Route 79 / Davol Street Corridor Study

Chapter 5

Recommendations

5.1 Introduction

As defined in Chapter 1, the purpose of this study is to develop alternatives that will foster economic development along the Fall River waterfront while improving multimodal accessibility between the waterfront and the neighborhoods. The framework for accomplishing this purpose is identified through the study's goals and objectives, also enumerated in Chapter 1. The assessment of alternatives developed throughout the study was conducted with respect to their ability to achieve these goals and objectives. While alternatives that best meet these goals and objectives were determined in this study through a combination of analytical methods and an extensive public participation process, the policy context will aid in the decision making going forward. This Chapter contains recommendations for which alternatives should be advanced further, details the steps identified in the MassDOT Project Development and Design Guide, highlights the policy aspects of the project development process, and identifies the role of the City of Fall River as a partner in this process. This report concludes the planning process and sets the stage for advancing the study's recommendations into the project development phase.

The range of long-term alternatives that underwent detailed analysis[1] based on the Working Group input during the initial screening process includes the following:

Alternative 1- Elevated Route 79 with Cross Connections: This alternative relocates Route 79 to the east to open up land for development parcels, but maintains it as an elevated four-lane (two lanes in each direction) limited access highway. Three new cross connections are introduced under Route 79.

Alternative 2 - At-grade Urban Boulevard: Under this Alternative, Route 79 is shifted to the east to open up land for development parcels and lowered to approximately match elevations of the existing Davol Street. It is configured as a six-lane boulevard (three lanes in each direction separated by a landscaped median). Three new cross connections are introduced via signalized intersections in addition to improving and signalizing the existing cross connection at President Avenue.

Alternative 2-Modified - At-grade Urban Boulevard with Reduced Cross Section: This Alternative is similar to Alternative 2 with regard to its alignment and access. However, it features a reduced Boulevard cross section of four lanes (two lanes in each direction). It also limits the extent of Davol Street West to just maintaining access to local land uses, rather than a continuous north-south corridor featured under Alternative 2. The scaled down Route 79 cross section is independent of this feature and could be implemented with or without it.

Alternative 3 - At-grade Urban Boulevard with Frontage Roads: Similar to Alternative 2 Modified, it features a four-lane (two lanes in each direction separated by a landscaped median) Route 79 Boulevard with signalized intersections at three new cross connections. It also introduces one-way frontage roads on either side of Route 79 for local access.

All of these Alternatives meet the study goals and objectives to varying degrees. Table 5.1 illustrates the correlation between the long-term alternatives and the study goals and objectives. Chapter 4 details

[1] Analysis of Alternative 2-Modified was based on traffic projections and development scenario developed for Alternative 2. No additional travel demand modeling was performed for this alternative.

performance of each alternative and contains an Evaluation Matrix comparing various measures of effectiveness. This evaluation coupled with early and continuous community input and guided by the FHWA and MassDOT policies led to a determination that Alternatives 2 and 2-Modified would be the most advantageous in addressing the study goals and objectives. As such, these alternatives are recommended for advancing to the next step. Alternatives 2 and 2-Modified are illustrated in Figures 5.1 and 5.2. Figures 5.3 and 5.4 are three-dimensional renderings of Alternative 2.

Table 5.1: Long-Term Alternatives vs. Study Objectives

Study Objective	No-Build	Alternative 1	Alternative 2	Alternative 2 Modified	Alternative 3
Provide better multimodal connectivity between Fall River and the waterfront	■	●	●	●	●
Enhance multimodal access to South Coast Rail	▬	●	●	●	●
Balance local and regional mobility	□	●	○	○	○
Improve and enhance safety conditions	□	●	●	●	●
Increase opportunities for economic development and land use	◇	◒	●	●	○
Minimize potential impacts to the environment and community	□	○	●	●	●

LEGEND:	Some	Moderate	Substantial
Benefits	○	◒	●
Impacts	□	▬	▬
Neutral	◇		

In addition to the long-term alternatives, a number of short-term and medium-term alternatives are recommended for implementation. Although they do not fulfill the overall study goals and objectives, they improve safety and multimodal accessibility and can be implemented within a shorter time frame than the long-term alternatives due to lesser permitting and design requirements and lower construction costs. The following discussion outlines short-term and medium-term improvement recommendations and provides additional detail on selection of Alternatives 2 and 2-Modified.

Figure 5.1: Alternative 2

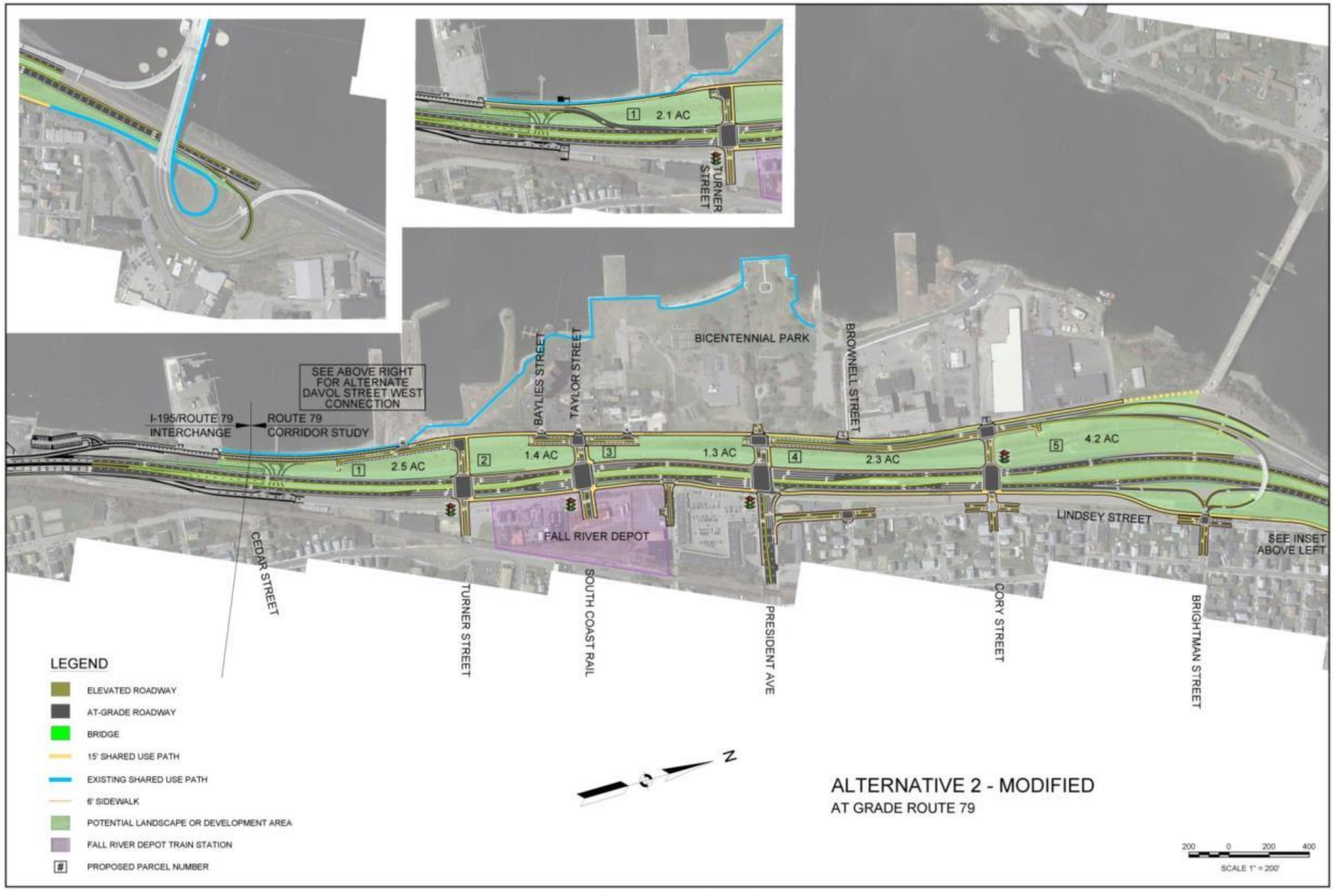

Figure 5.2: Alternative 2 – Modified

Figure 5.3: Rendering of Alternative 2 – Aerial View (Looking North)

Figure 5.4: Rendering of Alternative 2 – Street View (Davol Street Looking Northeast)

5.2 Alternatives Recommended for Advancement

Chapters 3 and 4 developed and analyzed through an iterative process a number of alternatives that could be implemented within the study area to meet the study goals and objectives. The development of alternatives began by evaluating individual locations with known safety and access deficiencies for pedestrians, bicyclists and vehicles. While "spot" improvements at these locations are possible, none of them fully satisfy all study goals and objectives; accordingly, a broader corridor-wide approach was required to meet all study objectives.

All alternatives presented in this study are categorized in one of three categories. The localized improvements are categorized as short-term and medium-term improvements, and the corridor-wide solutions are categorized as long-term alternatives. The short-term improvements could be accomplished with minimal levels of design and permitting, have relatively low costs, and, therefore, could be implemented in the near future. Medium-term improvements would require more significant levels of design and funding, which would slightly delay their implementation, making them a possibility within the next few years. The long-term alternatives, those that reconfigure the Route 79 and Davol Street corridor within the study area, will require the greatest levels of design, environmental permitting, complexity and funding, and have the longest timeframe for implementation.

5.2.1 Short-Term Improvements

Short-term improvements are recommended for implementation at the following five locations within the study area.

Davol Street U-turn near Cedar Street

At the U-turn near Cedar Street, it is recommended to trim back existing vegetation to improve sight distance along Davol Street West. In addition, pavement markings should be added to delineate Davol Streets West and East as well as the stop lines along the U-turn lanes. A sign indicating an upcoming merge should be relocated to provide sufficient warning distance. These modifications would meet the study objective of improving and enhancing safety conditions. While they fall into the short-term improvement category due to being relatively simple and economical, it is recommended to delay their implementation until the adjacent I-195/Route 79 interchange project is substantially completed in this area. The Cedar Street U-turn area is currently being used for detouring Route 79 traffic affected by the interchange construction and will be restored to its existing condition upon completion of that project.

President Avenue at Davol Street East and Lindsey Street Intersection

At the intersection of President Avenue and Lindsey Street, a "Do Not Block Intersection" box should be painted, along with signs alerting motorists to the presence of pedestrians placed in advance of and at the intersection. An unsignalized crosswalk and ADA compliant ramps should be added at this intersection. At the intersection of President Avenue and Davol Street East, accessible pedestrian signals and ramps should be installed across all legs of the intersection.

These improvements would meet the study objective of improving and enhancing safety conditions.

President Avenue at North Main Street

At the intersection of President Avenue and North Main Street, accessible pedestrian signals and ramps should be installed across all legs of the intersection. Along northbound and southbound North Main Street, exclusive left-turn lanes should be added. The traffic signal phasing and corresponding signal indications should be upgraded to provide exclusive left-turn phases for all approaches. These intersection modifications would meet the study objective of improving and enhancing safety conditions.

Lindsey Street at Brownell Street

At the intersection of Lindsey Street with Brownell Street, accessible pedestrian ramps should be installed at all legs of the intersection. New pavement markings and signage should be installed to emphasize crosswalks on all approaches and the stop lines on Lindsey Street. These additions to the intersection would meet the study objective of improving and enhancing safety conditions.

Davol Street Bicycle Accommodations

Davol Street West and Davol Street East should be restriped and should have new signs installed to provide bicycle lanes or bicycle accommodating shoulders along the outside lane. Along Davol Street West, the second through lane should be dropped south of President Avenue to maintain one through lane, one five-foot wide bike lane and one lane for parking. Along Davol Street East, between the Cedar Street U-turn and President Avenue, the outside shoulder should be restriped for bicycles. These modifications to Davol Streets West and East would meet the study objectives of improving and enhancing safety conditions, providing better multimodal connectivity between the neighborhoods and the waterfront, and offering multimodal access to South Coast Rail.

In addition to the specific locations described above, the City of Fall River is in the process of installing bike route signs along selected low volume / low speed local streets. Consistent with this initiative, it is recommended that bike route signs and "sharrow" pavement markings be installed along all streets connecting Wellington Street (current terminus of the Veterans Memorial Bridge shared-use path) and President Avenue to create designated easily identifiable bicycle access. Due to a number of one-way streets, the northbound and southbound bike routes would partially follow different paths. In the north-south direction, such a bike route would be comprised of the corridor formed by Wellington, Fulton, Brightman, Morton, George, and Lindsey Streets. In the reverse direction from south to north, this corridor would be somewhat more direct and would follow Lindsey, Brightman, Fulton, and Wellington Streets.

5.2.2 Medium-Term Improvements

A medium-term improvement that is recommended for implementation is partial reconstruction of Davol Street West south of President Avenue in order to provide a two-way shared-use path. This alternative would partially reconstruct Davol Street West to support one southbound through lane and one lane of parking. A shared-use path would be separated from the roadway by a grass buffer. This work could be accomplished by reallocating available space within the existing 37'-38' right-of-way obtained for an aerial image, but it should be verified by obtaining a detailed survey. This improvement would meet the study objectives of improving and enhancing safety conditions, providing better multimodal connectivity between the neighborhoods and the waterfront, and offering multimodal access to South Coast Rail. In order to maintain continuity of access, the implementation of this improvement should be coordinated with the I-195/Route 79 Interchange project which will include pedestrian and bicycle provisions on Davol Street West between Central Street and the northern project limits,

5.2.3 Long-Term Alternatives

Alternatives 2 and 2 – Modified are recommended for advancement to the next project phase as these two alternatives meet the study goals and objectives to the greatest extent and are supported by the community. Additionally, FHWA requires that a designated preferred alternative be determined as part of the project development process. More specifically:

- Both alternatives improve mobility, connectivity, and safety for all transportation modes and users by introducing three new and one improved east-west connections between Fall River and the waterfront, providing pedestrian and bicycle accommodations throughout the project limits, and by improving a number of high crash locations.
- Both alternatives promote and foster local and regional economic development potential by introducing new development parcels, providing efficient access to these and existing parcels for both regional and local vehicular and non-motorized traffic, and by connecting these parcels to the future South Coast Rail Fall River Depot train station.
- Both alternatives improve the quality of life for residents of surrounding neighborhoods and throughout Fall River by introducing safe multimodal accessible routes, eliminating physical and visual barrier formed by the elevated Route 79 and replacing it with an attractive urban boulevard. They restore Brightman Street to two-way operation, thus enabling access to Route 79 and eliminating excessive circulation through the neighborhood.

The further development of these alternatives will have to address certain design challenges. Alternative 2 introduces long pedestrian crossing distances across Route 79 and will require careful assessment of pedestrian interval lengths balanced with the desire to maintain efficient vehicular operation. Alternative 2 - Modified features shorter crosswalks, but potentially

increased level of congestion due to fewer through lanes. Intersection queuing and traffic signal coordination parameters will need to be thoroughly examined. Brightman Street connection to northbound Route 79 introduced under both alternatives will require a close examination of horizontal and vertical design elements to mitigate the difference in elevation of 20 feet between the two roadways.

While Alternatives 1 and 3 satisfy most of the study goals and objectives, they are not recommended for the following reasons:

- Alternative 1 does not support the goal of improving the quality of life to the same potential as Alternatives 2 and 2 – Modified as it retains the visual barrier created by the elevated Route 79 roadway. Also, it does not allow a direct connection from Brightman Street to southbound Route 79 and Davol Street. At a cost of almost double the cost of Alternatives 2 and 2-Modifed, it does not provide the most advantageous use of public funds.
- Alternative 3 does not fully support the goal of promoting and fostering economic development potential due to a less efficient roadway configuration, which limits the size of development that could be supported by the roadway infrastructure.

5.3 MassDOT Project Development and Design Process

Transportation decision-making is complex and can be influenced by legislative mandates, environmental regulations, financial limitations, agency programmatic commitments, and partnering opportunities. Project development is the process that takes a transportation improvement from conception through construction. Decision-makers and reviewing agencies, when consulted early and often throughout the project development process, can ensure that all participants understand the potential impact these factors may have on project implementation.

The MassDOT Highway Division has developed a comprehensive project development process which is contained in Chapter 2 of the *MassDOT Highway Division's Project Development and Design Guide*. The eight-step process covers a range of activities extending from identification of a project need, through completion of a set of finished contract plans, to construction of the project. The sequence of decisions made through the project development process progressively narrows the project focus, while developing greater design details, and ultimately leads to a project that addresses the identified needs in the most cost-effective and publicly acceptable way. The Route 79 / Davol Street Corridor Study has been structured to meet the first two steps of the project development process: I - Needs Identification and II - Planning. The more-detailed descriptions provided in the following sections are focused on the process for a roadway project, but the same basic process will need to be followed for non-roadway projects as well.

Step I: Needs Identification

For each of the locations at which an improvement is to be implemented, MassDOT leads an effort to define the problem, establishes project goals and objectives, and defines the scope of the planning

needed for implementation. To that end, it has to complete a Project Need Form (PNF), which states in general terms the deficiencies or needs related to the transportation facility or location. The PNF documents the problems and explains why corrective action is needed. For this study, the information defining the need for the project will be drawn primarily, perhaps exclusively, from the present report. Also, at this point in the process, MassDOT meets with potential participants, such as the Southeastern Massachusetts Metropolitan Planning Organization (MPO) and community members, to allow for an informal review of the project.

The PNF is reviewed by the MassDOT Highway Division District 5 office whose jurisdiction includes the location of the proposed project. MassDOT also sends the PNF to the MPO, for informational purposes. The outcome of this step determines whether the project requires further planning, whether it is already well supported by prior planning studies, and, therefore, whether it is ready to move forward into the design phase, or whether it should be dismissed from further consideration.

Step II: Planning

This phase will likely not be required for the implementation of the improvements proposed in this planning study, as this planning report should constitute the outcome of this step. However, in general, the purpose of this implementation step is for the project proponent to identify issues, impacts, and approvals that may need to be obtained, so that the subsequent design and permitting processes are understood.

The level of planning needed will vary widely, based on the complexity of the project. Typical tasks include: define the existing context, confirm the project need, establish goals and objectives, initiate public outreach, define the project, collect data, develop and analyze alternatives, make recommendations, and provide report documentation. Likely outcomes include consensus on the project definition to enable it to move forward into environmental documentation (if needed) and design, or a recommendation to delay the project or dismiss it from further consideration.

Step III: Project Initiation

At this point in the process the proponent, MassDOT Highway Division, completes a Project Initiation Form (PIF) for each improvement, which is reviewed by its Project Review Committee (PRC) and the MPO. The PRC is composed of the Chief Engineer, each District Highway Director, and representatives of the Project Management, Environmental, Planning, Right-of-Way, Traffic, and Bridge departments, and the Federal Aid Program Office (FAPO). The PIF documents the project type and description, summarizes the project planning process, identifies likely funding and project management responsibility, and defines a plan for interagency and public participation. First the PRC reviews and evaluates the proposed project based on the MassDOT's statewide priorities and criteria. If the result is positive, MassDOT Highway Division moves the project forward to the design phase and to programming review by the MPO. The PRC may provide a Project Management Plan to define roles and responsibilities for subsequent steps. The MPO review includes project evaluation based on the MPO's regional priorities and criteria. The MPO may assign project evaluation criteria score, a Transportation Improvement Program (TIP) year, a tentative project category, and a tentative funding category.

Step IV: Environmental Permitting, Design, and Right-of-Way Process

This step has four distinct but closely integrated elements: Public Outreach, Environmental Documentation and Permitting (varying levels, if required), Design, and Right-of-Way Acquisition (if required). The outcome of this step is a fully designed and permitted project ready for construction. The sections below provide more detailed information on the four elements of this step of the project development process.

Public Outreach

Continued public outreach in the design and environmental process is essential to maintain varying levels of public support for the project and to seek meaningful input on the design elements. The public outreach is often in the form of required public hearings (conducted at the 25% and 100% design milestones), but can also include less formal dialogues with those interested in and affected by a proposed project.

Environmental Documentation and Permitting

The project proponent, in coordination with the Environmental Services section of the MassDOT Highway Division, will be responsible for identifying and complying with all applicable federal, state, and local environmental laws and requirements. This includes determining the appropriate project category for both the Massachusetts Environmental Protection Act (MEPA) and the National Environmental Protection Act (NEPA). Environmental documentation and permitting is often completed in conjunction with the Preliminary Design phase described below.

Design

There are three major phases of design. The first is Preliminary Design, which is also referred to as the 25-percent submission. The major components of this phase include a full survey of the project area, preparation of base plans, development of basic geometric layout, development of preliminary cost estimates, and submission of a functional design report. Preliminary Design, although not required to, is often completed in conjunction with the Environmental Documentation and Permitting. The next phase is Final Design, which is also referred to as the 75% and 100% submission. The major components of this phase include preparation of a subsurface exploratory plan (if required), coordination of utility relocations, development of temporary traffic control plans through construction zones, development of final cost estimates, and refinement and finalization of the construction plans. Once Final Design is complete, a full set of Plans, Specifications, and Estimates (PS&E) is developed for the project.

Right-of-Way Acquisition

A separate set of Right-of-Way plans is required for any project that requires land acquisition or easements. The plans must identify the existing and proposed layout lines, easements, property lines, names of property owners, and the dimensions and areas of estimated takings and easements.

Step V: Programming (Identification of Funding)

Programming, which typically begins during the design phase, can actually occur at any time during the process, from planning to design. In this step, which is distinct from project initiation, the proponent requests that the MPO include the project in the region's Transportation Improvement Program (TIP) process. The proponent requesting the project's listing on the TIP can be the community or it can be one of the MPO member agencies (the Regional Planning Agency, MassDOT, and the Regional Transit Authority). The MPO then considers the project in terms of state and regional needs, funding availability, project readiness, evaluation criteria, and compliance with the Regional Transportation Plan and decides whether to place it in the Draft TIP for public review and then in the Final TIP. A project does not have to be fully designed in order for the MPO to program it in the TIP, but generally a project has reached 75-percent design to be programmed in the year-one element of the four-year TIP.

Step VI: Procurement

Following project design and programming of a highway project, the MassDOT Highway Division publishes a request for proposals, which is also often referred to as being 'advertised' for construction. MassDOT then reviews the bids, and awards the contract to the qualified bidder with the lowest bid.

Step VII: Construction

After a construction contract is awarded, MassDOT Highway Division and the contractor develop a public participation plan and a temporary traffic control plan for the construction process.

Step VII: Project Assessment

The purpose of this step is to receive constituents' comments on the project development process and the project's design elements. MassDOT Highway Division can apply what is learned in this process to future projects

Table 5.2 contains the summary of these steps along with their affect on the project schedule and lists approximate duration ranges associated with each step.

Table 5.2: Project Development Schematic Timetable

Description	Schedule Influence	Typical Duration
Step I: Problem/Need/Opportunity Identification The proponent completes a Project Need Form (PNF). This form is then reviewed by the MassDOT District office, which provides guidance to the proponent on the subsequent steps of the process.	The PNF has been developed so that it can be prepared quickly by the proponent, including any supporting data that is readily available. The District office shall return comments to the proponent within one month of PNF submission.	1 to 3 months
Step II: Planning Project planning can range from agreement that the problem should be addressed through a clear solution to a more-detailed analysis of alternatives and their impacts.	For some projects, no planning beyond preparation of the PNF is required. While other projects require a planning study centered on specific project issues associated with the proposed solution or a narrow family of alternatives. More complex projects will likely require a detailed alternatives analysis.	Project Planning Report: 3 to 24+ months
Step III: Project Initiation The proponent prepares and submits a Project Initiation Form (PIF) and a Transportation Evaluation Criteria (TEC) form in this step. The PIF and TEC are informally reviewed by the Metropolitan Planning Organization (MPO) and MassDOT District office, and formally reviewed by the Project Review Committee (PRC).	The PIF includes refinement of the preliminary information contained in the PNF. Additional information summarizing the results of the planning process, such as the Project Planning Report, is included with the PIF and TEC. The schedule is determined by PRC staff review (dependent on project complexity) and meeting schedule.	1 to 4 months
Step IV: Design, Environmental, and Right of Way The proponent completes the project design. Concurrently, the proponent completes necessary environmental permitting analyses and files applications for permits. Any right of way needed for the project is identified and the acquisition process begins.	The schedule for this step is dependent upon the size of the project and the complexity of the design, permitting, and right-of-way issues. Design review by the MassDOT District and appropriate sections is completed in this step.	3 to 48+ months
Step V: Programming The MPO considers the project in terms of its regional priorities and determines whether or not to include the project in its Draft Transportation Improvement Program (TIP) which is then made available for public comment. The TIP includes a project description and funding source.	The schedule for this step is subject to each MPO's programming cycle and meeting schedule. It is also possible that the MPO will not include a project in its Draft TIP based on its review and approval procedures.	3 to 12+ months
Step VI: Procurement The project is advertised for construction and a contract awarded.	Administration of competing projects can influence the advertising schedule.	1 to 12 months
Step VII: Construction The construction process is initiated including public notification and any anticipated public involvement. Construction continues to project completion.	The duration for this step is entirely dependent upon project complexity and phasing.	3 to 60+ months
Step VIII: Project Assessment The construction period is complete and project elements and processes are evaluated on a voluntary basis.	The duration for this step is dependent upon the proponent's approach to this step and any follow-up required.	1 month

Source: MassDOT Highway Division Project Development and Design Guide

The project development process described previously is based on a conventional project delivery method, commonly referred to as "Design-Bid-Build" (D-B-B). The essence of the D-B-B process is that project is designed to the PS&E level and then advertised for construction, i.e. the design and construction are carried out sequentially. Under this scenario the engineer of record (designer) and the construction contractor are two separate contracting entities. A schematic timeline illustrating this process is shown in Figure 5.5, and for the purpose of this discussion assumes aggressive durations and that construction funding would be available at the end of the design phase.

Route 79 / Davol Street Corridor Project (Conventional Delivery Method)

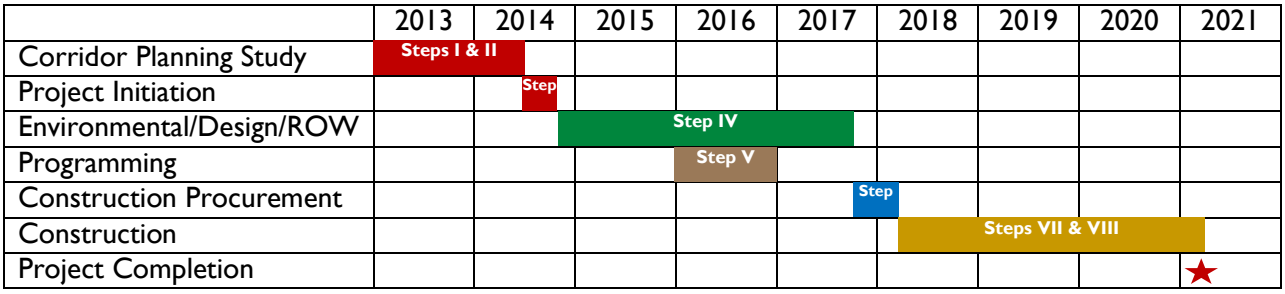

Figure 5.5: Schematic Implementation Timeline for a Design-Bid-Build Project

Another project delivery method gaining increasing support and becoming more and more common is "Design-Build" (D-B). Massachusetts General Laws allow the use of D-B for the construction, reconstruction, alteration, remodeling, and repairs of a public works project estimated to cost not less than $5,000,000.00[2]. The main difference between the D-B-B and the D-B delivery methods is that the project proponent (MassDOT) contracts with the D-B entity which is responsible for design and construction. Such an arrangement allows overlapping design and construction activities and results in accelerated project schedule. Typically, Steps I, II, and III are completed prior to initiating the D-B procurement. Step IV is modified: it still includes the environmental permitting and right-of-way acquisition; however, the design is carried out only to the 25% level. Final design is performed by the D-B entity. Due to the lesser level of design, the duration of Step IV is reduced, but the procurement phase which includes preparation of the bid may take longer than under the D-B-B process. The overall project schedule, however, and especially start of construction are accelerated. Figure 5.6 illustrates the schematic timeline for a D-B project delivery.

Route 79 / Davol Street Corridor Project (Design-Build Delivery Method)

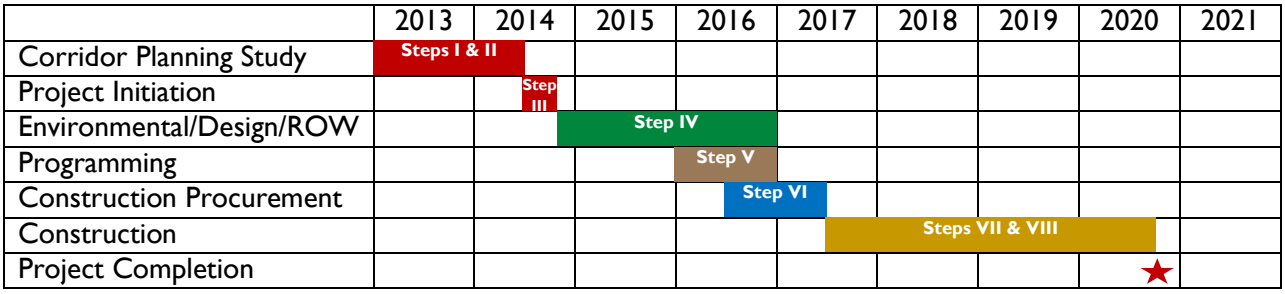

Figure 5.6: Schematic Implementation Timeline for a Design-Build Project

[2] MassDOT Design Build Procurement Guide, December 1, 2012.

Comparison of the two schedules shows that the D-B process could potentially allow construction to start six to twelve months earlier than the D-B-B method. This gain in schedule is somewhat diminished due to a longer construction process which would have to allow time for some design activities to take place before commencement of construction, but the overall project duration is still likely to be reduced by 6-12 months.

5.4 Environmental Considerations

Going forward, in the Environmental Permitting and Design phases, any proposed corridor improvements must comply with the National and Massachusetts Environmental Policy Acts and the Wild and Scenic Rivers Act, as well as take into account the potential impacts of climate change and the necessity of evacuation routes.

5.4.1 Environmental Policy Acts

The project proponent, in coordination with the Environmental Services section of the MassDOT Highway Division, will be responsible for identifying and complying with all applicable federal, state, and local environmental laws and requirements. This includes determining the appropriate project category for both the Massachusetts Environmental Policy Act (MEPA) and the National Environmental Policy Act (NEPA). Environmental documentation and permitting is often completed in conjunction with the Preliminary Design phase.

NEPA does not establish any quantitative thresholds for the environmental classification of a transportation improvement project. Transportation projects vary in type, size and complexity, and potential to affect the environment. The effects of such projects can vary from very minor to significant impacts on the human environment. To account for the variability of project impacts, three basic "classes of action" are allowed and determine how compliance with NEPA is carried out and documented:

- An Environmental Impact Statement (EIS) is prepared for projects where it is known that the action will have a significant effect on the environment.
- An Environmental Assessment (EA) is prepared for actions in which the significance of the environmental impact is not clearly established. Should environmental analysis and interagency review during the EA process find a project to have no significant impacts on the quality of the environment, a Finding of No Significant Impact (FONSI) is issued.
- Categorical Exclusions (CEs) are issued for actions that do not individually or cumulatively have a significant effect on the environment.

The MEPA process includes eleven review thresholds that identify categories for projects that are likely to cause damage to the environment. These review thresholds determine whether MEPA review is required. MEPA review is required when one or more review thresholds are met or exceeded and the subject matter of at least one review threshold is within MEPA jurisdiction. A review threshold that is met or exceeded also specifies whether MEPA review

shall consist of an Environmental Notification Form (ENF) and a mandatory Environmental Impact Report (EIR) or of an ENF and other MEPA review if the Secretary of the Executive Office of Energy & Environmental Affairs so requires.

The project will require preparation and filing of an ENF. The ENF criteria may be triggered by creating five acres of new impervious surface (more likely for Alternative 2 than Alternative 2 - Modified), a possible impact to endangered species within the Taunton River in case the roadway drainage system requires a new outfall, potential cutting of five 14-inch public shade trees, and will be definitely be triggered by construction of a new one-quarter mile long roadway or widening of an existing roadway for a distance of one-half mile.

The initial assessment of the MEPA review thresholds indicates that most likely the project will not meet or exceed any of the EIR requirements. As currently envisioned, neither of the recommended alternatives would involve the construction of greater than ten acres of new impervious surface or the construction of a new roadway or widening of an existing roadway for two miles.

The alternatives reconfigure and consolidate Route 79, Davol Street West and Davol Street East while introducing new roadways at east-west connections. This design results in a change in the overall impervious area within the Focus Area. The following estimates of the changes in impervious surface areas are based on conceptual designs suitable for planning purposes only. Additional engineering design details will be developed during the project development phases and these estimates are subject to change. Currently, there are roughly 35.0 acres of impervious surface within the Focus Area. The reconfiguration of Route 79 and the introduction of east-west roadways in Alternative 1 would increase impervious surface areas by 1.5 acres. The consolidation of existing roadways in Alternative 2 would provide a decrease of 2.5 acres while Alternative 2 – Modified would further decrease impervious surfaces by 6.8 acres. Alternative 3 would decrease impervious areas by 5.5 acres.

For the Route 79 / Davol Street Corridor Study, the following MEPA review thresholds that may require an ENF or an EIR were evaluated:

1. Land

- EIR
  - Direct alteration of 50 or more acres of land (that is not now disturbed) (there are only approximately 15 acres of land within the project area that are currently not disturbed)
  - Ten or more acres of new impervious surface (none of the alternatives considered would exceed this threshold, based on the current conceptual designs)
- ENF
  - Alteration of 25 acres of land (not now disturbed)
  - Five or more acres of new impervious surface (see above)

- Article 97 land impacts (public lands with natural resources)
- Urban redevelopment project with 100 or more new dwelling units or 50,000 square feet of new non-residential space

2. State listed endangered species

- ENF
  - Alteration of designated significant habitat, or more than two acres of impact to priority habitat. The only state listed endangered species habitat within the project limits is within the Taunton River. It is highly unlikely that any proposed improvements would be determined to have a negative impact on such species, although review with the Natural Heritage Endangered Species Program (NHESP) will be required.

3. Wetlands

- None of the thresholds established for wetland impacts will be exceeded if this project is implemented.

6. Transportation

- EIR
  - Construction of a new roadway two or more miles in length
  - Widening of an existing roadway by one or more travel lanes for two or more miles
- ENF
  - Construction of a new roadway one-quarter mile long or widening of an existing roadway by 4 or more feet for one-half mile or more
  - Cut 5 or more living public shade trees whose diameter is 14" or greater
  - Generation of 2,000 or more new ADT, or 1,000 or more ADT with 150 new parking spaces
  - Construction of 300 or more new parking spaces

10. Historic and Archeological Resources

- ENF
  - Demolition of a historic structure or archeological site

Several MEPA thresholds do not apply to this project. These are: Water, Wastewater, Energy, Air, Solid and Hazardous Waste, Areas of Critical Environmental Concern (ACEC), and Regulations.

5.4.2 Floodplain Impacts and the Potential for Sea Level Rise

As discussed in Chapter 4, a preliminary assessment was undertaken to examine the potential impacts of rising sea levels. To do this, the existing FEMA Flood Insurance Rate Map (FIRM),

dated July 7, 2009, was examined within the study area. The GIS-generated FIRM for the project area is shown in Figure 5.7. The map was adjusted to take into account the revised I-195/Route 79 Interchange Project, currently under construction. Based on observations, it appears that the floodplain extends through the Route 79 underpass near Cedar Street to the area east of Route 79, while Route 79 itself remains above the floodplain. The Route 79 embankment does not act as a flood barrier, but it does appear to channel the flow to the openings under the embankment during flood conditions.

To assess the potential impacts of rising sea levels, it was assumed that the 100-year floodplain elevation will rise by an average of five feet. Figure 5.7 includes a revised 100-year floodplain boundary with an elevation increase of five feet. Due to the local topography, the extent of this change is relatively insignificant to the majority of the City of Fall River to the east. The map also shows three primary land uses that are prevalent in the area: residential, commercial, and industrial. The areas that are within the estimated future 100-year floodplain, which include the potential 5-foot sea level rise, are primarily commercial and industrial zones along the waterfront. Residential areas are above this floodplain and would remain such even with the floodplain elevation was raised by five feet.

The last step in this exercise was to evaluate the impacts of lowering Route 79 relative to the limits of the 100-year floodplain. A revised FIRM indicating the potentially revised floodplain, taking into account the adjusted Route 79 elevation proposed under Alternatives 2 and 2 – Modified is shown in Figure 5.8. It shows that while a portion of Route 79 just south of the City Pier would fall within the estimated future floodplain, a 5-foot rise in the sea level would have little impact.

Because the project area is located within an area subject to flooding and potential sea level rise, it is recommended that the project development process examine flooding implication in much greater detail. As the design of the roadway improvements progresses a detailed analysis of the potential for an anticipated rise in flood levels will need to be developed. Also, any proposed new development within the existing floodplain and/or adjacent to the Taunton River will need to consider existing and projected flood levels during the early planning, permitting and design phases.

Figure 5.7: GIS Generated FIRM

Figure 5.8: Revised GIS Generated FIRM with Alternative 2 and Alternative 2 – Modified Elevations

5.4.3 Wild and Scenic Rivers Act

The Taunton River at this location is designated as a component of the National System of Wild and Scenic Rivers in accordance with the Wild and Scenic Rivers Act, which is administered by the National Park Service (NPS). Rivers, or segments of a river, are classified as wild, scenic or recreational. The section of the Taunton River within the project study area is classified as recreational. The recreational classification is used for those rivers or sections of rivers that are readily accessible, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past. Regardless of classification, each river in the National System is administered with the goal of protecting and enhancing the values that caused it to be designated. Designation neither prohibits development nor gives the federal government control over private property. Recreation, agricultural practices, residential and business development, and other uses may continue.

The NPS requires review of water resource projects when they are federally funded, permitted or assisted projects. This project will likely be partially federally funded and will also likely require a permit from the US Army Corps of Engineers (ACOE) for the potential design changes to a stormwater outfall structure located near the City Pier. The official NPS review will take place at the time of the ACOE permitting. Early communication benefits the review process and a representative from the NPS Wild and Scenic Rivers program has been actively involved as a member of the Working Group during the development of this planning study.

It is recommended that coordination with the NPS continue as the project development phases are developed. The Act encourages protection of the river but at the same time also encourages people to learn about and appreciate the attributes that warrant such protection, and to recognize the river's value as a recreational and ecological resource. As the project moves through the project development phase the consideration for both the protective measures and the increased awareness for the river's attributes should continue.

5.4.4 Evacuation Routes

The Southeastern Massachusetts Metropolitan Planning Organization (SMMPO) and the Southeastern Regional Planning and Economic Development District (SRPEDD) issued a study in 2006 entitled "Hurricane Evacuation Route Evaluation" which includes the study area. The Hurricane Evacuation Route Evaluation identified issues that may inhibit safe and effective traffic flow during an emergency. These issues include:

- Evacuation Route Conflicts
- Storm Surge Flooding
- Community Issues (shelters)
- Road System Impacts
- Evacuation Population and Traffic.

Under the category of "Road System Impacts" this study states that: "Major roads potentially impacted in Mount Hope Bay communities from a hurricane storm surge include I-195, U.S. Route 6, Route 103, Route 136, Route 138, and Route 79".

The study further determined that impacts to the city of Fall River would be primarily contained to those areas along the banks of the Taunton River, which would include portions of the project study area. Potential flooding would impact Route 79, Davol Street (East and West), and Route 138 in the area under the Braga Bridge. The study noted that Route 79 north of Brightman Street Bridge may also experience significant flooding due to the close proximity to the Taunton River. It should also be noted that Route 79 is identified as a Massachusetts Evacuation Route, and the proposed Route 79/Davol Street Corridor improvements are listed as a future project.

It is recommended that the potential for storm events adversely affecting evacuation routes be given further consideration during the project development phases. Consultation with the SMMPO and SRPEDD is recommended during the project development phase. As sea level rise and potential for an increase in the frequency and intensity of severe storm events is studied further by agencies such as NOAA it is possible that these evacuation routes may require modifications or at least further evaluation.

5.5 Policy Context

The Route 79 / Davol Street Corridor study has also been conducted in the context of transportation policy and planning principles that are significantly different from those that were in place when Route 79 and Davol Streets East and West were built. The planning environment for infrastructure in Massachusetts and around the country has changed, in terms of evolving policy positions and in local and regional priorities and the Goals, Objectives, and Evaluation Criteria were developed with the intent of aligning with these policy directives. The recommendations for this study were not determined strictly by how much vehicular traffic can be moved, but were also developed in accordance with the following state and Federal policies and regulations:

- MassDOT's GreenDOT Policy and the GreenDOT Implementation Plan, which embraces the goals that will include the design of a multi-modal transportation system, promote healthy transportation and livable communities, and to triple the share of travel demand by bicycling, transit, and walking.
- MassDOT's Complete Streets Policy requires balancing the use of the public right-of-way for all transportation modes, requires that MassDOT projects provide safe and accessible options for all travel modes for all ages and abilities, and emphasizes a multi-modal philosophy.
- The Massachusetts Healthy Transportation Compact and MassDOT's Healthy Transportation Policy Directive, an agreement between MassDOT, Massachusetts Health and Human Services, the Secretary of Energy and Environmental Affairs, and the Massachusetts Department of Public Health, requires that all MassDOT projects not only accommodate, but actively promote healthy transportation modes. This legislation is designed to facilitate transportation decisions that balance the needs of all users, expands mobility, improves public health and supports a cleaner environment.

- Federal regulations include Moving Ahead for Progress in the 21st Century (MAP-21) which is FHWA's national surface transportation plan, that, among many other things, seeks to increase the emphasis on non-auto users and encourages opportunities for alternative travel modes including transit, bicycle and pedestrian.

All of these policies reflect the fact that roadways are part of an infrastructure that must serve all users, while being an integral part of the surrounding neighborhoods. Providing access for all modes and travelers, considering vulnerable roadway users, enhancing transportation choices, fostering community connectivity and economic development, and ensuring the public health of adjoining residents are important considerations that are recognized through the policies and initiatives described above.

The Route 79/Davol Street Improvements will implement these goals, themes, policies and regulations by:

- Allowing for increased green space
- More trees in the median, along each side of Route 79, along the east side of Davol Street West, and along each side of the east-west connecting roads
- Improved bicycle and pedestrian access
- Improved access to bus and rail facilities

MassDOT's GreenDOT Policy and the GreenDOT Implementation Plan

More trees, grass, and other vegetation will not only improve aesthetics but would also be one step closer to better air quality, will provide more shade during the warmer months, and will improve opportunities for urban wildlife habitat. The shade provide by additional trees benefit the human population by providing a respite from the sun and also by reducing the heat absorbed and transmitted by paved areas. All of these benefits enhance the community in tangible ways but also provide a better living experience for residents, businesses, visitors and the traveling public.

The Massachusetts Healthy Transportation Compact and MassDOT's Healthy Transportation Policy Directive

Under existing conditions, the only designated east-west access for pedestrians and bicyclists is at President Avenue. Since the project will include additional east-west connections, the waterfront and the Harborwalk will become much more accessible. The project will include sidewalks or shared-use paths along each side of all roadways. The current concepts indicate all of the pedestrian paths running parallel to the roadway. As the design of the project progresses, these paths, which include both the sidewalk and shared-use path, could be designed to meander through designed landscaping features (not yet designed) and along and between any future developments, assuming there is adequate space to accommodate meandering paths.

As discussed in more detail in Chapter 2 of this document, the 2012 Regional Transportation Plan issued by SRPEDD proposes the creation of the South Coast Bikeway. This regional route would connect a number of existing and proposed bicycle paths and on-road bike routes. This route would include the existing bicycle path on the Veterans Memorial Bridge, the existing Quequechan River Greenway and its

planned extension, and a future connection between the two. It is therefore recommended that proposed improvements to bicycle access and facilities include close coordination with stakeholders, including SRPEDD, as the Route 79/Davol Street project moves through the project development phases. Such coordination will help ensure that the proposed connectivity for bicycles is consistent with other regional plans such as the South Coast Bikeway.

National Highway System

As discussed in Chapter 2, The National Highway System (NHS) consists of roadways essential to national economics, defense and mobility. The NHS includes interstates, principal arterials, and intermodal connectors. Route 24, Route 79 and President Avenue are classified on the NHS as Other Roads. U.S. Route 6 and President Avenue between Davol Street West and Davol Street East are considered as Urban Principal Arterials. I-195 is classified as an Interstate while Route 24 and Route 79 have the functional classification of Principal Arterial. Davol Street East, Davol Street West, Turner Street and Brightman Street are considered Urban Minor Arterials. All other roadways are local roadways.

The FHWA has oversight responsibility for the NHS and would be required to review design changes as they relate to the functional classification of the roadway. MassDOT will need to continue to coordinate with the FHWA, the City of Fall River and the Southeastern Massachusetts Metropolitan Planning Organization throughout the project development phases as it relates to any potential changes in the functional classification of any of the roadways within the project limits.

Transit, South Coast Rail, and the Southeastern Massachusetts MPO

The project will also improve access to bus facilities and identifies potential modifications to existing bus routes that will enhance bus service within the project limits. The project will improve access to the South Coast Rail Fall River Depot station, which is within the project limits. There are two Southeastern Regional Transit Authority (SRTA) bus routes in the area that could be modified when the project is built or when the proposed South Coast Rail project is completed, improving access to multi-modal transportation. SRTA Bus Route 2 runs along North Main Street and also provides a bus stop at Commonwealth Landing. This route could easily be modified to include another stop at the Fall River Depot. SRTA Bus Route 14 crosses the Braga Bridge to access their main bus terminal. This route could also be changed to provide access from Somerset to the proposed South Coast Rail, although it would be more difficult to reroute because the Fall River Depot station is further removed from this route.

The South Coast Rail Corridor Plan Update (December 2013) prepared by SRPEDD and others, updated areas within the South Coast Rail Corridor where communities would like to see growth (Priority Development Areas - PDAs) and areas they would like to preserve (Priority Protection Areas - PPAs). The purpose of identifying these priority areas was to target public investments, focus planning activities, and catalyze private development within a coordinated framework. Within the Focus Area, Fall River Depot was cited as a community priority area of regional significance. The Focus Area is also located within the Fall River Waterfront and Transit Oriented Development (WTOD) district which is geared towards transit oriented development but also includes commercial and industrial development associated with the waterfront along with mixed-use potential. The WTOD district was

also cited for its regional significance because of its location in close proximity to the proposed South Coast Rail Station site.

It is recommended that the project proponents continue to coordinate closely with the South Coast Rail project proponents as well as SRPEDD throughout the project development process, particularly since the SCR and proposed development along the waterfront district have been identified for their regional significance.

The Southeastern Massachusetts MPO is a transportation policy-making organization made up of representatives from local government and transportation authorities. MPOs were created to ensure that existing and future expenditures for transportation projects and programs were based on a continuing, cooperative and comprehensive (3-C) planning process. Federal funding for transportation project and programs are channeled through this process. As this project moves through the project development phases, coordination with the SMMPO will be required to request and allocate funding and to ensure that the project is consistent with other regional and local transportation programs and projects.

5.6 Role of the City of Fall River

As the alternatives are developed further, it is also recommended that the City of Fall River initiate a master planning process for the development of the study area. The master plan will build on the 2002 Fall River Harbor and Downtown Economic Development Plan and should be prepared concurrently with the Route 79/Davol Street Corridor environmental process to ensure a true partnership between Fall River and MassDOT. The development of the master plan is paramount to establishing the final roadway configuration. As such, the master plan needs to define the development size and mix that is compatible with the proposed roadway system and should address the means of reducing vehicular demand through such measures as Transportation Demand Management (TDM) and encouragement of transit use. It is anticipated that it will be a mixed-use development fully supporting internal trips and promoting walking and bicycling.

5.7 Additional Cost Considerations

The long-term alternatives developed in this study would create new parcels that could be repurposed or sold for public or private non-transportation purposes. Many of these parcels are located wholly or partially within the State Highway Layout. As this State Highway Layout was funded by the federal government, the value of the land must be reimbursed to the federal government if it is repurposed or sold for non-transportation services.

Table 5.3 provides conceptual values of parcels created for development in Alternatives 2 and 2 – Modified that would fall within the existing State Highway Layout. These estimated values do not reflect fair market value analysis. They are based on a synthesis of existing assessed values, recent waterfront sales comparisons and local and regional benchmark commercial properties. Accordingly, this analysis does not aim to provide an accurate estimation of land value, but is rather intended to illustrate order

of magnitude right-of-way costs and provide a comparative assessment of these costs between the two recommended alternatives.

Table 5.3: Estimated Parcel Valuation

Alternative	Parcel Number	Parcel Type	Parcel Size (ac)	Estimated Value
Alternative 2	1	Wide	1.2	$360,000
	2	Wide	1.4	$420,000
	3	Narrow	1.0	$200,000
	4	Narrow	2.1	$420,000
	5	Wide	4.2	$1,260,000
	Alternative 2 Totals		9.9	$2,660,000
Alternative 2 - Modified	1	Wide	2.2	$660,000
	2	Wide	1.6	$480,000
	3	Narrow	1.4	$280,000
	4	Wide	2.5	$750,000
	5	Wide	4.5	$1,350,000
	Alternative 2 - Modified Totals		12.2	$3,520,000

The process by which these parcels are sold would be conducted by MassDOT's Office of Real Estate and Asset Development. Upon completion of the construction phase, areas of the project that are no longer used for transportation purposes within the SHLO would be identified as surplus parcels, and may be available for disposition (sale, lease, license, easement, etc.), and would be governed by Mass General Law, Chapter 6C, as amended, and M.G.L Chapter 81, as well as administrative requirements set forth by the FHWA. This disposition process requires an internal canvass of other sections of MassDOT, in order to be certain the property is no longer needed for future MassDOT highway and railway projects. It would also require an open bidding process through a Request for Proposal, with the property appraised for its highest and best use. All expenses incurred by these outside services are born by the proponent of this action, or by an alternative party who is subsequently awarded the property through the RFP process.

To promote development of these parcels, public-private partnerships could be formed using District Improvement Financing (DIF) or Tax Increment Financing (TIF). DIF and TIF provide opportunities for cities to redevelop areas in order to increase property values and tax revenue, improve infrastructure and transportation services, and increase jobs, housing and quality of life.

5.8 Summary of Recommended Alternatives

Table 5.4 presented below contains a summary of short-term, medium-term and long-term recommendations. Along with brief alternatives descriptions, the information includes major milestones to be addressed by the project proponent and parties responsible for their implementation. Also included are order of magnitude costs, encompassing permitting, engineering, right-of-way, and construction costs.

Table 5.4: Summary of Recommended Alternatives and Major Milestones

Recommended Improvement	Description	Major Milestones	Responsible Party	Implementation Cost
Short-Term				
Davol Street U-turn near Cedar Street	• Trim vegetation • Install pavement markings and signs	• Implement upon substantial completion of I-195/Route 79 Interchange	City of Fall River	$9,000
President Avenue at Davol Street East and Lindsey Street	• Upgrade pedestrian signals to ADA standards • Install pavement markings and signs • Install ADA compliant accessible ramps	• Perform engineering • Procure and complete construction	City of Fall River	$55,000
President Avenue at North Main Street	• Modify traffic signals to introduce protected left turn phases • Upgrade pedestrian signals to ADA standards • Install ADA compliant accessible ramps • Install pavement markings and signs	• Perform engineering • Procure and complete construction	City of Fall River	$89,000
Lindsey Street at Brownell Street	• Install pavement markings and signs • Install ADA compliant accessible ramps	• Perform engineering • Procure and complete construction	City of Fall River	$22,000
Davol Street Bicycle Accommodations	• Install pavement markings and signs	• Implement upon substantial completion of I-195/Route 79 Interchange	City of Fall River	$22,000

Table 5.4: Summary of Recommended Alternatives and Major Milestones (continued)

Recommended Improvement	Description	Major Milestones	Responsible Party	Implementation Cost
Medium-Term				
Davol Street Shared-Use Path	• Reconstruct sidewalk and install new curb • Install grass strip • Relocate drainage structures • Resurface Davol Street • Install pavement markings and signs	• Initiate project development: prepare and submit PNF and PIF • Coordinate with SRPEDD to include project in the region's TIP • Obtain survey • Complete environmental permitting and engineering • Procure and complete construction	City of Fall River	$1,320,000
Long-Term				
Alternative 2 and Alternative 2 - Modified	• Demolish existing Route 79 • Construct at-grade Route 79 • Construct new cross streets • Construct sidewalks and shared-use paths • Install traffic signals • Perform other related work, including drainage, utilities, landscaping, connections to local streets	• Prepare and submit PNF, PIF and TEC • Determine NEPA and MEPA review requirements • Coordinate with SRPEDD to include project in the region's TIP • Coordinate with FHWA regarding Route 79 being part of NHS • Coordinate with City of Fall River regarding study area master plan • Coordinate with South Coast Rail on access to Fall River Depot	MassDOT	$66,500,000

Table 5.4: Summary of Recommended Alternatives and Major Milestones (continued)

Recommended Improvement	Description	Major Milestones	Responsible Party	Implementation Cost
Alternative 2 and Alternative 2 - Modified		• Coordinate with SRTA regarding options of modifying bus routes • Complete environmental permitting and preliminary engineering • Determine project delivery method • Procure and complete final design and construction		

5.9 Alternatives Refinement Considerations

In addition to the alternatives recommended for advancement, a number of other issues evolved or have been brought up by various stakeholders during the planning process. These issues warrant futher consideration and are listed below.

Coordination/Consultation

- Consultation with FHWA regarding use of available federal earmark funds for project development
- Coordination with FHWA on NHS designation impacts
- Coordination with South Coast Rail and SRTA regarding incorporation of bus shelters and access to transit station stops into the roadway design
- Coordination with South Coast Rail project regarding incorporation of Electric Vehicle charging stations in the parking facilities

Project Development

- Additional travel demand modeling for Alternative 2 – Modified
- Opportunities to further reduce the extent of impervious pavement surfaces
- Continuous work with abutters to determine any access benefits and/or impacts

- Compatibility with and connections to the I-195/Route 79 Interchange project limits
- Exploration of use of energy efficient PV (solar electric) panels along created MassDOT infrastructure or created parcels
- Further examination of U-turn bridge near Brightman Street for bicycle and pedestrian use
- Access to and potential for development of area near old Brightman Street Bridge

Design Elements

- Refinements to corridor alignment and layout
- Extensive use of Complete Streets principles
- Determination of sidewalk and shared-use path widths
- Use of low-maintenance vegetation as part of landscape design
- Introduction of lighting fixtures emphasizing historic character of Fall River
- Exploration of streetscape amenities and related funding sources
- Balance of on-street parking vs. surface lots or parking structures within development parcels