



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Stephanie Pollack, MassDOT Secretary and CEO and MPO Chair
Tegin L. Teich, Executive Director, MPO Staff

TECHNICAL MEMORANDUM

DATE: November 7, 2019
TO: Boston Region Metropolitan Planning Organization
FROM: Chen-Yuan Wang, MPO Staff
RE: Selection of FFY 2020 Subregional Priority Roadway Study
Location

1 BACKGROUND

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

To address these concerns, MPO staff developed a work program titled Addressing Safety, Mobility, and Access on Subregional Priority Roadways. The program adheres to the following MPO goals.

- Safety—make all modes safe
- Preservation—maintain the system
- Capacity Management and Mobility—use existing facility capacity more efficiently and increase healthy transportation capacity
- Clean Air/Clean Communities—create an environmentally friendly transportation system
- Transportation Equity—provide comparable transportation access and service quality among communities, regardless of income level or minority population
- Economic Vitality—ensure our transportation network serves as a strong foundation for economic vitality

The program has been well received by municipalities and the Massachusetts Department of Transportation (MassDOT) district offices and has been included

in the UPWP since 2013, including this federal fiscal year (FFY) 2020.¹ Another purpose of the study is to identify roadway segments in the MPO region that are of concern to subregional groups but have not been cited in the LRTP regional needs assessment.²

The study emphasizes issues identified by the relevant subregional groups, along with recommendations to address the identified issues. In addition to topics about mobility, safety, and access, it includes bicycle, pedestrian, and freight transportation, transit feasibility, and other subjects raised by subregional groups.

This memorandum presents the procedure used to select roadways for the study, including data gathering; selection criteria; roadway rating; the roadway corridor chosen for study; and a summary.

2 SELECTION PROCEDURE

Selecting the study location comprised three steps:

- 1) Gathering data and identifying potential roadways
- 2) Developing selection criteria
- 3) Rating potential roadways

2.1 Gathering Data and Identifying Potential Roadways

MPO staff identified potential study roadways through various means:

- Soliciting suggestions for study locations during recent outreach for developing the MPO's FFY 2020 UPWP
- Reviewing meeting records from the UPWP outreach process for the past eight years (2012 to present) to identify roadways that had been proposed for study by subregions
- Reviewing the roadways that are being monitored as part of the MPO's Congestion Management Process program, and identifying those with delay or safety concerns
- Contacting subregions, the MassDOT Highway Division district offices, and municipalities for further information about some of the potential study roadways

¹ Unified Planning Work Program, Federal Fiscal Year 2020, endorsed by the Boston Region Metropolitan Planning Organization on July 18, 2019.

² Boston Region MPO Work Program for Addressing Priority Corridors from the Long-Range Transportation Plan Needs Assessment: Federal Fiscal Years 2012–19.

MPO staff then assembled the following detailed data for these roadways:

- MassDOT 2014 Road Inventory File—used to assemble roadway jurisdiction, average daily traffic, sidewalk width, shoulders, and other geometric information
- MassDOT 2012–16 crash database—used to assemble high-crash locations, pedestrian and bicycle crashes, and crash rates
- MPO bike network gap data and MassDOT bike facilities—used to identify bicycle needs, connectivity, and accommodation
- Massachusetts Bay Transportation Authority (MBTA) bus route, subway line, and commuter data—used to identify segments serving MBTA bus routes and transit stations
- Data from MassDOT’s project-information database, the MPO’s 2020–24 Transportation Improvement Program (TIP) projects, MPO planning and other studies, and municipal websites—used to identify projects, studies, and TIP projects planned or programmed for each roadway

Locations with projects that currently are under construction, in design, under study, or programmed in the TIP were excluded from further consideration. After the exclusion, MPO staff identified 22 potential roadway segments in the region. Table 1 presents data assembled for each roadway segment and indicates municipality, MAPC subregion, MassDOT district office, jurisdiction, length, functional class, average daily traffic, overall crash rates, bicycle/pedestrian crashes per mile, Highway Safety Improvement Program (HSIP)-eligible crash clusters,³ and any relevant studies or projects. It also cites results of applying the selection criteria, and priority rating. Roadway segments are sorted by score, MassDOT District, and roadway name.

2.2 Selection Criteria

MPO staff examined roadway locations more closely and prioritized locations by applying a score based on safety conditions, multimodal significance, subregional priority, implementation potential, and regional equity.

- *Safety Conditions, 0–2 points (each bullet counts as 1 point)*

³ HSIP-eligible crash clusters are defined by MassDOT as crash clusters that rank within the top five percent of crash clusters for each Regional Planning Agency, based on the Equivalent Property Damage Only (EPDO) index. In the EPDO index, property-damage-only and severity unknown crashes are awarded one point each, fatal crashes and crashes involving injuries are given 21 points each. In the Boston Region MPO, 421 intersections are identified from MassDOT 2014–16 Crash Data as the top five percent crash clusters with a minimum EPDO value of 115.

- Location has higher-than-average crash rate for its functional class or contains two or more HSIP-eligible intersections
- Location has significant number of pedestrian and bicycle crashes (two or more per mile) or lacks sufficient pedestrian or bicycle accommodations⁴
- *Multimodal Significance, 0–2 points (each bullet counts as 1 point)*
 - Location currently supports transit, bicycle, pedestrian, or heavy vehicle activities or needs to support these activities
 - Location has significant potential to improve transit, bicycle, pedestrian, or heavy vehicle activities
- *Subregional Priority, 0–2 points (each bullet counts as 1 point)*
 - Location is essential for subregion’s economic, cultural, or recreational development
 - Location carries significant portion of subregional vehicle, bicycle, or pedestrian traffic
- *Implementation Potential, 0–3 points (each bullet counts as 1 point)*
 - Location is proposed or endorsed by its subregion and is a priority for that subregion
 - Location is proposed or endorsed by its roadway administrative agency (agencies)
 - Location has strong support from all of its stakeholders
- *Regional Equity, 0–1 points (each bullet counts as 1 point)*
 - Location is situated in a subregion that has not been selected for this study in the past two years

2.3 Rating Potential Roadways

Roadway segments with a score of five points or fewer were rated as low priority. Roadway segments with a score of six to seven points were rated medium priority. Roadway segments with a score of eight or more points were rated high priority. Among the 22 potential locations, MPO staff identified three as high priority:

⁴ The criterion defines sufficient pedestrian accommodation as more than 80 percent of the roadway containing minimal five-foot sidewalks in both directions; and sufficient bicycle accommodation as more than 80 percent of the roadway containing minimal five-foot shoulders (or bicycle lanes) in both directions.

- 1) Route 53 in Norwell
- 2) Route 1 in Wrentham
- 3) Route 135 in Ashland

Staff also evaluated the pedestrian accommodation and safety improvement needs for the three locations by applying the MPO's Pedestrian Report Card Assessment.⁵ All three locations qualify highly for pedestrian accommodation or safety improvement requirements. Appendix A contains detailed results of the assessments.

3 SELECTED STUDY LOCATION: ROUTE 53 IN NORWELL

MPO staff recommends Route 53 in Norwell for this study cycle, based on the following considerations:

- The study site has strong support from all stakeholders, including representatives and officers from Norwell, MAPC, and MassDOT District 5.
- The corridor has a high pedestrian and bicycle crash rate. Based on the recent five-year (2012–16) MassDOT crash data, a total of 276 crashes occurred in the corridor. Among them, 75 caused personal injuries, one is identified as a pedestrian crash, and one is a bicycle crash.⁶
- The corridor is essential for the subregion's economic development.
- The roadway lacks bicycle accommodation and has insufficient pedestrian accommodation with many sidewalk gaps, especially on the west side.
- The roadway has potential for Complete Street improvements.

Figure 1 shows the locations of this study and the previously studied corridors in the region. The selected corridor is approximately 2.1 miles in total length. All the segments in the corridor are classified as Urban Minor Arterial. The roadway carries regional and local traffic. The corridor contains mainly commercial developments, including large scale shopping plazas and street-front retailers, and some multi-unit residents and single-family houses.

⁵ Pedestrian Level-of-Service Memorandum, Ryan Hicks and Casey-Marie Claude, Boston Region Metropolitan Organization, January 19, 2017.

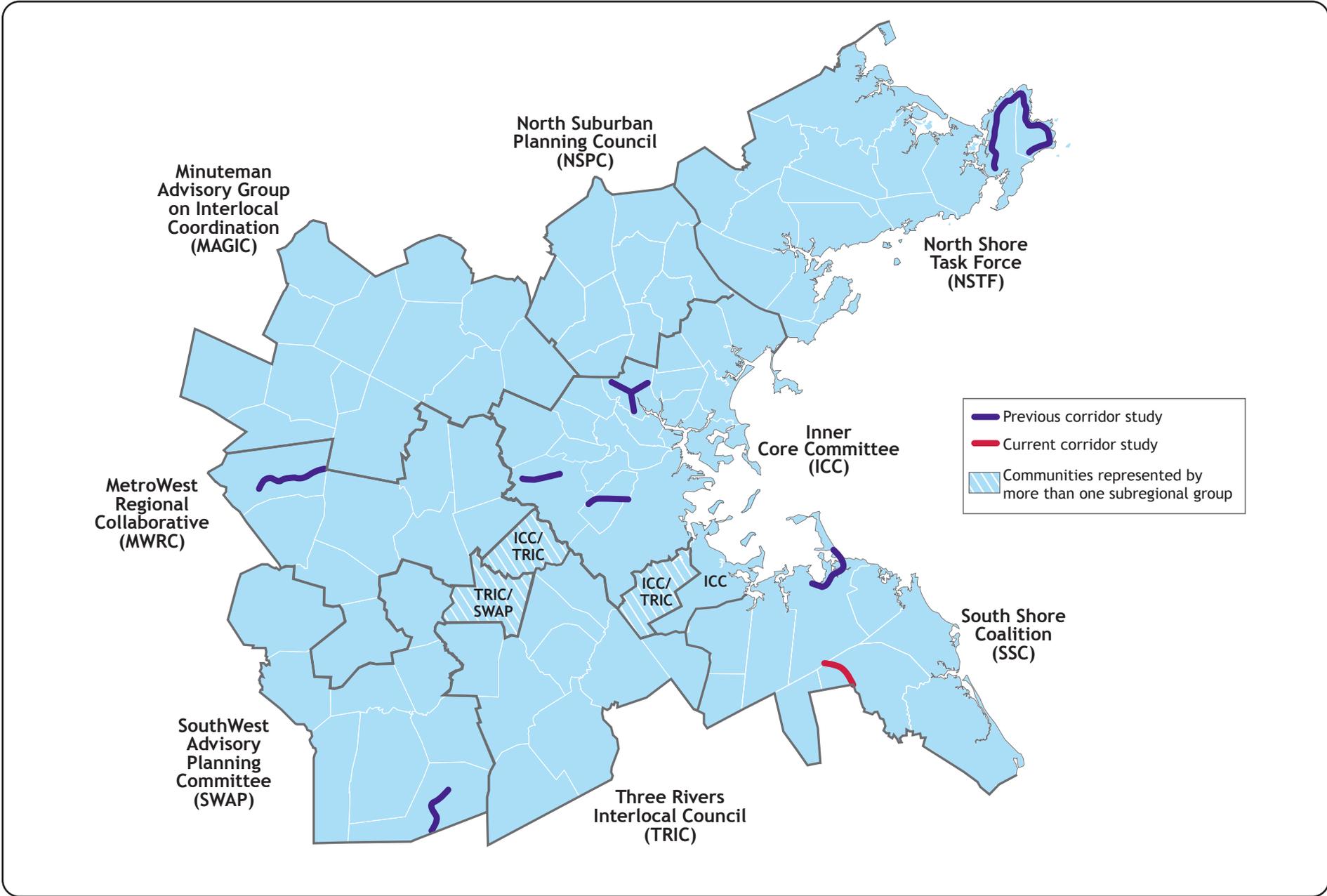
⁶ Pedestrian crashes refers to crashes that involve at least one vehicle and one pedestrian, and bicycle crashes refers to crashes involving at least one vehicle and one bicycle. No crashes involving at least one bicycle or one pedestrian were identified from the available data.

The Town of Norwell is interested in enhancing the vibrancy, design, and livability of Route 53. MAPC identified this corridor as essential for the region's economic development and recommended it for this study. MassDOT Highway Division District 5 also recommended this roadway for study to explore safety and Complete Street needs and improvement potentials for its resurfacing maintenance. A study of this corridor will be timely to support these undertakings. Meanwhile, it will support the MPO goals by improving subregional transportation safety and mobility and promoting regional economic vitality.

4 SUMMARY

The selected Route 53 corridor in Norwell meets the objectives of this study, especially in supporting the transportation improvement priorities of the Inner Core Committee subregion.

MPO staff will submit this proposal to the MPO for discussion and approval. If the MPO approves this selection, staff will meet with officials from Norwell, MassDOT, and MAPC to discuss the study specifics, conduct field visits, collect data, and perform various analyses.



BOSTON REGION MPO

FIGURE 1 Study Locations

Addressing Safety, Mobility, and Access on Subregional Priority Roadways

TABLE 1
Roadway Segments Considered for Study (Selected Segment is Highlighted in Blue)
Subregional Priority Roadways Study

Roadway	Location	Community	MAPC Subregion	MassDOT District	Jurisdiction	Length (Miles)	Functional Classification*	Average Daily Traffic	Number of Crashes 2012-16	Number of Injury and Fatal Crashes 2012-16	Number of Bicycle Crashes 2012-16	Number of Pedestrian Crashes 2012-16	Corridor Overall Crash Rate (MVT)	Pedestrian and Bike Crashes Per Mile	HSIP-Eligible Crash Clusters 2014-16	Study, Project, or TIP Project	Safety Conditions	Multimodal Significance	Subregional Priority	Implementation Potential	Regional Equity	Score	Overall Assessment	Summary of Comments
Route 53	Hingham town line to Hanover town line	Norwell	SSC	5	MassDOT	2.1	5	17,500	276	75	1	1	4.1	1.0	0	No Projects.	2	2	2	3	1	10	High	MassDOT District 5 proposed this location for study (August, 2019). It has high crash rate and pedestrian and bicycle safety and accommodation concerns. It is supported by all stakeholders. The roadway was also cited in the 2018 MPO UPWP outreach.
Route 1	Plainville town line to Foxborough town line	Wrentham	SWAP	5	MassDOT	2.5	3	27,500	196	61	0	0	1.6	0.0	0	No Projects.	2	2	2	2	1	9	High	MassDOT District 5 proposed this location for study (August, 2019). This undivided highway carries a high volume of traffic and lacks pedestrian and bicycle accommodations. There are a number of ongoing and planned developments in the corridor.
Route 135	Hopkinton town line to Framingham city line	Ashland	MWRC	3	Ashland	3.1	3	12,000	248	59	4	4	3.7	2.6	0	MassDOT Project 603602: Ashland- Bridge Replacement, A-14-002, Route 135 (Union Street) over the Sudbury River. The proposed project consists of replacing the existing Union Street (Route 135) bridge over the Sudbury River in its present location with minor improvements to the approach roadways. The bridge will remain open during construction using staged construction. Completed in 2012.	2	2	2	2	1	9	High	In FFY 2018 MWRC meeting, Route 135 from Hopkinton to Natick was cited as a regional corridor needing Complete Street improvements.
Route 38	I-95 Interchange to Wilmington town line	Woburn	NSPC	4	MassDOT, Woburn	1.4	3	12,500	163	36	0	3	5.1	2.1	0	No projects	2	1	2	1	1	7	Medium	In 2010, NSPC and Woburn requested a study of the I-95 rotary interchange and the traffic signals at Route 38 and Elm Street. MassDOT District 4 suggested that a Road Safety Audit (RSA) may be a more appropriate way to address these locations.
Route 129	Swampscott town line to Ocean Avenue	Marblehead	NSTF	4	Marblehead	1.5	3	11,600	66	20	3	2	2.1	3.3	0	No projects	1	2	2	1	1	7	Medium	NSTF cited this roadway as one of the subregion's priority roadways for study in the FFY 2013 and FFY 2014 UPWP. High traffic volumes between Marblehead and Lynn are creating bottlenecks in this corridor.
Route 62	Olson Street to Middlesex Avenue	Wilmington	NSPC	4	Wilmington	2.0	5	12,100	224	64	2	3	5.1	2.5	0	MassDOT Project 605021: Wilmington Intersection Improvements on Route 62 (Middlesex Avenue) at Glenn Road and Wildwood Street. The project involves the installation of new traffic signal at the intersection of Route 62 (Middlesex Avenue) at Glen Road and Wildwood Street, reconfiguration of Glen Road intersection and widening of Route 62 (Middlesex Avenue) and Glen Road. The project is 96% Complete.	2	2	1	1	1	7	Medium	CTPS identified this location as a potential study site.
Lafayette Street (Route 1A/114)	Derby Street to Marblehead town line	Salem	NSTF	4	Salem	1.8	3	20,000	304	98	12	18	4.6	16.7	0	No Projects.	2	2	1	1	1	7	Medium	North Shore Community Development Coalition cited this location in 2019 MPO outreach meeting.
Route 109	Medway town line to Medfield town line	Millis	SWAP	3	Millis	3.8	3	15,500	127	29	0	2	1.2	0.5	0	MassDOT Project 609344: Medfield- Millis- Bridge Preservation, M-11-002, West Street over the Charles River and M-11-003, State 109 (Main Street) over the Charles River. This project is in the preliminary design phase.	1	2	2	1	1	7	Medium	In FFY 2018 UPWP outreach, Route 109 is cited as a major subregional travel route to Interstate 95/Route 128.
Route 109	Millis town line to Dover town line	Medfield	TRIC	3	Medfield	3.2	3	16,000	286	50	3	3	3.1	1.9	0	MassDOT Project 609344: Medfield- Millis- Bridge Preservation, M-11-002, West Street over the Charles River and M-11-003, State 109 (Main Street) over the Charles River. This project is in the preliminary design phase.	1	2	2	1	1	7	Medium	In FFY 2018 UPWP outreach, Route 109 is cited as a major subregional travel route to Interstate 95/Route 128.
Route 85	Hopkinton town line to Malborough city line	Southborough	MWRC	3	Southborough	4.3	5	8,000	190	34	0	0	3.0	0.0	0	MassDOT Project 603793: Replacement of the Route 85 (River Street) bridge over the Sudbury River, which connects Hopkinton and Southborough. Construction ends in Summer 2014.	1	2	2	1	1	7	Medium	In FFY 2018 MWRC meeting, Route 85 (Cordaville Road) was cited as a corridor needing improvements.
Route 140	Mendon town line to Franklin town line	Bellingham	SWAP	3	MassDOT	2.6	3	12,000	247	42	1	2	4.3	1.2	0	No Projects.	2	2	1	1	1	7	Medium	In FFY 2018 SWAP post-meeting survey, Bellingham proposed Route 140 (Mechanic Street) from Maple Street to Route 126 for Complete Street study.
Route 27	Walpole town line to Sherborn town line	Medfield	TRIC	3	Medfield	5.5	2	13,000	213	50	0	0	1.6	0.0	0	No Projects.	2	2	1	1	1	7	Medium	The location is identified by CTPS mainly due to the lack of pedestrian and bicycle accommodations.
Route 27	Medfield town line to Natick town line	Sherborn	SWAP	3	Sherborn	4.3	2	12,500	258	75	1	1	2.6	0.5	1	No Projects.	2	2	1	1	1	7	Medium	The location is identified by CTPS mainly due to the lack of pedestrian and bicycle accommodations. Major concern location in the Route 16 and Route 27 intersected area has been studied.
Route 37	Braintree town line to Brockton town line	Holbrook	SSC	5	MassDOT and Holbrook	3.6	3	10,000	377	105	2	3	5.7	1.4	1	MassDOT Project 608543: Corridor Improvements and Related Work on South Franklin Street (Route 37) from Snell Street to King Road. The project consists of roadway rehabilitation to provide a consistent cross section, including sidewalk reconstruction, curb ramp installation and drainage upgrades along Route 37 for a length of 0.6 miles. This project is in the preliminary design phase.	1	1	2	1	1	6	Medium	The Town of Holbrook has been in contact with the district and is interested in improvements, particularly multimodal transportation improvements (2012).

Roadway	Location	Community	MAPC Subregion	MassDOT District	Jurisdiction	Length (Miles)	Functional Classification*	Average Daily Traffic	Number of Crashes 2012-16	Number of Injury and Fatal Crashes 2012-16	Number of Bicycle Crashes 2012-16	Number of Pedestrian Crashes 2012-16	Corridor Overall Crash Rate (MVMT)	Pedestrian and Bike Crashes Per Mile	HSIP-Eligible Crash Clusters 2014-16	Study, Project, or TIP Project	Safety Conditions	Multimodal Significance	Subregional Priority	Implementation Potential	Regional Equity	Score	Overall Assessment	Summary of Comments
Route 115	Wrentham town line to Millis town line	Norfolk	SWAP	5	Norfolk	5.3	5	6,500	171	33	1	2	2.7	0.6	0	MassDOT Project 602496: Foxborough- Norfolk- Wrentham- Reconstruction of Route 115, Pond Street and Pine Street, from Needham Street in Norfolk to Route 140. The proposed project consists of safety and transportation improvements for 2.7 miles of Route 115 between Needham/North Street and Route 140, and 0.3 mile of Pine Street between Route 115 and Route 1. Completed in 2012.	1	2	1	1	1	6	Medium	MassDOT Project 602496 covers half of the corridor.
Route 38	Woburn town line to Tewksbury town line	Wilmington	NSPC	4	MassDOT	4.0	3	12,600	623	151	9	9	6.8	4.5	2	MassDOT Project 608051: Reconstruction on Route 38 (Main Street), from Route 62 to the Woburn city line. The roadway will consist of two 11-foot lanes, two five-foot bike lanes and a six-foot sidewalk. Turn lanes and upgraded traffic signals will be installed at Route 62; 25% Package Comments to DE (as of 05/07/2018)	2	2	1	0	1	6	Medium	NSPC cited this roadway during the UPWP outreach for FFYs 2013 and 2014. Project 608051 has a scope covering half of the segment's length (about 2.2 miles). The project is under design.
Route 97	Route 1A to Wenham town line	Beverly	NSTF	4	Beverly	1.5	5	8,300	87	23	0	2	3.8	1.3	1	TIP/MassDOT Project 608347: Beverly- Intersection Improvements at three Locations: Cabot Street (Route 1A/97) at Dodge Street (Route 1A), County Way, Longmeadow Road and Scott Street, Mckay Street at Balch Street and Veterans Memorial Bridge (Route 1A) at Rantoul, Cabot, Water, and Front Streets. The project involves updating and modernizing traffic signal equipment at the intersections and providing on-street bicycle accommodations and wheelchair ramps at sidewalks at each intersection. Pavement milling and overlay at each intersection is also included in this work. 100% Package Received (09/03/2019)	2	2	1	0	1	6	Medium	NSTF proposed to study this segment in conjunction with the Route 97 corridor in Boxford, Georgetown, and Haverhill (Merrimack Valley Planning Commission). This may have implementation challenges. The Beverly section is the most concerned location and is covered by Project 608347.
Route 114	Salem town line to Route 129 (Ocean Avenue)	Marblehead	NSTF	4	Marblehead	1.4	3	17,000	120	14	4	1	2.8	3.6	0	No projects	1	1	2	1	1	6	Medium	NSTF cited this roadway during the UPWP outreach for FFYs 2013 and 2014. Study should include how to improve bike facilities and bike-to-rail connections in this heavily traveled tourist area and build on the Essex Coastal Scenic Byway to the region.
Route 133	Gloucester city line to Western Avenue	Essex	NSTF	4	Essex	2.1	5	12,500	68	17	3	0	1.4	1.4	0	TIP/MassDOT 608596: Route 133 (Main Street) superstructure replacement over Essex River Bridge. This bridge preservation project will address the bridge that carries Route 133 (Main Street) over the Essex River in Essex. This project is in the preliminary design phase. FFYs 2020-24 TIP Programmed. MassDOT Project 609315: Essex- Resurfacing and Targeted Safety Improvements on Route 133 (John Wise Avenue). This project is in the preliminary design phase. MassDOT Project 600217: Essex- Reconstruction of Route 133 (Main Street) from North of Western Avenue to Waters Street. The proposed project will consist of reconstructing Main Street/Eastern Avenue from the vicinity of the John Wise Avenue intersection to the intersection with Eastern Avenue, including concrete sidewalks and pavement markings. Construction ends in autumn 2013.	1	2	1	1	1	6	Medium	MassDOT Project 609315 covers half of the roadway and segment and 600217 covers about a quarter of the roadway including the downtown area. This roadway was cited in the 2013 UPWP outreach.
Route 2A (King Street)	Route 495 Southbound ramps to Ayer town line	Littleton	MAGIC	3	MassDOT	2.5	3	14,000	131	39	0	0	2.1	0.0	0	TIP/MassDOT 608443: Intersection Improvements on Route 2A at Willow Road and Bruce Street. The project involves intersection improvements, including geometric modifications, widening and signalization. Additional improvements involve updated signage and pavement markings. 25% Package Rejected (01/28/2019)	1	2	2	0	1	6	Medium	Requested by Littleton in 2015.
Route 115	Norfolk town line to Sherborn town line	Millis	SWAP	3	Millis	4.3	5	6,500	46	16	0	1	0.9	0.2	0	MassDOT Project 604240: Bridge replacement of Route 115 (Norfolk Road) over the Charles River in Millis. This project will replace the existing bridge deck with a new scour protected substructure, which will widen the existing roadway width from 30 feet to 32 feet, maintaining the existing two lane cross section. The proposed bridge will widen the existing sidewalk and incorporate a utility bay. Existing traffic patterns will be maintained during construction. Construction ends in 2011.	1	2	1	1	1	6	Medium	The location is identified by CTPS mainly due to the lack of pedestrian and bicycle accommodations.
Main Street	Wakefield town line to Central Street	Saugus	ICC	4	Saugus and MassDOT	2.9	5	16,950	262	99	2	6	2.9	2.8	1	MassDOT Project 610534: Saugus- Pedestrian Improvements on Main Street/Route 1. This project is in the preliminary design phase. No projects	1	2	1	1	0	5	Low	In FFY 2012 UPWP outreach, Saugus requested the MPO to consider performing a roadway/sidewalk/traffic light/pedestrian access assessment study, to be called a Main Street/Saugus Center Corridor Study.

Acronyms and Abbreviations

FFY= Federal Fiscal Year, HSIP = Highway Safety Improvement Program, ICC = Inner Core Committee, MAGIC = Minuteman Advisory Group on Interlocal Coordination, MassDOT = Massachusetts Department of Transportation, MVMT = Million vehicle miles traveled, MWRC = MetroWest Regional Collaborative, MWRTA = MetroWest Regional Transit Authority, NSPC = North Suburban Planning Council, NSTF = North Shore Task Force, RTA = Regional transit authority, SSC = South Shore Coalition, SWAP = South West Advisory Planning Committee, TIP = Transportation Improvement Program, TRIC = Three Rivers Interlocal Council, UPWP = Unified Planning Work Program.

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.

Multimodal Significance: Location supports transit, bicycle, or pedestrian activity, has significant potential to enhance these activities, or has a heavy vehicle (truck/bus) issue.

Subregional Priority: Location carries a significant proportion of subregional vehicle, bicycle, or pedestrian traffic or is essential for its subregional economic, cultural, or recreational development.

Implementation Potential: Location is proposed or endorsed by the subregion, by the roadway administrative agency (agencies), or has strong support from all of its stakeholders.

Regional Equity: Location is situated in a subregion that has not been selected for this study in the past two years.

*** 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

Source: Central Transportation Planning Staff.

APPENDIX A

Pedestrian Report Card Assessment

Route 53 in Norwell
Route 1 in Wrentham
Route 135 in Ashland



Pedestrian Report Card Assessment (PRCA): Roadway Segment

Roadway Segment Location

Route 53 in Norwell

Grading Categories	Score	Rating
Safety	1.6	Poor
System Preservation	2.0	Fair
Capacity Management and Mobility	1.8	Fair
Economic Vitality	2.0	Fair

Transportation Equity	
High Priority Area	
Moderate Priority Area	√
Low Priority Area	

Central Transportation Planning Staff (CTPS) to the Boston Region MPO:
www.ctps.org | 857.702.3700 | ctps@ctps.org

Ryan Hicks, Congestion Management Process Manager:
www.ctps.org/cmp | 857.702.3661 | rhicks@ctps.org

Casey Claude, Bicycle and Pedestrian Program Manager:
www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Category Ratings
Good: Score 2.3 to 3.0
Fair: 2.3 > Score > 1.7
Poor: Score 1.7 to 0

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown Roadway Segment

Capacity Management and Mobility			
Performance Measure	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	2.0	Fair
Crosswalk Presence	33%	1.0	Poor
Walkway Width	17%	3.0	Good
TOTAL <small>(Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)</small>	100%	1.8	Fair

Economic Vitality			
Performance Measure	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	3.0	Good
Adjacent Bicycle Accommodations	50%	1.0	Poor
TOTAL <small>(Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)</small>	100%	2.0	Fair

Meaning of Ratings

Good: 3.0
Fair: 2.0
Poor: 1.0

Transportation Equity Priority

High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Safety			
Performance Measure	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	2.0	Fair
Pedestrian-Vehicle Buffer	20%	1.0	Poor
Vehicle Travel Speed	20%	1.0	Poor
TOTAL <small>(Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)</small>	100%	1.6	Poor

System Preservation			
Performance Measure	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	2.0	Fair

Transportation Equity Priority	
Area Condition	Yes/No
Low Income Population \geq 32.32%	No
Minority Population \geq 28.19%	No
6.69%+ of Population > 75 Years of Age	Yes
16.15%+ of Households w/o Vehicle	No
Within ¼ Mile of School/College	Yes



Central Transportation Planning Staff (CTPS) to the Boston Region MPO:
www.ctps.org | 857.702.3700 | ctps@ctps.org

Ryan Hicks, Congestion Management Process Manager:
www.ctps.org/cmp | 857.702.3661 | rhicks@ctps.org

Casey Claude, Bicycle and Pedestrian Program Manager:
www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Pedestrian Report Card Assessment (PRCA): Roadway Segment

Roadway Segment Location		
Route 1 in Wrentham		

Grading Categories	Score	Rating
Safety	2.2	Fair
System Preservation	1.0	Poor
Capacity Management and Mobility	1.0	Poor
Economic Vitality	1.5	Poor

Transportation Equity	
High Priority Area	
Moderate Priority Area	
Low Priority Area	√

Category Ratings

Good: Score 2.3 to 3.0
Fair: 2.3 > Score > 1.7
Poor: Score 1.7 to 0

Transportation Equity Priority

High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown Roadway Segment

Capacity Management and Mobility			
Performance Measure	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	1.0	Poor
Crosswalk Presence	33%	1.0	Poor
Walkway Width	17%	1.0	Poor
TOTAL <small>(Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)</small>	100%	1.0	Poor

Economic Vitality			
Performance Measure	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	1.0	Poor
Adjacent Bicycle Accommodations	50%	2.0	Fair
TOTAL <small>(Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)</small>	100%	1.5	Poor

Meaning of Ratings

Good: 3.0
Fair: 2.0
Poor: 1.0

Transportation Equity Priority

High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Safety			
Performance Measure	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	3.0	Good
Pedestrian-Vehicle Buffer	20%	1.0	Good
Vehicle Travel Speed	20%	1.0	Poor
TOTAL <small>(Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)</small>	100%	2.2	Fair

System Preservation			
Performance Measure	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	1.0	Poor

Transportation Equity Priority	
Area Condition	Yes/No
Low Income Population \geq 32.32%	No
Minority Population \geq 28.19%	No
6.69%+ of Population > 75 Years of Age	Yes
16.15%+ of Households w/o Vehicle	No
Within ¼ Mile of School/College	No



Central Transportation Planning Staff (CTPS) to the Boston Region MPO:
www.ctps.org | 857.702.3700 | ctps@ctps.org

Ryan Hicks, Congestion Management Process Manager:
www.ctps.org/cmp | 857.702.3661 | rhicks@ctps.org

Casey Claude, Bicycle and Pedestrian Program Manager:
www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Pedestrian Report Card Assessment (PRCA): Roadway Segment

Roadway Segment Location		
Route 135 in Ashland		

Grading Categories	Score	Rating
Safety	1.2	Poor
System Preservation	2.0	Fair
Capacity Management and Mobility	1.8	Fair
Economic Vitality	2.0	Fair

Transportation Equity	
High Priority Area	
Moderate Priority Area	√
Low Priority Area	

Category Ratings

Good: Score 2.3 to 3.0
Fair: 2.3 > Score > 1.7
Poor: Score 1.7 to 0

Transportation Equity Priority

High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown Roadway Segment

Capacity Management and Mobility			
Performance Measure	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	2.0	Fair
Crosswalk Presence	33%	1.0	Poor
Walkway Width	17%	3.0	Good
TOTAL <small>(Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)</small>	100%	1.8	Fair

Economic Vitality			
Performance Measure	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	3.0	Good
Adjacent Bicycle Accommodations	50%	1.0	Poor
TOTAL <small>(Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)</small>	100%	2.0	Fair

Meaning of Ratings

Good: 3.0
Fair: 2.0
Poor: 1.0

Transportation Equity Priority

High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Safety			
Performance Measure	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	1.0	Poor
Pedestrian-Vehicle Buffer	20%	2.0	Fair
Vehicle Travel Speed	20%	1.0	Poor
TOTAL <small>(Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)</small>	100%	1.2	Poor

System Preservation			
Performance Measure	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	2.0	Fair

Transportation Equity Priority	
Area Condition	Yes/No
Low Income Population \geq 32.32%	No
Minority Population \geq 28.19%	No
6.69%+ of Population > 75 Years of Age	Yes
16.15%+ of Households w/o Vehicle	No
Within ¼ Mile of School/College	Yes