design standards or American Association of State Highway and Transportation Officials \(AASHTO\) guidelines. The bridge would retain its current configuration of substandard 10-foot lane widths, versus 12-foot standard lane widths for limited access highways; minimal pedestrian and bicycle accommodations that do not meet current accessibility standards; and steep \(6%\) approach grades that exceed the maximum grade \(4-5 %\) typical for limited access highways. Additionally, the Major Rehabilitation Alternative would not address the bridge's lack of](#)

physical separation between opposing traffic lanes and shoulders to provide emergency vehicle access and refuge for vehicle breakdowns or crashes.

In its current configuration, Sagamore Bridge is seriously deficient geometrically and cannot be widened to meet the minimum required capacity of the highway system on which it is located without affecting the historic integrity of the bridge. Under current travel patterns, the right-most through travel lane in each direction on the bridge is often used as an acceleration and deceleration lane to facilitate vehicles entering and exiting the bridge from the adjacent interchange ramps, increasing lane-changing maneuvers and reducing the efficiency of cross-canal traffic movement. Per AASHTO highway design standards for adequate acceleration lane, deceleration lane, and taper lengths for interchange access to the bridge north and south of the canal crossing, a continuous auxiliary lane in each direction for the full length of Sagamore Bridge is required.

In existing conditions, the proximity of interchanges and intersections at the end of the bridge and the lack of an auxiliary lane across the bridge and the adjoining roadways result in weaving and merging issues for motorists, which further increases congestion and queueing. Approaching Sagamore Bridge from the north on State Route 3, the roadway narrows from two lanes to one, creating slowdowns and queueing, especially during peak travel periods. The Major Rehabilitation Alternative would not address these substandard design elements of the bridge's approaches from the north and south of Cape Cod Canal.

While the Major Rehabilitation Alternative would avoid use of the NRHP-eligible Sagamore Bridge, the component deficiencies of the existing bridge, combined with prolonged construction period bridge closures and ongoing maintenance requirements throughout the remaining life of the bridge (as described in [Section 5.3](#)), would continue to impede mobility and accessibility for road users crossing Cape Cod Canal, as well as contribute to the bridge's high crash rate.

In existing conditions, Sagamore Bridge experienced a significantly higher crash rate than the MassDOT average crash rate for similar principal arterial roadways between January 1, 2017, and December 31, 2019. The MassDOT crash rate for a similar facility is 0.80 crashes per million vehicle miles traveled (MVMT). Sagamore Bridge experienced a crash rate of approximately 2.6 crashes per MVMT or 228% higher than the Massachusetts average crash rate for a principal arterial roadway. While approximately 36% of the crashes on Sagamore Bridge reported during the 2017–2019 study period were reported as rear-end type collisions, which can be attributed to congestion, approximately 63% of the crashes were reported to be sideswipe, head-on, or single-vehicle crashes, attributed to the narrow 10-foot-wide lanes, lack of shoulders, and lack of median separation between the directions of travel.⁵

Further, because Sagamore Bridge was built in the 1930s, it does not meet current seismic design standards. Based on criteria provided in the MassDOT Load and Resistance Factor Design bridge design specifications, Sagamore Bridge is designated as a "Critical and Essential Bridge," indicating that it must be operational following a natural disaster or other event. Given the age and underlying structural

⁵ Approximately 1% of the crashed were not reported by type.

deficiencies of the bridge, it is vulnerable to damage from major seismic events or extreme weather-related events, such as hurricanes.

The Major Rehabilitation Alternative would not meet the purpose and need for the Program, as further described in **Chapter 2, Program Purpose and Need**. Therefore, the Major Rehabilitation Alternative is not feasible and prudent. **Table 3** summarizes MassDOT’s reason for eliminating the Major Rehabilitation Alternative as a feasible and prudent avoidance alternative according to the criteria described in **Section 5.1.3**.

Table 3. **Assessment of the Major Rehabilitation Alternative as a Feasible and Prudent Avoidance Alternative**

It is not feasible and prudent to avoid Section 4(f) property if it would result in any of the following:	Major Rehabilitation Alternative
(b) The bridge is seriously deficient geometrically and cannot be widened to meet the minimum required capacity of the highway system on which it is located without affecting the historic integrity of the bridge.	The Major Rehabilitation Alternative would not meet the identified transportation needs of the Program, including: • Address the deteriorating structural condition and escalating maintenance demands of Sagamore Bridge. • Address the substandard design elements of Sagamore Bridge, the immediate mainline approaches, and the adjacent interchanges and intersections. The Major Rehabilitation Alternative would not bring Sagamore Bridge up to current engineering standards and regulations, including current seismic design standards. The bridge would retain its current configuration of substandard lane widths, inadequate safety barriers, minimal pedestrian and bicycle accommodations, and steep approach grades. <u>As a result, high crash rates would be expected to continue.</u>

6 Measures to Minimize Harm

To apply the Nationwide Historic Bridges Programmatic Evaluation for bridges that are replaced, FHWA must concur that the proposed action includes all possible planning to minimize harm. For the Sagamore Bridge project, all possible planning to minimize harm consists of the following:

- The existing bridge is made available for an alternative use, provided a responsible party agrees to maintain and preserve the bridge; and
- Agreement among SHPO, ACHP, and FHWA is reached through the Section 106 process of the NHPA on measures to minimize harm and those measures are incorporated into the project.

The following sections describe these measures to minimize harm.

6.1 Alternative Use of Existing Bridge

As the entity responsible for operating the Cape Cod Canal Federal Navigation Project, USACE has determined that retaining the existing Sagamore Bridge superstructure or substructure in its current location for an alternative use would conflict with the primary purpose of the Cape Cod Canal Federal Navigation Project to support navigation. As the current owner and operator of Sagamore Bridge, USACE requires the complete removal of Sagamore Bridge following construction of the replacement bridge, due to the impediments to navigation within the Cape Cod Canal that would be created by retaining the existing bridge.

In its 2019 MRER/EA for the Cape Cod Canal Highway Bridges, in which USACE recommended the replacement of the Sagamore and Bourne Bridges as the Preferred Alternative, USACE indicated that USACE policy requires civil works projects to consider and evaluate future fluctuations in relative sea level; as such, the replacement bridge design would “incorporate considerations for potential sea level change into the design analysis...”. With a vertical height of 135 feet above mean high water (MHW), the existing bridge does not account for future fluctuations in relative sea level. As a result, over time, the existing bridge would prohibit canal travel by auto carriers and cruise ships, the largest ships currently using Cape Cod Canal. Further, USACE concurred that proposed location of the replacement piers outside of the canal waters would remove the potential for vessel strikes to critical members of the bridge structure and would effectively increase the horizontal clearance at the crossing. The U.S. Coast Guard confirmed this determination in its preliminary navigation clearance determination, issued on March 11, 2025, noting:

“...the replacement Bourne and Sagamore Bridges should provide at least 138.3 feet of vertical clearance (MHW) and at least 500 feet of horizontal clearance to not unreasonably obstruct the free navigation of the waters over which the bridge is constructed.”

While maintaining and preserving the bridge on its existing alignment would be infeasible as it would create impediments to navigation, in compliance with the Nationwide Historic Bridges Programmatic Evaluation, on May 26, 2026, USACE posted on its website the availability of Sagamore Bridge for adoption to any public or private entity interested in its removal, relocation, and repurposing for an alternative use.⁶ USACE also provided information on the availability of the historic bridge for adoption via the New England District’s New Release Manager.⁷ In its notice, USACE indicated that proposals for the relocation and alternative use of the bridge were required to include a relocation plan detailing the bridge’s proposed use, location, schedule for relocation, and the available resources to ensure continued maintenance of the structure. Documentation of the Sagamore Bridge marketing is provided in **Attachment 2**.

⁶<https://www.nae.usace.army.mil/missions/projects-topics/historic-bridges-available-for-adoption/>

⁷<https://www.nae.usace.army.mil/Media/News-Releases/Article/4500799/historic-bridges-available-for-adoption/>

6.2 Agreement on Measures to Minimize Harm through the Programmatic Agreement

FHWA and MassDOT have prepared a Programmatic Agreement to mitigate for the use of Sagamore Bridge, in accordance with 36 CFR 800.14(b). The Programmatic Agreement commits the Program to certain stipulations that would mitigate the adverse effects on the NRHP-eligible Sagamore Bridge, including, but not limited to, the following:

- Design and construction of a new, high-level bridge comprised of parallel, twin, steel tied-arch superstructures supported on delta frames to replace Sagamore Bridge.
- Incorporation of sensitive aesthetic design to maintain and enhance the settings of the replacement Sagamore Bridge within the Cape Cod Canal Historic District. The application of aesthetic design elements shall include but not be limited to special surface textures on bridge abutment walls; landscaping to enhance the Sagamore Bridge as a gateway entrance to Cape Cod; and aesthetic bridge lighting of the bridge arch and different bridge components, such as the bridge cables, inner piers, and inner delta frames.
- Preparation of Historic American Engineering Record (HAER) documentation in coordination with the National Park Service (NPS) for submittal to the Library of Congress. The documentation shall include 1) copies of existing drawings reproduced on velum; 2) photographs with large format negatives; and 3) an outline format historical report. Documentation shall meet all HAER standards and shall be submitted to the NPS in accordance with the prescribed review schedule. Copies of all documentation shall also be submitted electronically, either by compact disc or USB flash drive, to USACE, SHPO for transmittal to the Massachusetts Archives, and to the Bourne Historical Commission (BHC) for transfer to any local repository of their choosing. Hard copies of all documentation, except photographic negatives, shall be made available to USACE, SHPO, or BHC upon request.
- Fabrication of at least one interpretative panel for installation at the pedestrian overlook on the new bridge, the subject of which shall be determined in consultation with the Section 106 consulting parties.
- Salvage and relocation of the historic bridge plaques at a publicly accessible location or transfer to an appropriate local entity(ies).
- Investigation of the salvage and re-use of sections of the steel truss, granite from the piers and abutments, and granite sidewalk, as well as other existing bridge components such as bridge lighting, as feasible, for application in the Project areas, including but not limited to at the replacement bridge site and the shared use paths. Additionally, MassDOT shall solicit interest from USACE, other state agencies, municipalities, non-profit art and/or historic preservation groups in Bourne, Barnstable County, and the greater Cape Cod and Islands region, schools, and the public for the transfer and adaptive re-use of select components of the historic bridge for public education, art, historic preservation, or other uses in publicly accessible spaces.

FHWA and MassDOT [have coordinated](#) the development of the Programmatic Agreement with the MHC, acting in its authority as the Massachusetts SHPO, the designated Official with Jurisdiction over the Section 4(f)-protected Sagamore Bridge. The Programmatic Agreement is provided in **Attachment 1**.

7 Coordination and Consultation

FHWA initiated the Section 106 consultation process with MHC, the Massachusetts SHPO and the Official with Jurisdiction over the Section 4(f)-protected historic bridge, on March 30, 2023. Additionally, FHWA initiated the Section 106 process with Consulting Parties on January 23, 2024.

MassDOT and FHWA have coordinated with SHPO regarding the proposed demolition of Sagamore Bridge. Additionally, MassDOT and FHWA have notified SHPO that the agencies will pursue a Nationwide Historic Bridges Programmatic Evaluation for Sagamore Bridge under Section 4(f). MassDOT and FHWA have received no objection from SHPO related to the proposed Section 4(f) compliance pathway.

In accordance with the requirements of the Nationwide Historic Bridges Programmatic Evaluation, FHWA and MassDOT [have continued](#) coordination with USACE and SHPO through signing of the Programmatic Agreement. The combined Final Environmental Impact Statement and Record of Decision [includes](#) the signed Programmatic Agreement (**Attachment 1**). Other than consultation and coordination through the Section 106 process, the Nationwide Historic Bridges Programmatic Evaluation does not require public involvement.

Attachments

Attachment 1

Programmatic Agreement among FHWA - Massachusetts Division, Massachusetts SHPO, New England District of the USACE, and MassDOT for the Cape Cod Bridges Program

Attachment 2

Documentation of Bridge Marketing