

5 Draft Section 4(f) Evaluation

5.1 Introduction

Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 (49 United States Code [USC] 303 and 23 USC 138), 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)¹ from “use” by transportation projects that receive funding from or require approval by an agency of the USDOT. The Cape Cod Bridges Program (Program) is subject to Section 4(f) as the USDOT financially supports the transportation program through the Federal Highway Administration (FHWA). Construction and operation of the Program would affect Section 4(f) properties.

This chapter identifies publicly owned parks, recreation areas, and historic sites listed or eligible for listing in the NRHP, and it provides applicability determinations and draft Section 4(f) evaluations for the use of Section 4(f) properties. There are no wildlife or waterfowl refuges in the Sagamore Bridge or Bourne Bridge Project Limits.

5.1.1 Parks and Recreation Areas

This chapter provides FHWA’s proposed *de minimis* impact determinations for the Program’s use of Sagamore Recreation Area in Sagamore North, Keith Field Recreation Area in Sagamore South, Bourne Scenic Park in Bourne North, and Bourne Recreation Area and Gallo Ice Arena in Bourne South. FHWA and the Massachusetts Department of Transportation (MassDOT) request public review and comment on these proposed determinations (refer to [Section 5.5 through Section 5.9](#)). As the Lead Federal Agency for the Program, FHWA will issue a decision on whether the proposed uses of Section 4(f) properties can be approved in the Final Environmental Impact Statement and Record of Decision.

5.1.2 Historic Sites

Appendix 5.1 through Appendix 5.3 provide FHWA’s proposed determinations for the Program’s use of the historic Sagamore Bridge, Bourne Bridge, and Cape Cod Canal Historic District, and FHWA’s review of the visual effects of the Program upon historic properties. **Appendix 5.1** and **Appendix 5.2** provide the Programmatic Section 4(f) Evaluations and Approvals for FHWA Projects that Necessitate the Use of Historic Bridges (Nationwide Historic Bridges Programmatic Evaluations) for Sagamore Bridge and Bourne Bridge. **Appendix 5.3** provides FHWA’s proposed *de minimis* impact determination for the proposed use of the Cape Cod Canal Historic District, and FHWA’s determination of no use of historic properties within the viewshed of the bridges.

¹ Per 23 Code of Federal Regulations 774.17, the term “historic site” includes any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that are included in, or are eligible for inclusion in, the National Register of Historic Places.

5.2 Regulatory Context

This evaluation was prepared in accordance with FHWA’s regulations and guidance for implementing Section 4(f) of the USDOT Act of 1966. FHWA’s regulations for implementing Section 4(f) are available at Title 23 Code of Federal Regulations (CFR) 774. FHWA’s guidance on the format and content for Section 4(f) evaluations is provided in the [FHWA Technical Advisory T6640.8A](#) (October 30, 1987),² and the revised [FHWA Section 4\(f\) Policy Paper](#) (July 20, 2012).³

5.2.1 Definition of Section 4(f) Use

As defined in 23 CFR 774.17, the “use” of a Section 4(f) property occurs when at least one of the following conditions applies:

- **Direct use:** Land is permanently incorporated into a proposed transportation project through partial or full acquisition, or a permanent easement that allows permanent access onto the property for maintenance or other transportation-related purposes.
- **Temporary occupancy:** There is a temporary use of land that is considered adverse in terms of the statute’s preservation purpose, as determined by the criteria in 23 CFR 774.13(d).
- **Constructive use:** There is no permanent incorporation of land, but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify property for protection under Section 4(f) are substantially impaired. This use is further defined in 23 CFR 774.15(a) through (e).

5.2.2 Section 4(f) Approval Requirements

FHWA, and other USDOT operating agencies, will not approve a transportation program or project that requires the use of any land protected under Section 4(f), as defined in 23 CFR 774.17, unless:

- A determination is made that: 1) there is no feasible and prudent avoidance alternative to the use of land from the property, and 2) the action includes all possible planning to minimize harm to the property resulting from such use,⁴ or
- The use of the property, including any measures to minimize harm, will have a *de minimis* impact on the property.
 - For publicly owned parks and recreation areas, *de minimis* impacts are defined as those that do not “adversely affect the activities, features, and attributes” of the Section 4(f) property. A *de minimis* impact finding for parks and recreation areas requires public notice and an opportunity for public review and comment concerning the effects on the protected activities, features, or attributes of the property. In accordance with 23 CFR 774.17(4) and (5), a *de minimis* impact

² https://www.environment.fhwa.dot.gov/legislation/nepa/guidance_preparing_env_documents.aspx#f4

³ <https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.aspx>

⁴ The Federal Highway Administration’s definition of “feasible and prudent avoidance alternative” and “all possible planning” are available at 23 Code of Federal Regulations 774.17.

determination does not require consideration of avoidance alternatives. All possible planning to minimize and mitigate harm is encompassed within a *de minimis* impact determination.

- For historic sites, *de minimis* impacts are defined as those where FHWA makes a determination of either “no effect” or “no adverse effect” pursuant to Section 106 of the National Historic Preservation Act, and the State Historic Preservation Officer concurs with that determination.

For projects that involve the use of a Section 4(f) property where a *de minimis* impact determination cannot be made, the following options are available to analyze and document the use for FHWA approval:

- Prepare an individual Section 4(f) evaluation and conclude that there is no feasible and prudent alternative that completely avoids the use of the Section 4(f) property, that the project includes all possible planning to minimize harm, and that if there are multiple alternatives with a use(s) that has greater than *de minimis* impacts, the alternative with the least overall harm is selected.
- Apply a programmatic Section 4(f) evaluation. Programmatic Section 4(f) evaluations are a time-saving alternative to individual evaluations for certain types of uses. To date, FHWA has issued five nationwide Section 4(f) programmatic evaluations.

5.2.3 Criteria for *De Minimis* Impact Determinations

FHWA has established criteria that must be satisfied to meet the requirements for [de minimis impact determinations](#), which are described in the following sections.⁵

5.2.3.1 Public Parks and Recreation Areas

FHWA may make a *de minimis* impact determination for public parks and recreation areas when all three of the following criteria are met:

1. The use of the Section 4(f) resource, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f);
2. The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource; and
3. The officials with jurisdiction (OWJ) for the property are informed of FHWA’s intent to make the *de minimis* impact determination based on their written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

⁵ https://www.environment.fhwa.dot.gov/env_topics/4f_tutorial/use_deminimis.aspx

5.2.3.2 Historic Sites

FHWA may make a *de minimis* impact determination on a historic site when all three of the following criteria are met:

1. The process of Section 106 of the National Historic Preservation Act results in the determination of "no adverse effect" or "no historic properties affected" with the concurrence of the State Historic Preservation Officer and/or Tribal Historic Preservation Officer, and Advisory Council on Historic Preservation (ACHP), if the ACHP is participating in the Section 106 consultation;
2. The State Historic Preservation Officer and/or Tribal Historic Preservation Officer, and ACHP, if the ACHP is participating in the Section 106 consultation, is informed of FHWA's intent to make a *de minimis* impact determination based on their written concurrence in the Section 106 determination; and
3. FHWA has considered the views of any consulting parties participating in the Section 106 consultation.

5.3 Identification of Section 4(f) Properties

5.3.1 Methodology Used to Identify Section 4(f) Properties

Section 4.17, Public Parks, Recreational Facilities, and Open Space, describes the methodology MassDOT used to identify publicly owned parks and recreation facilities within a 0.125-mile buffer from the Project Limits (referred to as Study Areas) where a potential Section 4(f) use could occur.

Section 4.16, Cultural Resources, describes the methodology MassDOT used to identify historic properties and define the Construction and Viewshed Areas of Potential Effects (APE). The Construction APEs reflect the boundaries of the Sagamore and Bourne Bridge Project Limits, while the Viewshed APEs reflect a more expansive area that considers potential viewshed effects of the replacement bridges upon NRHP-listed or -eligible properties. For Section 4(f), the entirety of the Construction and Viewshed APEs comprises the Study Areas where the use of a historic property could occur.

Figure 5-1 and **Figure 5-2** identify Section 4(f)-protected properties in the Sagamore Bridge Project Limits and Bourne Bridge Project Limits, respectively.

5.3.2 Section 4(f) Applicability to Public Parks and Recreation Areas within the Cape Cod Canal Federal Navigation Project

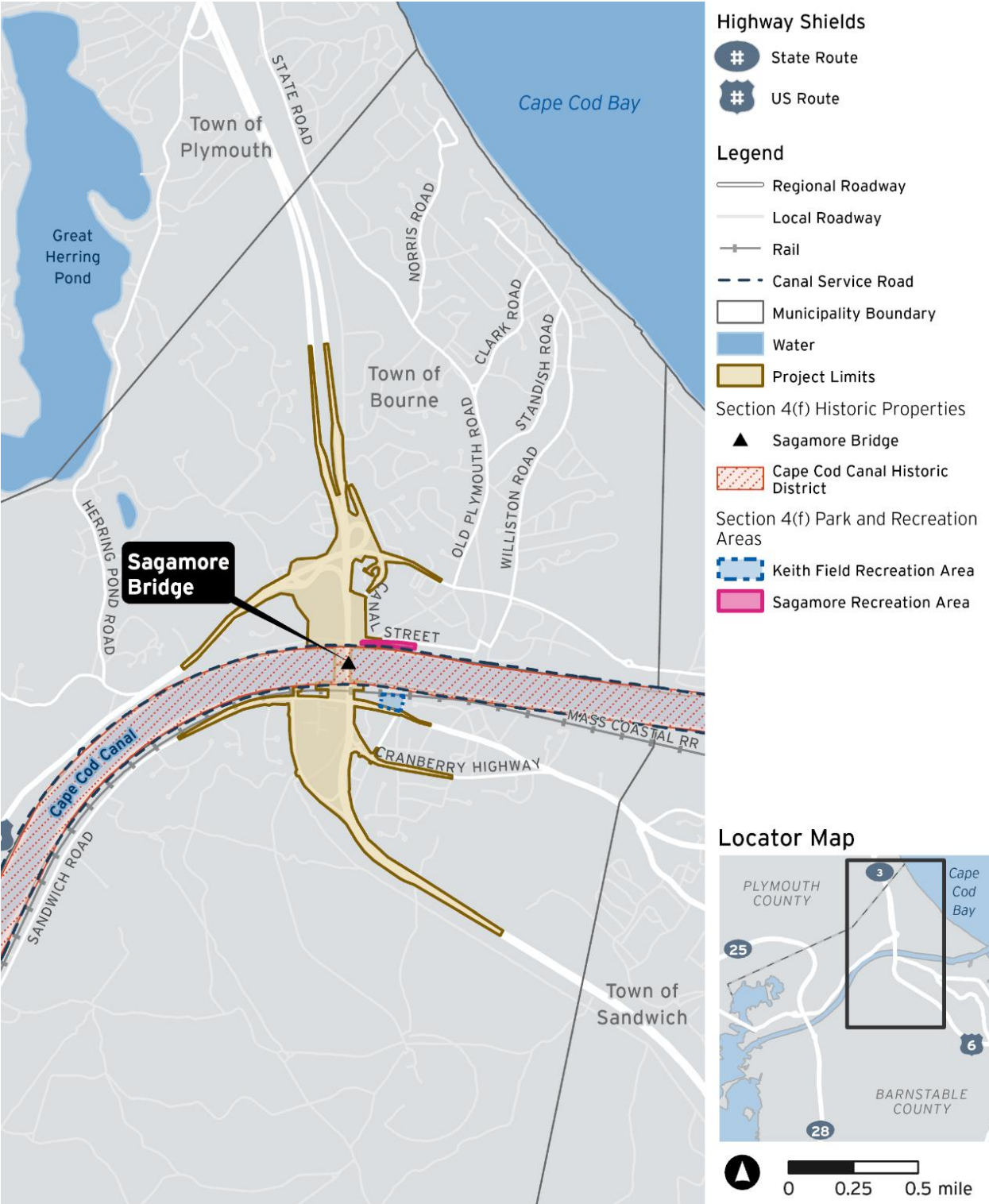
The Study Areas used for identifying publicly owned parks and recreation areas overlap with the Cape Cod Canal Federal Navigation Project (FNP). According to 36 CFR 327, the regulations governing public use of Cape Cod Canal FNP and other U.S. Army Corps of Engineers (USACE) water resource development projects, it is the policy of the Secretary of the Army, acting through the Chief of Engineers, to manage the natural, cultural, and developed resources of each project in the public interest by providing recreational opportunities while also protecting and enhancing the civil works projects. Since 1966, the USACE has operated or leased lands with the Cape Cod Canal FNP for recreational uses.

In adherence to the USACE's primary mission to provide navigation and navigation support for Cape Cod Canal, and the Secretary of the Army's directive to provide the public with recreational opportunities within the Cape Cod Canal FNP, the USACE determined that the Cape Cod Canal FNP constitutes a Public Multiple-Use Land Holding under Section 4(f). Per 23 CFR 774.11(d):

where Federal lands are administered under statutes permitting management for multiple uses, and, in fact, are managed for multiple uses, Section 4(f) applies only to those portions of such lands which function for or are designated in the plans of the administering agency as being for, significant park, recreation, or wildlife and waterfowl refuge purposes.

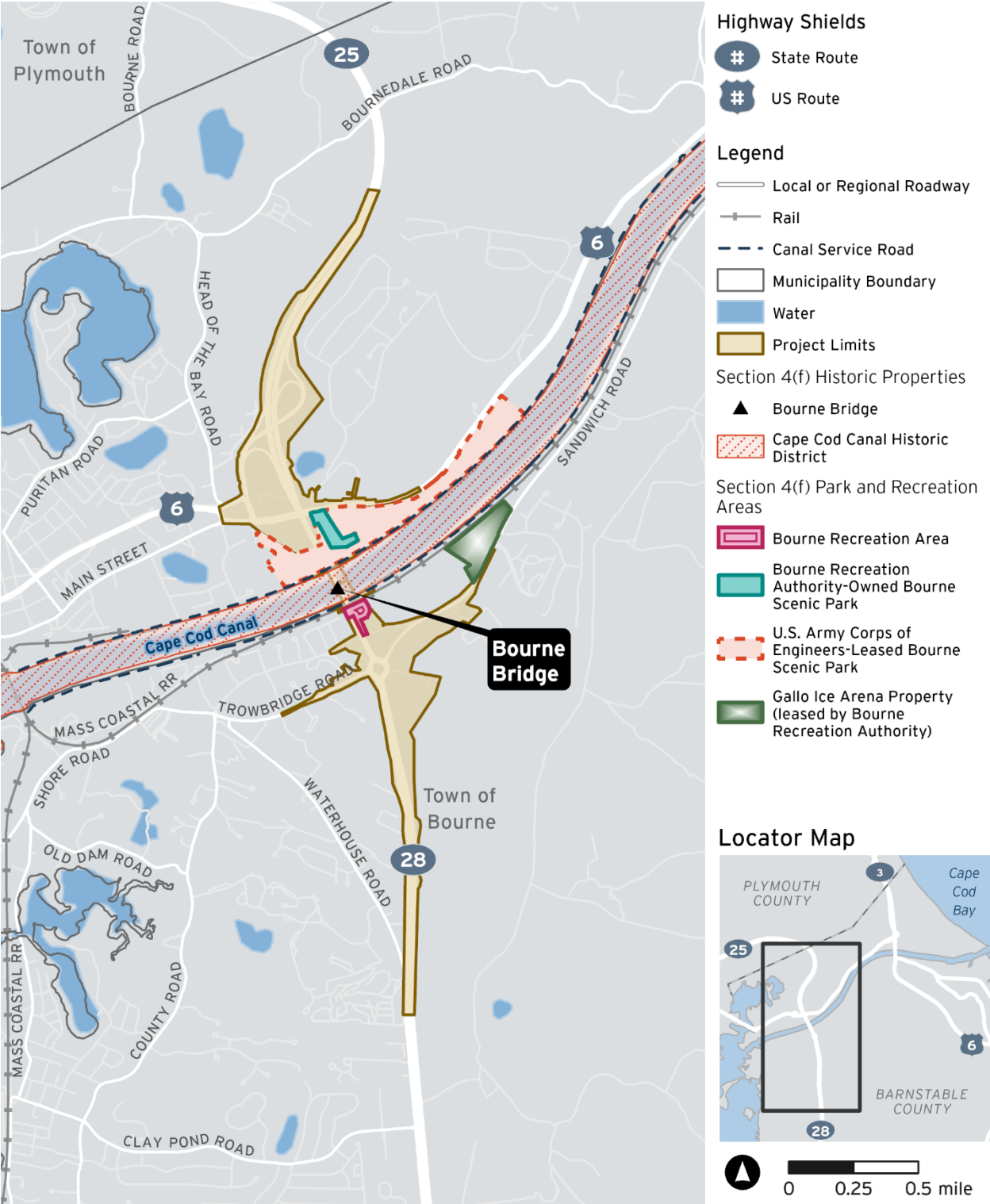
As such, the USACE determined and FHWA concurred that the primary purpose of Sagamore Recreation Area, Bourne Scenic Park, and Bourne Recreation Area is for recreation. Therefore, these lands are subject to Section 4(f) jurisdiction. While the other designated park and recreation areas within the Cape Cod Canal Federal Navigation Project were not included in the U.S. Army Corps of Engineers' request to the Federal Highway Administration regarding Section 4(f) jurisdiction, these recreation areas, such as the Gallo Ice Arena, also meet the criteria for Section 4(f) protection and are considered Section 4(f) properties. Based on input from the USACE, FHWA determined that the primary purposes of the Cape Cod Canal navigable waterway and Canal Service Roads are for navigation and navigation support. Therefore, Section 4(f) does not apply to the waterway or the Canal Service Roads. Documentation of this coordination between the USACE and FHWA is provided as **Appendix 5, Attachment 1** and **Attachment 2**.

Figure 5-1. Section 4(f)-Protected Properties within Sagamore Bridge Project Limits



Source: Massachusetts Department of Transportation, 2024

Figure 5-2. Section 4(f)-Protected Properties within Bourne Bridge Project Limits



Source: Massachusetts Department of Transportation, 2024

5.3.3 Section 4(f)-Protected Public Park and Recreation Areas

Publicly owned park and recreation areas of significance that were identified as Section 4(f) properties within the Study Areas include Sagamore Recreation Area, Keith Field Recreation Area, Bourne Scenic Park, Bourne Recreation Area, and Gallo Ice Arena (presented in [Figure 5-1](#) and [Figure 5-2](#)).

Keith Field Recreation Area, owned and operated by the Town of Bourne, is a significant community asset. According to the Town of Bourne Recreation Area Feasibility Study Survey Report (February 2025), it is one of four major recreational areas in town targeted for future development.

The USACE has confirmed the significance of Sagamore Recreation Area, Bourne Scenic Park, and Bourne Recreation Area (incorporating Gallo Ice Arena) as regional recreational assets within the Cape Cod Canal FNP, developed in accordance with 36 CFR 327.⁶ The USACE's Master Plan for the Development of Recreation Resources (October 1975) identifies the importance of these resources, as well as other USACE-designated recreational resources within the FNP, noting that Cape Cod Canal is the New England Division's most heavily visited project and is a "most important resource both commercially and recreationally."⁷

The significance of Bourne Scenic Park and Gallo Ice Arena as both local and regional recreational assets is established through Chapter 450 of the Acts of 2018, *An Act Relative to the Bourne Recreation Authority*, which authorized the Bourne Recreation Authority (BRA) to manage and control land to be purchased or leased from the federal government for the operation of Bourne Scenic Park for the general public and construction and maintenance of an indoor hockey and skating rink for use by individuals and school and amateur teams in the town of Bourne, as well as for other purposes.⁸

5.3.4 Section 4(f)-Protected Historic Properties

5.3.4.1 Section 4(f)-Protected Historic Properties within the Construction Area of Potential Effects

Section 4(f)-protected historic properties within the Construction APEs, where a use could occur, include Sagamore Bridge, Bourne Bridge, and the Cape Cod Canal Historic District, each of which is eligible for listing in the NRHP (presented in [Figure 5-1](#) and [Figure 5-2](#), respectively). There are no NRHP-listed properties or National Historic Landmarks within the Construction APEs.

⁶ According to 36 Code of Federal Regulations 327, the regulations governing public use of U.S. Army Corps of Engineers water resource development projects, it is the policy of the Secretary of the Army, acting through the Chief of Engineers, to manage the natural, cultural, and developed resources of each project in the public interest by providing recreational opportunities while also protecting and enhancing the civil works projects.

⁷ The U.S. Army Corps of Engineers' Master Plan for the Development of Recreation Resources identifies other public parks and recreation areas of significance within the Cape Cod Canal Federal Navigation Project, including Scusset Beach State Reservation, leased to the Massachusetts Department of Conservation and Recreation.

⁸ Session Law - Acts of 2018 Chapter 450

No archaeological sites were identified that would warrant preservation in place for protection under Section 4(f).⁹ Refer to **Section 4.16, Cultural Resources**, for additional details.

5.3.4.2 Section 4(f)-Protected Historic Properties within the Viewshed Area of Potential Effects

Figure 4.16-3 and **Figure 4.16-4** in **Section 4.16, Cultural Resources**, present the Viewshed APEs for Sagamore and Bourne Bridges, respectively. **Table 4.16-1** in **Section 4.16** identifies NRHP-listed and -eligible historic architectural properties within the Sagamore or Bourne Bridge Viewshed APEs that could be affected by the Build Alternative (refer to **Chapter 3, Proposed Action and Alternatives** for a detailed description of the Build Alternative).

5.4 Description of Impacts, Use, and Section 4(f) Determinations

This section describes the potential impacts of the alternatives to Section 4(f) properties and identifies whether the impacts would constitute a use of the property under Section 4(f), as defined in **Section 5.1**. This section also describes the Section 4(f) determinations proposed by FHWA for the respective uses.

5.4.1 No Build Alternative

The No Build Alternative would involve continued operation of the existing Sagamore and Bourne Bridges and their approach roadway networks, with no improvements aside from routine maintenance and necessary repairs to maintain public safety. In the No Build Alternative, the USACE would continue to own, operate, and maintain the bridges as components of the Cape Cod Canal FNP, while MassDOT would continue to own, operate, and maintain the state highway networks at the two bridges.

The No Build Alternative would also include transportation projects that are committed to or funded in the Federal Fiscal Year 2025 – 2029 Transportation Improvement Program for the Cape Cod Metropolitan Planning Organization. The transportation projects planned for implementation will be subject to independent National Environmental Policy Act (NEPA) reviews and related determination of transportation uses under Section 4(f). Therefore, they are not considered in this Draft Section 4(f) Evaluation. The No Build Alternative would not include any other USDOT involvement through funding or approval authority, so Section 4(f) would not apply to the USACE's facilities or activities within the Cape Cod Canal FNP.

It is anticipated that any future routine maintenance of the highway approach networks to the bridges by MassDOT would be conducted within the state highway layout, independent of any bridge maintenance work. Accordingly, the No Build Alternative would not result in a use of any Section 4(f) properties.

Noise modeling for the Program assessed portions of the following existing public parks and recreation areas within each Program quadrant, which are identified as noise-sensitive land uses (FHWA Activity

⁹ 23 Code of Federal Regulations 774.13(b)

Category C¹⁰): Sagamore Recreation Area in Sagamore North, Keith Field Recreation Area in Sagamore South, Bourne Scenic Park in Bourne North, and Bourne Recreation Area in Bourne South.¹¹ The noise modeling concluded that no public parks or recreation areas in Sagamore North, Bourne North, or Bourne South approach or exceed FHWA’s Noise Abatement Criteria (NAC) threshold for the 2019 existing condition, nor would they approach or exceed the NAC threshold for the 2050 No Build Alternative. In Sagamore South, both the 2019 existing condition noise levels and the 2050 No Build Alternative noise levels would approach or exceed the FHWA Activity Category C NAC threshold at Keith Field Recreation Area on the baseball field behind home plate in the catcher’s position. **Section 4.14, Noise and Vibration**, provides details of the noise analysis.

5.4.2 Build Alternative Impacts, Use, and Determinations for Public Parks and Recreation Areas

Table 5-1 summarizes the effects of the Build Alternative on Section 4(f) public parks and recreation areas, the Section 4(f) uses, and proposed Section 4(f) determinations as determined through FHWA analyses. It also identifies the chapter section for each property’s evaluation.

Table 5-1. Summary Table of Impacts, Uses, and Section 4(f) Determinations for Public Parks and Recreation Areas

Park and Recreation Area	Existing Acreage ^[1]	Build Alternative Impacts/Section 4(f) Use		Section 4(f) Use and Proposed Determination	Chapter Section
		Temporary Occupancy	Direct Use		
Sagamore Recreation Area	2 acres	Temporary occupancy of 0.53 acres due to the Sagamore Bridge project	Direct use (permanent easement) of 0.51 acres for operations and maintenance of the replacement Sagamore Bridge	<i>De Minimis</i> Impact	Section 5.5

¹⁰ FHWA Activity Category C includes the following noise sensitive land uses: active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.

¹¹ Noise modeling was not conducted at or proximate to Gallo Ice Arena, which is outside the Noise Study Area.

Park and Recreation Area	Existing Acreage ^[1]	Build Alternative Impacts/Section 4(f) Use		Section 4(f) Use and Proposed Determination	Chapter Section
		Temporary Occupancy	Direct Use		
Keith Field Recreation Area	2.8 acres	No temporary occupancy	• Direct use (permanent easement) of 0.05 acres for utility operations and maintenance • Direct use (permanent easement) of 0.32 acres for a permanent shared-use path	<i>De Minimis</i> Impact	Section 5.6
Bourne Scenic Park	80.2 acres (U.S. Army Corps of Engineers-leased: 73.7 acres; Bourne Recreation Authority-owned: 6.5 acres)	Temporary occupancy of 14.7 acres due to the Bourne Bridge project	Direct use (permanent easement) of 5.7 acres for operations and maintenance of the replacement Bourne Bridge and interchange approach network	<i>De Minimis</i> Impact	Section 5.7
Bourne Recreation Area	4.1 acres	No temporary occupancy	Direct use of 4.1 acres due to the construction of the Bourne Bridge project, 3.1 acres of which would be a permanent easement for operations and maintenance of the replacement Bourne Bridge and interchange approach network	<i>De Minimis</i> Impact	Section 5.8

Park and Recreation Area	Existing Acreage ^[1]	Build Alternative Impacts/Section 4(f) Use		Section 4(Use and Proposed Determination	Chapter Section
		Temporary Occupancy	Direct Use		
Gallo Ice Arena	18.8 acres	Temporary occupancy of 2.3 acres due to the Bourne Bridge project	• Direct use (permanent easement) of 0.61 acres for operations and maintenance of the reconfigured site entrance at Sandwich Road • Direct use of 3.14 acres for mitigation of impacts to Bourne Recreation Area	<i>De Minimis</i> Impact	Section 5.9

^[1] Acreage for U.S. Army Corps of Engineers-owned and leased parcels obtained from U.S. Army Corps of Engineers shapefiles, October 2024. Acreage for Keith Field Recreation Area and Bourne Recreation Authority-owned Bourne Scenic Park obtained from GIS parcel data.

5.4.3 Build Alternative Impacts, Use, and Determinations for Historic Properties

Table 5-2 summarizes MassDOT’s recommended effects of the Build Alternative on Section 4(f)-protected historic properties within the APEs, assessment of Section 4(f) use, and FHWA’s proposed determinations. It also identifies the chapter appendix for each property’s evaluation.

Table 5-2. Summary Table of Impacts, Uses, and Section 4(f) Determinations for Historic Properties

Historic Property	Protection	Build Alternative Impacts	Recommended Section 106 Effect	Section 4(f) Use & Proposed Determination	Chapter Appendix
Sagamore Bridge	National Register of Historic Places (NRHP) eligible	Demolition	Adverse Effect	Direct Use/Programmatic Section 4(f) Evaluation and Approval for Federal Highway Administration Projects that Necessitate the Use of Historic Bridges (Nationwide Historic Bridges Programmatic Evaluation)	Appendix 5.1
Bourne Bridge	NRHP-eligible	Demolition	Adverse Effect	Direct Use/Nationwide Historic Bridges Programmatic Evaluation	Appendix 5.2
Cape Cod Canal Historic District	NRHP-eligible	Use of land within District for Replacement Sagamore and Bourne Bridges; Loss of Contributing Resources	No Adverse Effect due to Replacement Bridge Design Type	Direct Use/ <i>De minimis</i> Impact	Appendix 5.3

5.5 Sagamore Recreation Area: Analysis and *De Minimis* Impact Determination

This section provides FHWA’s analysis of the use of Sagamore Recreation Area. As directed by 23 CFR 774.5(b)(2), for public parks and recreation areas where FHWA intends to issue a *de minimis* impact determination, public notice and opportunity for review and comment, followed by written concurrence from the OWJ for the property, are required before FHWA can approve the proposed use. Because FHWA intends to apply a *de minimis* impact determination for the use of Sagamore Recreation Area, FHWA is seeking public review and comment on this proposed Section 4(f) determination as part of the Draft Environmental Impact Statement public review period.

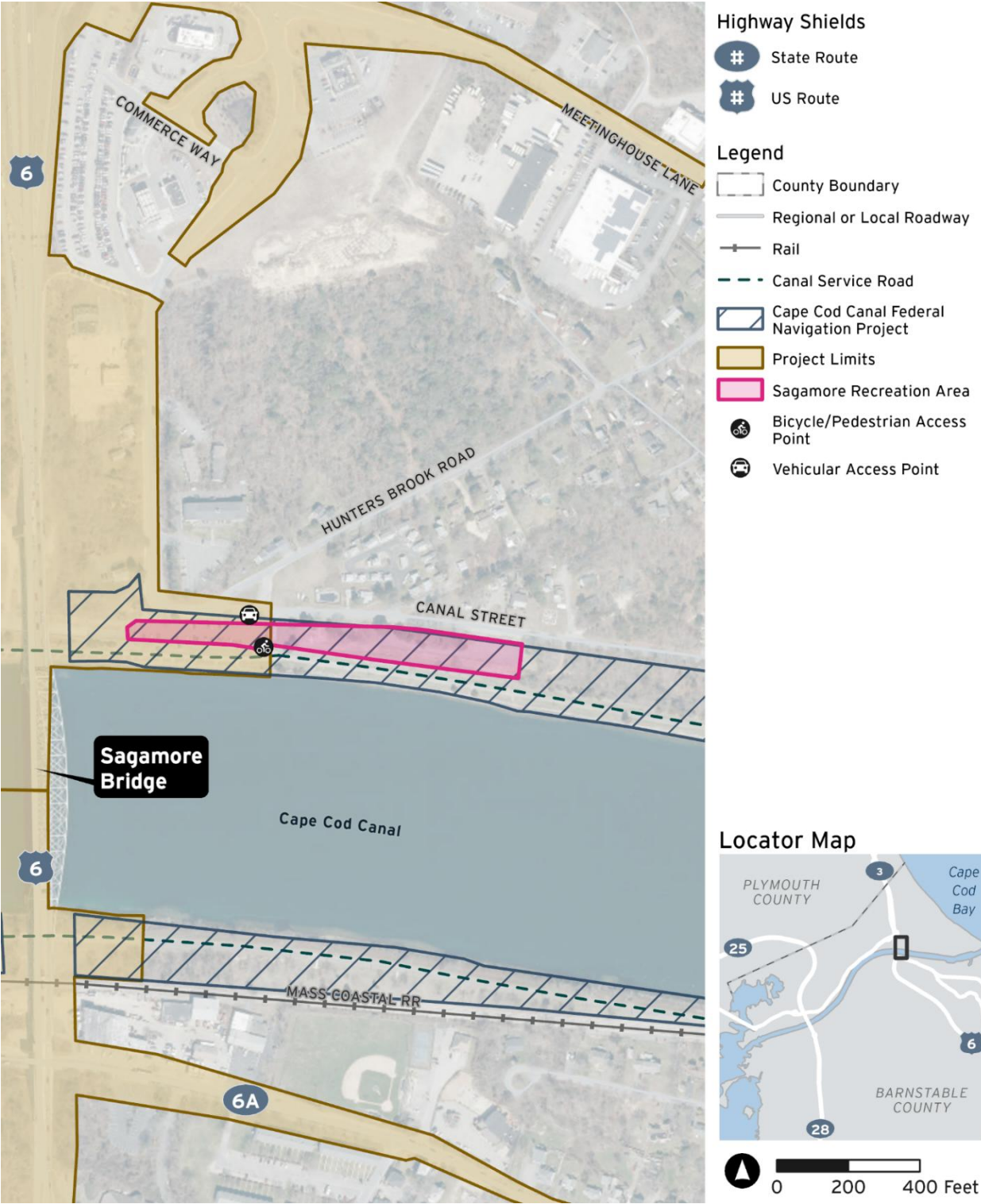
5.5.1 Description of Property

Sagamore Recreation Area is directly east of Sagamore Bridge within the Cape Cod Canal FNP. The USACE operates the 2-acre Sagamore Recreation Area to support the public's use of its recreational resources on the north side of the canal. Access to Sagamore Recreation Area is provided via Canal Street from Meetinghouse Lane from the north and via the North Canal Service Road from the south.

Sagamore Recreation Area provides an Americans with Disabilities Act (ADA)-compliant seasonal comfort station that has potable water and sanitary facilities with a 3,500-gallon septic tank. Outdoor park features and facilities include a landscaped and wooded area with park benches, canopied picnic tables, concrete paved area, portable toilets, and interpretive signage. Sagamore Recreation Area has approximately 58 paved parking spaces, including four accessible parking spaces, which are directly east of the bridge, and an unpaved gravel parking area east of the comfort station.

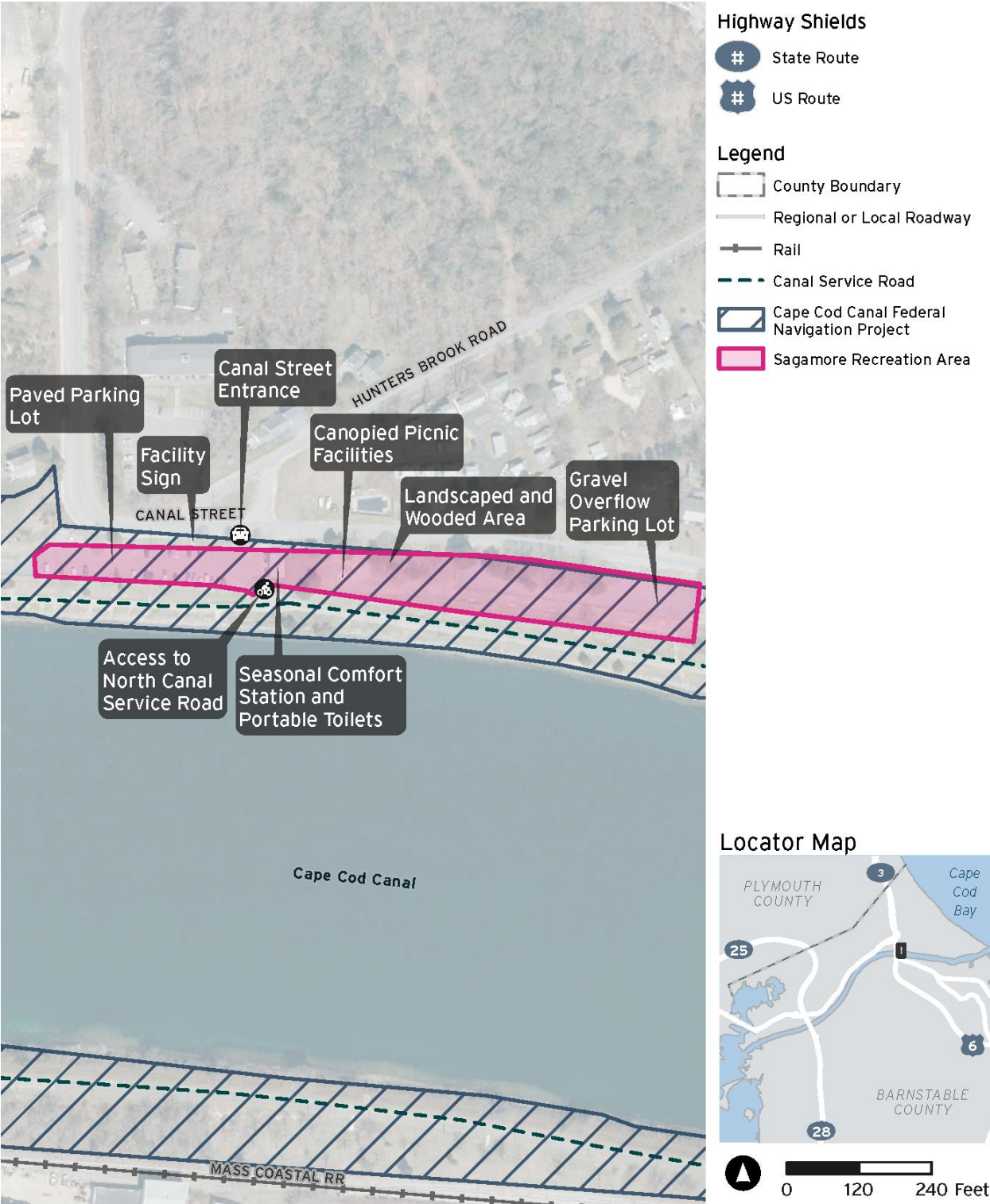
Figure 5-3 depicts Sagamore Recreation Area in relation to the Sagamore Bridge Project Limits, and **Figure 5-4** depicts Sagamore Recreation Area's existing conditions, including recreational features. **Exhibit 5-1 through Exhibit 5-6** provide photographs of existing conditions.

Figure 5-3. Sagamore Recreation Area: Overview



Source: Massachusetts Department of Transportation, 2025

Figure 5-4. Sagamore Recreation Area: Existing Conditions and Recreational Features



Source: Massachusetts Department of Transportation, 2025

Exhibit 5-1. Sagamore Recreation Area: Sign and Paved Parking Lot, facing southwest



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-2. Sagamore Recreation Area: Seasonal Comfort Station and Portable Toilets, facing west



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-3. Sagamore Recreation Area: Picnic Facilities, facing west



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-4. Sagamore Recreation Area: Picnic Facilities, facing east



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-5. Sagamore Recreation Area: Overflow Parking Area, facing west



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-6. Sagamore Recreation Area: Access to North Canal Service Road, facing east



Source: Massachusetts Department of Transportation, 2024

5.5.2 Proposed Impacts and Use

5.5.2.1 Temporary Occupancy

Based on preliminary design plans, the construction of the Sagamore Bridge project would require MassDOT to obtain a temporary easement (outgrant) of approximately 0.53 acres from the USACE.

Proposed temporary impacts to existing facilities through the construction period would include the following:

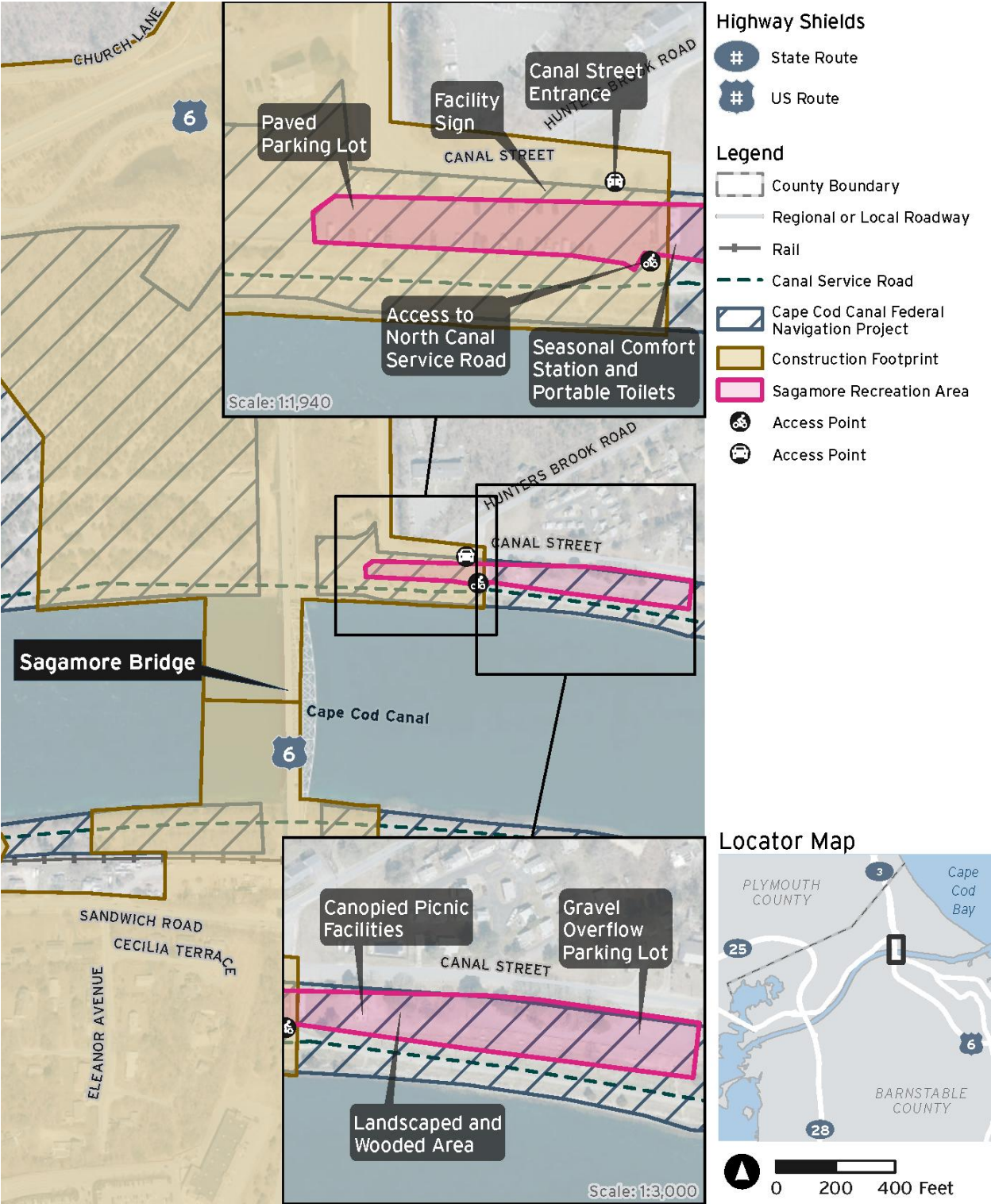
- Close the paved parking lot immediately east of Sagamore Bridge, which has approximately 54 parking spaces.
- Remove signage, consisting of the Sagamore Recreation Area welcome sign and an interpretive panel at the public access point to the North Canal Service Road.

Construction activities would not impact the existing comfort station, portable toilets, canopied picnic tables, landscaped and wooded area, the four accessible parking spaces in the paved parking lot, or the overflow parking lot. These facilities would remain open to the public through the construction period. The North Canal Service Road access point would also remain open to the public.

As described in **Section 4.14, Noise and Vibration**, construction of the Sagamore Bridge project would result in intermittent fluctuations in noise levels and vibration exposure due to construction vehicle operations and construction equipment performing earth-disturbing work, bridge demolition, and bridge construction.

About one-third of the recreation area closest to the bridge is inside the construction footprint and could experience temporary occupancy during the construction period. **Figure 5-5** presents the Sagamore Recreation Area facilities that could be impacted during construction.

Figure 5-5. Sagamore Recreation Area: Proposed Temporary Occupancy



Source: Massachusetts Department of Transportation, 2025

5.5.2.2 Direct Use

Direct use of Sagamore Recreation Area would be required for the operation and maintenance of the Sagamore Bridge project. It is anticipated that MassDOT would obtain an approximately 0.51-acre permanent easement (outgrant) from the USACE for operation and maintenance of the bridge.

To construct the proposed shared-use path (SUP) connection to North Canal Service Road, the Build Alternative would result in a permanent loss of 29 parking spaces on the south side of the existing Sagamore Recreation Area paved parking lot. There would be no direct use of the remaining 25 parking spaces in the paved parking lot, including the four accessible parking spaces.

Based on noise modeling conducted for the Build Alternative, there were no existing noise-sensitive receptors within the Sagamore North quadrant, including Sagamore Recreation Area, predicted to experience a substantial increase in traffic noise between the 2019 Existing Condition and the 2050 Build Alternative. **Appendix 4.14, Noise and Vibration Technical Report**, provides details of modeling conducted near Sagamore Recreation Area.

5.5.3 Measures to Minimize Harm

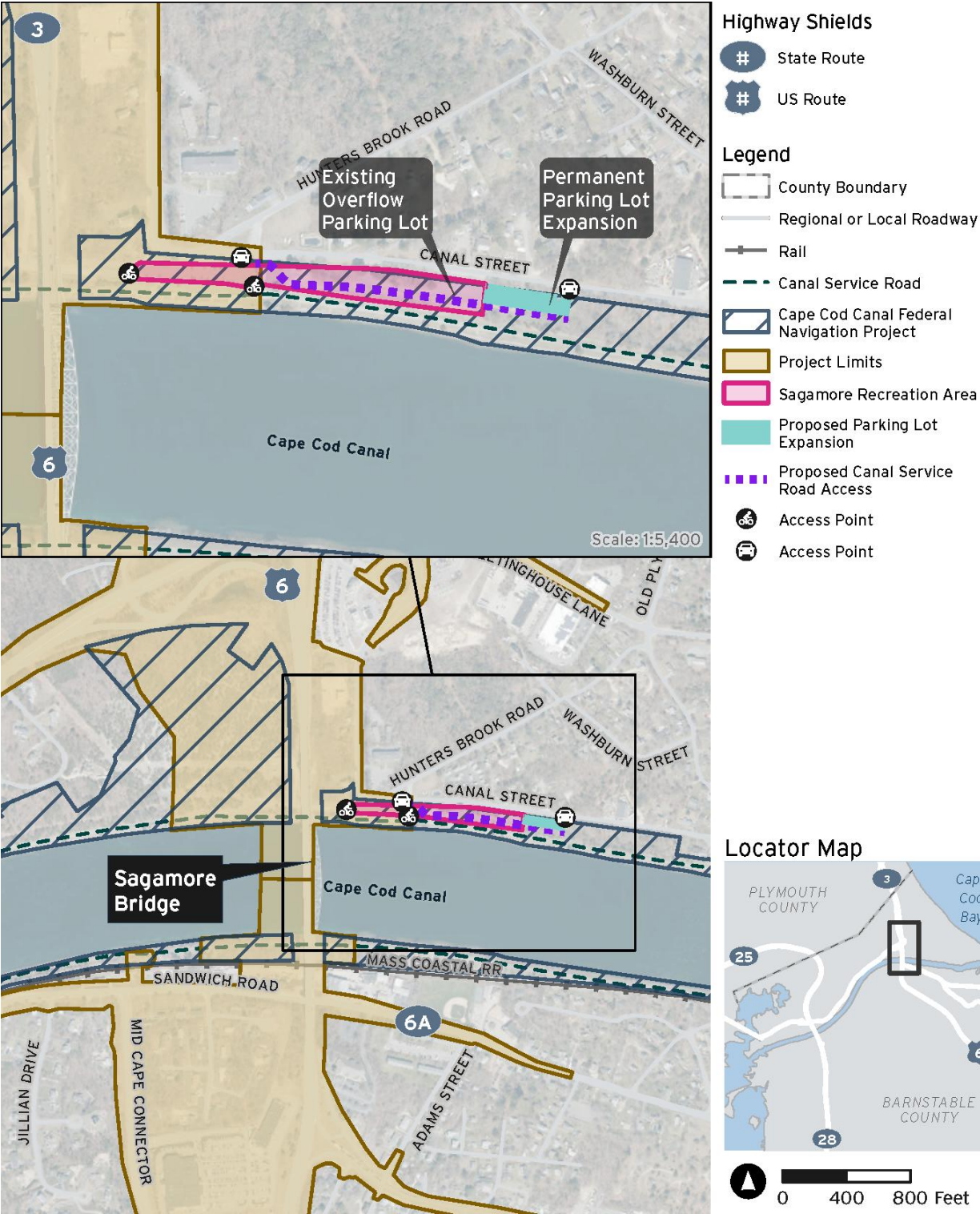
In coordination with the USACE, through meetings and workshops conducted from December 2022 through August 2025, FHWA and MassDOT have developed measures to minimize harm, including avoidance, minimization, mitigation, and enhancement measures, for the proposed use of Sagamore Recreation Area. As applicable, MassDOT would implement the measures to minimize harm prior to undertaking any construction activities for the Sagamore Bridge project that would result in a use of Sagamore Recreation Area, such that there would be no loss of the features and attributes that qualify the property for protection under Section 4(f).

Table 5-3 is a summary of the existing recreational features at Sagamore Recreation Area, anticipated use due to the Build Alternative, proposed measures to minimize harm for each feature where a use would occur, and the proposed permanent condition. **Section 5.5.3.1** and **Section 5.5.3.2** provide additional details. **Figure 5-6** depicts MassDOT's proposed measures to minimize harm in relation to the Sagamore Bridge Project Limits, including construction minimization measures and permanent mitigation and enhancement measures. **Figure 5-7** depicts the post-construction condition.

Table 5-3. Sagamore Recreation Area – Recreational Features, Section 4(f) Uses, and Measures to Minimize Harm

Existing Feature	Temporary Occupancy	Direct Use	Measures to Minimize Harm	Permanent Condition
2-acre recreation area	0.53 acres	0.51 acres	Expand recreation boundary by 0.63 acres to mitigate for direct use	2.63-acre recreation area (net gain of 0.63 acres)
Comfort station and portable facilities	No temporary occupancy	No direct use	Not applicable (no use)	No change from existing condition
Picnic tables, benches, canopy	No temporary occupancy	No direct use	Not applicable (no use)	No change from existing condition
Parking lot and parking spaces	Construction footprint requires closing 54 parking spaces	Direct use of 29 spaces	Construct new parking lot; provide 54 parking spaces during construction	83 parking spaces (net increase of 25 parking spaces)
North Canal Service Road Access	No temporary occupancy	No direct use	Not applicable (no use)	New sidewalk connection from the expanded parking lot
Signage	Construction footprint requires removal	No direct use	Remove and store	Signage reinstalled
Shared-Use Path (SUP) Connection	Not applicable; SUP to Sagamore North does not exist	Not applicable	Not applicable	New SUP connection from Sagamore Recreation Area to Sagamore North SUP

Figure 5-6. Sagamore Recreation Area: Measures to Minimize Harm



Source: Massachusetts Department of Transportation, 2025

5.5.3.1 Construction Minimization Measures

Implement Construction Noise and Vibration Control Plans

MassDOT would require Program contractors to minimize the effects of construction noise and vibration upon adjacent communities and Section 4(f) properties. A special provision within the contract would require the contractor to submit a Noise Control Plan and a Vibration Control Plan for approval by MassDOT prior to the start of construction. The plans would describe the procedure for predicting construction noise and vibration levels prior to performing construction activities, providing the results of a pre-construction buildings survey (identifying structures of concern for potential vibration impacts), and identifying noise and vibration reduction measures to meet the noise and vibration level limitations, minimize nuisance noise and vibration conditions, and preclude structural damage from vibration. Refer to **Chapter 4.14, Noise and Vibration**, for more information on noise and vibration mitigation measures during construction.

Implement MassDOT Standard Specifications for Air Pollution Prevention

MassDOT would require Program contractors to implement standard specifications for air pollution prevention during construction, including dust control, to minimize air quality impacts to Section 4(f) properties. As part of these requirements, the construction contractor would be responsible for minimizing emissions from construction vehicles and equipment and for treating soil and stockpiled materials to control and suppress dust. Refer to **Chapter 4.13, Air Quality**, for more information on air quality mitigation measures during construction.

Minimize Land Disturbance and Restore Landscape

MassDOT would revegetate all areas disturbed by construction and implement an extensive landscape plan to repair, restore, and enhance the existing landscape affected by Program construction. Following construction completion and establishment of the state highway layout, natural resource restoration would return lawns in disturbed areas to their pre-construction condition.

5.5.3.2 Mitigation and Enhancement Measures

Restore Existing Parking

Except for 29 parking spaces located within the operational footprint of the proposed Sagamore Bridge SUP, once the Sagamore Bridge project's construction is complete, MassDOT would restore the paved parking lot to its pre-construction condition.

Expand Parking Facilities

MassDOT would maintain existing parking levels at Sagamore Recreation Area throughout construction by building an overflow parking area that provides 54 parking spaces. The overflow parking area would be constructed by extending the existing Sagamore Recreation Area gravel lot to the east, and it would have a gravel surface to match the existing lot. The expanded lot would be designed for one-way traffic flow, with entry from the existing parking lot and an exit onto Canal Street. It would be constructed in an area outside the existing boundary of Sagamore Recreation Area but within the USACE-owned and operated Cape Cod Canal FNP, resulting in a permanent expansion of the Sagamore Recreation Area to approximately 2.63 acres (net gain of approximately 0.63 acres). Upon completion of construction, the

proposed parking lot would result in a net increase of 25 parking spaces at Sagamore Recreation Area. The expanded parking lot would be owned and maintained by the USACE as part of Sagamore Recreation Area. The expanded parking facility would also include a sidewalk connection to the existing paved parking area and access to North Canal Service Road with pedestrian-scale lighting. Refer to [Figure 5-6](#) for the proposed overflow parking lot footprint and connection.

Extend Shared-Use Path Connection

An enhancement to Sagamore Recreation Area, the ADA-accessible SUP proposed for the Sagamore North quadrant would extend to include the Sagamore Recreation Area's existing and new parking lot facilities, and provide access to the North Canal Service Road, connecting the Sagamore Recreation Area to neighborhoods and transit facilities on both sides of Sagamore Bridge. Refer to [Figure 5-6](#) for a depiction of the proposed Sagamore North SUP connection at the western boundary of Sagamore Recreation Area. Refer to **Chapter 4.3, Pedestrian and Bicycle Facilities**, for additional details on pedestrian and bicycle facilities proposed for the Sagamore North quadrant.

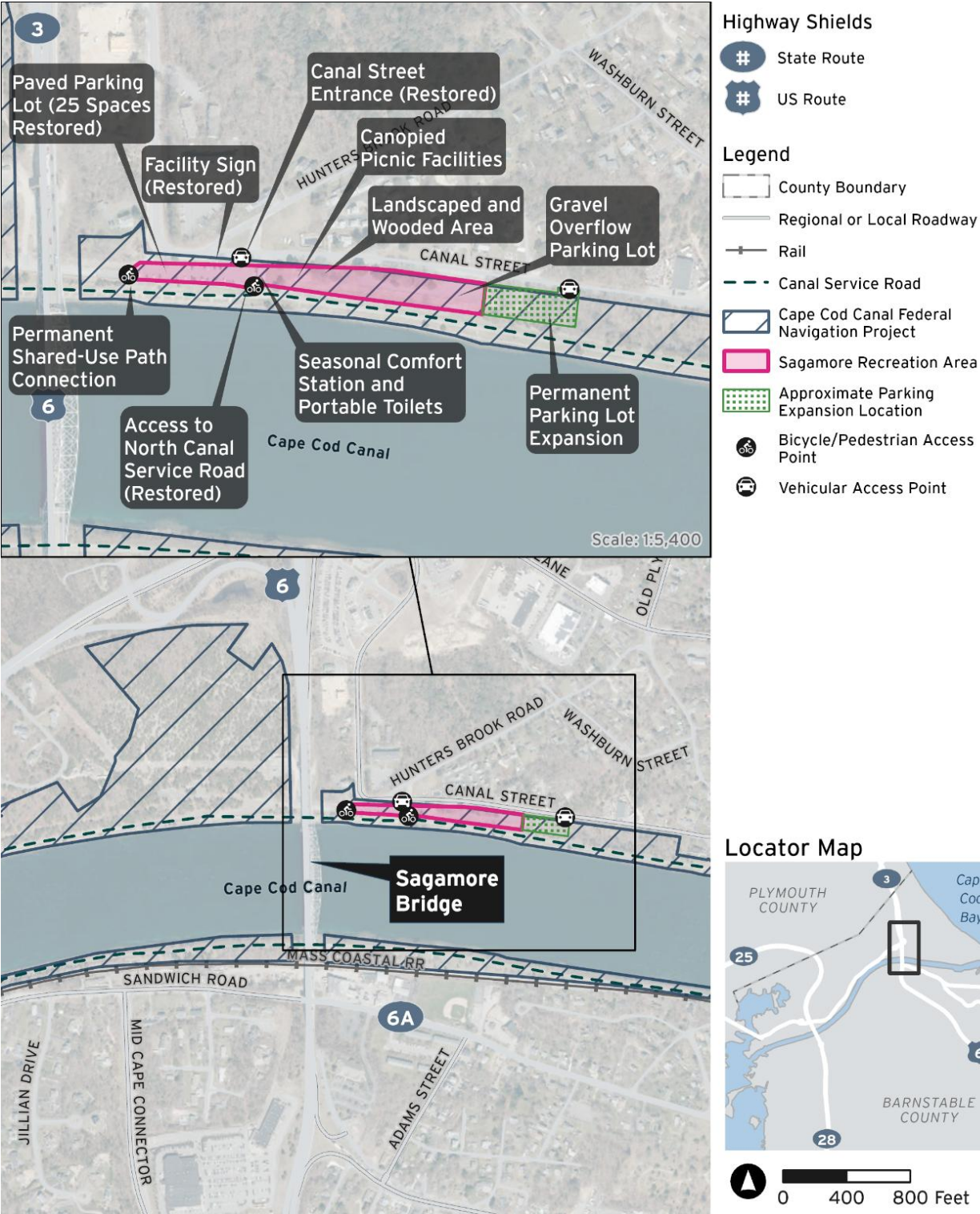
5.5.3.3 Summary of Use and Permanent Condition

As demonstrated in [Table 5-3](#), the use of Sagamore Recreation Area for the construction and operation of the Sagamore Bridge project, together with any impact avoidance, minimization, and mitigation or enhancement measures, would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

[Figure 5-7](#) presents the proposed permanent condition of Sagamore Recreation Area upon completion of construction. As depicted in the figure, the USACE's parking lot would be restored upon completion of construction. The proposed parking expansion would be a permanent feature that provides 25 new, permanent parking spaces. Therefore, when accounting for the existing 54 parking spaces and the four accessible parking spaces at Sagamore Recreation Area, plus the 25 new parking spaces, the permanent condition of Sagamore Recreation Area would have a total of 83 parking spaces, all of which results in an expanded park footprint. The new SUP connection to existing and proposed bicycle and pedestrian facilities in the Sagamore North quadrant, which would include pedestrian-scale lighting, would enhance the recreational features of Sagamore Recreation Area. Upon completion of construction, Sagamore Recreation Area would comprise 2.63 acres within the Cape Cod Canal FNP, reflecting a net gain of 0.63 acres as compared to its current area, and there would be no net loss of land from the Sagamore Recreation Area due to the Sagamore Bridge project. The USACE would be responsible for redesignating the Sagamore Recreation Area's boundaries to reflect the permanent facility layout, which includes incorporating the expanded parking area.

MassDOT estimates the total cost of the proposed measures to minimize harm for Sagamore Recreation Area to be approximately \$4.3 million (based on 2025 projections).

Figure 5-7. Sagamore Recreation Area: Proposed Permanent Condition



Source: Massachusetts Department of Transportation, 2025

5.5.4 Coordination and Consultation

FHWA and MassDOT have coordinated extensively with the USACE as the OWJ for Sagamore Recreation Area. The USACE serves as a Cooperating Agency in the NEPA environmental review process for the Program, as detailed in **Appendix 6.1, Agency Coordination and Public Involvement Technical Report**. USACE has participated in a series of Cooperating Agency meetings with FHWA and MassDOT to exchange information during Program planning and to provide concurrence on decision points in the NEPA review process. **Table 5-4** lists the additional coordination meetings MassDOT has conducted with USACE to review anticipated impacts and discuss measures to minimize harm to Sagamore Recreation Area.

Table 5-4. Sagamore Recreation Area Official with Jurisdiction Coordination Meetings

Meeting Date	Description
December 12, 2022	Review of mainline options and construction laydown area impacts, specifically related to the Cape Cod Canal Federal Navigation Project and the U.S. Army Corps of Engineers leased and operated park and recreation areas, including Sagamore Recreation Area.
March 21, 2024	Review of applicability of Section 4(f) to the Cape Cod Bridges Program and discussion of anticipated impacts to the Cape Cod Canal Federal Navigation Project.
May 23, 2024	Continuation of the March 21, 2024, meeting, including consideration of the Cape Cod Canal Federal Navigation Project as a Multiple Land Use Holding.
May 16, 2025	Review of the Massachusetts Department of Transportation’s proposed measures to minimize harm to Sagamore Recreation Area, including the proposed minimization and enhancement measures.
August 4, 2025	Review of the Massachusetts Department of Transportation’s proposed measures to minimize harm to Sagamore Recreation Area and discussion of the official with jurisdiction coordination process.
August 28, 2025	Continuation of the August 4, 2025, meeting to discuss proposed measures to minimize harm to Sagamore Recreation Area, real estate requirements, and the U.S. Army Corps of Engineers process for designating recreation areas with the Cape Cod Canal Federal Navigation Project.

FHWA and MassDOT will continue to coordinate with USACE through its review of proposed measures to minimize harm, including obtaining USACE’s final written concurrence as the OWJ for Sagamore Recreation Area. It is anticipated that the final written concurrence from the USACE will be included in the combined Final Environmental Impact Statement and Record of Decision.

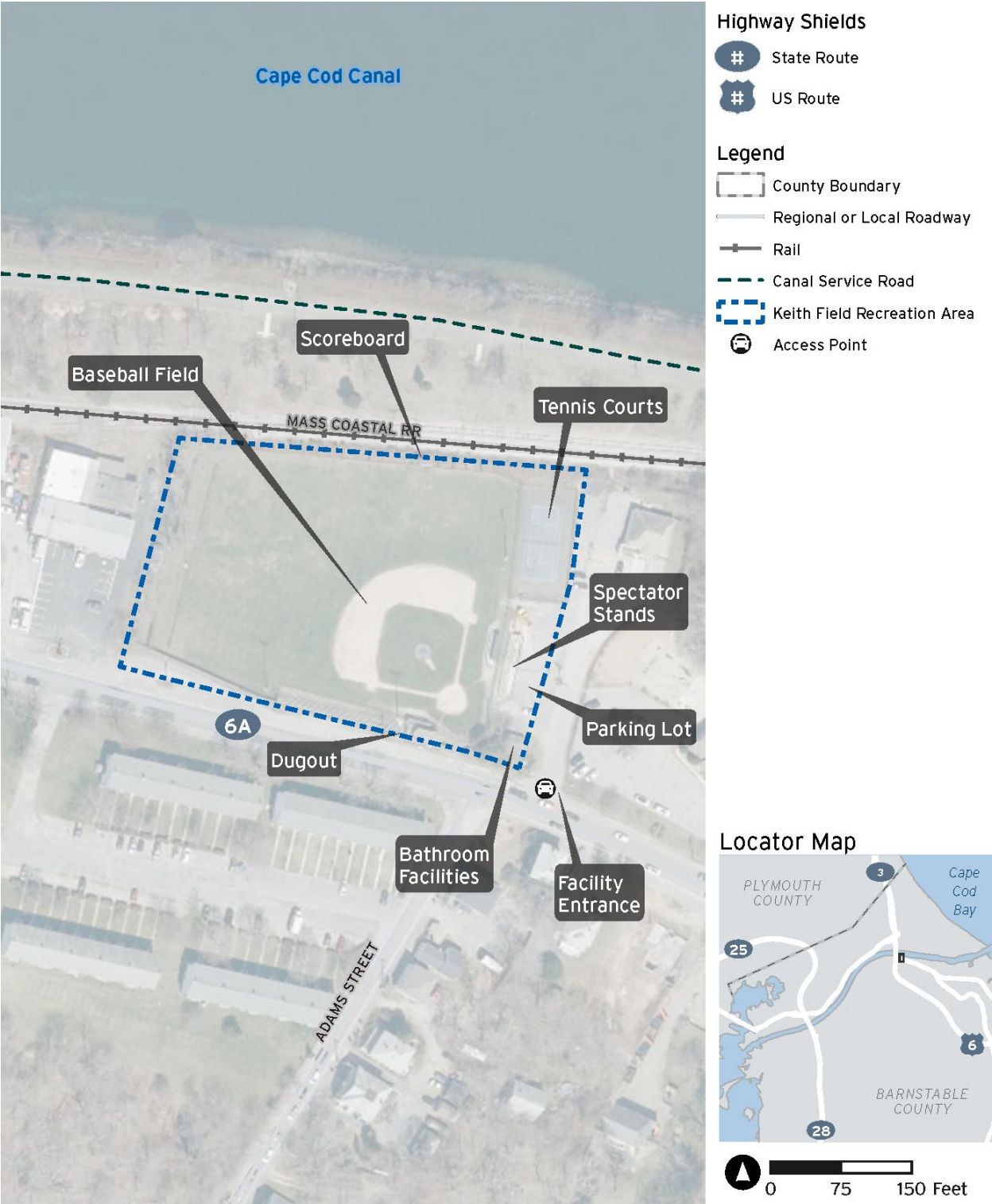
5.6 Keith Field Recreation Area: Analysis and *De Minimis* Impact Determination

This section provides FHWA’s analysis of the use of the Keith Field Recreation Area. As directed by 23 CFR 774.5(b)(2), for public parks and recreation areas where FHWA intends to issue a *de minimis* impact determination, public notice and opportunity for review and comment, followed by written concurrence from the OWJ for the property, are required before FHWA can approve the proposed use. Because FHWA intends to apply a *de minimis* impact determination for the use of the Keith Field Recreation Area, FHWA is seeking public review and comment on this proposed Section 4(f) determination as part of the Draft Environmental Impact Statement public review period.

5.6.1 Description of Property

Keith Field Recreation Area is an approximate 2.8-acre parcel south of Cape Cod Canal at 880 Sandwich Road east of Sagamore Bridge. It is owned and operated by the Town of Bourne, which is the OWJ for the property. Keith Field Recreation Area consists of the Babe Ruth baseball field with a dugout, scoreboard, lighting, and spectator stands; bathroom facilities; and a hard-surface tennis court. Both the baseball field and tennis court are fenced. Access to the recreation area is via a driveway directly from Sandwich Road, and limited public parking, which can accommodate approximately 26 vehicles (four of which are ADA-accessible), is provided directly east and south of the fenced tennis court. According to the Town of Bourne, when the parking lot reaches capacity, drivers often illegally park their vehicles along the shoulder of Sandwich Road (State Route 6A) near the southwestern edge of Keith Field Recreation Area, within the state highway right-of-way, creating unsafe conditions for vehicles and pedestrians. To the north, Keith Field Recreation Area is bordered by MassCoastal Railroad, which separates the recreation area boundary from South Canal Service Road. [Figure 5-8](#) depicts the existing conditions and recreational features, and [Exhibit 5-7](#) and [Exhibit 5-8](#) are photographs of existing conditions.

Figure 5-8. Keith Field Recreation Area: Existing Conditions and Recreational Features



Source: Massachusetts Department of Transportation, 2025

Exhibit 5-7. Keith Field Recreation Area, facing northwest



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-8. Keith Field Recreation Area, facing west



Source: Massachusetts Department of Transportation, 2024

5.6.2 Proposed Impacts and Use

Based upon preliminary design plans, the construction and operation of the Sagamore Bridge project would require the use of approximately 0.4 acres of Keith Field Recreation Area. In total, use of the 2.8-acre parcel would account for approximately 14% of the total parcel area.

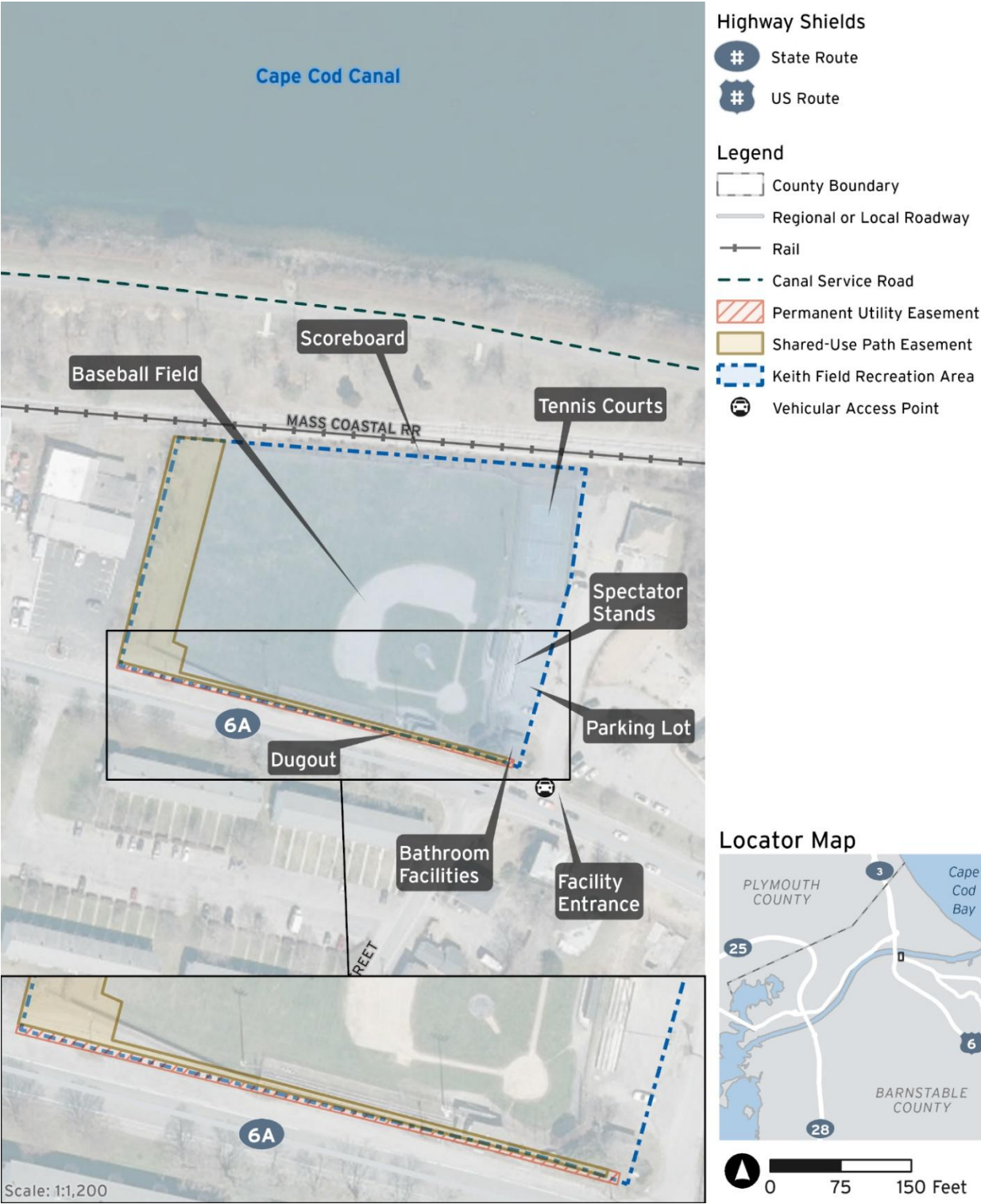
Direct use of 0.32 acres of the Keith Field Recreation Area would be required to construct and maintain a SUP along the western edge of the parcel. The SUP would be a 12-foot-wide paved path directly west of the existing fenced baseball field and would connect the permanent SUP on the south side of Sandwich Road to South Canal Service Road. MassDOT would construct a wood-rail fence on the western side of the proposed SUP for the length of the baseball field. At the northern terminus of the SUP at Keith Field Recreation Area, MassDOT would construct a Z-gate for pedestrians and bicyclists to safely cross the MassCoastal railroad tracks to access the Cape Cod Canal FNP and South Canal Service Road. The railroad crossing would also include a signal and auditory warnings. MassDOT is coordinating with the Town of Bourne to obtain easements for the construction and operation of the SUP on the Keith Field Recreation Area.

Direct use of 0.05 acres of the Keith Field Recreation Area would also be required for utility relocations along the portion of Sandwich Road bordering the baseball field's southern boundary. The proposed direct use would represent less than 2% of its total land area. As part of an initial construction phase, utilities along Sandwich Road would be relocated underground into concrete-encased duct banks. MassDOT is coordinating with the Town of Bourne to obtain a construction easement and a permanent easement for the utility relocations. The permanent easement would be located just within the southern boundary of the parcel bordering Sandwich Road and would not affect the existing baseball field dugout.

MassDOT assessed potential noise effects due to the construction and operation of the Sagamore Bridge project. During construction, there would be intermittent fluctuations in noise levels due to construction vehicles and equipment performing earth-disturbing work and roadway reconstruction within and proximate to Keith Field Recreation Area. Construction activities would involve site preparation, grading, and roadway construction. Based on noise modeling conducted for the 2050 Build Alternative, no FHWA Category C land uses in the Sagamore South quadrant, including Keith Field Recreation Area, would approach or exceed the Noise Abatement Criteria threshold; further, no substantial noise increases are predicted for the 2050 Build Alternative within the Sagamore South quadrant. **Section 4.14, Noise and Vibration**, provides additional details of potential construction period and operations effects, including MassDOT's contract specification requirements for noise and vibration control during construction.

Figure 5-9 presents the anticipated use of the Keith Field Recreation Area due to the Build Alternative, and the locations of the SUP and permanent utility easements.

Figure 5-9. Keith Field Recreation Area: Proposed Use



Source: Massachusetts Department of Transportation, 2025

5.6.3 Measures to Minimize Harm

In coordination with the Town of Bourne, FHWA and MassDOT have developed measures to minimize harm, including avoidance, minimization, mitigation, and enhancement measures, for the proposed use of Keith Field Recreation Area. **Table 5-5** is a summary of the existing recreational features at Keith Field Recreation Area, anticipated use due to the Build Alternative, proposed measures to minimize harm for each feature where a use would occur, and the proposed permanent condition.

Section 5.6.3.1 and **Section 5.6.3.2** provide additional details. Refer to **Figure 5-10** for MassDOT's proposed measures to minimize harm in relation to the Sagamore Bridge Project Limits, including construction minimization measures and permanent mitigation and enhancement measures.

As applicable, MassDOT would implement the measures to minimize harm prior to undertaking any construction activities for the Sagamore Bridge project that would result in a use of Keith Field Recreation Area, such that there would be no loss of the features and attributes that qualify the property for protection under Section 4(f).

Table 5-5. Keith Field Recreation Area – Recreational Features, Section 4(f) Uses, and Measures to Minimize Harm

Existing Feature	Direct Use	Measures to Minimize Harm	Permanent Condition
Recreation Area property (west of baseball field fence)	Direct use of 0.32 acres for a permanent shared-use path (SUP)	- Construct SUP to avoid impacts to the fenced-in baseball field - Retain SUP and connection as permanent facilities, per request of Town of Bourne (official with jurisdiction)	Permanent SUP from Sandwich Road to South Canal Service Road with flashing lights at the railroad crossing
Recreation Area property (south of baseball field fence)	Direct use of 0.05 acres for the operation and maintenance of relocated utilities	- Restore disturbed land - Perform utility maintenance from Sandwich Road	Existing overhead utilities are relocated underground, and land is restored
Parking lot (approximately 26 spaces with 4 accessible spaces)	No direct use	Construct a 30-space public parking area (approximately 0.3 acres) with SUP connections to Keith Field SUP	- Net increase of 30 parking spaces - Expanded footprint of Keith Field Recreation Area (net gain of approximately 0.3 acres)

5.6.3.1 Construction Minimization Measures

MassDOT would implement measures to minimize harm to the Keith Field Recreation Area during the construction of the Sagamore Bridge project. These measures would include the following (as described in [Section 5.5.3.1](#)):

- Implement construction noise and vibration control plans
- Implement MassDOT standard specifications for air pollution prevention
- Minimize land disturbance and restore landscape

Impacts to the Keith Field Recreation Area would be minimized to the maximum extent practicable. MassDOT would construct the SUP outside the fenced baseball field to avoid effects. Additionally, the existing overhead utilities would be placed underground via a concrete-encased duct bank accessed from Sandwich Road. Access to the easement for operations and maintenance would be from Sandwich Road and would not interfere with the ongoing recreational uses of Keith Field Recreation Area.

5.6.3.2 Mitigation and Enhancement Measures

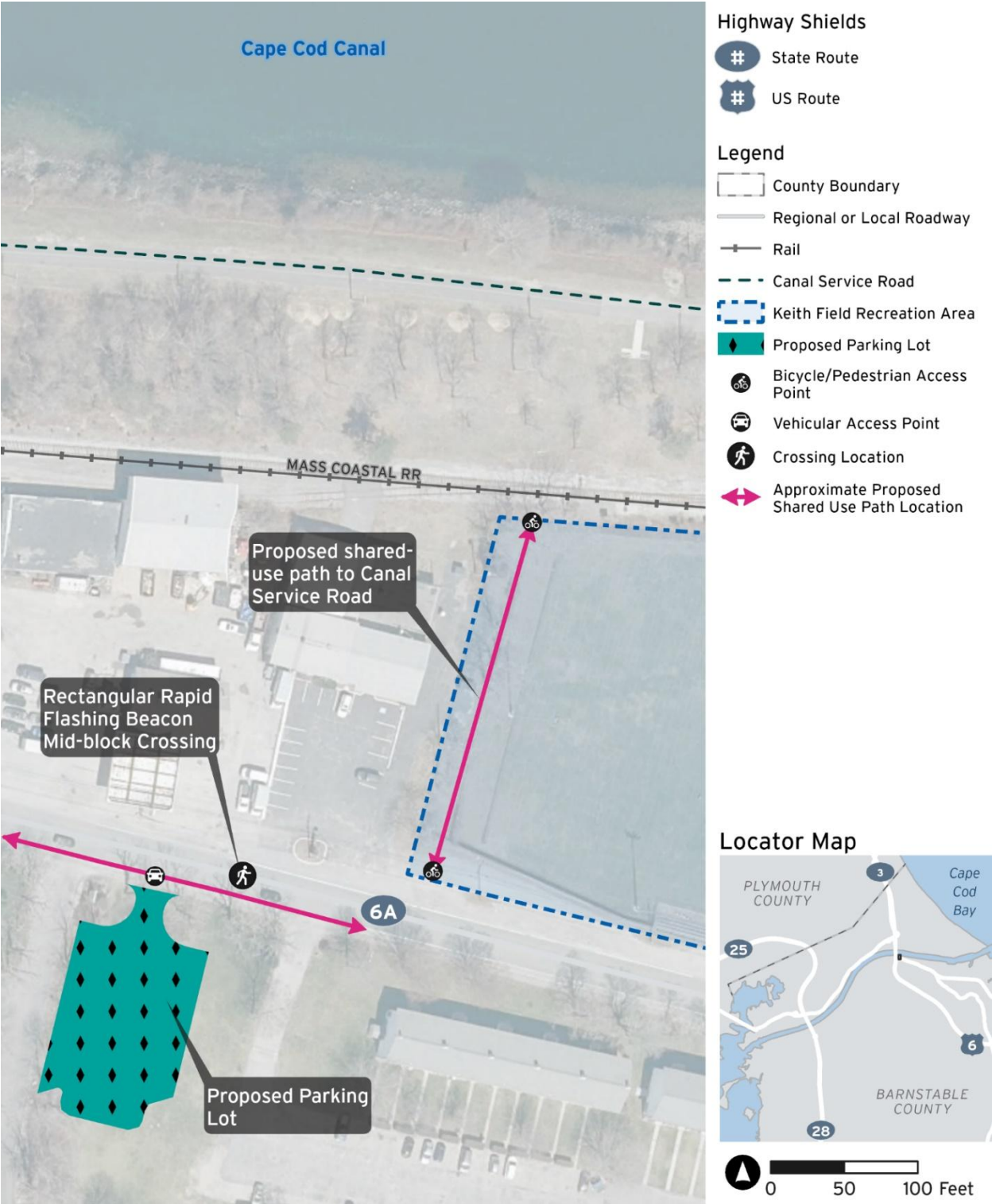
Expanded Public Parking Area

In coordination with the Town of Bourne, MassDOT would construct a public parking area on a vacant lot on the south side of Sandwich Road, west of Keith Field Recreation Area, to accommodate a greater number of Keith Field patrons and potential SUP users. MassDOT would obtain permanent easements from two private property owners to construct the proposed public parking area. The proposed parking lot would occupy approximately 0.3 acres, accommodate approximately 30 vehicles, and include a mid-block rectangular rapid flashing beacon to help pedestrians and bicyclists safely cross Sandwich Road between the parking lot and Keith Field Recreation Area. The expanded parking area would support safe multimodal connections to Keith Field and South Canal Service Road. Additional amenities in this area would include lighting and landscaping adjacent to the proposed new parking area. The new parking lot would be owned and maintained by the Town of Bourne.

The new parking lot would expand the size of Keith Field Recreation Area, from approximately 2.8 acres under existing conditions to approximately 3.1 acres in the proposed permanent condition.

[Figure 5-10](#) provides the proposed parking area layout.

Figure 5-10. Keith Field Recreation Area: Proposed Measures to Minimize Harm



Source: Massachusetts Department of Transportation, 2025

Permanent Shared-Use Path Connection

As noted in [Section 5.6.2](#), MassDOT's proposed use of the Keith Field Recreation Area is to construct the SUP connecting Sandwich Road and South Canal Service Road under the Build Alternative, and its use is only required until completion of the Build Alternative SUPs. However, at the request of the Town of Bourne (further described in [Section 5.6.4](#)), MassDOT is constructing the SUP connection as a permanent facility. The permanent SUP connection would enhance the recreational value of Keith Field Recreation Area by providing connections between the proposed parking lot, the proposed SUPs along Sandwich Road, and South Canal Service Road. As the Keith Field Recreation Area does not contain any multimodal or SUP connections under the existing conditions, this proposed enhancement would provide recreation area users with additional activity options at Keith Field.

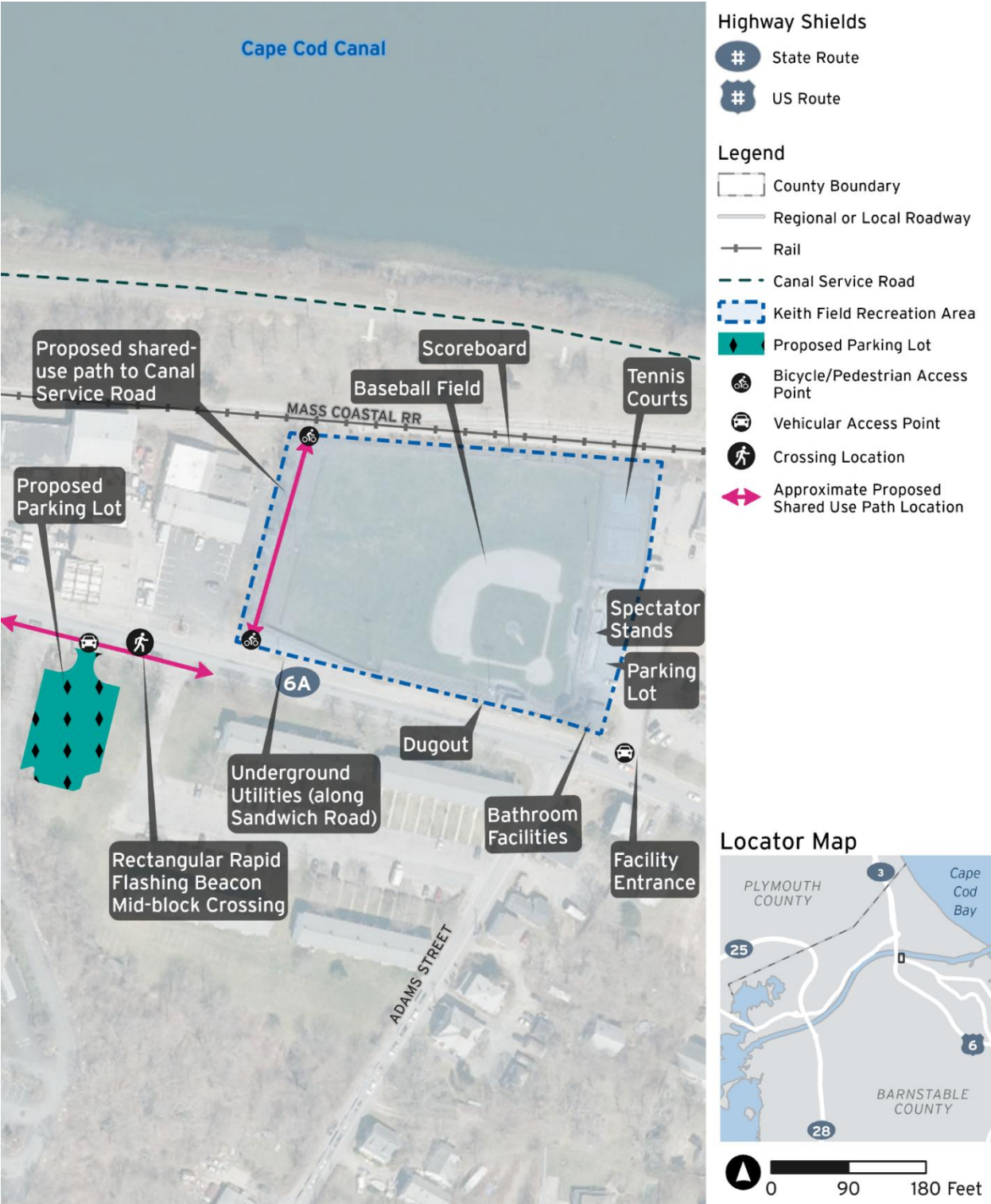
5.6.3.3 Summary of Use and Permanent Condition

As demonstrated in [Table 5-5](#), the use of the Keith Field Recreation Area for the Sagamore Bridge project, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

[Figure 5-11](#) depicts the proposed permanent condition of Keith Field Recreation Area, including the proposed measures to restore and enhance the facility. The proposed parking expansion would provide 30 additional parking spaces, and it would help mitigate illegal overflow parking on the shoulder of Sandwich Road when the facility's existing parking lot reaches capacity. The permanent SUP connection to South Canal Service Road would expand the recreation opportunities at Keith Field Recreation Area by providing an authorized multimodal connection to South Canal Service Road without impacting the baseball field or other existing recreational features at the site. MassDOT would obtain a permanent easement of 0.05 acres for utility relocations. MassDOT would relocate all existing overhead utilities underground and restore the area (upon completion of construction), so the area could continue to be used for recreational purposes. The new parking lot would increase the size of Keith Field Recreation Area by approximately 0.3 acres.

MassDOT estimates the total cost of the proposed measures to minimize harm for Keith Field Recreation Area to be approximately \$1.7 million (based on 2025 projections).

Figure 5-11. Keith Field Recreation Area: Permanent Condition



Source: Massachusetts Department of Transportation, 2025

5.6.4 Coordination and Consultation

MassDOT has initiated coordination with the Town of Bourne as the OWJ for Keith Field Recreation Area regarding the anticipated effects, and the minimization and mitigation of impacts due to the direct use of the Keith Field Recreation Area. MassDOT met with the Town of Bourne on March 31, 2025, and July 17, 2025, to discuss the proposed use and potential minimization and enhancement measures for Keith Field Recreation Area.

FHWA and MassDOT will continue to coordinate with the Town of Bourne through its review of the proposed measures to minimize harm, including obtaining the Town of Bourne's final written concurrence as the OWJ for Keith Field Recreation Area. It is anticipated that the final written concurrence from the Town of Bourne will be included in the combined Final Environmental Impact Statement and Record of Decision.

5.7 Bourne Scenic Park: Analysis and *De Minimis* Impact Determination

This section provides FHWA's analysis of the use of Bourne Scenic Park. As directed by 23 CFR 774.5(b)(2), for public parks and recreation areas where FHWA intends to issue a *de minimis* impact determination, public notice and opportunity for review and comment, followed by written concurrence from the OWJ, are required before FHWA can approve the proposed use. Because FHWA intends to apply a *de minimis* impact determination for the use of Bourne Scenic Park, FHWA is seeking public review and comment on this proposed Section 4(f) determination as part of the Draft Environmental Impact Statement public review period.

5.7.1 Description of Property

Bourne Scenic Park is an approximately 80.2-acre recreation campground north of Cape Cod Canal, immediately adjacent to the east and west sides of Bourne Bridge at 370 Scenic Highway in the town of Bourne, Barnstable County, Massachusetts. Access to Bourne Scenic Park is from Scenic Highway (U.S. Route 6) at the signalized intersection with Nightingale Road and Andy Oliva Drive.

Bourne Scenic Park has been managed by the BRA since 1951. The BRA owns a 6.5-acre parcel within Bourne Scenic Park. The remainder of the park (approximately 73.7 acres) is within the Cape Cod Canal FNP and is owned by the USACE and leased to the BRA. Both the USACE and BRA are OWJs for Bourne Scenic Park. The park features seasonal camping with 439 sites and a variety of recreational facilities.

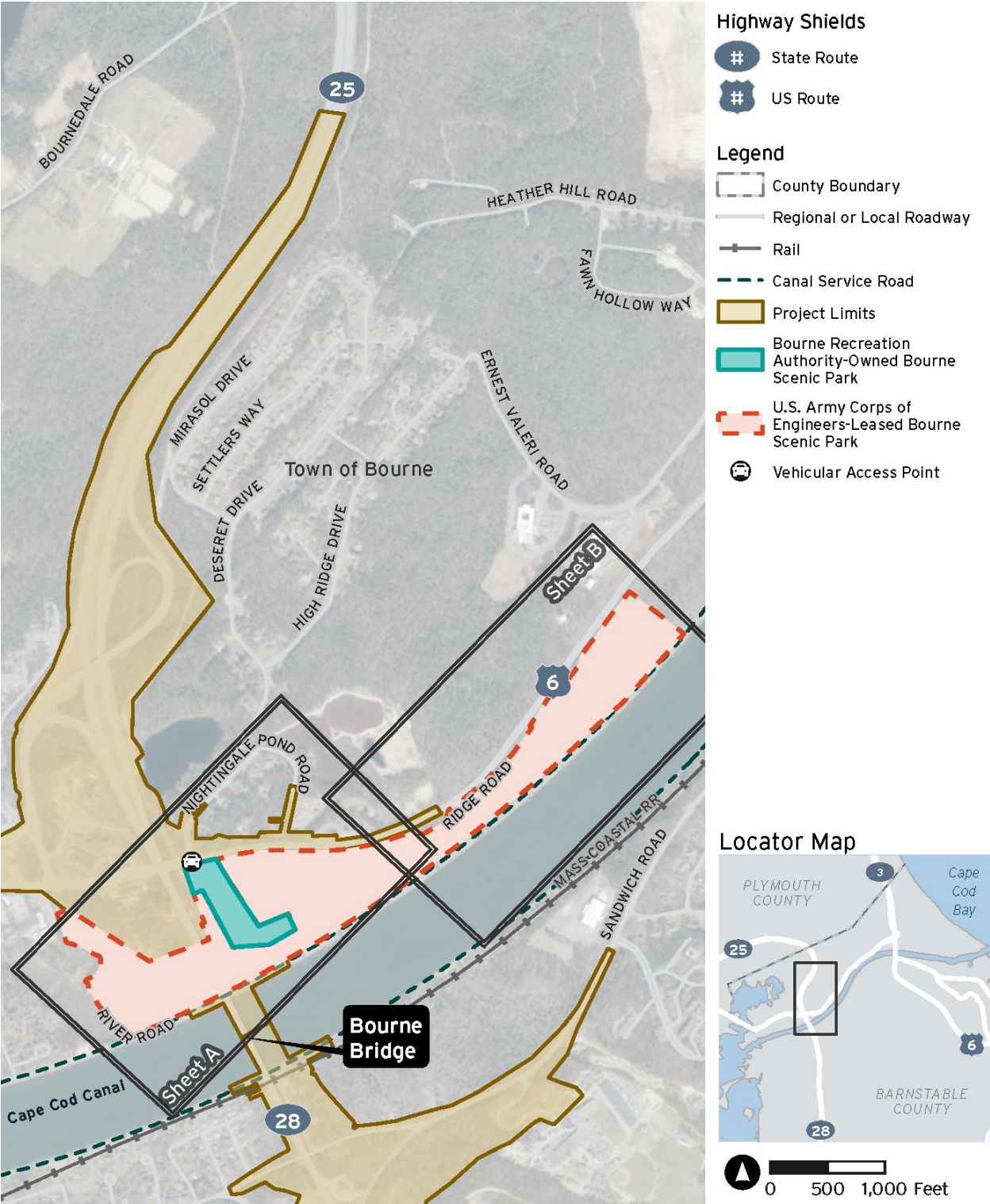
Figure 5-12 through Figure 5-15 present the existing layout of Bourne Scenic Park. The park's campsites are grouped into six different lettered areas, which are used to indicate different regions of the park. These areas include A-Area, B-Area, C-Area, CX-Area, G-Area, P-Area, and PX-Area. The lettered areas of the park are presented in **Figure 5-13**.

Most park amenities are located directly east and west of Bourne Bridge in A-Area and P-Area. **Figure 5-14** presents an overview of the park's recreational amenities in these areas. The park's recreational features in A-Area include the primary park access from Scenic Highway with designated entrance and exit lanes and a gate house on Andy Oliva Drive, camper recreational vehicle (RV)

parking, maintenance garage (comprising several structures) directly east of the entrance, park office, the multipurpose Alex Consoni Pavilion, and accessible bathroom facilities directly south of the park entrance. Other recreation and support facilities located in A-Area, B-Area, and G-Area include a playground, basketball court, individual bathroom and shower facilities, dump station, camp store, and picnic area. Recreational features located directly west of the Bourne Bridge (P-Area and PX-Area) include volleyball and tennis courts, two swimming pools, bathroom and shower facilities, picnic areas, and 100 campsites. Bourne Scenic Park's remaining 339 campsites extend east approximately 1 mile from the bridge (A-Area, B-Area, CX-Area, and C-Area), and include sites for cabins, lodges, and a non-electric tent area.

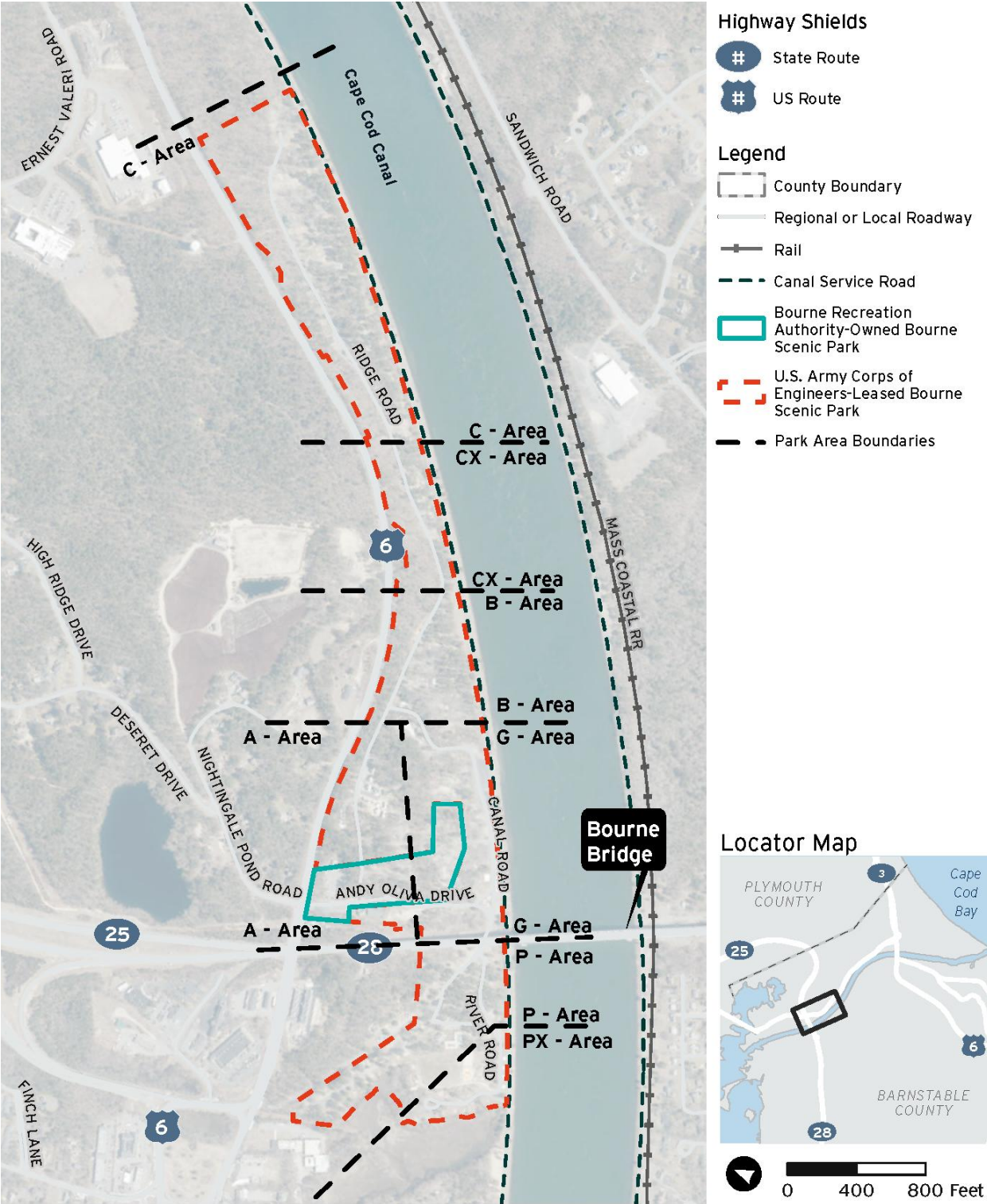
Bourne Scenic Park has aboveground electrical and internet access. Campsites provide 30- and 50-amp electric service, water hookups, and gray water dumping. There is no sewer service for individual campsites. Bourne Scenic Park also provides direct access to the North Canal Service Road, including two bicycle (at-grade) access points along Canal Road in A-Area (directly east of Bourne Bridge) and five pedestrian (stairway) access points from B-Area, CX-Area, and C-Area.

Figure 5-12. Bourne Scenic Park, Existing Conditions (Overview)



Source: Massachusetts Department of Transportation, 2025

Figure 5-13. Bourne Scenic Park, Existing Conditions (Overview) – Park Regions



Source: Massachusetts Department of Transportation, 2025

Figure 5-14. Bourne Scenic Park, Existing Conditions and Recreational Features (Sheet A)



Source: Massachusetts Department of Transportation, 2025

Figure 5-15. Bourne Scenic Park, Existing Conditions and Recreational Features (Sheet B)



Source: Massachusetts Department of Transportation, 2025

Currently, 60% of all campsites consist of seasonal campers. Seasonal campers primarily use section on the west side of the Bourne Bridge, and weekly campers primarily use the section on the east side of Bourne Bridge. Campers use facilities on both sides of the park, traveling via the North Canal Service Road that borders the southern end of the park. [Exhibit 5-9 through Exhibit 5-20](#) provide photographs of existing conditions.

Exhibit 5-9. Bourne Scenic Park: Exit and Gatehouse, facing south



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-10. Bourne Scenic Park: Camper RV Parking Lot, Park Office, and Alex Consoni Pavilion, facing southwest



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-11. Bourne Scenic Park: Alex Consoni Pavilion, facing west



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-12. Bourne Scenic Park: Maintenance Buildings, facing northeast



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-13. Bourne Scenic Park: Maintenance Area Shed and Parking Area, facing north



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-14. Bourne Scenic Park: Children's Playground, facing northeast



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-15. Bourne Scenic Park: Basketball Court, facing south



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-16. Bourne Scenic Park: Swimming Pool, facing southwest



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-17. Bourne Scenic Park: Swimming Pool Bath Facilities



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-18. Bourne Scenic Park (Western Portion): Campsites on Pool Road, facing southwest



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-19. Bourne Scenic Park (Western Portion): Campsites on Sand Street, facing southeast



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-20. Access to North Canal Service Road at Bourne Bridge abutment, facing south



Source: Massachusetts Department of Transportation, 2024

5.7.2 Proposed Impacts and Use

According to preliminary design plans, construction and operation of the replacement Bourne Bridge and interchange approach network would require the temporary occupancy of approximately 14.7 acres — 11.9 acres are USACE-owned and leased to the BRA, and 2.8 acres of land are BRA-owned. There are approximately 5.7 acres required for direct use — 4.4 acres are USACE-owned, and 1.3 acres are BRA-owned. [Figure 5-16](#) presents the proposed use of Bourne Scenic Park due to the Bourne Bridge project, consisting of the construction footprint (temporary occupancy) and operations footprint (direct use). [Figure 5-17](#) and [Figure 5-18](#) present enlarged views of the proposed use of Bourne Scenic Park.

Highway Shields

 State Route

 US Route

Legend

 County Boundary

 Regional or Local Roadway

 Rail

 Canal Service Road

 Operations Footprint

 Construction Footprint

 Bourne Recreation
Authority-Owned Bourne
Scenic Park

 U.S. Army Corps of
Engineers-Leased Bourne
Scenic Park

 Vehicular Access Point

PLYMOUTH COUNTY

Cape Cod Bay

3

25

6

BARNSTABLE COUNTY

28

0 500 1,000 Feet

Figure 5-17. Bourne Scenic Park: Proposed Use, Enlarged View (Sheet A)



Source: Massachusetts Department of Transportation, 2025

Figure 5-18. Bourne Scenic Park: Proposed Use, Enlarged View (Sheet B)



Source: Massachusetts Department of Transportation, 2025

5.7.2.1 Temporary Occupancy

MassDOT would likely obtain temporary easements from the USACE and BRA for the proposed use during the construction period (temporary occupancy), which would include land for bridge construction access, crane placement, material laydown areas, and general construction activities. The following impacts would result from either the construction zone or the required roadway rerouting needed within Bourne Scenic Park to allow circulation throughout the park during the construction period:

- Closure of the existing park entrance from U.S. Route 6 (Scenic Highway)
- Removal of the park office and parking, gate house, Alex Consoni Pavilion (including game room and separate bathroom facilities), playground near A-Area, and basketball court near P-Area
- Removal of approximately 52 campsites within A-Area, G-Area, and P-Area
- Closure of the North Canal Service Road access point directly east of Bourne Bridge

Construction activities would adversely affect access within Bourne Scenic Park. During construction, the 14.7-acre temporary construction zone would be fenced, with access limited to authorized personnel. The fencing around the construction zone would prohibit Bourne Scenic Park employees and campers from traveling between the eastern and western portions of the campground. Campers in the eastern portion of Bourne Scenic Park would not have access to recreational facilities in the western portion of the park, including the two swimming pools, volleyball and basketball courts, and North Canal Service Road access points directly east and west of Bourne Bridge.

In addition to access restrictions, construction activities would result in intermittent noise and vibration impacts, even in areas adjacent to but outside of the construction footprint. These effects would stem primarily from vehicle operations associated with transporting concrete materials, oversized loads such as steel reinforcement cages, and other large deliveries required for bridge and roadway construction. The most disruptive activities are expected during demolition of the existing bridge and construction of new piers, which could involve saw cutting, hoe ramming, drilling, or pile driving. Construction near the park entrance also would include grading and site preparation, contributing to periodic noise and vibration. **Section 4.14, Noise and Vibration**, provides details on construction noise and vibration effects, including MassDOT's contract specifications for managing noise and vibration during construction.

5.7.2.2 Direct Use

The Build Alternative would require the direct use of approximately 5.7 acres — 4.4 acres of USACE-owned land within the replacement bridge alignment and approximately 1.3 acres of BRA-owned land adjacent to Scenic Highway (U.S. Route 6) — for new highway ramps within the alignment of the replacement Bourne Bridge and the State Route 25 to Scenic Highway eastbound ramp. For this direct use of the park, it is anticipated that MassDOT would obtain permanent easements from the USACE and BRA. The Commonwealth of Massachusetts would provide the agencies with fair market value in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970

(42 United States Code 61; 49 CFR 24, as amended). **Section 4.8, Property Acquisition, Displacement, and Relocation**, provides details on the right-of-way acquisition and compensation process.

Based on noise modeling conducted for the 2050 Build Alternative, no FHWA Category C land uses in the Bourne North quadrant, including Bourne Scenic Park, would approach or exceed the noise abatement criteria. No substantial noise increases are predicted for the 2050 Build Alternative within the Bourne North quadrant.

5.7.3 Measures to Minimize Harm

In coordination with the USACE and BRA through meetings and workshops conducted from December 2022 through August 2025, FHWA and MassDOT have developed measures to minimize harm, including avoidance, minimization, mitigation, and enhancement measures, for the proposed use of Bourne Scenic Park. **Table 5-6** is a summary of the existing recreational features at Bourne Scenic Park, anticipated use due to the Build Alternative, proposed measures to minimize harm for each feature where a use would occur, and the proposed permanent condition. **Section 5.7.3.1** and **Section 5.7.3.2** provide additional details. **Figure 5-19 through Figure 5-22** present MassDOT’s proposed measures to minimize harm in relation to the Bourne Bridge Project Limits, including construction minimization measures and permanent mitigation and enhancement measures.

As applicable, MassDOT would implement the measures to minimize harm prior to undertaking any construction activities for the Bourne Bridge project that would result in a use of Bourne Scenic Park, such that there would be no loss of the features and attributes that qualify the property for protection under Section 4(f).

Table 5-6. Bourne Scenic Park – Recreational Features, Section 4(f) Uses, and Measures to Minimize Harm

Existing Feature	Temporary Occupancy	Direct Use	Measures to Minimize Harm	Permanent Condition
73.7-acre U.S. Army Corps of Engineers-owned recreation area	11.9 acres construction footprint	4.4 acres operations footprint	Expand recreation boundaries within Cape Cod Canal Federal Navigation Project to mitigate for direct use	85.7-acre U.S. Army Corps of Engineers-owned recreation area (net gain of 12 acres)
6.5-acre Bourne Recreation Authority-owned recreation area	2.8 acres construction footprint	1.3 acres operations footprint	Expand recreation boundaries within Cape Cod Canal Federal Navigation Project to mitigate for direct use	6.5-acre Bourne Recreation Authority-owned recreation area (no change from existing condition)

Existing Feature	Temporary Occupancy	Direct Use	Measures to Minimize Harm	Permanent Condition
Multi-lane park entrance from U.S. Route 6 with gate house and vehicle queuing area	Construction footprint requires removal	Operations footprint requires permanent relocation	Construct relocated park entrance from U.S. Route 6 with a temporary traffic light, three vehicle queuing lanes, and a gatehouse	Relocated park entrance, vehicle queuing lanes, and gatehouse constructed as new, permanent facilities
Park Office	Construction footprint requires removal	Operations footprint requires permanent relocation	Relocate and construct a two-story office building with a camper check-in counter	Relocated park office constructed as a new, permanent facility
Alex Consoni Pavilion (including game room)	- Construction footprint requires removal - Close off access for campers traveling from the west side of the park	Operations footprint requires permanent relocation	- Relocate and construct a new pavilion and enclosed game room - Relocate game room equipment from the existing game room - Construct a new stage with sound system - Construct new pavilion and fire pits in P- and PX-Areas	- Relocated pavilion constructed as a new, permanent facility - Net gain of a new stage with sound system, new pavilion, and fire pits in P- and PX-Areas
Bathroom facilities at Alex Consoni Pavilion	Construction footprint requires removal	Operations footprint requires permanent relocation	Construct a new bathhouse for the G-Area	New bathhouse for the G-Area constructed as a modernized, permanent facility

Existing Feature	Temporary Occupancy	Direct Use	Measures to Minimize Harm	Permanent Condition
Playground near A-Area	Construction footprint requires removal	Operations footprint requires permanent relocation	Construct new playgrounds near A-Area and C-Area	- Relocated playground near A-Area constructed as a new, permanent facility - Net gain of one new playground near C-Area
Basketball Court near P-Area	Construction footprint requires removal	Operations footprint requires permanent relocation	Construct a new basketball court near A-Area	Relocated basketball court constructed as a new, permanent facility
Campsites in A-Area, G-Area, and P-Area	Construction footprint requires removal of 52 recreational vehicle campsites	No direct use	Expand A-Area, P-Area, and C-Area campground facilities to provide 115 new recreational vehicle campsites, water and electrical service hookups, and a new bathhouse	- Net gain of 63 recreational vehicle campsites - New bathhouse in C-Area
Access to North Canal Service Road (Andy Oliva Drive)	Closure of access point directly east of bridge	No direct use	Restore access after construction	- Access restored on Andy Oliva Drive - New access provided in C-Area
Two swimming pools near P-Area	Closure of west side access for campers traveling from the east side of the park	No direct use	Construct a new swimming pool on the east side of the park near A-Area	- Access restored - Net gain of one new swimming pool
Volleyball court near P-Area	Close off west side access for campers traveling from the east side of the park	No direct use	Restore access between the east and west sides of the park following construction	Access restored

Existing Feature	Temporary Occupancy	Direct Use	Measures to Minimize Harm	Permanent Condition
Access to P-Area and PX-Area campsites	Closure of west side access for campers traveling from the east side of the park	No direct use	Construct a new west side entrance from U.S. Route 6 and a gatehouse	- Access restored - Additional park entrance and gatehouse constructed as a new, permanent facility
Utilities (Water, Electricity, and Wi-Fi)	Impacts to infrastructure within the construction footprint	No direct use	- Replace existing infrastructure in-kind after construction - Provide new water, electricity, and Wi-Fi in the C-Area campground expansion	- Utility infrastructure restored - New water, electricity, and Wi-Fi infrastructure provided at new campsites
Facility roadways	Impacts to infrastructure within the construction footprint	No direct use	Repave all impacted roadways after construction	Roadways restored

5.7.3.1 Construction Minimization Measures

MassDOT would implement measures to minimize harm to Bourne Scenic Park during the construction of the Bourne Bridge project. These measures would include the following (as described in [Section 5.5.3.1](#)):

- Implement construction noise and vibration control plans
- Implement MassDOT standard specifications for air pollution prevention
- Restore landscape

5.7.3.2 Mitigation and Enhancement Measures

MassDOT would implement several measures to mitigate the use of Bourne Scenic Park and enhance the recreational features and amenities of the park that qualify the property for Section 4(f) protection. MassDOT would be responsible for fully implementing all proposed permanent mitigation and enhancement measures prior to undertaking any construction activities for the Bourne Bridge

project that would result in a use of Bourne Scenic Park, such that there would be no loss of the features and attributes that qualify the property for protection under Section 4(f).¹²

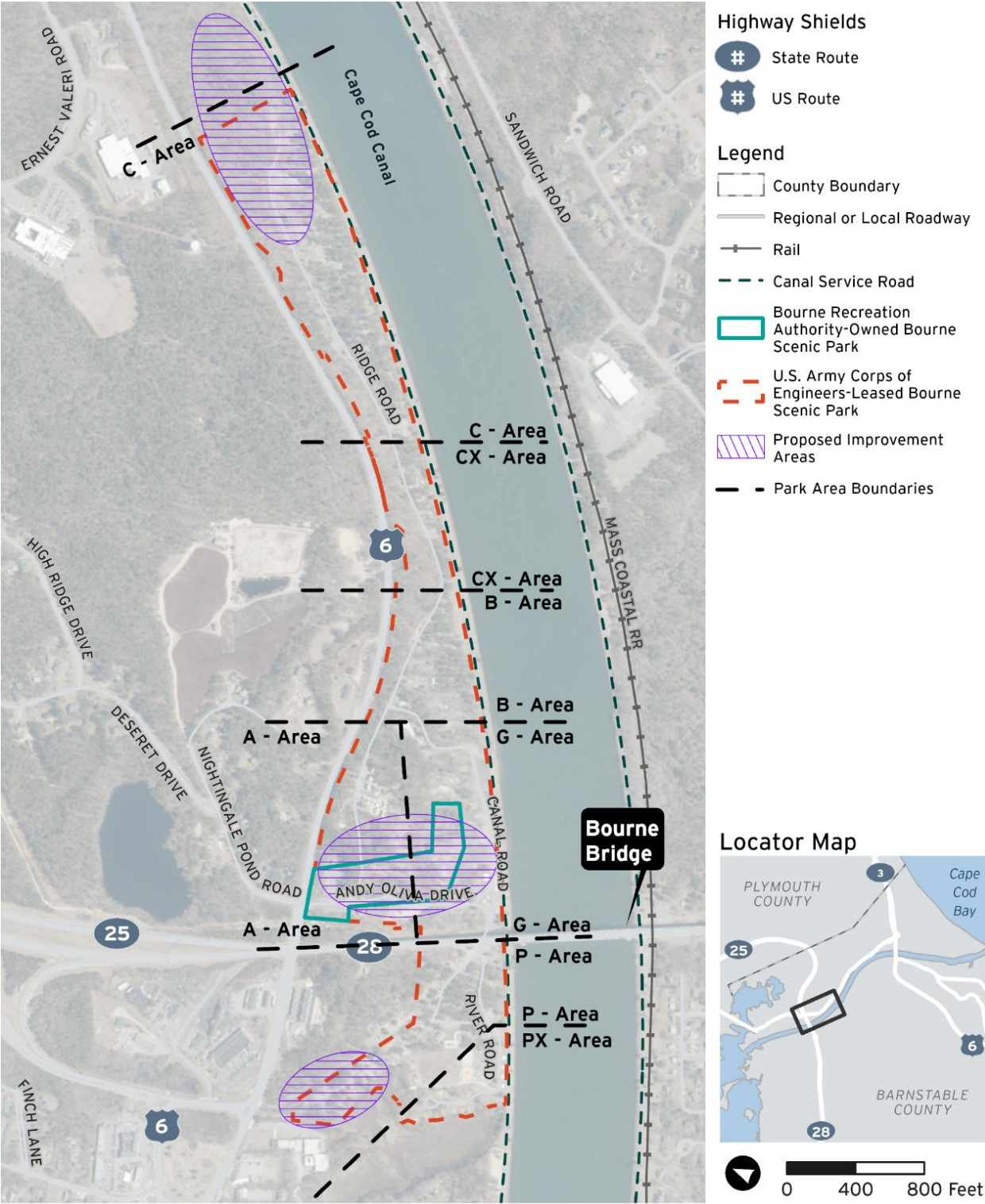
Figure 5-19 provides the general locations of the proposed mitigation and enhancement measures in relation to the existing park areas. There are three proposed mitigation and enhancement areas within Bourne Scenic Park:

- East side expansion (C-Area)
- East side entrance and improvements (A-Area and G-Area)
- West side improvements (P-Area)

Certain mitigation and enhancement measures also would be implemented across all three areas. These are described in detail in the remainder of this section.

¹² In coordination with the U.S. Army Corps of Engineers and Bourne Recreation Authority, the Massachusetts Department of Transportation (MassDOT) is confirming the mechanism(s) for providing the proposed mitigation and enhancement measures at Bourne Scenic Park, potentially consisting of MassDOT construction contracts, financing, a combination of methods, or other means.

Figure 5-19. Bourne Scenic Park: Proposed Mitigation and Enhancement Measures (Overview)



Source: Massachusetts Department of Transportation, 2025

Park-wide Mitigation and Enhancement Measures

MassDOT would implement certain mitigation and enhancement measures in all areas of Bourne Scenic Park affected by the Bourne Bridge project, as described in the following sections.

Roadway Repaving

MassDOT would repave roadways impacted during construction, and repave others, as needed, to implement the proposed measures to minimize harm.

Restore and Expand Electricity and Wi-Fi Infrastructure

For any existing electrical and Wi-Fi infrastructure impacted during construction, MassDOT would replace and restore that infrastructure in-kind. MassDOT would also expand the electricity and Wi-Fi service within Bourne Scenic Park to provide service to the east side campground expansion in the C-Area of the park.

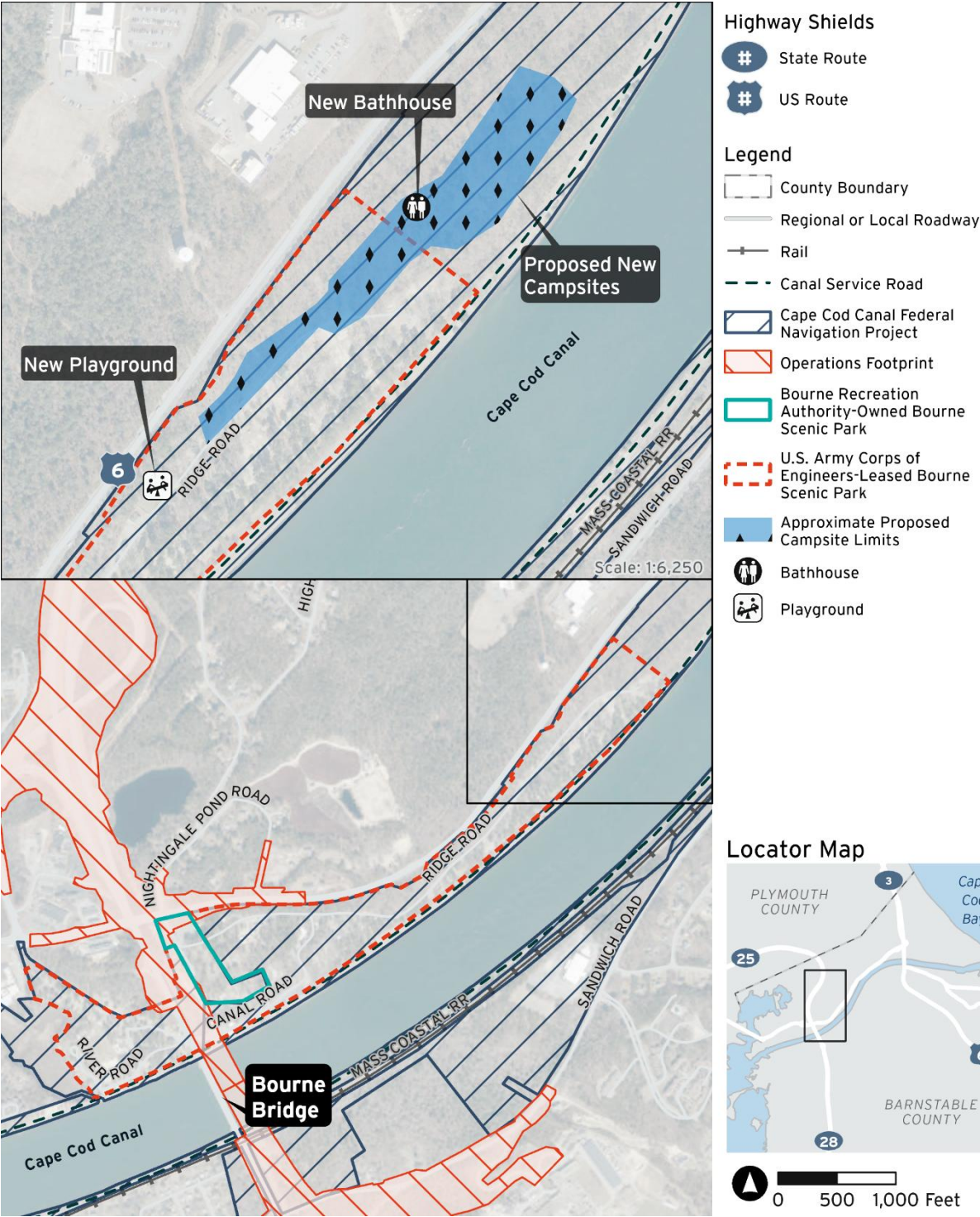
East Side Expansion

MassDOT would expand the park's C-Area camping facilities further to the east by constructing new RV campsites. The new campsites would include water and electrical service hookups for RVs and Wi-Fi infrastructure. Within the east side expansion area, MassDOT would construct a new pedestrian connection from the new campsites to the North Canal Service Road. MassDOT would also expand the campground roadway network to provide a connection from the additional campsites to the existing C-Area campsites. MassDOT would also construct a new playground and a concrete masonry unit bathhouse of approximately 850 square feet in the expanded C-Area.

The proposed C-Area expansion, as well as the campsite replacements proposed for A-Area, P-Area, and PX-Area, described in the [East Side Entrance and Improvements](#) and [West Side Improvements](#) sections, would provide up to 115 new campsites across Bourne Scenic Park, resulting in a parkwide net gain of 63 campsites. It is anticipated that this proposed enhancement measure would result in a larger area of USACE-owned property that would be leased to the BRA for Bourne Scenic Park's operation.

The proposed mitigation and enhancement measures included in the east side expansion are depicted in [Figure 5-20](#).

Figure 5-20. Bourne Scenic Park: East Side Expansion



Source: Massachusetts Department of Transportation, 2025

Note: This figure illustrates a conceptual arrangement of the proposed facilities. The final configuration is subject to refinement and may evolve as the design process progresses.

East Side Entrance and Improvements

Mitigation and enhancement measures that would be implemented in the east side entrance and improvement areas are described in the following sections and presented on [Figure 5-21](#).

Existing East Side Entrance Intersection Control and Improvements

MassDOT would reconstruct the existing entrance to Bourne Scenic Park from U.S. Route 6 to have a temporary traffic light at the entrance to the facility. The existing park driveway leading from U.S. Route 6 to A-Area would be reconstructed to have entrance and exit lanes with three 150-foot-wide vehicle queuing lanes. MassDOT would also construct a new gatehouse in this area, along with new signage. This entrance for campers and park-related activities would be entirely separate from the entrance designated for Program-related construction activities.

New Office Complex

MassDOT would construct a new two-story wood-frame office building of approximately 4,800 square feet adjacent to the proposed vehicle queuing lanes at the park entrance near A-Area. The office building would include a camper check-in counter with up to three stations. The office building would also include space for park administrative offices and a recreation office.

New Pavilion/Recreation Hall

MassDOT would construct a glue-laminated timber (glulam) frame pavilion and an enclosed game room structure of approximately 65 feet by 45 feet (3,000 square feet) at the park entrance near A-Area, close to the proposed new office complex. The gaming equipment for the proposed game room would be relocated from the park's existing game room. MassDOT would also build a basketball court in this area.

New Pool, Playground, and Bathhouse

MassDOT would build a new fiberglass in-ground pool, measuring approximately 30 feet by 50 feet and 4 feet deep, within an approximate 100-foot by 50-foot concrete pool deck. MassDOT would construct a new playground that includes one large climbing structure designed for 5- to 12-year-old children, one medium climbing structure designed for 2- to 5-year-old children, and one swing set with six swings. The in-ground pool and playground would be located at the park entrance near A-Area.

Additionally, MassDOT would construct a new concrete masonry unit bathhouse of approximately 850 square feet for the G-Area of the campground. MassDOT would develop the floor plan for the bathroom, stalls, and shower facilities in coordination with the USACE and BRA.

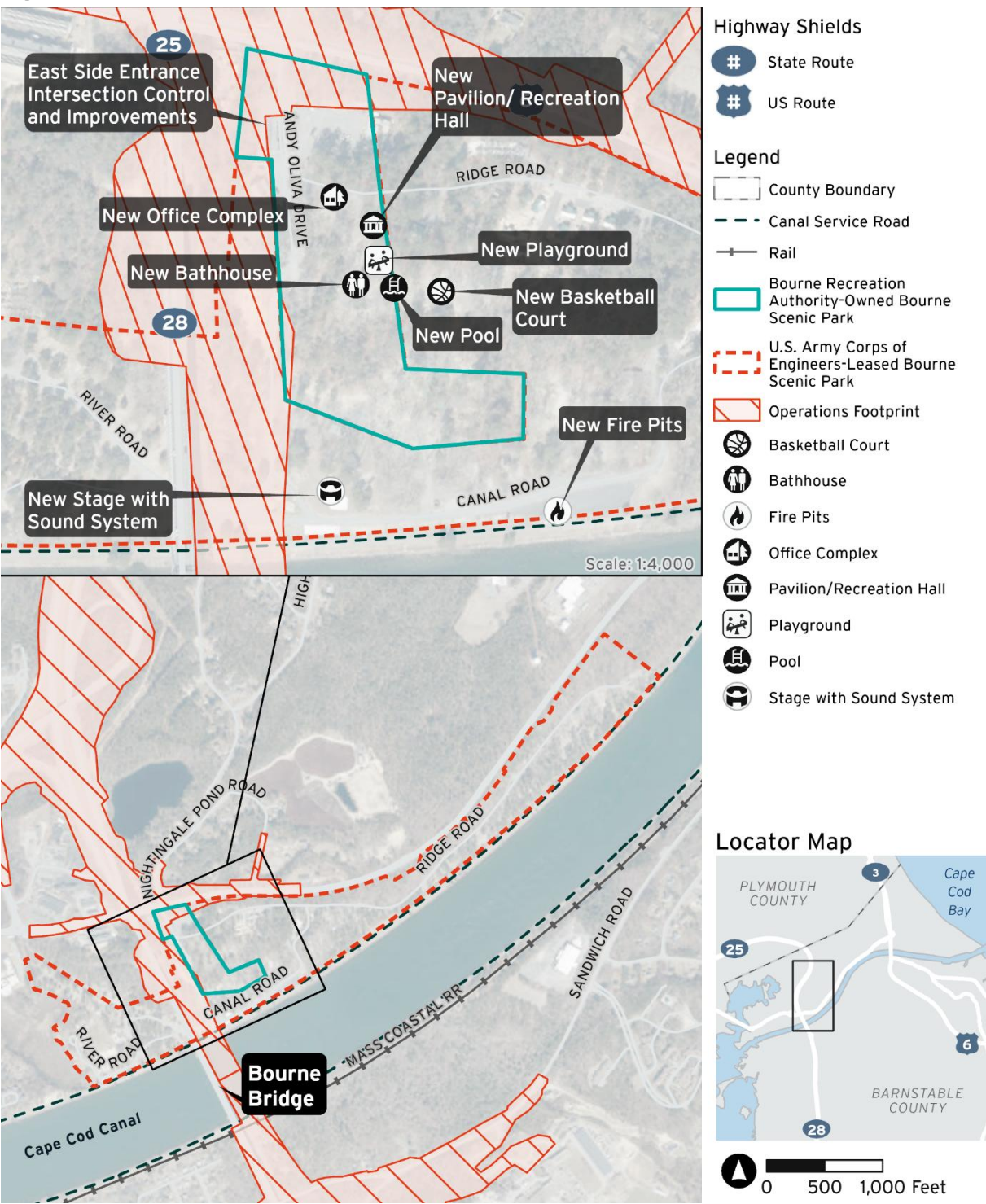
New Stage with Sound System

MassDOT would construct a new stage with a sound system off Andy Oliva Drive near the North Canal Service Road access in the G-Area of the park.

Additional Campsites and Cabins

MassDOT would construct seven new cabins and six new campsites in the park's A-Area, including associated water and electrical service hookups for RVs.

Figure 5-21. Bourne Scenic Park: East Side Entrance and Improvements



Source: Massachusetts Department of Transportation, 2025

Note: This figure illustrates a conceptual arrangement of the proposed facilities. The final configuration is subject to refinement and may evolve as the design process progresses.

West Side Improvements

Mitigation and enhancement measures that would be implemented in the west side improvements area are described in the following sections and presented on [Figure 5-22](#).

New West Side Entrance and Gatehouse

MassDOT would construct a new, permanent right-in, right-out entrance to U.S. Route 6/Scenic Highway from the P- and PX-Areas of the park, located on the western side of Bourne Bridge. At the new entrance, MassDOT would also construct a new, permanent gatehouse. It is anticipated that this proposed enhancement measure would result in a larger area of USACE-owned property that would be leased to the BRA for Bourne Scenic Park's operation.

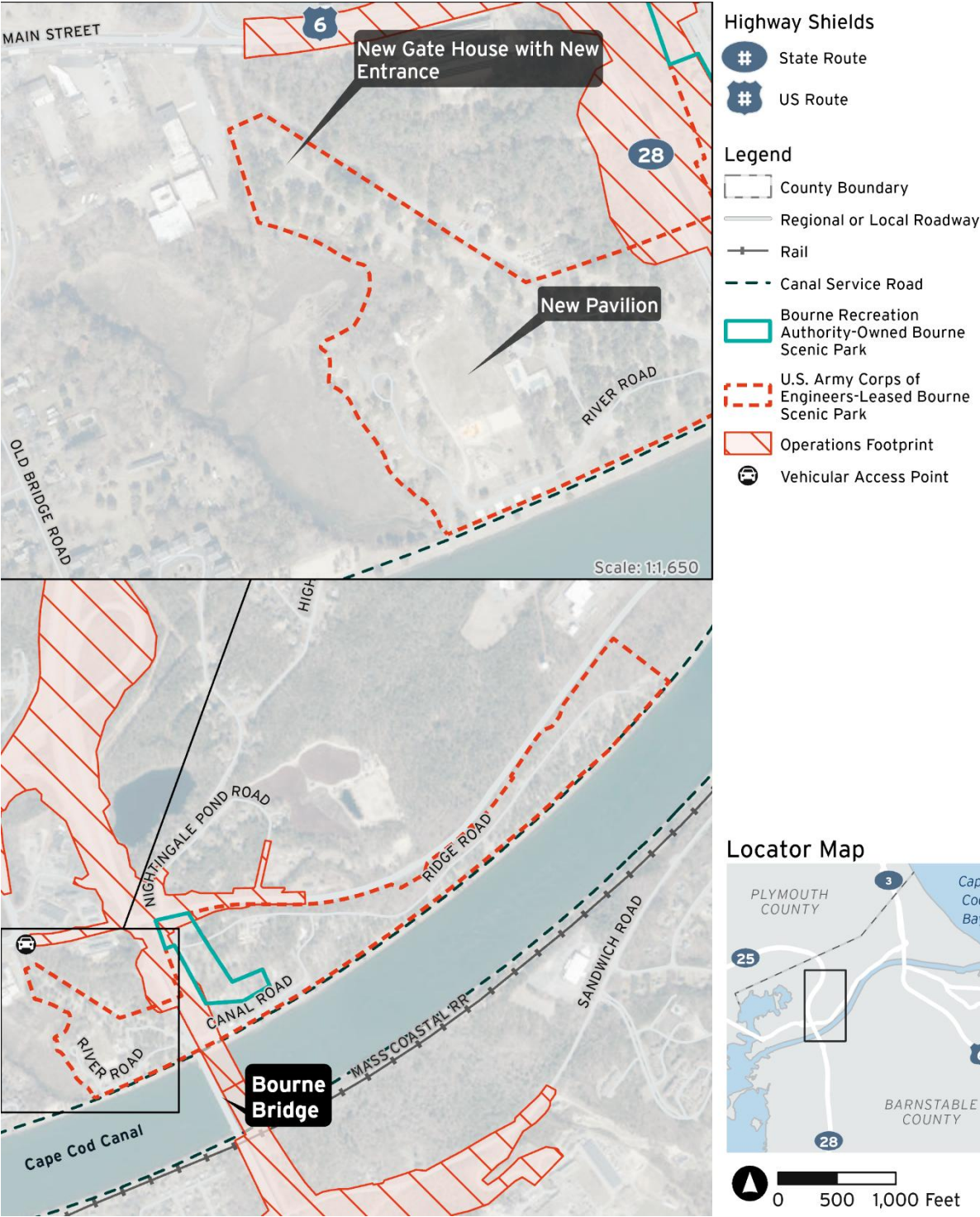
New West Side Pavilion

MassDOT would construct a new glulam frame pavilion in the P and PX-Areas of the park west of Bourne Bridge in a manner similar to that proposed for A-Area. MassDOT would also construct new fire pits in the P- and PX-Areas.

Additional Campsites

MassDOT would construct 11 new campsites in the park's P-Area and PX-Area, including associated water and electrical service hookups for RVs. MassDOT would also construct a new roadway linking the P-Area and PX-Area as a loop road.

Figure 5-22. Bourne Scenic Park: West Side Improvements



Source: Massachusetts Department of Transportation, 2025

Note: This figure illustrates a conceptual arrangement of the proposed facilities. The final configuration is subject to refinement and may evolve as the design process progresses.

5.7.3.3 Summary of Use and Permanent Condition

As demonstrated in [Table 5-6](#), the use of Bourne Scenic Park for the Bourne Bridge project, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

Upon completion of construction, the proposed mitigation and enhancement measures would remain as permanent features, providing a park-wide net gain of 63 campsites with new fire pits and an additional park entrance and gatehouse on the west side of the park, and a new stage and sound system, an additional playground, swimming pool, and bathhouse on the east side of the park. Other relocated features would be constructed as new, modernized facilities. The USACE-owned portion of Bourne Scenic Park would comprise 85.7 acres within the Cape Cod Canal FNP, reflecting a net gain of 12 acres, compared to its current area. The BRA-owned portion of Bourne Scenic Park would comprise 6.5 acres, resulting in no net loss of BRA-owned land, and the USACE would be responsible for expanding the BRA-owned recreation boundaries within the Cape Cod Canal FNP. The USACE would also be responsible for redesignating the USACE-owned boundaries of Bourne Scenic Park and updating any lease agreements with the BRA to reflect the permanent facility layout, including incorporating the expanded camping areas and west side park entrance into the facility's boundary.

MassDOT estimates the total cost of the proposed measures to minimize harm for Bourne Scenic Park to be approximately \$17.8 million (based on 2025 projections).

5.7.4 Coordination and Consultation

FHWA and MassDOT have coordinated extensively with the USACE and BRA as the two OWJs for Bourne Scenic Park.

The USACE serves as a Cooperating Agency in the NEPA environmental review process for the Program. The USACE has participated in a series of Cooperating Agency meetings with FHWA and MassDOT to exchange information during Program planning and to provide concurrence on decision points in the NEPA review process, as detailed in **Appendix 6.1, Agency Coordination and Public Involvement Technical Report**.

[Table 5-7](#) lists coordination meetings that MassDOT has conducted with the USACE and/or BRA to review anticipated impacts and discuss potential measures to minimize harm to Bourne Scenic Park.

Table 5-7. Bourne Scenic Park Officials with Jurisdiction Coordination Meetings

Meeting Date	Description	U.S. Army Corps of Engineers Present	Bourne Recreation Authority Present
December 12, 2022	Review of mainline options and construction laydown area impacts specifically related to the Cape Cod Canal Federal Navigation Project and the U.S. Army Corps of Engineers leased and operated park and recreation areas, including Bourne Scenic Park.	Yes	No
March 16, 2023	Introductory meeting with the Bourne Recreation Authority (BRA) to share Program conceptual level information, Bourne Scenic Park operations, and BRA priorities.	Yes	Yes
March 21, 2024	Review of applicability of Section 4(f) to the Cape Cod Bridges Program, impacts to Bourne Scenic Park, and options for the site entrance and internal roadway.	Yes	No
May 23, 2024	Continuation of the March 21, 2024, meeting. Discussion of the consideration of the Cape Cod Canal Federal Navigation Project as a Multiple Land Use Holding.	Yes	No
July 15, 2024	Overview of Section 4(f). Review of concept plans for the Bourne Scenic Park entrance location.	Yes	Yes
September 12, 2024	Continuation of July 15, 2024, meeting. Site walk to review park facilities. Discussion of BRA's priorities for facilities to be retained, replaced, or compensated, resulting from use.	Yes	Yes
February 28, 2025	Review of concept plans for Bourne Scenic Park entrance mitigation and east side park expansion.	Yes	Yes
May 16, 2025	Review of the Massachusetts Department of Transportation's (MassDOT) feasibility assessment for potential mitigation and enhancement measures.	Yes	No
June 16, 2025	Continued review of MassDOT's feasibility assessment for potential mitigation and enhancement measures.	Yes	Yes
August 4, 2025	Working session to review minimization, mitigation, and enhancement measures to avoid adverse effects.	Yes	No
August 13, 2025	Working session to review minimization, mitigation, and enhancement measures to avoid adverse effects.	Yes	Yes

Meeting Date	Description	U.S. Army Corps of Engineers Present	Bourne Recreation Authority Present
August 28, 2025	Continuation of August 4, 2025, meeting to discuss proposed measures to minimize harm to Bourne Scenic Park, real estate requirements, and the U.S. Army Corps of Engineers process for designating recreation areas with the Cape Cod Canal Federal Navigation Project.	Yes	No

FHWA and MassDOT will continue to coordinate with the USACE and BRA through their review of proposed measures to minimize harm, including obtaining their final written concurrences as the two OWJs for Bourne Scenic Park. It is anticipated that the final written concurrence from the USACE and BRA will be included in the combined Final Environmental Impact Statement and Record of Decision.

5.8 Bourne Recreation Area: Analysis and *De Minimis* Impact Determination

This section provides FHWA’s analysis of the use of Bourne Recreation Area. As directed by 23 CFR 774.5(b)(2), for public parks and recreation areas where FHWA intends to issue a *de minimis* impact determination, public notice and opportunity for review and comment, followed by written concurrence from the OWJ, are required before FHWA can approve the proposed use. Because FHWA intends to apply a *de minimis* impact determination for the use of Bourne Recreation Area, FHWA is seeking public review and comment on this proposed Section 4(f) determination as part of the Draft Environmental Impact Statement public review period.

5.8.1 Description of Property

Bourne Recreation Area is at the base of the Bourne South quadrant within the Cape Cod Canal FNP in the town of Bourne, Barnstable County, Massachusetts. As the OWJ, the USACE operates the approximately 4.1-acre Bourne Recreation Area to support the public’s use of its recreational resources on the south side of the canal. Access to Bourne Recreation Area from Lower Sandwich Road is provided via Bourne Bridge Road.

Bourne Recreation Area provides an ADA-compliant seasonal comfort station that has potable water and sanitary facilities with a 3,500-gallon septic tank. Outdoor facilities include a wooded area with park benches, picnic tables, interpretive signage, waste receptacles, bike racks, and portable toilets for off-season use. A small, unused gatehouse is on the east side of Bourne Bridge Road, across from the comfort station.

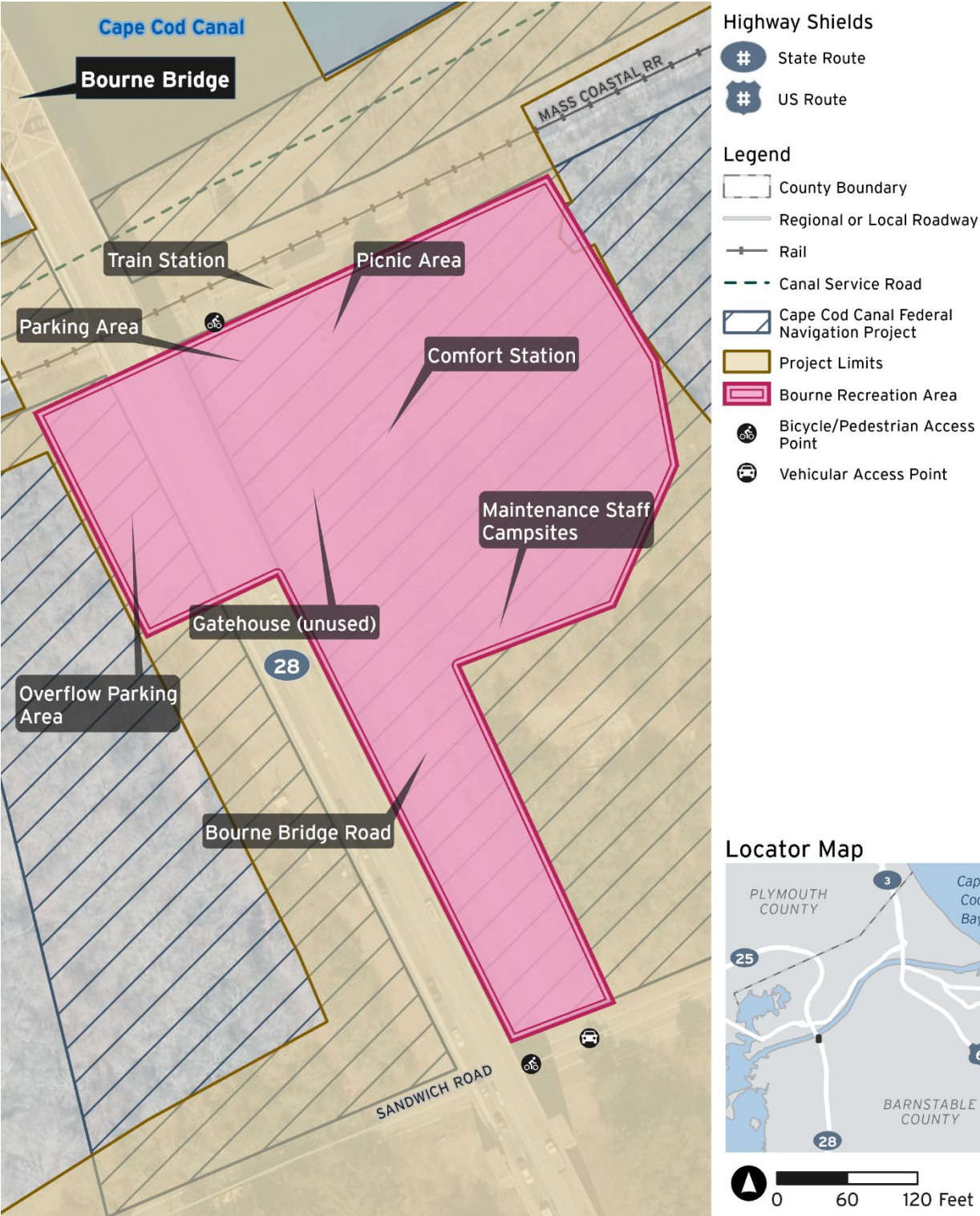
To the north, Bourne Recreation Area is separated from South Canal Service Road by the Cape Cod Railroad (Cape Main Line), operated by Cape Rail, Inc. under contract to MassDOT. There are no railroad safety cross arms, and signage at the railroad tracks states that crossing the tracks is

prohibited. Bourne Station is owned and maintained by MassDOT. It is a covered platform that borders the tracks to the south. The station meets ADA accessibility standards.

Bourne Recreation Area provides approximately 60 parking spaces: 25 spaces are in a paved area next to the recreation picnic area east of Bourne Bridge, and 35 spaces are in an overflow gravel area, directly underneath and west of the elevated State Route 28 mainline. The parking spaces are used by recreational users, USACE staff, and Cape Cod Railroad users embarking and disembarking at Bourne Station.

East of the picnic area and within the boundaries of Bourne Recreation Area, the USACE has three campsites for its seasonal park attendant staff that maintain its three recreational areas on the south side of the canal, including the Bourne Recreation Area, Tidal Flats Recreation Area, and Midway Recreation Area. Each campsite contains a trailer with a connection to the septic field east of the comfort station, individual parking space, picnic table, fire ring, water service, and 110-volt electrical service. Access to the campsites is provided via the South Canal Service Road. [Figure 5-23](#) provides Bourne Recreation Area's existing recreational features. [Exhibit 5-21 through Exhibit 5-27](#) provide photographs of existing conditions.

Figure 5-23. Bourne Recreation Area: Existing Conditions



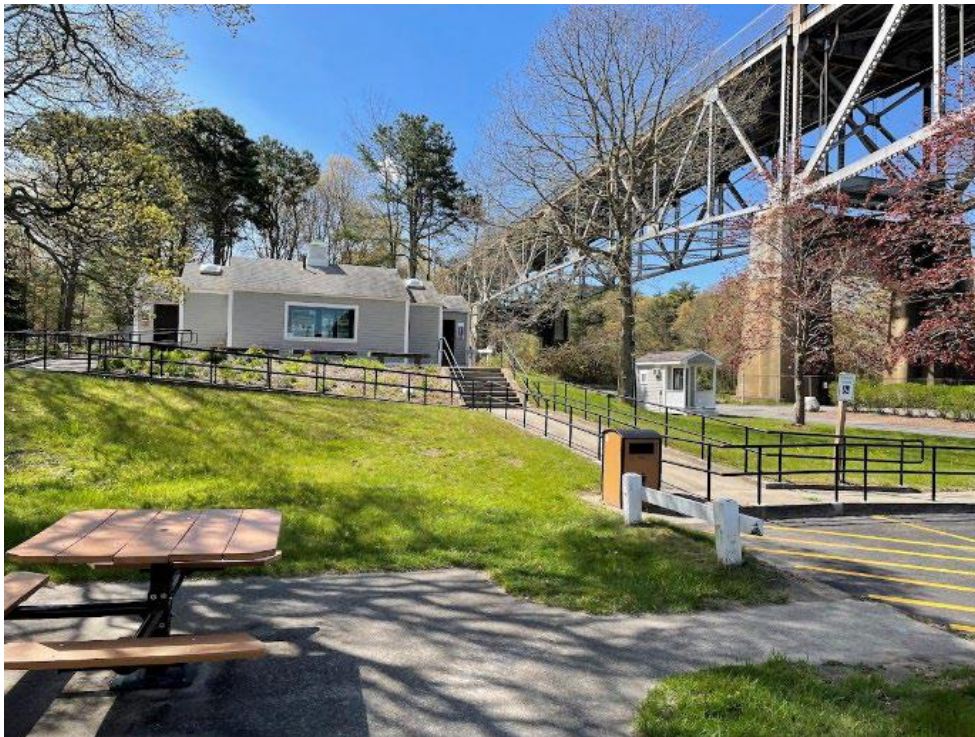
Source: Massachusetts Department of Transportation, 2025

Exhibit 5-21. Bourne Recreation Area: Sign at Sandwich Road, facing northwest



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-22. Bourne Recreation Area: Seasonal Comfort Station, facing south



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-23. Bourne Recreation Area: Picnic Tables, Parking, and Portable Toilets, facing north



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-24. Bourne Bridge Road, facing north from Sandwich Road



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-25. Overflow Gravel Parking Area, facing northwest from Bourne Bridge Road



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-26. Bourne Station, facing southeast from South Canal Service Road (outside of Bourne Recreation Area)



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-27. Cape Cod Railroad Tracks, facing east at Bourne Bridge (outside of Bourne Recreation Area)



Source: Massachusetts Department of Transportation, 2024

5.8.2 Proposed Impacts and Use

Based on preliminary design plans, the construction of the Bourne Bridge project would require the use of 4.1 acres of Bourne Recreation Area, which comprises the entire parcel. Impacts to existing facilities would include:

- Closure of Bourne Bridge Road (service road) and access to South Canal Service Road
- Closure of the paved and unpaved parking areas and removal of fencing
- Closure and removal of outdoor park and recreation facilities, including park benches, picnic tables, bike racks, and waste receptacles
- Removal of signage, consisting of the Bourne Recreation Area welcome sign and an interpretive panel at the public access point to South Canal Service Road
- Closure and removal of the seasonal comfort station and portable toilets
- Removal of the (unused) gatehouse on Bourne Bridge Road¹³
- Closure of three park attendant staff campsites

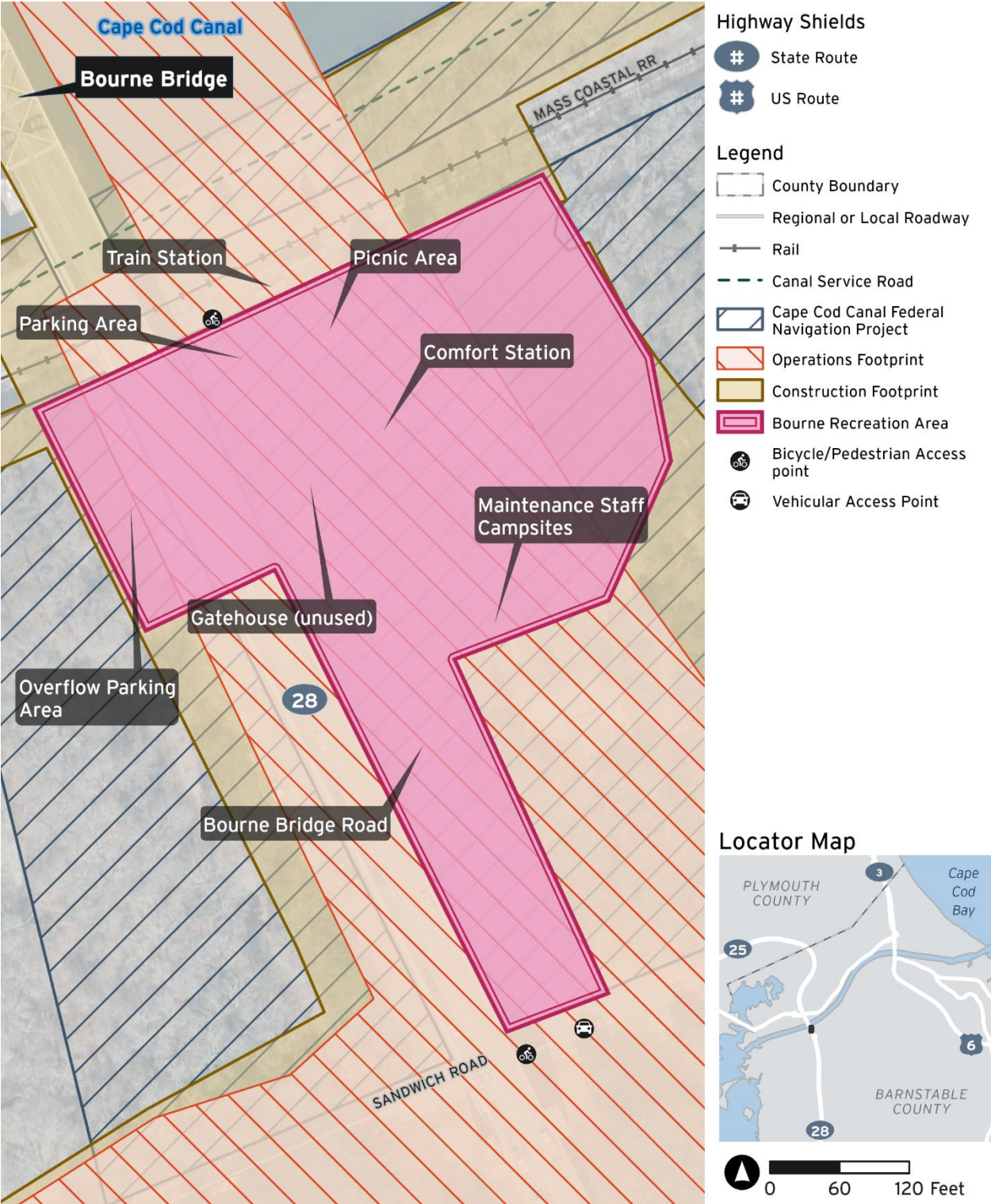
¹³ At the request of the U.S. Army Corps of Engineers, the existing unused gatehouse will not be relocated.

Because the Bourne Bridge project construction footprint would occupy the entire parcel, MassDOT would relocate the existing park facilities and recreational uses prior to construction. In coordination with the USACE, MassDOT reviewed potential relocation sites with sufficient acreage and development potential that would be close to the existing Bourne Recreation Area, to ensure continuous support of the public's use of USACE's recreational resources on the south side of the canal. The proposed facility relocation is discussed in [Section 5.8.3.2](#).

For the operation and maintenance of the replacement bridge (direct use), it is anticipated that MassDOT would obtain an approximately 3.1-acre permanent easement (outgrant) from the USACE. The existing park facilities and recreational uses of Bourne Recreation Area would be relocated prior to the start of construction. As a result, the 4.1-acre area would no longer be designated by the USACE as recreational. Rather, the land uses would revert to navigation and navigation support, which is consistent with the Cape Cod Canal FNP. The operational condition of the Build Alternative would not result in a direct use of the protected activities, attributes, or features that qualify Bourne Recreation Area for Section 4(f) protection.

[Figure 5-24](#) presents the anticipated use of Bourne Recreation Area due to the Build Alternative.

Figure 5-24. Bourne Recreation Area: Proposed Use



Source: Massachusetts Department of Transportation, 2025

5.8.3 Measures to Minimize Harm

In coordination with the USACE through meetings and workshops conducted from December 2022 through August 2025, FHWA and MassDOT have developed measures to minimize harm, including avoidance, minimization, mitigation, and enhancement measures, for the proposed use of Bourne Recreation Area. [Table 5-8](#) presents a summary of the existing recreational features at Bourne Recreation Area, anticipated use due to the Build Alternative, proposed measures to minimize harm for each feature where a use would occur, and the proposed permanent condition. [Section 5.7.3.1](#) and [Section 5.7.3.2](#) provide additional details. [Figure 5-25](#) and [Figure 5-26](#) depict MassDOT's proposed measures to minimize harm in relation to the Bourne Bridge Project Limits, including minimization measures and permanent mitigation and enhancement measures.

As applicable, MassDOT would implement the measures to minimize harm prior to undertaking any construction activities for the Bourne Bridge project that would result in a use of Bourne Recreation Area, such that there would be no loss of the features and attributes that qualify the property for protection under Section 4(f).

Table 5-8. Bourne Recreation Area – Recreational Features, Section 4(f) Uses, and Measures to Minimize Harm

Existing Feature	Direct Use	Measures to Minimize Harm	Permanent Condition
Bourne Recreation Area property (4.1 acres)	Direct use of 4.1 acres due to the construction and operations footprints of the Bourne Bridge project	Relocate features approximately 0.75-miles east to Gallo Ice Arena/Cape Cod Canal Federal Navigation Project land to mitigate for direct use	4.1-acre relocated Bourne Recreation Area (no change in area from existing conditions) 4.1 acres of Cape Cod Canal Federal Navigation Project land reverted to navigation and navigation support (primary use) following relocation of Bourne Recreation Area
Facility access via Bourne Bridge Road and Sandwich Road	Construction and operations footprints require permanent relocation	- Construct new 24-foot-wide facility access road - Construct a shared-use path connection from Sandwich Road	- Relocated facility access from Sandwich Road (State Route 6A) constructed as a new, permanent facility - New designated multimodal access to the facility
Access to South Canal Service Road	Construction and operations footprints require permanent relocation	Construct new access to South Canal Service Road with a permanent railroad crossing and safety features for pedestrians and bicyclists	Relocated access constructed as a new, permanent facility with pedestrian and bicyclist railroad crossing safety features

Existing Feature	Direct Use	Measures to Minimize Harm	Permanent Condition
Paved and unpaved parking areas (60 parking spaces)	Construction and operations footprints require permanent relocation	- Construct a new parking area with up to 100 parking spaces - Construct a new bus loop and 24 new parking spaces	124 parking spaces (net increase of 64 parking spaces)
Outdoor park facilities (benches, picnic tables, bike racks, waste receptacles)	Construction and operations footprints require permanent relocation	Construct new pavilion and recreational space, relocate and reconstruct outdoor park facilities (benches, picnic tables, bike racks, waste receptacles)	Relocated outdoor park facilities constructed as new, permanent facilities
Signage (park welcome sign and interpretive panel)	Construction and operations footprints require permanent relocation	Relocate and reconfigure signage	Signage reinstalled
Seasonal comfort station and portable toilets	Construction and operations footprints require permanent relocation	- Construct new seasonal comfort station - Relocate portable toilets	- Relocated seasonal comfort station constructed as a new, permanent facility - Relocated portable toilets
Three park attendant staff campsites	Construction and operations footprints require permanent relocation	Relocate and reconstruct campsites	Relocated park attendant staff campsites constructed as new, permanent facilities

5.8.3.1 Construction Minimization Measures

MassDOT would implement measures to minimize harm during construction of the Bourne Bridge project, which would include relocating the Bourne Recreation Area. Construction minimization measures would include implementing project-wide construction noise and vibration plans and measures for air pollution prevention (described in [Section 5.5.3.1](#)) and restoring the landscape.

5.8.3.2 Mitigation and Enhancement Measures

MassDOT would fully implement all proposed permanent mitigation and enhancement measures prior to undertaking any construction activities for the Bourne Bridge project that would result in a use of Bourne Recreation Area, such that there would be no loss of the features and attributes that qualify

the property for protection under Section 4(f). The proposed mitigation and enhancement measures are presented in [Figure 5-25](#) and [Figure 5-26](#).

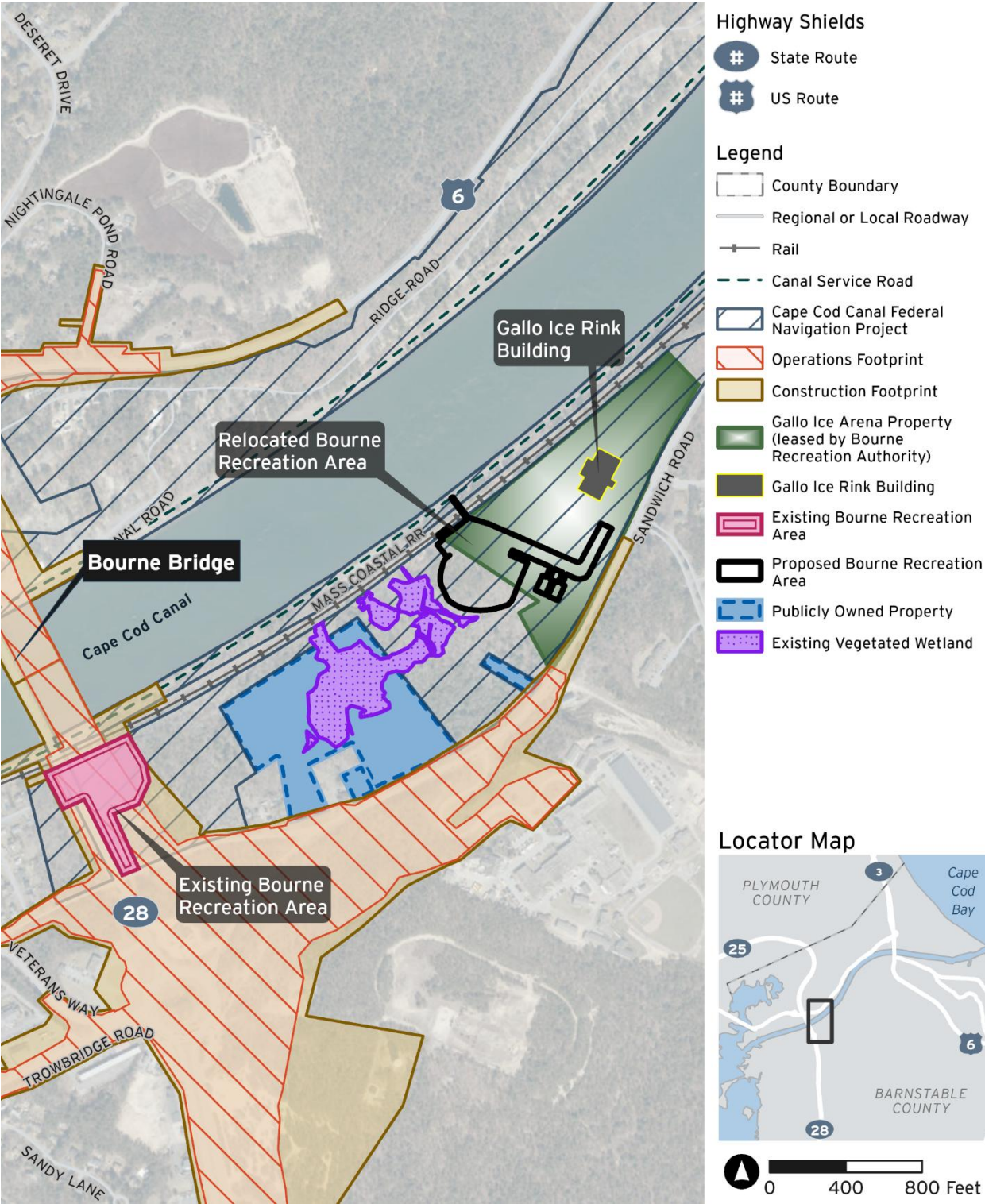
Relocate and Construct Permanent Bourne Recreation Area

MassDOT proposes to relocate the Bourne Recreation Area facilities approximately 0.75 miles to the east within the Cape Cod Canal FNP, including a portion of the USACE-leased Gallo Ice Arena parcel. As illustrated in [Figure 5-25](#), Bourne Recreation Area is separated from the arena parcel by two publicly owned protected parcels, totaling 15.6 acres; forested wetland areas; and (non-recreation) Cape Cod Canal FNP land. Both Bourne Recreation Area and the Gallo Ice Arena parcel abut MassCoastal Railroad and South Canal Service Road to the north and Sandwich Road to the south.

Within an approximately 4.1-acre area, MassDOT would construct new permanent park facilities, including a pavilion and recreational space, USACE maintenance staff campsites, space for a new MassCoastal Railroad train platform (relocated Bourne Station), bus loop with approximately 24 parking spaces, a seasonal comfort station and portable toilets, a parking lot with up to 100 parking spaces, and a 24-foot-wide access road from Sandwich Road. Additionally, MassDOT would construct a 12-foot-wide SUP linking both the recreation area and Gallo Ice Arena to Sandwich Road and South Canal Service Road. At the MassCoastal Railroad tracks, MassDOT would construct a Z-gate so pedestrians and bicyclists can safely access South Canal Service Road. The railroad crossing would also include a signal and auditory warnings.

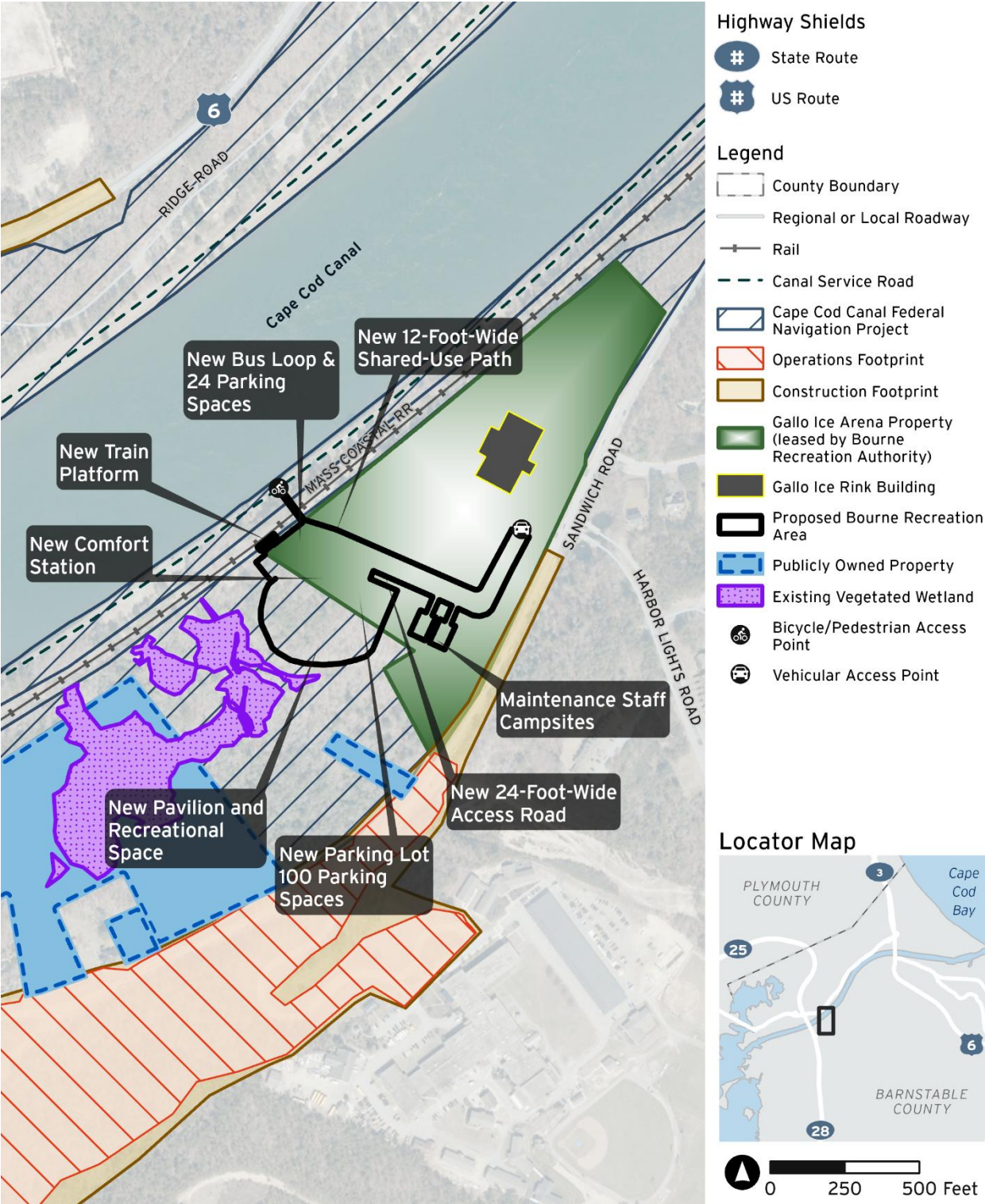
The configuration of the proposed facilities would be determined in coordination with USACE and, for facilities located within the Gallo Ice Arena parcel, with USACE and BRA, the OWJs. The design and location requirements for the train platform would be determined in coordination with USACE, MassDOT Rail and Transit Division, MassCoastal Railroad, and the Massachusetts Bay Transportation Authority. Following construction of the relocated Bourne Recreation Area, USACE would assume ownership and maintenance of the proposed new parking areas, pavilion, recreational amenities, seasonal comfort station and portable toilets, and access road. MassDOT would assume maintenance responsibilities for the proposed SUP and railroad crossing and would coordinate responsibilities for the new railroad train platform with the MassDOT Rail and Transit Division.

Figure 5-25. Bourne Recreation Area: Mitigation and Enhancement Measures (Overview)



Source: Massachusetts Department of Transportation, 2025

Figure 5-26. Bourne Recreation Area: Mitigation and Enhancement Measures (Enlarged View)



Source: Massachusetts Department of Transportation, 2025

5.8.3.3 Summary of Use and Permanent Condition

As demonstrated in [Table 5-8](#), the use of Bourne Recreation Area for the Bourne Bridge project, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

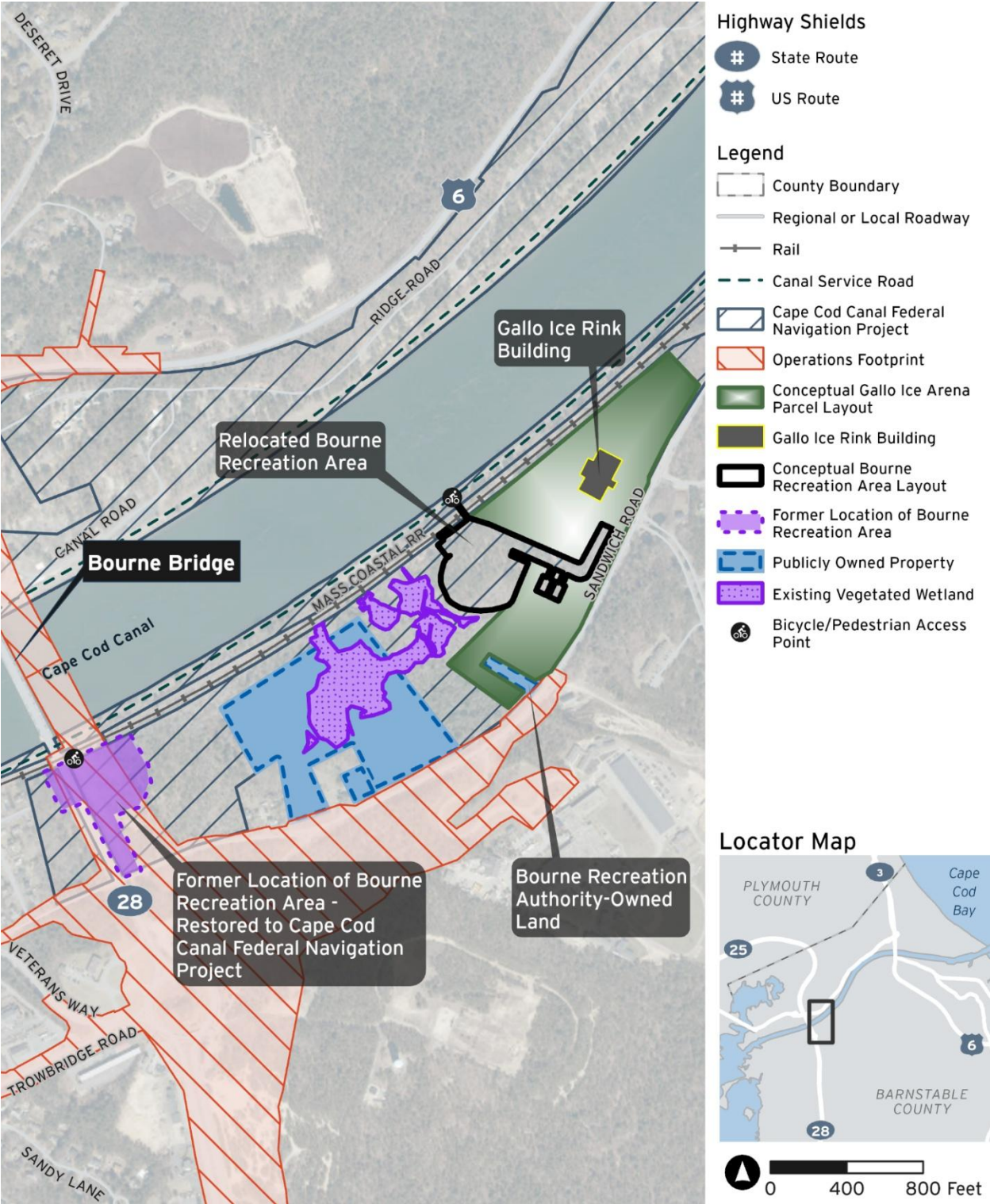
Prior to construction of the Build Alternative, MassDOT would relocate and construct new, permanent Bourne Recreation Area facilities on and abutting the Gallo Ice Arena parcel within the Cape Cod Canal FNP. As identified in [Table 5-8](#), all the existing recreational features and uses at Bourne Recreation Area would be provided at the relocated, permanent facility. Additionally, the relocated, permanent facility would expand and enhance the recreational features and uses of Bourne Recreation Area, including providing a net gain of 64 parking spaces and a new bus loop facilitating multimodal connections to the MassCoastal Railroad train platform at Bourne Station, as well as to Sandwich Road and South Canal Service Road. The relocated Bourne Recreation Area would comprise approximately 4.1 acres within the Cape Cod Canal FNP, resulting in no change as compared to its existing footprint of 4.1 acres. Therefore, the construction of the Build Alternative would not decrease the amount of land designated for the Bourne Recreation Area. The USACE would be responsible for redesignating the boundaries of Bourne Recreation Area to reflect the permanent facility layout in its new location.

MassDOT estimates the total cost of the proposed measures to minimize harm for Bourne Recreation Area to be approximately \$14.7 million (based on 2025 projections).

Following the relocation of Bourne Recreation Area to the Gallo Ice Arena parcel, 4.1 acres at the Bourne Bridge would revert to navigation and navigation support as their primary use. As a community benefit, MassDOT would provide a 10-foot-wide SUP adjacent to Bourne Bridge Road, connecting Sandwich Road to South Canal Service Road, including providing a Z-gate, signal, and auditory warnings for pedestrians and cyclists to safely cross the Mass Coastal railroad tracks. While this proposed SUP connection could serve recreational users, the primary purpose of the SUP connection would be for transportation rather than recreation.

[Figure 5-27](#) illustrates the proposed permanent condition at Bourne Bridge south and the relocated Bourne Recreation Area/Gallo Ice Arena configuration.

Figure 5-27. Bourne Recreation Area/Gallo Ice Arena: Permanent Condition



Source: Massachusetts Department of Transportation, 2025

5.8.4 Coordination and Consultation

FHWA and MassDOT have coordinated extensively with the USACE as the OWJ for Bourne Recreation Area.

The USACE serves as a Cooperating Agency in the NEPA environmental review process for the Program. As detailed in **Appendix 6.1, Agency Coordination and Public Involvement Technical Report**, USACE has participated in a series of Cooperating Agency meetings with FHWA and MassDOT to exchange information during Program planning and to provide concurrence on decision points in the NEPA review process.

Table 5-9 lists the additional coordination meetings that MassDOT has conducted with USACE to review anticipated impacts and discuss measures to minimize harm to Bourne Recreation Area.

Table 5-9. Bourne Recreation Area Official with Jurisdiction Coordination Meetings

Date	Description
December 12, 2022	Review of mainline options and construction laydown area impacts, specifically related to the Cape Cod Canal Federal Navigation Project and the U.S. Army Corps of Engineers leased and operated park and recreation areas, including Bourne Recreation Area.
March 21, 2024	Review of applicability of Section 4(f) to the Program and discussion of anticipated impacts to the Cape Cod Canal Federal Navigation Project.
May 23, 2024	Continuation of March 21, 2024, meeting, including consideration of the Cape Cod Canal Federal Navigation Project as a Multiple Land Use Holding.
May 16, 2025	Review of the Massachusetts Department of Transportation’s proposed measures to minimize harm to Bourne Recreation Area, including the proposed minimization and enhancement measures.
August 4, 2025	Review of the Massachusetts Department of Transportation’s proposed measures to minimize harm to Bourne Recreation Area and discussion of the official with jurisdiction coordination process.
August 28, 2025	Continuation of August 4, 2025, meeting to discuss proposed measures to minimize harm to Bourne Recreation Area, real estate requirements, and the U.S. Army Corps of Engineers process for designating recreation areas with the Cape Cod Canal Federal Navigation Project.

FHWA and MassDOT will continue to coordinate with the USACE through its review of proposed minimization and enhancement measures, including obtaining the USACE’s final written concurrence as the OWJ for Bourne Recreation Area. It is anticipated that the final written concurrence from the USACE will be included in the combined Final Environmental Impact Statement and Record of Decision.

5.9 Gallo Ice Arena: Analysis and *De Minimis* Impact Determination

This section provides FHWA’s analysis of the use of Gallo Ice Arena. As directed by 23 CFR 774.5(b)(2), for public parks and recreation areas where FHWA intends to issue a *de minimis* impact determination, public notice and opportunity for review and comment, followed by written concurrence from the OWJ, are required before FHWA can approve the proposed use. Because FHWA intends to apply a *de minimis* impact determination for the use of Gallo Ice Arena, FHWA is seeking public review and comment on this proposed Section 4(f) determination as part of the Draft Environmental Impact Statement public review period.

5.9.1 Description of Property

Gallo Ice Arena is located at 231 Sandwich Road on an approximate 18.8-acre parcel off Sandwich Road within the Cape Cod Canal FNP, approximately 0.75 miles from the existing Bourne Recreation Area. As depicted in [Figure 5-28](#), USACE, as the landowner and lessor, and BRA, as the facility owner and operator and land lessee, are both OWJs for Gallo Ice Arena.

Gallo Ice Arena serves as a year-round indoor hub for ice sports and skating activities. The property features an indoor ice rink building that is used by a wide range of local organizations and teams, including Bourne High School, Canal Youth Hockey, the Bourne Skating Club, and the Sandwich Blue Knights, as well as public and senior skating sessions. The approximately 35,700-square-foot facility was constructed by BRA in 1973. In addition to the ice rink building, the property includes a paved parking area, which has 40 parking spaces fronting Sandwich Road, an unpaved and unmarked overflow parking lot, separated driveway access to and from Sandwich Road, and entrance signage.

To the north, the fenced Gallo Ice Arena property is separated from South Canal Service Road by the Cape Cod Railroad (Cape Main Line). There is an informal path from the overflow lot to South Canal Service Road, but there are no railroad safety cross arms at the railroad tracks.

The entrance to Gallo Ice Arena, at the parcel’s southeastern boundary off Sandwich Road, is situated approximately a quarter mile north of the driveway of Upper Cape Cod Regional Technical High School (UCT) along Sandwich Road. Both facilities frequently host large-scale sporting events, such as the Massachusetts Interscholastic Athletic Association State Tournament at Gallo Ice Arena and the Cape Cod Baseball League at UCT. So, it is common for one venue to use the other venue’s parking area as overflow during peak times. Between UCT and the Gallo Ice Arena, Sandwich Road consists of a two-lane roadway, separated by a painted double yellow centerline, with a speed limit of 45 miles per hour. No sidewalks or bicycle accommodations exist on either side of the road.

[Figure 5-28](#) depicts the existing layout of the Gallo Ice Arena. [Exhibit 5-28 through Exhibit 5-33](#) provide photographs of existing conditions.

Figure 5-28. Gallo Ice Arena: Existing Conditions



Source: Massachusetts Department of Transportation, 2025

Exhibit 5-28. Gallo Ice Arena Parcel and Entrance at Sandwich Road, facing west



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-29. Gallo Ice Arena Sign and Parcel Frontage, facing southwest



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-30. Gallo Ice Arena Paved Parking Area, facing east



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-31. Gallo Ice Arena Overflow Parking Area, facing west



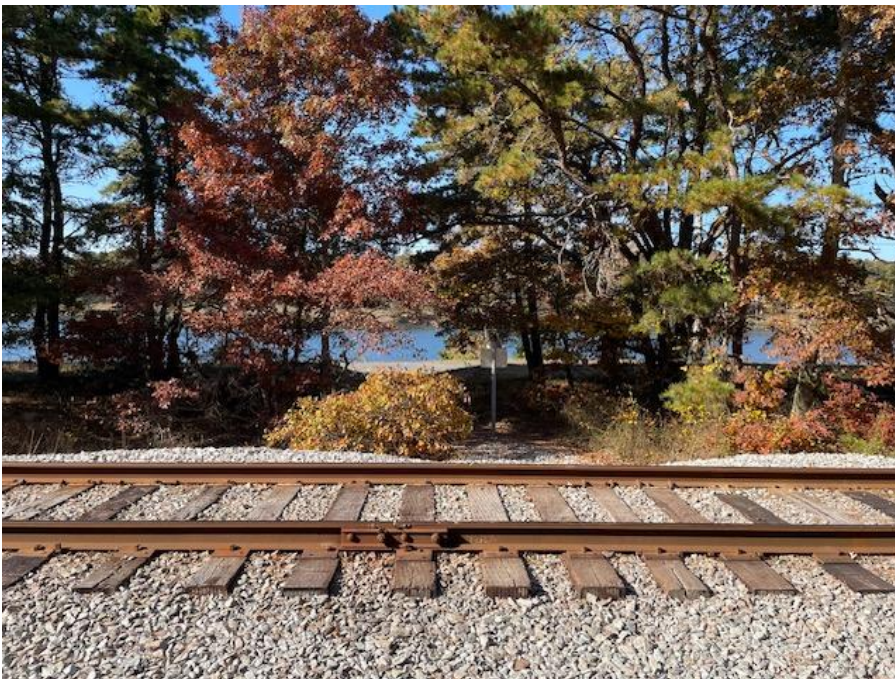
Source: Massachusetts Department of Transportation, 2024

Exhibit 5-32. Informal path at Arena property's western boundary to railroad tracks and South Canal Service Road, facing north



Source: Massachusetts Department of Transportation, 2024

Exhibit 5-33. Railroad Tracks at South Canal Service Road, outside of Arena parcel western boundary, facing north



Source: Massachusetts Department of Transportation, 2024

5.9.2 Proposed Impacts and Use

5.9.2.1 Temporary Occupancy

Based on preliminary design plans, construction of proposed roadway improvements along Sandwich Road as part of the Bourne Bridge project would require MassDOT to obtain a temporary easement (outgrant) of approximately 2.3 acres from the USACE on the Gallo Ice Arena parcel. The temporary easement would represent approximately 12% of the 18.8-acre Gallo Ice Arena parcel and is the area which would experience use during the construction period (temporary occupancy).

The proposed roadway improvements along Sandwich Road that would result in temporary occupancy of Gallo Ice Arena include pedestrian and bicycle accommodations and roadway safety improvements on Sandwich Road from UCT to Gallo Ice Arena. MassDOT is undertaking these improvements based on requests from BRA (an OWJ for the Gallo Ice Arena) and UCT (an adjacent landowner) during stakeholder coordination meetings.

The proposed improvements would consist of a 12-foot-wide SUP on both sides of Sandwich Road with roadway and pedestrian-scale lighting and widened shoulders. The roadway upgrades are intended to meet current design standards and would establish a safe and accessible pedestrian and bicycle connection between the arena and the school campus for students and event attendees.

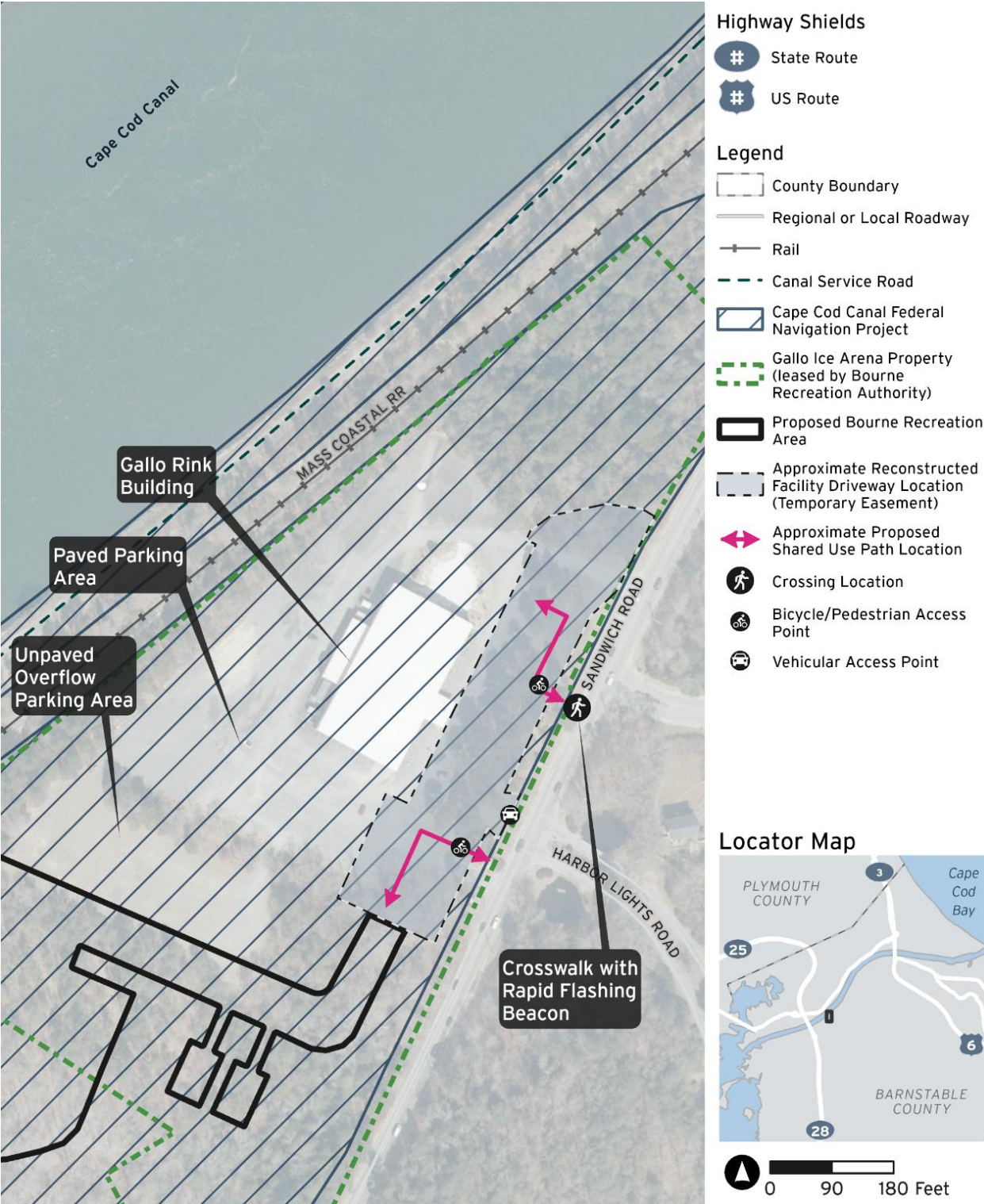
The accessible SUP connection between the arena and the school campus would include road safety audit improvements at the Gallo Ice Arena/Harbor Light Road intersections on Sandwich Road, which were identified as part of MassDOT's Cape Cod Canal Area Transportation Improvements Program. Within an approximately 500-foot area of Sandwich Road fronting the Gallo Ice Arena property, MassDOT would reconfigure the unsignalized "T" intersections with the arena's separate entrance and exit driveways to provide right-in, right-out access from Sandwich Road. These improvements would improve access management of the Gallo Ice Arena's driveways and circulation within the facility's parking lot. Improvements in this area would also include separated SUP access to and from the arena property, and access to the Harbor Lights and Weather Deck Road residential neighborhoods, located on the south side of Sandwich Road. Dedicated turn lanes would be provided at the intersections. On the north side of Sandwich Road, the SUP would use the separated roadway entrance and exit points, which is the same as existing conditions. Additionally, the SUP would provide separated access to the arena. In addition to traffic-calming median islands, signage, and dedicated left-turn lanes, a rapid flashing beacon would be installed approximately midway on this road segment to provide pedestrians and bicyclists safe access between the north and south sides of Sandwich Road.

In order to construct the roadway improvements, temporary impacts to existing facilities at the Gallo Ice Arena through the construction period would include removal of signage consisting of three facility entrance signs along Sandwich Road. The roadway improvements, including the reconstructed facility driveway, would be constructed in a landscaped area of the Gallo Ice Arena between the paved facility parking lot and Sandwich Road, so construction activities would not impact the ice rink building, parking areas, or the informal access to South Canal Service Road.

Figure 5-29 presents the anticipated temporary occupancy of the Gallo Ice Arena parcel.

As described in **Section 4.14, Noise and Vibration**, construction of the Bourne Bridge project would result in intermittent fluctuations in noise levels and vibration exposure due to construction vehicle operations and construction equipment performing earth-disturbing work, bridge demolition, and bridge construction.

Figure 5-29. Gallo Ice Arena: Proposed Temporary Occupancy



Source: Massachusetts Department of Transportation, 2025

5.9.2.2 Direct Use

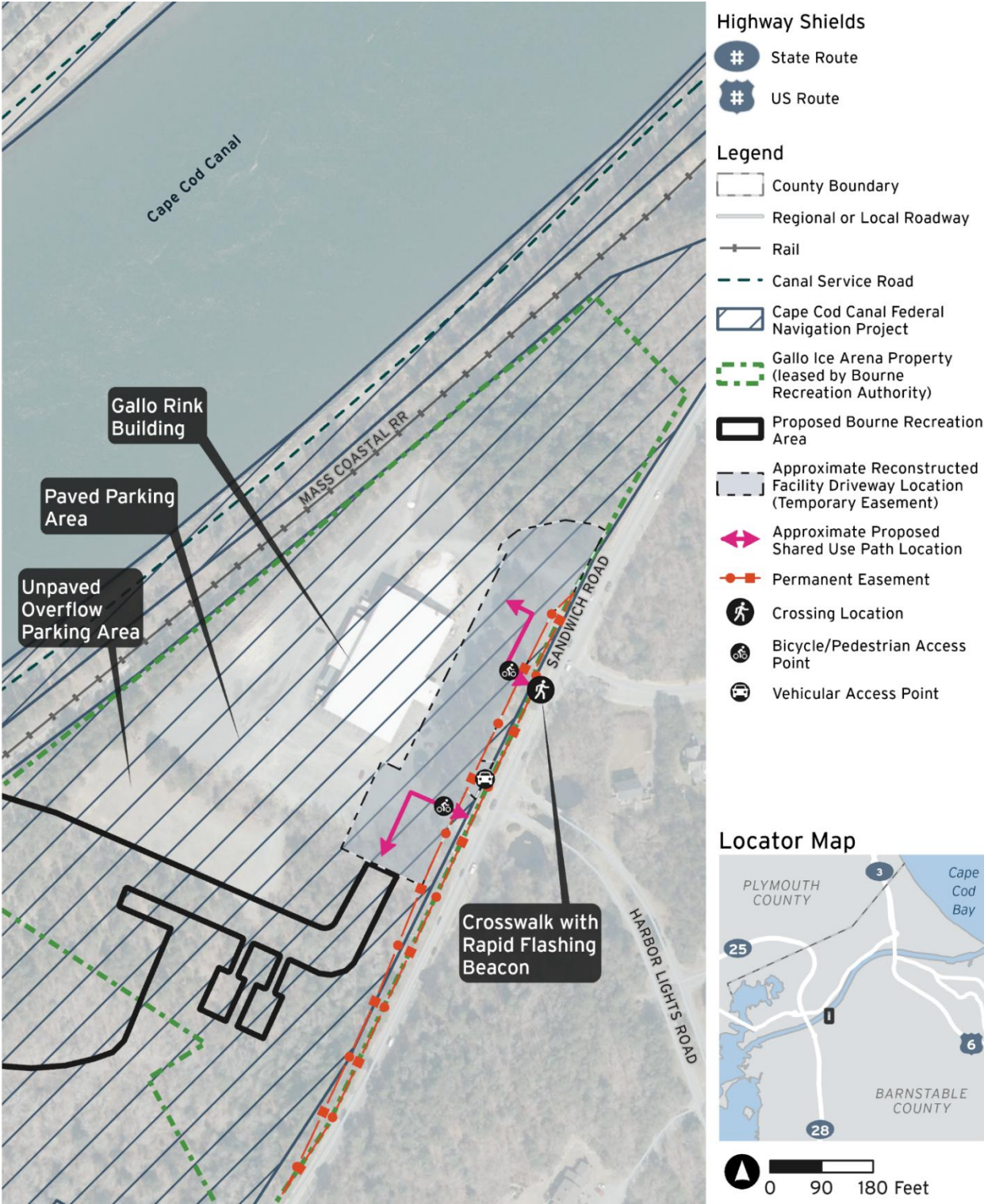
Direct use of the Gallo Ice Arena would occur from two activities: the construction of the roadway improvements along Sandwich Road and the relocation of the Bourne Recreation Area.

Roadway Improvements

While MassDOT is continuing to advance the design in coordination with BRA and USACE, MassDOT estimates that the roadway improvements along Sandwich Road would result in a direct use of approximately 0.61 acres of land within the Gallo Ice Arena property. MassDOT would obtain a permanent easement for operations from the USACE as the facility landowner. The proposed roadway improvements would not alter the existing state highway layout. The permanent easement for the sidewalk and SUP crosswalk would be located within a landscaped area of the Gallo Ice Arena parcel abutting Sandwich Road. There are no recreational facilities or features present in this area of the property, so recreational activities would not be impacted by this direct use.

Figure 5-30 depicts the proposed direct use of the Gallo Ice Arena property resulting from the permanent easement for the roadway improvements. MassDOT estimates the total cost of the proposed measures to minimize harm for Gallo Ice Arena to be approximately \$565,000 (based on 2025 projections).

Figure 5-30. Gallo Ice Arena: Proposed Direct Use (Roadway Improvements)



Source: Massachusetts Department of Transportation, 2025

Bourne Recreation Area Relocation

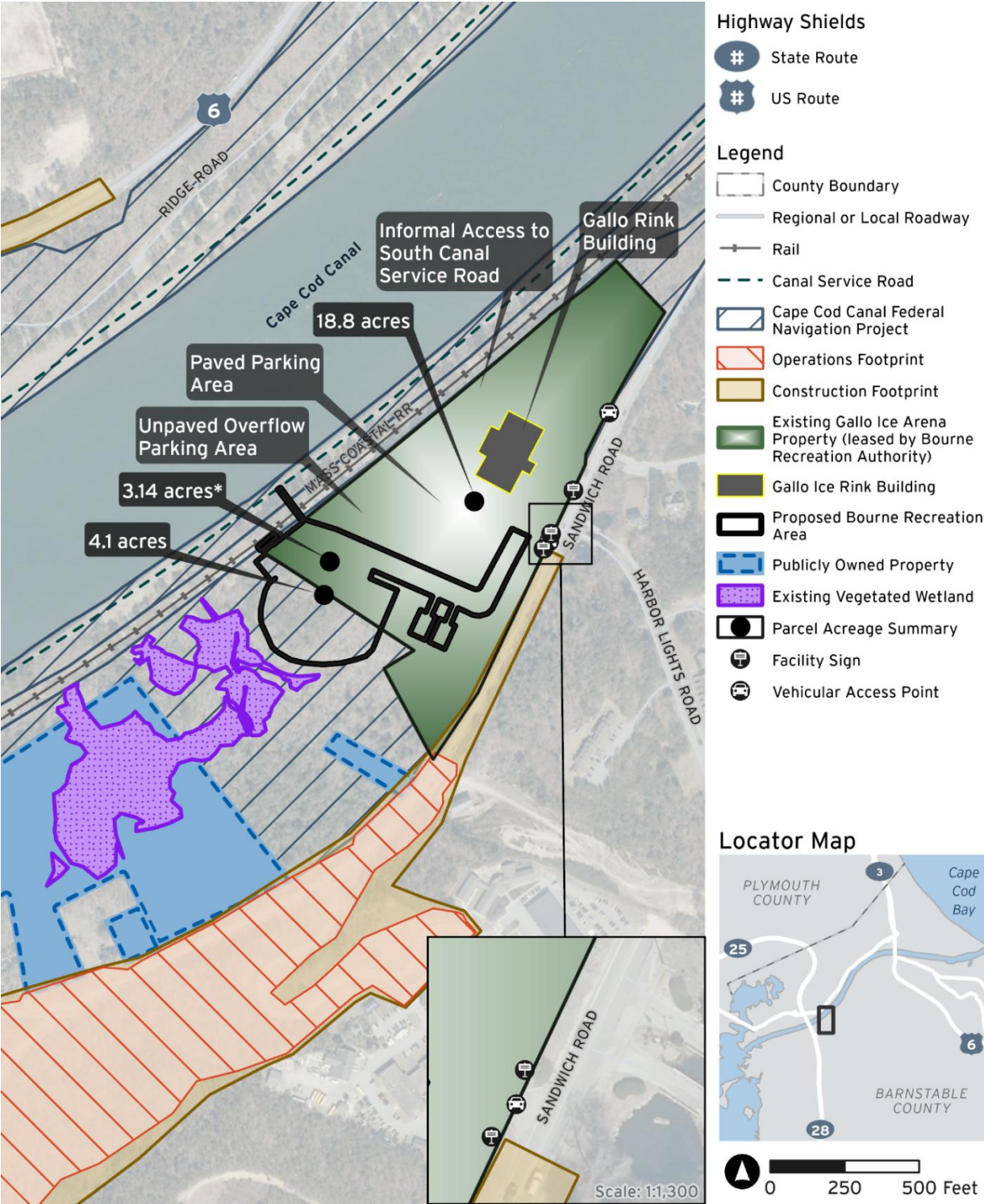
MassDOT is proposing to mitigate for the Bourne Bridge project's use of the Bourne Recreation Area (refer to [Section 5.8.2](#)) by relocating its facilities and reconstructing the recreation area approximately 0.75 miles to the east, abutting the Gallo Ice Arena parcel.

In [Figure 5-25](#) and [Figure 5-26](#), the existing recreational features of Bourne Recreation Area (listed in [Table 5-8](#)) would be relocated to approximately 4.1 acres of land within the Cape Cod Canal FNP. Approximately 3.14 of these 4.1 acres are leased by USACE to BRA for operation of the Gallo Ice Arena, with the remaining acreage operated by USACE as part of the Cape Cod Canal FNP. Therefore, based on preliminary design, relocation of the Bourne Recreation Area would result in a direct use of 3.14 acres of the Gallo Ice Arena. The proposed direct use of 3.14 acres would represent approximately 17% of the total Gallo Ice Arena parcel area.

The relocated Bourne Recreation Area would be constructed in a wooded area of the Gallo Ice Arena parcel that is not used for recreation or other facility activities, therefore, this proposed direct use is not expected to affect the daily operations of the arena or the existing recreational features, including the ice rink building or parking areas.

[Figure 5-31](#) depicts the proposed direct use of the Gallo Ice Arena property resulting from the relocation of the Bourne Recreation Area.

Figure 5-31. Gallo Ice Arena: Proposed Direct Use (Bourne Recreation Area Relocation)



* This total acreage (3.14 acres) defines the area of overlap between the existing Gallo Ice Arena property and the relocated Bourne Recreation Area property.

Source: Massachusetts Department of Transportation, 2025

5.9.3 Measures to Minimize Harm

In coordination with the USACE and the BRA, FHWA and MassDOT have developed measures to minimize harm, including avoidance, minimization, mitigation, and enhancement measures, for the proposed use of Gallo Ice Arena. **Table 5-10** is a summary of the existing recreational features at Gallo Ice Arena, anticipated use due to the Build Alternative, proposed measures to minimize harm for each feature where a use would occur, and the proposed permanent condition. Refer to **Figure 5-33** for MassDOT’s proposed measures to minimize harm in relation to the Bourne Bridge Project Limits, including construction minimization measures and permanent mitigation and enhancement measures.

As applicable, MassDOT would implement the measures to minimize harm prior to undertaking any construction activities for the Bourne Bridge project that would result in a use of Gallo Ice Arena, such that there would be no loss of the features and attributes that qualify the property for protection under Section 4(f).

Table 5-10. Gallo Ice Arena – Recreational Features, Section 4(f) Uses, and Measures to Minimize Harm

Existing Feature	Temporary Occupancy	Direct Use	Measures to Minimize Harm	Permanent Condition
18.8-acre property	2.30 acres (temporary easement for roadway improvements)	0.61 acres (permanent easement for roadway improvements) 3.14 acres (Bourne Recreation Area relocation)	- Construct roadway improvements as requested by the Bourne Recreation Authority, an official with jurisdiction for the property - Avoid impacts to recreational features, including the ice rink building and parking areas - Redesignate 3.14 acres within Cape Cod Canal Federal Navigation Project to the Bourne Recreation Authority-leased Gallo Ice Arena parcel	- Improved multimodal accessibility and safety to and within the Gallo Ice Arena - Improved parking circulation 18.8-acre BRA-leased property (no net loss of acreage)
Facility signs	Construction footprint requires removal	No direct use	Remove and store	Signage reinstalled

5.9.3.1 Construction Minimization Measures

MassDOT would implement measures to minimize harm to Gallo Ice Arena during the construction of the Bourne Bridge project. These measures would include the following (as described in [Section 5.5.3.1](#)):

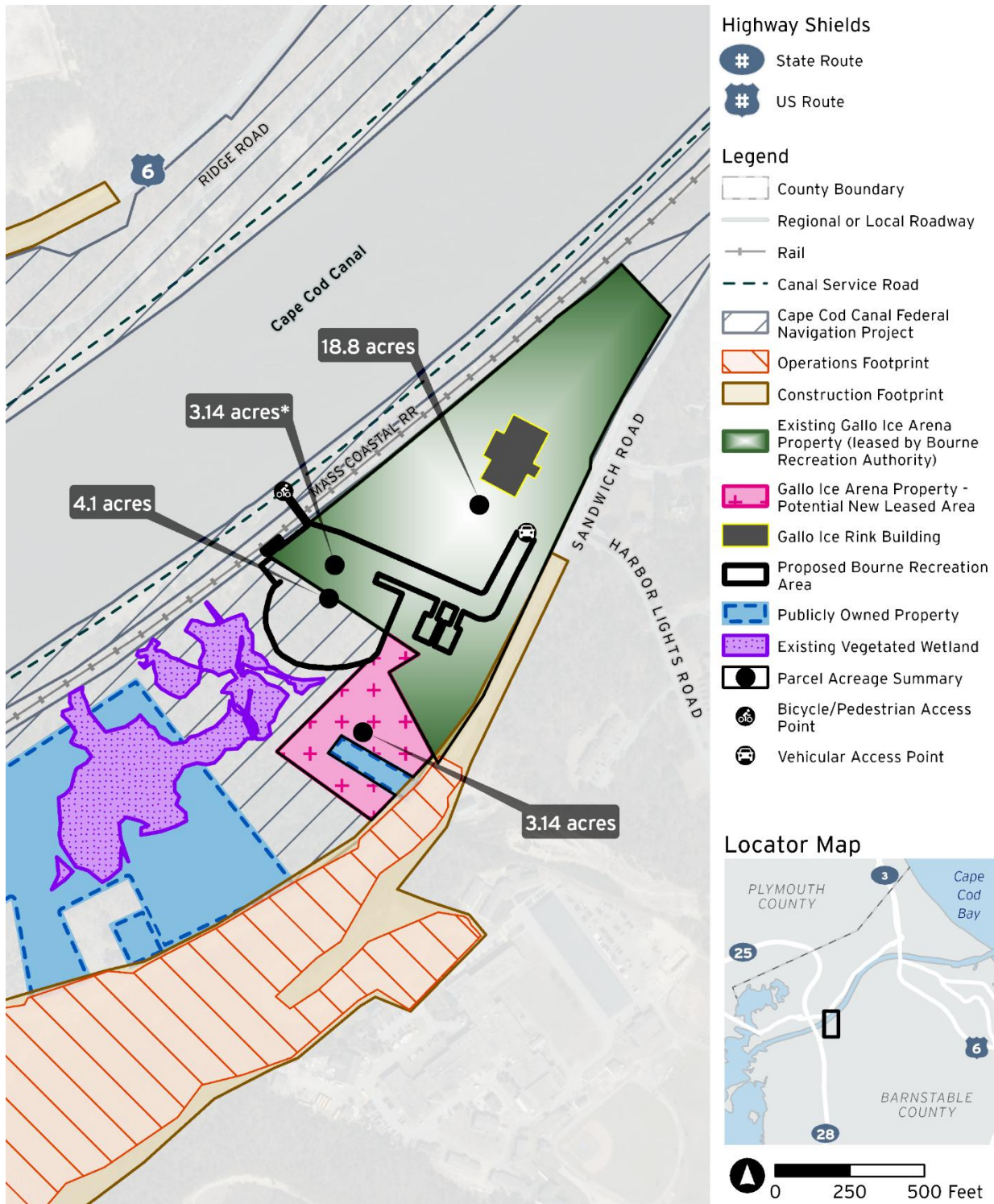
- Implement construction noise and vibration control plans
- Implement MassDOT standard specifications for air pollution prevention
- Minimize land disturbance and restore landscape

Impacts to Gallo Ice Arena would be minimized to the maximum extent practicable. MassDOT would construct the sidewalk, SUP, and reconfigured facility entrance and driveway outside the paved parking area to avoid effects. Upon completion of construction, the three facility entrance signs would be reconfigured for the new site driveways and reinstalled. Access to the permanent easement for operations and maintenance would be from Sandwich Road and would not interfere with the ongoing recreational uses of Gallo Ice Arena.

5.9.3.2 Mitigation and Enhancement Measures

In order to mitigate for the direct use of 3.14 acres of the Gallo Ice Arena, the USACE would be responsible for designating an additional 3.14-acre portion of the Cape Cod Canal FNP as Gallo Ice Arena property to be leased to the BRA, so no changes to the total acreage of land leased to the BRA for use as the Gallo Ice Arena would occur. [Figure 5-32](#) depicts a conceptual redesignation of a 3.14-acre portion of the Cape Cod Canal FNP that would be leased to the BRA. With this land redesignation, there would be no net loss of BRA-leased property. [Figure 5-33](#) depicts the Gallo Ice Arena parcel's proposed permanent condition in relation to the relocated Bourne Recreation Area.

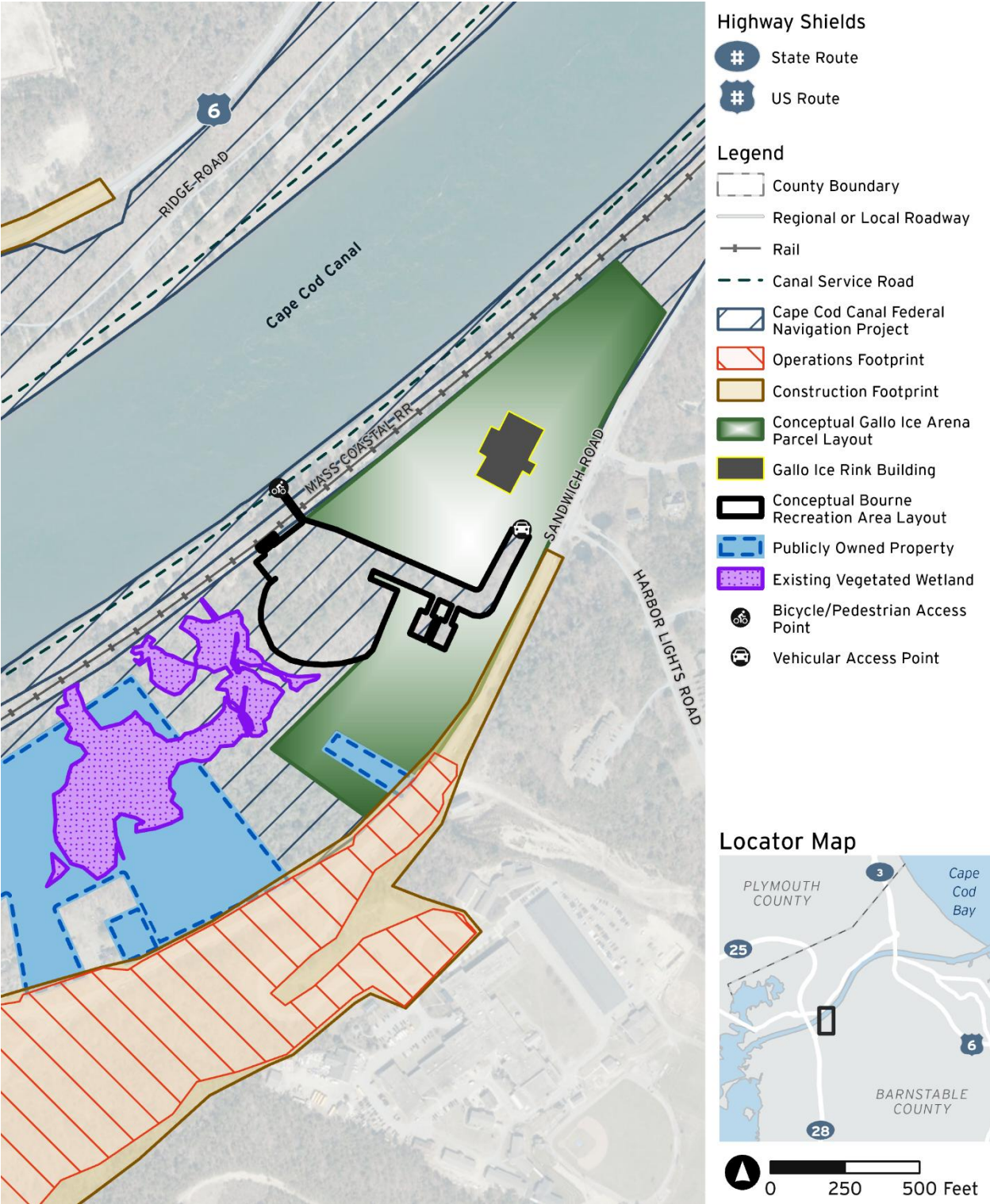
Figure 5-32. Gallo Ice Arena: Proposed Direct Use (Mitigation Activities)



* This total acreage (3.14 acres) defines the area of overlap between the existing Gallo Ice Arena property and the relocated Bourne Recreation Area property.

Source: Massachusetts Department of Transportation, 2025

Figure 5-33. Relocated Bourne Recreation Area/Gallo Ice Arena: Permanent Condition



Source: Massachusetts Department of Transportation, 2025

5.9.3.3 Summary of Use and Permanent Condition

As demonstrated in [Table 5-10](#), the use of Gallo Ice Arena for the Bourne Bridge project, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, would not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

The proposed access reconfiguration to Gallo Ice Arena from Sandwich Road, the addition of sidewalks and SUP connections, and the facility's parking lot circulation improvements would enhance the recreational opportunities provided by Gallo Ice Arena, as they would directly improve accessibility and safety for all arena users. The multimodal connections between UCT and the Gallo Ice Arena would also increase safety for recreational users of the arena who use UCT parking areas as overflow during peak use times of the arena, such as for events or tournaments. The current roadway layout does not include pedestrian connections from UCT to Gallo Ice Arena. MassDOT is undertaking these improvements at the request of the BRA, an OWJ for the property, and UCT, an adjacent landowner. MassDOT has designed the roadway improvements such that no impacts to the recreational features of the site, including the ice rink building or parking areas, would occur.

While the relocation of the Bourne Recreation Area would result in a direct use of 3.14 acres of the Gallo Ice Arena, the USACE would designate a 3.14-acre area of the Cape Cod Canal FNP as Gallo Ice Arena property to mitigate for this direct use so that no net loss of land would occur. Further, the expansion of leased parcel boundaries to the west would encompass an existing BRA-owned 0.5-acre parcel, potentially enhancing recreational opportunities along Sandwich Road, including opportunities for future park and recreation development in coordination with USACE. The relocation of the Bourne Recreation Area features to the Gallo Ice Arena would also enhance the recreational value of Gallo Ice Arena as a Town of Bourne community resource. The consolidation of recreational uses and support facilities on Sandwich Road, expansion of the local SUP network with access to South Canal Service Road and Cape Cod Canal, and provision of permanent outdoor park features with additional accessible parking capacity (124 parking spaces at the relocated Bourne Recreation Area) would substantially contribute to Gallo Ice Arena as a regional recreational destination. Additionally, the inclusion of a designated access point to South Canal Service Road with railroad crossing safety features, such as auditory warnings and Z-gates for pedestrians, would improve the safety of access to South Canal Service Road from Gallo Ice Arena compared to the existing, informal path between the arena parking lot and South Canal Service Road (refer to [Exhibit 5-32](#)).

5.9.4 Coordination and Consultation

MassDOT has initiated coordination with the USACE and the BRA as the OWJs for Gallo Ice Arena regarding the anticipated effects, and the minimization and mitigation of impacts due to the temporary occupancy and direct use of Gallo Ice Arena.

FHWA and MassDOT will continue to coordinate with the USACE and the BRA through review of the proposed measures to minimize harm, including obtaining final written concurrence from the USACE and the BRA as the OWJs for Gallo Ice Arena. It is anticipated that the final written concurrence from

the USACE and the BRA will be included in the combined Final Environmental Impact Statement and Record of Decision.

5.10 Summary of Proposed Findings and Determinations for Public Parks and Recreation Areas

Table 5-11 provides a summary of the existing and proposed acreage of each Section 4(f) park and recreational property where a use would occur and a summary of measures to minimize harm resulting from the proposed use. As demonstrated by the table, when taking into account the proposed measures to minimize harm, there would be no net loss of any Section 4(f)-protected property as a result of the Program.

Table 5-11. Summary of Section 4(f) Uses and Measures to Minimize Harm

Section 4(f) Property	Existing Acreage	Proposed Acreage	Summary of Measures to Minimize Harm
Sagamore Recreation Area	2.0 acres	2.63 acres	- Expand recreation boundary by 0.63 acres to mitigate for direct use - Construct new parking lot providing a net increase of 25 parking spaces
Keith Field Recreation Area	2.8 acres	3.1 acres	- Retain shared-use path as permanent facility, per request of Town of Bourne (official with jurisdiction) - Relocate overhead utilities underground, restore disturbed land - Construct new parking lot providing a net increase of 30 parking spaces
Bourne Scenic Park	80.2 acres (total)	92.2 acres (total)	- Expand recreation boundaries within Cape Cod Canal Federal Navigation Project by 12 acres to mitigate for direct use - Park-wide net gain of 63 campsites - Net gain of new fire pits and additional park entrance and gatehouse on the west side of the park - Net gain of new stage and sound system, additional playground, swimming pool, and bathhouse on the east side of the park
	73.7 acres (U.S. Army Corps of Engineers-owned)	85.7 acres (U.S. Army Corps of Engineers-owned)	
	6.5 acres (Bourne Recreation Authority-owned)	6.5 acres (Bourne Recreation Authority-owned)	

Section 4(f) Property	Existing Acreage	Proposed Acreage	Summary of Measures to Minimize Harm
Bourne Recreation Area	4.1 acres	4.1 acres	- Relocate features approximately 0.75-miles east to Gallo Ice Arena/Cape Cod Canal Federal Navigation Project land to mitigate for direct use - Net gain of 64 parking spaces
Gallo Ice Arena	18.8 acres	18.8 acres	Redesignation of 3.14 acres within Cape Cod Canal Federal Navigation Project to the Bourne Recreation Authority-leased Gallo Ice Arena parcel

5.10.1 Determinations of *De Minimis* Impact

FHWA proposes to make *de minimis* impact determinations for the proposed use of the Sagamore Recreation Area and Keith Field Recreation Area due to the Sagamore Bridge Project, and the proposed use of Bourne Scenic Park, Bourne Recreation Area, and Gallo Ice Arena due to the Bourne Bridge Project.

While the Program would result in a use of Section 4(f)-protected properties, MassDOT would implement measures to minimize harm, including avoidance, minimization, mitigation, and enhancement measures, such that the Program would not adversely affect the activities, features, or attributes that make these properties eligible for Section 4(f) protection. In issuing its proposed Section 4(f) determination for the use of Sagamore Recreation Area, Keith Field Recreation Area, Bourne Scenic Park, Bourne Recreation Area, and Gallo Ice Arena, FHWA considered the following:

- The proposed measures would minimize potential impacts to each facility's recreational uses during the construction period, and the proposed facility improvements would enhance the recreational features of each property, all of which contribute to each property's recreational value and significance.
- There would be no net loss of land from any Section 4(f) property as a result of the Program.
- At Sagamore Recreation Area, the proposed enhancement measures would result in expanded parking areas and connections to existing and proposed pedestrian and bicycle facilities.
- At Keith Field Recreation Area, the construction and operation of the proposed SUP would not impact the operations of the baseball field, and the utilities would be installed and maintained with minimal effect on the property. Additionally, the proposed mitigation measures would result in safer and expanded parking accommodations for the recreation area. Further, the new SUP with connections to South Canal Service Road would enhance the pedestrian and bicycle facilities network, which would provide expanded recreational opportunities at Keith Field Recreation Area.
- At Bourne Scenic Park, the proposed enhancement measures would result in new, modernized facilities in the eastern and western portions of the park. The proposed enhancement measures would increase the opportunities available for camping and result in a net gain of a new stage,

sound system, fire pits, and additional park entrance and gatehouse on the west side of the park, and an additional playground, swimming pool, and bathhouse on the east side of the park.

- At Bourne Recreation Area, the proposed enhancement measures would result in new, modernized facilities, including a pavilion, recreational space, new SUP connecting Sandwich Road and South Canal Service Road, and expanded parking areas.
- At Gallo Ice Arena, the construction and operation of the proposed SUP, sidewalk, and reconfigured driveway would not interfere with the ongoing recreational uses of the property, including the ice rink building or parking, but would result in improved accessibility, safety, and parking circulation. Additionally, the relocation of the Bourne Recreation Area to the Gallo Ice Arena parcel would substantially contribute to Gallo Ice Arena as a regional recreational destination by consolidating recreational uses and support facilities on Sandwich Road, expanding the local SUP network with access to South Canal Service Road and Cape Cod Canal, and providing permanent outdoor park features.
- The proposed minimization, mitigation, and enhancement measures at Sagamore Recreation Area and Keith Field Recreation Area would be implemented and fully operational prior to the start of the Sagamore Bridge Project. The proposed minimization, mitigation, and enhancement measures at Bourne Scenic Park, Bourne Recreation Area, and Gallo Ice Arena would be implemented and fully operational prior to the start of the Bourne Bridge Project. Therefore, any use of Sagamore Recreation Area, Keith Field Recreation Area, Bourne Scenic Park, Bourne Recreation Area, or Gallo Ice Arena would cause no loss of recreational function or value to any property due to the Program.

Based on the minimization, mitigation, and enhancement measures described in [Section 5.5 through Section 5.8](#), and in accordance with 23 CFR 774, FHWA has determined that the Program would have a *de minimis* impact on Sagamore Recreation Area, Keith Field Recreation Area, Bourne Scenic Park, Bourne Recreation Area, and Gallo Ice Arena.

Prior to making a *de minimis* impact determination, FHWA must complete the following actions, per 23 CFR 774.5(b)(2):

- Provide public notice and an opportunity for public review and comment concerning the effects on the protected activities, features, or attributes of the property.
- Notify the OWJ(s) of the intent to make a *de minimis* impact finding. Following an opportunity for public review and comment, the OWJ for the Section 4(f) property must concur in writing that the project will not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection.

In coordination with the Program's Draft Environmental Impact Statement public review and comment period, FHWA and MassDOT are seeking public review and comment on the proposed *de minimis* impact finding for Sagamore Recreation Area, Keith Field Recreation Area, Bourne Scenic Park, Bourne Recreation Area, and Gallo Ice Arena. FHWA and MassDOT will consider any public comments received prior to issuing a final determination and approval. The combined Final Environmental Impact Statement/Record of Decision will include the final Section 4(f) determinations for the proposed use of the Section 4(f)-protected parks and recreation areas within the Program areas.