



South Coast Rail: A Reader's Guide to the Draft Environmental Impact Statement and Report

MARCH 2011

PHOTO: JOHN ROBSON

INTRODUCTION

This Summary is intended to provide an easy-to-read guide to help you navigate the lengthy and detailed **Draft Environmental Impact Statement/Draft Environmental Impact Report (DEIS/DEIR)** for the South Coast Rail Project. We hope this can help you quickly find answers to your questions about the project.

The DEIS/DEIR is a combined federal and state document that looks at eight alternatives for restoring transit service to the South Coast. The document provides information on the transportation benefits of each of these alternatives and the potential impacts of the alternatives on noise, visual, wetlands, environmental justice, air quality and other social, historic and environmental resources. Because the document is long—over 2,500 pages including maps and figures—this guide is intended to help readers find topics of importance to them. Copies of the full report are available in print form, on DVD and on line (see the box on page 5 for more information). Information on how to comment on the DEIS/DEIR is on page 8.

MassDOT and the Corps agreed to coordinate the state and federal environmental review of the project. To this end, MassDOT has adopted the draft federal document (DEIS) as the state Draft Environmental Impact Report (DEIR), with some additions. MassDOT prepared the Preface and the Response to Comments on the Environmental Notification Form.

MassDOT has identified the Stoughton family of alternatives as its preferred corridor in the Preface. The Corps will not determine the permissible route—the Least Environmentally Damaging Practicable Alternative or LEDPA—until later in the environmental process. MassDOT has identified its preference to facilitate state review under the Massachusetts Environmental Policy Act (MEPA), the state regulatory process. After the public comment period has closed, the Massachusetts Secretary of Energy and Environmental Affairs will outline a scope of work for the Final Environmental Impact Report (FEIR). The Corps and MassDOT plan to continue coordinating their efforts on the project to produce a combined Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR).



What is South Coast Rail?

South Coast Rail is a project of MassDOT and the MBTA to restore public transportation to the South Coast region. The project will improve access to transit for an underserved area of the state, increase transit ridership, improve regional air quality, reduce greenhouse gas emissions, and support opportunities for smart growth and economic development. The DEIS/DEIR examines eight alternatives and the state portion of the document recommends the Stoughton route alternatives as the best option for balancing transportation and environmental benefits with environmental impacts. South Coast Rail includes a smart growth Corridor Plan to guide the region's economic development while protecting its green spaces, lakes and ponds. The project includes Technical Assistance to help 31 cities and towns in the region implement the Corridor Plan.



Civic engagement meeting held by MassDOT to gather ideas from the public on the pros and cons of different alternatives

WHAT IS IN THE DEIS/DEIR?

The DEIS/DEIR is an important document in the environmental review of the project. It investigates different alternatives for restoring public transit service to the South Coast. The document assesses how well each alternative meets MassDOT's project purpose, which is: to more fully meet the existing and future demand for public transportation between Fall River/New Bedford and Boston, Massachusetts, to enhance regional mobility while supporting smart growth planning and development strategies in affected communities.

The DEIS/DEIR has chapters defining and comparing the alternatives, describing the environment, and assessing the impact of the various alternatives on social, economic, historic, and environmental resources. The document also establishes MassDOT's commitments to mitigate for unavoidable impacts. It contains appendices on technical topics of interest and importance to the project. One appendix of particular interest is MassDOT's responses to public comments that over 150 people and institutions submitted on the project's November 2008 Environmental Notification Form (ENF). The DEIS/DEIR is based on conceptual level engineering, which will be refined for one alternative that will be advanced to the final environmental document, the FEIS/FEIR.

LOOKING AT THE DEIS/DEIR

What follows is a brief summary of the seven chapters of the DEIS/DEIR. The DEIS/DEIR was prepared by the U.S. Army Corps of Engineers, as the lead federal agency with responsibility under the National Environmental Policy Act. MassDOT has reviewed the document and adopted it as MassDOT's DEIR under the Massachusetts Environmental Policy Act. The document also includes Appendices.

Preface – MassDOT prepared this Preface to the DEIR to address its responsibilities under the Massachusetts Environmental Policy Act (MEPA), as some of these differ from the responsibilities of the Corps of Engineers under the National Environmental Policy Act (NEPA). This Preface includes background information on the project's history; outlines the Commonwealth's project purpose, including why smart growth is a critical element of this transportation project; and provides an index to the parts of the DEIS/DEIR that respond to the requirements of the Massachusetts Energy and Environmental Affairs Secretary's Certificate on the ENF. This chapter also details the civic engagement process MassDOT has used to gather the ideas, suggestions and concerns of residents. The Preface identifies MassDOT's preferred family of alternatives (the Stoughton corridor alternatives) and why MassDOT has identified its preference at this time.

Chapter 1, Executive Summary – The Executive Summary provides a succinct summary of each of the DEIS/DEIR chapters and the major findings of the study. A summary table provides a compact comparison of the alternatives' impacts. The subsequent chapters provide more detailed discussion of each of the topics summarized in Chapter 1.

Chapter 2, Purpose and Need – This brief chapter defines the purpose of the South Coast Rail project and discusses the responsibilities of MassDOT and the Corps with respect to MEPA and NEPA.

Chapter 3, Alternatives – Chapter 3 describes the process by which MassDOT developed and evaluated 65 transportation alternatives for the project and the reasons why eight alternatives, including a no action or no build option, were selected for a detailed analysis of transportation performance, environmental benefits and adverse impacts. These seven build alternatives (the No-Action Alternative, Attleboro Electric Alternative, Attleboro Diesel Alternative, Stoughton Electric Alternative, Stoughton Diesel Alternative, Whittenton Electric Alternative, Whittenton Diesel Alternative, and the Rapid Bus Alternative) fall into four geographic corridors. Each alternative is described in detail in this chapter, including the required infrastructure improvements, stations, overnight layover facilities, ridership, and cost. The chapter also provides an analysis that compares how well the alternatives meet the project purpose, how feasible each is to construct and operate, and how each benefits and impacts the environment.

Chapter 4, Affected Environment and Environmental Consequences – Chapter 4 is divided into 18 sections, each of which provides a detailed description of existing environmental resources along the four corridors (Attleboro, Stoughton, Whittenton, and Rapid Bus), identifies the requirements of the Secretary's Certificate concerning the specific resource, and provides a description of the effects of each alternative based on the conceptual engineering design. The sections in this chapter compare the impacts of South Coast Rail alternatives on each environmental resource for permanent direct impacts, permanent indirect impacts, and temporary construction impacts, and identify measures to mitigate for unavoidable adverse effects. The sections are described in brief below.

Section 4.1, Transportation, describes the existing transportation systems in the South Coast region (highways, commuter and passenger railroad

Helpful Acronyms and Definitions

DEIS – Draft Environmental Impact Statement (federally-required document)

DEIR – Draft Environmental Impact Report (state-required document)

DEIS/DEIR – A combined report that addresses both the federal and state environmental review requirements for a project

Catenary – The cable running above the track that is used by the train to obtain electric power

Corps – U.S. Army Corps of Engineers (lead federal agency reviewing South Coast Rail project)

ENF – Environmental Notification Form (state-required document that precedes the DEIR)

FEIS – Final Environmental Impact Statement (federally-required document)

FEIR – Final Environmental Impact Report (state-required document)

Grade crossing – An intersection of a railroad track and another track or road at the same level

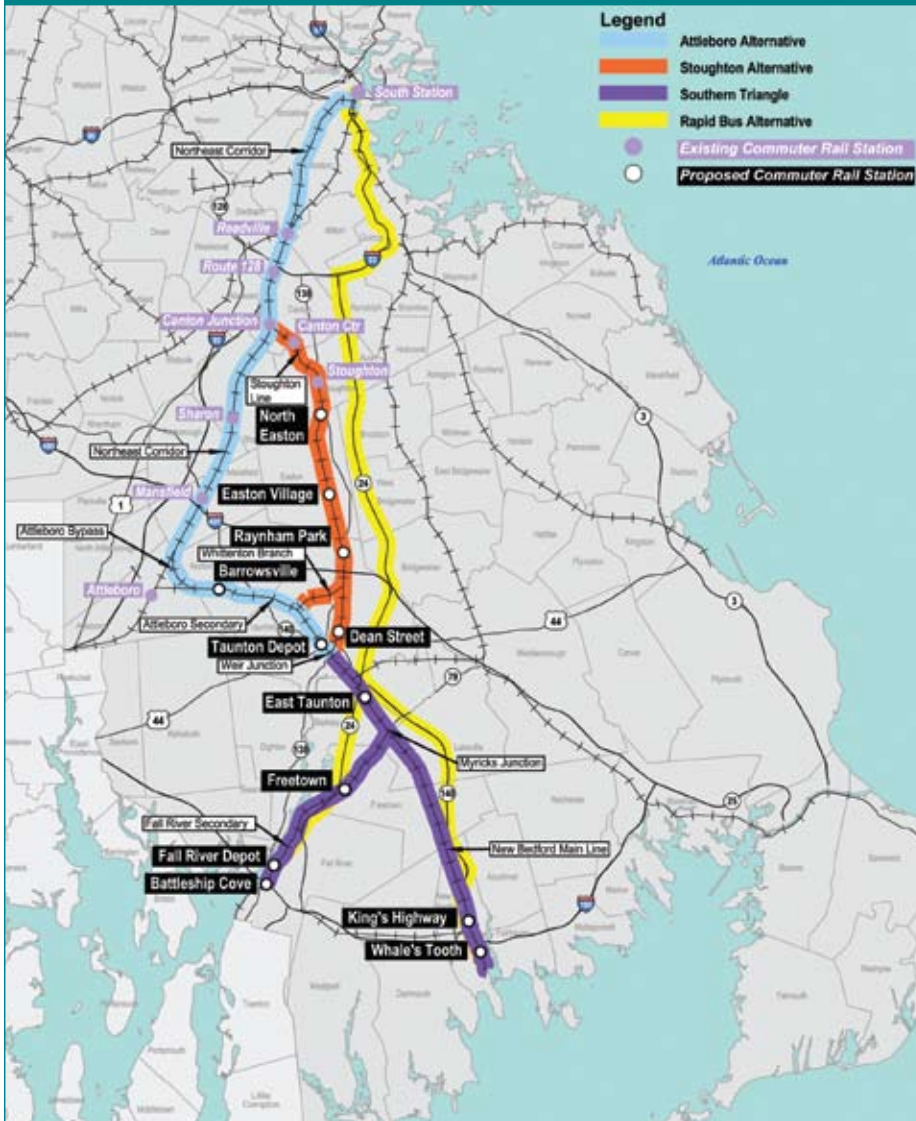
Layover – A storage site for the trains. South Coast Rail will have two overnight layovers, one near the end of the New Bedford line and one at the end of the Fall River line.

LEDPA – Least Environmentally Damaging Practicable Alternative (the alternative that will be selected by the Corps)

MEPA Office – Massachusetts Environmental Policy Act Office (state agency reviewing South Coast Rail project)

No-build – The future scenario if the proposed project is not built

Right-of-way – A strip of land used for a transportation facility



A map of the alternatives described in detail in Chapter 3 of the DEIS/DEIR

services, freight rail operations, regional bus services) and existing traffic conditions in the vicinity of each of the proposed commuter rail stations. For the future conditions (analyzed for the year 2030), this section describes the effects of each alternative on transportation systems and roadways and traffic in the vicinity of each station, as well as the effects of at-grade crossings on local traffic. Measures to mitigate for adverse impacts (increased traffic and congestion) are also identified for each alternative.

Section 4.2, *Land Use and Zoning*, describes the existing land uses and zoning along each corridor and, in more detail, in the vicinity of each station and layover facility. This section describes the land acquisitions that would be required to construct each alternative (land required for stations and layover

facilities, for power substations for the electric options, or to construct the track in areas where MassDOT does not own the right-of-way).

Section 4.3, *Socioeconomics*, describes the existing social and economic conditions within 20 affected municipalities, including information on demographics, housing, tax rates, municipal tax income, and economic development tools. For each of the alternatives, this section documents the anticipated direct economic effects due to property acquisition (loss of tax revenues, loss of jobs), indirect economic effects (changes in property values, economic growth), and social effects (changes to neighborhood cohesion).

Section 4.4, *Environmental Justice*, describes the distribution of minority and low-income populations within the South Coast Rail area. It evaluates each of the alternatives to determine if there would be a disproportionate adverse effect on these populations. Environmental justice is an important element of policy-making in transportation planning. Environmental justice policies focus on improving the natural environment in disadvantaged communities, and addressing disproportionate adverse environmental impacts that exist

in those communities. This section also describes MassDOT's efforts to include minority and low-income populations in the civic engagement process.

Section 4.5, *Visual and Aesthetic Resources*, describes the existing visual environment along each of the alternative corridors and in the vicinity of each proposed station and layover facility. It focuses on the view of the corridor, grade crossings, or the station site from adjacent public roads and residences. This section also describes the changes in the visual landscape as a result of each of the alternatives, including the effects of removing trees, adding overhead power catenary, improving grade crossings, or constructing stations. It also evaluates the effects of the alternatives on the visual resources associated with the Taunton River, designated as a federal Wild and Scenic River.

Section 4.6, Noise, describes existing noise along each of the alternative corridors and in the vicinity of each proposed station and layover facility. It explains the methodology used to evaluate noise levels and describes and quantifies the changes in noise due to each alternative, including during project construction. This section also identifies the types and locations of measures that could be implemented to mitigate for moderate or severe noise impacts.

Section 4.7, Vibration, describes existing vibration along each of the alternative corridors and in the vicinity of each proposed station and layover facility. It explains the methodology used to evaluate vibration levels and describes and quantifies the changes in vibration for each alternative, including during construction. This section also identifies the types and locations of measures that could be implemented to mitigate for moderate or severe vibration impacts.

Section 4.8, Cultural Resources, describes the historic, cultural, and archaeological resources within the Area of Potential Effect for each of the alternatives (including stations and layover facilities) based on the records of the Massachusetts Historical Commission and resource surveys conducted by MassDOT. These resources include historic districts, properties on the National Register of Historic Places, properties eligible for the National Register, known archaeological sites, sites that have a high potential to contain archaeological resources, and historic cemeteries. This section also discusses the Corps' ongoing consultation with the Native American Tribes. It identifies the potential effects of each alternative on historic, cultural and archaeological resources that could result from construction of the alternative. Potential effects considered in this section include direct property acquisition or demolition/destruction of a resource; changes in the visual setting; potential damage from vibration; noise impacts; or the potential alteration of a resource or its visual setting as a result of noise mitigation measures (soundproofing or noise barriers). Potential mitigation measures for each alternative, and compliance with the National Historic Preservation Act, are also discussed.

Section 4.9, Air Quality, describes the regional air quality under existing and proposed future no-build conditions. It provides a detailed discussion of the methods used to evaluate the South Coast Rail's effects on regional air quality, localized air quality, greenhouse gas emissions, and air toxics. The analysis quantifies each alternative's emissions of regional air pollutants

(volatile organic compounds, nitrogen oxides, carbon dioxide, carbon monoxide, and particulate matter) and emissions of localized air pollutants (carbon monoxide and particulates) for "hot spots" such as intersections and layover facilities. It provides an analysis of Greenhouse Gas (CO₂) emissions, which includes an evaluation of electric and diesel fuel options for the trains. Mitigation measures for construction-period air pollution are also discussed.

Section 4.10, Protected Open Space and Areas of Critical Environmental Concern, describes the protected public open space along each of the South Coast Rail corridors (parks, recreation areas, state reservations and wildlife management areas, public conservation lands) as well as the state-designated Areas of Critical Environmental Concern (ACECs). Private conservation lands, although not subject to the same legal protections, are also described. This section evaluates the effects of each of the alternatives on protected open space due to land acquisition or activities that would change the use of public open space, and it evaluates the potential indirect effects of the South Coast Rail project with, and without, smart growth measures. Impacts to resources within the Areas of Critical Environmental Concern (ecosystems, wetlands, wildlife) are described in the relevant technical section of Chapter 4.

Section 4.11, Farmland Soils, describes the soils along the South Coast Rail corridors, particularly at the proposed

Where Can I Find the DEIS/DEIR?

Copies of the DEIS/DEIR are available for review in a number of formats and locations:

- On the Army Corps of Engineers website: <http://www.nae.usace.army.mil/projects/ma/SouthCoastRail/southcoastrail.htm> and the South Coast Rail website: www.mass.gov/southcoastrail.
- At libraries in communities from the South Coast to Boston (see a full list on the project website: www.mass.gov/southcoastrail). DVDs will also be available in 13 other libraries.
- By request: a DVD, Executive Summary or print copy by calling or sending an email to Charlie Patton, (617)357-5772 or cpatton@reginavilla.com.

station and layover facilities sites that are designated by the U.S. Department of Agriculture as Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance. This section describes the regulatory programs that protect farmland in Massachusetts and identifies and quantifies the effects of each of the alternatives on designated farmland soils, consistent with the methodology required by the Department of Agriculture's Natural Resources Conservation Service.

Section 4.12, Hazardous Materials, describes the known locations of releases of oil and hazardous materials along each of the alternative corridors and in the vicinity of each of the proposed stations and layover facility sites, and describes the methods that would be used to evaluate and control oil and hazardous materials during construction. This section identifies locations where additional investigations would be required prior to construction.

Section 4.13, Geology, describes the existing regional geology and soils conditions along each of the alternative corridors and the potential effects of each alternative on geological features.

Section 4.14, Biodiversity, Wildlife and Vegetation, describes the existing natural habitats and wildlife resources along the South Coast Rail corridors, including descriptions of bioregions, Important Bird Areas, Biomap Core Habitats, Living Waters Core Habitats, plant communities, and vernal pools. The impacts of each of the alternatives is described for the permanent direct impacts (loss of habitat due to construction), indirect impacts (loss of habitat connectivity, habitat size, supporting upland habitat for vernal pools), and temporary impacts during construction. The University of Massachusetts Conservation Assessment and Prioritization System analysis was used to evaluate the effects of each alternative on the ecological integrity of natural areas along each corridor, and it quantified the loss of Index of Ecological Integrity units associated with each alternative. This section also identifies conceptual measures to mitigate for the loss of habitat or connectivity, including stream crossing standards and land preservation.

Section 4.15, Threatened and Endangered Species, identifies the state-listed rare species (endangered, threatened, and special concern) along each of the South Coast Rail corridors. State-listed species potentially affected by the South Coast Rail alternatives include three turtle species, two salamanders, several

insects (butterflies, moths and dragonflies) and plants. There are no federally-protected rare species within the South Coast Region that would be affected by the proposed transportation alternatives. This section identifies the potential direct (habitat loss) and indirect effects (loss of connectivity, mortality, population effects) on each of the species present along these corridors, and identifies potential mitigation measures. This section also documents MassDOT's consultation with the Natural Heritage and Endangered Species Program as well as compliance with the Massachusetts Endangered Species Act.

Section 4.16, Wetlands, describes the state- and federally-regulated wetlands (including floodplains) along each of the South Coast Rail corridors and how these wetlands were identified and mapped. The potential direct wetland impacts, meaning the number of wetland acres that would be filled by each alternative, are quantified by municipality and by wetland type. These impact estimates are based on the conceptual design for the project and Geographic Information System (GIS)-based wetland delineations. The estimates will be refined for the alternative studied in the FEIS/FEIR by using more advanced engineering design and field-delineated wetlands. Section 4.16 also describes the efforts to minimize unavoidable wetland impacts, establishes compensatory mitigation goals for each alternative, and identifies potential mitigation measures. The section also includes information on compliance with state and federal wetlands regulations, and documents that any of the South Coast Rail alternatives would require a Variance from the Massachusetts Wetlands Protection regulations.

Section 4.17, Water Resources, describes the existing surface water resources and groundwater resources

Blanding's Turtle and other species are identified in Section 4.15



PHOTO: MASSACHUSETTS DEPARTMENT OF FISH AND GAME



PHOTO: CHARLES WOHLERS, CREATIVE COMMONS

Photo of Hockomock Swamp, one of the wetland resources investigated in the DEIS/DEIR

along each of the South Coast Rail corridors. It identifies the potential permanent effects of each alternative (from track infrastructure operations, highway operations, stations, and layover facilities) and temporary construction-period impacts, along with measures to mitigate for potential changes in surface or groundwater quality. These measures include low-impact design of stormwater management and treatment systems at stations and layover facilities, in compliance with the Massachusetts Stormwater Regulations.

Section 4.18, Coastal Zone and Chapter 91, describes the regulatory context of the Coastal Zone Management Act and the Massachusetts Waterways Regulations (Chapter 91), and the elements of each alternative that would require compliance with the act and regulations. This section provides a preliminary analysis of compliance with these programs for each alternative.

Chapter 5, Indirect Effects and Cumulative Impacts – This chapter provides an analysis of the indirect and cumulative effects of each of the alternatives. Indirect effects are impacts caused by the induced growth in jobs and households that may result from increased transportation access in the South Coast area. The cumulative impact analysis evaluates changes that would result from past and reasonably foreseeable future actions combined with the South Coast Rail alternatives. The majority of this chapter evaluates the South Coast Rail project's indirect effects on the region's

municipalities under three scenarios: the No-Build Alternative (regional growth that will happen without the South Coast Rail project); Scenario 1, the South Coast Rail project without smart growth measures; and Scenario 2, the South Coast Rail project with smart growth measures, meaning the implementation of the *South Coast Rail Economic Development and Land Use Corridor Plan*. These scenarios show how the transit project, both with and without smart growth, will impact land use, forest land, farmland, wetlands, biodiversity, infrastructure (water and sewer), greenhouse gas emissions, traffic, and economics.

Chapter 6, Commitment of Resources – Chapter 6 responds to specific requirements of NEPA for an Environmental Impact Statement and describes the commitment of funds, energy, materials, and labor for the project. It also discloses the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity, in other words, the tradeoffs between the potential adverse impacts of the proposed project and the potential long-term benefits of the proposed project. This section defines “short-term” as being construction related and “long-term” as being the operational phase of the proposed project.

Chapter 7, Proposed Mitigation and Section 61 Findings, provides information required under MEPA, specifically the draft Proposed Section 61 Findings for the Project which require state agencies and authorities to review, evaluate, and determine the impacts on the natural environment of all projects or activities requiring permits issued by the state. In compliance with the requirements of Section 61, this chapter provides MassDOT's proposed draft findings describing environmental impacts and certifying that all feasible measures have been taken by MassDOT to avoid or minimize these impacts. This chapter also lists the permits that will be required to construct the South Coast Rail project, explains how the project will comply with the requirements for a Variance under the Massachusetts Wetlands Protection Act, and summarizes MassDOT's commitments to mitigate for environmental impacts.

Responses to Comments on the Environmental Notification Form – In this appendix, MassDOT provides detailed responses to all of the comments submitted on the ENF. The section includes the complete comment letters, MassDOT's responses to each comment, and a detailed response to each of the requirements of the Secretary's Certificate.

How Can I Provide Comments on the DEIS/DEIR?

The U.S. Army Corps of Engineers will be conducting two public hearings on the DEIS/DEIR. Email, website and post card notices on the dates and locations will be distributed by MassDOT. Comments will be accepted orally at the hearings, which will include a transcript of all remarks. To be fully considered by the Massachusetts Secretary of Energy and Environmental Affairs, comments on the state document must be submitted in writing.

For background information on the project, please visit www.mass.gov/southcoastrail.

The Corps and MEPA will accept written comments until May 27, 2011. Please send your comments to both agencies:

- Alan Anacheka-Nasemann
Army Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751
email: SCREIS@USACE.army.mil
fax: 978-318-8303
- Secretary Richard K. Sullivan, Jr., EOEEA
attn.: MEPA Office (Aisling O'Shea)
100 Cambridge Street, Suite 900
Boston MA 02114
email: aisling.o'shea@state.ma.us
fax: 617-626-1181 or via hand delivery.

Copies of the DEIS/DEIR are available at libraries in communities from the South Coast to Boston:

ACUSHNET

Russell Memorial Library
88 Main Street

ATTLEBORO

Attleboro Public Library
74 North Main Street

BERKLEY

Berkley Public Library
3 Locust Street

BOSTON

State Transportation Library
10 Park Plaza, 2nd Floor

Boston Public Library
700 Boylston Street

BRAINTREE

Thayer Public Library
798 Washington Street

CANTON

Canton Public Library
786 Washington Street

DEDHAM

Dedham Public Library
43 Church Street

EASTON

Ames Free Library
53 Main Street

FALL RIVER

Fall River Public Library
104 North Main Street

FOXBOROUGH

Boyden Library
10 Bird Street

FREETOWN

James White Library
5 Washburn Road

LAKEVILLE

Lakeville Public Library
4 Precinct Street

MANSFIELD

Mansfield Public Library
255 Hope Street

MILTON

Milton Public Library
101 Blue Hills Parkway

NEW BEDFORD

New Bedford Public Library
613 Pleasant Street

NORTON

Norton Public Library
68 East Main Street

QUINCY

Thomas Crane Public Library
40 Washington Street

RANDOLPH

Randolph Public Library
2 North Main Street

RAYNHAM

Raynham Public Library
760 South Main Street

SHARON

Sharon Public Library
11 North Main Street

STOUGHTON

Stoughton Library
84 Park Street

TAUNTON

Taunton Public Library
12 Pleasant Street

WEST BRIDGEWATER

West Bridgewater Public Library
80 Howard Street

