



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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MEMORANDUM

DATE February 7, 2013
TO Boston Region Metropolitan Planning Organization
FROM Chen-Yuan Wang
MPO Staff
RE Addressing Safety, Mobility, and Access on Subregional Priority
Roadways: Selection of Study Locations

Background

During the MPO's outreach for the development of the Unified Planning Work Program (UPWP) and the Long-Range Transportation Plan (LRTP), Metropolitan Area Planning Council (MAPC) subregional groups and other entities submit comments and identify transportation problems and issues that concern them. Often these issues are related to bottlenecks, safety, or lack of safe or convenient access for abutters along roadway corridors in their area. Such issues can affect not only mobility and safety along a roadway and its side streets, but also livability and quality of life, including economic development and air quality.

To address these kinds of concerns, this study was included in the federal fiscal year (FFY) 2013 UPWP.¹ The purpose of this study is to identify roadway segments in the MPO region that are of concern to subregional groups but that have not been identified in the LRTP regional needs assessment.² These roadways typically are not major arterials, but are arterial roadways or collector roadways that may carry fewer vehicles daily than major arterials and may be maintained by a city or town.

The emphasis of the study is on the issues identified by the relevant subregional groups and the development of recommendations to address the identified issues. Subjects that will be considered in addition to mobility, safety, and access are transit feasibility, truck issues, bicycle and pedestrian transportation, preservation, and other issues raised by subregional groups.

¹ *Unified Planning Work Program*, Federal Fiscal Year 2013, endorsed by the Boston Region Metropolitan Planning Organization on June 28, 2012.

² A work scope for "Priority Corridors for LRTP Needs Assessment—FFY 2013," dated October 4, 2012, was approved by the MPO and that study is presently underway. The two corridors that were selected for that study are Route 30 from Shoppers World Way to Speen Street, and Route 2 in Concord and Lincoln.

This memorandum presents the procedure used for selecting roadways for the study, including the selection criteria; the roadways that were selected for study; and a summary.

Selection Procedure

The selection procedure for the study locations comprised three steps. First, MPO staff identified potential study locations through various sources; these are listed below. Second, MPO staff assembled more detailed data on the identified roadways. Third, MPO staff evaluated the identified roadways by applying five selection criteria.

The sources used in the first step are:

- Soliciting suggestions of study locations during the outreach for the development of the MPO's FFY 2014 UPWP in recent months.
- Review of meeting records from the UPWP outreach in the last five years (2008 to the present) to identify the roadways that had been proposed for study by subregions.
- Review of the roadways that had been identified in the MPO's LRTP Priority Corridors study and then screening the roadways that carry fewer vehicles daily than major arterials.³
- Review of the roadways being monitored as part of the MPO's Congestion Management Process (CMP) program and identifying those with delay or safety concerns.
- Contacting subregions, MassDOT Highway Division district offices, and municipalities for further information on some of the potential roadways.

In total, 20 different roadway sections were identified as potential study locations. Table 1 shows the location, length, functional classification, jurisdiction, and other related information of the roadway sections that were evaluated for this study.

Second, MPO staff assembled more detailed data on these identified roadways. The data assembled include:

- MassDOT's 2010 Road Inventory File and 2006–10 crash database, which were used to assemble the information for each roadway section, such as jurisdiction, average daily traffic (ADT), crash locations, and crashes per mile.

³ Considering the different intents of this study and the Priority Corridors study, staff selected roadways that have average daily traffic of about 30,000 or fewer vehicles per day for this study. The threshold was decided after the review of various data, including arterial data from the CMP, and discussions among staff members.

- Related data from MassDOT's project information database, the MPO's FFYs 2013–16 Transportation Improvement Program (TIP) projects, CTPS planning and other studies, and municipal websites for projects, studies, and TIP projects that have been planned or programmed for each roadway section.
- The MPO's CMP roadway travel speed data.
- MBTA bus service performance and passenger load data.

Third, MPO staff evaluated the identified roadways by applying five selection criteria. The five criteria were:

- *Safety Conditions*: Location has a high crash rate for its functional class⁴ or contains areas with a high number of crashes or with a significant number of pedestrian/bicycle crashes.
- *Multimodal Significance*: Location supports transit, bicycle, or pedestrian activity or has an implementation project to support one or more of these activities.
- *Subregional Significance*: Location carries a significant proportion of subregional vehicle, bicycle, or pedestrian traffic.
- *Subregional Priority*: Location is endorsed by a subregion and is a priority for the subregion.
- *Implementation Potential*: Location is proposed by the roadway agency or related agencies that have identified prospective funding resources for design and implementation.

Another criterion that was applied was regional equity: to not select more than one location in a subregion. Finally, two roadway sections, described below, were selected for this study.

Roadway Sections Selected for Study

The two roadway sections (highlighted in Table 1) that staff selected for the MPO's approval in this study are:

- Routes 127A/127 in Gloucester and Rockport (also known as the Cape Ann Loop)
- Route 3A in Cohasset and Scituate (from the MBTA commuter rail station in Cohasset to Henry Turner Bailey Road in Scituate)

The section of Routes 127A/127 in Gloucester and Rockport is a part of the 85-mile state-designated Essex Coastal Scenic Byway. The Essex National Heritage Commission (ENHC) recently obtained state bond funding for improving the safety,

⁴ Location has a segment crash rate (crashes per million vehicle-miles traveled) higher than the statewide average for its functional class.

access, and mobility of the byway. ENHC proposed three roadway sections in the byway system for a review and planning of roadway improvements for all users, focusing on pedestrian and bicycle facilities, including potential "bicycle depot" and satellite parking locations.⁵ This corridor is regarded as the highest priority among the three proposed sections.

The section of Route 3A in Cohasset and Scituate is located in an area that is being developed. The corridor serves residents, commuters, and local businesses, and connects the MBTA commuter rail stations in the two towns. The South Shore Coalition and the Towns of Cohasset and Scituate strongly support a corridor study that focuses on safety improvements and increasing transportation access and mobility for all modes (bicycle, pedestrian, transit, and motor vehicles). The recently completed Cohasset Master Plan addresses transportation and mobility along this corridor. It was repeatedly mentioned during the outreach process for the FFYs 2013 and 2014 UPWP.

Summary

The two selected locations meet the objectives of this study, especially in supporting the transportation improvement priorities of their respective subregions. The work scope for this study assumed that "up to three" arterial segments would be selected. However, presently MPO staff do not propose studying a third corridor segment because the Routes 127A/127 section is a relatively long corridor—15 miles, which would, therefore, require considerable resources.

Once the MPO approves this selection, staff will meet with officials from municipalities and related agencies to discuss the study specifics, conduct field visits and data collection, and perform various analyses for both roadway segments. As the project budget anticipates, staff will spend roughly 60% of the budget on work tasks for both corridors during FFY 2013 and the remainder of the budget during FFY 2014.

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⁵ Bicycle depots are locations where people can securely park their bikes so they can explore an area (a town, park, or a hiking trail) by bus or train, or on foot. Satellite parking locations provide places for people to park their cars and then take bikes or scooters into town or to other destinations.

Table 1 Locations Evaluated and Selected (High-lighted in Yellow) for Subregional Priority Roadways Study

Roadway	Location	Approx. Length	Functional Class.*	Jurisdiction	Subregion	Average Daily Traffic	Selection Criteria**					Overall Assessment	Source of Reference	Summary of Comments
							Safety Concerns	Multimodal Significance	Subregional Significance	Subregional Priority	Implementation Potential			
Route 35	Route 97 in Wenham to Route 114 (Margin St.) in Peabody	6 miles	5	Danvers, Peabody, MassDOT D4	NSTF	12,000-22,500 (Est.)	X	X	X	X		Medium	UPWP FFYs 2013 & 2014	NSTF cited this roadway during the UPWP outreach for FFYs 2013 and 2014.
Route 62	Conant/Eliot Street to I-95 Interchange	2 miles	3	Danvers	NSTF	18,500-20,500 (2009)	X	X	X	X		Medium	UPWP FFYs 2013 & 2014	NSTF cited this roadway during the UPWP outreach for FFYs 2013 and 2014.
Route 97	Route 1A in Beverly to Topsfield/Boxford Town Line	5-6 miles	5	Beverly, Wenham, Danvers, Topsfield	NSTF	10,000-20,000 (Est.)	X	X	X	X		Medium	UPWP FFYs 2013 & 2014	NSTF proposed to study this segment in conjunction with the Route 97 corridor in Boxford, Georgetown, and Haverhill (Merrimack Valley Planning Commission).
Route 114	Sections in Middleton	6-8 miles	2	MassDOT D4	NSTF	17,500-29,000 (2009)	X		X			Low	UPWP FFY 2012	Route 114 from Middleton Square to Essex/Forest Street was recently reconstructed and improved (2008 MassDOT Project #600227). Other Route 114 sections in Middleton will be resurfaced in 2013 (MassDOT Project #606126).
Route 127	Gloucester (Route 133) to Beverly (Beverly-Salem Bridge)	14 miles	5	MassDOT D4, Manchester-by-the-Sea, Beverly	NSTF	6,000-9,000 (Est.)	X	X	X	X	X	High	UPWP FFYs 2013 & 2014	This section of Route 127 is a part of the 85-mile state-designated Essex Coastal Scenic Byway. The Essex National Heritage Commission (ENHC) recently obtained bond funding for improving the safety, access, and mobility of the byway and is interested in a comprehensive review and planning for potential improvements.
Routes 127A/127	Cape Ann Loop: Gloucester to Rockport via Route 127A; Rockport to Gloucester via Route 127	15 miles	5	Gloucester, Rockport	NSTF	8,000 to 22,000 (Est.)	X	X	X	X	X	High	UPWP FFYs 2013 & 2014	This is the second of three segments in the byway system that ENHC proposed for a review of safety and mobility issues, focusing on pedestrian and bicycle facilities, including potential "bicycle depot" locations. This section is regarded as the highest priority among the three proposed sections.
Route 133	Gloucester (Route 127) to Ipswich (Route 1A)	11 miles	5, 6	MassDOT D4, Essex, Ipswich	NSTF	10,500 (2009)		X	X	X	X	Medium	UPWP FFYs 2013 & 2014	This is the last of three sections proposed for study by ENHC. It was cited in the 2013 UPWP outreach. A 2-mile section in the Essex downtown area was recently reconstructed (summer 2011).
Route 28	I-95 to Washington Street in Reading	1.5 miles	3	MassDOT D4, Reading	NSPC	12,500-17,500 (2009)	X	X	X			Medium	LRTP Priority Corridors Study	Route 28 from Washington Street to Route 129 was recently reconstructed (2009, MassDOT Project # 602617).
Route 38	I-95 Interchange to Elm/School Street in Woburn	0.75 mile	3	MassDOT D4, Woburn	NSPC	18,500-20,000 (2009)	X	X	X			Medium	UPWP FFY 2012	NSPC and Woburn requested a study of the I-95 rotary interchange and the traffic signals at Route 38 and Elm Street. MassDOT jurisdiction north of I-95 recently reconstructed by developer. It may be suitable for an intersection study at Elm Street.
Route 60	Route 3/2A (Mass. Ave.) to Route 2 in Arlington	1.5 miles	5	Arlington	ICC	25,000 (2009)	X	X	X			Medium	LRTP Priority Corridors Study	One high-crash location at the intersection at Massachusetts Avenue. The CTPS study addressed the problems at the high-crash location.
Route 117	Route 20 to Weston Town Line in Waltham	1.5 miles	5	Waltham, MassDOT D4 (I-95 Interchange)	ICC	15,00-20,00 (Est.)	X	X	X			Medium	UPWP FFY 2012	In FFY 2012 UPWP outreach, Waltham proposed this roadway for the Priority Corridor study. Major proposals include widening the bridge over Route 128, connecting Route 2 by extending Green Street, and other critical intersection improvements.
Mt. Auburn St. /Route 16	Fresh Pond Parkway to Watertown Square	2.5 miles	3	Cambridge, Watertown	ICC	18,000-30,000 (2009)	X	X	X		X	Medium	UPWP FFY 2014	In FFY 2014 UPWP outreach (12/2012), Watertown proposed to reduce travel lanes and provide multi-uses of the roadway and to improve safety and access. It can be considered in the next round of this study.
Greenough Blvd.	Fresh Pond Parkway to Arsenal Street	1 mile	5	DCR	ICC	10,500 (2009)	X	X	X			Medium	UPWP FFY 2014	Watertown proposed to reduce travel lanes and provide multi-uses of the roadway.
Quincy Street	Bowdoin St. to Warren St.	1.5 miles	5	Boston	ICC	15,000-20,000 (Est.)	X	X	X			Medium	UPWP FFY 2011	In FFY 2011 UPWP outreach, the Dorchester Bay Economic Development Corporation proposed this roadway for the Priority Corridors study. Major developments in the corridor were expected due to the proposed Four Corners Station on the Fairmount commuter rail line.
Edgell Road	Route 9 to Water Street in Framingham	2 miles	5	Framingham	MetroWest	15,000-22,000 (Est.)	X	X	X			Medium	UPWP FFY 2008	MetroWest cited this roadway in the FFY 2008 UPWP outreach. Town commissioned a preliminary traffic safety study at four intersections on Edgell Road in 2004.
Route 3A	Henry Turner Bailey Road in Scituate to MBTA commuter rail station in Cohasset	3 miles	3	MassDOT D5	SSC	13,000-20,500 (2009)	X	X	X	X	X	High	UPWP FFYs 2013 & 2014	Route 3A in this developing area serves residents, commuters, and local businesses, and connects MBTA commuter rail stations. SSC and Towns of Cohasset and Scituate strongly support a corridor study that focuses on safety improvements and increasing transportation access and mobility for for all modes (bicycle, pedestrian, transit, and motor vehicles). The recently completed Cohasset Master Plan addresses transportation and mobility along this corridor.
Route 140	Beaver Street to Franklin Village Shopping Center in Franklin	0.75 mile	3	MassDOT D3, Franklin	SWAP	20,500-23,500 (2009)	X		X		X	Medium	MassDOT D3	This is one of two sections of Route 140 recommended by MassDOT District 3. Other sections of Route 140 in Franklin and Wrentham are scheduled to be reconstructed or resurfaced in 2013 MassDOT Project #604988 (Franklin) and Project #605700 (Wrentham).
Route 140	Wrentham/Franklin Town Line to Chestnut Street in Franklin	1 mile	3	MassDOT D3, Franklin, Wrentham	SWAP	20,500 (2009)			X		X	Low	MassDOT D3	This is the second of the two sections on Route 140 recommended by MassDOT District 3.
Route 27	Canton Street to Depot Street	1 mile	3	Sharon	TRIC	13,500 (2009)	X	X	X			Medium	UPWP FFY 2012	TRIC cited this roadway in the UPWP FFY 2012 outreach.
Route 27	Downtown Stoughton	0.75 mile	3	Stoughton	TRIC	16,000-18,000 (2009)	X	X	X	X		Medium	UPWP FFY 2013	TRIC cited this roadway in the UPWP FFY 2013 outreach.

Note: * Functional classification: 2 = principal arterial, 3 = rural minor arterial or urban principal arterial, 5 = urban minor arterial or rural major collector, 6 = urban collector or rural minor collector

** Selection Criteria:

Safety Conditions: Location has a high crash rate for its functional class or contains areas with a high number of crashes or with a significant number of pedestrian/bicycle crashes.

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