Massachusetts Pedestrian Transportation Plan

Initiatives and Action Plan

The following section highlights new initiatives to meet the vision and goals defined in the Plan. Each initiative is supported by actions, and measures to track progress, with the ultimate goals of eliminating pedestrian fatalities and serious injuries, and increasing the percentage of short trips made by walking.

Initiative 1: Promote pedestrian safety, accessibility, and connectivity in investment decision-making and project development.

Making funding decisions and developing projects are two of the most important ways that MassDOT can demonstrate its values and its commitment to walking. MassDOT is responsible for (1) designing projects on all facilities under its jurisdiction, (2) reviewing the design of federally-funded projects on municipal facilities, and (3) setting design standards and minimums that also meet federal standards and minimums.

Actions

1-1. Ensure that pedestrian safety, accessibility, and connectivity is a priority throughout the project development process, from scoping to scoring to design to construction. MassDOT will evaluate and refine its project selection criteria to ensure that projects that address pedestrian safety and connectivity receive priority. MassDOT will establish new guidelines for maintaining pedestrian routes through its work sites during construction.

1-2. Ensure issues and opportunities to create safe and connected pedestrian facilities are studied and implemented when MassDOT is reviewing development projects as part of the Massachusetts Environmental Policy Act and access permit proposals. MassDOT will update the Transportation Impact Assessment guidelines for environmental review documents as needed.

1-3. Disseminate information to raise awareness about best practices highlighted in the Resource Guide and how state funding sources, including Chapter 90 funds, can be used for pedestrian projects on local roads.

Measures for tracking progress

- Number of miles of sidewalk created
- Number of crossings created
- Increase in walking trips around projects

Initiative 2: Establish a set of prioritized pedestrian projects on MassDOT-owned roadways and bridges that address safety, equity, accessibility, and critical gaps in connectivity.

To systematically address pedestrian-related deficiencies and betterment in the MassDOT-owned roadway network, MassDOT is taking a data-driven approach to prioritize locations for new projects. MassDOT is responsible for just 8.2% of all roadway miles in the Commonwealth, but all of these roadways provide important routes for most people to access destinations whether traveling along, across, or to these roadways. **The map on the right** shows all MassDOT owned roads excluding interstate and limited access highways.

Actions

2-1. Finalize a list of priority projects from the Pedestrian Prioritization Analysis. The Pedestrian Prioritization Analysis identifies high priority corridors based on existing sidewalks, potential demand for walking, and equity. From review of the corridors, identify individual projects that will fill in missing sidewalk gaps, construct new or enhanced crossings, improve sidewalk conditions, introduce accessibility enhancements, slow vehicle speed, and/or make complete streets enhancements. MassDOT will update the data inventory regularly and rerun the analysis to establish a rolling set of high priority corridors. For more information on the methodology, see the Appendix. **The map to the right** shows all of the Pedestrian Priority Corridors on Mass-DOT owned roadways statewide.

2-2. Initiate new projects annually based on Action 2-1 to address high crash locations, implement systematic changes to prevent crashes, fill in critical gaps for connectivity and accessibility, and prioritize locations based on equity analysis. For projects that are already active, adjust scope, and for projects that are not active, initiate project development process.

2-3. For all active roadway and bridge projects, MassDOT will incorporate the Pedestrian Prioritization Analysis, as well as existing transit, safety and curb ramp data to inform project scope and design. The available data, which can be downloaded from MassDOT's Open Data Portal, includes:

Sidewalk Gaps
A key piece of baseline data for the Pedestrian Prioritization Analysis is MassDOT's Pedestrian Facilities inventory. The data details the presence and width of sidewalks along MassDOT roadways. **The map to the right** shows existing sidewalk locations on MassDOT roadways as well as associated gaps

on at least one side of the roadway within the state system. MassDOT owns approximately 1,100 miles of sidewalk.

Potential Demand
A second input into the Pedestrian Prioritization Analysis is the potential demand for pedestrian activity along or across a MassDOT-owned roadway. The potential demand score factors in current land use, connectivity of the nearby street network, and total distance of the sidewalk segment. For instance, a sidewalk in a town center, allowing for pedestrian travel to and from many different destinations, would receive a high score from a potential demand standpoint. **The map to the right** shows scores by street segment.

Equity
A third input for the Pedestrian Prioritization Analysis is equity. The equity score shows Environmental Justice and Title VI communities based on demographic and socioeconomic data. **The map to the right** shows where there is a higher percentage of minority populations, zero-vehicle households, low-income populations, limited-English proficiency population, people with disabilities, and youth and elderly populations.

Transit Route Locations
The map to the right shows where there are transit routes operated by 16 Regional Transit Authorities (RTAs), including the Massachusetts Bay Transportation Authority (MBTA). In state fiscal year 2017, the MBTA carried 398 million passengers across their entire system, which includes 4 subway lines, 177 bus routes, 12 commuter rail lines, water transportation ferry service, and paratransit service. The other 15 RTA's provide over 7,800 stops along 282 fixed bus routes in 262 communities across the state. During the same time period, the RTA's carried over 29 million passenger trips on fixed routes, along with approximately 2.3 million passenger trips on their demand response systems. For more information on the MBTA and the RTA's please visit the Massachusetts public transportation webpage.

Pedestrian Crash Cluster Locations
The map to the right shows the top 5% (133 locations) of pedestrian crash clusters between the years of 2006-2015. Crash clusters are areas defined by a 25 meter radius (80 feet) where there have been multiple reported collisions between motor vehicles and people walking. The crash data is compiled by the MassDOT Registry of Motor Vehicles (RMV) based on crash reports submitted by State and local police. For more details about crash data can be found at the MassDOT Crash Portal.

Curb Ramps
The map to the right shows the existence and quality (defined as 'passing' or 'failing') of curb ramps. Curb ramps provide an accessible route that people, including those with disabilities, can use to safely transition from a roadway to a

curbed sidewalk and vice versa. Curb ramps classified as a 'passing' condition, means they are in compliance with current ADA/AAB standards. 'Failing' means the ramp is not in compliance or because there is no ramp where one is required. Out of 26,000 curb ramps, 20,800 are good and 5,200 are failing. MassDOT's ADA Transition Plan includes an implementation plan for addressing 'failing' curb ramps.

2-4. Share methodology and lessons learned from implementation from MassDOT's Pedestrian Prioritization Analysis to support municipalities in their work to address safety, equity, connectivity, and accessibility needs. This action will be coordinated with Initiative 5, Action 5-2.

Measures for tracking progress

- Number of priority pedestrian projects completed (in development)
- Increase in walking trips
- Decrease in fatal and serious injury crashes
- Accessible paths of travel to transit

Initiative 3: Slow vehicle speeds and improve visibility of people walking.

The leading threat to safety of pedestrians is the speed of vehicles. As speed increases, people driving lose the ability to properly observe their immediate surroundings, and vehicles require longer distances to come to a stop. Roadway designs incorporate cues for drivers about how fast or slow to drive, and can be used to slow drivers in deference to pedestrians. Roadway design also impacts visibility and other key pedestrian safety design elements. MassDOT will update design guidance related to traffic calming and visibility such as setting appropriate target speeds, road diets, crosswalk placement, crosswalk design, and lighting. Setting speed limits is a component of an integrated speed management strategy; however, speed limit reductions alone are generally not enough to induce lower speeds. For new or reconstructed roadways, MassDOT sets speed limits in consideration of the intended speed and other contextual factors, including existing or expected mix of roadway users, adjacent land uses, and existing operating speeds.

Speed enforcement is an important part of promoting a culture of safe driving; however, there is a lack of comprehensive information available about enforcement methods. One method of enforcement that is widespread in other countries and increasing in the US is automated speed enforcement (ASE), which uses cameras and radar technology to identify and cite vehicles traveling above the speed limit. Implementation of automated speed enforcement is not within MassDOT's purview, but MassDOT will do research to learn more and monitor the development of legislation. (Massachusetts General Law currently does not currently permit the use of ASE, so it would require new legislation to implement.)

Actions

3-1. Implement design features, including traffic calming, road diets, midblock crossings, and safety countermeasures that encourage and facilitate safe pedestrian travel on all state-owned roadways. Details on design features can be found in the **Resource Guide.**

3-2. Develop and provide speed-setting guidelines to raise awareness about the relationship between speed and safety, and how to set appropriate speeds through combination of roadways design and setting speed limits.

3-3. Initiate a research project that examines the benefits and impacts of automated speed enforcement.

3-4. Evaluate speeds on high priority corridors as described in Initiative 2, Action 2-1.

3-5. Promote the Municipal Resource Guide for Walkability and provide trainings to support municipalities in implementing traffic calming and improving pedestrian visibility.

Measures for tracking progress

- Number of serious or fatal pedestrian crashes where vehicle speed was a contributing factor
- Number of serious or fatal crashes involving pedestrians crossing the street
- Number of communities that access training in implementing traffic calming and improving pedestrian visibility. (In Development)

Initiative 4: Improve pedestrian accessible paths of travel to transit.

Transit riders are also pedestrians. In Massachusetts, 88 percent of MBTA subway and Green Line riders and 96 percent of MBTA bus riders walked to transit stations or stops. Public transportation is an important feature of the Commonwealth's transportation network, and safe, comfortable walking routes to transit access points enables and encourages people to use it. From July 2016 to June 2017, 398 million trips were taken on the MBTA and 29.3 million trips taken on fixed-route bus service run by Regional Transit Authorities. According to Plan for Accessible Transit Infrastructure (PATI)data of the MBTA's 7,600 bus stops, 31 percent lacked adjacent crosswalks. The following actions are in addition to all existing work through PATI and other initiatives to improve access to transit.

Actions

4-1. Construct safe crossings to connect bus stops to destinations, starting with MassDOT-owned corridors as identified in the Pedestrian Prioritization Analysis in Initiative 2.

4-2. Disseminate best practices in the maintenance of transit stops as described in the Resource Guide. As needed, clarify maintenance responsibilities because of

the variety of land owners responsible for pedestrian facilities along a single route.

4-3. Ensure that if a roadway or bridge project is also a transit route that access to transit is a priority throughout the project development process. This action will happen in tandem with Initiative 1.

Measures for tracking progress

- Percentage of MBTA and RTA transit stops with an accessible pedestrian path of travel on DOT-owned roadways

Initiative 5: Launch a year-round maintenance and operations plan for MassDOT-owned pedestrian facilities and support municipalities to do the same.

Year-round maintenance of pedestrian facilities ensures the continual comfort and safety of the people who use them, but also extends the lifespan of the facilities themselves. MassDOT has a comprehensive process for inventorying the condition of curb-to-curb roadway pavement and for clearing snow and ice on all roadways and bridges travelled by vehicles. This initiative establishes actions to add pedestrian facility maintenance and operations to this work. MassDOT is moving towards a proactive and systematic data collection strategy to identify facilities in need of attention. MassDOT has already gathered data on curb ramp condition as part of the Statewide ADA Transition Plan.

Actions

5-1. Develop a comprehensive maintenance plan for MassDOT-owned pedestrian facilities to address facility preservation and repair (both sidewalk surface and associated elements like signs, pavement markings, signals, and curb cuts) and winter maintenance. Pilot a winter snow and ice removal initiative on pedestrian facilities in order to provide the basis for development of a comprehensive plan – and an understanding of potential barriers to make such a program permanent.

5-2. Support municipalities to maintain their sidewalks and related pedestrian facilities. Disseminate the Municipal Resource Guide for Walkability, share lessons learned from MassDOT maintenance and operations efforts, provide trainings through Baystate Roads on pedestrian facility maintenance and winter operations, and expand the statewide vendor contracts on CommBUYS. These contracts will allow municipalities to more easily purchase equipment and/or materials, such as paint, signal equipment, signs, snow removal equipment and de-icing material.

Measures to track progress

- Number of miles of sidewalk in good, fair or poor condition (In Development)

- Crossing condition (including pavement markings, signs, functional pedestrian signals, visibility) (In Development)
- Snow and/or ice cleared from % of MassDOT sidewalks within a specific timeframe of an event (In Development)
- Number of communities reporting establishment of pedestrian facility assessment and maintenance program (In Development)
- Number of communities that participate in Baystate Roads training course (In Development)
- Number of communities that access Municipal Resource Guide for Walkability (In Development)

Initiative 6: Invest in data collection to inform Initiatives 1-5 and to track progress.

MassDOT is committed to using an informed, data-driven approach to implement and measure progress for each of the Initiatives and Actions presented in this Plan. To do so, MassDOT must ensure that data collection practices are gathering the necessary information to conduct robust analyses and make informed decisions.

Actions

6-1. Identify data needs to conduct safety analysis on MassDOT-owned roadways. MassDOT will work with the state's Traffic Records Coordinating Committee (TRCC) to evaluate crash data reporting, improve pedestrian reporting, and adopt best practices from other states for better data. Facilitated by the Executive Office of Public Safety and Security, the TRCC provides a forum for agencies that are involved with crash records to ensure that data collection practices across the Commonwealth are consistent and well-integrated. High-quality crash data is critical to understanding where pedestrian safety improvements are most needed and for identifying pedestrian crash types, which can help guide the selection of countermeasures. MassDOT will launch an improved MassDOT Crash Portal, a searchable database of crash reports submitted by the Massachusetts State Police and local police departments.

6-2. Inventory and collect condition information for sidewalks, roadways crossings, and off-street paths. This information will be integrated into the MassDOT asset management database and GIS systems. The processes utilized for collecting information on pavement, bridges, bus stops, and curb ramp inventory will serve as a model for data collection and management. MassDOT will add bridge pedestrian facility data that is currently not available in to the Pedestrian Prioritization Analysis.

6-3. Start a permanent pedestrian and bicycle count program through a combination of temporary and permanent counters, in addition to household travel surveys. As a first step, MassDOT will conduct a pedestrian and bicycle count pilot at a select number of locations to test different types of equipment and understand the resources and operational support needed to expand statewide. MassDOT will partner with regional

planning agencies, Metropolitan Planning Organizations, municipalities, and groups who do counts to develop a centralized data portal for pedestrian and bicycle counts. MassDOT will share lessons learned with municipalities and anyone who conducts counts. This program complements MassDOT's vehicle count program that includes 550 continuous vehicular traffic count stations and 3,000 short-duration vehicular traffic counts.

Measures to track progress

- Pedestrian facility data on state-owned bridges (In Development)
- Pedestrian facility condition data (In Development)
- Number of permanent pedestrian counter locations (In Development)
- Number of recurring pedestrian count locations (In Development)