13

THE RECOMMENDED TRANSPORTATION PLAN

Background

This chapter lists and outlines the recommended projects that represent the Boston Region MPO's priorities through the year 2030. It explains the process used to select these projects for the region. It also includes the transportation model results that forecast the overall impacts of the recommended set of projects.

Through the JOURNEY TO 2030 Amendment, the MPO recognizes the diversity of transportation needs and issues throughout the Boston region and attempts to respond to them in a balanced manner. For this Plan Amendment, the MPO set the policies, selected the regionally significant projects, and identified actions necessary to serve all modes of transportation for persons and freight in this metropolitan region, and, in so doing, attempted to address the issues of safety, mobility, congestion and sprawl while supporting economic vitality and environmental justice.

There is also a need to support a transportation system that expands choices for travel within the region. While advocating a transportation system that adequately supports all modes of travel, the MPO recognizes that many people in the region are, and will continue to be, reliant on the automobile. Indeed, the members of the MPO expect both roadway congestion to worsen and the demand for transit to increase in the future, and recognize that many possibilities exist to reduce our dependence on the single-occupant vehicle, for example, by changing our land use practices.

This Plan Amendment is generally consistent with MetroFuture, the land use plan for the Boston region, and with the sustainable-development principles of the Commonwealth. MetroFuture is an initiative that MAPC developed that provides a

vision for the future of the Boston region, and a strategy for getting there. It looks at a number of factors, including community character, residential and housing growth, economic development, and natural resources, as well as transportation issues.

The MPO seeks to provide access to transportation services on an equitable basis across the region. This includes, but is not limited to, ensuring that low-income and minority communities have transportation options for traveling to jobs, and that transit-dependent residents can reach needed services.

Finally, the MPO recognizes that the transportation system plays a critical role in the continued economic health of the region. Many sectors of the regional economy depend heavily on the safe and efficient movement of goods and services by truck, rail, air, and water.

Project Selection

There are significant transportation needs in the region for maintenance, enhancement and expansion of the system. The MPO used its criteria to steer its limited funding to those projects that most effectively provide for maintenance of the system and advancement of the mobility, safety, and sustainable-development goals of the MPO and the state.

Highway Projects

In the selection of highway projects, the MPO considered its visions and policies (presented in Chapter 4). Each highway project that has a defined description was included in the Universe of Projects and was rated by MPO staff according to its consistency with the following policies:

- System Preservation, Modernization, and Efficiency
- Mobility
- Environment
- Safety and Security
- Regional Equity (also called Environmental Justice)
- Land Use and Economic Development

Transit Projects

The MBTA's Program for Mass Transportation (PMT) was used in the selection of transit projects. All projects in the PMT were evaluated based on 35 individual performance measures that were divided into seven categories:

- Utilization
- Mobility
- Cost-effectiveness
- Air quality
- Service quality
- Economic and land use impacts
- Environmental justice

Within the cost-effectiveness category, the performance measures that were used considered the impact of projects on both existing and new riders.

The selection of highway and transit projects for inclusion in the Plan was based on the informed judgment of MPO members after they reviewed myriad sources of information, including:

- Results from the regional travel-demand model
- Information available on projects through feasibility studies, project-specific modeling work, and environmental impact reports
- A matrix examining each individual highway project for conformity with the MPO's transportation policies and recommendations and prioritizations of each transit project as set forth in the MBTA's Program for Mass Transportation as discussed above
- Recommendations from the MPO's citizen advisory council
- MPO members' knowledge of proposed projects
- Feedback from the public through the MPO's outreach process

Recommended List of Planned Major Infrastructure and Expansion Projects

For roadways, this Plan Amendment includes funding for both maintenance and expansion of the transportation system. Funding for much of the maintenance of the roadways for the Boston Region MPO area is provided through the statewide resurfacing, maintenance, and infrastructure programs. Maintenance of the bridges is provided through the statewide bridge program and the accelerated bridge program. Major infrastructure and capacity expansion projects and other maintenance and rehabilitation projects not included in the statewide programs are funded through the Boston Region MPO's share of the Discretionary Capital Program and the Regional Infrastructure Program.

In this Plan Amendment, the MPO has allocated all of the MBTA's future transit capital funding to system infrastructure maintenance, accessibility improvements, and system enhancements. It also demonstrates the MPO's commitment to the State Implementation Plan projects by programming and funding those new projects. The Commonwealth has made the commitment to fund the SIP commitment transit projects.

The major infrastructure and capacity expansion program is used to fund projects currently underway and also those that constitute the planned major infrastructure and expansion projects of the transportation system. The following ongoing regionally significant projects are funded in this Plan:

- The Central Artery Project: The total budget for this project is approximately $14.625 billion, and the costs funded under this Plan are $837 million for the repayment of Grant Anticipation Notes.
- Route 128 Additional Lanes (Randolph to Wellesley): The total budget for this project is approximately $381.4 million, and the remaining costs funded under this Plan are $149 million. The completion date of this project is projected to be 2017.

After accounting for the costs of these ongoing projects, the remaining funds are available for major infrastructure and capacity expansion. A major infrastructure project is any project that costs over $10 million. An expansion project is any project that adds capacity to the existing system through the addition of a travel lane, the construction of an interchange, the construction of a commuter rail extension or rapid transit line, or the procurement of additional (not replacement) public transportation vehicles. Table 13-1 lists the projects funded under the major infrastructure and capacity expansion program and the type of project—major infrastructure project, or expansion project, or both. Figure 13-1 shows the locations of these projects.

During the development of this Plan Amendment, the MPO voted to use the majority of highway funding for highway projects. However, they also

voted to "flex" $219 million in highway funding to three transit projects. All of the public transportation funds are used for improvements to the regional public transportation system. Based upon this distinction, the major infrastructure and expansion program yields approximately $1.709 billion for non–Central Artery highway projects from the Boston Region MPO Discretionary Capital Program and $500.9 million from Non-MPO Funding including federal earmarks, state, local, and private funding, and $1.148 billion for transit projects, plus $40 million from federal earmarks, state, local, and private funding. Table 13-2 shows the total amount of funding dedicated to major infrastructure and capacity expansion projects in the Plan.

In addition to the major infrastructure and expansion projects listed in Table 13-1, the MPO is committed to continued funding of projects to improve mobility in the region, particularly in the following areas (see Chapters 5 and 6 for more details on these programs):

- Suburban mobility/transportation demand management
- Bicycle facilities
- Pedestrian facilities
- Freight movement
- Congestion Mitigation and Air Quality (CMAQ) Program

Highway Projects in the Recommended Plan

Table 13-3 lists the highway projects funded under the major infrastructure and expansion program, their costs, and the timeframe in which they are projected to be constructed. Pursuant to federal guidance on allowing for inflation, the costs associated with each highway project are based on the current estimated cost plus 4 percent per year through the year of construction.

The location of each project is shown in Figure 13-1.

In addition, Table 13-4 provides a list of bridges currently scheduled for advertisement that cost over $10 million.

The next section of Chapter 13 provides a detailed description and map for each highway project included in the recommended Plan Amendment.

TABLE 13-1

Major Infrastructure and Expansion Projects in the Recommended Plan

PROJECT	TYPE OF PROJECT*	COST
MIDDLESEX TURNPIKE (BEDFORD, BURLINGTON, AND BILLERICA)	MI/EXP	$19,200,000
PULASKI BOULEVARD (BELLINGHAM)	MI	$13,006,510
TRAPELO ROAD (BELMONT	MI	$13,000,000
EAST BOSTON HAUL ROAD/CHELSEA TRUCK ROUTE (BOSTON) ***	MI/EXP	$18,000,000
FAIRMOUNT LINE IMPROVEMENTS (BOSTON)	MI/EXP	$114,000,000
RED LINE/BLUE LINE CONNECTOR – DESIGN ONLY (BOSTON)	MI/EXP	$29,000,000
RUSSIA WHARF FERRY TERMINAL (BOSTON)	EXP	$2,200,000
SULLIVAN SQUARE (BOSTON) ***	MI	$40,000,000
RUTHERFORD AVENUE (BOSTON)	MI	$45,507.000
RESURFACING AT VARIOUS LOCATIONS (BOSTON)	MI	$21,500,000
CONSOLIDATED RENTAL CAR FACILITY (LOGAN AIRPORT, BOSTON) **	MI/EXP	$337,000,000
BRAINTREE SPLIT – I-93/ROUTE 3 INTERCHANGE (BRAINTREE)	MI/EXP	$36,017,000
I-93/I-95 INTERCHANGE (CANTON)	MI/EXP	$216,000,000
I-95 (NB)/DEDHAM STREET RAMP/DEDHAM STREET CORRIDOR (CANTON) **	MI/EXP	$9,000,000
ROUTE 2/CROSBY'S CORNER (CONCORD AND LINCOLN)	MI/EXP	$72,000,000
ROUTE 128/ROUTE 35 AND ROUTE 62 (DANVERS)	MI	$25,982,000
ROUTE 126/135 GRADE SEPARATION (FRAMINGHAM)	MI	$54,080,000
RESURFACING AND RELATED WORK ON ROUTE 9 (FRAMINGHAM AND NATICK)	MI	$12,500.000
BRUCE FREEMAN RAIL TRAIL (CONCORD TO WESTFORD)	MI	$17,250,000
ROUTE 53 FINAL PHASE (HANOVER)	EXP	$1,000,000
ASSABET RIVER RAIL TRAIL (HUDSON TO ACTON)	MI	$16,725,000
ROUTE 85 IMPROVEMENTS (HUDSON)	EXP	$8,400,000
ROUTE 1 IMPROVEMENTS (MALDEN, REVERE, & SAUGUS)	MI/EXP	$70,304,000
ROUTE 139 WIDENING (MARSHFIELD)	EXP	$7,150,200
NEEDHAM STREET/HIGHLAND AVENUE (NEWTON AND NEEDHAM)	MI/EXP	$17,000,000
QUINCY CENTER CONCOURSE, PHASE 2 (QUINCY)	EXP	$8,100,000
I-93/I-95 INTERCHANGE (READING AND WOBURN)	MI/EXP	$194,792,000
WONDERLAND PARKING GARAGE (REVERE) **	MI/EXP	$52,000,000
BRIDGE STREET (SALEM)	EXP	$10,000,000
1000 ADDITIONAL PARK AND RIDE SPACES (REGIONWIDE)	MI/EXP	$69,100,000
ASSEMBLY SQUARE ORANGE LINE STATION (SOMERVILLE)	MI/EXP	$50,000,000
ASSEMBLY SQUARE ROADWAYS (SOMERVILLE) **	MI/EXP	$28,000,000
GREEN LINE LECHMERE TO COLLEGE AVENUE (SOMERVILLE)	MI/EXP	$934,000,000
GREEN LINE COLLEGE AVENUE TO MYSTIC VALLEY PARKWAY ROUTE 16 (SOMERVILLE)	MI/EXP	$130,000,000
SOUTH WEYMOUTH NAVAL AIR STATION ACCESS IMPROVEMENTS (WEYMOUTH, HINGHAM, & ROCKLAND) **	MI/EXP	$90,014,750
ROUTE 18 CAPACITY IMPROVEMENTS (WEYMOUTH) ***	MI/EXP	$26,100,000
MONTVALE AVENUE (WOBURN)	EXP	$3,400,000
NEW BOSTON STREET BRIDGE (WOBURN)	EXP	$4,500,000

* Exp = Expansion – Project adding capacity to the roadway or transit system, MI = Major Infrastructure – Project costing $10 million or more

** Non-MPO Funding is used to fund the following projects:
- Consolidated Rental Car Facility will be paid for by the Massachusetts Port Authority from General Airport Revenue Bonds, taxable revenue bonds supported by revenue from the daily Customer Facility Charge and rent from car companies, and the Transportation Infrastructure and Innovation Act (TIFIA) funds.
- I-95 NB/Dedham Street Ramp will be paid for by the developer.
- South Weymouth Naval Air Station Access Improvements (includes East-West Parkway) will use state, local, and private resources.
- Somerville Assembly Square Roadway project will use American Recovery and Reinvestment Act (ARRA) funding, state, local, and private resources.
- Wonderland South Parking Garage will use ARRA, federal, and state resources.

*** A portion of these projects are funded with earmarks.

TABLE 13-2

Funding Dedicated to Major Infrastructure and Expansion Projects

PROJECT	DEDICATED FUNDING
CENTRAL ARTERY PROJECT	$837,000,000
MPO DISCRETIONARY CAPITAL PROGRAM: NON–ARTERY HIGHWAY PROJECTS (MAJOR INFRASTRUCTURE/EXPANSION PROGRAM)	$1,708,745,548
MPO DISCRETIONARY CAPITAL PROGRAM: HIGHWAY FUNDS FLEXED TO TRANSIT (MAJOR INFRASTRUCTURE/EXPANSION PROGRAM)	$219,430,000
NON-MPO FUNDED PROGRAM: NON–ARTERY HIGHWAY PROJECTS (MAJOR INFRASTRUCTURE/EXPANSION PROGRAM)	$500,900,000
HIGHWAY FUNDING SUBTOTAL	**$3,266,075,548**
TRANSIT EXPANSION PROJECTS FUNDED IN THE BOSTON MPO BY THE COMMONWEALTH	$1,148,300,000
TRANSIT EXPANSION PROJECTS FUNDED IN THE BOSTON MPO WITH NON-MPO FUNDS	$40,000,000
TRANSIT FUNDING SUBTOTAL	**$1,188,300,000**

FIGURE 13-1

Major Infrastructure and Expansion Projects in the Recommended Plan

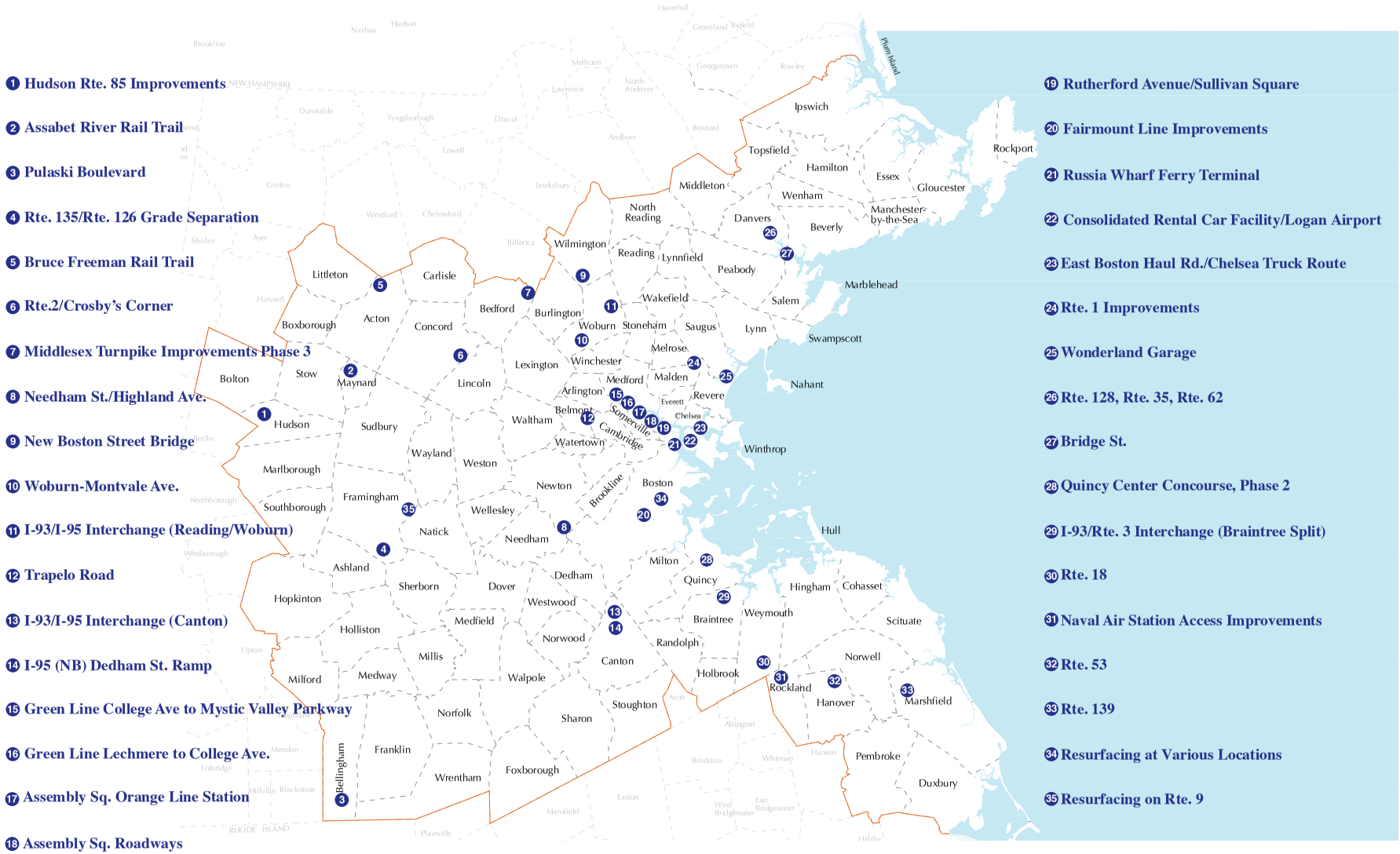


TABLE 13-3
Major Infrastructure and Expansion Highway Funded Projects in the Recommended Plan, with Costs

	CURRENT COST	2010	2011–2015	2016–2020	2021–2025	2025–2030	MPO TARGET FUNDING	NON-MPO FUNDING*
ONGOING NO-BUILD HIGHWAY PROJECT								
ROUTE 128 ADDITIONAL LANES (RANDOLPH TO WELLESLEY)	$149,000,000	$17,000,000	$112,000,000	$20,000,000			$149,000,000	
RECOMMENDED HIGHWAY PROJECTS								
MIDDLESEX TURNPIKE IMPROVEMENTS PHASE 3 (BEDFORD, BURLINGTON, AND BILLERICA)	$19,200,000			$27,328,000			$27,328,000	
PULASKI BOULEVARD (BELLINGHAM)	$13,006,510	$13,006,510					$13,006,510	
TRAPELO ROAD (BELMONT)	$13,000,000		$15,816,000				$15,816,000	
EAST BOSTON HAUL ROAD/CHELSEA TRUCK ROUTE (BOSTON)	$18,000,000			$25,620,000			$19,995,787	$5,624,213
SULLIVAN SQUARE (BOSTON)	$40,000,000			$56,932,000			$41,554,290	$15,377,710
RUTHERFORD AVENUE (BOSTON)	$45,507,000				$78,803,000		$78,803,000	
RESURFACING AT VARIOUS LOCATIONS (BOSTON)**	$21,500,000	$21,500,000					$21,500,000	
CONSOLIDATED RENTAL CAR FACILITY (LOGAN AIRPORT, BOSTON)	$337,000,000		$337,000,000					$337,000,000
I-93/ROUTE 3 INTERCHANGE – BRAINTREE SPLIT (BRAINTREE)	$36,017,000			$51,264,000			$51,264,000	
I-93/I-95 INTERCHANGE (CANTON)	$216,000,000					$404,564,000	$404,564,000	
I-95 NORTHBOUND/ DEDHAM ST. RAMP (CANTON)	$9,000,000		$9,000,000					$9,000,000
ROUTE 2/CROSBY'S CORNER GRADE SEPARATION (CONCORD AND LINCOLN)	$72,000,000		$72,000,000				$72,000,000	
ROUTE 128/ROUTE 35 AND ROUTE 62 (DANVERS)	$25,982,000	$13,496,710	$12,485,290				$25,982,000	
ROUTE 126/ROUTE 135 GRADE SEPARATION (FRAMINGHAM)	$54,080,000					$113,938,000	$113,938,000	
ROUTE 9 RESURFACING (FRAMINGHAM AND NATICK)**	$12,500,000	$12,500,000					$12,500,000	
BRUCE FREEMAN RAIL TRAIL (CONCORD TO WESTFORD)	$17,250,000				$29,871,000		$29,871,000	
ROUTE 53 FIINAL PHASE (HANOVER)	$1,000,000			$1,170,000			$1,170,000	
ASSABET RIVER RAIL TRAIL (HUDSON TO ACTON)	$16,725,000		$20,349,000				$20,349,000	
ROUTE 85 IMPROVEMENTS (HUDSON)	$8,400,000			$11,956,000			$11,956,000	

TABLE 13-3 (CONT.)
MAJOR INFRASTRUCTURE AND EXPANSION HIGHWAY FUNDED PROJECTS IN THE RECOMMENDED PLAN, WITH COSTS

	CURRENT COST	2010	2011–2015	2016–2020	2021–2025	2025–2030	MPO TARGET FUNDING	NON-MPO FUNDING*
RECOMMENDED HIGHWAY PROJECTS								
ROUTE 1 IMPROVEMENTS (MALDEN AND REVERE)	$70,304,000					$148,120,000	$148,120,000	
ROUTE 139 WIDENING (MARSHFIELD)	$7,150,200			$10,177,000			$10,177,000	
NEEDHAM ST./HIGHLAND AVE./WINCHESTER ST. (NEWTON AND NEEDHAM)	$17,000,000				$29,439,000		$29,439,000	
QUINCY CENTER CONCOURSE, PHASE 2 (QUINCY)	$8,100,000	$8,100,000					$8,100,000	
I-93/I-95 INTERCHANGE (READING AND WOBURN)	$194,792,000				$337,317,000		$337,317,000	
BRIDGE STREET (SALEM)	$10,000,000			$14,233,000			$14,233,000	
ASSEMBLY SQUARE ROADWAY PROJECT (SOMERVILLE)**	$28,000,000	$28,000,000					$15,000,000	$13,000,000
S. WEYMOUTH NAVAL AIR STATION ACCESS IMPROVEMENTS (PARKWAY CONSTRUCTION) (WEYMOUTH, HINGHAM, AND ROCKLAND)**	$80,000,000	$15,000,000	$65,000,000				$13,000,000	$67,000,000
S. WEYMOUTH NAVAL AIR STATION ACCESS IMPROVEMENTS (MULTI-MODAL CENTER) (WEYMOUTH,HINGHAM, AND ROCKLAND)	$10,014,750	$10,014,750						$10,014,750
ROUTE 18 CAPACITY IMPROVEMENTS (WEYMOUTH)	$26,100,000		$26,100,000				$11,517,961	$14,582,039
MONTVALE AVENUE (WOBURN)	$3,400,000			$4,839,000			$4,839,000	
NEW BOSTON STREET BRIDGE (WOBURN)	$4,500,000			$6,405,000			$6,405,000	
TRANSIT PROJECTS WITH HIGHWAY FUNDING								
GREEN LINE EXTENSION FROM COLLEGE AVE. TO MYSTIC VALLEY PARKWAY (RTE. 16)	$130,000,000			$185,031,000			$185,031,000	
ASSEMBLY SQUARE ORANGE LINE STATION (SOMERVILLE)	$10,000,000		$11,699,000				$11,699,000	
WONDERLAND SOUTH PARKING GARAGE (REVERE)	$52,000,000	$52,000,000					$22,700,000	$29,300,000
TOTAL	**$1,776,528,460**	**$167,603,220**	**$253,867,251**	**$364,653,077**	**$475,430,000**	**$666,622,000**	**$1,928,175,548**	**$500,898,712**

* Non-MPO Funding includes earmarks, with the exception of the following:
- Consolidated Rental Car Facility will be paid for by the Massachusetts Port Authority from General Airport Revenue Bonds; taxable revenue bonds supported by revenue from the daily Customer Facility Charge and rent from car companies; and the Transportation Infrastructure and Innovation Act (TIFIA) funds.
- I-95 NB/Dedham Street Ramp will be paid for by the developer.
- South Weymouth Naval Air Station Access Improvements (includes East-West Parkway) will use state, local, and private resources.
- Somerville Assembly Square Roadway project will use American Recovery and Reinvestment Act (ARRA) funding, state, local, and private resources.
- Wonderland South Parking Garage will use ARRA, federal, and state resources.

** Projects funded with American Recovery and Reinvestment Act funding.

TABLE 13-4

Highway Bridges with Estimated Costs Over $10 Million

PROJECT		CURRENT COST	2010	2011-2015	2016-2020	2021-2025	2026-2030
BOSTON/ CAMBRIDGE*	LONGFELLOW BRIDGE	$350,000,000	$60,000,000	$290,000,000			
BOSTON*	CAMBRIDGE ST OVER CHARLES RIVER	$15,930,000		$15,930,000			
BOSTON*	NORTH HARVARD ST OVER CHARLES RIVER	$15,870,000	$15,870,000				
BOSTON*	ROUTE 2 OVER SOLDERS FIELD RD	$25,860,000	$25,860,000				
BOSTON*	CASEY OVERPASS OVER WASHINGTON ST	$28,370,000	$28,370,000				
BOSTON	MASSACHUSETTS AVE OVER ROUTE 2A (COMMON-WEALTH AVE)	$12,000,000		$12,000,000			
BOSTON	NORTH WASHINGTON ST OVER THE CHARLES RIVER	$55,000,000		$55,000,000			
BOSTON	NORTHERN AVENUE PEDESTRIAN BRIDGE	$45,000,000			$45,000,000		
DEDHAM	PROVIDENCE HIGHWAY OVER MOTHER BROOK	$11,177,880		$11,177,880			
EVERETT/ MEDFORD*	REVERE BEACH PKWY OVER THE MALDEN RIVER	$41,320,000	$41,320,000				
HANOVER/ NORWELL	ROUTE 3 OVER HIGH ST	$28,198,500		$28,198,500			
LITTLETON	TAYLOR ST OVER I-495	$22,800,000	$22,800,000				
LEXINGTON	ROUTE 2 OVER I-95	$47,040,000		$47,040,000			
LEXINGTON	ROUTE 2A OVER I-95	$21,087,700		$21,087,700			
LYNN/ SAUGUS	BRIDGE ROUTE 107 OVER THE SAUGUS RIVER	$62,580,000	$62,580,000				
IPSWICH*	ROUTE 1A OVER THE MBTA	$10,711,115	$10,711,115				
MEDFORD*	MAIN STREET (ROUTE 38) OVER MYSTIC RIVER	$11,620,000	$11,620,000				
NEEDHAM/ WELLESLEY	ROUTE 128 ADD-A-LANE BRIDGE (CONTRACT V)	$55,000,000		$55,000,000			
QUINCY*	FORE RIVER BRIDGE	$255,000,000		$255,000,000			
QUINCY	WEST SQUANTUM ST OVER NEWPORT AVE AND MBTA	$16,056,873		$16,056,873			
REVERE*	REVERE BEACH PKWY OVER MBTA	$31,030,000	$31,030,000				
REVERE*	BLUE LINE AND REVERE BEACH PKWY	$10,000,000		$10,000,000			
SOMERVILLE*	ROUTE 28 OVER WASHINGTON ST	$22,910,000	$22,910,000				

* Bridges funded under the Accelerated Bridge Program.

Those projects not delineated with an asterisk are funded under the federalized Statewide Bridge Program.

Bedford, Billerica, and Burlington: Middlesex Turnpike Phase 3 ($19,200,000)

Description

The proposed improvements will widen Middlesex Turnpike from 800 feet north of Plank Street to 900 feet north of Manning Road. The widening will provide two lanes in each direction, making it a four-lane highway with a median. There will be left-turn lanes at key intersections. The improvements span a segment of approximately 1.5 miles and includes the reconstruction of the bridge over the Shawsheen River. The roadway cross-section width will increase to 70 feet, and the total right-of-way will be 85 feet wide. Each direction will consist of a 14-foot outside travel lane, a 13-foot inside travel lane, and a 16-foot median. The median will be reconfigured at key intersections and driveways as a 4-foot median with a 12-foot protected left-turn lane. On the east side of the 70-foot travel way is a 7-foot grass strip, and on the west side are a 3-foot grass strip and a 4-foot concrete sidewalk.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

The project consists of a corridor that spans two communities, Bedford and Billerica. The area in Bedford is zoned for industrial park, industrial, general business, and residential uses. The area in Billerica is zoned for industrial uses.

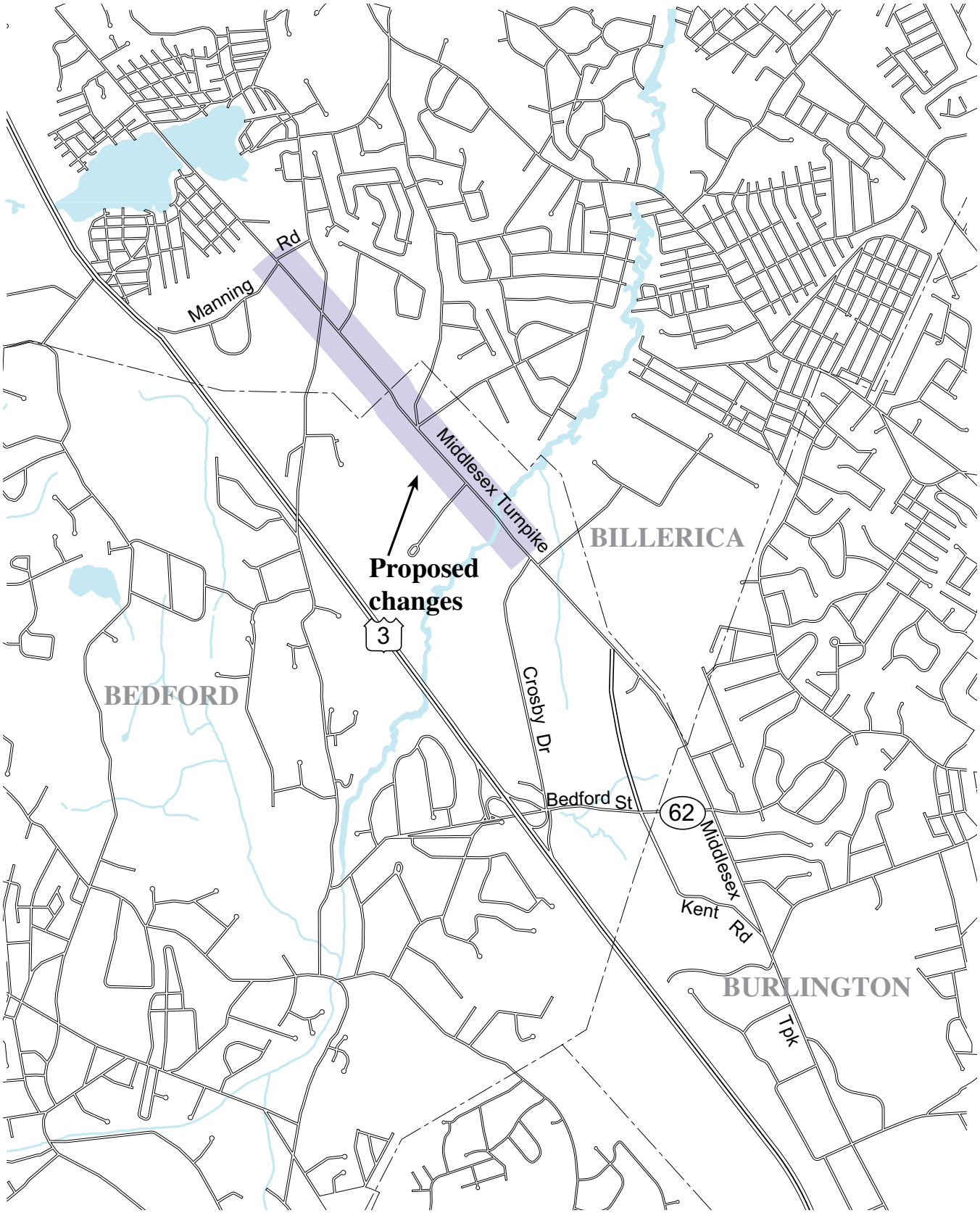
Mobility

According to MassHighway traffic counts conducted in 2003, the average daily traffic on the Middlesex Turnpike at the Bedford town line was 15,000 vehicles. According to the draft environmental impact report (DEIR) done in 1995, a Roadway Segment Capacity Analysis showed that Middlesex Turnpike operated at a level of service (LOS) E in the AM and PM peak hours and that at six out of seven intersections along the turnpike, the critical movement in the AM and PM peak hours operated at LOS F. In terms of delay, the Congestion Management System monitoring conducted in 2002 found that the average travel speed is below 70 percent of the posted speed along four segments in both the northbound and southbound directions, in both the AM and PM peak periods.

Economic Opportunities

According to the DEIR, improving the capacity, efficiency, and safety of this roadway will help improve the redevelopment opportunities of this area.

MAP 13-1 Bedford, Billerica, and Burlington: Middlesex Turnpike Phase 3



Bellingham: Pulaski Boulevard ($13,006,510)

Description

This project will include the reconstruction and widening of Pulaski Boulevard between Moody Street and the Franklin town line, a length of 2.2 miles. This project will improve traffic safety and operations for both motorists and pedestrians by rehabilitating the pavement, improving the signals, and providing pedestrian safety improvements.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

The project area is primarily zoned for commercial use near Crooks Corner and commercial and residential use along the remainder of the corridor.

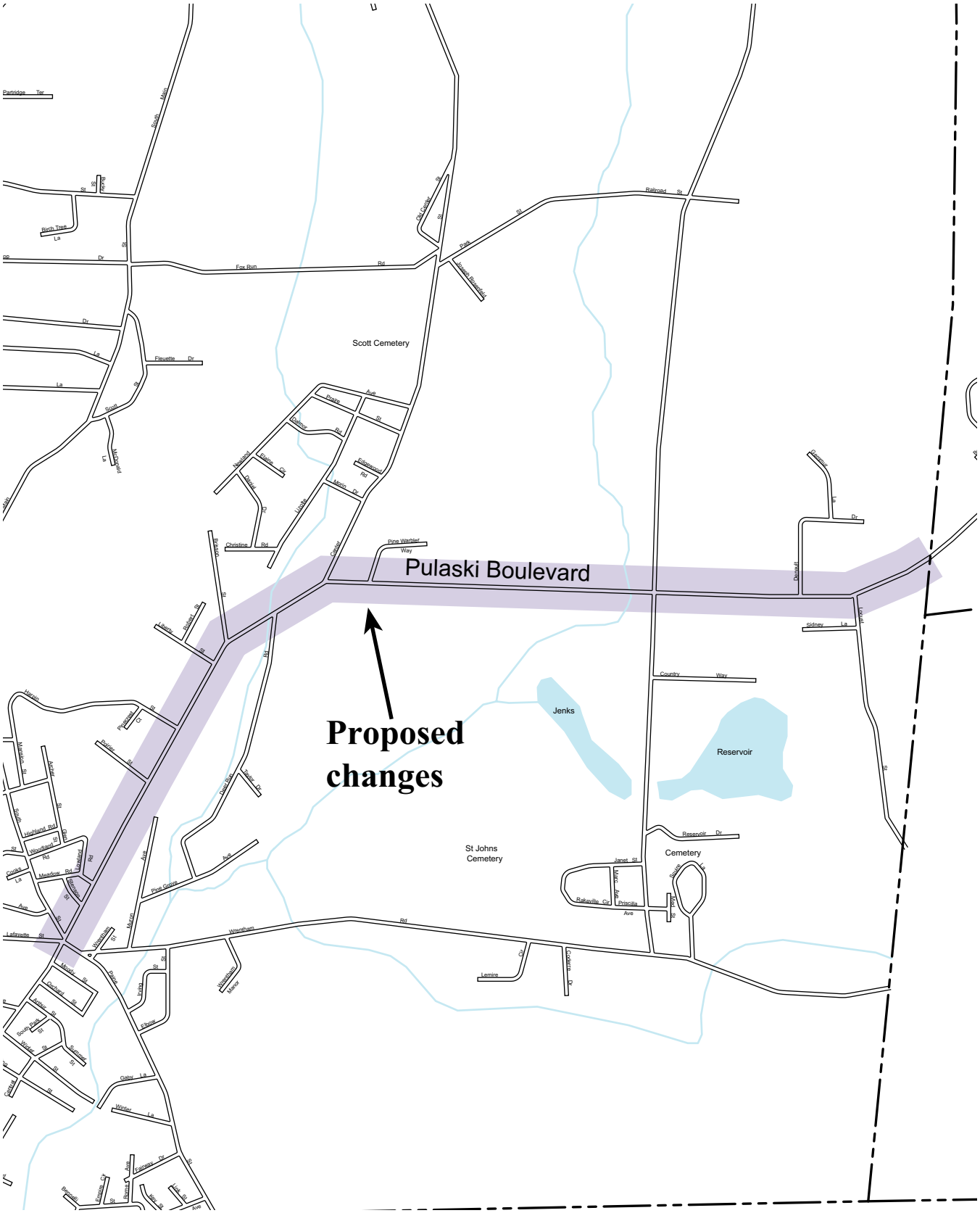
Safety

This project area includes no high-crash locations, but 160 crashes occurred along the corridor according to a 2003 Design Exception Report produced by MassHighway.

Mobility

According to 2002 MassHighway traffic counts, the average daily traffic (ADT) along Pulaski Boulevard was 13,900 vehicles east of Crooks Corner and 17,900 vehicles west of Crooks Corner. The Pulaski Boulevard and Crooks Corner intersection and four of the other five major intersections along the corridor operate at level of service (LOS) F during the AM and/or PM peak periods.

MAP 13-2 BELLINGHAM: PULASKI BOULEVARD



Belmont: Trapelo Road ($13,000,000)

Description

This project will be a reconstruction of Trapelo Road from the Cambridge city line to Waverly Oaks Road (Route 60), a length of 2.5 miles. The project will provide traffic signal, sidewalk, bicycle, and streetscape improvements. It will also include the following improvements:

- Construction of a second culvert at Beaver Brook to alleviate flooding
- Fully actuated traffic signals
- ADA-compliant sidewalks throughout both sides of the corridor
- Reduced traffic lane widths to accommodate a bicycle shoulder

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

The project area is zoned for a mix of uses, including commercial and residential (multi-family and single-family housing). The area within one-half mile of the corridor is fully developed, with only a handful of underutilized parcels.

Safety

There are three high-crash locations within the study area, according to MassHighway's list of top 1,000 high-crash intersections for the years 1997 to 1999.

- Trapelo Road at Lexington Street
- Trapelo Road at Belmont Street
- Belmont Street at School Street

A total of 596 crashes were recorded along the corridor between 2000 and 2002, according to an economic development study done for the Town of Belmont.

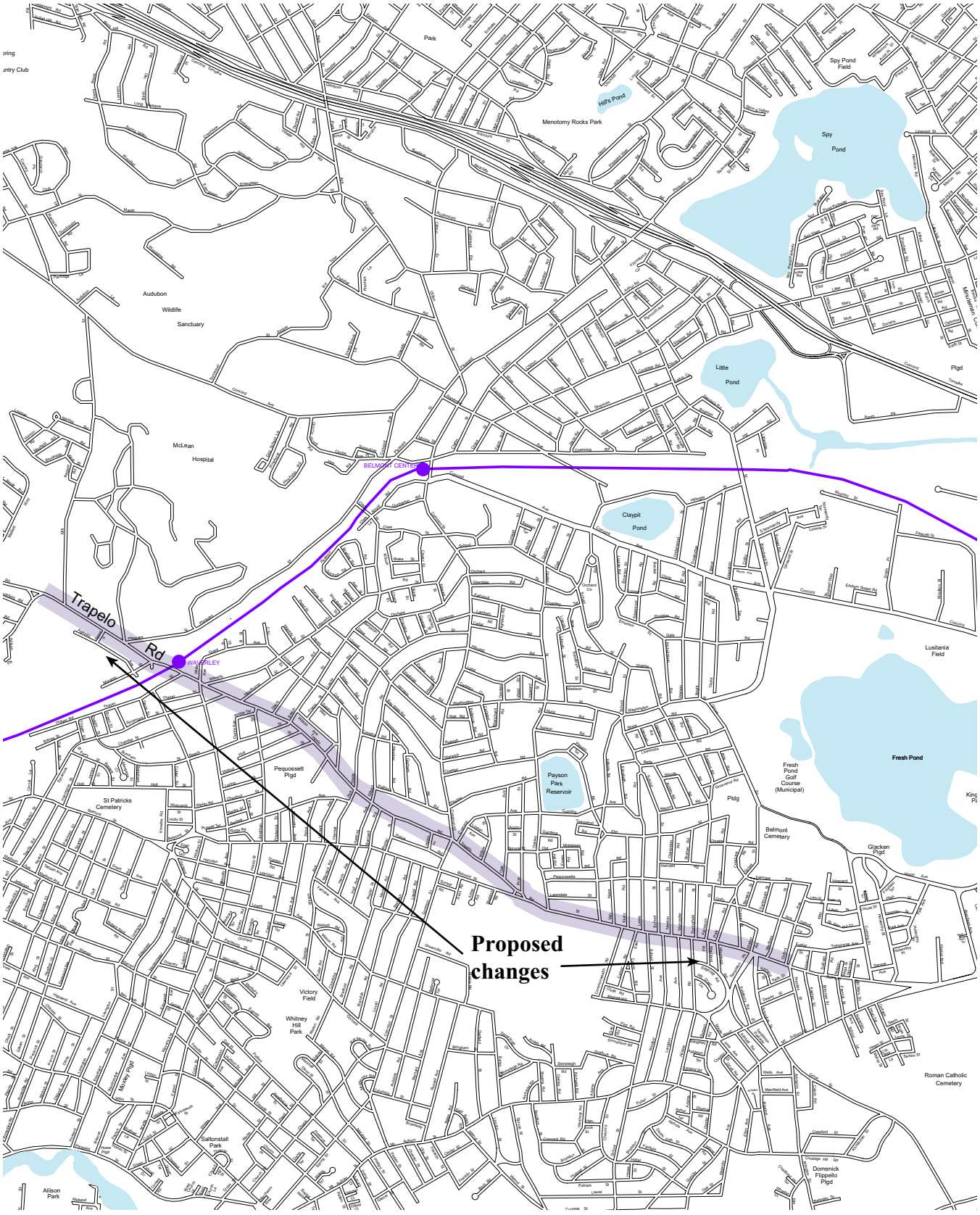
Mobility

According to traffic counts by the Transportation Data Corporation (TDC) in 2005, the average daily traffic volume on Trapelo Road ranges from 15,000 vehicles (along Belmont Street and along Trapelo Road east of Pleasant Street) to 30,000 (along Trapelo Road west of Pleasant Street). Trapelo Road operates at a level of service (LOS) C during the AM and PM peak periods. The current posted speed limits on Trapelo Road are 30 mph, but average peak-period speeds are 16.4 mph in the AM and 15.3 mph in the PM.

Connectivity

The proposed improvements will improve the connectivity of the area by promoting the use of alternative transportation modes (walking, bicycling, and transit).

MAP 13-3 BELMONT: TRAPELO ROAD



Boston: East Boston Haul Road/Chelsea Truck Route ($18,000,000)

Description

This project creates a new grade-separated roadway connecting the City of Chelsea and the harbor tunnels/Logan Airport using an abandoned below-grade railroad right-of-way. It would provide a roadway passing beneath Neptune Road, Bennington Street, and Saratoga Street, and would connect to Chelsea Street south of the Chelsea Street Bridge. A proposed design variation would provide a new direct ramp connection between Chelsea Street and Route 1A southbound and redesign the current unsafe connection between Chelsea Street and Route 1A at Curtis Street. It would allow the continued use of the existing Route 1A viaduct over Saratoga Street, Bennington Street, and Neptune Road. The roadway has been proposed as an exclusive facility for trucks, buses, passenger shuttles, and other airport related traffic but the planning and environmental review process for the project should analyze whether automobile use of the facility could reduce congestion in the area without significantly degrading operations on the new roadway.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

The project area includes five zoning districts—residential, neighborhood business, waterfront (includes maritime economy reserve and manufacturing), corridor enhancement (promotes activities such as commercial uses to serve as a buffer between residential and industrial uses), and Logan Airport. The land use surrounding the northern end of the proposed road is primarily industrial, while around the southern end it is predominantly commercial (with a few residential areas). The project will incorporate the intersection of East Boston Greenway and Frankfort Street.

Mobility

MassHighway traffic counts performed in 1997 showed average daily traffic of 21,800 vehicles on the Chelsea Street Bridge and 37,100 vehicles on Route 1A at the Logan Airport ramps in 2003. According to the East Boston/Chelsea Truck Route Concept Study dated June 1998, this project will improve mobility through a dedicated route for freight vehicles, rental cars, and buses that will bypass neighborhood traffic in East Boston and provide a direct link between Chelsea and Logan Airport.

Connectivity

The bypass road will provide freight vehicles, rental cars, Park n' Fly buses, Masport shuttle buses, and MBTA buses with a direct connection to Logan Airport, resulting in enhanced connections between the airport and communities north of Boston.

Sharing of Benefits/Burdens

According to the East Boston/Chelsea Truck Route Concept Study, the project's positive implications for the cargo industry are matched by its benefits for the local and regional community. Benefits include reducing traffic on local and neighborhood streets through the dedicated freight-haul road and providing a pedestrian connection to the East Boston Greenway.

Economic Opportunities

East Boston is situated between Logan Airport, a key player in New England's freight truck transportation network, and the city of Chelsea's Airport Overlay District. According to the East Boston/Chelsea Truck Route Concept Study, this new connection will enhance the efficiency and accessibility of commercial vehicle travel between Logan and Chelsea by eliminating a major truck traffic bottleneck.

MAP 13-4 BOSTON: EAST BOSTON HAUL ROAD/CHELSEA TRUCK ROUTE

Boston: Rutherford Avenue ($45,507,000)/Sullivan Square ($40,000,000)

Description

The Rutherford Avenue Corridor Transportation Study (a cooperative effort between MassHighway and the City of Boston) contains a design to reconstruct Rutherford Avenue consisting of two components:

- A new four-lane bypass road adjacent to the Interstate 93 viaduct for traffic diverted from City Square, with underpasses at the Gilmore Bridge and at Cambridge Street at Sullivan Sq.
- A four-lane roadway for local Charlestown traffic

The project includes a redesigned Sullivan Square to accommodate the bypass road connection to Route 99.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

Rutherford Avenue was built prior to the interstate system and was the historic connection to cities and towns north of Boston. Today it remains an important path into the city, and it has been used as a major alternative route during the construction of the Central Artery. Rutherford Avenue parallels the elevated Interstate 93 to its west; to its east is the neighborhood of Charlestown. It provides access to tourist areas, including the USS Constitution and the Freedom Trail. Thus, there is a large amount of pedestrian travel in the vicinity. In addition, a new park has been built on the west side of the roadway as part of the open-space mitigation measures for the Central Artery/Tunnel Project. The Rutherford Avenue project will divert regional traffic to a new bypass road and create a local access roadway to benefit pedestrians and create more open space.

Mobility

This project divides Rutherford Avenue into two roadways separating regional from local traffic. The new roadway will have eight lanes through the project area. MassHighway conducted traffic counts on Rutherford Avenue south of Sullivan Square in 2003. At that time the average daily traffic was 29,100 vehicles.

Connectivity

The Sullivan Square and Community College Orange Line Stations are located in the project area. Rutherford Avenue has been designated as an Urban Ring Phase 2 route in the MBTA's draft environmental impact report, based on the roadway's anticipated reconstruction.

Community Character

According to the Rutherford Avenue Study (see the note below), there are three main urban design goals associated with this project:

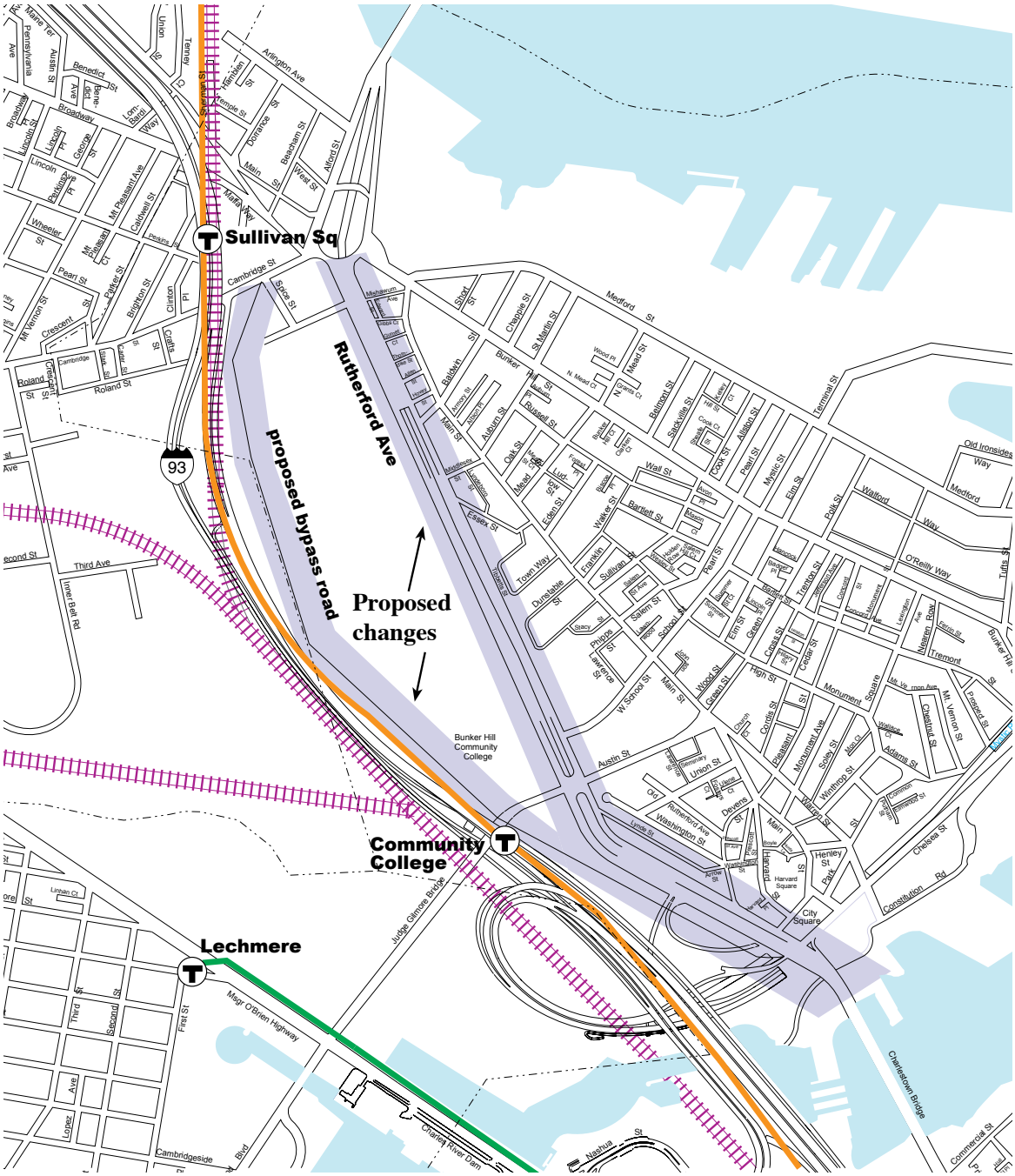
- Improve vehicular and pedestrian comfort and amenities
- Integrate the Rutherford Avenue corridor into the Charlestown neighborhood with new blocks and streets
- Increase the amount of green space and usable open space along the corridor

Note

A study of the Rutherford Avenue corridor was done as part of mitigation for the Central Artery/Tunnel Project. The study recommended near- and long-term improvements to Rutherford Avenue and Sullivan Square that would enhance the corridor as part of the regional roadway network and improve its integration into the abutting residential neighborhood. The plan recommended:

- Modifications to the Sullivan Square grade separation to connect the bypass road to Route 99 and improve access to transit and pedestrian travel
- Creating a four-lane bypass road with underpasses and a four-lane neighborhood access road.

MAP 13-5 BOSTON: RUTHERFORD AVENUE/SULLIVAN SQUARE



- New bicycle and pedestrian facilities
- Creating new parcels for development

Boston: Resurfacing at Various Locations ($21,500,000)

Description

Various roadways around the City of Boston will be resurfaced. Wheelchair ramps along these roadways will also be upgraded. The locations include:

AREA 1			
STREET	**FROM**	**TO**	**NEIGHBORHOOD**
ALBANY STREET	MASSACHUSETTS AVE	RANDELL STREET	BOSTON PROPER
BEACON STREET	COMMONWEALTH AVE	BLANFORD STREET	BOSTON PROPER
BOWDOIN STREET	DEVER STREET	HAMILTON STREET	BOSTON PROPER
CAMBRIDGE STREET	WINDOM STREET	HARVARD AVE	ALLSTON
CHESTNUT HILL AVE	COMMONWEALTH AVE	BEACON STREET	BRIGHTON
CLARENDON STREET	STUART STREET	COMMONWEALTH AVE	BOSTON PROPER
CONGRESS STREET (PART A)	NEW SUDBURY STREET	NORTH STREET	BOSTON PROPER
CONGRESS STREET (PART B)	WATER STREET	HIGH STREET	BOSTON PROPER
HARRISON AVE (PART A)	KNEELAND STREET	OAK STREET	BOSTON PROPER
HARRISON AVE (PART B)	PLYMPTON STREET	WORCESTER SQUARE	BOSTON PROPER
LAKE STREET	COMMONWEALTH AVE	LAKE SHORE ROAD	BRIGHTON
MEDFORD STREET	DECATUR STREET	ELM STREET	CHARLESTOWN
NEW RUTHERFORD AVE	RTE 99	MISHAWUM STREET	CHARLESTOWN
NORTH BEACON STREET	CAMBRIDGE STREET	DUSTIN STREET	BRIGHTON
NORTHAMPTON STREET	HARRISON AVENUE	TREMONT STREET	BOSTON PROPER

AREA 2			
STREET	**FROM**	**TO**	**NEIGHBORHOOD**
ALLANDALE STREET	CENTRE STREET	1750' WEST OF ELWELL	JAMAICA PLAIN
CENTRE STREET (PART A)	SOUTH STREET	ORCHARD STREET	JAMAICA PLAIN
CENTRE STREET (PART B)	VFW PKWAY	RHODA STREET	JAMAICA PLAIN
FOREST HILLS STREET	WASHINGTON STREET	MON WILLIAM CASEY HWY	JAMAICA PLAIN
GLEN ROAD	FOREST HILLS STREET	GLADE AVENUE	JAMAICA PLAIN
HYDE PARK AVE	MILTON STREET	NEPONSET VALLEY PKWY	HYDE PARK
SOUTH STREET	WASHINGTON STREET	BELGRADE AVE	ROSLINDALE
TALBOT AVENUE (PART A)	HARVARD STREET	WESTCOTT STREET	DORCHESTER
TALBOT AVENUE (PART B)	SPENCER STREET	NORFOLK STREET	DORCHESTER
WALTER STREET	SOUTH STREET	CENTRE STREET	WEST ROXBURY
WASHINGTON STREET (PART A)	WILLIAMS STREET	MORTON STREET	ROSLINDALE
WASHINGTON STREET (PART B)	ARCHDALE ROAD	UKRAINE WAY	ROSLINDALE

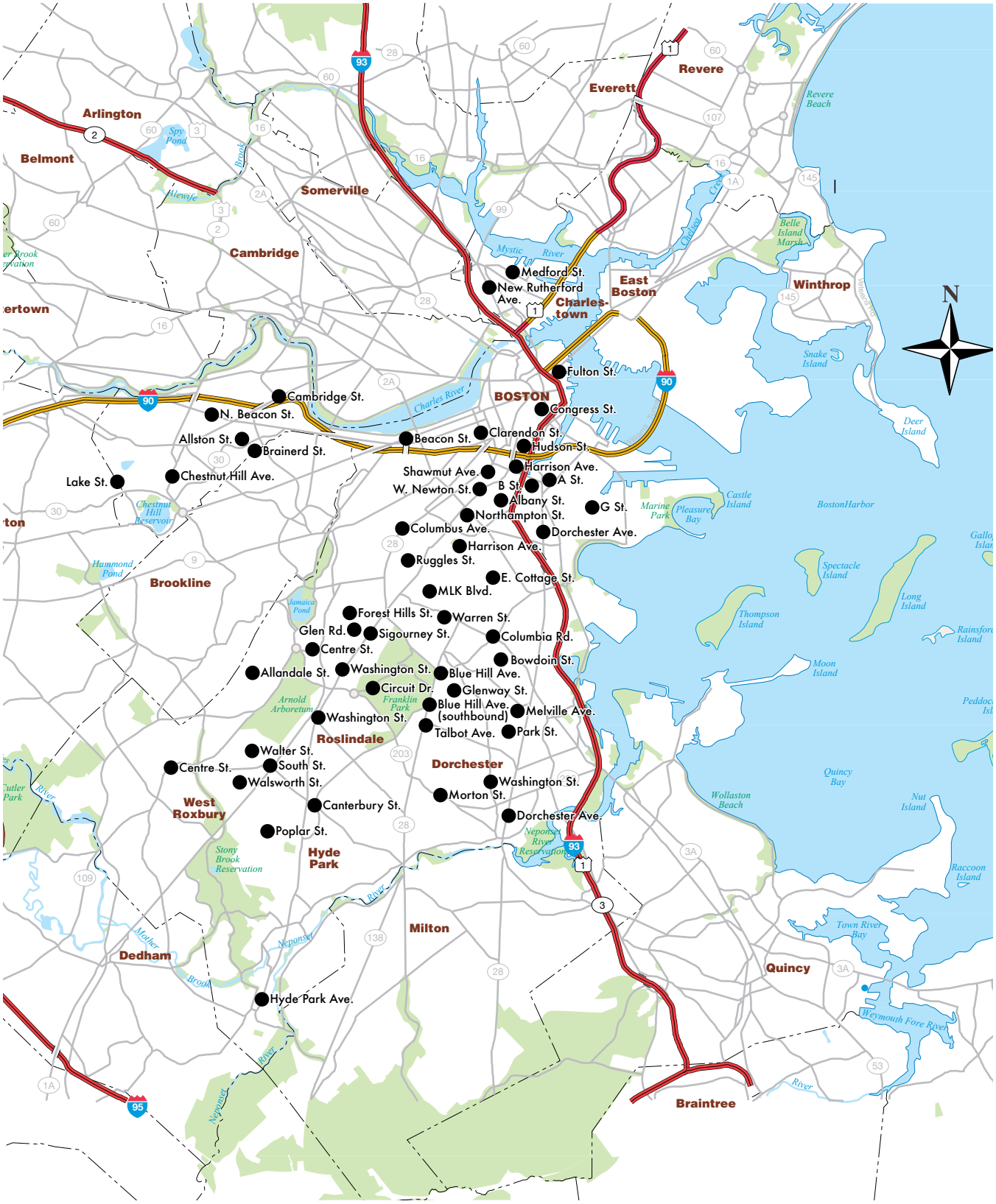
Boston: Resurfacing at Various Locations (cont.)

AREA 3			
STREET	**FROM**	**TO**	**NEIGHBORHOOD**
CIRCUIT DRIVE	MORTON STREET	GLEN ROAD	ROXBURY
COLUMBUS AVENUE	MALCOLM X BLVD	RITCHIE STREET	ROXBURY
DORCHESTER AVENUE (PART A)	WEST BROADWAY	HAUL ROAD	SOUTH BOSTON
DORCHESTER AVENUE (PART B)	GALLIVAN BLVD	RICHMOND STREET	DORCHESTER
G STREET	EAST BROADWAY	COLUMBIA ROAD	SOUTH BOSTON
MARTIN LUTHER KING BLVD	WALNUT AVENUE	WARREN STREET	ROXBURY
MORTON STREET	WOODMERE STREET	WASHINGTON STREET	MATTAPAN
RUGGLES STREET (PART A)	TREMONT STREET	PARKER STREET	ROXBURY
RUGGLES STREET (PART B)	PARKER STREET	HUNTINGTON AVENUE	ROXBURY
WALWORTH STREET	ORANGE STREET	WASHINGTON STREET	WEST ROXBURY

AREA 4			
STREET	**FROM**	**TO**	**NEIGHBORHOOD**
A STREET (PART A)	DORCHESTER AVE	WEST BROADWAY	SOUTH BOSTON
A STREET (PART B)	MT WASHINGTON AVE	CONGRESS STREET	SOUTH BOSTON
B STREET (PART A)	DORCHESTER AVE	WEST BROADWAY	SOUTH BOSTON
B STREET (PART B)	WEST BROADWAY	WEST THIRD STREET	SOUTH BOSTON
COLUMBIA ROAD	HAMILTON STREET	EAST COTTAGE STREET	DORCHESTER
EAST COTTAGE STREET	DUDLEY STREET	NORFOLK AVE	DORCHESTER
FULTON STREET	CROSS STREET	RICHMOND STREET	BOSTON PROPER
HARRISON AVE (PART C)	EAST LENNOX STREET	DUDLEY STREET	ROXBURY
HUDSON STREET	HARVARD STREET	HARRISON AVENUE	BOSTON PROPER
SHAWMUT AVENUE	MILFORD STREET	PELHAM STREET	ROXBURY
WEST NEWTON STREET	TREMONT STREET	COLUMBUS AVE	BOSTON PROPER

AREA 5			
STREET	**FROM**	**TO**	**NEIGHBORHOOD**
ALLSTON STREET	LONG AVENUE	COMMONWEALTH AVE	BRIGHTON
BLUE HILL AVE SOUTHBOUND	DONALD ROAD	RHODES STREET	MATTAPAN
BLUE HILL AVE	GEORGIA STREET	GLENWAY STREET	ROXBURY
BRAINERD ROAD	GORHAM STREET	WALBRIDGE STREET	BRIGHTON
CANTERBURY STREET	HYDE PARK AVENUE	POPLAR STREET	ROSLINDALE
GLENWAY STREET	HARLEM STREET	HARVARD STREET	DORCHESTER
MELVILLE AVENUE	WASHINGTON STREET	WALDECK STREET	DORCHESTER
PARK STREET	VINSON STREET	ALPHA ROAD	DORCHESTER
POPLAR STREET	BEECH STREET	WEST STREET	HYDE PARK
SIGOURNEY STREET	GLEN ROAD	ROBESON STREET	JAMAICA PLAIN
WARREN STREET (PART A)	DECKARD STREET	BLUE HILL AVENUE	ROXBURY
WARREN STREET (PART B)	WHITING STREET	CLIFFORD STREET	ROXBURY
WASHINGTON STREET (PART C)	WILLIAMS STREET	MORTON STREET	ROXBURY
WASHINGTON STREET (PART E)	MORTON STREET	GALLIVAN BOULEVARD	DORCHESTER

MAP 13-6 BOSTON: RESURFACING AT VARIOUS LOCATIONS



This page left intentionally blank.

Boston: Logan Airport Consolidated Rental Car Facility ($337,000,000)

Description

The proposed project at Logan Airport consists of constructing a Consolidated Rental Car Facility (ConRAC) served by an alternative fuel shuttle bus system connecting airline passengers with two modes: rental cars and MBTA transit service (at the Airport T Station). The project is intended to create an efficient and environmentally superior facility and shuttle bus operation that will help the Authority meet current and future ground access needs. The ConRAC will be constructed on airport property known as the Southwest Service Area. Massport will be seeking federal Transportation Infrastructure Finance and Innovation Act (TIFIA) financing assistance for this project.

Project's Context/Possible Impacts

The new facility will provide enhanced customer service with convenient, frequent shuttle bus service from the airport terminals and MBTA Airport T Station, along with swift access to and from the regional transportation system. Currently, each company owns and separately operates a diesel-powered shuttle bus fleet for its respective customers. These vehicles circulate throughout the airport roadway system on fixed headways, often carrying only a handful of passengers. The Authority has documented the environmental benefits that will arise from consolidating the bus system; transitioning to a fleet composed entirely of clean-fuel buses will also have important air quality benefits. In addition, the facility is being designed to achieve LEED Silver (and strive for LEED Plus) certification and will also include renewable energy features. The project would also include additional improvements to airport roadways and several intersections.

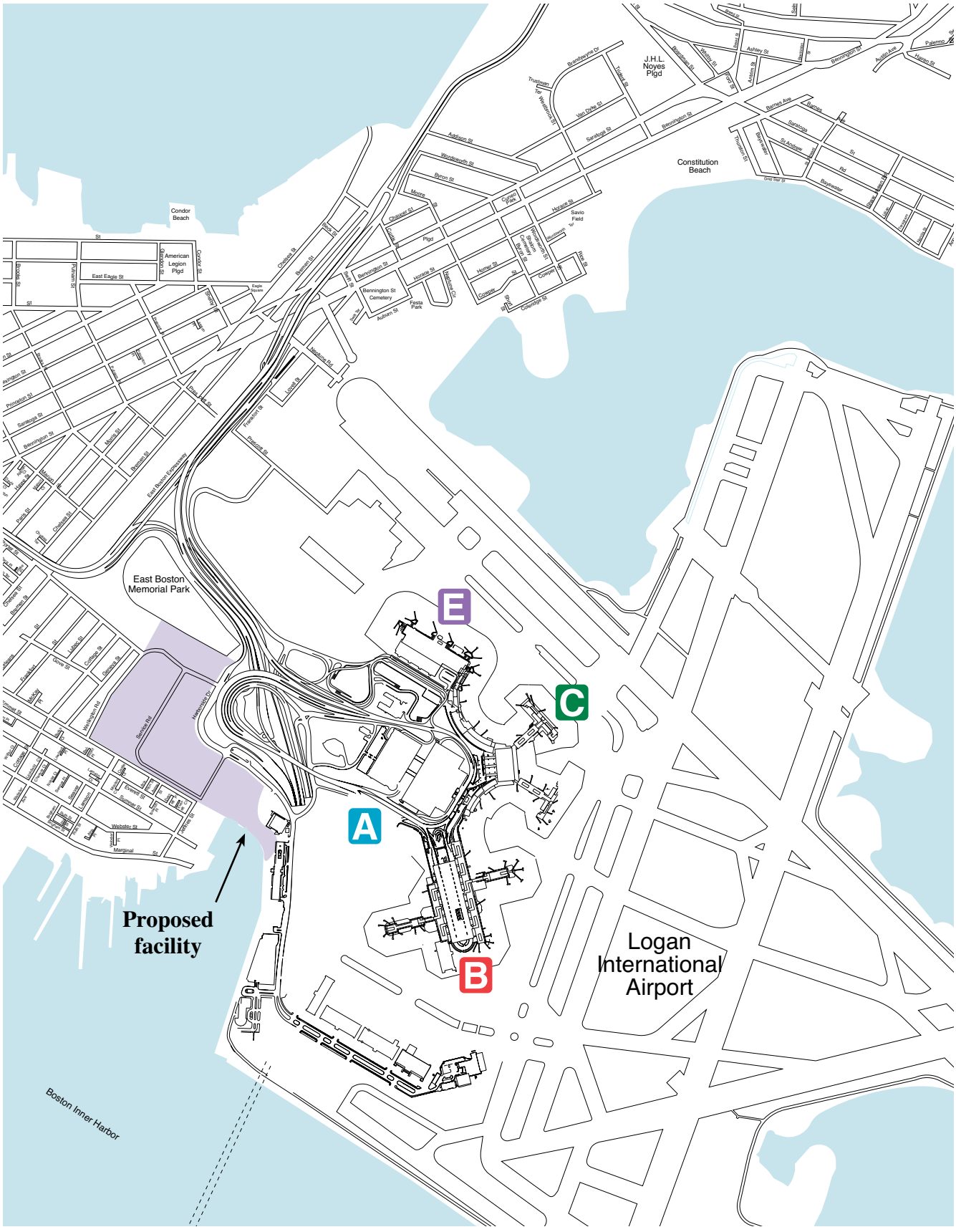
Key benefits of the planned facility include:

- Improved air quality as a result of a consolidated shuttle bus system, powered by compressed natural gas (CNG) or comparable alternative fuel
- Incorporation of sustainable design elements
- Significantly improved efficiencies in operations and customer service
- Capacity to manage the demand for rental cars within Logan's constrained footprint
- Reduced impact of rental car operations on the East Boston community and adjacent neighborhoods

The full build project currently calls for a multilevel ConRAC garage with approximately 3,120 Ready/Return spaces, a Customer Service Center, and Quick Turnaround Areas, which will contain maintenance, car wash, and fueling facilities, as well as space for surface rental car storage/parking. The ConRAC is one component of an overall redevelopment plan that will also include: environmental remediation, new infrastructure (roadways, utilities, etc.), intelligent transportation systems technologies, and extensive visual and sound buffering along the boundary between the airport and the community.

The Authority is preparing final environmental permitting documents for this program and will soon begin the final design process. The expected date of beneficial occupancy is mid-2013.

MAP 13-7 BOSTON: LOGAN AIRPORT CONSOLIDATED RENTAL CAR FACILITY



Braintree: I-93/Route 3 Interchange (Braintree Split) ($36,017,000)

Description

Through its Mobility Management System, the Boston Region MPO recommended a study of the Braintree Split. The Central Transportation Planning Staff produced a report for the MPO, *I-93/Southeast Expressway/Route 3 (Braintree Split) Operational Assessment and Potential Improvements,* in March 2006. The proposed project addresses mobility and safety issues of the Braintree Split, and includes the following three improvements:

I-93 North On-Ramp from Route 37 East in Braintree ($2.3 million)

- Restrict the existing on-ramp to traffic that is heading to Route 3 South, Burgin Parkway, or Washington Street ($0.6 million)
- Construct a double left-turn bay at the signalized ramp-arterial junction on the east side of I-93 for use by traffic proceeding to the Expressway to access the south-side on-ramp ($1.6 million)
- Install new signs or modify existing signs on Route 37 to guide motorists to the appropriate ramps ($0.10 million)

(The above modifications would increase safety and provide a longer weave distance to the Expressway.)

Route 3 South, between Burgin Parkway and Union Street ($17.3 million)

- Upgrade the northbound acceleration lane from Union Street into an auxiliary lane (a fourth lane northbound), possibly ending after the exit ramp at interchange 19 (Burgin Parkway/ MBTA Quincy Adams Station ($8.1 million)
- Add a fourth southbound travel lane beginning at the Burgin Parkway on-ramp and possibly ending after the exit ramp at the Union Street interchange ($8.1 million)
- Provide a right-turn bypass lane or slip lane at the southbound ramp-rotary junction for use by the high volume of right-turn traffic ($1.1 million)

I-93 South, between Route 37 and Route 24 ($16.4 million)

- Add a travel lane on I-93 South, beginning south of the Route 37 interchange and ending at the diverge point to Route 24 ($15.1 million)
- Reconfigure the lane assignment at the diverge point of I-93 and Route 24 to provide two travel lanes to the two-lane connector ramp connecting to Route 24 ($0.10 million)
- Widen the merge point at the entrance of Route 24 South to four lanes to receive the four travel lanes from the connecting ramps ($1.1 million)
- Install new signs or modify existing signs on I-93 South to guide motorists to Route 24 ($0.1 million)

Project's Context/Possible Impacts, by Relevant MPO Policy Area

Land Use

Land surrounding the split in Braintree is zoned Highway Business Residential. The split continues over the town border into Quincy, where adjacent land is zoned Heavy Industrial and Planned Unit Development.

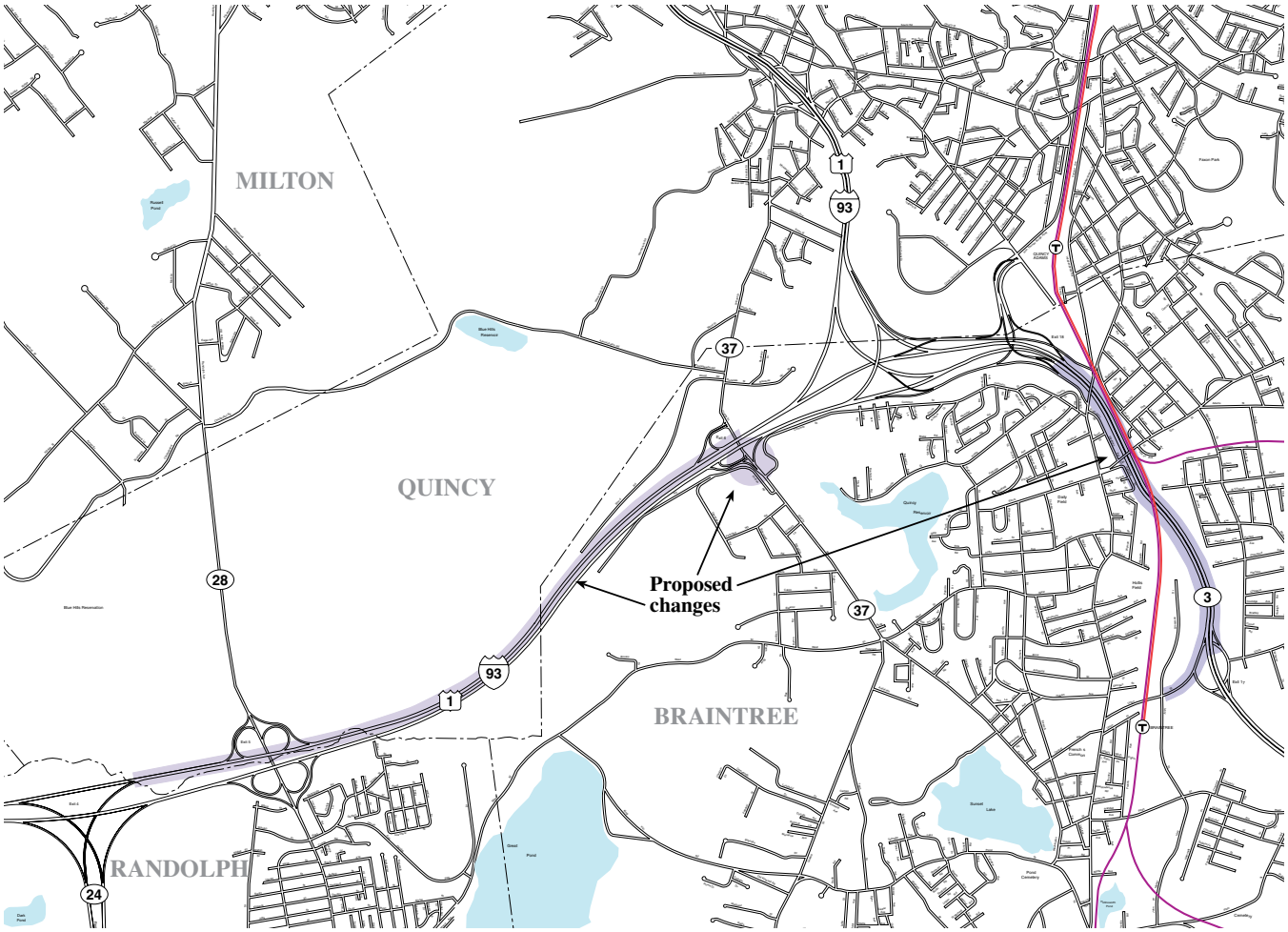
Safety

This location is on MassHighway's list of the top 1,000 high-crash locations for the years 1999 to 2001. The crash total was 314; of these, 209 were property damage only and 105 involved injuries. None of the crashes were fatal.

Mobility

According to MassHighway's 2005 Traffic Volumes, average daily two-way traffic on I-93 north of Route 37 was 219,600 in 2003. Average daily two-way traffic on Route 3 between exits 17 and 19 was 128,800 in 2003. Average daily two-way traffic on Route 3 between exits 19 and 20 was 115,900 in 2003.

MAP 13-8 BRAINTREE: I-93/ROUTE 3 INTERCHANGE (BRAINTREE SPLIT)



Average observed travel speeds on roadways are compiled in the MPO's Mobility Management System. Average observed speeds on Route 3 northbound approaching the Braintree Split are 30-44 mph during the AM peak period. Average observed speeds on I-93 northbound leaving the Braintree Split range between 50-54 mph and 55-59 mph during the AM peak period. Average observed speeds on Route 3 southbound leaving the Braintree Split range between 50-54 mph and 55-59 mph during the AM peak period. Average observed speeds on I-93 southbound approaching the Braintree Split are 55-59 mph during the AM peak period.

Average observed speeds on Route 3 northbound approaching the Braintree Split are 55-59 mph during the PM peak period. Average observed speeds on I-93 northbound leaving the Braintree Split are 55-59 mph during the PM peak period. Average observed speeds on Route 3 southbound leaving the Braintree Split are 1-29 mph during the PM peak period. Average observed speeds on I-93 southbound approaching the Braintree Split are 30-44 mph during the PM peak period. Based on MMS criteria, an expressway is considered congested when average speeds are less than 50 mph.

Connectivity

The Braintree Split is located near the Quincy Adams Station on the Red Line.

Canton: I-95/I-93 Interchange ($216,000,000)

Description

Specific components of the Interstate 95/Interstate 93 interchange project are:

- Replacement of the I-95 northbound entrance ramp with a direct connector ramp
- Construction of a new entrance ramp from University Avenue to I-93 northbound, including the discontinued use of the Green Lodge Street Bridge west of Elm Street
- Construction of a realigned, two-lane direct connection between Route I-93 southbound and I-95 southbound, including a new ramp to Blue Hill Drive
- Construction of a realigned, two-lane, direct connection from I-95 northbound to I-93 northbound
- Widen Dedham Street over I-95 to five lanes. Dedham Street will be widened to four lanes from I-95 to University Avenue in Westwood. Improvements will also be made to the Canton Street/University Intersection in Westwood.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

The 37 acres encompassed by this project are located entirely within the Fowl Meadow/Ponkapoag Bog Area of Critical Environmental Concern. Much of the land surrounding the interchanges is permanently protected, although some of it is zoned for single residences and light industry. According to the Environmental Notification Form (ENF) that was submitted to the Department of Environmental Protection, the project, as proposed, will decrease roadways and other paved areas by 1.7 acres.

Safety

This project is located at a high-crash location: between 1999 and 2001, I-93 at I-95 was the site of 297 crashes, of which 188 involved only property damage and 109 involved bodily injury. It ranked #22 on the list of the state's high-crash intersections. There are recurring safety problems, including numerous truck rollovers, on the I-95 northbound ramp.

Mobility

The ENF identifies chronic congestion in the project area in both the morning and afternoon peak periods, with the roadways and the interchanges frequently functioning at level of service F. Severe congestion at the intersection of University Avenue and Blue Hill Drive causes long queues that occasionally extend beyond the I-95 southbound exit ramp to Blue Hill Drive. Data collected in 2004 show that there were 134,700 vehicle trips per day on the I-95 section of the project and 151,000 trips on the I-93 section.

Connectivity

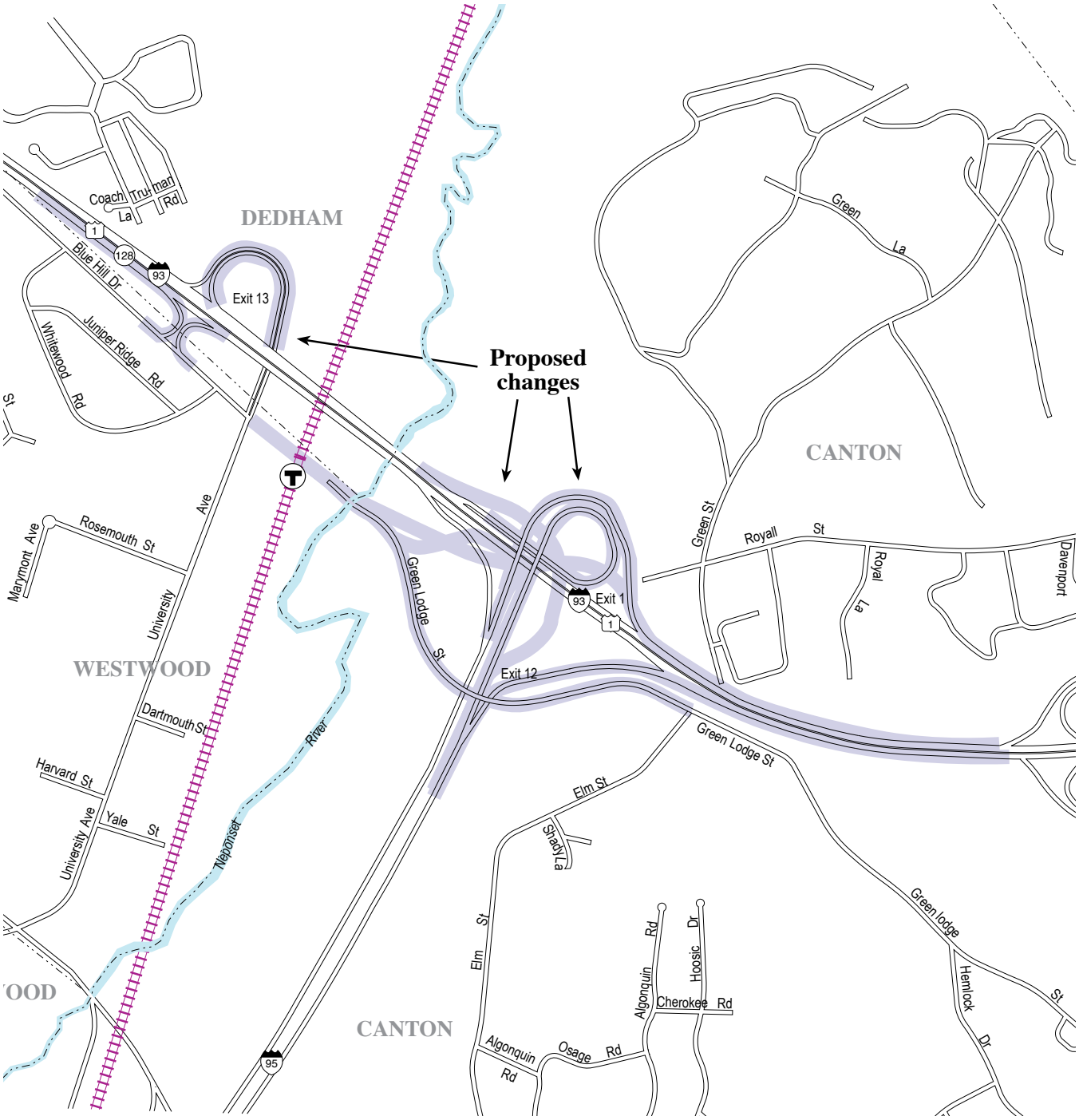
By reducing congestion and travel times, this project will enhance the attractiveness of Amtrak and MBTA commuter rail services at the Route 128 Station, as well as shuttle bus services connecting the station to residential and business centers in the area. The project will also facilitate greater recreational use of the Blue Hill Reservation trail system that runs through the area.

Note

This project implements the recommendations of the University Avenue/I-95/I-93 Regional Traffic Study that was prepared by the Central Transportation Planning Staff in July 1999. It is also consistent with the Canton, Dedham, Norwood, and Westwood Municipal Growth Planning Study.

The environmental impact report currently underway includes the Dedham Street/I-95 Northbound Ramp project (see separate project description). The projects are presented separately in order to show the areas in greater detail.

MAP 13-9 CANTON: I-95/I-93 INTERCHANGE DESCRIPTION



Canton: I-95 Northbound/Dedham Street Ramp ($9,000,000)

Description

Construct a new ramp from Interstate 95 northbound to Dedham Street in Canton. This will complement the benefits of the recently completed construction of the Dedham Street/I-95 southbound ramp by providing direct access to the town of Canton and the town of Westwood's University Avenue industrial area. Although this project is considered part of the Canton/Westwood I-95/I-93/University Avenue project, it is programmed in an earlier year.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

This project is located in the Fowl Meadow/Ponkapoag Bog Area of Critical Environmental Concern. Adjacent land is zoned for light industry and single-family residences.

Mobility

This project will benefit local streets in the area by enabling I-95 northbound traffic destined for the University Avenue area to avoid local residential streets without increasing through traffic on Dedham Street. Users of the upper University Avenue/Blue Hill Drive area will also benefit.

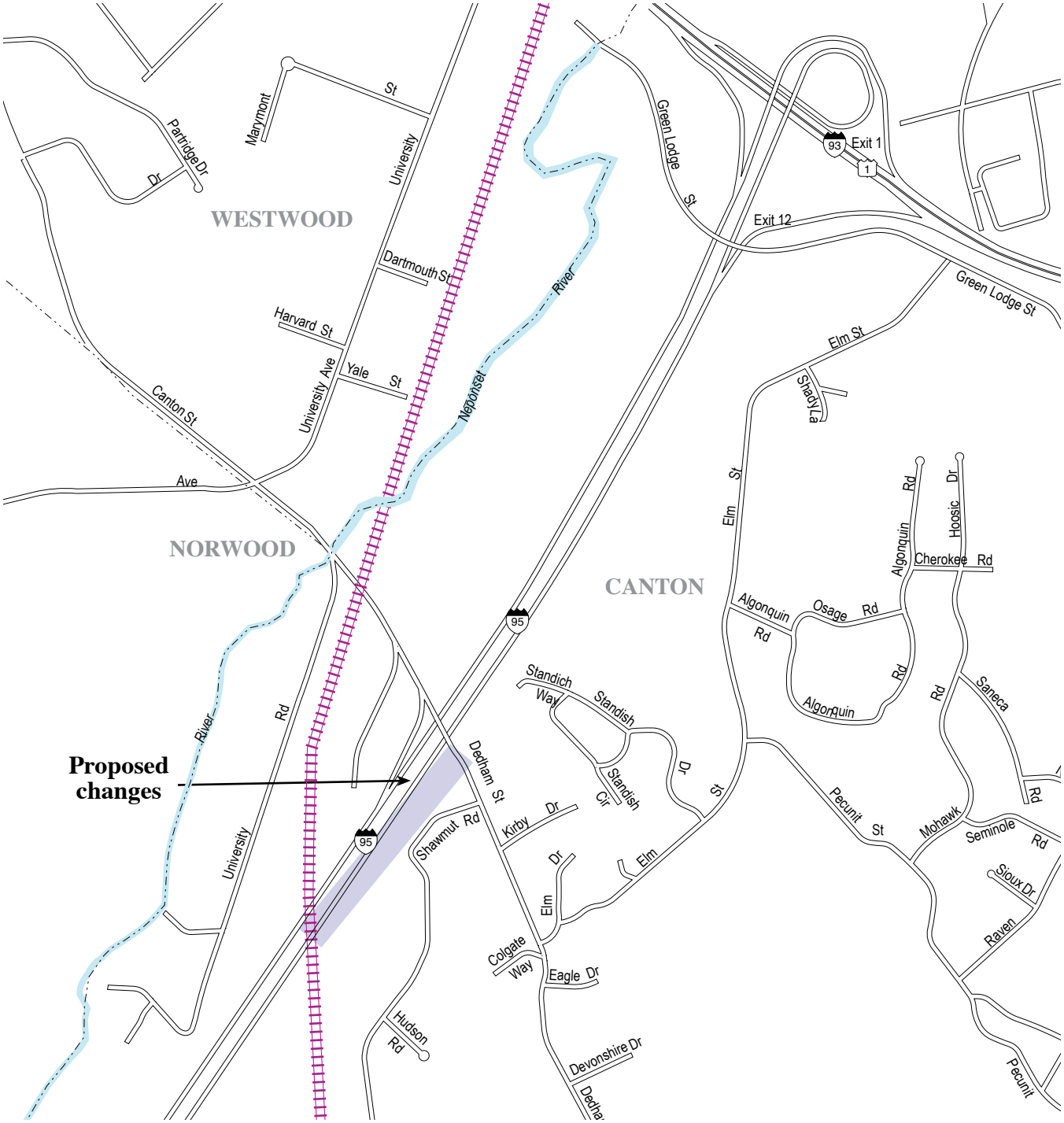
Connectivity

By reducing congestion and travel times, this project will enhance the attractiveness of Amtrak and MBTA commuter rail services at the Route 128 Station, as well as shuttle bus services connecting the station to residential and business centers in the area.

Note

This project implements the recommendations of the University Avenue / I-95/I-93 Regional Traffic Study that was prepared by the Central Transportation Planning Staff in July 1999. It is also consistent with the Canton, Dedham, Norwood, and Westwood Municipal Growth Planning Study.

MAP 13-10 CANTON: I-95 NORTHBOUND/DEDHAM STREET RAMP



Concord and Lincoln: Route 2/Crosby's Corner Grade Separation ($72,000,000)

Description

Realign the section of Route 2 between Bedford Road and Crosby's Corner to the north and convert it into a limited-access roadway. The existing Route 2 alignment will serve as a frontage road, providing access to the adjacent homes and businesses. The newly aligned Route 2 will include four 12-foot travel lanes, separated by a Jersey-barrier median strip, and a 10-foot paved shoulder, in each direction. A new bridge will be constructed to carry Route 2 traffic uninterrupted over the Crosby's Corner intersection.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

The project area includes a mix of zoning, primarily residential and business.

Safety

According to the Route 2 Crosby's Corner draft environmental impact report (DEIR), there are two safety benefits associated with the proposed improvement. The first is that the highest volume movement (Route 2 eastbound /westbound) will no longer be required to stop at the Crosby's Corner intersection. This will reduce the potential for rear-end collisions, especially in the westbound direction, which represent 42 percent of the crashes at this location. An elevated grade-separated interchange will also reduce the 6 percent downgrade in the westbound direction that is a contributing cause of accidents at this location.

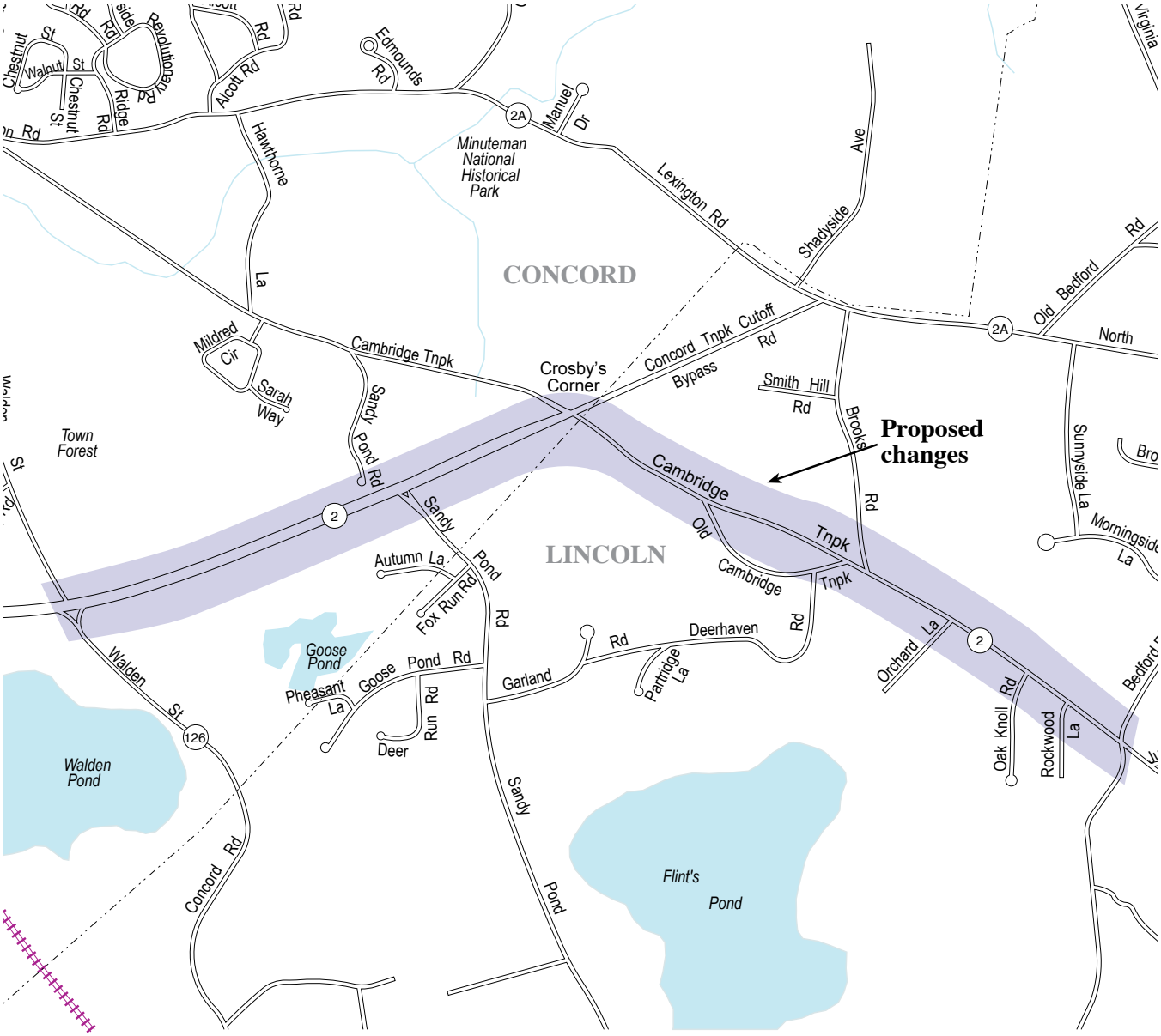
Mobility

On weekdays, Route 2 between Route 128 and I-495 is a radial commuter route. The inbound peak-hour traffic flow in the AM and the outbound flow in the PM represent approximately 60 percent of the two-way traffic. Although Route 2 provides access to some local business and residences, its primary use is for commuting through the area. According to MassHighway traffic counts, the average daily traffic on Route 2 west of Crosby's Corner was 48,000 vehicles in 1998. Average daily traffic on Route 2A east of Crosby's Corner was 11,000 vehicles in 1996. According to the intersection level of service (LOS) analysis that was done for the DEIR in 1995, the Route 2 intersection at Route 126, the Crosby's Corner intersection, and the Route 2 intersection with Bedford Road each had an LOS of F in the AM and PM peak hours.

Note

The proposed improvements will follow the existing right-of-way (ROW) but will require land takings at certain points. The required ROW takings will impact some houses and a conservation area. The improvements will also impact several wetland areas. According to the DEIR, the proposed alternative conforms to Concord's long-range plan for a limited-access expressway.

MAP 13-11 Concord and Lincoln: Route 2/Crosby's Corner Grade Separation



Danvers: Route 128/Route 35 and Route 62 ($25,982,000)

Description

This project will include the reconstruction of two interchanges on Route 128 at Route 62 (Elliot Street) and Route 35 (High Street) to add new acceleration and deceleration lanes. This project will also replace the bridge carrying Route 128 over an unused MBTA railroad yard located south of the High Street interchange.

Project's Context/Possible Impacts, by MPO Policy Area

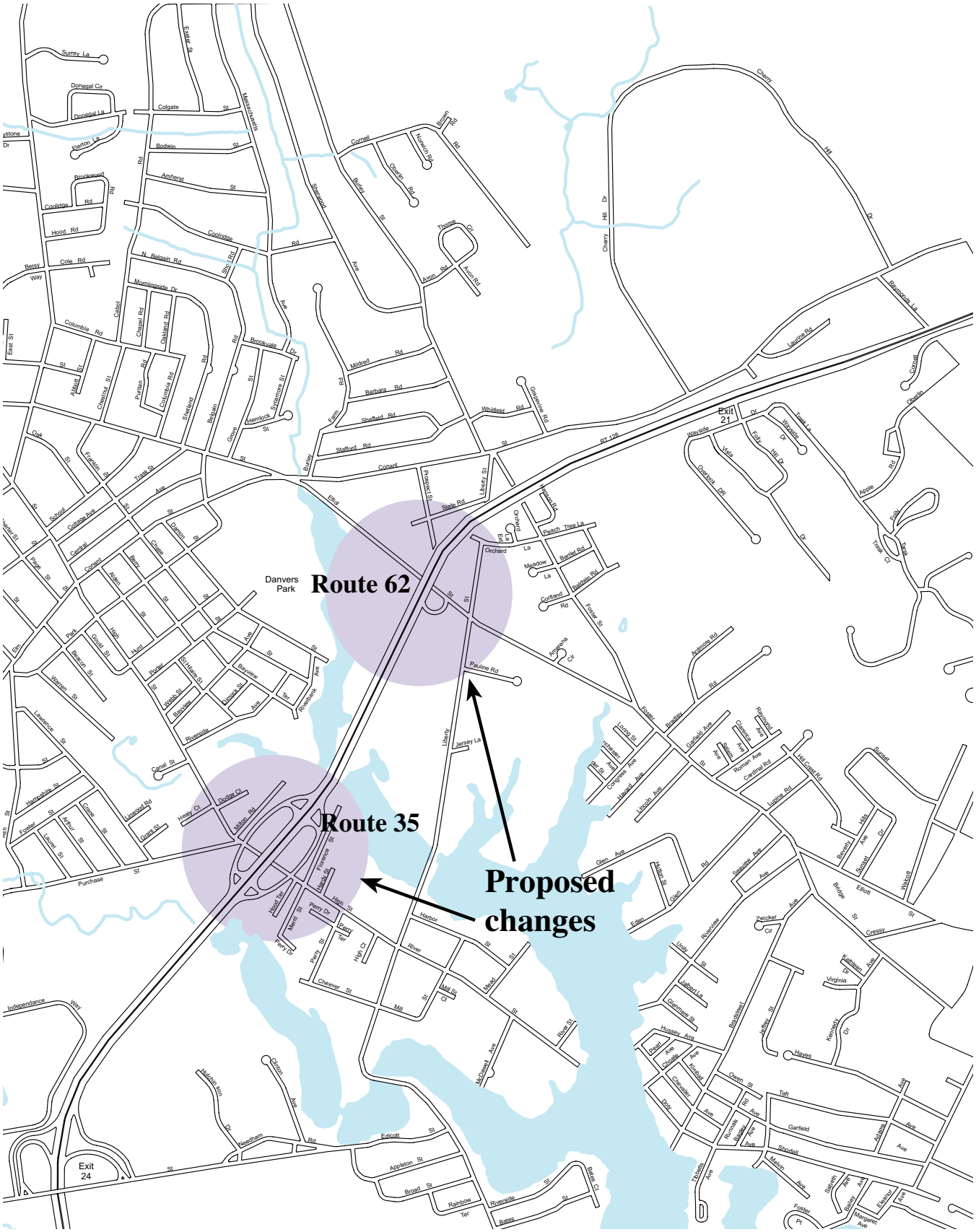
Mobility

According to the Boston Region MPO's Mobility Management System (MMS) data, the average daily traffic (ADT) (collected between 2003 and 2008) entering Interchange 23 at Route 35 is 101,000 vehicles, and ADT entering Interchange 22 at Route 62 is 114,500 vehicles. The current posted speed limits on both interchanges are 55 mph, but average peak-period speeds at the Route 35 and Route 62 interchanges vary within the range of 44 to 54 mph during the AM and PM peak periods.

Safety

There were 65 reported crashes between 2004 and 2006 at Route 35, and 167 reported crashes at Route 62.

MAP 13-12 DANVERS: ROUTE 128/ROUTE 35 AND ROUTE 62



Framingham: Route 126/Route 135 Grade Separation ($54,080,000)

Description

Construct a 700-foot, below-grade underpass (one travel lane in each direction) from Park Street to Irving Street, allowing through traffic on Route 126 (Concord Street) to pass underneath Route 135 (Waverly Street) and the railroad tracks. The majority of the underpass will consist of an ascending/descending ramp with an open roof; approximately 135 feet of it will be a tunnel under Route 135 and the railroad tracks.

Travel lanes will be maintained at grade on Route 126 to intersect with Route 135, with upgraded signalization. Each approach to this intersection will have at least two lanes, and all turning movements will be permitted. The open-box configuration of the underpass will prohibit traffic on Howard Street from crossing Concord Street and will preclude southbound traffic on Route 126 from turning left onto Irving Street.

The design concept for the project includes extensive streetscape amenities such as widened sidewalks, street trees, decorative lighting, and benches. The project also has the potential to encourage economic development in downtown Framingham, partially through the redevelopment of parcels taken for the roadway reconstruction.

Construction of this project will require land-takings, including sites currently in use by downtown businesses. It will also necessitate the elimination of approximately 30 on-street parking spaces.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

This project is located in Framingham's central business district, which, according to the Executive
Office of Environmental Affairs/Metropolitan Area Planning Council buildout analysis, is subject to absolute development constraints, but is also a designated redevelopment district. According to the Route 126 Corridor Study, the construction of this project would help facilitate downtown redevelopment by making the downtown area a more attractive location and by providing redevelopment sites through the partial taking of business sites as necessary for the roadway work.

Safety

This project is located at a high-crash location—between 1999 and 2001, Route 126 at Route 135 has been the site of 127 crashes, of which 98 involved only property damage and 29 involved bodily injury. As such, it ranked #215 on the list of the state's high-crash intersections. As described above, the design of this project maintains all current movements at the intersection, while providing additional travel lanes for through traffic.

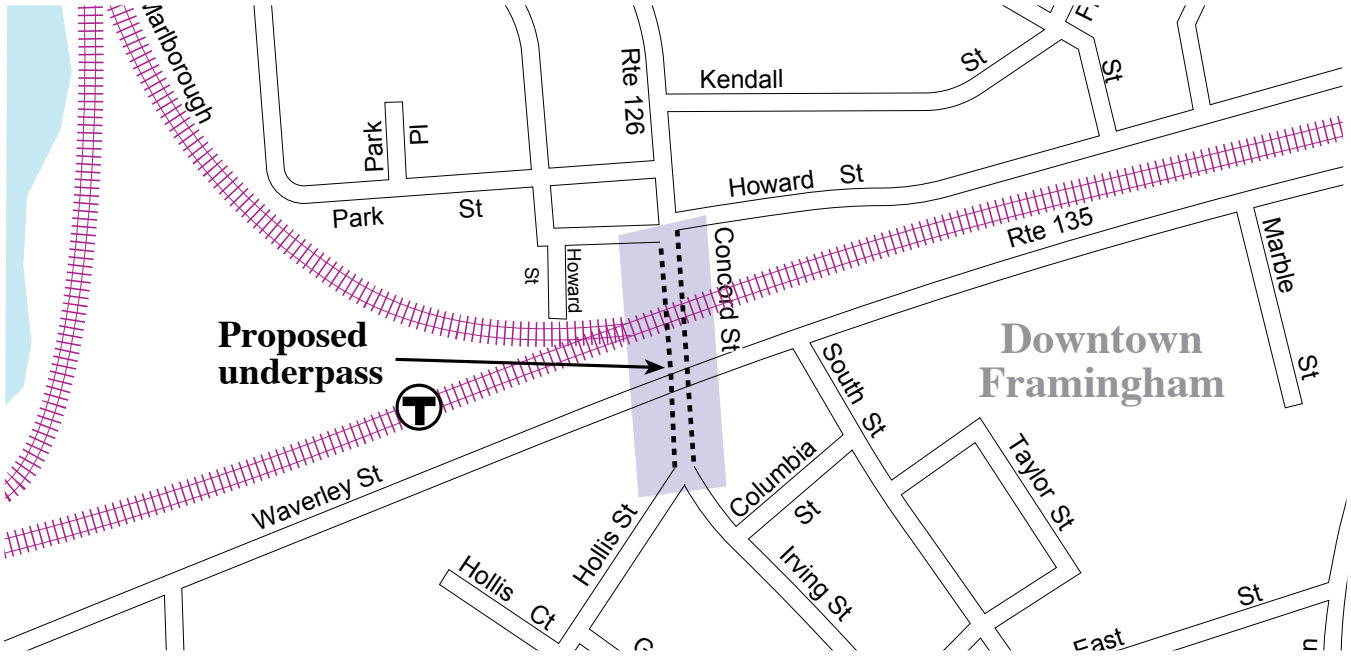
Mobility

This project provides additional travel lanes for through traffic on Route 126, bypassing at-grade intersections with Route 135 and the railroad tracks. According to the Route 126 Corridor Study, the average daily traffic on this segment of roadway is approximately 22,000 vehicles (1996 figure). The Route 126/Route 135 intersection functions at level of service F in the AM and PM peak periods. In terms of delay, the intersection is tentatively rated as the second worst in the MetroWest subregion and the eighth worst in the MPO region (source: 2001/2002 Congestion Management System monitoring).

Connectivity

The Framingham commuter rail station is located near the project site; however, the project does not significantly affect either vehicle or nonmotorized access to the station. All LIFT buses currently connect at a bus stop on the corner of Route 126 and Howard Street; the project as envisioned will eliminate pedestrian and vehicle access across Howard Street. The LIFT 3 bus makes connections southeast of the project

MAP 13-13 Framingham: Route 126/Route 135 Grade Separation



site; the project as envisioned will not impact this route, as it accesses the area via the at-grade connection between Route 126 and Route 135.

Environmental Justice

An MPO-designated community of concern is located in Southeast Framingham adjacent to the project site. This project will facilitate some level of northbound traffic originating from this area or southbound traffic going to the area; however, the project has not been identified as a priority by the environmental justice community.

Economic Opportunities

According to the Route 126 Corridor Study, this project is closely related to the redevelopment of the downtown Framingham central business district.

Community Character

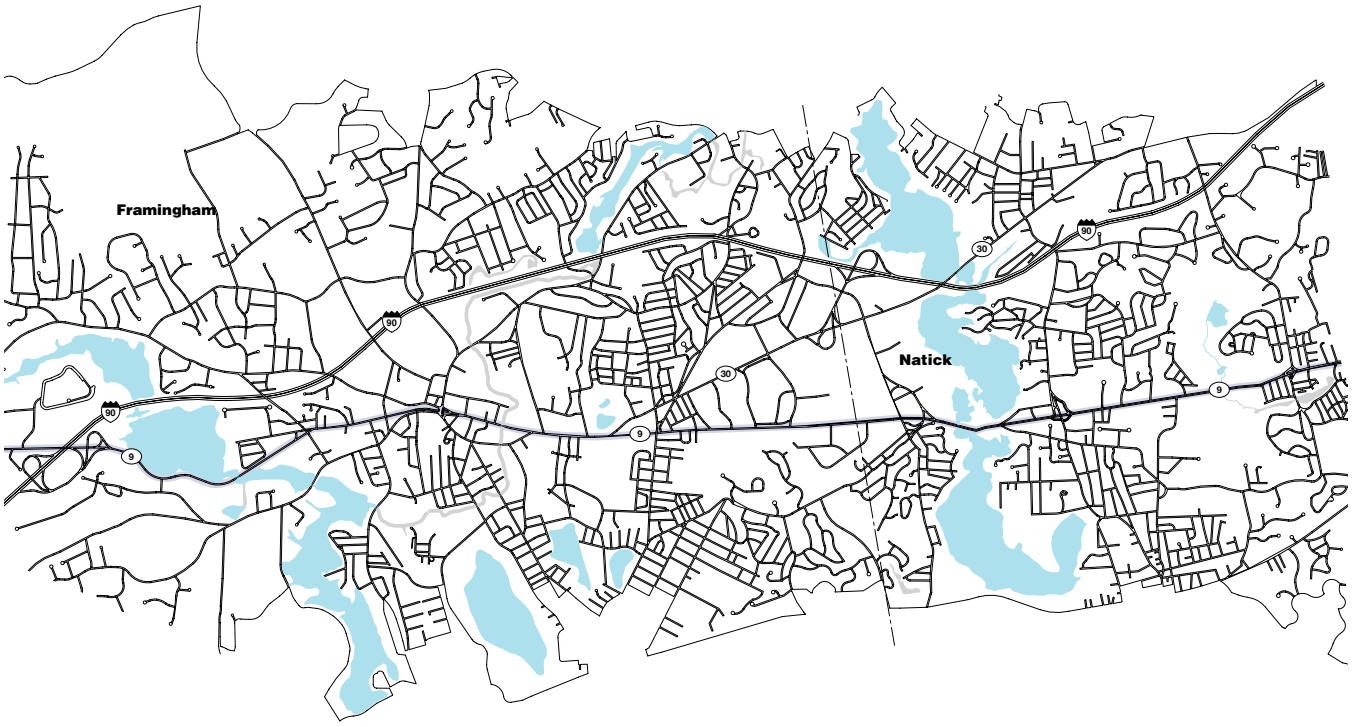
As currently envisioned, the project includes many streetscape amenities and will facilitate downtown redevelopment, including possible facade improvements in the area of the town common. The project also eliminates a significant congestion point in downtown Framingham.

Framingham and Natick: Resurfacing and Related Work on Route 9 ($12,500,000)

Description

Route 9 will be resurfaced from approximately the Southborough/Framingham Line easterly to the Natick/Wellesley Line. The work is to include milling & resurfacing, wheelchair ramp upgrades, additional sidewalk/sidewalk repairs, signal improvements, new reflectorized lines, and recessed roadway reflectors.

MAP 13-14 Framingham and Natick: Resurfacing and Related Work on Route 9



Concord to Westford: Bruce Freeman Rail Trail ($17,250,000)

Description

This project will include two construction phases (Phase 2A and 2C) of the Bruce Freeman Rail Trail (BFRT). The new trail will extend beyond the Phase 1 segment, beginning in Acton and ending at the Concord/Sudbury town line. It will run along the Framingham and Lowell railroad corridor.

Phase 2A will extend from the end of the BFRT Phase 1 section of the trail (the Westford-Lowell Phase) and continue south through Westford, Carlisle, and Acton, a total length of approximately 4.88 miles. It includes the following:

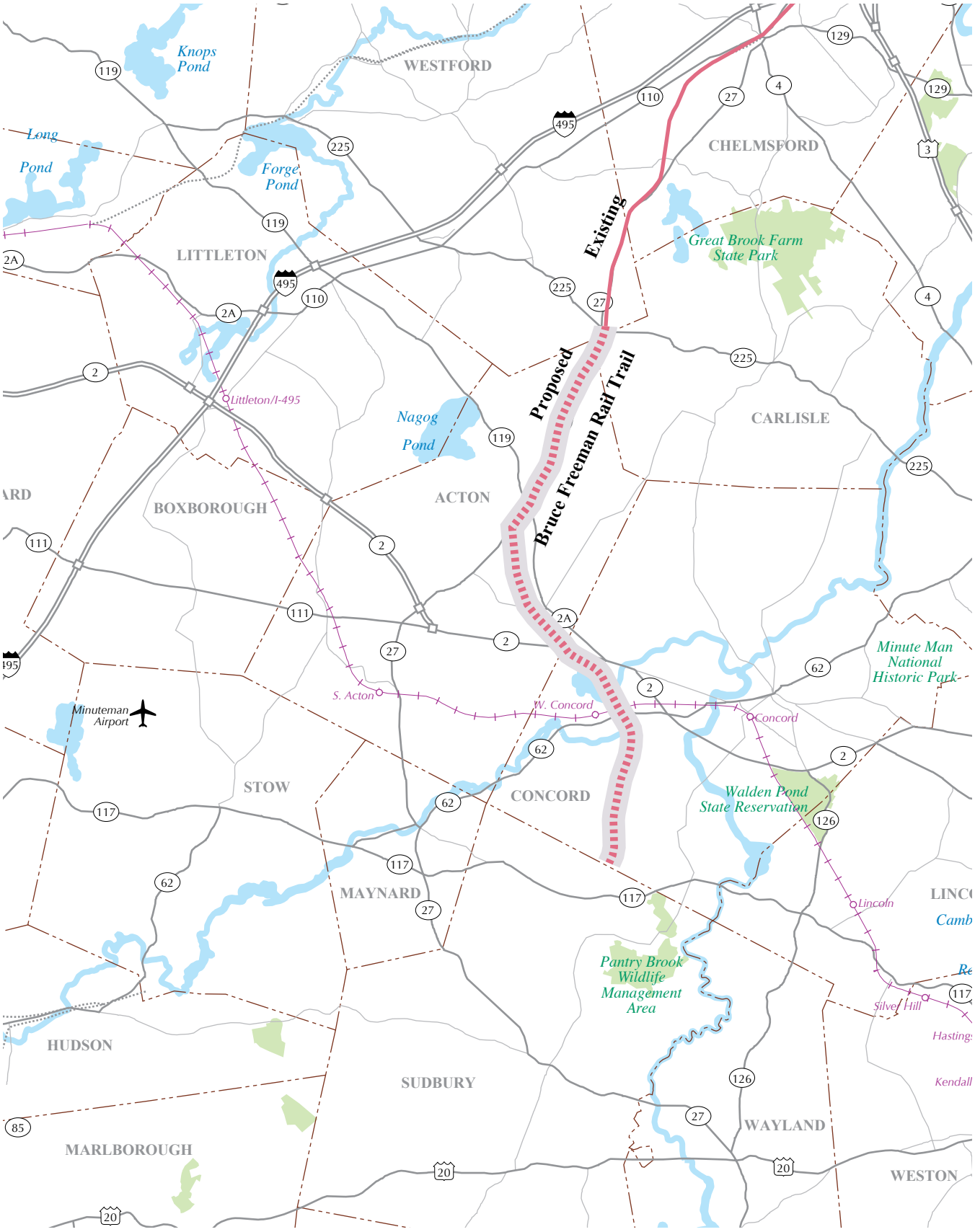
- A new variable-width (ranging from 10 to 12 feet) paved asphalt multi-use rail trail
- Two-foot stabilized shoulders
- An adjacent six-foot-wide stone dust trail (provided where feasible)
- Trail pavement markings and signage
- Passively actuated flashing beacons at trail and roadway crossings
- New roadway pavement markings and signage at trail crossings
- Construction of a prefabricated pedestrian bridge structure over Route 2A/119, and rehabilitation of six existing railroad bridges along the trail
- Construction of culverts, earthwork, landscaping, and other items incidental to the construction of the rail trail.

Phase 2C will include the construction of a 2.5-mile trail section from Commonwealth Avenue south to Powder Mill Road in Concord. The section from Powder Mill Road to the Sudbury town line will be addressed in cooperation with the Town of Sudbury as they develop plans for the trail in their town.

Note that Phase 2B will be part of the Concord Rotary project. Phase 2B is the section of the BFRT from Commonwealth Avenue in Concord to the Acton town line.

The completed BFRT will span approximately 17 miles and will serve as a multimodal alternative transportation route that will connect eight municipalities to various destinations, including downtowns, commuter rail stations, schools, and scenic areas.

MAP 13-15 Concord to Westford: Bruce Freeman Rail Trail



Hanover: Route 53 Final Phase ($1,000,000)

Description

This project will widen Route 53 from two to four lanes in Hanover between Route 3 and Route 123, a distance of 0.26 mile. This project is the fifth and final phase of construction along the Route 53 corridor. Previous projects widened Route 53 to four lanes from Route 3 to Mill Street and Mill Street to Rawson Street. This project also includes the following improvements:

- Installation of a new fully actuated traffic signal at the intersection of Route 53 and the Route 3 northbound ramps
- Construction of a second sidewalk and added shoulders to accommodate pedestrians and bicyclists
- Resurfacing, signage, and drainage.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

The project area is zoned for a mix of uses, though the area along Route 53 is primarily composed of commercial and business properties. Much of the land abutting Route 53 in the project area is subject to absolute development constraints, according to the Executive Office of Energy and Environmental Affairs (EOEEA)/Metropolitan Area Planning Council (MAPC) buildout analysis.

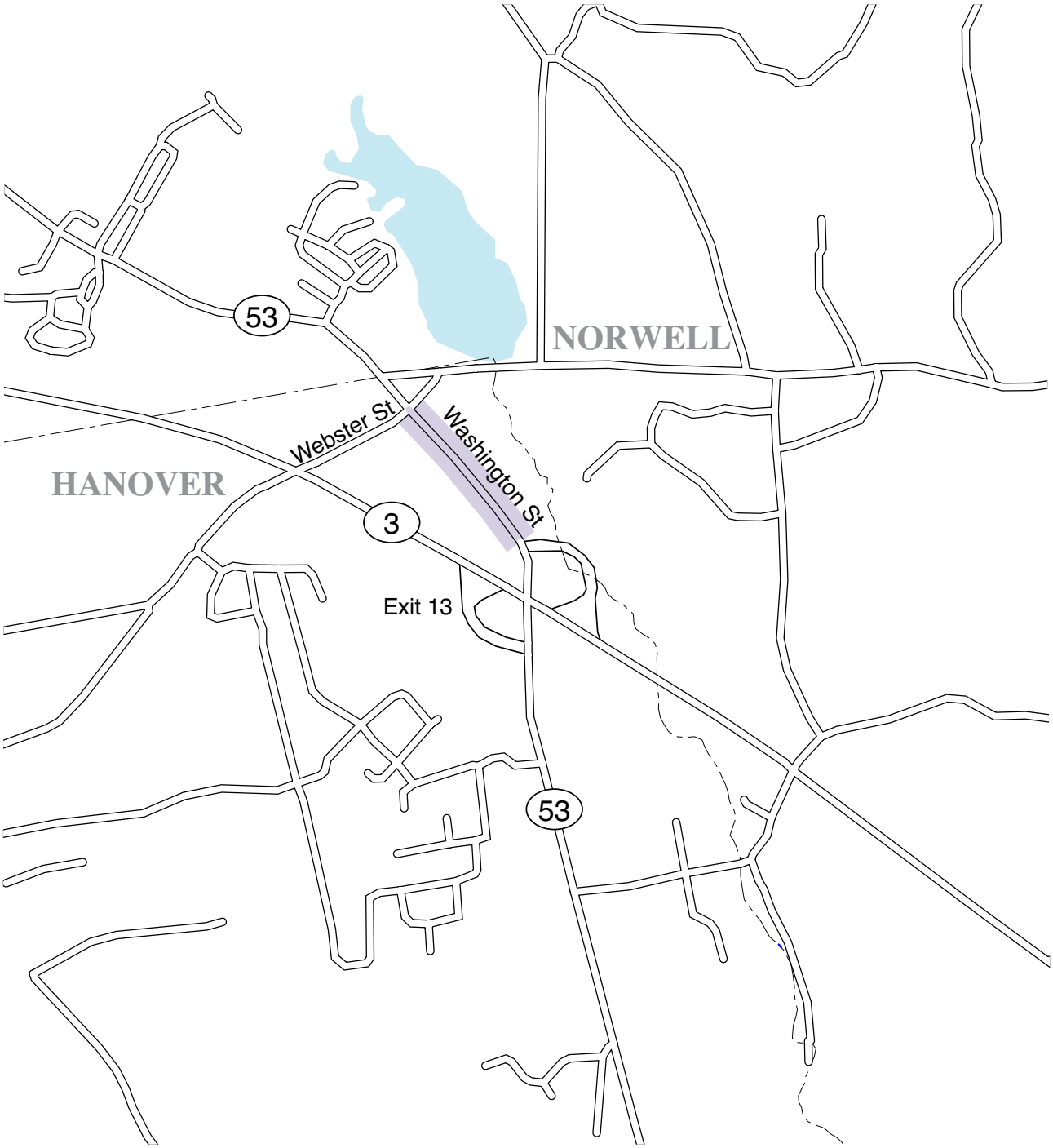
Safety

There are no high-crash locations within the study area according to MassHighway's list of the Top 1,000 high-crash intersections for the years 1999 to 2001.

Mobility

Average observed travel speeds on roadways are compiled in the MPO's Congestion Management Process. Average observed speeds on Route 53 study area in the AM peak period range between 35–42 mph in the northbound direction and are greater than 43 mph in the southbound direction. During the PM peak period, average observed speeds in the northbound and southbound direction of Route 53 range between 35–42 mph.

MAP 13-16 HANOVER: ROUTE 53 FINAL PHASE



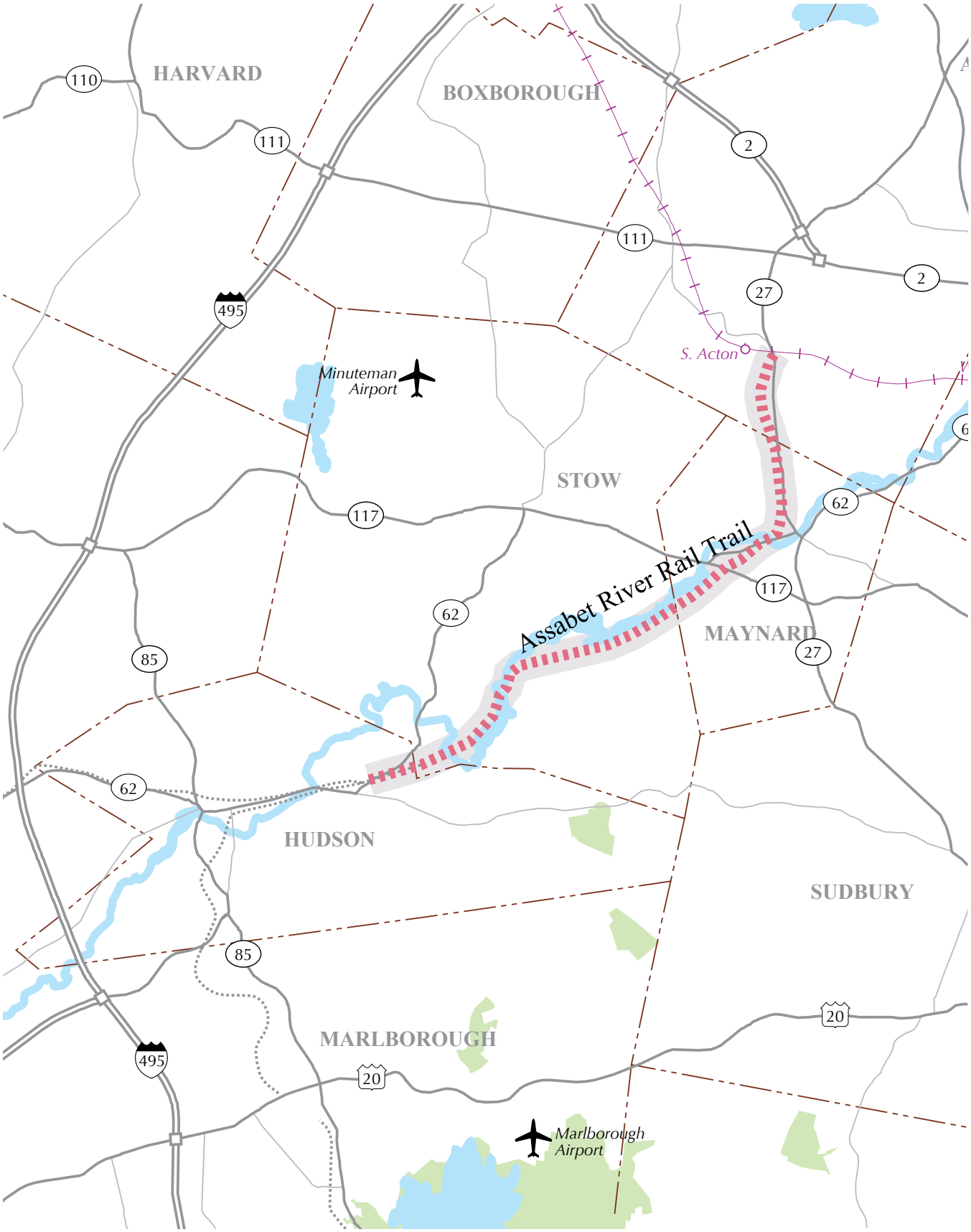
Hudson to Acton: Assabet River Rail Trail ($16,725,000)

Description

This project will include the construction of the Assabet River Rail Trail from Acton, through Maynard and Stow, to Hudson, a distance of 6.6 miles. The work will also include the construction of two new bikeway bridges, replacement of an existing pedestrian bridge, and rehabilitation or replacement of a railroad bridge. The Towns are also proposing a 1,100-foot boardwalk through a wetland area.

This rail trail project will provide an alternative transportation option that will link the Assabet River National Wildlife Refuge with the downtown business districts, retail sectors, playing fields, and the South Acton commuter rail station.

MAP 13-17 HUDSON TO ACTON: ASSABET RIVER RAIL TRAIL



Hudson: Washington Street (Route 85) Widening ($8,400,000)

Description

MassHighway completed a study in 2001 involving Route 85 in the Town of Hudson and the City of Marlborough. The project begins at the Hudson/Marlborough town line and continues northward 1.52 miles to Route 62. It includes the following improvements:

- Resurface Route 85 with minor widening from the Hudson/Marlborough town line to the Route 85 Connector
- Reconstruct and/or resurface Route 85 with widening and intersection improvements from the Route 85 Connector to Brigham Street
- Resurface Route 85 with minor widening from Brigham Street northward to Route 62 (Main Street)

These improvements were once part of a larger set of recommended improvements in Hudson and Marlborough involving Route 85, the Route 85/I-290 Connector, and the I-290/I-495 interchange, but are now a stand-alone project.

Project's Context/Possible Impacts, by Relevant MPO Policy Area

Land Use

Land use along Washington Street (Route 85) from Brigham Street in Hudson to the Marlborough line is zoned as Residential, Commercial, or Industrial.

Safety

There are no high-crash locations in Hudson, according to MassHighway's list of the top 1,000 high-crash locations for the years 1999 to 2001.

Mobility

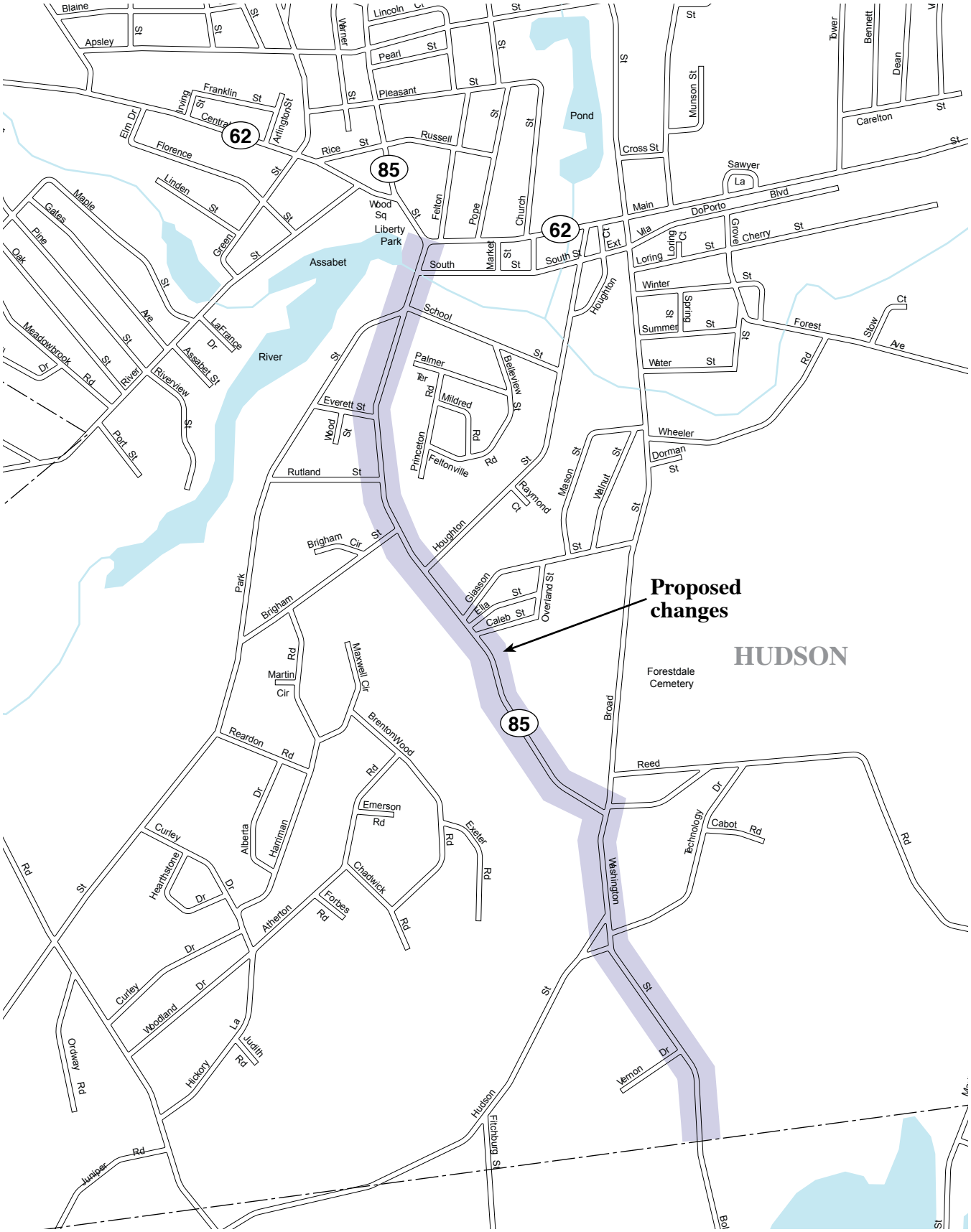
According to MassHighway's 2005 Traffic Volumes for the Commonwealth, daily two-way traffic on Washington Street south of Broad Street ranged from 24,200 to 28,700 in 1999.

From the MPO's Congestion Management System (CMS) data, it was seen that some segments of Washington Street between Brigham Street and the Marlborough town line experienced some peak period congestion. Average observed speeds on this section of Route 85 in the AM peak period were below 25 mph in both directions. During the PM peak period, this same section of Route 85 had observed speeds below 24 mph in both directions. Therefore, based on CMS criteria, this section of Route 85 is considered congested during the AM and PM peak periods.

Connectivity

The Town of Hudson is not located within a regional transit authority district. Sidewalk improvements will provide better access to the Assabet River Rail Trail, which crosses Route 85 within the project area.

MAP 13-18 HUDSON: WASHINGTON STREET (ROUTE 85) WIDENING



Malden, Revere, and Saugus: Route 1 Improvements ($70,304,000)

Description

Widen Route 1 from four to six lanes between Copeland Circle (Route 60) and Route 99. As part of this project, the on- and off-ramps at Salem Street and Lynn Street will be reconstructed to provide acceleration/deceleration lanes, better turning radii, and full turning movements. Also, the connection between Route 99 and Route 1 will be improved by providing a normal right-lane merge from Route 99 northbound to Route 1 northbound.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

Zoning along Route 1 in the project area is primarily residential, light industrial, and highway-oriented businesses.

Safety

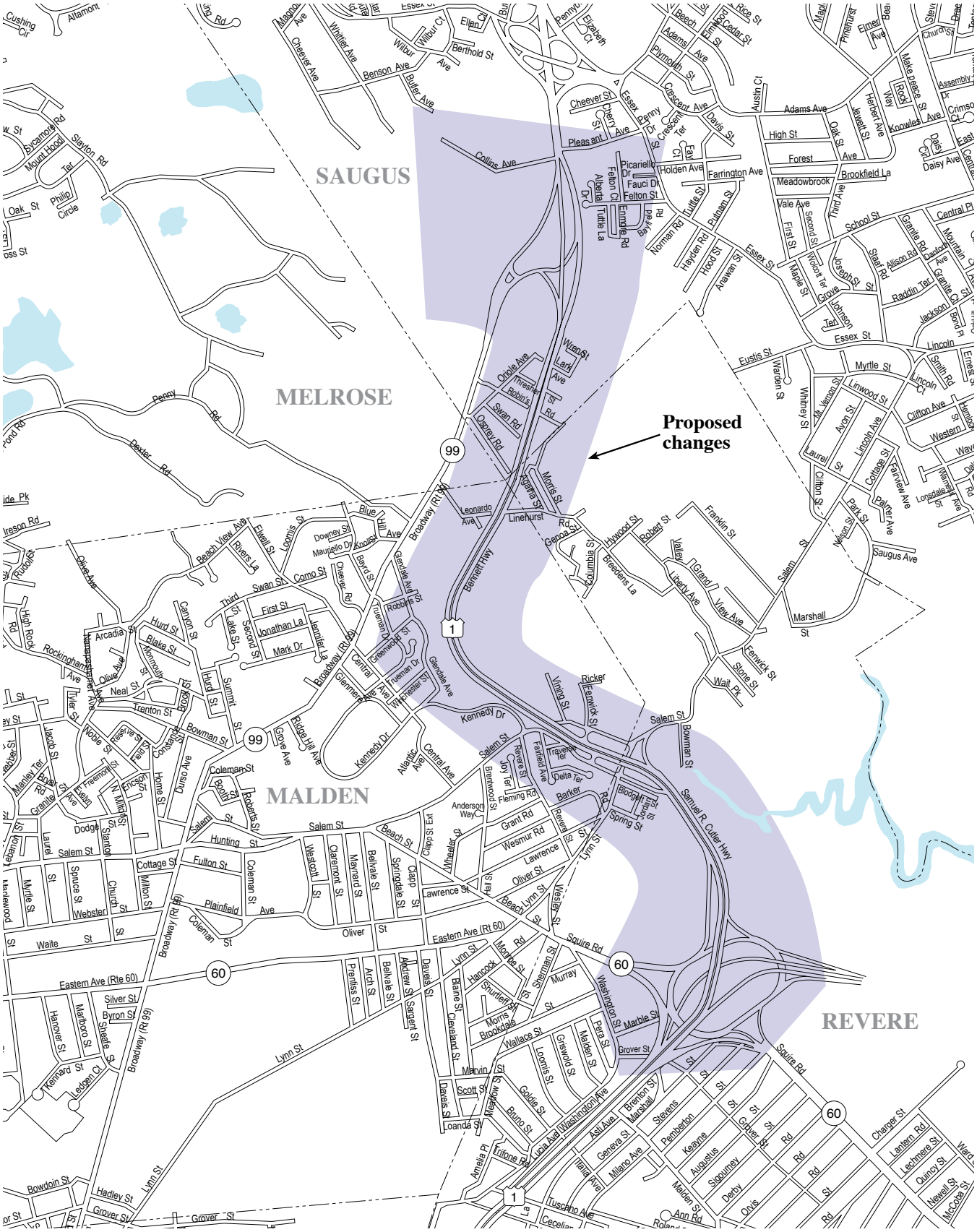
This project area includes a high-crash location—between 1999 and 2001, the intersection of Route 1 and Copeland Circle in Revere was the site of 463 crashes, of which 249 involved only property damage and 213 involved bodily injury, with one resulting in a fatality. It ranked #3 on the list of the state's high-crash intersections.

In addition, according to the Lower North Shore Transportation Improvement Study conducted by CTPS in 2000, unsafe traffic operations are present at the on- and off-ramps of the Salem Street/ Lynn Street interchange due to the ramps' geometric limitations, including the absence of deceleration and acceleration lanes, the tight turning radii, and the close proximity of adjacent ramps.

Mobility

Average daily traffic (ADT) along Route 1 at the Malden/Revere city line was 88,500 in 2004, according to traffic volume data compiled by MassHighway, while ADT along Route 1 one-half kilometer north of Sargent Street (south of Route 60) was 54,600 in 1998. Traffic volumes along Route 1 are significantly higher north of Copeland Circle (Route 60), since Route 60 serves as the major east-west connector between towns north of Malden and the coast, Logan Airport, and the Wonderland Blue Line Station. Despite this, Route 1 has six lanes south of Copeland Circle and narrows to four lanes north of the Circle. According to the Lower North Shore Study, recurring congestion occurs on Route 1 southbound at the Route 60 off-ramp during the AM peak period and on Route 1 northbound at the Route 60 on-ramp during the PM peak period.

MAP 13-19 MALDEN, REVERE, AND SAUGUS: ROUTE 1 IMPROVEMENTS



Marshfield: Route 139 Widening ($7,150,200)

Description

This project will increase the travel lanes from two to four lanes on Route 139 between School Street and Furnace Street to remove the bottleneck condition. It also includes the following improvements:

- Construct a new sidewalk on the north side of the roadway with ADA-compliant pedestrian ramps and crosswalks
- Reconstruct the existing sidewalk on the south side of the roadway
- Add turning lanes and signalization at intersections along the corridor
- Expand shoulder width to six feet to accommodate bicycles

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

Land use in this area of Marshfield is zoned for business, industrial, office park, and residential use. Much of the land abutting Route 139 in the project area is subject to partial or absolute development constraints, according to the Executive Office of Energy and Environmental Affairs (EOEEA)/Metropolitan Area Planning Council (MAPC) buildout analysis.

Safety

There are two high-crash locations within the study area, according to MassHighway's list of the Top 1,000 high-crash intersections for the years 1999 to 2001.

- The intersection of Route 139 and Ocean Street was ranked #850 on the list, with 41 crashes, of which 24 involved only property damage and 17 resulted in personal injury.
- The intersection of Route 139 and Route 3A was ranked #885 on the list, with 50 crashes, of which 36 involved only property damage and 14 resulted in personal injury.

A total of 145 crashes were reported within the study area between 2003 and 2005, according to the Town of Marshfield Police Department. Of those, 88 crashes involved property damage, 35 crashes involved personal injury, and there were no fatalities.

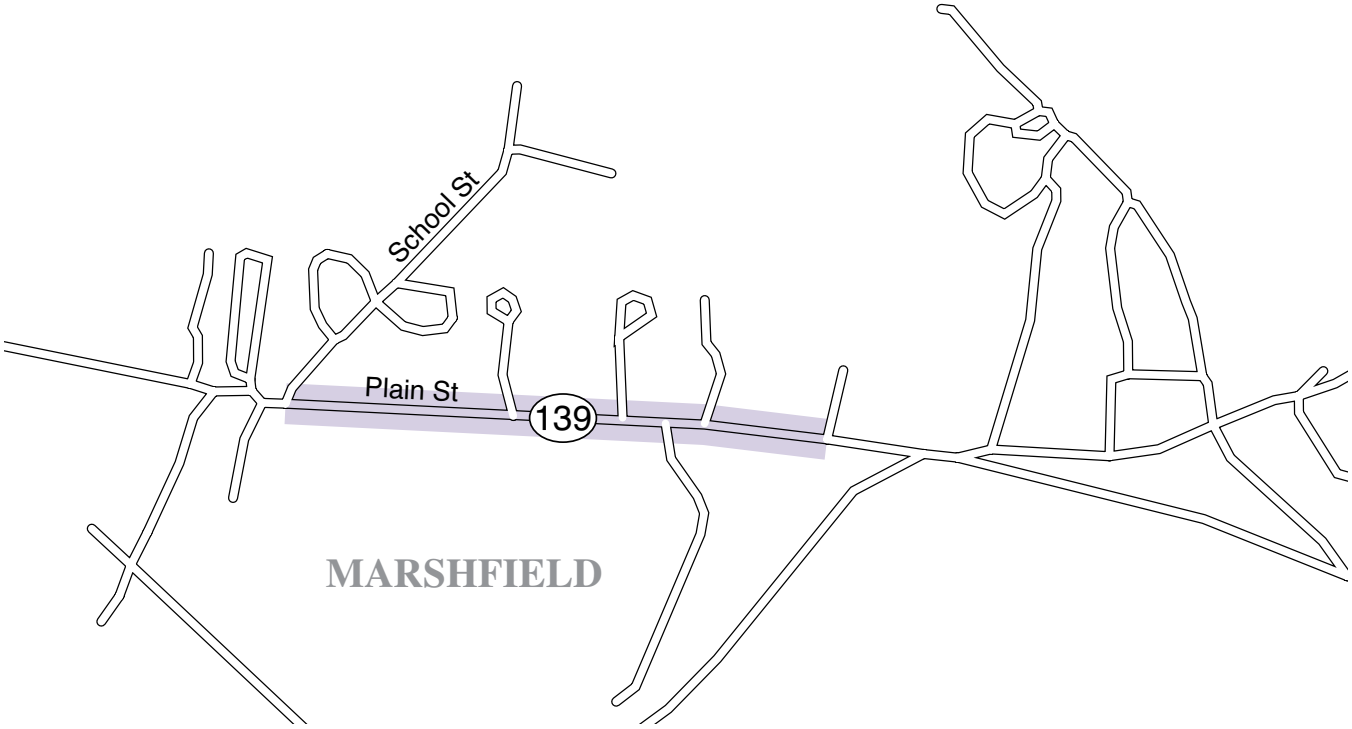
Mobility

According to MassHighway traffic counts, the average daily traffic volume on Route 139 west of Route 3A was 20,100 vehicles in 2003, and east of Webster Street it was 17,000 in 2004. Traffic volumes included in the Route 139 Corridor Improvement Study prepared by Vollmer Associates in April 2005 indicate traffic volumes to be approximately 36,500 vehicles east of School Street and 26,000 vehicles east of Cross Street. According to the Functional Design Report by Tetra Tech Rizzo, four of the five intersections along the Route 139 study area operate at LOS F during AM, PM, and Saturday peak hours. Current speed limits on Route 139 are posted at 45 mph.

Connectivity

The proposed improvements will include continuous sidewalks on both sides of the roadway to accommodate pedestrian activity. In addition, a six-foot-wide shoulder will be provided to serve as a shared bicycle lane.

MAP 13-20 MARSHFIELD: ROUTE 139 WIDENING



Needham and Newton: Needham Street/Highland Avenue ($17,000,000)

Description

Needham Street will remain a three-lane cross section from the Needham Street/Winchester Street/Dedham Street intersection in Newton to the bridge over the Charles River at the Needham town line. The roadway will be rehabilitated and widened to include bicycles, new sidewalks, reconfigured intersections, and updated traffic signals. The Highland Avenue portion of the project will improve the geometry of the roadway from the Highland Avenue/Webster Street intersection in Needham to the Newton town line. Work will include upgrades and the installation of traffic signals at five intersections. The project will also include the reconstruction and widening of the bridge over the Charles River to accommodate four travel lanes.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

The project area in Newton along Needham Street is zoned as residential from Route 9 north and as mixed-use and multi-residential from Route 9 south to the Needham town line. The project area in Needham is zoned as industrial east of Interstate 95 to the Newton town line and residential west of I-95.

Safety

This project area includes one high-crash locations—Highland Avenue at I-95 in Needham. Between 1999 and 2001, the Highland Avenue/I-95 intersection was the site of 139 crashes, of which 88 involved only property damage and 51 involved bodily injury. It ranked #106 on the list of the state's high-crash intersections.

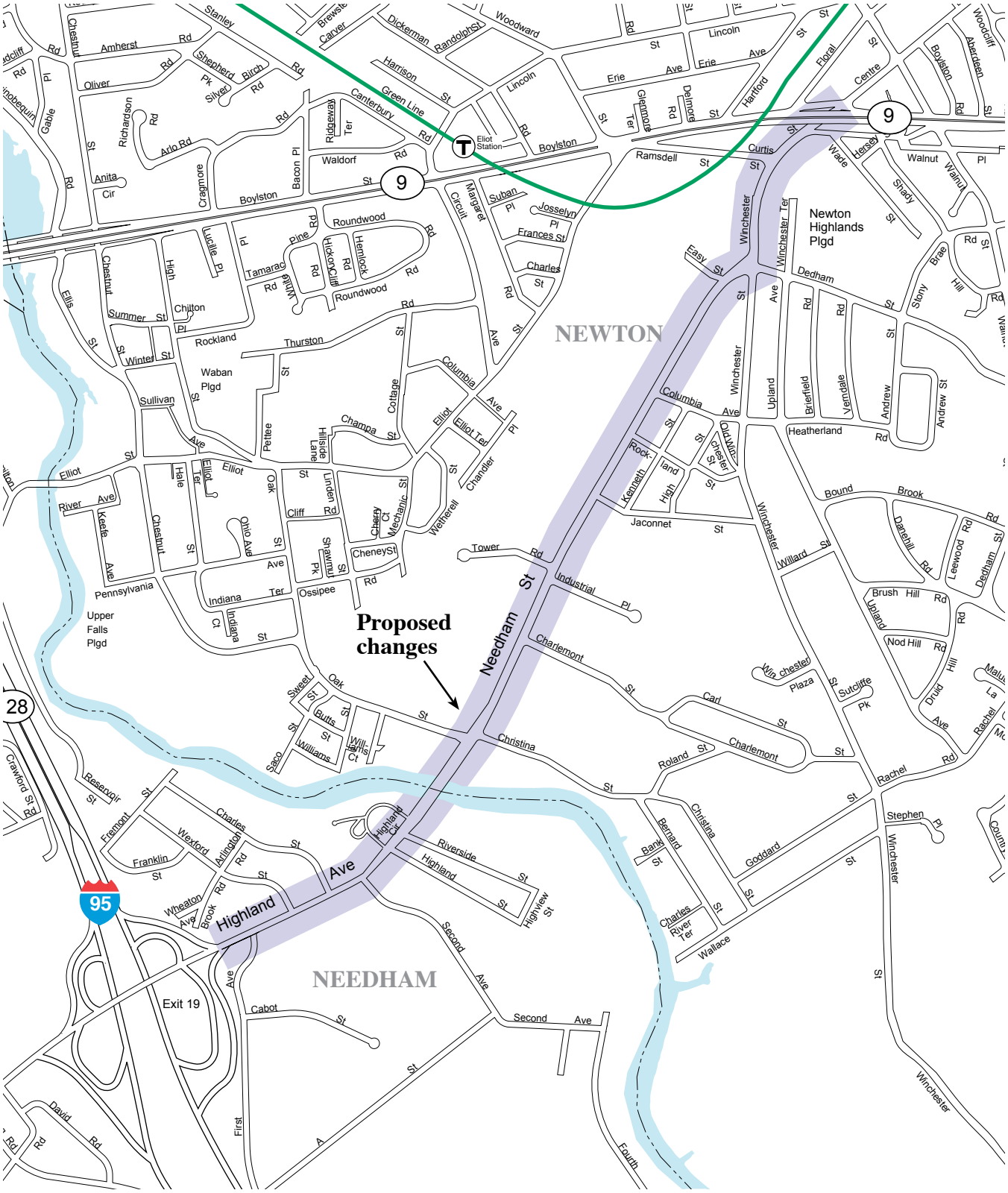
Mobility

According to MassHighway traffic counts performed in 2002 on Highland Avenue west of Gould Street in Needham, the average daily traffic (ADT) was 23,300 vehicles. The ADT on Needham Street south of Tower Road in Newton in 2001 was 25,200 vehicles. According to counts performed as part of the Highland Avenue Corridor Improvements Functional Design Report (FDR) in 2002, the ADT on Highland Avenue east of First Street (just east of I-95 and between the two other count locations) was 36,700 vehicles. Results from the 2001–2002 Congestion Management System monitoring indicate that the average travel speed on both Needham Street and Highland Avenue is 15 mph or less (level of service E/F) along multiple segments of this corridor in the northbound and southbound directions during the AM and PM peak periods.

Economic Opportunities

According to both the Highland Avenue Corridor Improvements FDR and the proposed Stop and Shop Supermarket draft environmental impact report, this project would help facilitate redevelopment along this corridor.

MAP 13-21 NEEDHAM AND NEWTON: NEEDHAM STREET/HIGHLAND AVENUE



Quincy: Quincy Center Concourse Phase 2 ($8,100,000)

Description

This project continues work from Phase One, which was the construction of a bridge over the MBTA tracks between Burgin Parkway and Parkingway completed in 2002. Phase Two of this project consists of a new roadway from Parkingway to Hancock Street, the realignment of Revere Road between Hancock Street and Mechanic Street, and the reconstruction of Revere Road from Mechanic Street to just beyond Miller Style Road where the road will link up with Concourse Phase Three (McGrath Highway reconstruction). The new four-lane road will improve east-west vehicular access through Quincy Center while promoting economic development and revitalization of the city's urban core.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

The project area is located in the central business district of Quincy and is zoned for mixed-use under the Quincy Center Zoning Districts.

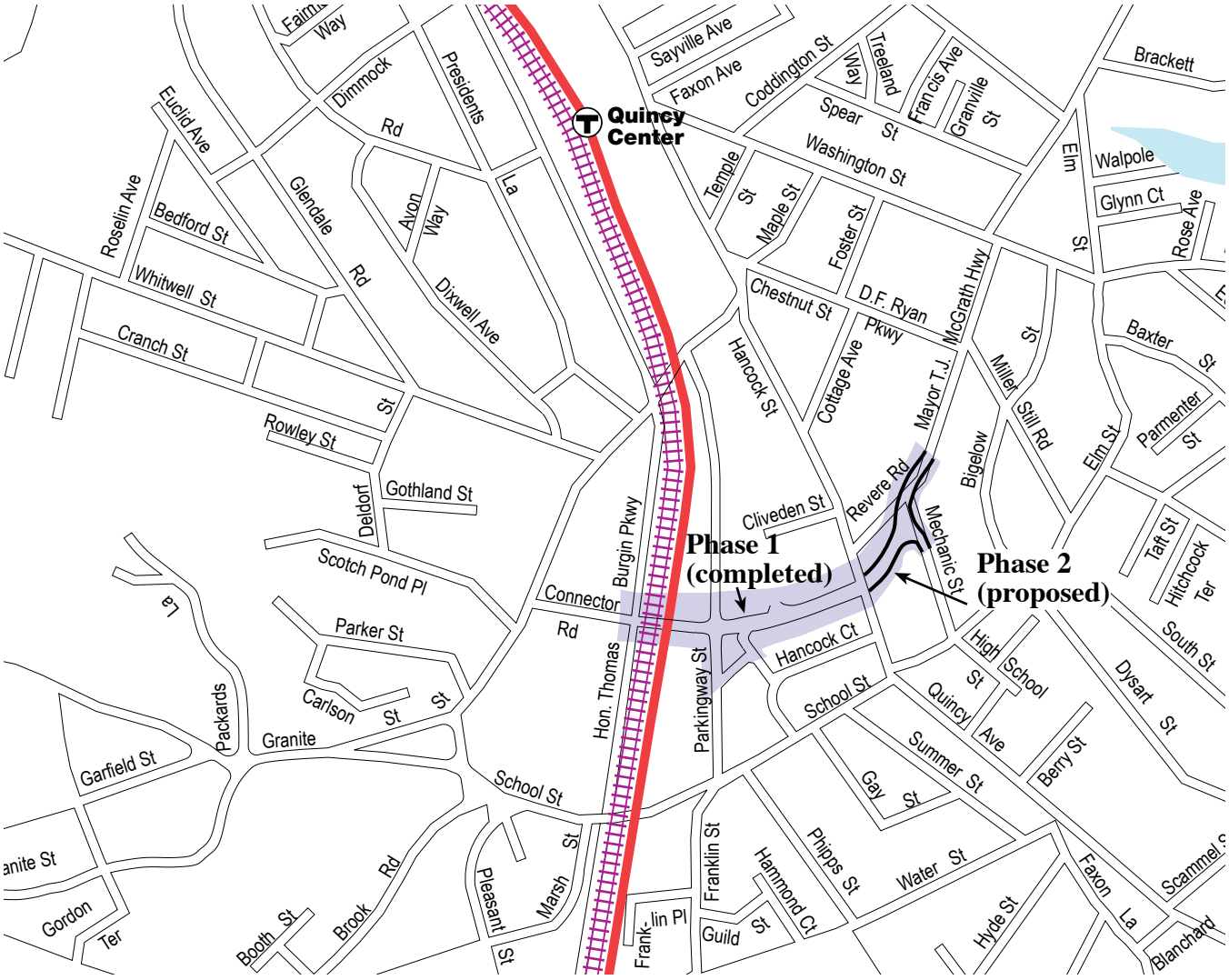
Mobility

According to the Quincy Center Concourse Traffic Study Report (September 1995), the completion of the entire project will provide a new connection between Burgin Parkway and the Southern Artery (Route 3A). The new four-lane roadway will provide the downtown with a second major access point from Route 3 (via Burgin Parkway) and will improve vehicular movement and flow in and around the project area. Design of Phase Two includes pedestrian friendly amenities and signalization at the intersections of Concourse/Hancock Street and Concourse/Miller Stile Road that will improve pedestrian mobility and safety.

Note

The design concept for the project is to develop a pedestrian friendly context sensitive design that will add to and not take away from the existing urban environment. The project is expected to improve access and mobility to downtown and unlock the development potential of several existing parcels that will stimulate private investment in Quincy Center.

MAP 13-22 QUINCY: QUINCY CENTER CONCOURSE PHASE 2



Reading and Woburn: I-93/I-95 Interchange ($194,792,000)

Description

Improve safety at the junction of Interstate 93 and Interstate 95. The project includes a combination of highway, transit, and transportation demand management improvements as follows:

Highway Improvements:

- Add a fourth travel lane to I-95 between I-93 and Route 28 and in the northbound direction only extend the fourth lane to Route 129
- Two new direct connection interchange ramps to remove weaves
- Reconfigured ramps at Route 128 Northbound/Washington Street
- Anticipated noise barriers

Transit Improvements:

- Anderson Regional Transportation Center shuttle services
- Increased MBTA reverse peak and local bus service
- New Peabody park-and-ride-lot and shuttle service
- Increased commuter rail – Lowell/Haverhill to Boston

Transportation Demand Management:

- Increased marketing, incentives, and signage for transit and carpooling

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

Zoning in the project area is residential, industrial, and business.

Safety

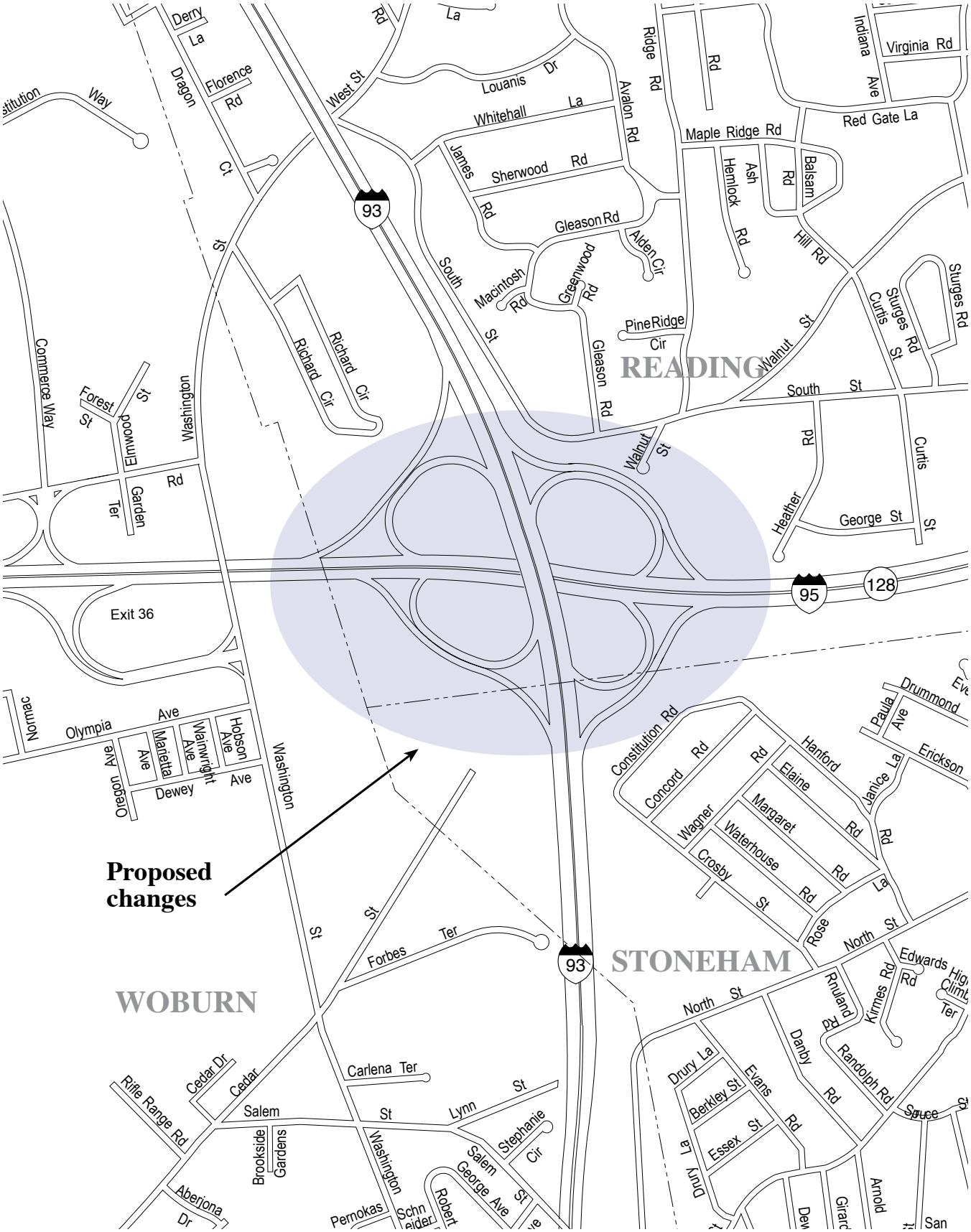
This interchange is a high-crash location—between 1999 and 2001, the I-93/I-95 interchange was the site of 560 crashes, of which 398 involved only property damage and 162 involved bodily injury. It was ranked the #5 high-crash site on the list of the state's high-crash intersections.

Mobility

According to MassHighway traffic counts, the average daily traffic on the interstate highways leading into this interchange is as follows:

- I-93 north of I-95 (2004 counts) – 165,100 vehicles
- I-93 south of I-95 (2001 counts) – 161,900 vehicles
- I-95 east of I-93 (2000 counts) – 153,000 vehicles
- I-95 west of I-93 (1997 counts) – 168,300 vehicles

MAP 13-23 READING AND WOBURN: I-93/I-95 INTERCHANGE



Salem: Bridge Street ($10,000,000)

Description

Bridge Street (Route 1A) from Flint Street to Washington Street will be widened to two lanes in each direction.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

A portion of this area of Bridge Street was recently rezoned to North River Canal Corridor Mixed Use District to encourage Mixed use redevelopment and a higher and better use of the land. A portion of the adjacent land remains residentially zoned for two-family use.

Safety

This project includes two high-crash locations—Bridge Street/North Street and Bridge Street/ Washington Street. Between 1999 and 2001, the Bridge Street/North Street intersection was the site of 75 crashes, of which 54 involved only property damage, 21 involved bodily injury. It ranked #445 on the list of the state's high-crash intersections. The Bridge Street/Washington Street intersection was the site of 54 crashes, of which 42 involved only property damage and 12 involved bodily injury. It ranked #969 on the list of the state's high-crash intersections.

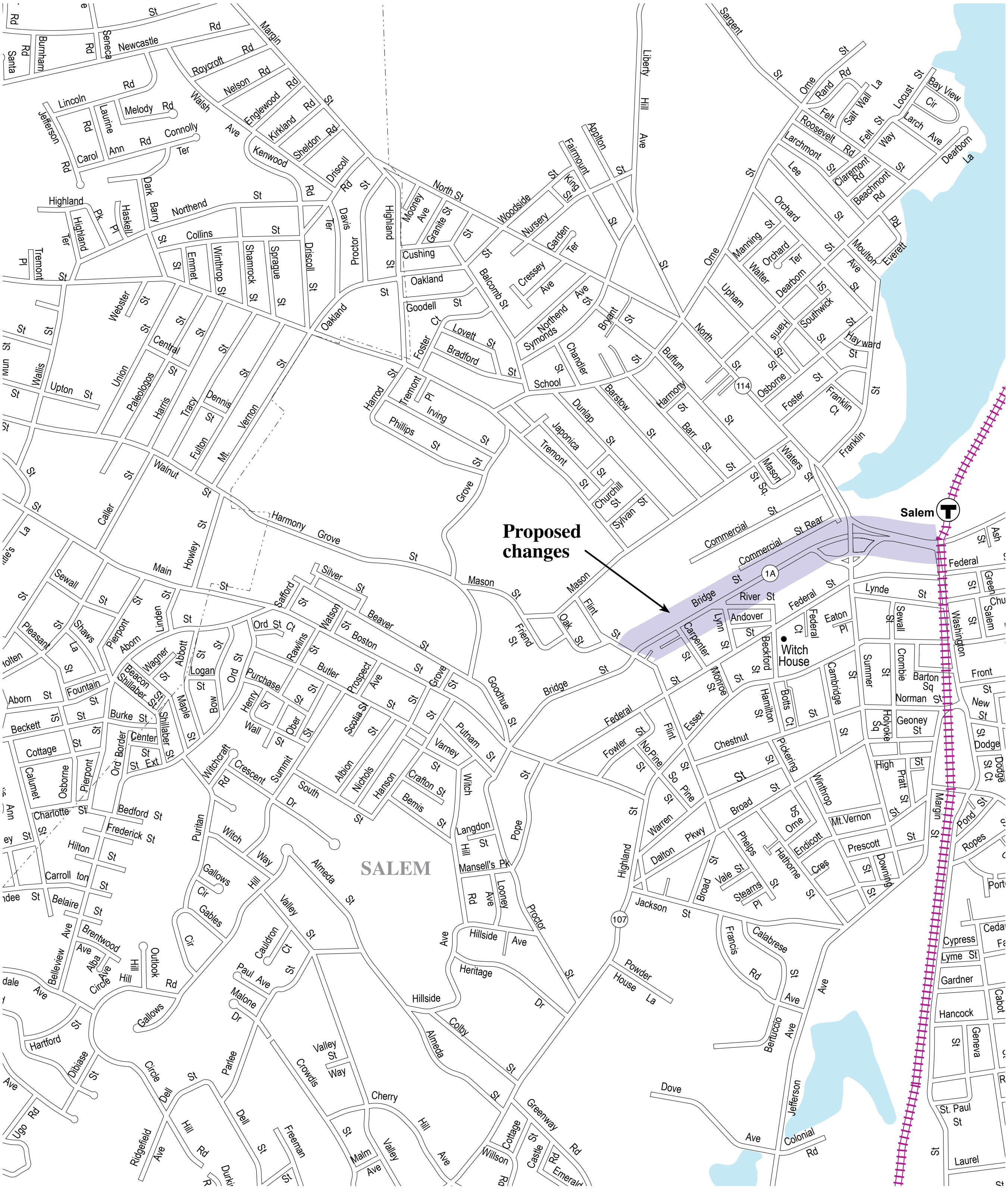
Mobility

According to MassHighway traffic counts, the average daily traffic on Bridge Street north of North Street is 23,900 vehicles (2004 figures).

Connectivity

The Salem commuter rail station is located in the vicinity of the project. The MBTA is working to expand parking at this commuter rail station. All MBTA buses that operate in Salem connect at this commuter rail station. The Bridge Street project will improve access to this site and, as envisioned, will enhance pedestrian access on Bridge Street and at the Washington Street rotary.

MAP 13-24 SALEM: BRIDGE STREET



Somerville: Assembly Square Roadways ($28,000,000)

Description

Reconstruction of a 1.2+ mile roadway (Assembly Square Drive) that will serve as the primary north–south thoroughfare within the Assembly Square District and a series of intersection and roadway improvements that will address vehicular access and public safety associated with new development opportunities planned within Assembly Square in Somerville. It includes the following improvements:

- New signal installation at I-93 southbound on-ramp; the intersection of Middlesex Avenue and Foley Street; and the intersection of Mystic Avenue northbound and New Road
- Improvement and extension of Foley Street and New Road (the extension of New Road is IKEA Way)
- Construction and signal upgrade of G Street
- A new roadway will be constructed between Mystic Avenue and Route 28
- Intersection reconfiguration to allow left turns out of the site onto Route 28 southbound
- Traffic signal upgrade to improve visibility at Route 28 and Mystic Avenue northbound

  Pedestrian crossing upgrades and signal installation at Kensington Avenue

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

The project area contains an estimated 5+ million square feet of mixed-use development, including the 340,000-square-foot IKEA store, 667,000 square feet of additional retail space, 2,100 housing units, and 1.78 million square feet of new office development.

Safety

The intersection of Route 28 southbound and Mystic Avenue northbound is the top crash location in the MPO area, according to a 1999–2001 MassHighway safety study. The project aims to improve access for multiple transportation users, including passenger vehicles, pedestrians, bicyclists, and buses, through bicycle lanes, sidewalks, flashing crosswalks, signage, and vehicular lanes which will enable direct bus connections to the new Orange Line station.

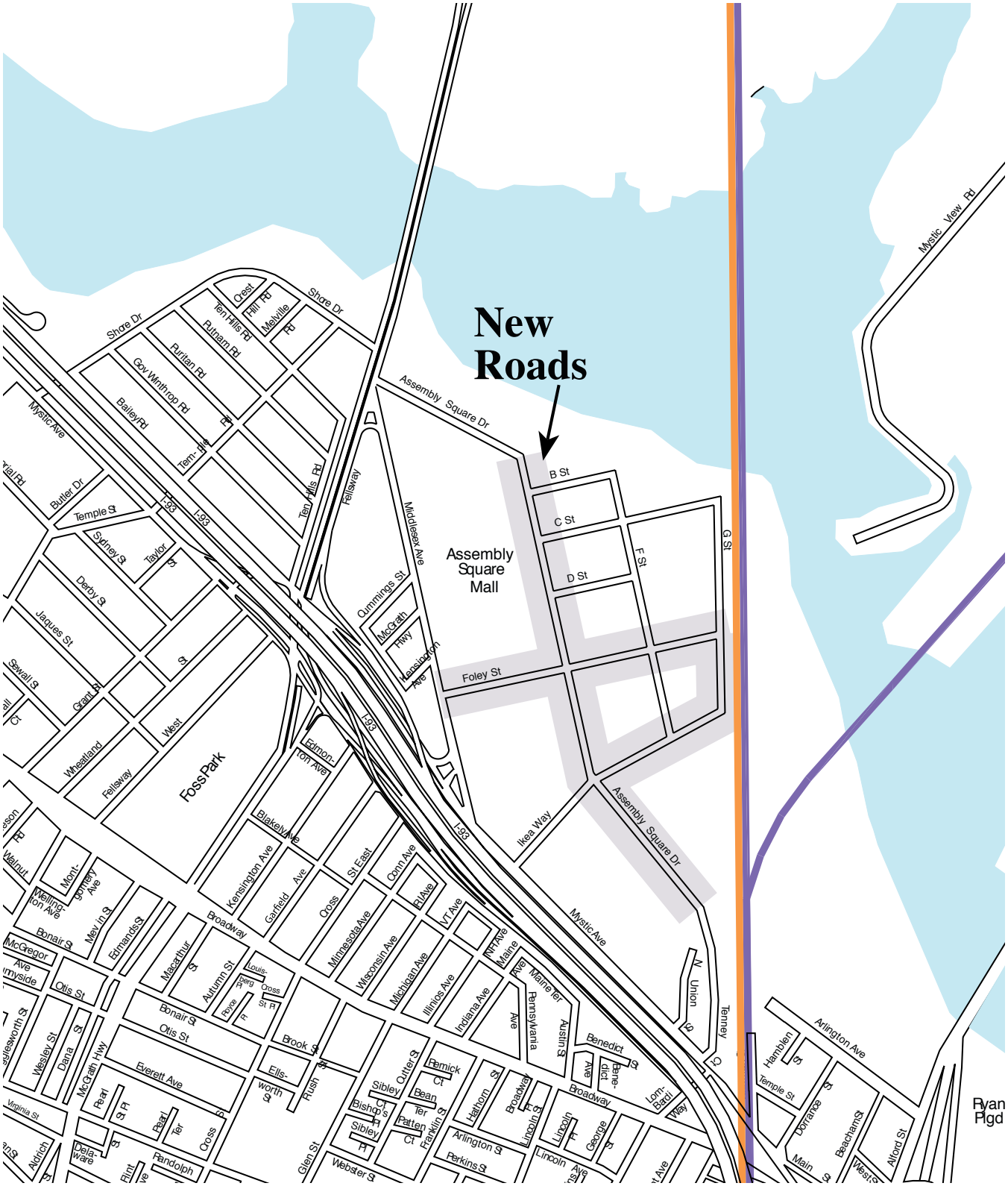
Mobility

The new Assembly Square Drive roadway is projected to collect between 16,000 and 18,000 vehicles per day based on future anticipated traffic demands from the Assembly Square development. In addition, Route 28 is projected to have nearly 85,000 vehicles per day in 2018.

Connectivity

The project area will serve as an intermodal center that will be accessible by automobile, bicycle, foot, bus, or train. Assembly Square Drive will link two MBTA bus routes with Assembly Square: Route 90, which connects to Davis Square, Sullivan Square, and Wellington Circle; and Route 92, which links to downtown Boston. In addition, G Street will incorporate a shared-use path that will connect Draw Seven Park to the proposed station.

MAP 13-25 SOMERVILLE: ASSEMBLY SQUARE ROADWAYS



Weymouth, Abington, Hingham, and Rockland: S. Weymouth Naval Air Station Access Improvements ($90,014,750)

Description

The primary benefit of this project is the facilitation of a significant economic development opportunity related to the reuse of the Naval Air Station. To support this reuse, the transportation improvements include:

- A new East-West Parkway through the Naval Air Station property establishing east-west connectivity between Route 18 and Route 3. The Parkway will be a median-divided, limited access boulevard consisting of four travel lanes in each direction from Route 18 to approximately Union Street and two travel lanes from Union Street to Weymouth Street on the east side of the base, plus turning lanes.
- The connection to the west will include widening Reservoir Park Drive and Hingham Street to Commerce Drive and making minor changes to the Route 3/Rt 228 Interchange ramps, resulting in a consistent four-lane cross-section between the proposed parkway and Route 3.
- Proposed transit improvements include a relocation of and improvements to the South Weymouth Commuter Rail Station [this is a separate HPP earmark being requested for 2009] with new transit facilities, potential new services including shuttle bus service, and additional parking spaces. The property is located in close proximity to the South Weymouth commuter rail station.

Improvements to Route 18 to the east in Weymouth have been included under a separate project.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

Tri-Town is responsible for the redevelopment of the 1,400-acre former South Weymouth Naval Air Station. Current planning identified in the Revised Master Plan and Zoning By Laws approved in 2005 calls for mixed-use development on the site (Construction of 2,855 housing units—20 percent affordable and at least 400 reserved for senior housing, up to 2,000,000 sq. ft. of commercial and industrial space, a designated site for a school, a designated site for a community facility, an 18 hole golf course, playing fields and a multimodal transportation center).

The project area (the redevelopment site and the surrounding communities, including the locations of the access improvements) includes areas of significant commercial and industrial land uses, including shopping centers, an industrial park, a hospital, and commercial corridors on roadways in the vicinity. There are also large areas of suburban, low- and medium-density residential development around the former Naval Air Station.

Safety

Between 1999 and 2001, the two interchanges and three of the intersections at which improvements are planned were classified as high-crash locations: Derby Street and Route 3 (Exit 15); Hingham Street (Route 228) and Route 3 (Exit 14); Whiting Street (Route 53) and Gardner Street; Whiting Street (Route 53) and Main Street (Route 228); Adams Street (Route 58) and North Avenue (Route 139).

- Route 3/Derby Street interchange (in Hingham) was the site of 116 crashes, of which 72 involved only property damage and 44 involved bodily injury. It ranked #152 on the list of the state's high-crash intersections.
- Route 3/Hingham Street (Route 228) interchange (in Rockland) was the site of 117 crashes, of which 71 involved only property damage and 46 involved bodily injury. It ranked #142 on the list of the state's high-crash intersections.
- Whiting Street (Route 53)/Main Street (Route 228) intersection (in Hingham) was the site of 76 crashes, of which 54 involved only property damage and 22 resulted in injuries. It ranked #427 on the list of the state's high-

MAP 13-26 Weymouth, Abington, Hingham, and Rockland: S. Weymouth Naval Air Station Access Improvements

crash intersections.

- Adams Street (Route 58)/North Avenue (Route 139) intersection (in Abington) was the site of 40 crashes, of which 25 involved only property damage and 15 resulted in injuries. It ranked #985 on the list of the state's high-crash intersections.

Mobility

A connector road will provide an additional link between Route 3 and Route 18, the region's two major north/south roadways, as well as an alternative access route to the redevelopment site. The connector road will also provide an additional link to the South Weymouth commuter rail station on the Plymouth Line, which is located on Route 18.

Connectivity

Tri-Town is working with the MBTA to explore several concepts for transit amenities, including additional parking at the South Weymouth commuter rail station and development of a multimodal transit center linking rail, public and private bus services in the region, perhaps bus service to the Red Line in Braintree, and the Logan Express. The developer is considering electric shuttle bus service to link the station with work sites.

Economic Opportunities

The South Shore Tri-Town Development Corporation estimates that the development will result in 9,000 new jobs. The South Weymouth Access Study also estimates that jobs in neighboring towns will increase by approximately 6,600. Secondary employment growth is estimated at 8,500 above Metropolitan Area Planning Council and Old Colony Area Planning Council projections for 2020.

Weymouth: Route 18 Capacity Improvements Project ($26,100,000)

Description

Widen Route 18 to two continuous lanes in each direction (with four-foot shoulders) between Highland/Charmada Streets (south of Middle/West Streets) in Weymouth and Route 139 in Abington. Sidewalks will also be constructed. The Route 18 bridge over the MBTA Old Colony Line (to Plymouth) will be reconstructed and widened.

Intersection improvements (including additional left- and right-turn lanes and some roadway widening between intersections) on Route 18 from Route 3 and including the Middle/West Street intersection, Park Avenue, Columbian Road, and Pond and Pleasant Streets are being constructed as separate projects.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

Zoning along the Route 18 corridor in Weymouth includes residential, highway transition, medical services (the South Shore Hospital and other related medical facilities), limited business, and general business. Zoning along Route 18 in Abington is industrial or highway commercial.

Safety

This project area includes three high-crash locations—Route 18/Route 3, Route 18/Middle Street, and Route 18/Park Avenue —all in Weymouth. Between 1999 and 2001, the Route 18/Route 3 intersection was the site of 200 crashes, of which 108 involved only property damage and 92 involved bodily injury. It ranked #45 on the list of the state's high-crash intersections. The Route18/Middle Street intersection was the site of 146 crashes, of which 104 involved only property damage and 42 involved bodily injury. It ranked #127 on the list of the state's high-crash intersections. The Route18/Park Avenue intersection was the site of 94 crashes, of which 64 involved only property damage and 30 involved bodily injury. It ranked #273 on the list of the state's high-crash intersections.

Mobility

According to MassHighway traffic counts, the average daily traffic volumes on Route 18 along this stretch of roadway are as follows:

Weymouth:

- North of Park Avenue (2000 counts) – 31,200 vehicles
- North of Trotter Road (1999 counts) – 25,200 vehicles
- North of Pond Street (2003 counts) – 26,200 vehicles

Abington:

- North of Route 139 (1999 counts) – 19,400 vehicles

Intersection analyses were performed as part of the South Weymouth Access Study in August 2000. The existing levels of service (LOS) during the PM peak period were as follows:

Weymouth:

- Route 18/West Street – LOS E
- Route 18/Park Avenue – LOS C
- Route 18/Columbian Street – LOS E
- Route 18/Pleasant Street – LOS D
- Route 18/Trotter Road – LOS D

Abington:

- Route 18/Route 139 – LOS D

According to 2002 Congestion Management System monitoring performed by CTPS, the average AM and PM speed on Route 18 in the northbound and southbound directions is calculated to be less than 15 mph for three segments of the roadway in the project area. The average travel speed on Route 18 is below 70 percent of

MAP 13-27 Weymouth: Route 18 Capacity Improvements Project

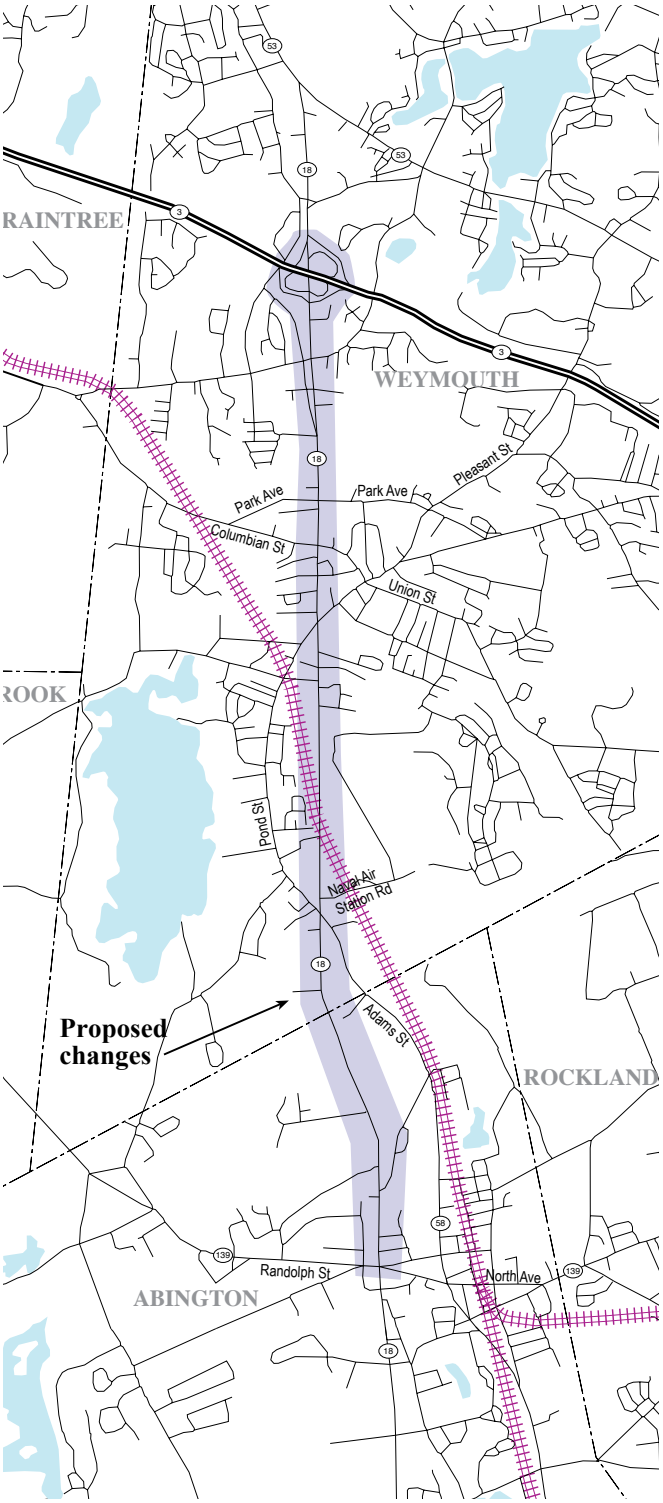
posted speed along 25 segments in the northbound and southbound directions in the AM and PM peak periods. Six signalized intersections in the project area are ranked in the top 25 most delayed intersections (monitored as part of the CMS roadway network) for the South Shore Coalition MAPC subregion in the PM peak period.

Connectivity

Route 18 provides access to the South Weymouth commuter rail station on the Plymouth Line. The South Shore Tri-Town Development Corporation, responsible for redevelopment of the South Weymouth Naval Air Station, is proposing an expanded, multimodal station in conjunction with the existing South Weymouth commuter rail station.

Economic Opportunities

This project is a component of the development plan for the former South Weymouth Naval Air Station, which involves the redevelopment of the 1,450-acre site, consistent with the Re-Use Plan formula. The South Shore Tri-Town Development Corporation foresees corporate office park, entertainment, and recreation uses, for the site, with more than 60 percent open space (recreational and conservation).



Woburn: Montvale Avenue ($3,400,000)

Description

This is an arterial and intersection improvement project along Montvale Avenue from Central Street to east of Washington Street in the City of Woburn. It includes the following improvements:

- Widen Montvale Avenue to four lanes and provide turning lanes at Washington Street
- Reconstruction of roadway and sidewalks
- Installation of new traffic signal system at Central Street and modification of phasing and timing at Washington Street

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

The proposed widening of Montvale Avenue will have minor impacts to the adjacent land uses. The project area contains a mix of uses, but primarily commercial and some residential. Maximum parking requirements and transportation demand management (TDM) requirements for all new developments are imposed. In addition, the project will improve pedestrian and handicap access by widening existing four-foot sidewalks to five to six feet, and adding wheelchair ramps.

Safety

The project area includes a high-crash location at the intersection of Montvale Avenue and Washington Street. The location was ranked #11 on MassHighway's 2006 Top 200 Crash Locations Report for the years 2004–2006. A total of 78 crashes were reported during the three-year study period. Though there were no fatalities, 55 involved property damage and 18 involved personal injury.

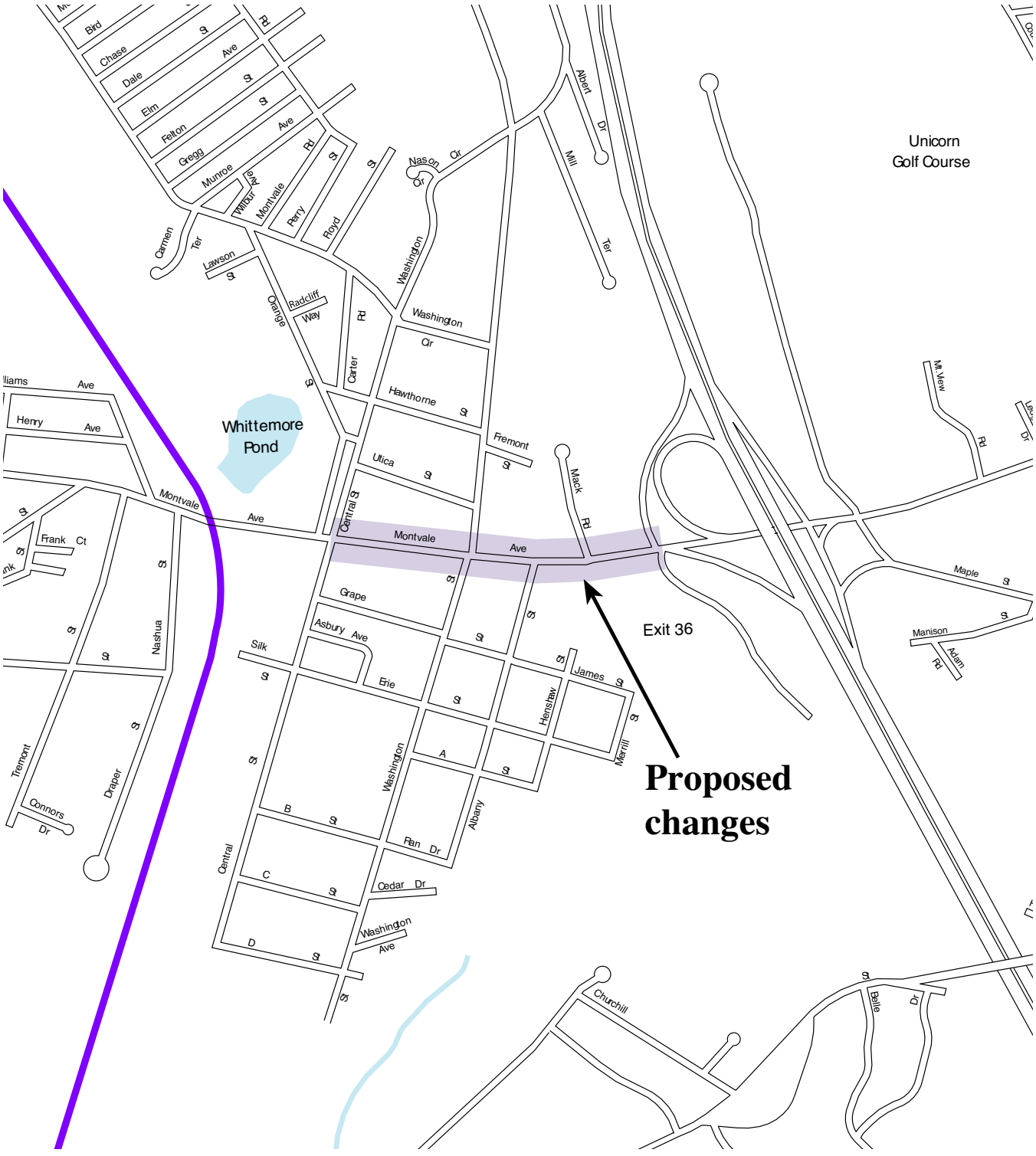
Mobility

Average daily traffic (ADT) along Montvale Avenue at Washington Street was between 18,450 and 28,420 vehicles, according to counts collected by Precision Data Industries, and an additional 12,755 to 14,640 vehicles were recorded along Washington Street. ADT at Montvale Avenue and Central Street was between 18,450 and 19,215 vehicles. Under 2007 existing conditions, the intersection at Montvale Avenue and Washington Street operated at LOS C in the AM and PM peak periods, while the Montvale Avenue and Central Street intersection operated at LOS A in the AM and LOS B in the PM peak period. Although the LOS of service is acceptable, the proposed improvements will better utilize lane use and increase coordination between the intersections to accommodate increasing traffic volumes

Connectivity

The proposed project area serves as a critical connection between I-93, I-95, and the surrounding Woburn area. The project will enhance MBTA bus operations (Routes 354 and 355) by improving the poor operating and safety conditions. In addition, the project will benefit the pedestrian and bicycle activity that links with nearby schools.

MAP 13-28 WOBURN: MONTVALE AVENUE



Woburn: New Boston Street Bridge ($4,500,000)

Description

Construct a bridge on New Boston Street at the northern end of Woburn Industrial Park where New Boston Street crosses the MBTA Lowell Branch commuter rail line to Woburn Street in Wilmington. This connection existed until approximately thirty years ago, when the bridge was destroyed by fire; it was never reconstructed.

Project's Context/Possible Impacts, by MPO Policy Area

Land Use

The majority of the land in the New Boston Street area in Woburn is zoned for industrial use, and existing development in the area is primarily commercial/industrial. With the recent opening of the Anderson Regional Transportation Center (RTC) and the I-93 Industriplex interchange, the City of Woburn anticipates additional office and retail development in the project area over the next few years. Just north of the proposed project, in Wilmington, the land is zoned as industrial and includes Southeast Wilmington Industrial Park. Further north on Woburn Street in Wilmington and south of Route 129, the land is zoned as residential.

Mobility

No traffic studies have been performed to date; however, the opening of this bridge would provide a second means of access to the growing Industriplex area for residents of Wilmington and communities to the north, as well as for emergency vehicles from the North Woburn fire station.

Connectivity

The Anderson Regional Transportation Center is located just south of the proposed New Boston Street Bridge. The new bridge would provide an additional automobile access point for the park-and-ride and transit services offered at this center.

MAP 13-29 WOBURN: NEW BOSTON STREET BRIDGE