

4 Affected Environment, Environmental Consequences, and Mitigation

4.7 Community Facilities

4.7.1 Introduction

This section identifies existing community facilities within the Sagamore and Bourne Study Areas and assesses the potential effects of the No Build and Build Alternatives on these facilities. Community facilities are identified as facilities that provide essential services to the public, including places for people to gather and participate in cultural activities. Such facilities include libraries, schools, hospitals, community health centers, fire departments, police stations, town halls, and places of worship.

Section 4.17, Public Parks, Recreational Facilities, and Open Space, discusses parklands and recreational facilities.

A project can adversely affect community facilities and services through the following:

- **Physical impacts** – A project physically displaces or alters a community facility.
- **Changes in accessibility** – A project interferes with the ability of people to access the facility, such as restricting pedestrian access, adding street closures, or reducing parking.
- **Changes in population** – A project encourages a growth in population, thereby increasing the number of people served by a facility.

4.7.1.1 Regulatory Context

Guidance for consideration of potential effects on community facilities is derived from the following:

- Federal Highway Administration's (FHWA) Technical Advisory document T6640.8A¹
- FHWA's Community Impact Assessment: A Quick Reference for Transportation, 2018 Update (Publication Number: FHWA-HEP-18-055)²
- Town of Bourne's Local Comprehensive Plan (2019)³
- Cape Cod Commission's Regional Policy Plan (2019)⁴

¹ Federal Highway Administration. 1987. [Guidance for Preparing and Processing Environmental and Section 4\(f\) Documents](https://www.environment.fhwa.dot.gov/legislation/nepa/guidance_preparing_env_documents.aspx). https://www.environment.fhwa.dot.gov/legislation/nepa/guidance_preparing_env_documents.aspx

² Federal Highway Administration. 2018. [Community Impact Assessment: A Quick Reference for Transportation](https://www.fhwa.dot.gov/livability/cia/quick_reference/index.cfm). https://www.fhwa.dot.gov/livability/cia/quick_reference/index.cfm

³ Cape Cod Commission. [Town of Bourne Local Comprehensive Plan](https://www.capecodcommission.org/our-work/town-of-bourne-local-comprehensive-plan). 2019. <https://www.capecodcommission.org/our-work/town-of-bourne-local-comprehensive-plan>

⁴ Cape Cod Commission. [Regional Policy Plan](https://www.capecodcommission.org/our-work/rpp/). 2019. <https://www.capecodcommission.org/our-work/rpp/>

4.7.1.2 Study Areas and Methodology

The Study Areas for this community facilities assessment encompass 0.5-mile buffers from the construction limits for the Build Alternative at the Sagamore and Bourne Bridges ([Figure 4.7-1](#)). These 0.5-mile Study Areas were developed to identify community facilities that could be potentially affected by the Build Alternative.

Community facilities within the Study Areas were identified using the Town of Bourne’s Local Comprehensive Plan, the Cape Cod Commission’s Regional Policy Plan, Massachusetts GIS spatial data layers, and Google Maps. Interviews conducted with local officials during spring-summer 2024 informed this evaluation’s understanding of the current impacts of bridge-related traffic on community facility access and the importance of community facilities on the Upper Cape.⁵

4.7.2 Affected Environment

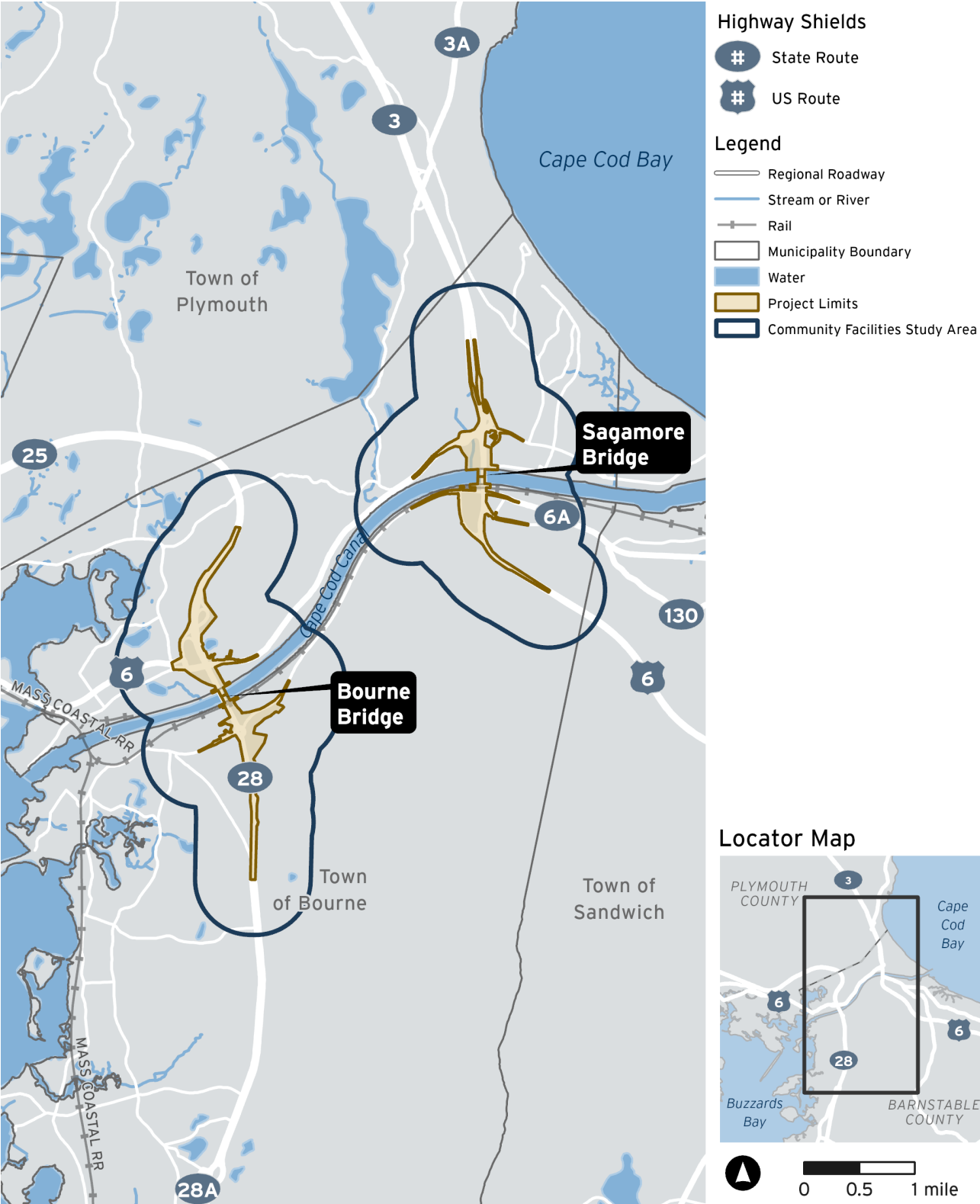
The Sagamore and Bourne Study Areas include several community facilities ([Table 4.7-1](#)). The community facilities in and around the Sagamore and Bourne Study Areas are documented in [Figure 4.7-2](#) and [Figure 4.7-3](#). The map identification numbers listed in [Table 4.7-1](#) correspond to community facility number labels in [Figure 4.7-2](#) and [Figure 4.7-3](#).

4.7.3 No Build Alternative

The No Build Alternative would not physically displace, alter, or change accessibility to any community facilities within the Study Areas. The No Build Alternative is not expected to significantly change patterns in population, employment, or community facility use. Projected traffic growth within the Study Areas would increase congestion and continue to hamper mobility and accessibility to community facilities and services with the No Build Alternative. Additionally, there would be no improvements to pedestrian and bicycle access to community facilities with the No Build Alternative.

⁵ The Upper Cape includes the municipalities of Bourne, Falmouth, Sandwich, and Mashpee.

Figure 4.7-1. Community Facilities (0.5-Mile Study Area)

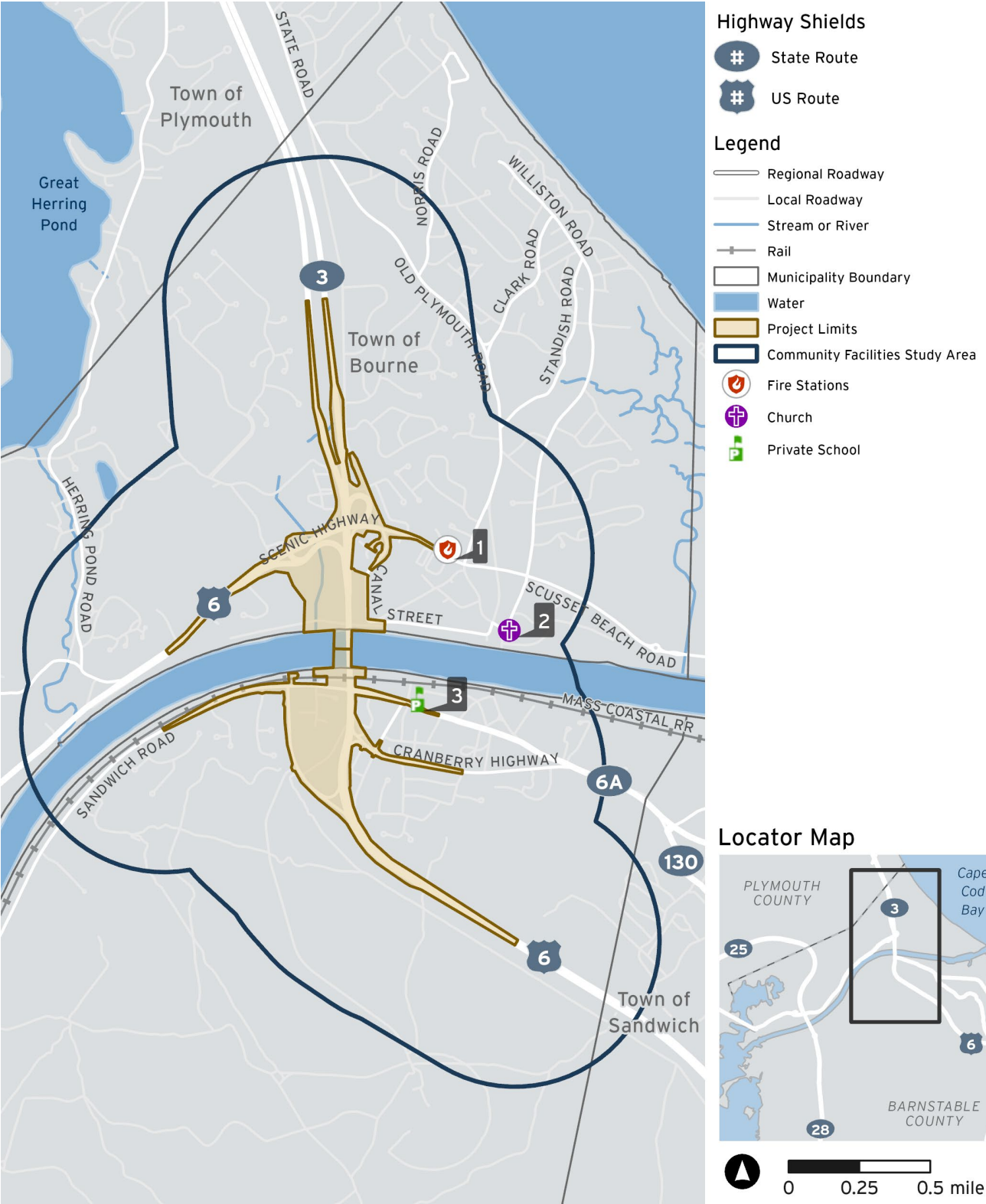


Source: Massachusetts Department of Transportation, 2024

Table 4.7-1. Community Facilities in the Sagamore and Bourne Study Areas

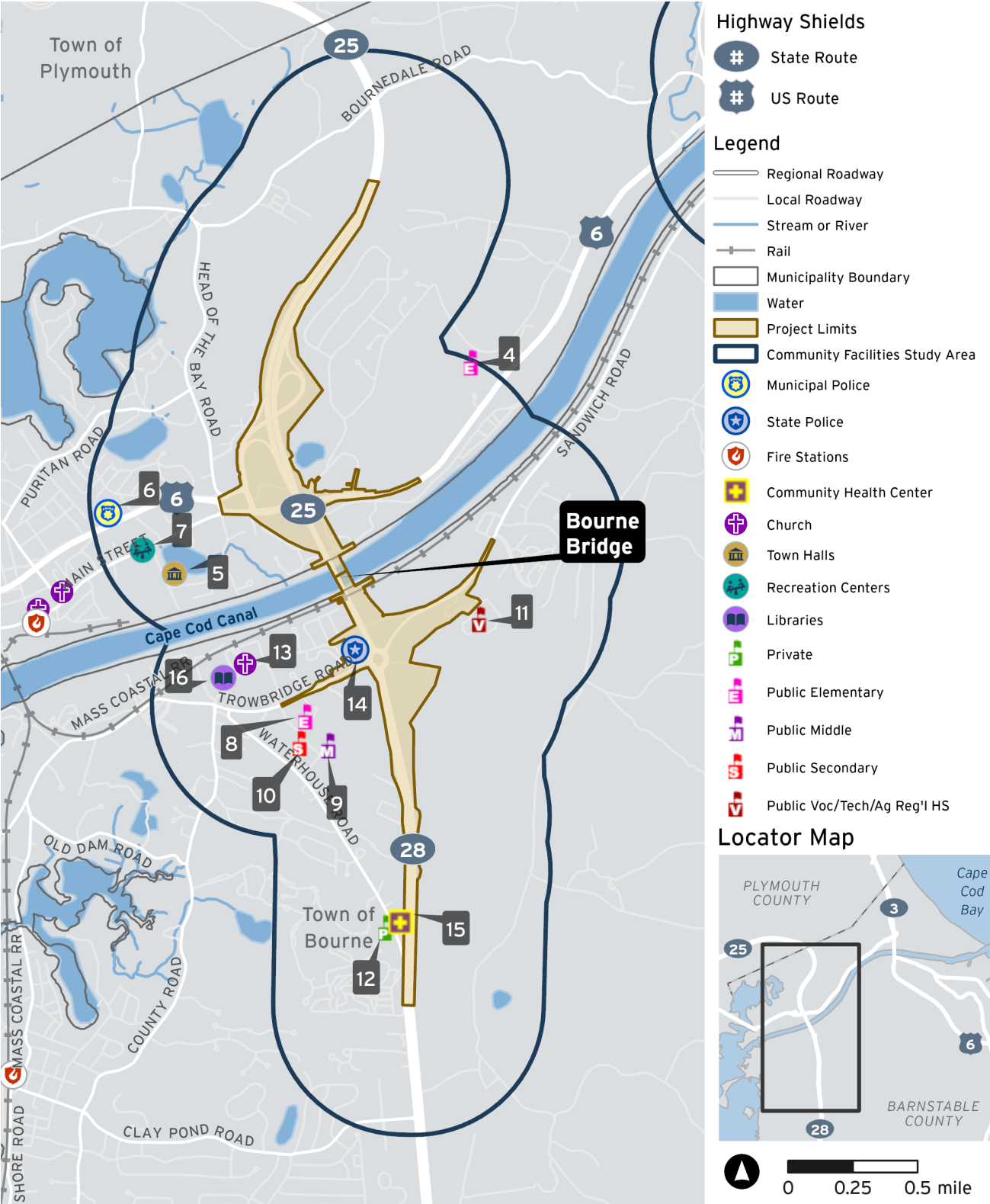
Map Identification Number	Facility Name	Facility Type	Address	Study Area Quadrant
1	Bourne Fire Department Headquarters (Station 3)	Fire Station	51 Meetinghouse Ln, Sagamore Beach, MA 02562	Sagamore North
2	Swift Memorial United Methodist Church	Place of Worship	10 Williston Rd, Sagamore Beach, MA 02562	Sagamore North
3	Bridgeview Montessori School	School	885 Sandwich Rd, Sagamore, MA 02561	Sagamore South
4	Bournedale Elementary School	School	41 Ernest Valeri Rd, Bourne, MA 02532	Bourne North
5	Bourne Town Hall	Town Hall	24 Perry Ave, Bourne, MA 02532	Bourne North
6	Bourne Police Department	Police Station	175 Main St, Buzzards Bay, MA 02532	Bourne North
7	Bourne Veterans Memorial Community Center	Community Recreation Center	239 Main St, Buzzards Bay, MA 02532	Bourne North
8	Bourne Intermediate School	School	70 Trowbridge Rd, Buzzards Bay, MA 02532	Bourne South
9	Bourne Middle School	School	77 Waterhouse Rd, Bourne, MA 02532	Bourne South
10	Bourne High School	School	75 Waterhouse Rd, Bourne, MA 02532	Bourne South
11	The Upper Cape Cod Regional Technical High School	School	220 Sandwich Rd, Bourne, MA 02532	Bourne South
12	Independence Academy	School	118 Waterhouse Road, Suite B, Bourne, MA 02532	Bourne South
13	Bourne United Methodist Church	Place of Worship	37 Sandwich Rd, Bourne, MA 02532	Bourne South
14	State Police Station D7 – Bourne	Police Station	Bourne Rotary S, Bourne, MA 02532	Bourne South
15	Community Health Center of Cape Cod Bourne	Community Health Center	123 Waterhouse Rd, Bourne, MA 02532	Bourne South
16	Jonathan Bourne Public Library	Library	19 Sandwich Rd, Bourne, MA 02532	Bourne South

Figure 4.7-2. Community Facilities In and Near Sagamore Study Area



Source: Massachusetts Department of Transportation, 2024

Figure 4.7-3. Community Facilities In and Near Bourne Study Area



Source: Massachusetts Department of Transportation, 2024

4.7.4 Build Alternative

4.7.4.1 Operational Effects

The Build Alternative would not physically displace, alter, or change accessibility to any community facilities within the Study Areas. As the Build Alternative does not propose to add vehicular capacity to the existing transportation system or provide new transportation access to undeveloped areas, it would not result in changes in population that would increase demand for existing community services.

According to the results of the Noise and Vibration Analysis, detailed in **Section 4.14, Noise and Vibration**, the Build Alternative would not result in an exceedance of the FHWA Noise Abatement Criteria thresholds for land uses supporting community facilities (FHWA Activity Categories C⁶ and D⁷) within the common noise environment locations tested.⁸ As a result, it is anticipated that the Build Alternative would not result in adverse operational noise effects to community facilities.

The Build Alternative would reduce congestion and improve traffic operations for access to community facilities within the Study Areas. Additionally, the construction of shared-use paths across the replacement bridges with connections to local roadways and the Cape Cod Canal service roads for the Build Alternative would improve multimodal access to community facilities between the mainland and Cape Cod.

4.7.4.2 Construction Effects

The Build Alternative would have temporary construction-period effects on surrounding community facilities due to traffic circulation and noise. The overarching construction staging and sequencing goals for the Build Alternative are focused on maintaining all vehicle, bicycle, and pedestrian connections through construction. Accessibility to community facilities will not be limited or eliminated during construction. The contractor will also be required to submit a construction-period traffic management plan to the Massachusetts Department of Transportation prior to initiating work. The Traffic Management Plan will ensure connectivity is maintained throughout construction and the public is made aware of any temporary impacts to traffic patterns.

Construction noise and vibration effects will be most pronounced for bridge demolition and construction of new bridge piers, and less pronounced for interchange approach construction activities. Considering the location of existing community facilities in relation to the existing bridges and the proposed construction staging areas, it is anticipated that the Build Alternative would not result in significant, adverse construction-period noise and vibration effects on community facilities.

⁶ “Activity Category C” refers to land use that includes non-residential areas like parks, recreation areas, and certain commercial properties.

⁷ “Activity Category D” refers to interior spaces of non-residential facilities, including auditoriums, medical facilities, and places of worship.

⁸ Federal Highway Administration. 1997. [Procedures for Abatement of Highway Traffic Noise and Construction Noise](https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-772). October 16. <https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-772>

Any construction-period noise and vibration effects on community facilities would be temporary and would be mitigated in compliance with the applicable state and federal regulations.

4.7.5 Mitigation

No long-term operational mitigation measures are required, as the Build Alternative would not physically displace, alter, or change accessibility to any community facilities within the Study Areas.

Any adverse construction effects of the Build Alternative on community facilities related to transportation, noise, and vibration, would be short term with provision of necessary mitigation measures, as discussed in **Section 4.2, Transportation, Traffic, and Safety**, and **Section 4.14, Noise and Vibration**.