PIONEER VALLEY

Regional Bicycle and Pedestrian Plan

UPDATE

Prepared by:

Pioneer Valley Planning Commission

December 2025

Prepared in cooperation with the Massachusetts Department of Transportation and the U.S. Department of Transportation – Federal Highway Administration. The views and opinions of the authors (or agency) expressed herein do not necessarily state or reflect those of the U.S. Department of Transportation.

2025 Update to the Pioneer Valley Regional Bicycle and Pedestrian Plan

Final Report

December 2025

Prepared by the
Pioneer Valley Planning Commission

For the Pioneer Valley
Metropolitan Planning Organization

Prepared in cooperation with the Massachusetts Department of Transportation and the U.S. Department of Transportation - Federal Highway Administration. The views and opinions of the authors [or agency] expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

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1 INTRODUCTION

The Pioneer Valley Bicycle and Pedestrian Plan describes the status of active transportation modes in the Pioneer Valley, but more importantly, it highlights actions municipal government, advocacy organizations and individuals can take to encourage people to walk and bicycle in the Pioneer Valley. It also identifies actions public works officials and community leaders can take to engineer safer places for people to walk and bicycle. This combination of policy-related actions and physical projects allows government officials and citizens to collaborate to improve conditions for pedestrians and bicyclists.

A bicycle and pedestrian transportation plan is concerned with planning for active users who walk or travel by bicycle and other micromobility devices to their desired destinations. This plan is a reference document used by the Pioneer Valley Metropolitan Planning Organization (MPO) staff in relation to matters related to active modes of transportation such as walking and bicycling. The plan also serves as a support document for local communities' staff and their elected officials as a helpful tool that advances local projects towards implementation. It helps prioritize the needs of the region by expanding the recommendations born out of the plan into work program tasks, planning projects, and construction activities.

1.1 Background

The first Pioneer Valley Regional Bicycle and Pedestrian Plan was completed in 2000 and guided by the federal transportation law: Transportation Efficiency Act for the 21st century (TEA 21). In 2008, staff prepared an update on all matters relating to the bicycle and pedestrian plan in the Pioneer Valley region as a comprehensive draft document. That plan update was guided by the federal law: SAFTEA-LU, which included a major addition to the federal transportation law pertaining to pedestrians and bicyclists with a renewed national commitment to Safe Routes to Schools. The current update plan is being developed in concert with the federal Infrastructure Investment and Jobs Act (IIJA) legislation also referred to as the Bipartisan Infrastructure Law (BIL).

1.1.1 Pioneer Valley Regional Transportation Plan

The Pioneer Valley Regional Transportation Plan (RTP) outlines the direction of transportation planning and improvements for the Pioneer Valley through the year 2050. It provides the basis for state and federally funded transportation improvement projects and planning studies. As the Pioneer Valley's blueprint for maintaining a safe and efficient transportation system for all modes of travel, this long-range plan identifies the region's goals, strategies, and projects to both enhance and maintain our transportation system. The recent 2024 update of the Pioneer Valley Regional Transportation Plan emphasized the importance of safety and sustainability when planning for the movement of people in regional transportation.

Bicycling and walking are inextricably linked to the quality of life in our communities. The Pioneer Valley region affords some of the best environments for walking and bicycling in the Commonwealth. An expanding network of off-road trails, and vibrant downtowns laced with sidewalks and scenic shared-use roadways create an unmatched potential. As a destination or as a place to call home, the Pioneer Valley offers a wide range of transportation choices. The focus of this plan is on facilitating the design and construction of projects and the implementation of programs that improve safety and encourage bicycling and walking for people of all ages and abilities.

The first goal of the RTP is to provide and maintain a transportation system that is safe for users of all travel modes and eliminates fatalities and serious injuries. It identifies a number of regional needs and strategies to advance these goals. A summary of the bicycle and pedestrian-related RTP needs and strategies are included in the following two tables (Table 1.1 and 1.2). This subset of needs and strategies fall into one of three areas of emphasis: Safety and Security, Movement of People, or Sustainability (Figure 1.1). They are categorized in terms of their urgency into three categories: Immediate, Ongoing and Future.

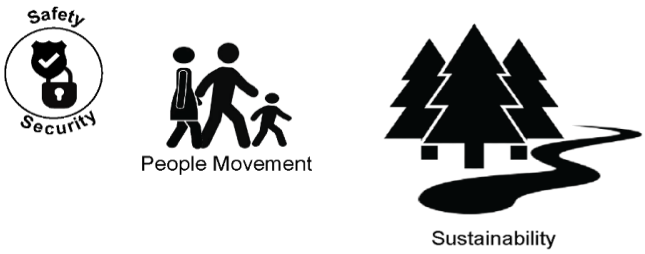
Table 1.1 Regional Needs Related to Bicycle and Pedestrian Transportation

Emphasis Area	Regional Needs	Priority Level
Safety and Security	Reverse the trend of the rising number of fatal and incapacitating injury crashes in the region, including disproportionally impacted protected populations and vulnerable users.	Immediate
Safety and Security	Improve access to driver, bicycle, and pedestrian education.	Immediate
Movement of People	Integrate complete streets, parking, and connectivity enhancements into transportation improvements.	Ongoing
Movement of People	Expand the existing bicycle and pedestrian network.	Ongoing
Movement of People	Maintain equity in providing transportation services and access throughout the region.	Ongoing
Movement of People	Increase the use of alternative transportation options to commute to work and school.	Immediate
Sustainability	Encourage travel modes that minimize impacts on air quality, greenhouse gas emissions and energy consumption.	Ongoing

Table 1.2 Regional Strategies Focusing on Bicycle and Pedestrian Transportation

Emphasis Area	Regional Strategies	Priority Level
Safety and Security	Provide infrastructure improvements to support pedestrians, transit users, and bicyclists in roadway and bridge design and the maintenance of existing facilities. Promote connectivity as part of all transportation improvement projects.	Ongoing
Safety and Security	Promote the Massachusetts Complete Streets and Safe Routes to School programs.	Ongoing
Safety and Security	Promote and advance the use of Roadway Safety Audits and Vulnerable Road User Assessments in the Pioneer Valley.	Ongoing
Safety and Security	Develop appropriate educational resources to promote safety for drivers, bicyclists, transit users, and pedestrians.	Immediate
Movement of People	Promote the implementation of separated bicycle lanes and shared use paths.	Ongoing
Movement of People	Assess connectivity for all modes of transportation for downtown areas and village centers. Identify locations for park and ride lots and supporting express transit service.	Ongoing
Movement of People	Work with local communities to incorporate the concepts of Complete Streets and Traffic Calming into transportation improvement projects.	Ongoing
Movement of People	Encourage private connections to the regional bikeway network.	Future

Figure 1.1 Emphasis Areas



1.1.2 Massachusetts Bicycle Plan

The Massachusetts Bicycle and Pedestrian Advisory Board in coordination with MassDOT began the process of revising and updating both the Bicycle Plan and the Pedestrian Plan. The plan prioritizes on- and off-road bicycling improvements and identifies a statewide bicycling network. The network improves multi-modal transportation generally and bicycle transportation specifically, as well as recreation, tourism, and economic vitality. It identifies priority corridors such as the Mass Central. New Haven Northampton Canal Line Greenway and The Bay State Greenway.

The 2019 Statewide Bicycle Transportation Plan focused on how and why the State is working to increase the percentage of everyday trips made by bicycling, and eliminate bicyclist fatalities and serious injuries at the same time. The vision of the state plan is: "Biking in Massachusetts will be a safe, comfortable, and convenient option for everyday travel". It identifies two goals:

1) Eliminate bicyclist fatalities and serious injuries.
2) Increase the percentage of everyday trips made by bicycling.

The Plan lays out an action-oriented strategy built around three key principles:

1) Reverse the decades-long practice of prioritizing automobile travel over all other modes by granting people biking the same level of importance as drivers in planning, design and maintenance processes.
2) Fix the types of physical gaps and barriers in the transportation system that discourage everyday biking, such as uncomfortable roadway crossings, poorly maintained roads, and lack of bike parking.
3) Lead the Commonwealth and support municipalities to advance everyday biking.

1.1.3 Massachusetts Pedestrian Plan

The 2019 Statewide Pedestrian Transportation Plan focused on how and why the State is working to increase the percentage of short trips made by walking and eliminate pedestrian fatalities and serious injuries at the same time. We are all pedestrians at some point on our daily travels – we walk to get to school or work, to our cars and to transit, or simply crossing the street to get a store. This Plan defines a pedestrian as anyone travelling on foot or who uses a wheelchair, cane or other assisted mobility device.

This Plan defines a vision for Massachusetts in which all people have a safe and comfortable walking option for short trips. It sets two statewide goals:

1) Eliminate pedestrian fatalities and serious injuries.
2) Increase the percentage of short trips made by walking.

There are three underlying principles for this plan:

1) Value people walking and their travel needs, especially the most vulnerable - children, elderly, people with disabilities - to ensure they can safely walk.
2) Prioritize improvements for people walking by proactively addressing gaps and barriers that discourage walking and are known to increase likelihood of crashes.
3) Lead the Commonwealth in meeting the pedestrian plan goals by supporting local municipalities and other agencies to increase everyday walking.

These two plans were followed by one combined statewide bicycle and pedestrian plan update in 2021 that highlights the investments made since 2019 as well as planned future investments for advancing walking and biking in the Commonwealth. In addition to the Plan, a companion document was created, called the Municipal Resource Guide for Walkability. The purpose of the guide is to support cities and towns in their efforts to improve walkability.

1.2 Regional Bicycle and Pedestrian Plan

The plan addresses both bicycle and pedestrian regional plans. It also touches upon micromobility programs such as scooter and bike sharing programs. The aim of this plan is to identify projects for implementation and future planning work program tasks to help communities implement projects and find support for applications for available funding opportunities.

1.2.1 Vision

The RTP sets a vision for the Pioneer Valley as a region that strives to develop and maintain a safe, dependable, resilient, environmentally sound, and equitable transportation system for all. It uses performance-based strategies that promote sustainability, health, and economic vitality. The regional bicycle and pedestrian plan supports this vision.

The current updated plan vision is:

> "The Pioneer Valley Region is a safe, accessible, and enjoyable place to walk and to ride a bicycle. An expanding network of bikeways, sidewalks, and friendly roadways to a variety of active modes of transport provides residents of all ages with many travel options for reaching any destination."

1.2.2 Goals

This plan is designed to promote walking and bicycling in the Pioneer Valley as a means to create healthy and sustainable communities. To align our regional vision for the Pioneer Valley Bicycle and Pedestrian Plan with the statewide vision two goals are proposed:

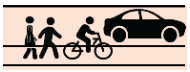
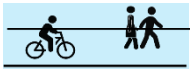
1) To increase walking and cycling trips. 

2) To decrease pedestrian and cyclist crashes. 

The Regional Bicycle and Pedestrian Plan Goals follow the Regional Transportation Plan Needs with their associated Emphasis Areas as listed in Table 1.1. A diagram demonstrating the direct relationship between the Goals and Needs is displayed on the next page (Figure 1.2).

1.2.3 Objectives

The following objectives would aid the efforts to reach the goals of increasing active trips and reducing vulnerable user crashes:

1) Identify roadway and facility improvements that help increase safety for active users. 
2) Identify potential corridors for connecting active users' paths to reduce bicycle and pedestrian network gaps. 
3) Support local and regional efforts to create a bike and pedestrian friendly environment by promoting educational initiatives related to active transportation modes for all ages and abilities such as Bike Month Events. 

The Regional Bicycle and Pedestrian Plan Objectives follow the Regional Transportation Plan Strategies with their associated Emphasis Areas as listed in Table 1.2. A second diagram demonstrates the relationship between the Strategies and Objectives is displayed in the pages following (Figure 1.3).

1.2.4 Summary

This plan outlines goals and accompanying objectives, strategies and actions designed to make the Pioneer Valley a safer place for pedestrians and bicyclists and, therefore, increase their numbers. The success of this plan depends upon the involvement of all residents of the Valley. The different levels of involvement include:

- Municipal governments must take it upon themselves to implement community-specific recommendations.
- Citizen groups must work with local government to explain how they are affected by government actions and to educate one another about pedestrian and bicycle safety.
- Residents must take the initiative to reduce their reliance on cars, and walk or ride their bikes to work, school, and play.

Figure 1.2 Bicycle and Pedestrian Plan Goals following Regional Transportation Plan

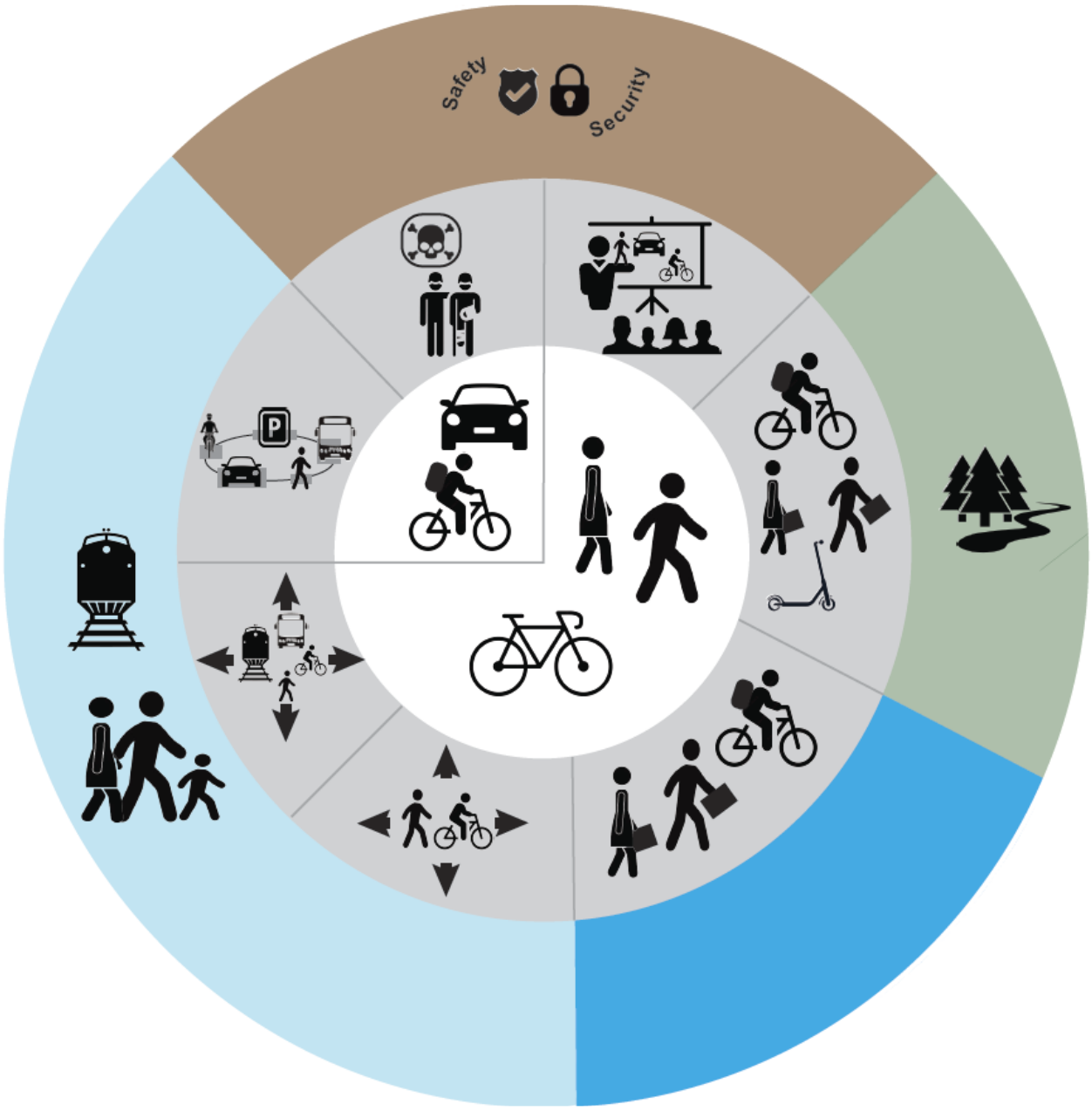
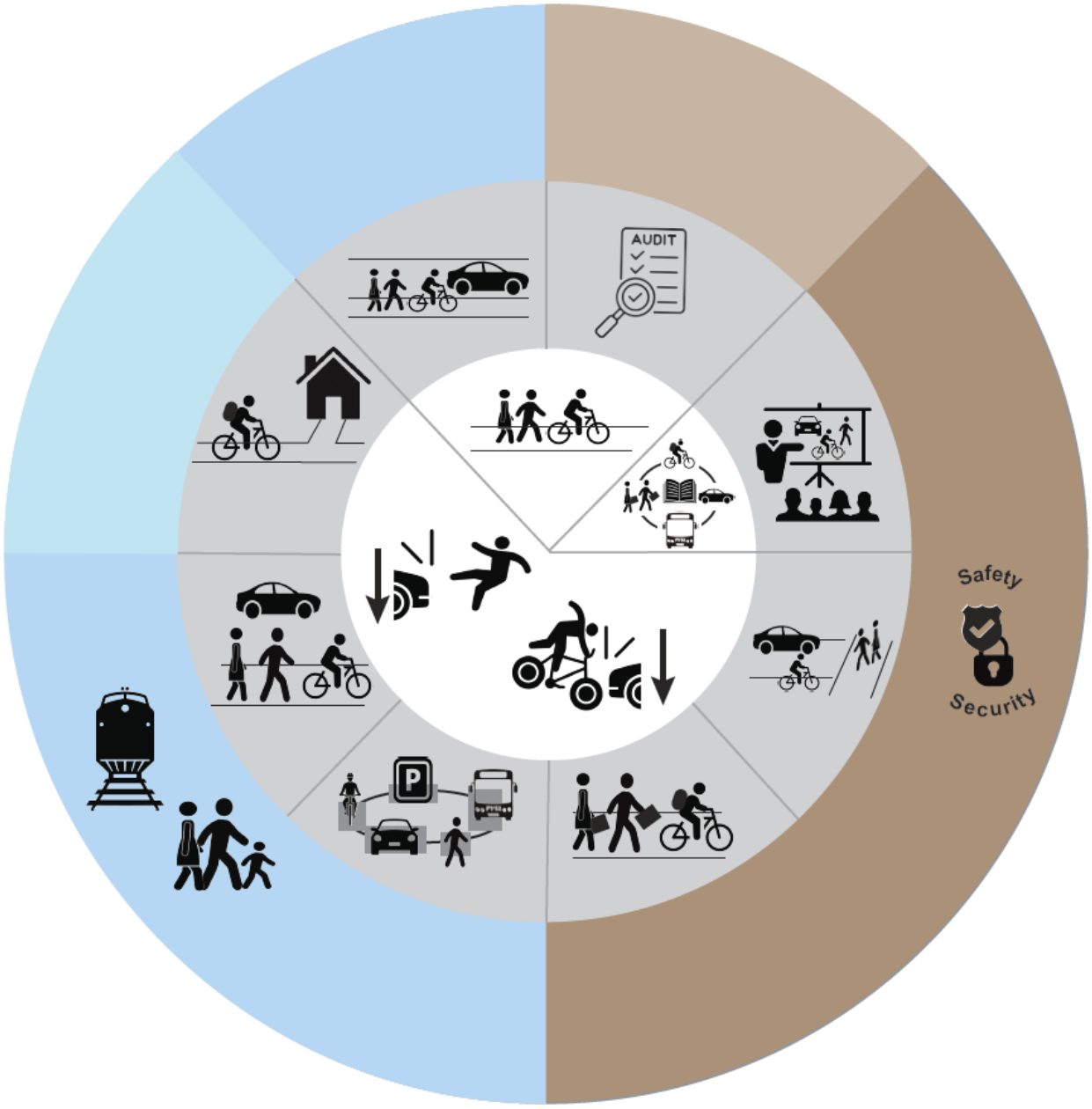


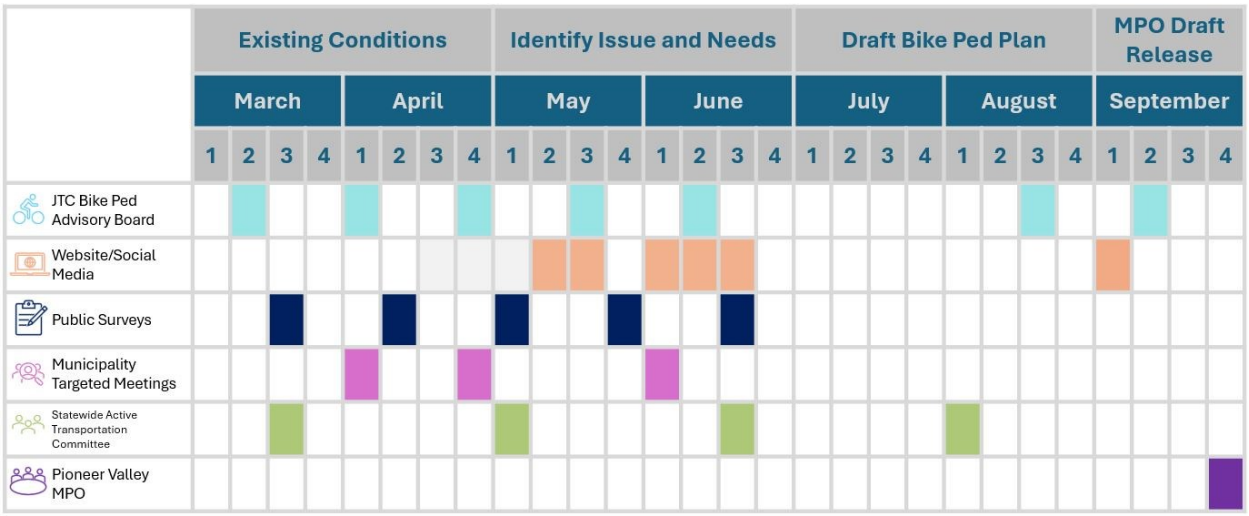
Figure 1.3 Bicycle and Pedestrian Plan Objectives following Regional Transportation Plan



2 PUBLIC OUTREACH

The draft Regional Bicycle and Pedestrian Transportation Plan for the Pioneer Valley underwent a public review and comment period consistent with the Pioneer Valley Region Public Participation Process. Early in the development of the plan, staff conducted regular presentations to the advisory group and sought members' input for the development of the draft document. Other virtual and in-person events were scheduled during the formal four month long public participation process (Figure 2.1).

Figure 2.1 Public Participation Scheduling Chart Initial Draft



During the Fall of 2024 and Spring of 2025, staff developed a set of informational engagement products to begin the outreach efforts for the process of updating the plan. These products included the following:

- Document Naming Preference Survey
- Webpage: http://pvmpo.pvpc.org/transportation-planning/Regional-Bicycle-and-Pedestrian-Plan (A major recent update to the agency website in July 2025 changed the plan's page link to: https://pvpc.org/our-work/regional-bicycle-and-pedestrian-plan/)
- Overview Presentation Slides
- Walking and Biking Stated Preference Survey
- Pioneer Valley Regional Bicycle and Pedestrian Plan Data Viewer/Editor Interactive Map
- Game of Spin the Wheel for a Chance to Win Million Dollar Bills in Play Money and Allocate them to Various Bicycle and Pedestrian Transportation Projects of Choice.

In addition to these products, other resources were made available online on a dedicated webpage for the 2025 plan update, which can be accessed at: https://pvpc.org/our-work/regional-bicycle-and-pedestrian-plan/. A copy of the surveys is included in the report Appendix document posted online.

PVPC reached out to local groups and organizations to present the plan and seek feedback from potential stakeholders. Table 2.1 below lists the types of presentations conducted as part of the outreach efforts of the plan.

Table 2.1 Outreach Events

Date	Event
Monthly	Bicycle, Pedestrian, and Complete Streets Sub-Committee
August 13, 2025 September 10, 2025	Pioneer Valley Joint Transportation Committee Meetings
August 26, 2025 September 23, 2025	Pioneer Valley Metropolitan Planning Organization Meetings
December 5, 2025	Walk/Bike Springfield
February 2025	Bike/Walk Holyoke Committee Meeting
March 11, 2025	Presentation at Age Friendly Pioneer Valley Committee Virtual Meeting
March, 2025	Amherst Transportation Committee
April 10, 2025	Walk/Bike Springfield
April 25, 2025	UMass-Amherst Informational Tabeling at Earth Day Event
Weekly during April 2025	Virtual Meetings in Collaborating with MassBike and Local Bike Advocates Planning for the Regional Bike Month Events
May 2025	Informational Tabeling at Select Bike Month Events
May 8, 2025	Presentation at the Western Massachusetts Transportation Advocacy Network Virtual Committee Meeting
May 20, 2025	Presentation at Westfield's Friends of Columbia Rail Trail
June 3, 2025	Presentation at Strong Towns Northampton Chapter Meeting

The PVPC staff offered status updates on the development of the draft plan to advisory committees such as the Bicycle, Pedestrian, and Complete Streets (BPCS) Sub-Committee of the Joint Transportation Committee, and the Pioneer Valley Metropolitan Planning Organization. Brief presentations on the progress of various sections of the plan were shared by staff regularly. Comments received during these meetings were incorporated into the plan. The monthly BPCS meetings were particularly useful for getting feedback from local community representatives about the content of the plan. Additionally, targeted outreach meetings were scheduled for special interest groups such as the regional Age Friendly Community committee and the regional Bike Month planning committee. Other special interest groups, such as Strong Towns Northampton and Walk Bike Springfield, were approached by visiting

and speaking with their members at their pre-existing local community committee meetings.

The Pioneer Valley MPO released the full draft of the plan on August 26, 2025. Public comments were accepted until September 15, 2025. Both paper and electronic copies of the plan report were made available upon request during the formal public participation process. The plan's report draft was made available for download from the plan's online webpage. Written comments received about the plan's draft report are included in an Appendix posted online.

Two news releases were sent out to media outlets in March and May 2025. Both press releases garnered local media attention and a public interview to introduce the planning effort undertaken as part of the regional Bicycle and Pedestrian Plan 2025 Update. The story was picked up by WWLP and MassLive news agencies (Figure 2.2).

Figure 2.2 News Coverage of the Regional Bicycle and Pedestrian 2025 Plan Update

LOCAL NEWS

PVPC updates Bicycle and Pedestrian Transportation Plan

by: Kayleigh Thomas
Posted: Mar 25, 2025 / 06:09 PM EDT
Updated: Mar 25, 2025 / 06:47 PM EDT

SHARE

SPRINGFIELD, Mass. (WWLP) – The Pioneer Valley Planning Commission (PVPC) began the process of updating their 2025 Regional Bicycle and Pedestrian Transportation Plan.

It's been 17 years since this plan has been upgraded, and the organization hopes to build on the improvements made in biking and walking over those years. They were able to fulfill projects like Bike Share River Walk in Chicopee, and Columbia Greenway in Southwick and Westfield.

| Springfield Police conduct "park and walk" sweep in this neighborhood >

The Bicycle and Pedestrian Transportation Plan now hopes to come up with more projects and policies that will benefit the region's 43 cities and towns. The organization hopes to continue to make streets more safer and accessible for all.

"A safe network to bike and walk makes all the difference, and i think that's come out more and more," said Jefferey McCullough, PVPC Principal Transportation Planner. "Priority is connecting our streets to popular destinations like schools, places of employment. We've seen the growth in bicycling and walking over the last ten years and we want to see that expand into the future."

The Pioneer Valley Planning Commission gets nearly $50 million in federal funding annually to support all new projects. One project currently in the works is the expansion of the Mass Central Rail Trail that goes from Williamsburg to Boston.

The community is looking for community feedback on their plan.To submit your responses or learn more about the plan click here.

PVPC working on two-decade plan for bikers and pedestrians

Updated: May. 22, 2025, 5:59 p.m. | Published: May. 22, 2025, 5:58 p.m.

In 2024, riders set off through Westfield on a rainy Saturday for the Great River Ride, a collection of long-distance bicycle rides hosted by the Friends of the Columbia Greenway Rail Trail that loop into the Hilltowns and other neighboring communities. (Marc St. Onge / The Westfield News, File) The Westfield News

By Namu Sampath | nsampath@repub.com

The rail trails now scattered throughout the four counties of Western Massachusetts were once just a thought.

Twenty years later, the trails offer scenic escapes to bikers and walkers from the bustle of everyday life.

2.1 Advisory Committee

The main advisory group is called the "Bicycle, Pedestrian and Complete Streets Sub-Committee" or (BPCS) for short. Members of this group were invited early on in the process to take part in the development of this plan update. Staff engaged the members of this committee in various discussions regarding topics such as: the naming of the report, updating the vision statement, narrowing down the goals and objectives, and prioritizing recommendations. These discussions with members of the advisory committee began in October 2024 and recurred regularly during the scheduled monthly meetings, as work progressed on this report. Table 2.2 below lists topics presented at monthly meetings in relation to the plan. These topics were added as discussion items to the regular order of business agenda for this committee.

Table 2.2 Bicycle Pedestrian and Complete Streets Sub-Committee Meetings

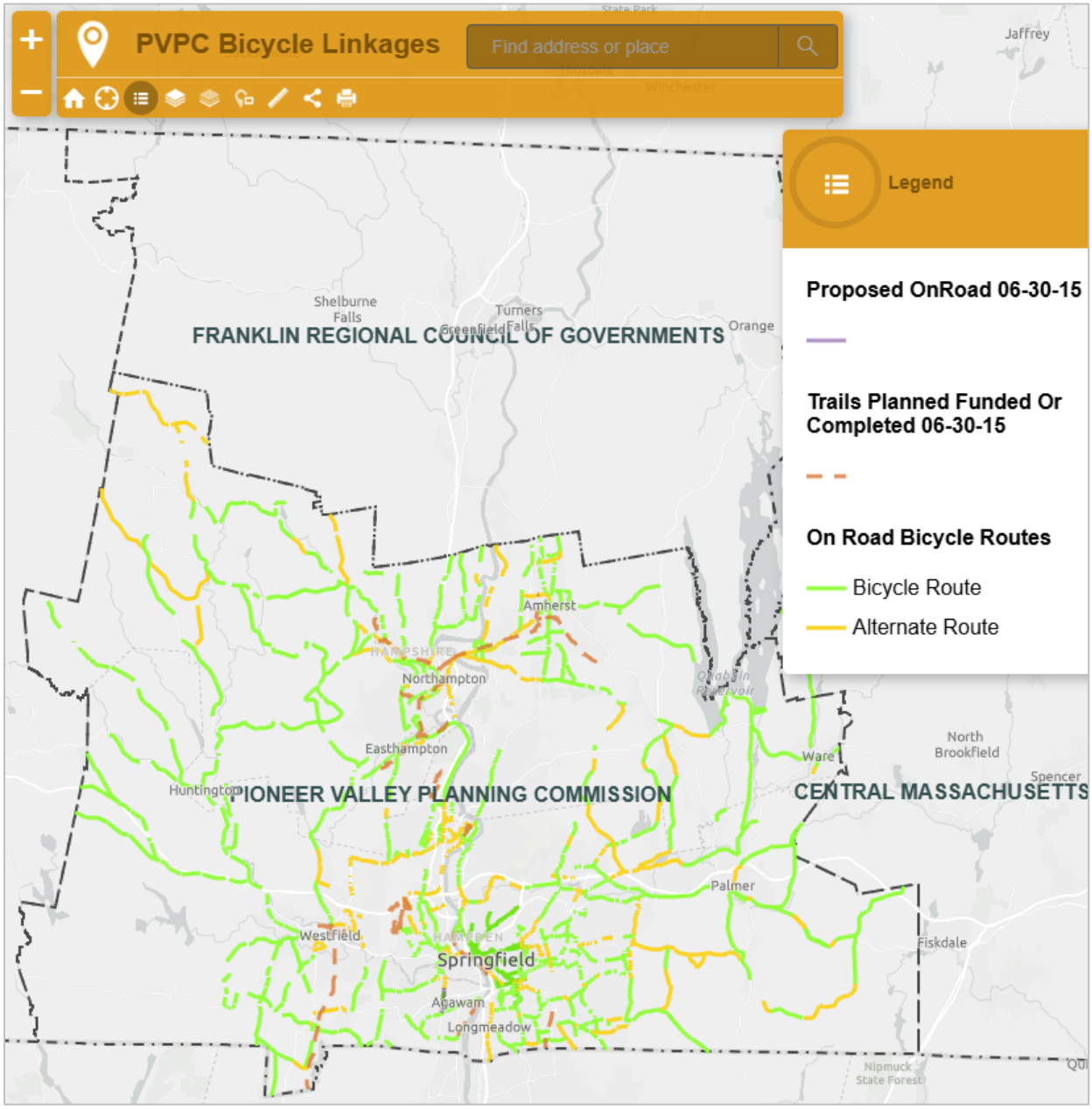
Meeting Date	Discussion Topics
October 9, 2024	Introducing the need for a new regional Bike/Ped Plan, RTP goals, updated inventory of facilities and network connections
November 13, 2024	Naming alternatives for the plan document, public outreach opportunities and strategies, regional network planning
December 11, 2024	Update of the previous Vision Statement
February 12, 2025	Public Outreach, Engagement Tools, Visual Survey
March 9, 2025	Pioneer Valley Bicycle and Pedestrian Network Gaps
April 9, 2025	News Release and Local Media Coverage, Upcoming Outreach Events in Amherst and Northampton, Weekly Organizational Meetings to Plan Bike Month Events
May 14, 2025	Ongoing Outreach Activities: Tabeling at Bike Month Events, Survey, Press Releases, Presentations to Local/Regional Organizations
June 11, 2025	Update on Outreach Activities: Tabeling at Bike Month Events, Survey, Press Releases, Presentations to Local/Regional Organizations
August 13, 2025	Prioritizing Strategies Identified Through the Public Outreach

The advisory meetings were held virtually and included a discussion that revolved around specific portions of the plan to seek feedback as well as progress updates about ongoing tasks. Comments and suggestions received from participants were used to update the plan's vision, goals, needs, strategies and problem statements. A review of existing bicycle and pedestrian network was one of the topics discussed using an interactive map tool (Figure 2.2). The completed draft version of the plan report was later distributed to the JTC and MPO through email and posted to PVPC's website in August 2025 as we continued to solicit comments from the general public. Public comments received are listed in an Appendix online.

2.2 Multiple Approaches to Public Engagement

A diverse array of engagement tools was implemented to reach as many stakeholders as possible (Figure 2.3). This ranged from multi-lingual announcements to translation services made available for meetings as well as online documents. Opinions of both professional committee members as well as local community members were sought to enrich this plan update. The aging community advocates were approached and encouraged to get involved in the planning process. This included both local planners, professionals from councils on aging, and interested residents that serve on the regional Aging and Dementia Friendly committee.

Figure 2.3 PVPC's Regional Bicycle Linkages Map



2.2.1 In-Person Interactions

Attending established committee meetings as well as presence at various Bike Month events was the strategy chosen by staff to meet people where they are (Table 2.3). This approach has proven to be successful in engaging the public in the planning process (Figures 2.4 and 2.5). This included reaching out to City and Town Transportation Committees, Town and University Sustainability Committees, as well as Bicycle and Pedestrian advocacy groups.

Table 2.3 Information Table and Public Outreach Opportunities in the Pioneer Valley

Community	Date	Day	Time	Event	Location
UMass-Amherst	4/25/2025	Friday	12:00 PM - 04:00 PM	Earth Day Extravaganza	Goodell Lawn
Amherst	4/26/2025	Saturday	10:00 AM - 04:00 PM	Sustainability Festival	Amherst Town Commons
Northampton	5/14/2025	Wednesday	07:00 AM - 9:00 AM	Northampton Bike Breakfast	Pulaski Park
Westfield	5/14/2025	Wednesday	05:30 PM - 06:30 PM	Mayor's Ride	Westfield City Hall
Springfield	5/17/2025	Saturday	08:00 AM - 11:00 AM	Largest Pancake Breakfast	Berkshire Bank Parking Lot

Figure 2.4 Information Table at the UMass-Amherst Earth Day Event

Figure 2.5 Information Table at the Amherst Sustainability Festival

2.2.1.1 Agency Meetings

During Spring 2025, staff reached out to various agencies and offered to speak about the Bicycle and Pedestrian regional plan update at one of the their regularly occuring meetings. Such coordinated events required early planning of at least a month in advance to work with the committee chair or facilitator and be placed on their upcoming committee meeting agenda. Examples of such agency visitations included WalkBike Springfield, a meeting with members of the Strong Towns Northampton Chapter and members of the Friends of the Columbia Rail Trail in Westfield. At these meetings PVPC staff explained the agency's role in developing a regional bicycle and pedestrian plan and provided an overview of the plan's content and purpose, then opened the discussion to committee members. Staff encouraged attendees to fill out the Bike/Pedestrian Habits survey and to provide their feedback via the online wiki map. At the end of the meeting, staff distributed contact information for future follow-up on questions about the plan update.

The WalkBike Springfield meeting participants gave their suggestions, including the need to describe elements of Complete Streets and how the emphasis on roadways being for all users is the major change since the last plan. They were asked to use the feedback form and map to suggest areas that need improvements. The on-line form allows users to upload photo attachments to illustrate the location where improvements are needed.

The Strong Towns group discussed a number of safety concerns that are obstacles to walking and bicycling. Among these, "speeding vehicles" and the need to implement better traffic calming measures and automated speed enforcement. Other issues included: safety for school children walking to school, maintenance, and snow removal on shared-use paths, improved connectivity in the sidewalk network, and having a more active voice by regional agencies (like PVPC) in supporting projects such as "Picture Main Street." Several participants expressed concern for pedestrians around transit stops and felt that there should be better visibility, and that bus stops should have benches. There was concern that the bike racks on PVTA buses were often full, and the bus app should provide notice to prospective riders. They stated that larger-scale private developments needed better pedestrian connectivity and identifyied the need to do a better job of maintaining existing bike lanes and sidewalks. Regionally, they suggested that we should work collectively to change social norms around distracted driving. They requested that PVPC work with municipal officials to secure funding for bicycle and pedestrian projects and programs.

The Westfield meeting attendees identified two main priorities. Their first priority was the need to complete the gaps in the New Haven to Northampton Canal Greenway. The group encouraged PVPC to actively engage with its counterparts along the corridor in CT to assure that the New Haven to Northampton Canal Greenway remained a priority corridor and that every effort was made to remove obstacles and support initiatives that would continue to advance this important project. The second proiority the committee focused on was challenges in expanding safe travel options

on local roads and the desire to make more connections to local destinations including downtown residential neighborhoods, Westfield State University, the Big Y shopping plaza, local schools, and areas north of the central business district. The City recently adopted a Complete Streets Prioritization Plan and there was support for complete streets initiatives including safer crosswalks and better nighttime visibility. With respect to shared-use paths, there was a lengthy discussion of the growth in E-bikes and the need to find a way to quantify/qualify associated problems and develop strategies to effectively manage the speed of the many new types of users on the trail. Other issues discussed included: children walking to school, graffiti on the trail, winter use of shared-use paths, and improved connectivity in the sidewalk network, measuring/quantifying the economic impact of the Greenway on the local economy and the use of PVPC drones to capture camera footage to promote and expand local tourism.

2.2.1.2 Outdoor Public Events

Bringing the information about the regional plan to the public is key in engaging those who otherwise would not know about it and are unaware of how to become a part of the ongoing regional planning process. In-person public informational tabeling efforts were scheduled to coincide with some of the most popular Bike Month outdoor events in May. This included Northampton's Community Bike Breakfast, Westfield's Mayor's Ride, and Springfield's Valet Bike Parking at the World's Largest Pancake Breakfast (Figures 2.6, 2.7, 2.8).

Figure 2.6 Information Table at the Northampton Community Bike Breakfast Event

Figure 2.7 Information Table at the Westfield Mayor's Ride Event

Figure 2.8 Information Table at the Springfield Pancake Breakfast Event

2.2.2 Virtual Meetings

Staff presented the plan at a couple of virtual public meetings held by existing committees and special interest groups. The first virtual presentation was to the committee of the Age and Dementia Friendly Pioneer Valley as an effort to begin engaging local Councils on Aging that held active walking clubs who are invested in implementing pedestrian friendly neghborhoods. The presentation slides were uploaded to the plan's online page and made available to public. The second presentation was to members of the Western Massachussetts Transportation Advocacy Network.

Some of the challenges identified by the Age and Dementia Friendly group included: having to drive to a walkable or bikable facility in Ware, park accessibility issues, school children blocking entry and exit of the Holyoke Senior Center as they walk home at the end of school day making it difficult for the elderly to navigate through the crowd. Some group members requested the installation of high visibility crosswalks such as raised crosswalks to improve crossings. A suggestion was made for placement of a rumble strip before crosswalks to alert drivers at locations where some have not been obeying the existing stop sign. Attendees also identified a need for an education campaign regarding yielding to pedestrians in crosswalks.

2.2.3 Engagement Tools

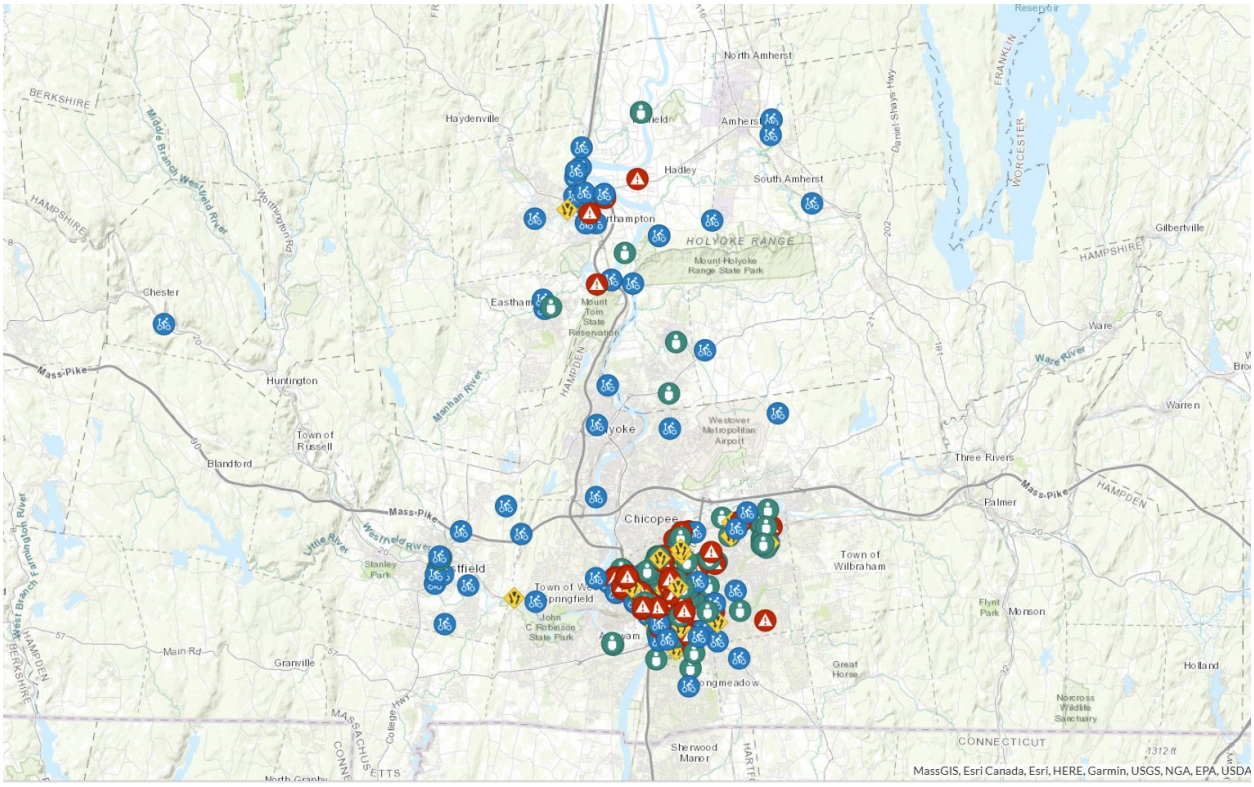
A variety of tools were employed to engage stakholders and the public in the planning process. The three main tools used were: maps, surveys, and spin the wheel game. The survey was available in both print as well as in digital format online. The online map version focused on collecting feedback and idenfitying gaps and seeking solutions to current problems in the regional bicycle and pedestrian network. These tools served as a conversation starter to get to know what kind of barriers residents faced when they chose to use active transportation modes of travel to reach their day to day destinations. The following sections in this chapter of the report describe the three main tools and the outreach efforts. Further details regarding the outcome of the outreach efforts is discussed later with the survey result analysis in the section about evaluation in Chapter Four of this report. All survey questions' summary results are included in an Appendix online.

2.2.3.1 Interactive Web Map

A regional online interactive map was published to the PVPC website (Figure 2.9). It is titled the "Pioneer Valley Regional Bicycle and Pedestrian Plan 2025 Update Data Viewer/Input Wiki Map". All promotional materials pointed to this web map and porvided links to instructions about how to provide input and suggest improvements. This map serves as a reference for existing conditions. Often called a wiki-map, it offers a representaion of the region's non-motorized network. It includes several layers of data that can be turned off and on to highlight various components of the regional active transportation network. There were four types of improvements to select from: Bicycle, Pedestrian, Road Crossing, or Traffic/Road. Color-coded circles enclose icons

that represent each type of improvement requested and mark the location of the public input. Clicking on an icon opens a window box to reveal comments received on page 2 of the infomration box. A glance at the regional wiki map below shows that there are many bicycle related improvements requested throughout the region marked by the blue circles. Green circles represent locations where pedestrian improvements were requested and red circles mark road crossing improvements requested. A yellow diamond represents a location where a traffic or road related improvement was needed.

Figure 2.9 Regional Wiki Map



The above map can be viewed at the following website link:
https://pvpc.maps.arcgis.com/apps/GeoForm/index.html?appid=bf67bd58f5014b8f93e4e01c9c87e543

2.2.3.2 Spin the Wheel Game

Spin the wheel game was developed to engage visitors at the PVPC information table at public events. When the wheel stopped spining at a random number, a player was given an equivalent number of Million Dollar bills of play money to spend on various bicycle and pedestrian transportation improvement projects. Then the player chose which bins to drop the bills into. The bins represented various project types (Table 2.4). Some of the spending choices were: bike lanes, shared use paths, sidewalks, safe crosswalks, expand bikeshare, bike parking, slow down speeds, stop distracted driving, maintenance, and other ideas. The activity proved fun for visitors of all ages (Figure 2.10).

Table 2.4 Budget Spending Categories (Game)

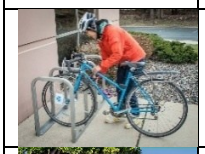
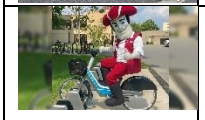
Image	Label	Description
	Maintenance	Rehabilitating current infrastructure, while maintaining good condition infrastructure.
	Bike Lanes	Adding and Improving Bike Lanes in areas with no Bike Lanes or Bike Lanes in need of improvements
	Sidewalks	Adding sidewalk connections or improving existing sidewalks accessibility and safety
	Shared-Use Paths (Bike Paths)	Adding Shared-Use Paths in areas in need, and improving current paths accessibility, safety, and connections
	Stop Distracted Driving	Improving driver awareness through enforcement and roadway additions (Signage, rumble strip, etc.)
	Safe Crosswalks	Adding crosswalks to areas in need of crosswalks and improving current crosswalks safety and accessibility
	Bike Racks Bike Parking	Providing Bike Racks/Bike Parking in areas of need, updating current Bike Parking accessibility
	Slow Traffic	Improving Traffic safety through slower traffic by speed limits, traffic calming (speed bumps, speed tables, etc.) and other safety measures
	Expand BikeShare	Adding Bike Share in areas with no existing bike share, improving current bike share infrastructure/system
	Your ideas?	Other Improvements not listed, provided by community members
	Spin the Wheel for Million Dollars	Grand Total (in bicycle and pedestrian improvements)

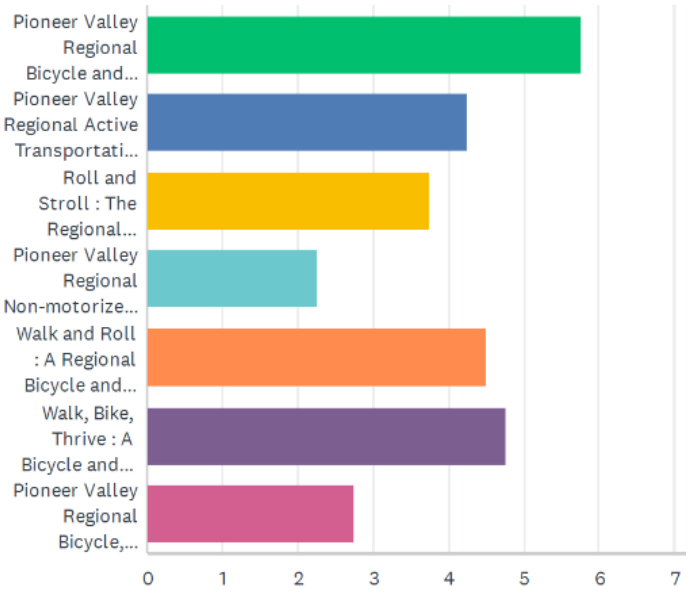
Figure 2.10 Spin for Million Game

2.2.3.3 Surveys

A series of surveys were developed throughout the stages of the plan update process. The first survey included a report naming questionnaire. It was shared exclusively with the advisory group to help us identify the best name for this 2025 plan update. The most familiar traditional name received the most votes (Figure 2.11).

Figure 2.11 Rank Which Name do you prefer for the documet

	1
Pioneer Valley Regional Bicycle and Pedestrian Plan	50.
Pioneer Valley Regional Active Transportation Plan	0.
Roll and Stroll : The Regional Bicycle and Pedestrian Plan for the Pioneer Valley Region	0.
Pioneer Valley Regional Non-motorized Transportation Plan	0.
Walk and Roll : A Regional Bicycle and Pedestrian Plan for the Pioneer Valley	25.
Walk, Bike, Thrive : A Bicycle and Pedestrian Plan for the Pioneer Valley Region	25.
Pioneer Valley Regional Bicycle, Pedestrian and Complete Streets Plan	0.



A second survey was designed to engage the public in the topic of active transportation barriers and needs using a series of questions for use at the in-person events or via the plan's online page (Figure 2.12). Copies of these surveys are included in the appendices of this report. A series of 17 questions, mostly multiple-choice, inquired about the current walking and biking habits of participants and tried to identify matters that would encourage them to walk or bike more. At the end of the survey participants were presented with a couple of open ended questions about what and where improvements to the existing bicycling and walking infrastructure were needed.

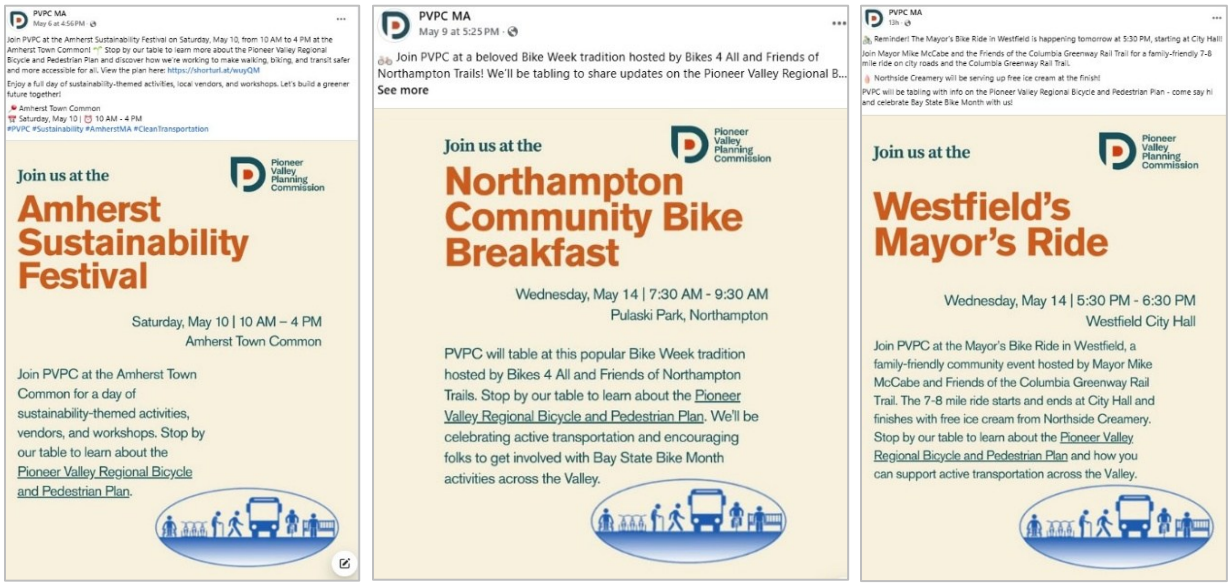
Figure 2.12 Surveying the Walking and Biking Habits

2.2.3.4 Social Media

A key promotional tool of today's modern and tecnologically savy public is social media (Figure 2.13). Staff worked with PVPC's Public Relations teams to post regular announcements about the plan using the agency's social media accounts on Bluesky, Facebook and Instagram. These included informational messages, invitations to public meetings, links to the interactive online map and surveys posted on the agency's website which included additional resources related to the Regional Bicycle and Pedestrian Plan 2025 Update. Visit the following links to view posts:

- Instagram - @PVPCMA
- Facebook - PVPC MA
- Bluesky - @PVPCMA

Figure 2.13 Outreach Events Promotional Social Media Posts



3 EXISTING CONDITIONS

Nestled among the forests, farmland, and mountains on the banks of the Connecticut River, the Pioneer Valley is ideally suited for recreational hiking and biking. Our small towns and larger city neighborhoods are where you find great coffee shops, historically preserved buildings, musical performances, crowds of young and the young at heart, a strong local food movement, first-rate museums and art galleries, shops, restaurants, and residents eager to get outdoors in any season.

The Pioneer Valley is made up of 43 cities and towns with various travel patterns influenced by how land is developed. Changes in population growth leads to changes in travel needs. In general, as the population of urban areas has decreased, rural and suburban area populations have increased. A sprawling development pattern has made it increasingly difficult to walk or bicycle as a practical and safe way to get around.

There is a growing desire to reduce our dependence on the automobile and increase the availability of options for people of all ages and abilities to choose to bicycle or walk. There is also an interest in the use of non-motorized transportation to provide benefits that help improve quality of life such as:

- Improve air quality by reducing fuel emissions.
- Improve individual health by combating obesity and related diseases, especially for low-income inner-city populations and rural towns.
- Counter economic strain due to the cost of operating vehicles at the micro level (family-centered) and macro level (industry-centered).
- Combat sprawling land consumption of large-lot zoning that promotes gasoline-based travel in new communities.
- Reduce transportation related greenhouse gas emissions.
- Inspire safe neighborhoods through traditional housing development with small-scale business.
- Decrease dependence on imported foreign fuel.

Many factors can influence one's decision to walk or bicycle. These include:

- Lack of ability to walk or bicycle
- The need to transport large items or additional passengers such as children
- The need for a car at work
- Access to appropriate routes
- Environmental conditions such as hills and climate
- Availability of secure bicycle parking
- Access shower facilities.

A successful bicycle and pedestrian network can be measured in a variety of ways. Census data and crash statistics provide one measure of current conditions, surveys conducted at local bike and pedestrian facilities provide another measure by which to measure success. Infrastructure improvements including shared use paths, sidewalks and bike lanes also serve as a barometer. Finally, the policies, regulations and practices of government also measure current conditions influencing pedestrian and bicyclist behavior and infrastructure development in the region.

From bicyclists racing down a country road in the hill towns, to pedestrians on sidewalks in urban areas, and children in school crossings in the suburbs, pedestrians and bicyclists are everywhere in the Pioneer Valley. The infrastructure that accommodates this movement exists in varying degrees and is expanding.

3.1 Regional Network Overview

Massachusetts law requires providing access for bicyclists and pedestrians on all roadways except limited access and Interstate highways. There are 4,325 miles of functionally classified roadway in the Pioneer Valley. Eighty-seven miles are Interstate, where walking and bicycling are prohibited. Local cities and towns maintain the majority of roads in the Pioneer Valley region, a total of 3,441 miles. An online Bicycle Facility Inventory tool can be accessed to document and assess the current status of the regional network (Figure 3.1).

Currently there are approximately 47 miles of designated off-road bicycle facilities in our region and 37 on-road facilities (Table 3.1). These include bike lanes and designated bike lanes and bike routes in Agawam, Amherst, Belchertown, Brimfield, Chicopee, Easthampton, Granby, Hadley, Holland, Holyoke, Monson, Northampton, South Hadley, Southwick, Springfield, Wales, Westfield, West Springfield and Williamsburg. Many more of these bicycle design treatments are in the planning stages as communities work to implement the "complete street" approaches to design.

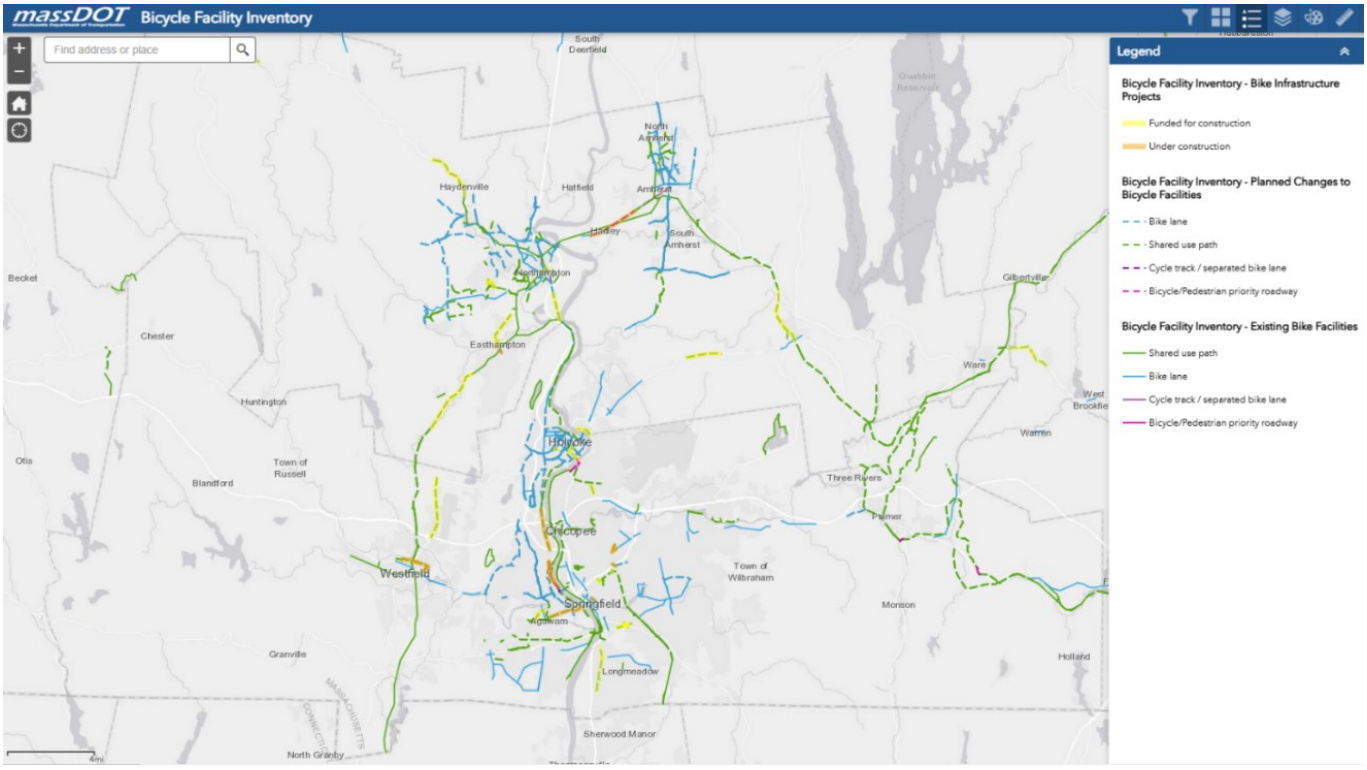
There are five general types of bicycle and pedestrian facilities according to the to the Guide for the Development of Bicycle Facilities [1]. These facility types include the following:

1) Shared use paths are facilities physically separated from motorized vehicular traffic by an open space or barrier and are either within the highway right-of-way or within an independent right-of way. Shared use paths may be used by bicyclists, pedestrians, skaters, wheelchair users, joggers and other non-motorized users.

[1] AASHTO, 2012. Guide for the Development of Bicycle Facilities

2) Bike lanes are portions of roadways that have been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists.
3) Signed shared roadways (bike routes) are shared roadways that have been designated by signing as preferred routes for bicycle use.
4) Shared roadways are roadways that are open to both bicycle and motor vehicle travel. They may be existing roadways, streets with wide curb lanes, or roads with paved shoulders.
5) Walkways are pedestrian facilities that can be either separated from roadways, such as sidewalks and paths, or part of roadways, such as crosswalks or wide shoulders. In addition to these types of on and off-street linear transportation facilities, a broad variety of nonlinear facilities exist that further support effective and convenient pedestrian and bicycle travel. They include, but are not limited to: bike lockers, bike racks, showers/dressing rooms, bike/pedestrian bridges, lighting, landscaping, curb-cuts, medians, refuge islands, curb ramps, benches, drinking fountains, restrooms and signage.

Figure 3.1 Bicycle Facility Inventory



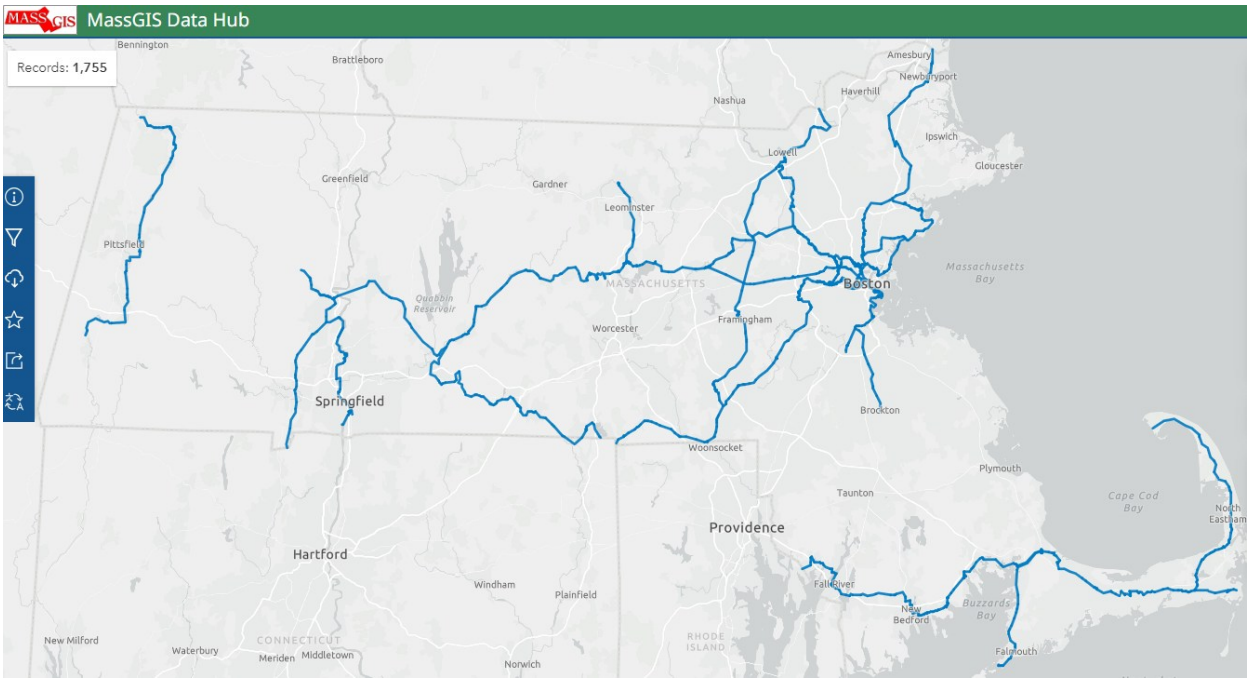
The original map above can be viewed online at this website link: https://massdot.maps.arcgis.com/apps/webappviewer/index.html?id=76fc33869d534c6ba0b16803d25ee990

Table 3.1 Pioneer Valley Existing Bicycle Infrastructure Inventory

Pioneer Valley Bicycle Facility	Communities	on/off road	Length (miles)	Date Opened
CT. River Riverwalk and Bikeway	Agawam	off	1.50	9/17/2004
Amherst Bike Route	Amherst	on	1.00	
Amherst Bikeway (Route 116)	Amherst	off	3.50	
Five College Bikeway	Amherst	on	6.00	
South Pleasant St. Bike Lanes	Amherst	on	0.25	7/15/2001
UMass Connector Bikeway	Amherst	off	1.90	5/15/2003
Norwottuck Belchertown Extension	Amherst/Belchertown	off	1.20	5/12/2000
Damon Road Sidepath	Northampton	Off		12/1/2024
Chicopee Center Canal Walk	Chicopee	off	0.20	5/21/2010
Redstone Rail Trail	East Longmeadow	off	1.57	9/9/2010
Manhan Rail Trail	Easthampton	off	4.20	6/19/2004
Dwight Street Bike Lanes	Holyoke	on	0.50	6/12/2005
Hampden Street Bike Lanes	Holyoke	on	0.60	5/13/2004
Route 5 Bike Lanes	Holyoke	on	1.20	7/8/2006
Holyoke Canalwalk	Holyoke	off	0.30	6/25/2010
Route 5 Bike Route	Holyoke/Northampton	on	8.00	6/25/1986
Springfield (Ludlow) Reservoir Trail	Ludlow	off	3.10	
MBW Trail	Monson, Brimfield, Wales	on	17.00	6/10/1998
Elm Street Bike Lanes	Northampton	on	0.80	6/15/2000
New Haven and Northampton Canal Rail Trail	Northampton	off	2.10	7/1/2005
MassCentral Rail Trail	Northampton	off	2.50	6/6/1984
Rocky Hill Trail	Northampton	off	0.50	
Norwottuck Damon Road to Woodmont	Northampton	off	0.80	5/1/2008
Norwottuck Look Park Extension to Grove St	Northampton	off	2.00	7/1/2005
South Street Bike Lanes	Northampton	on	1.10	9/10/2003
Northampton Canal/MassCentral Rail Trail	Northampton	off	1.00	9/26/1989
Norwottuck Rail Trail	Northampton/Hadley/Amherst	off	8.50	5/15/1993
Southwick Rails to Trails Phase I	Southwick	off	3.14	5/3/2010
CT. River Riverwalk and Bikeway	Springfield	off	3.70	7/18/2003
Westfield Riverwalk	Westfield	off	2.00	4/16/1998
116 Five College Bike Lane Extension	Granby/South Hadley	on	0.25	4/25/2015
Columbia Greenway (segment 2, 3)	Westfield	off		
Tunnel MassCentral Manhan Rail Trail	Northampton	off	0.10	2018
CT. River Riverwalk and Bikeway	West Springfield	off		2019
Ludlow Mills Riverwalk	Ludlow	off		
Agawam Connector Loop Bikeway	Agawam	on/off		
East Hadley Road Sidepath	Amherst	off		2019
Morgan-Sullivan Bridge	Agawam/West Springfield	off	0.10	2021
Route 116 Sidepath	Amherst	off		
CT Riverwalk and Bikeway	Chicopee	off	2.44	6/2022
Ware Accessible Trail (MassCentral)	Ware	off		2022
Western Avenue Bikeway	Westfield	off		2021
Grand Trunk Titanic Trail	Brimfield	off		
Total Mileage			83.05	

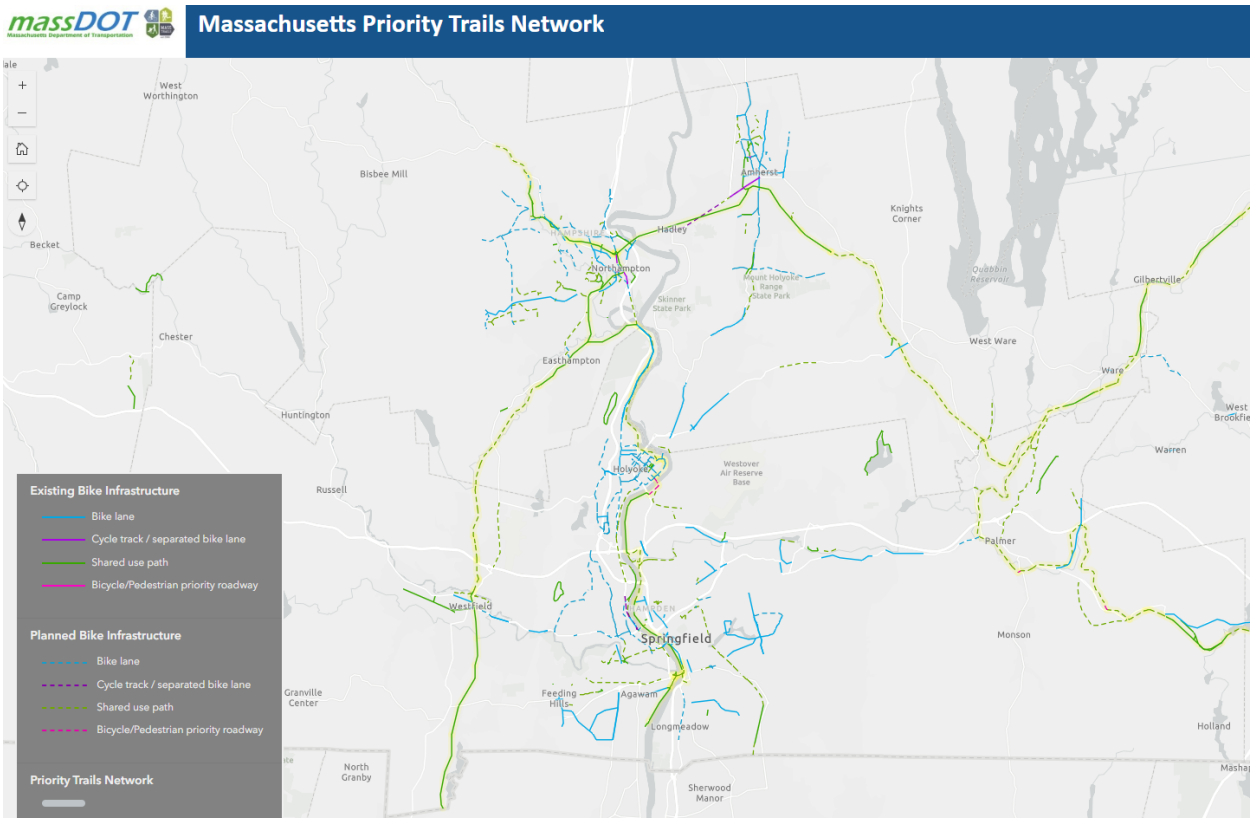
The Massachusetts Trails Team (MassTrails), an interagency collaboration between the state's Department of Conservation and Recreation (DCR), MassDOT, and municipalities, has published a new interactive Priority Trails Network vision map released in 2023 for current and future shared-use path projects throughout the Commonwealth (Figure 3.2). The map offers a centralized inventory of key rail trail projects that will help support an envisioned comprehensive statewide transportation trail network. Additionally, the map lists priority shared-use path project locations that either have been proposed for consideration or will be pursued for funding and development to help address key gaps in the network (Figure 3.3). Where off-road facilities do not exist, high-comfort on-road infrastructure is proposed such as separated bike lanes with sidewalks or side paths. The MassTrails Team works toward the realization of this statewide vision, in recognition of the transportation, recreation, environmental, economic, and other benefits trails provide. The trails identified on this map were selected from many envisioned by communities, trail groups, and agency staff. They represent priorities to be worked toward, but they are not the only places where attention and funding will be devoted. As key gaps in this network are completed, new priorities are identified and pursued.

Figure 3.2 Massachusetts Priority Trails Network Map



The original map above can be viewed online at this website link: https://geodot-massdot.hub.arcgis.com/datasets/3bf22008fbec4db59feb0dad94305706_0/explore

Figure 3.3 Pioneer Valley Region Priority Trails Network



The original map above can be viewed online at this website link: https://experience.arcgis.com/experience/75ad0564b18f48f5973657d65d2a775d/page/Page/

Pioneer Valley trails included in the Massachusetts Network Vision map are:

- Columbia Greenway Rail Trail
- Southwick Rail Trail
- Southampton Greenway Rail Trail
- Manhan Rail Trail
- Mass Central Rail Trail
- Northampton Bikeway
- Connecticut River Walk and Bikeway

MassDOT also prepared a series of statewide network analyses for different modes of active transportation. The results are shared via an online dashboard using an interactive state map rich with layers of data that can be turned on and off to show where certain attributes of the map intersect and reveal trip making patterns. The following sections of the regional network analysis borrow from two sources of active transportation trips and corridor data analysis conducted at the state and regional levels. The first source is a recent Bicycle and Pedestrian Infrastructure Gap Analysis

shared by MassDOT. The second source is from MassDOT's active transportation demand forecasting effort.

In this report, we will focus on the Pioneer Valley Region portion of this statewide analysis effort. A select set of data layers will be displayed to display observed patterns. The first map shows project short term priority sites (Figure 3.4). The second map shows the state roadway network analyzed by the MassDOT statewide effort where the roadway network is overlayed with the 2020 Census designated Urban Areas in the Pioneer Valley region (Figure 3.5). Maps are available for viewing on the MassDOT website at the following link, where various data layers can be easily turned on and off to create the various maps displayed in this chapter: https://experience.arcgis.com/experience/7f7ae2a91d9d4356b2d8e243c901500a#data_s=id%3Awidget_110_ouput%3A0

Figure 3.4 Short Term Project priority Sites

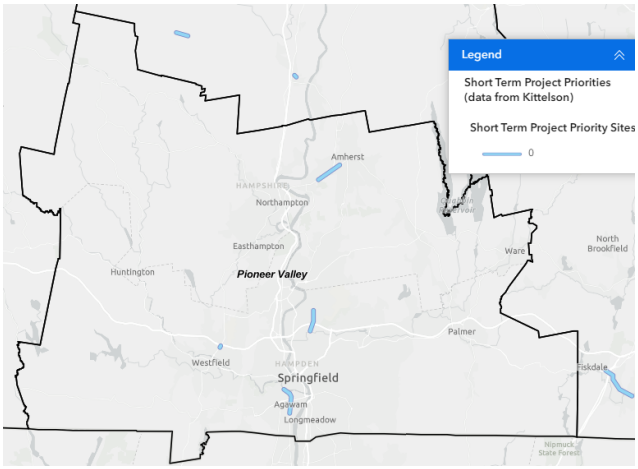
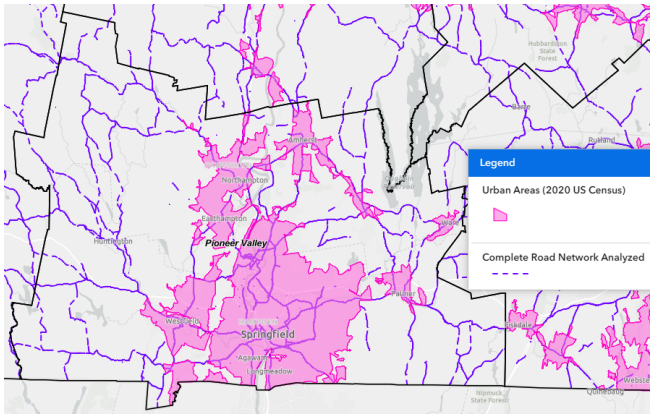


Figure 3.5 State Road Network with the 2020 US Census Urban Area Designations



The set of maps on the next page prioritize state roadways into districts for the pedestrian and the bicycle networks (Figures 3.6 and 3.7). These are followed by a set of maps of the Pedestrian and Bicycle Short Trips Vision Map Analysis of MassDOT Roads (Figures 3.8 and 3.9). The vision is that residents living or working along state roadways have access to high-comfort pedestrian and bicycle facilities for short

walking and biking trips. A high-comfort criteria assumes adequate space for lane/path width for bikes depending on volume/speed and utilizes a 5-foot sidewalk width for pedestrians. The short-trip analysis assumes a maximum distance of half mile for pedestrians and three miles for bicyclists. The infrastructure gap analysis offers priority ranking for corridors weighted by the percentage of roadways captured by the analysis tool in an MPO. It can display priorities for top-tier and mid-tier potential projects at the 2.5% and 5% level for bikes and the 5% and 10% for pedestrians.

Figure 3.6 Pedestrian Priority District

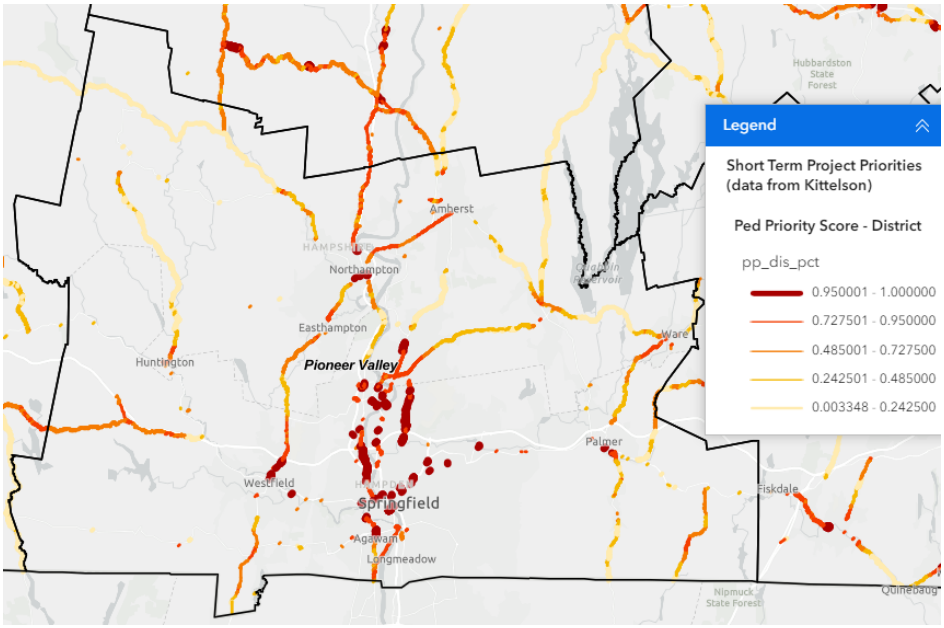
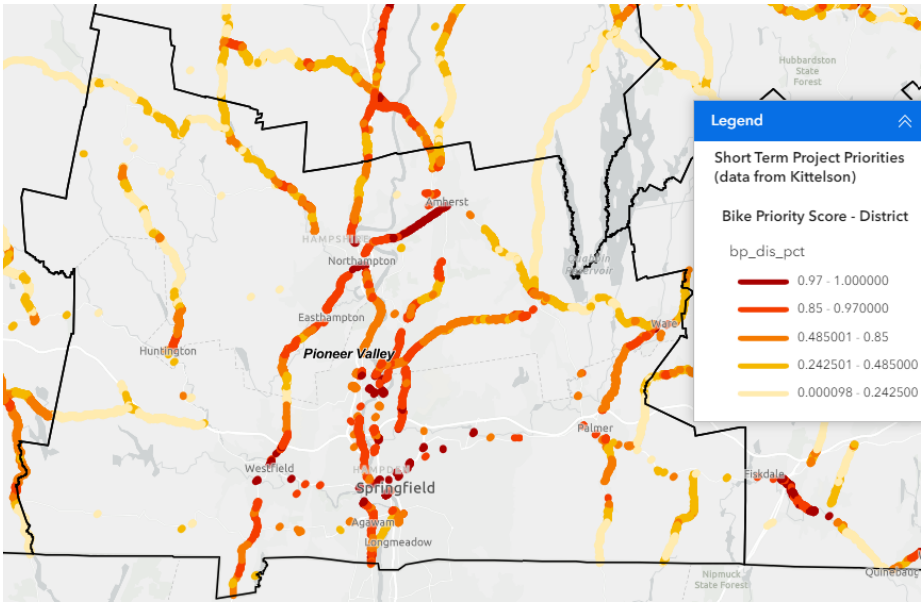


Figure 3.7 Bicycle Priority District



The original maps above can be viewed online at this website link:
https://experience.arcgis.com/experience/7f7ae2a91d9d4356b2d8e243c901500a

Figure 3.8 Pedestrian Short Trips Vision Map Analysis of MassDOT Roads

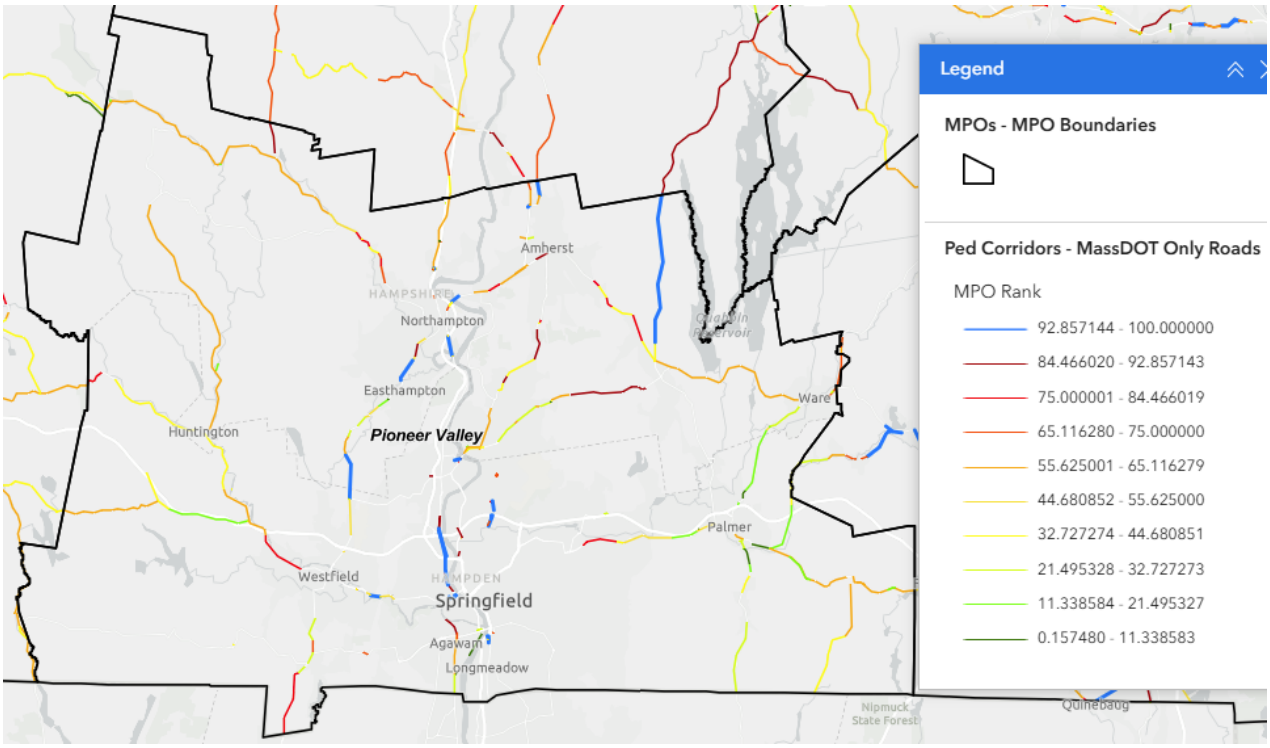
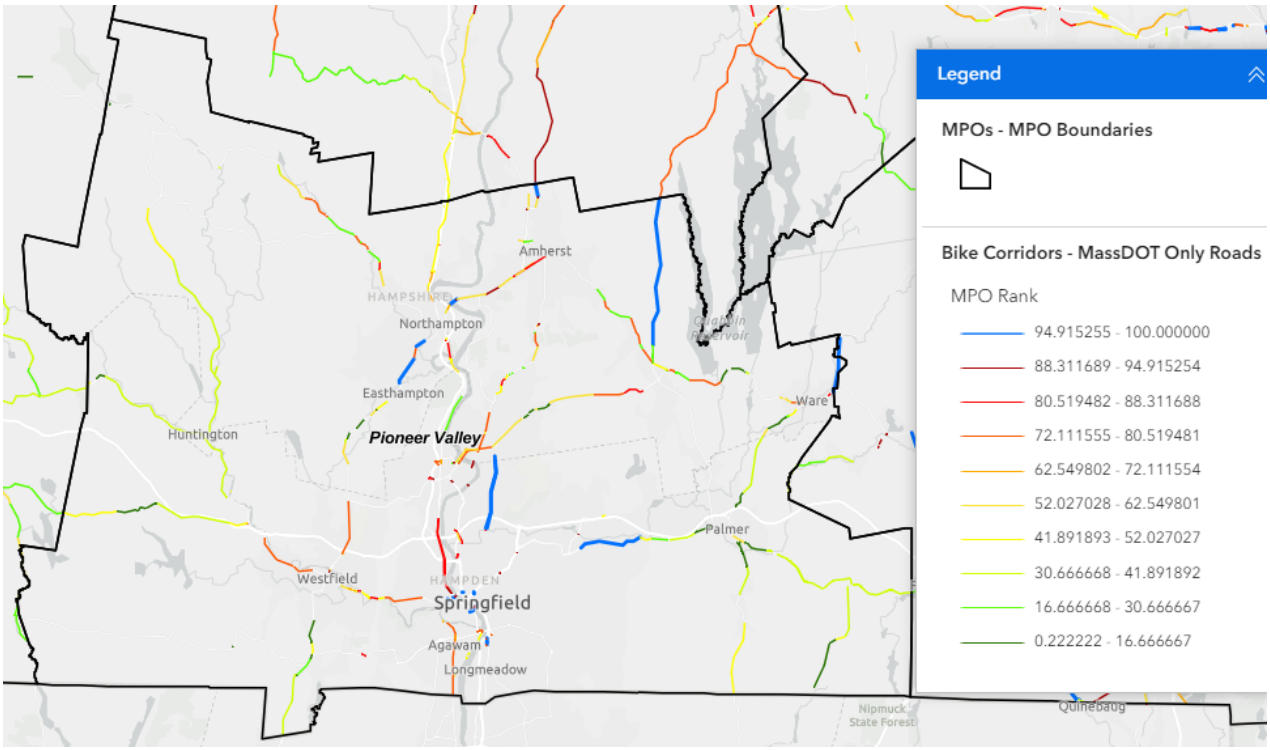


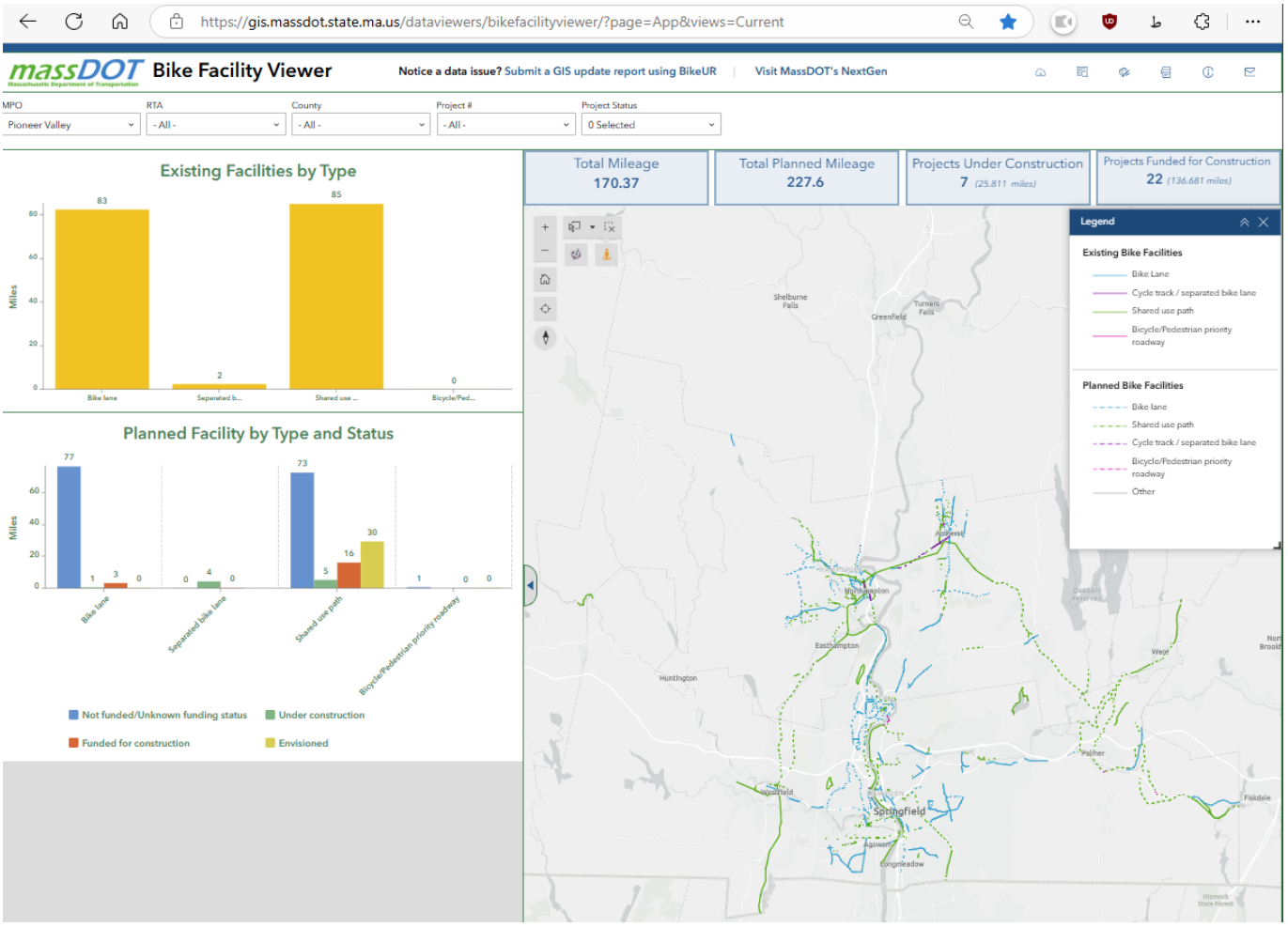
Figure 3.9 Bicycle Short Trips Vision Map Analysis of MassDOT Roads



The original maps above can be viewed online at this website link:
https://experience.arcgis.com/experience/7f7ae2a91d9d4356b2d8e243c901500a

MassDOT's Bike Facility Viewer is a useful online tool that displays existing and planned facilities by type (Figure 3.10). It can be viewed online at this website link: https://gis.massdot.state.ma.us/dataviewers/bikefacilityviewer/?page=App&views=Current

Figure 3.10 Bicycle Facilities by Type



Regional Highlights

The Pioneer Valley's regional non-motorized transportation network includes much more than MassDOT roads. It includes local jurisdiction roads as well as off-road facilities. Off-road facilities are comprised of shared-use paths, side paths, rail with trail, traditional bike paths, and rail trails. These off-road facilities allow new users to be introduced to the benefits of walking and bicycling while isolating them from potential conflicts with motorized traffic. They also provide economic benefits through bicycle tourism and downtown retail and restaurant foot traffic while reducing dependence on motor vehicle parking. Our strongest downtown business districts are in census blocks groups with the highest levels of walking and bicycling (see Appendix online). The following are highlights of some of the popular projects in the Pioneer Valley region that were completed within the past decade.

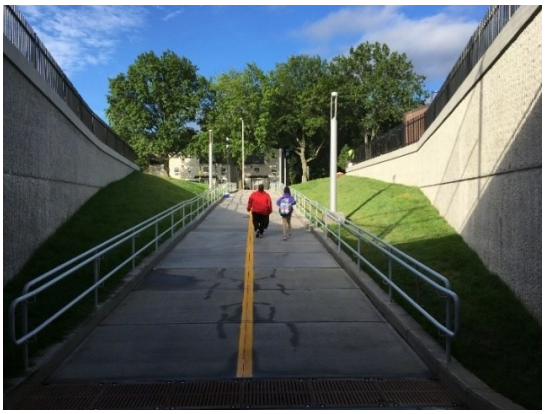
The Norwottuck Branch of the MassCentral Rail Trail is one example of the region's commitment to bicycling and walking. The ten-mile Norwottuck Trail links the communities of Northampton, Hadley, Amherst, and Belchertown, and facilitates travel to and from educational institutions, downtown commercial areas, major employment centers and residential neighborhoods. Weekend traffic counts show that 1,100 people per day on average utilize the trail when local colleges are in session. The Massachusetts Department of Conservation and Recreation (DCR) and MassDOT reconstructed the original 1992 "Norwottuck Rail Trail" (now part of the MassCentral Rail Trail) in June 2015. The reconstructed path is wider in most places and incorporates a number of accessibility and intersection improvements including new bridge decks.

In 2018 construction was completed on a MassDOT tunnel project by Northern Construction Services. The $4.4 million tunnel under the active north-south Amtrak rail corridor provides a significant connection between the MassCentral Rail Trail and the New Haven and Northampton Canal Greenway and the Manhan Rail Trail.

The Connecticut Riverwalk and Bikeway in Springfield, Agawam, Chicopee and Holyoke was expanded in 2019 to include the West Springfield section of the Connecticut Riverwalk and Bikeway addressing a need for visual access to the river while providing improved access to canoe launch areas.

The Springfield North End Underpass was completed in late 2021 (Figure 3.11). It created a safe pedestrian connection between the Brightwood and North End neighborhood. As part of the project, a fifty-two (52) foot long concrete underpass was constructed under the existing railroad tracks together with a new five hundred and thirty (530) foot long multi-use path connecting to existing sidewalks along Birnie Avenue and Plainfield Street in Springfield. The $6.7 million project created a new fully accessible crossing that encourages pedestrian and bicycle access to area resources while also offering significant safety improvements for North End residents traveling between Birnie Avenue and Plainfield Street.

Figure 3.11 Pedestrian Railway Underpass in Springfield



In 2022 Chicopee's addition to the Connecticut Riverwalk & Bikeway was opened to the public. The city-owned shared use path along the Connecticut River flood control

levee extends from the Medina Street boat ramp to Nash Field, a distance of 2.4 miles. This multi-use trail is composed of two parallel paths: a paved path for bikes located at the base of the dike and a gravel path located on top of the dike. The project includes overlooks to the river, way finding signs, parking locations, pathways over the levee to connect neighborhoods to the trails, root barriers, fishing access areas, benches at scenic vistas, and bike racks.

There are several Regional Hiking Trail Maps and bicycling guides available at bike shops, at local bookstores and online. The popularity of bicycling in the Pioneer Valley led to the production of several guidebooks specific to the region including the Rubel Bike Map to Western Massachusetts, Bicycle Touring in the Pioneer Valley (Nancy Jane), Bicycling the Pioneer Valley (Marion Gorhan), Touring Jacob's Ladder by Bicycle or Car (PVPC) and Jacob's Ladder Trail Western Region Off-Road Bicycle and Trail Guide (PVPC), New Haven and Northampton Canal Greenway by Robert Madison, Backroad Bicycling in Western Massachusetts by Andi Marie Cantele. The "Pioneer Valley Trails: A Hiking and Biking Guide," is sold at area bookstores and outdoor recreation retailers The guide shows the locations of many hiking and biking trails in Hampden and Hampshire counties (Figure 3.12). The guide features a map on one side, showing the locations of 47 trails. The reverse side includes descriptions of each of the trails, including their location, whether they are paved or off-road, the length, types of permitted uses, and parking information.

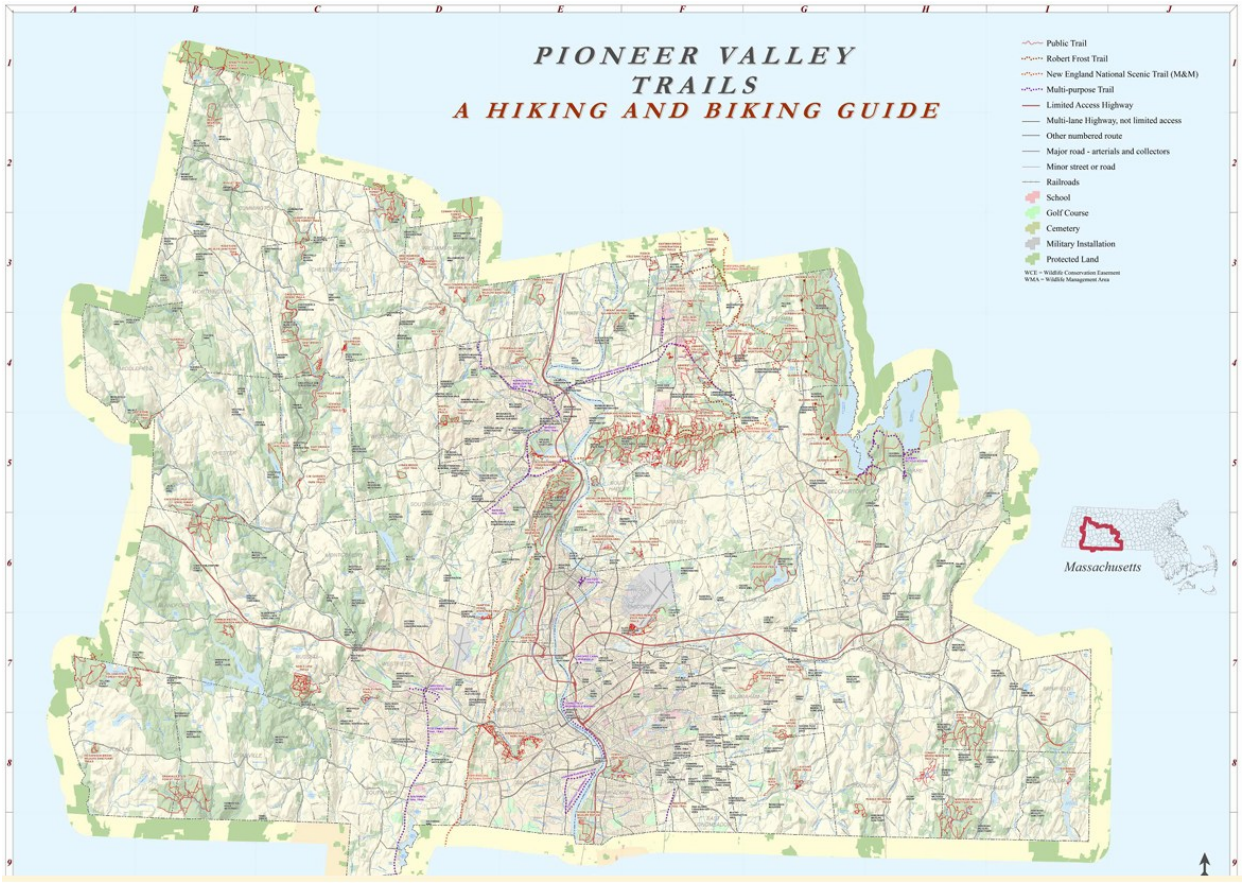
In brief, the current regional bicycle network offers:

- 90+ mile network across 17 communities.
- ~50 miles of on-road lanes
- Extended mobility range by public transit via bike racks on all fixed route transit vehicles, used 40,706 times in 2022.

The current regional pedestrian network:

- Varies by City and Town.
- Is more comprehensive in downtown and village centers
- Participates in the Massachusetts Safe Routes to School Program in 79 schools

Figure 3.12 Pioneer Valley Trails Map



The original map above can be viewed online at this website link: https://www.pvpc.org/sites/default/files/2016%20trail%20hike%20guide%20brochure%20FINAL%20sml.pdf.

The popularity of share use paths in the Pioneer Valley has brought new challenges and opportunities to those that use and manage these facilities. Interest in year-round use has pushed many communities to explore options for snow removal, and while recreation use still dominates trail activity many residents increasingly use the facilities for non-recreational trips. In 2018 PVPC commissioned a study of at-grade crossing on shared-use-paths to better understand the safety challenges that these unique intersections present. In 2025, the Department of Conservation and Recreation (DCR) started a pilot project to plow the Norwottuck Rail Trail (part the Mass Central Rail Trail/MCRT) from Woodmont Street in Northampton to Swift Way in Amherst connecting to UMass (Figure 3.13). To preserve the integrity of the trail, DCR will use specialized trail equipment to plow. No salt will be used along the trail to protect the surrounding ecological and agricultural landscapes, but spot sanding may be used to ensure the safety of all trail users.

Figure 3.13 Snow Removal on Norwottuck Rail Trail Hadley, MA

A major concern for pedestrians and bicyclists is the many bridges in the region. While most new or reconstructed bridge projects have followed state and federal guidelines for improving pedestrian and bicycle access, many bridges still lack sidewalks, and adequate shoulder width. The design and maintenance of these bridges directly influences the ability of people to walk or bicycle. In 2022, MassDOT completed the construction of the first separated bike lane on a bridge in Massachusetts. The project connects sidepaths in West Springfield and Agawam (Figure 3.14).

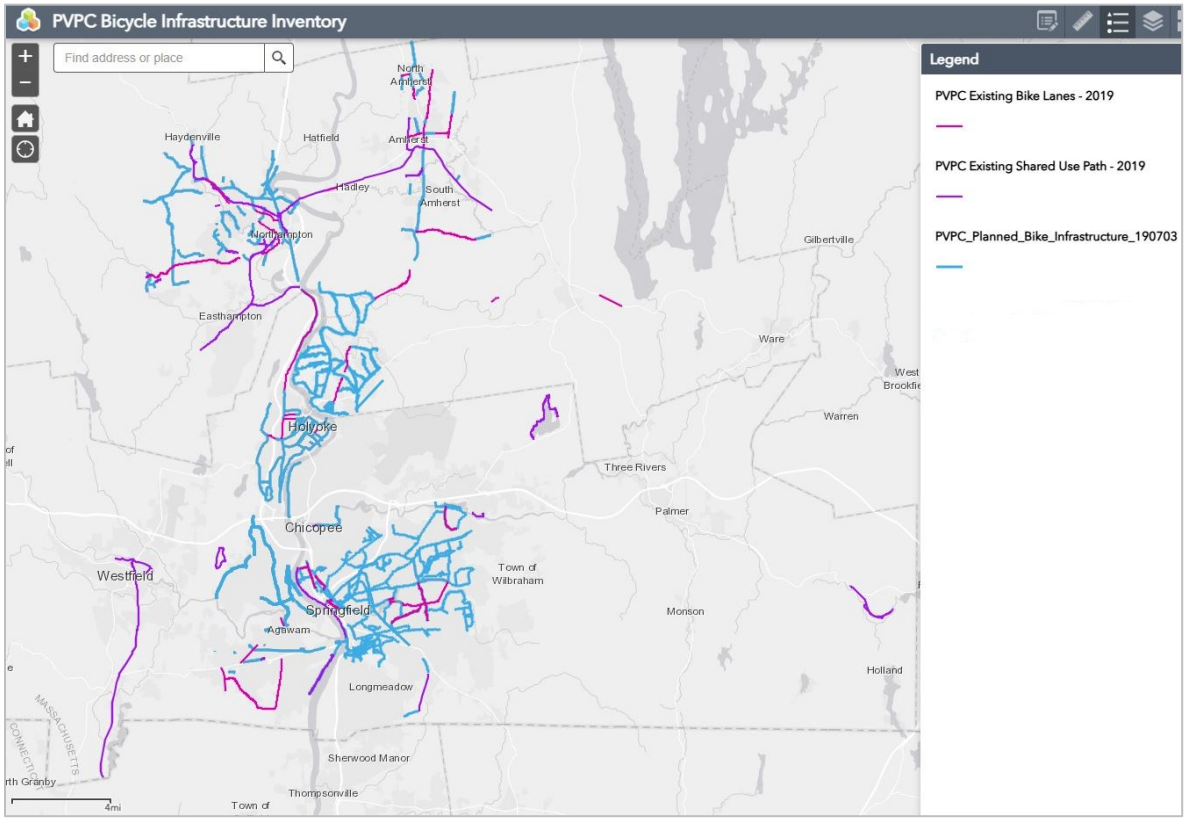
Figure 3.14 Agawam/West Springfield Bridge with Sidepath

3.1.1 Bicycle Network

The Pioneer Valley has much to offer for bicycling including bike lanes, shared use paths, side paths, striped shoulders, wide curb lanes, bike racks on transit vehicles, bike lockers, bike parking racks, employer-sponsored shower facilities, bike repair shops, maps, online rider resources, community bike share programs, bike rentals, organized rides, and sponsored races. Not far from the region's urban core, the rural roads of Western Massachusetts offer a vast array of quiet scenic New England country roads that can be explored for days on end. At the same time, our communities face challenges in meeting public expectations in expanding and connecting the Region's bikeway network. Many of the off-road and on-road facilities are disconnected and are hampered by pinch points that include bridges.

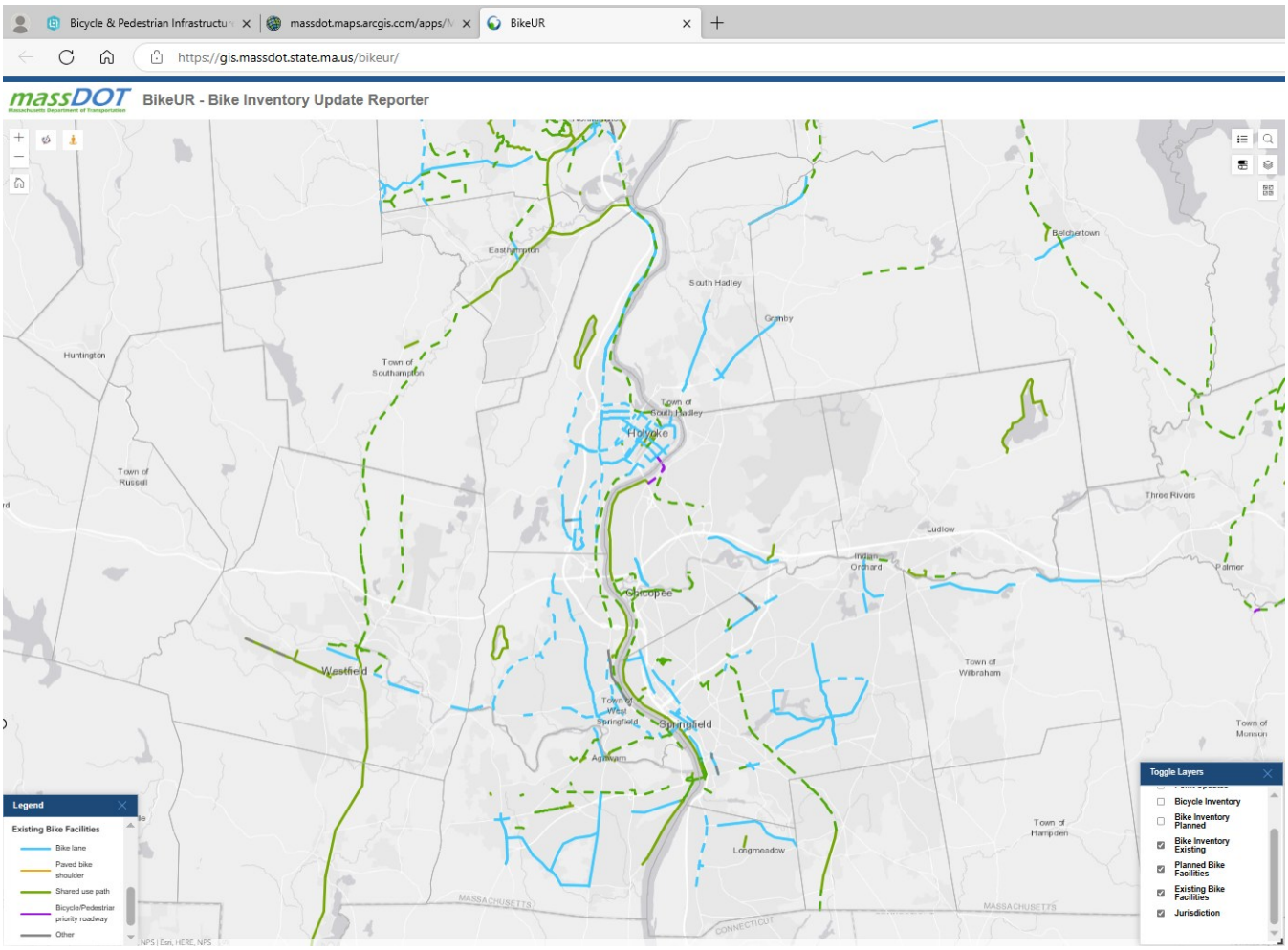
Currently seventeen communities provide over 90 miles of bicycle lanes, multi-use paths or "rail trails" in the region, while several communities have similar projects in the design phase. Twelve communities provide nearly 50 miles of designated on-road bicycle facilities. The Pioneer Valley Bicycle Infrastructure Inventory Map shows existing and proposed bicycle facilities (Figure 3.15). The next map shows the Statewide Bicycle Inventory Update Reporter Online Tool (Figure 3.16).

Figure 3.15 Pioneer Valley Bicycle Infrastructure Inventory Map



The above map can be viewed online at this website link: https://pvpc.maps.arcgis.com/apps/webappviewer/index.html?id=8643f065eb6b408388c8a7da0f46189b

Figure 3.16 Bicycle Inventory Update Reporter



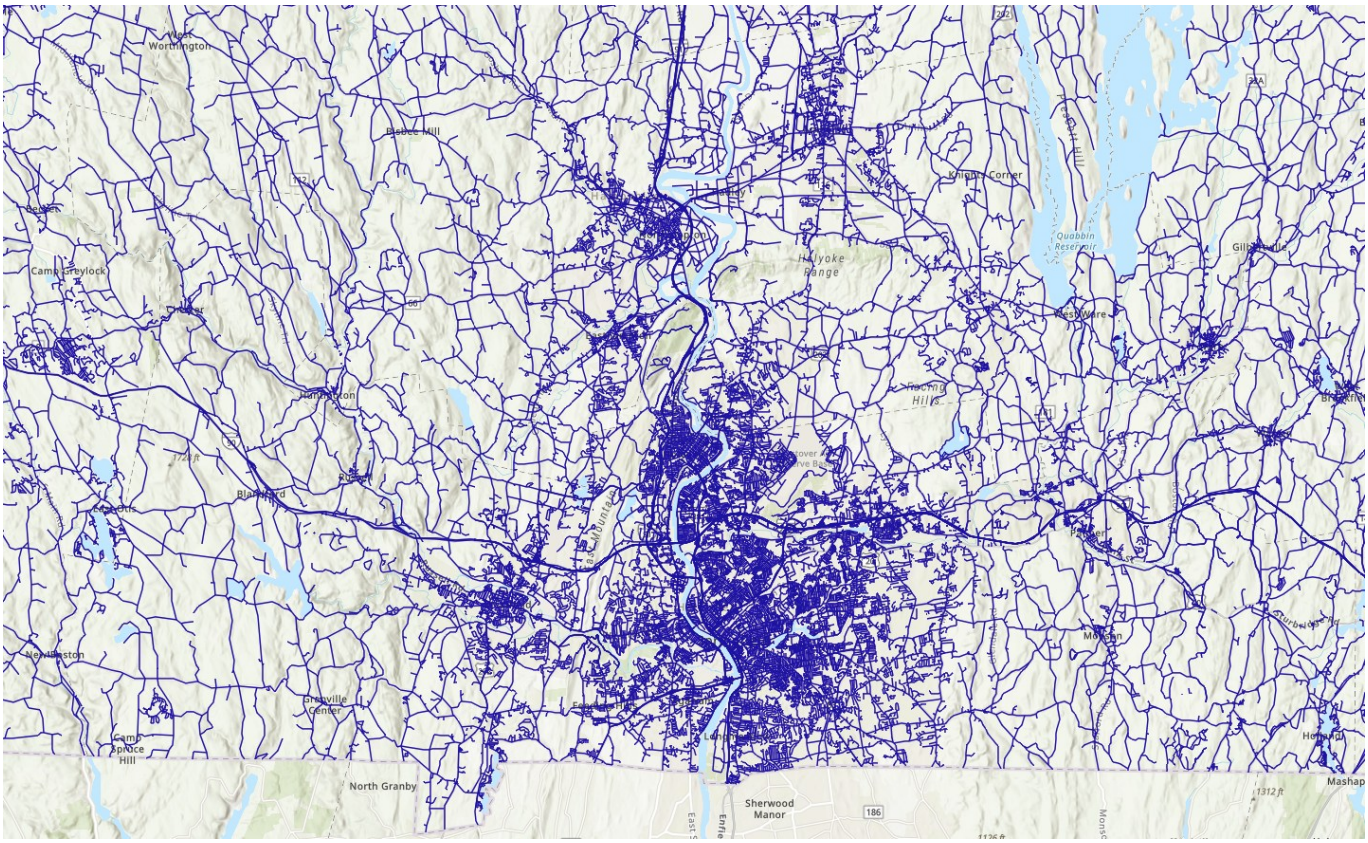
The above map can be viewed online at this website link:
https://gis.massdot.state.ma.us/bikeur/

3.1.2 Sidewalk Inventory

Pedestrian access and circulation are typically better in town or city centers due to the physical design of such places. Shops, offices, restaurants, and other amenities are generally clustered together and connected by a pedestrian network which is often more accessible and efficient than the vehicle network. Sidewalks are the most common infrastructure feature devoted to pedestrian circulation. Whether or not sidewalks are provided in a community can influence the area's overall character and function. In addition to the sidewalks themselves, crosswalks and points of access for persons with disabilities can influence the degree to which these pedestrian networks facilitate circulation.

An inventory of pedestrian facilities is available online by MassDOT as displayed in the following map (Figure 3.17).

Figure 3.17 Pedestrian Facilities



The above map is created online at this website link: https://www.arcgis.com/apps/mapviewer/index.html?panel=gallery&layers=45efedab4d114324a6c6c8f95de711d5

3.2 Walkability and Bikeability Analysis

A measuring tool was used to quantify and qualify the levels of the regional non-motorized network. This is the FHWA Bicycle Compatibility Index (BCI) which is used to evaluate road conditions for bicyclists. The BCI uses data collected on the roadway including travel lane width, shoulder width, vehicle speed, traffic volume and parking along each roadway segment. The FHWA analysis tool assigns an alphanumeric score to each roadway segment ("A" through "F"). An "A" score represents "perfect" roads for bicycling, whereas an "F" score indicates the least favorable roads for bicycling.

Data was collected for all the federal aid roadways in the Pioneer Valley Region. The BCI data is a useful tool for bicycle coordinators, transportation planners, traffic engineers, and others to evaluate existing facilities to determine what improvements may be required as well as determine the geometric and operational requirements for new facilities to achieve the desired level of bicycle service. Frequently used by the Pioneer Valley region, the BCI model has been applied in the following projects:

- Springfield Complete Streets Bicycle and Pedestrian Plan

- South Hadley Bicycle and Pedestrian Plan
- Granby Master Plan
- Southampton Route 10 Corridor Study
- Pioneer Valley Regional Bicycle Map

Many communities in the region have very "walkable" downtown areas The town centers of Holyoke, Springfield, Amherst, and Northampton have very high “walk scores” while more suburban neighborhoods and rural communities continue to struggle with obstacles and challenges for those desiring to bicycle or walk. A walk Score measures the walkability of any address and a Bike Score measures whether a location is good for biking (https://www.walkscore.com/methodology.shtml).

The most challenging obstacle to walking and bicycling is often vehicle travel speeds. Travel speed on our streets continues to rise despite recent efforts in Massachusetts to allow municipalities to adopt speed zoning and statutory speed limits. As of 2023 the communities of Springfield, Chicopee and Holyoke have adopted statutory speed limits.

3.2.1 Network Connectivity

Missing and insufficient pedestrian and bicycle networks along MassDOT roads were identified via a series of GIS map analyses in 2021. Both physical and quality gaps were identified on the statewide roadway network as part of the MassDOT Next Generation Pedestrian and Bicycle Vision Map. The MassDOT Bicycle and Pedestrian Infrastructure Gap Analysis GIS website is available at this link: https://experience.arcgis.com/experience/7f7ae2a91d9d4356b2d8e243c901500a

Two types of non-motorized network gaps are identified: Infrastructure Gap and Quality Gap.

Pedestrian Gap Analysis: (Figure 3.18)

- Infrastructure Gap: no physical sidewalk facility.
- Quality Gap: existing sidewalk is less than 5 feet wide.

(documented whether quality gap is one side or both sides)

Bicycle Gap Analysis: (Figure 3.19)

- Infrastructure Gap: no physical bicycle facility/shoulder.
- Quality Gap: existing bicycle facility does not meet FHWA recommended bicycle facility type based on traffic volume and speed conditions.
- No Physical Gap, Insufficient Data for Quality Gap: bicycle facility exists, but unable to assess compliance with FHWA guidance due to insufficient speed or volume data.

The infrastructure gap analysis conducted by MassDOT categorized the non-motorized network into five color coded categories as follows:

Red: Infrastructure Gap
Yellow: Quality Gap
Bright Green: Sufficient Quality
Olive Green: Insufficient Data for Quality Gap, No Physical Gap

Figure 3.18 Pedestrian Infrastructure Gap Analysis by MassDOT

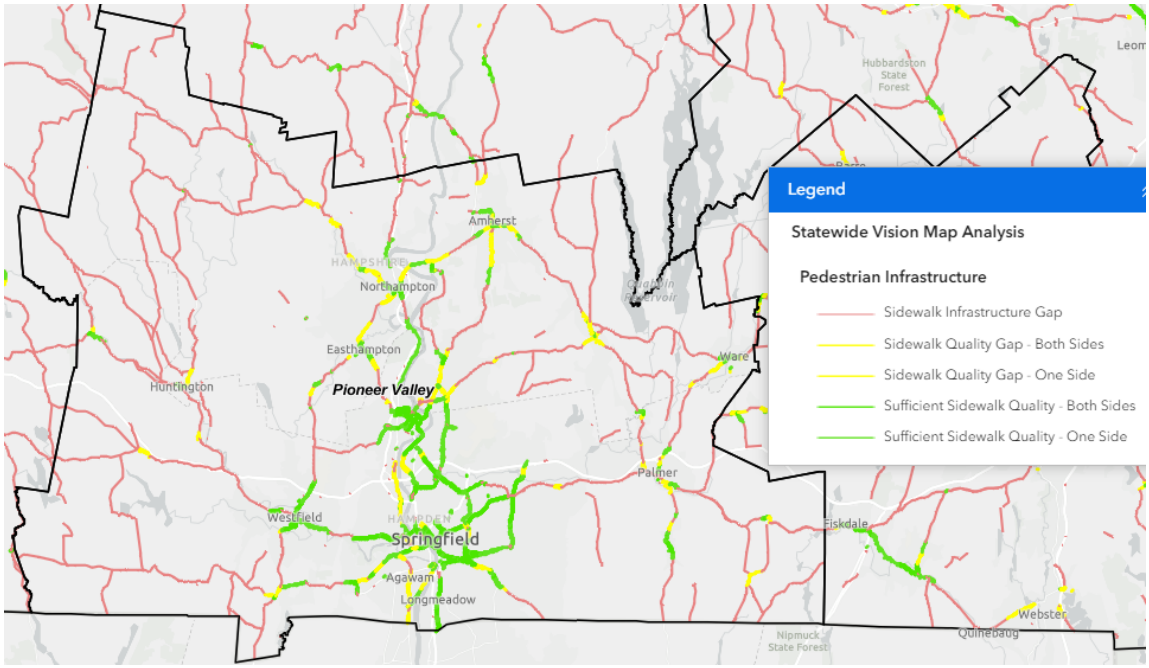
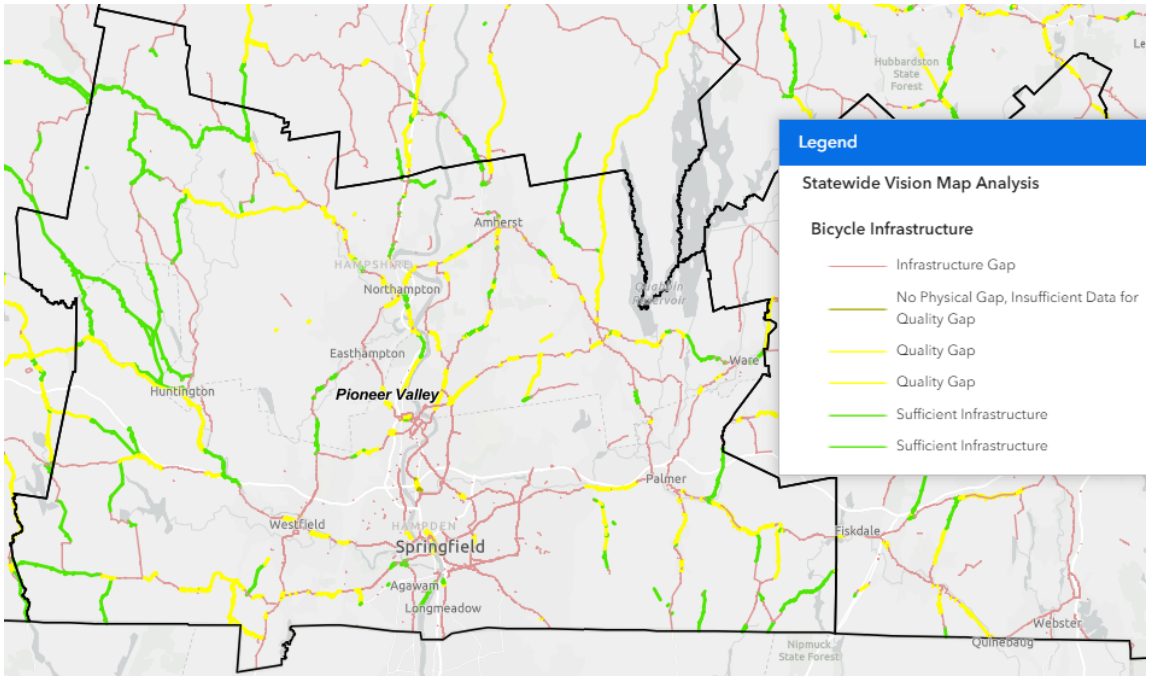


Figure 3.19 Bicycle Infrastructure Gap Analysis by MassDOT



The original maps above can be viewed online at this website link: https://experience.arcgis.com/experience/7f7ae2a91d9d4356b2d8e243c901500a

The built environment for walking, bicycling and transit is impacted by significant barriers that hamper the potential of active trip making. These barriers include narrow road and bridge cross sections, disjointed/unconnected off-road trail networks, lack of availability of sidewalks, lack of uniformity in signs/markings, limited transit access points and maintenance issues.

It is important to provide for the needs of pedestrians, bicycles and transit riders as part of the regional transportation network. The challenge lies in balancing the needs of the maintenance of the existing infrastructure while continuing to expand connections to the pedestrian, bicycle and transit network in a logical manner.

3.2.2 Travel Demand

The total number of bike and pedestrian commuters is difficult to quantify, but data in other sectors suggest numbers are increasing (Table 3.2). Police departments are increasing bike patrols, bike sales and service are up all across the country, and bike courier companies are experiencing a boom in business. In 2024, Massachusetts had 4.3% commuters by foot and 1% by bicycle, while nationwide the average active commute was 2.4% by foot and 0.5% by bicycle (press ctrl and click on underlined word to activate hyperlink and visit data source).

The only communities in the Pioneer Valley region that have bicycle commuting rates over the national average are Amherst, Hadley, Northampton and Pelham. Amherst and Northampton host Amherst College, UMASS and Smith College; Hadley is situated between the two communities which are connected by the region's first paved off-road shared use path, the Norwottuck section of the Mass. Central Rail Trail. The communities that have walk commuting rates above the national average are Amherst, Northampton and South Hadley.

Table 3.2 Non-Motorized Commute Trips

	1990	2000	2010	2020	2023	Percent Change
Bike to Work	0.33%	0.36%	0.60%	0.70%	0.75%	0.07%
Walk to Work	6.29%	5.16%	3.50%	5.55%	4.80%	-1.14%
PVPC Total Commuters	275,710	275,932	273,534	293,290	299,768	0.02%

Roadway network segments were also categorized by the Average Annual Daily Travel (AADT) to establish a ranking for Pedestrian and Bicycle Corridor priorities. See the following two maps where the highest priority segments were given a yellow color and the lowest priority segments were given a purple color, with a gradation of colors in between the top and low (Figures 3.20 and 3.21).

Figure 3.20 Pedestrian Corridors Priority by AADT

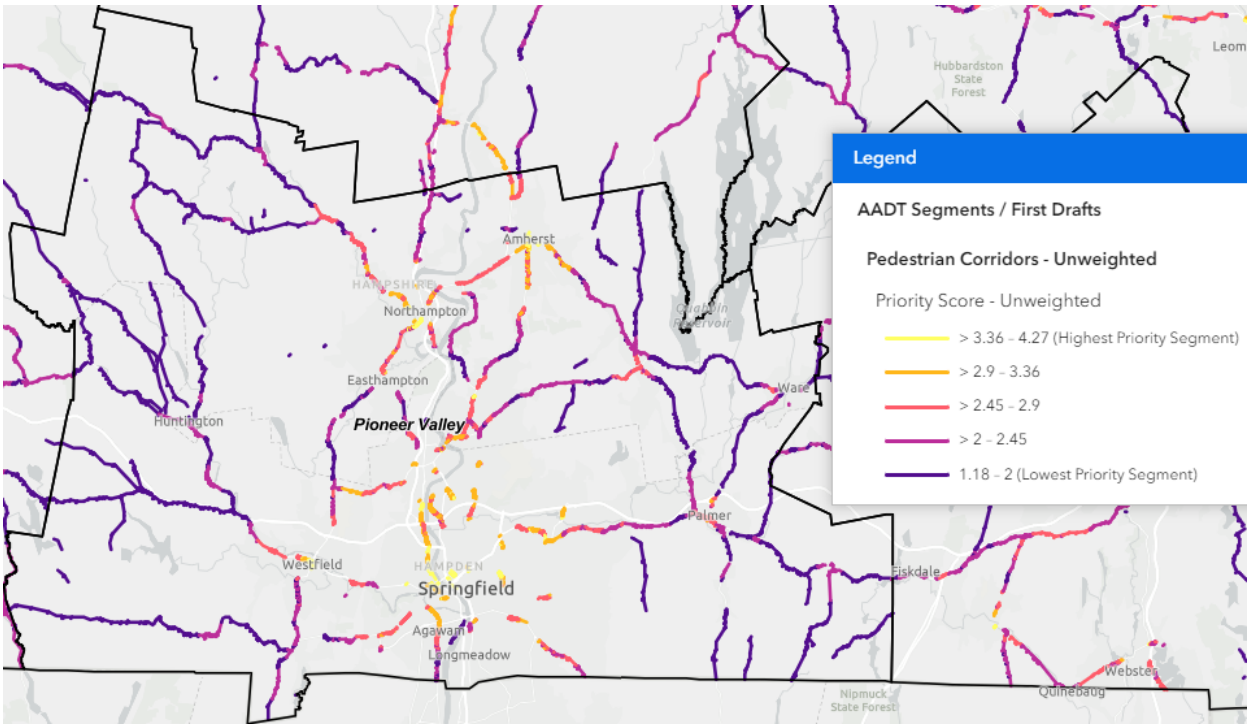
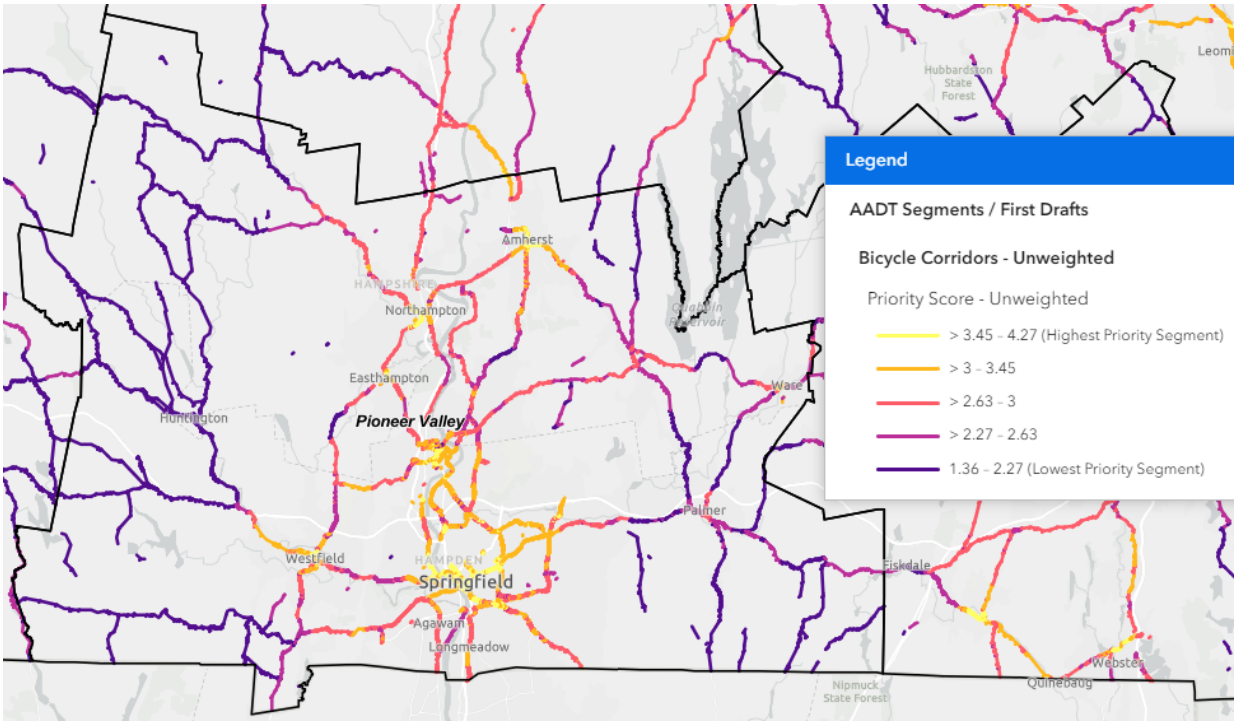


Figure 3.21 Bicycle Corridors Priority by AADT



The original maps above can be viewed online at this website link:
https://experience.arcgis.com/experience/7f7ae2a91d9d4356b2d8e243c901500a

These maps prioritize corridors within the urban centers of Springfield, Westfield, Holyoke, Easthampton, Northampton, and Amherst based on their AADT volumes.

3.2.3 Trip Potential

There are many factors that influence the choice to walk or bicycle over other means of travel. This includes distance between destinations, fearing that routes are not safe, environmental conditions, and availability of facilities. The regional network of shared-use-paths continues to expand with recent investments in the Westfield Columbia Greenway (New Haven to Northampton Canal Greenway) the Connecticut Riverwalk in Chicopee, and the Ware Accessible Trail on the Mass Central Rail Trail.

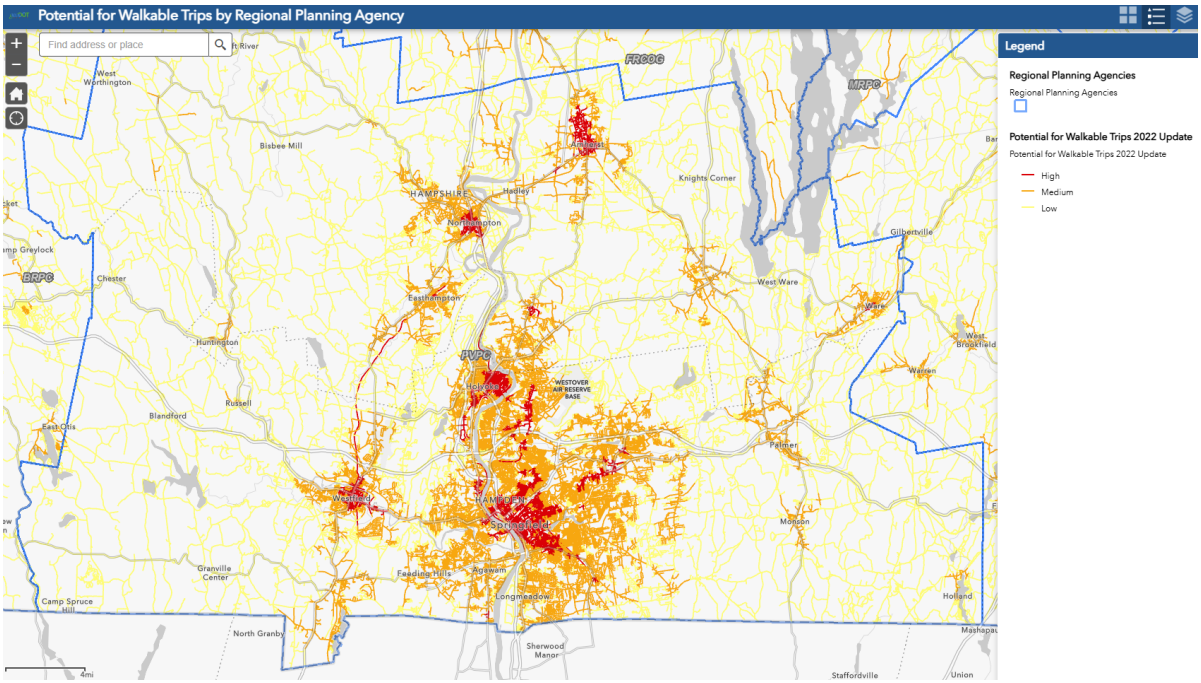
However, the built environment for walking, bicycling and transit is impacted by barriers that hamper the potential of active trip making. These barriers include narrow road and bridge cross sections, disjointed/unconnected off-road trail networks, lack of availability of sidewalks, lack of uniformity in signs/markings, limited transit access points and maintenance issues.

It is important to provide for the needs of pedestrians, bicycles and transit riders as part of the regional transportation network. The challenge lies in balancing the needs of the maintenance of existing infrastructure while continuing to expand connections to the pedestrian, bicycle and transit network in a logical manner. The availability of public transportation can encourage bicycle travel. Many stops on the PVTA connect people to the many bikeways across the pioneer valley. By making these trails more accessible to people without cars, it encourages usage and a healthier lifestyles for Pioneer Valley residents.

MassDOT modeled the potential for walking and biking and offered an update to the methodology in 2022. Using trip volumes provided by the “StreetLight” software, they added new metrics related to transportation access, crash data, demographics and social indicators to previous methodologies developed. The Potential for Everyday Walking and Biking layers display latent demand for active-mode trip making. The following two maps show the ranking of the regional roadway network with regards to potential roadway demand for active transportation trips (Figures 3.22, 3.23,3.24, 3.25).

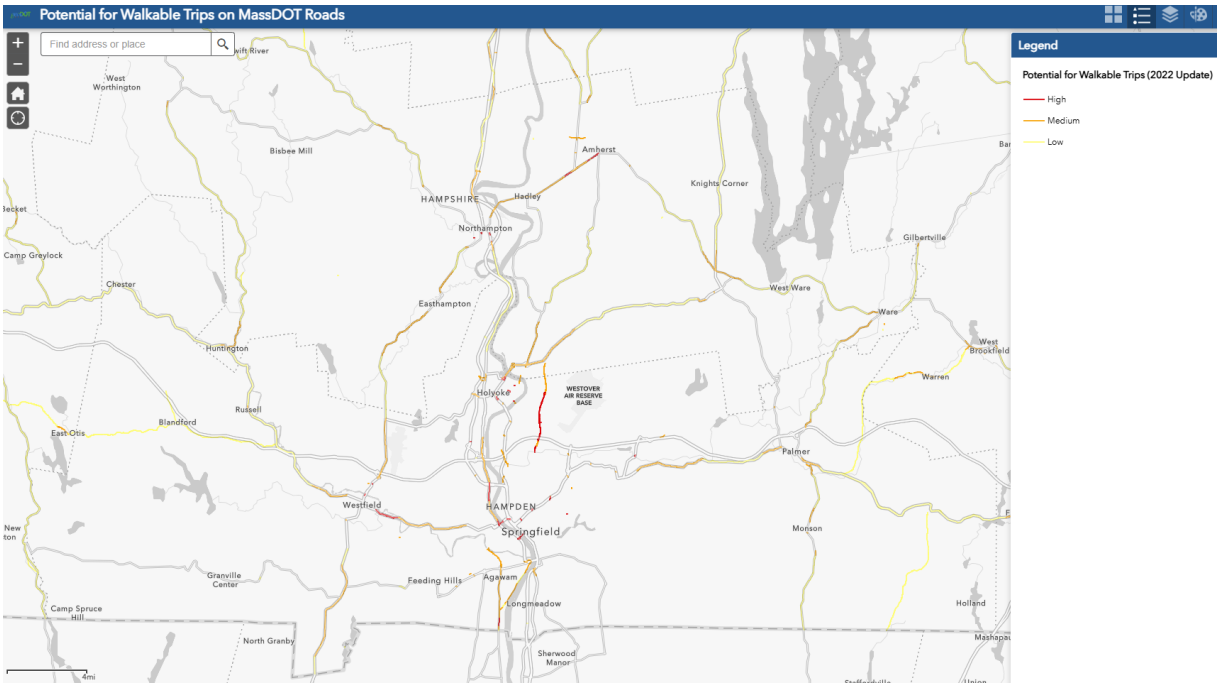
High potential roadways were identified by looking at the top 10% of roadways based on the Potential for Walking and Biking index. Medium potential roadways represent the top 60% of roadways on the index. Low potential roadways are the remaining 40% of roadways (note that this 40% is a majority of the mileage because these road segments tend to be in rural places and longer length roadways). The next map displays trip potential divided into three categories: High (Red), Medium (Orange), Low (Yellow). The following map figures have been taken form the MassDOT GIS website titled: “Potential for Everyday Biking by Regional Planning Agency”, 2022 update.

Figure 3.22 Potential for Everyday Walking in the Pioner Valley (3 Levels)



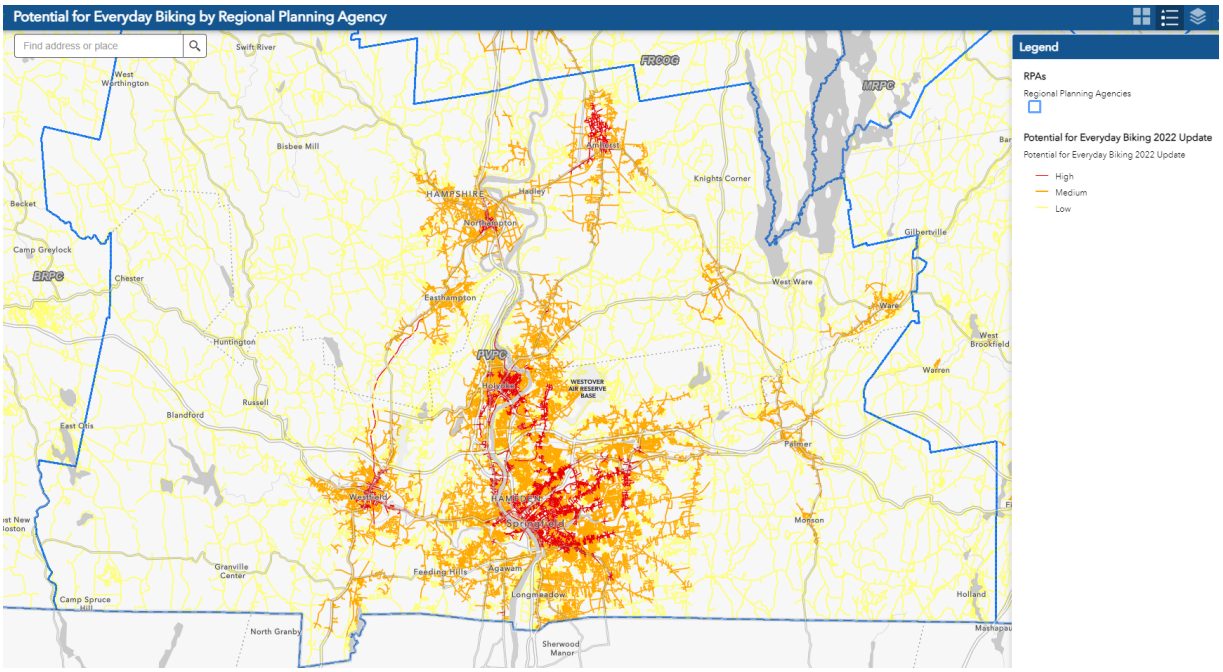
The original maps above can be viewed online at this website link: https://massdot.maps.arcgis.com/apps/webappviewer/index.html?id=abab2e8c3da446a5ae4b675cd35b5f4f

Figure 3.23 Potential for Walkable Trips in the Pioner Valley on MassDOT Roads



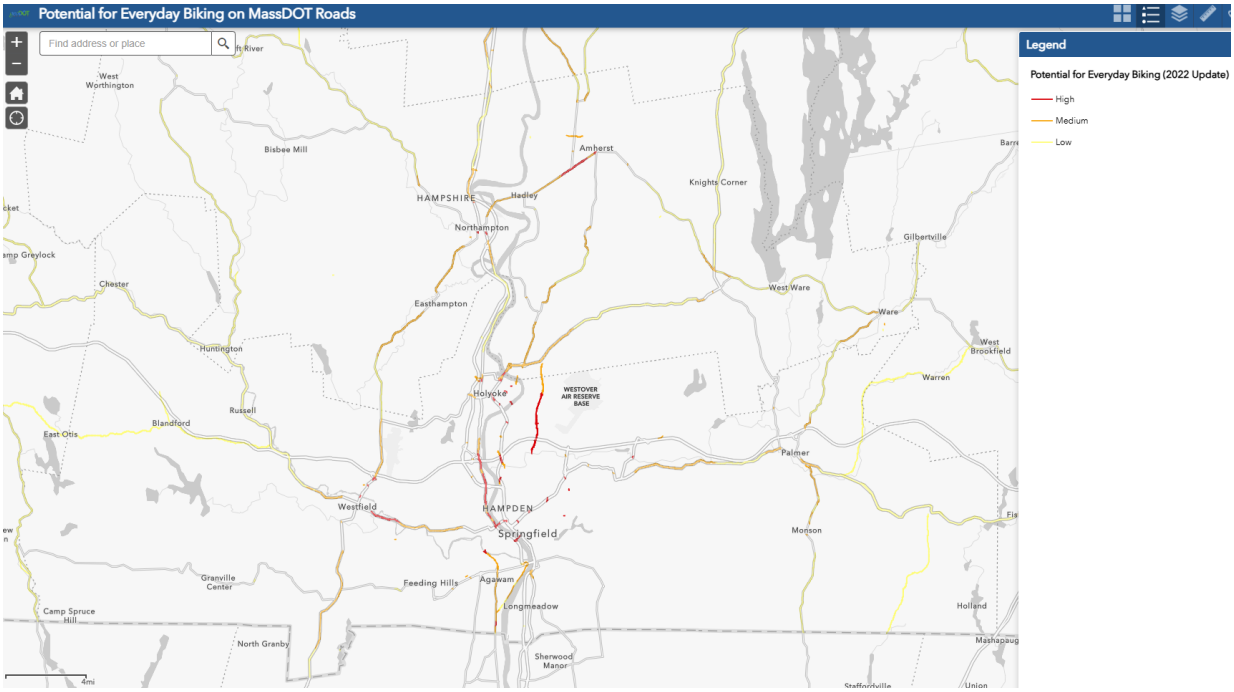
The original map above can be viewed online at this website link: https://massdot.maps.arcgis.com/apps/webappviewer/index.html?id=908cf743da4340d3bf2f02a17fc5cc69

Figure 3.24 Potential for Everyday Biking in the Pioner Valley (3 Levels)



The above map can be viewed online at this website link:
https://massdot.maps.arcgis.com/apps/webappviewer/index.html?id=371274be470c4f9db0543943398eb3d3

Figure 3.25 Potential for Everyday Biking in the Pioner Valley on MassDOT Roads



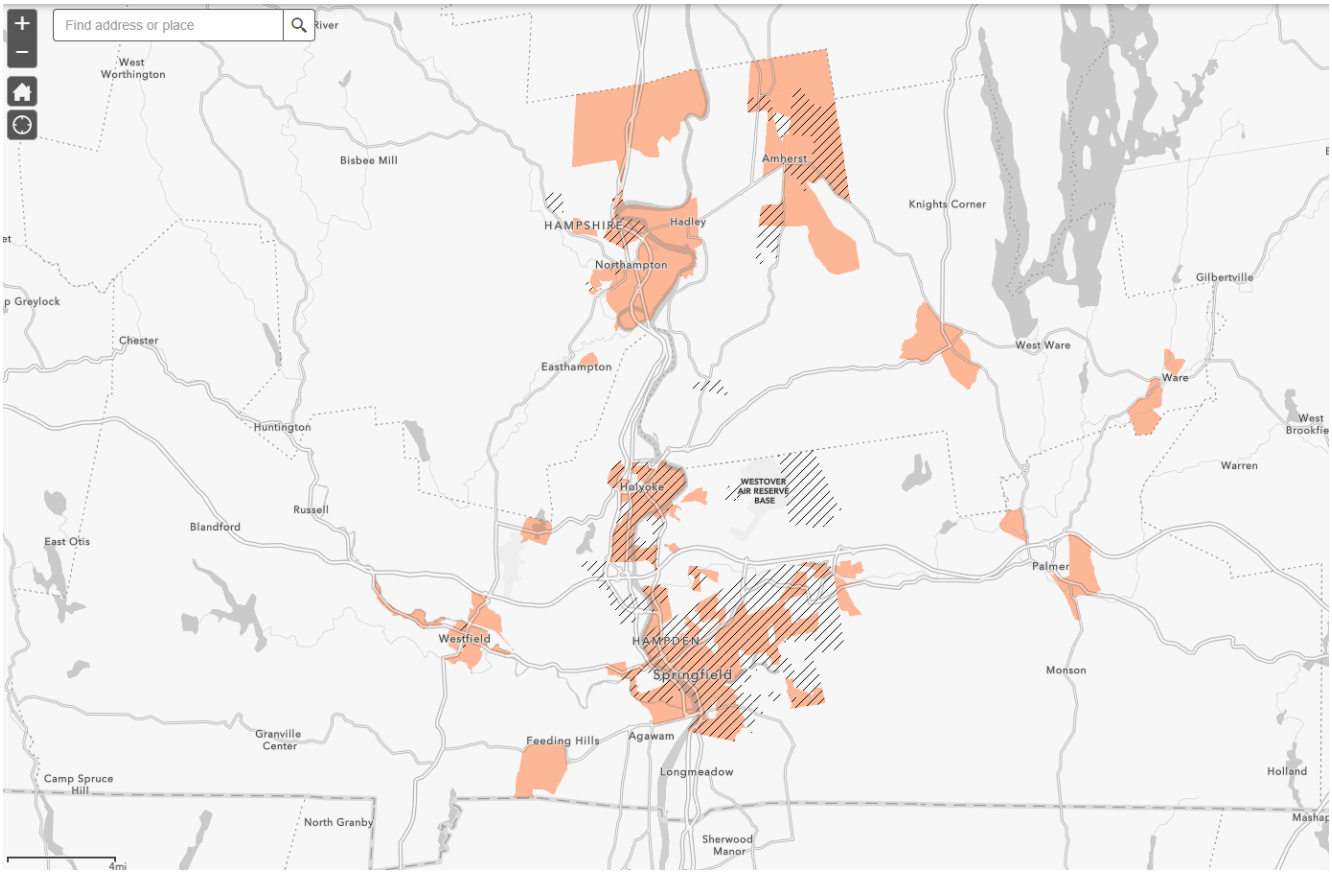
The above map can be viewed online at this website link:
https://massdot.maps.arcgis.com/apps/webappviewer/index.html?id=a1c48137a3c642c19b749e16ec509d3c

3.2.4 User Access

Our regional transportation system is not intended to be a "one size fits all" model. It is important to recognize that people will have different transportation needs. As a result, it is important to seek balance in the transportation system to provide travel modes that support all residents. The "Age Friendly" movement is a way to design a transportation system to allow all people to have access regardless of their age or ability. It is important to offer affordable, easy-to-use public transportation options connected to walking and bicycling amenities.

Census block groups areas identified as having a higher percentage than the statewide average of individuals from Title VI protected categories are displayed on the regional map below. Minority areas are represented by hashed gray color lines, while poverty areas are highlighted by orange color (Figure 3.26).

Figure 3.26 Minority and Poverty Areas Higher than the State Average



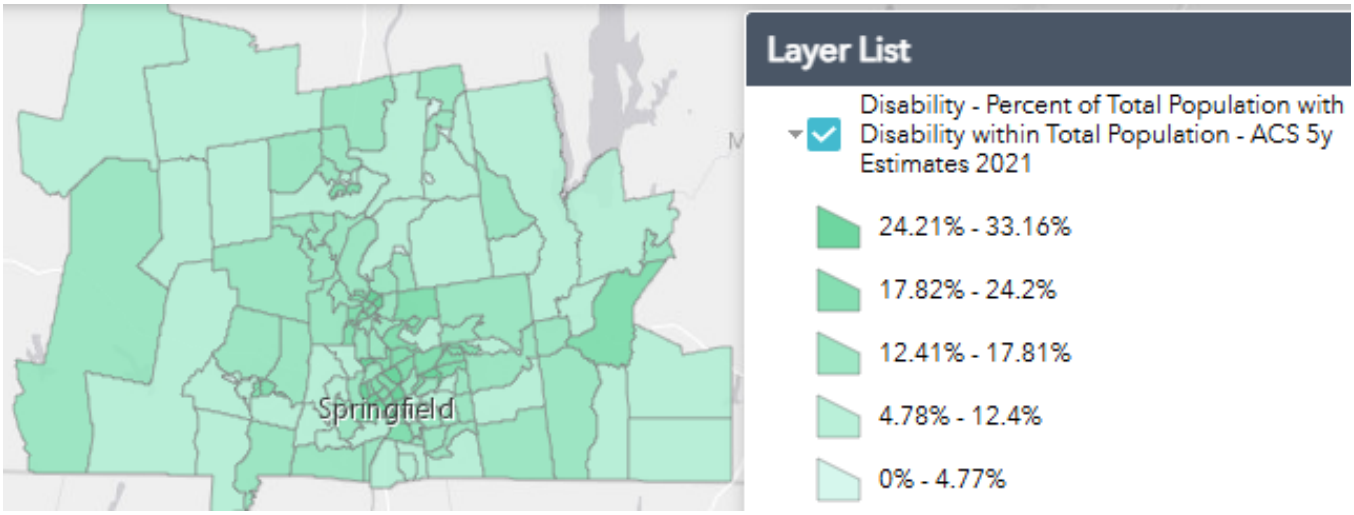
The above map can be viewed at the following website link with an ability to turn data layers on and off:
https://pvpc.maps.arcgis.com/apps/webappviewer/index.html?id=d124416bed674650bf51c65b6dd6abe4

It is critical that we improve the regional transportation system evenly throughout our region. The regional transportation planning process must be inclusive by providing

all who wish to participate a means to do so. Transportation improvements should be prioritized in a way to increase access to a variety of transportation alternatives that enhance health and wellbeing. It is necessary to remove barriers to use by people with physical disabilities by providing accessible bicycle and pedestrian facilities. New facilities must provide accessible features. The Americans with Disabilities Act (ADA), section II (1990) prohibits discrimination on the basis of disability in employment, State and local government, public accommodations, commercial facilities, transportation, and telecommunications.

According to the ADA, all actions undertaken by state and local governments must fully accommodate people with disabilities. For this reason, the construction of all pedestrian facilities must meet the needs of citizens living with disabilities. The minimum space requirements are influenced by the characteristics of those who use wheelchairs or other assistive devices. To allow free passing of pedestrians, a walkway that is at least five-feet wide and clear of obstructions is required. Within the Pioneer Valley the percentage of people with disability is displayed in the map below using the 2021 ACS 5 year estimate (Figure 3.27).

Figure 3.27 Percentage of People with Disability by Area



The above map can be viewed at the following website link with an ability to turn data layers on and off:
https://pvpc.maps.arcgis.com/apps/webappviewer/index.html?id=d124416bed674650bf51c65b6dd6abe4

3.2.5 Shared Mobility

Our region was the first to launch a bike commute week, eventually the idea was taken over by the Commonwealth and expanded to Bike Month every May. Also, we were the first region to launch an electric-assist bike-sharing system, ValleyBike. We are also one of a select few pilot projects in the Massachusetts Clean Energy Centers' Act4All Electric Bikes project, working to distribute no cost e-bikes to economically and structurally disadvantaged residents in our region. These three initiatives demonstrate

our region's commitment to increase access to non-motorized modes of transportation to all sectors of our communities.

Bike-sharing programs provide convenient and affordable access to bikes, increase first and last-mile connectivity and make transit a viable option for a wider range of trips. Valley Bike, a docked, all electric-assist bicycle sharing system operated from 2018 - 2022 in Amherst (including UMass), Chicopee, Easthampton, Holyoke, Northampton, South Hadley, Springfield, and West Springfield. It has potential for growth by adding new partner communities.

History of ValleyBike:

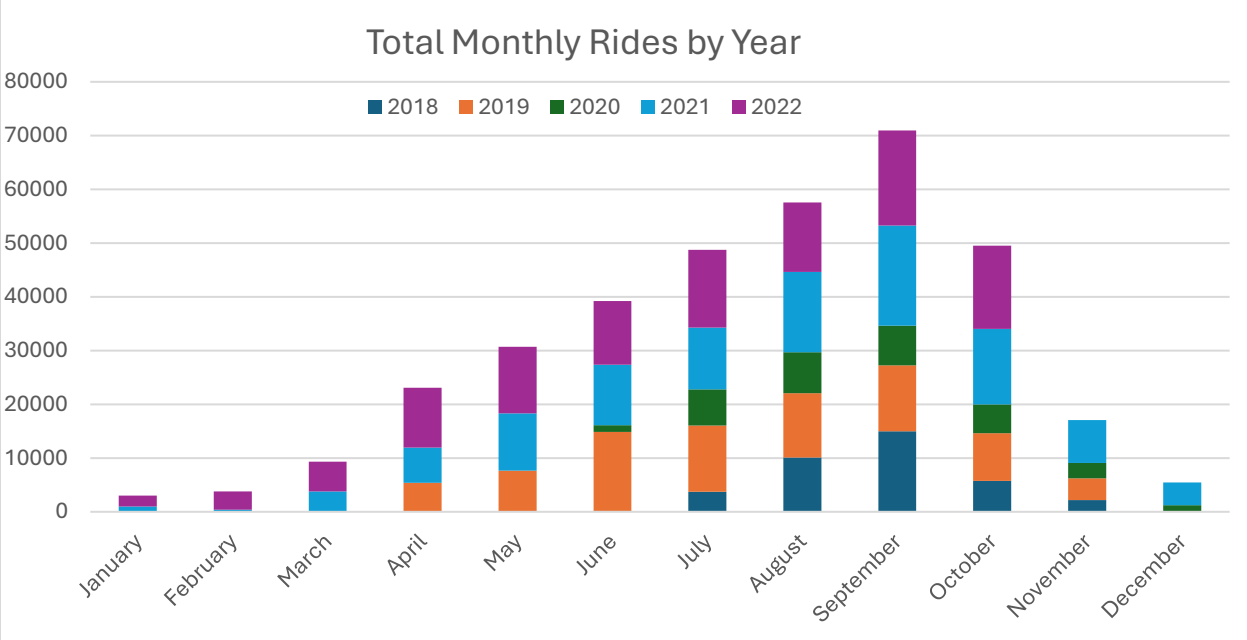
- June 2018: ValleyBike Share opens.
- November 2018: ValleyBike Share closes for the 2018 season.
- December 2018: Easthampton obtains a Massachusetts Housing Choice grant for ValleyBike and joins the regional consortium, growing it to six municipalities.
- 2019: A second CMAQ project to increase ValleyBike service and expand into Chicopee and West Springfield receives funding.
- 2020: The ValleyBike program, delayed by the Covid-19 Pandemic, opens in June 2020. The City of Springfield opts to keep their ValleyBike stations closed during the 2020 calendar year. Winter service begins at select locations.
- 2021: Chicopee and West Springfield become two new member communities to participate in the program. Additional Phase 2 expansion begins. The City of Holyoke receives funding under the Shared Streets and Spaces Grant Program to fund station pads and electrical supply. 2021 becomes the first year with the service available for all 12 months.
- 2022: Two new stations open. Service runs from January to October. The original vendor ceases ValleyBike operations.
- June 2024: ValleyBike reopens under a new Vendor – DropMobility.
- Expanding to Westfield in 2025.
- Potential future partners.

The 2022 calendar year was the fifth year of operation of ValleyBike Share program. During its first two years, operations were halted during the winter season and the system operated from April - November. During the 2020 calendar year, ValleyBike did not start until the month of June because of the Covid-19 pandemic. The City of Springfield chose not to participate during the entire calendar year of 2020. ValleyBike service resumed in the City of Springfield in May2021. Utilization data showed an increase in usage of ValleyBike in both 2021 and 2022 (Table 3.3). ValleyBike Share yearly summary report data can be viewed online at this weblink: https://pvmpo.pvpc.org/valley-bike-share-yearly-summary-report/. A tally of the total monthly riders taken during the first five years of the program show that September was the most popular months to ride these bikes, followed by August and then July and October (Figure 3.28).

Table 3.3 ValleyBike Total Rides 2018-2022

	2018	2019	2020	2021	2022
January				1,019	1,969
February				371	3,429
March				3,768	5,530
April		5,397		6,520	11,155
May		7,632		10,677	12,421
June	134	14,738	1,263	11,252	11,804
July	3,732	12,309	6,736	11,488	14,465
August	10,089	11,974	7,629	14,947	12,956
September	14,959	12,291	7,382	18,607	17,626
October	5,743	8,895	5,340	14,041	15,548
November	2,183	4,047	2,842	8,012	30
December			1,223	4,262	
Total	36,840	77,283	32,415	104,964	106,933

Figure 3.28 Monthly Rides Compared by Year



Bikeshare rides taken by select communities were tabulated by each month of the year as well as by station host community. The 2021 rides by station location map can be viewed at the following website link:

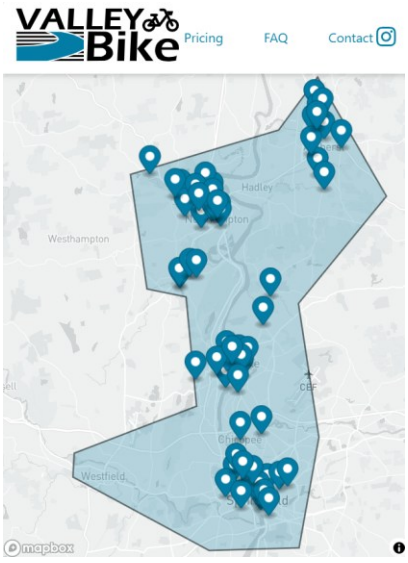
https://public.tableau.com/app/profile/pvpc/viz/ValleyBikeShare_202205121720/DB_PRIMARY?publish=yes

In the summer of 2024, the ValleyBike program was restarted by a new vendor to serve the partner municipalities including the new addition of Westfield (Figures 3.29 and 3.30). The current membership subscription has a higher fee than the previous program to join. Hopefully, this will make for a more sustainable model to allow for the continuity of the service (https://valleybike.org). There are discounts available for individuals on limited income. The current regional bikeshare system provides a total of 75 stations located in eight communities in the Pioneer Valley. More information about the new service can be found online at this website: https://www.northamptonma.gov/1599/ValleyBike

Figure 3.29 ValleyBike Share Stations in Springfield, MA

(Left: earlier system. Right: new system)

Figure 3.30 ValleyBike Share Station Locations 2024



3.2.6 Crashes

Safety concerns unite all components of a community and a region to act to protect vulnerable road users (VRU). VRUs are generally non-motorists such as pedestrians, bicyclists, anyone working along a road, individuals on skateboards, scooters, roller skates, wheelchairs, and other micromobility devices. Evaluating safety at the same time as one is promoting increased walking and bicycling is challenging because with more people out on their feet and bicycles—the more they are exposed to danger. Building safe facilities for pedestrians and bicyclists is the best way to ensure their safety, but limited funds and space make this most effective solution also the most inefficient.

The Pioneer Valley Planning Commission has established a Vulnerable Road User (VRU) Safety Study Program to analyze and improve non-motorist safety in the region by working in partnership with local communities and other VRU advocacy groups. Under this program, the PVPC works in cooperation with the JTC and the Bike Ped sub-committee to identify and prioritize locations of concern in the region where there are existing VRU safety issues. These locations are studied by analyzing existing conditions and historic trends. Feedback from VRU advocacy groups and local stakeholders is collected and finally short and long-term recommendations are drafted to improve transportation safety.

To make the transportation network friendly for all users, agencies and communities were encouraged to participate in the complete streets program. As of 2020, many communities in the Pioneer Valley region have participated in the Complete Streets Program as follows:

- 28 communities participating
- 18 communities adopted policies
- 12 funded improvement projects

"An Act to Reduce Fatalities" was signed into law in Massachusetts in December 2022. This law requires motor vehicles to pass vulnerable users at a safe distance of not less than 4 feet and at a reasonable and proper speed. In May of 2023, MassDOT notified all cities and towns of an opportunity to request free regulatory signs to notify operators of motor vehicles of the requirements of the law that can be installed on roadways within their jurisdiction.

Several national trends are negatively influencing walking and bicycling in the Region. One of them is the reliance on personal handheld devices which has expanded rapidly. In Massachusetts cell phone use creates more instances of distracted driving. The other is an increase in vehicle speeds that began during the Covid-19 pandemic that contributed to a higher number of crashes resulting in a fatality or serious injury.

The number of non-motorist fatalities and serious injuries decreased dramatically in 2020 at the start of the pandemic. This was followed by an increase in serious injuries and fatal crashes in 2021, and yet another increase in 2022. A comparison between

statewide and regional crash trends are depicted in the following chart of five-year averages between 2008 to 2024 (Figure 3.31).

Figure 3.31 Non-Motorized Serious Injuries and Fatalities 5 Year Averages

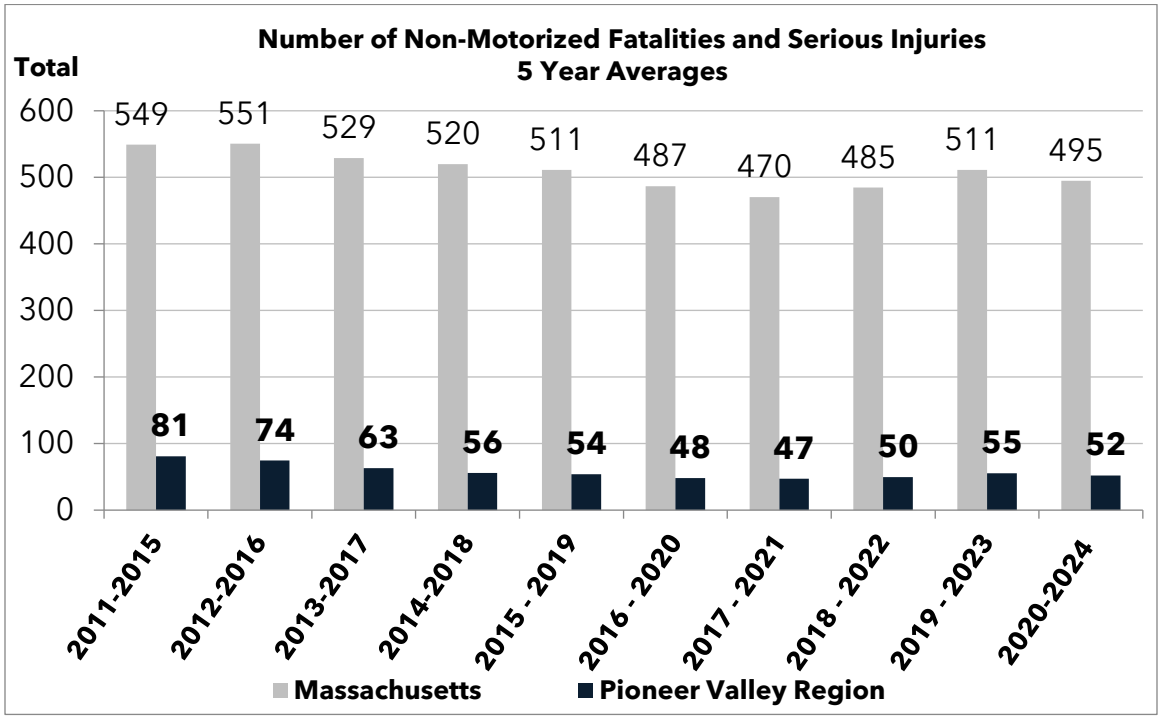
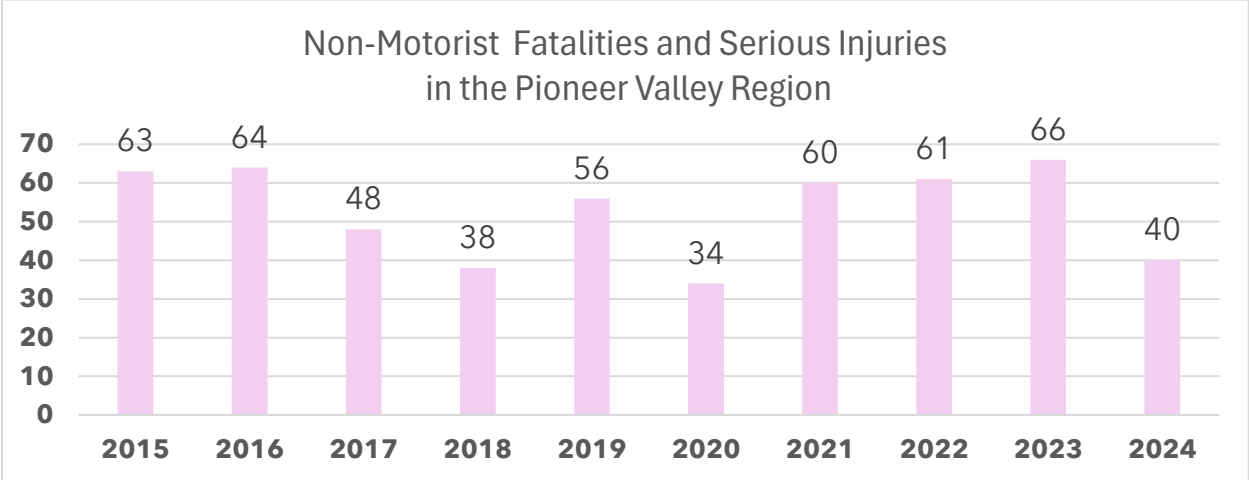


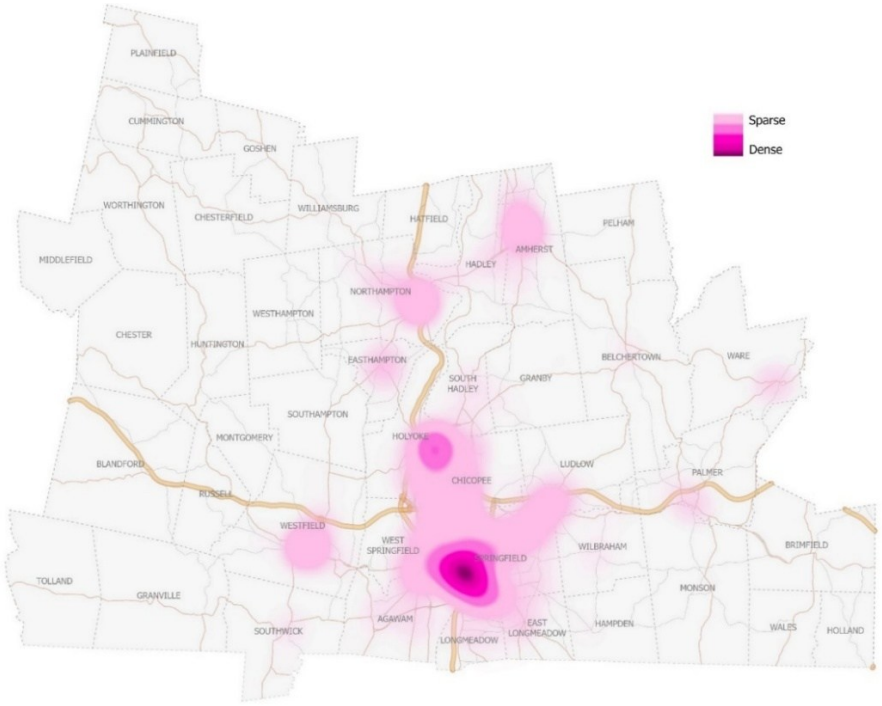
Figure 3.32 Non-Motorized Serious Injuries and Fatalities Regional Totals



As observed from the above graphic, the total number of non-motorist fatalities and serious injuries decreased by more than 60% from 2023 to 2024 (Figure 3.32). This trend, however, is not witnessed significantly in the five-year averages yet because of the substantial increase in all types of crashes during the immediate aftermath of the pandemic in 2020. The recent decrease in the number of these crashes is an encouraging trend and this data must be closely monitored in the coming years to observe long-term impact and change.

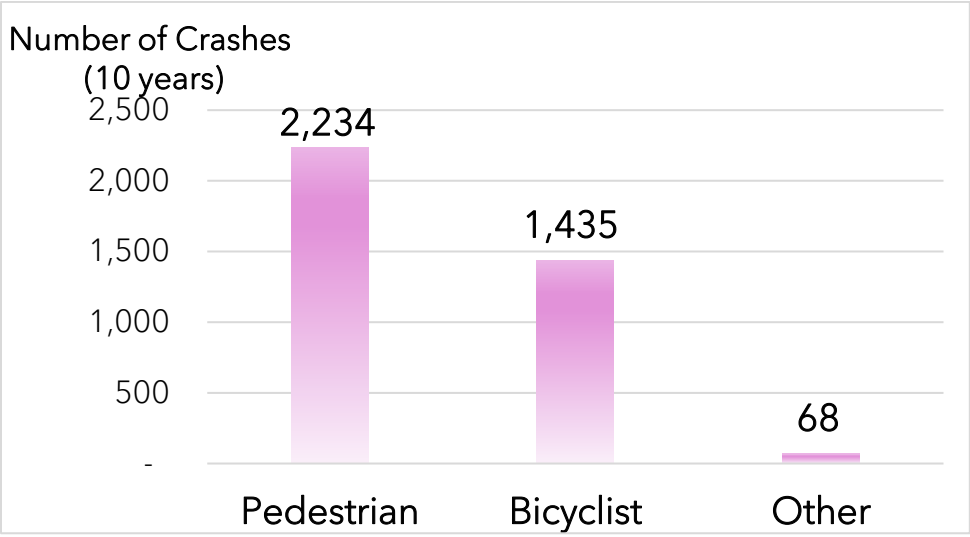
The areas in the Pioneer Valley with the maximum concentration of the non- motorist crashes appear to center around the largest urbanized areas (Figure 3.33). As expected, the urban areas of Springfield, Holyoke, and Chicopee experienced most crashes, followed by Northampton, Amherst, and Westfield. The darkest region on the map corresponds to the maximum crash density amongst all other sub regions in the Pioneer Valley.

Figure 3.33 Non-Motorized Crash Density (2015-2024)



A total of 3,737 non-motorist crashes were observed in the Pioneer Valley region during the last 10 years (Figure 3.24). Almost two thirds of these crashes involved pedestrians (60%), 38% bicyclists, and 2% other non-motorized road users.

Figure 3.34 Vulnerable Road User Crashes by Type (2015-2024)



Crashes are depicted as point locations on the map of the region below (Figure 3.35). Different types of vulnerable road users are depicted by a different color as illustrated in the legend. The density map on the previous page did not indicate the isolated locations in the rural areas. These crashes are rare and lower in number, however, are significant to mention due to the increased potential for severe injury crashes along roadways in rural areas where motor vehicles are travelling at higher speeds. During the 10 Year period from 2015 to 2024, non-motorized fatal crash are identified on the locations map on the next page (Figure 3.36).

Figure 3.35 Non-Motorized Crash Types 10 Year (2015-2024)

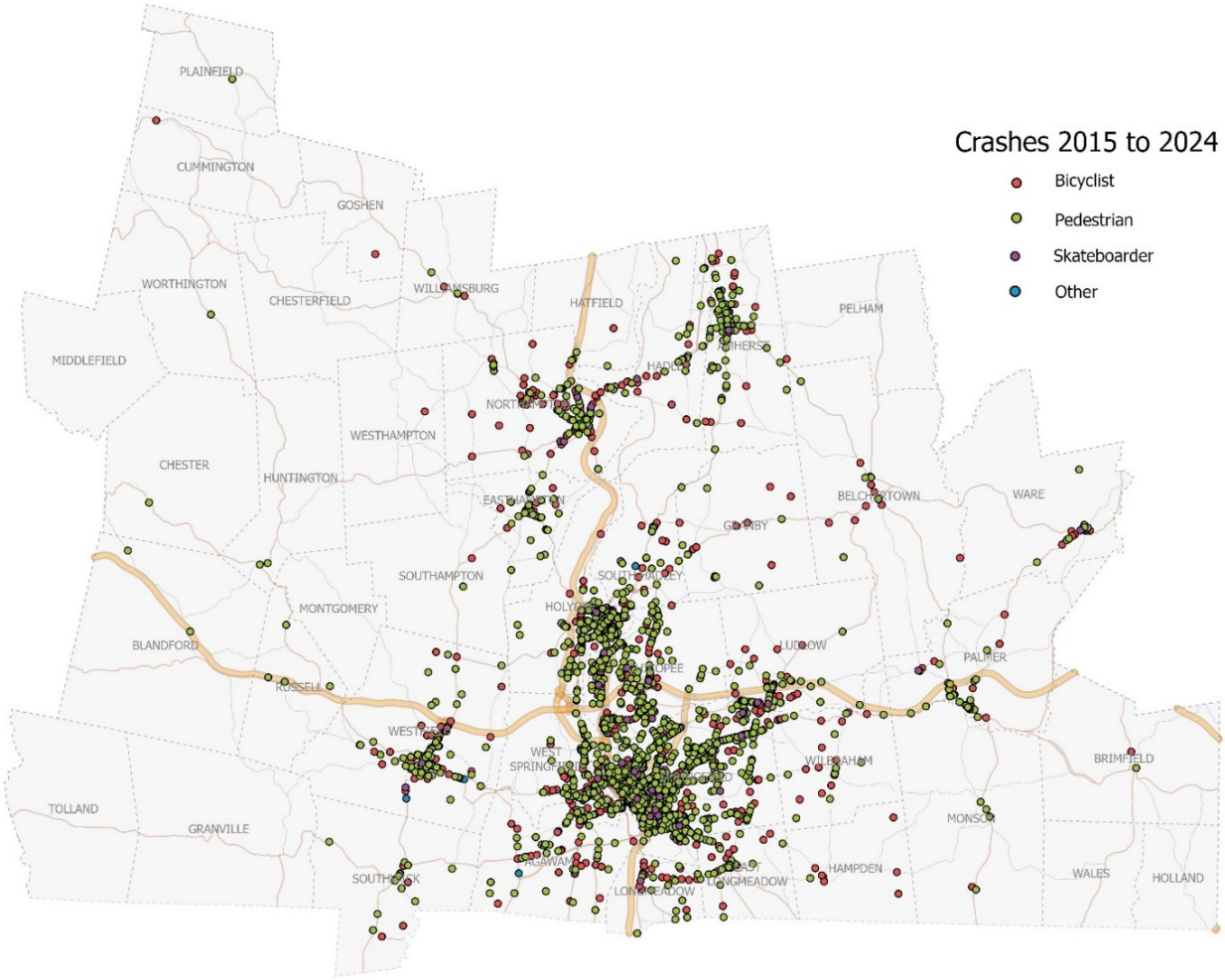
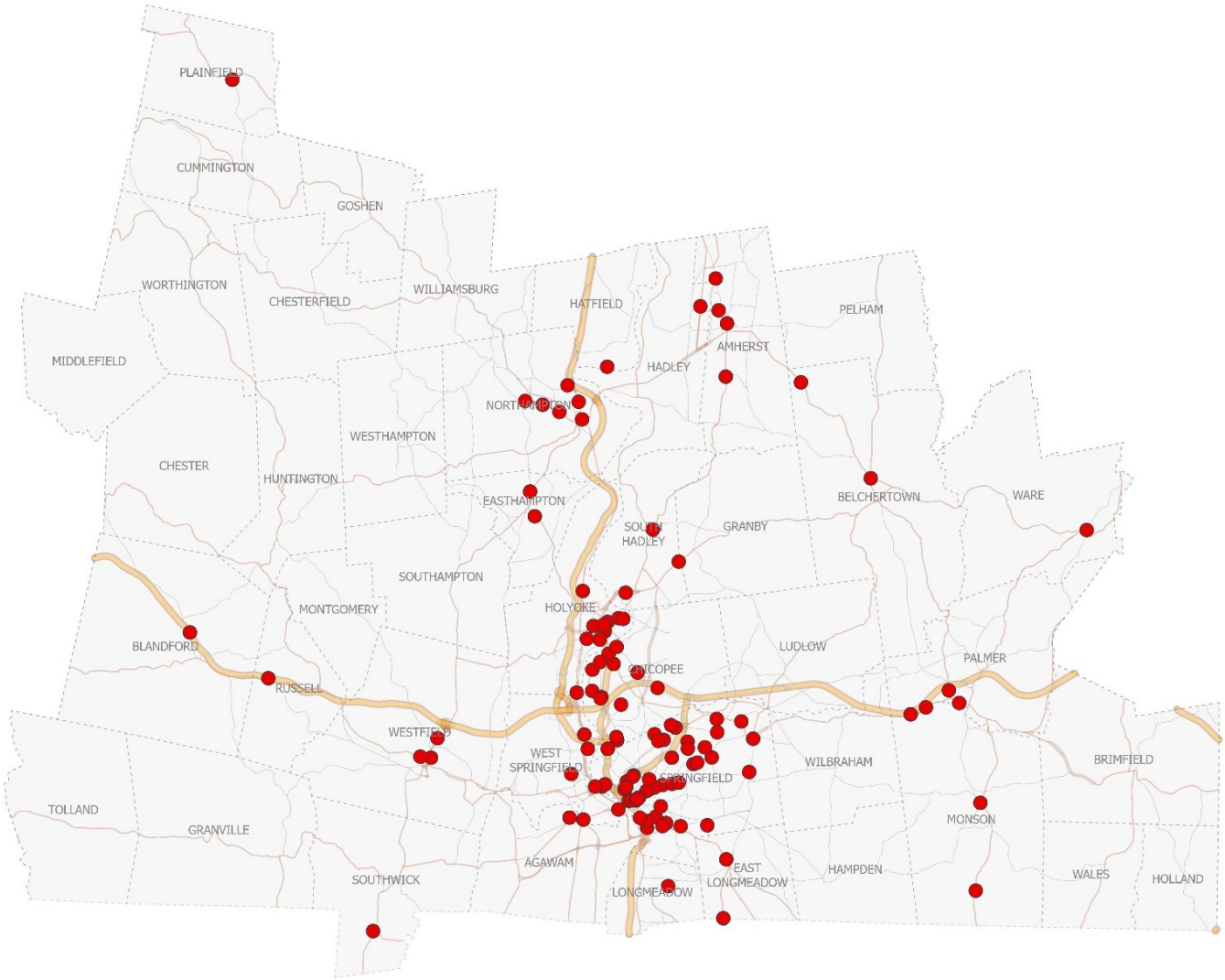


Figure 3.36 Non-Motorized Fatal Crash Locations 10 Year (2015-2024)



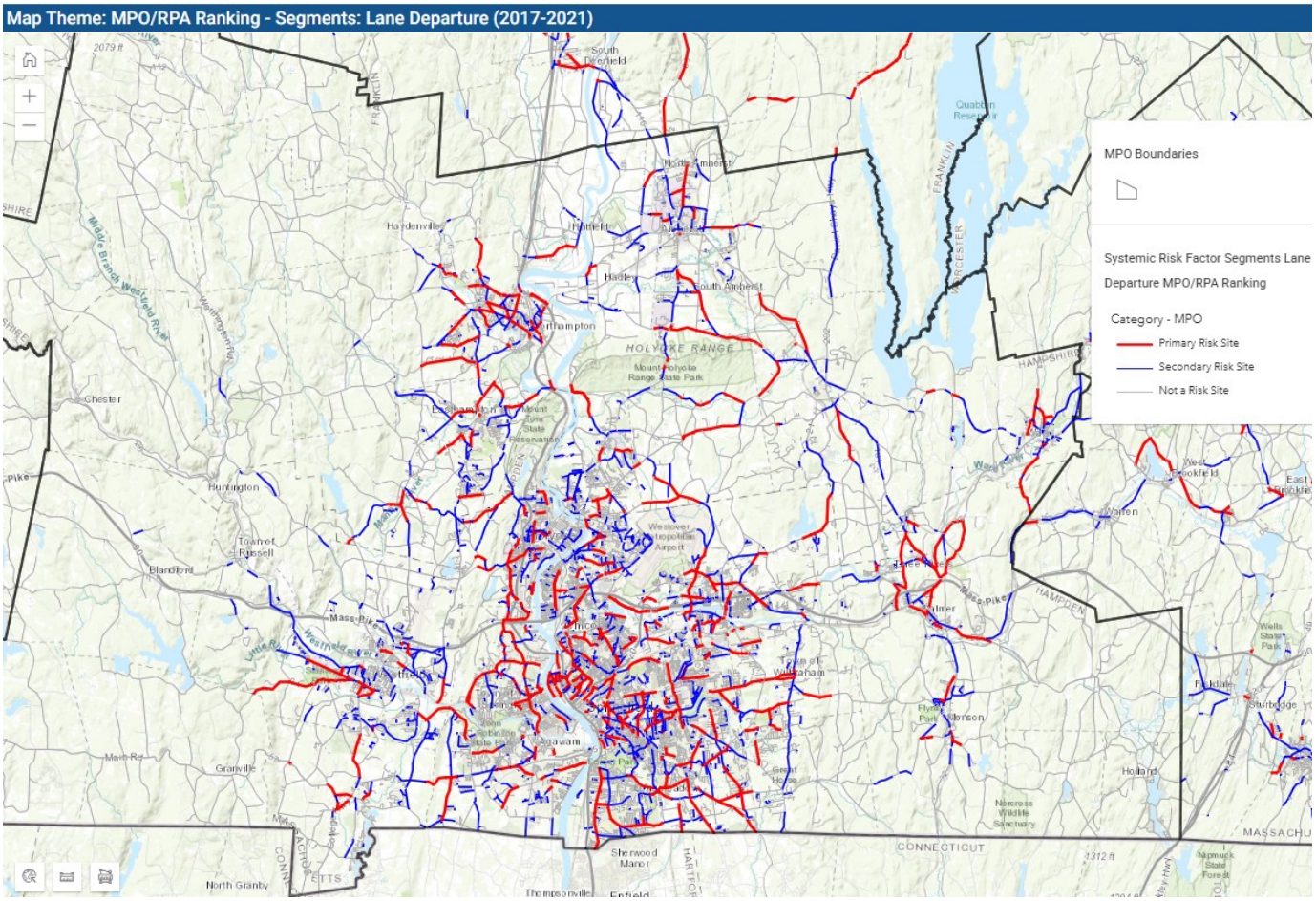
A societal trend impacting the type of crashes has been an increase in the size and mass of personal vehicles. Larger/heavier vehicles are increasingly seen as contributing to bicycle and pedestrian fatalities. While the region's population has grown modestly, a preference for large vehicles continues to grow.

Another useful online portal to identify locations of concern is the Network Screening – Systemic/Risk Based tool. This tool can be used to access data about and visualize the top risk sites for each of the Strategic Highway Safety Plan emphasis areas based on specific risk factors developed for each emphasis area. Top risk sites statewide as well as top risks sites within each MPO/RPA are available to view on an online map. Each emphasis area focuses on certain road types. Not all roadway segments are included.

Details on the specific risk factors and how they were developed for each emphasis area can be found in the MassDOT Network Screening Risk Based Methodology Reports. Details on the queries used to identify crashes for each emphasis area can be

found on the IMPACT Emphasis Area Definitions webpage: https://www.mass.gov/lists/network-screening-methodology-reports#reports-. The locations identified were categorized into primary risk site and secondary risk site by applying a systematic risk factor for lane departures, highlighted on the following map by red and blue color consecutively (Figure 3.37). The crash risk maps to follow can be viewed at this website link: https://apps.impact.dot.state.ma.us/sat/NetworkEmphasisArea.

Figure 3.37 Lane Departure Risk Locations 5 Year (2017-2021)



Risk sites for pedestrians and risk sites for bicyclists are also identified on maps shown on the next page (Figures 3.8 and 3.39). This analysis is based on a five-year crash data from 2017-2021. Comparing the two maps shows many similarities in locations of risk sites for both pedestrians and bicyclists who are labeled as vulnerable road users previously in this section. Among the apparent differences between the two types of users are certain corridors in Agawam, Amherst, Chicopee, Easthampton, Northampton, Springfield, Westfield, West Springfield.

Figure 3.38 Pedestrian Risk Locations 5 Year (2017-2021)

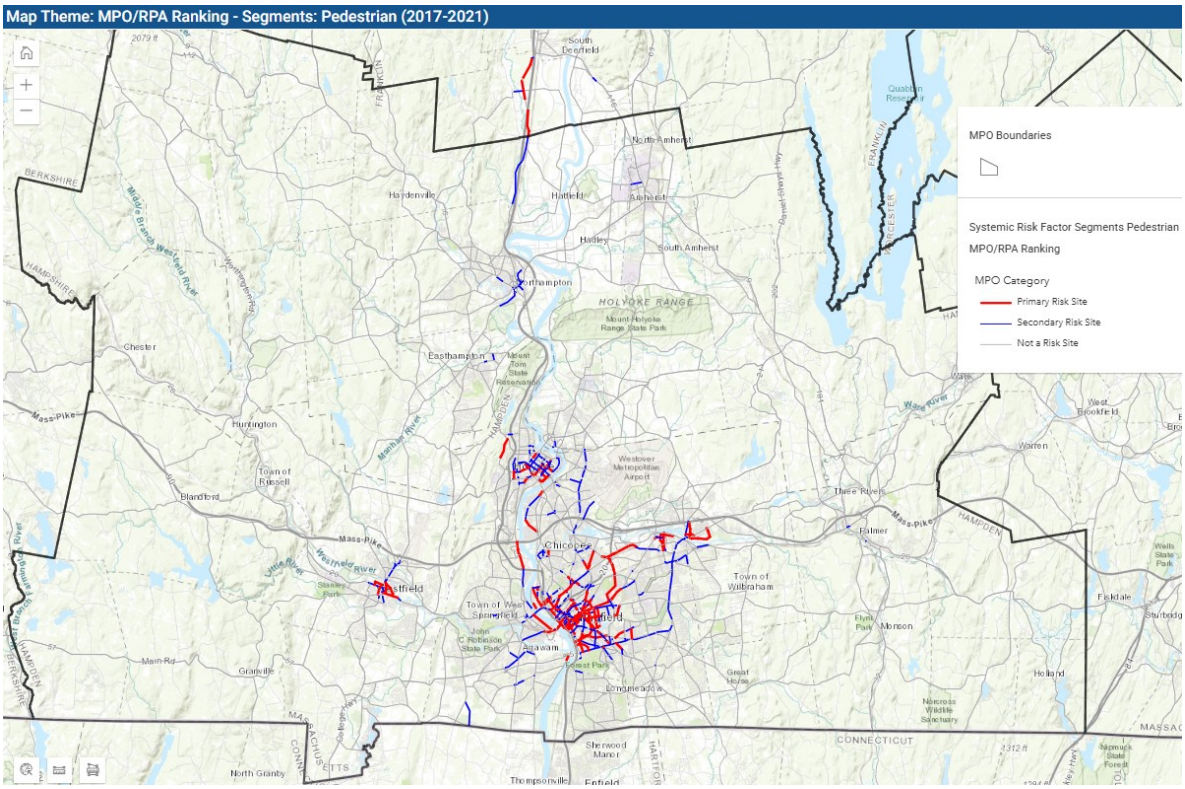
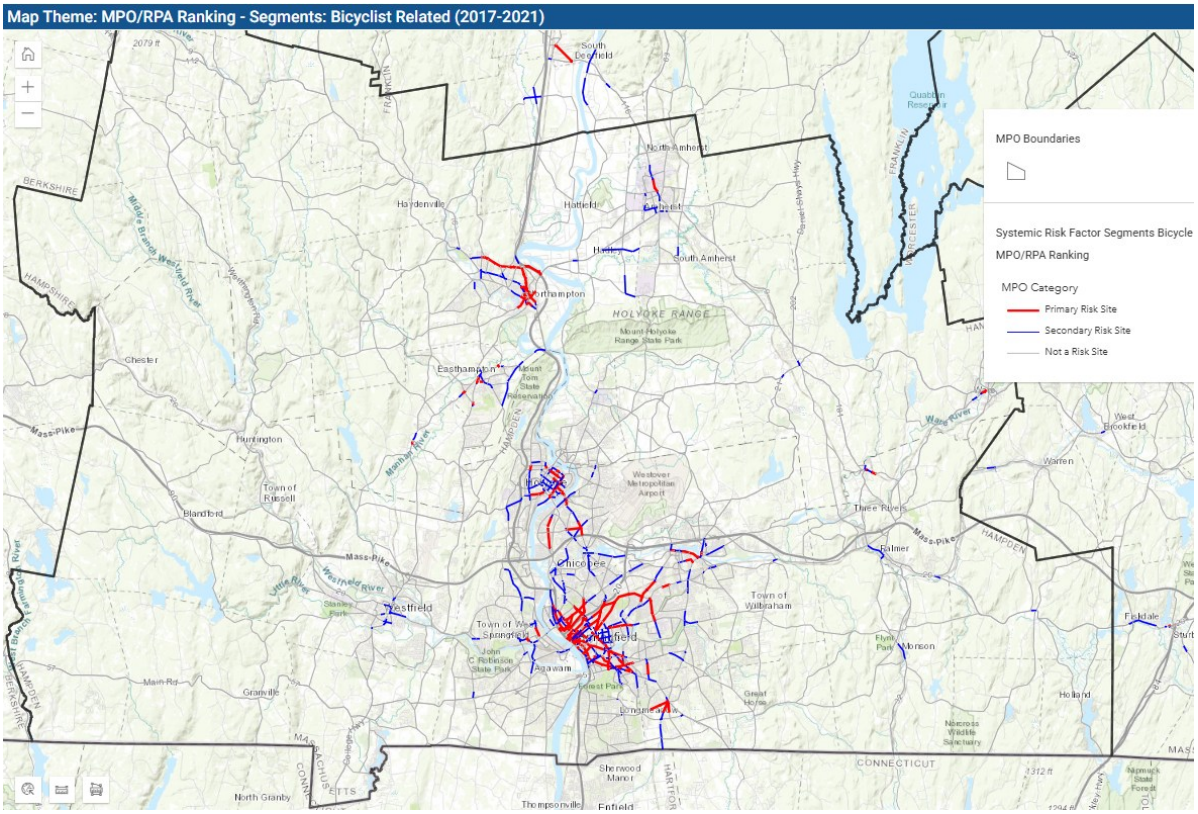


Figure 3.39 Bicyclists Risk Locations 5 Year (2017-2021)



3.3 Environmental Impact

The Pioneer Valley Planning Commission is working with a cross-section of the transportation, employment, education, industry, governmental, and resource conservation sectors to build a “Green Infrastructure” that connects critical natural and built features to protect them. Increasing the total miles of travel routes that can be accessed on foot or on bicycle is one of the critical features of a sustainable infrastructure, and a long-term strategy for the region.

Active transportation, such as walking and biking, offers a sustainable alternative to traditional single occupancy vehicle transportation. Compared to the average passenger vehicle, which emits nearly 400 grams of CO2 per mile, walking or cycling only produces about 25 grams of CO2 per mile. Given that almost 80 percent of Americans drive to work every day, traveling an average of 41 miles, transportation is a significant contributor to greenhouse gas emissions and air pollution. Opting to walk, bike, use a scooter/skateboard, or take public transportation has a big impact on reducing local and global air pollution which pose health risks to humans and animals in the environment.

When more people walk or bike, the number of cars on the road, overall traffic congestion and travel times are reduced, further reducing emissions. Biking can also be a source of mechanical and electrical energy. On average a biker can produce 100 kilowatts per hour, which creates enough energy to power a lightbulb. Choosing an active transportation over a single occupancy vehicle option can significantly reduce an individuals’ carbon footprint and contribute to a more sustainable future.

3.4 Health Impact

Walking and biking offer numerous health benefits, including reduced risk of heart disease, stroke, diabetes, obesity and promote mental well-being by reducing stress and anxiety. The physical activity of biking or walking can leave the individual feeling more energized for the rest of the day. The prevalence of a sedentary lifestyle coupled with dependence on automobile travel for transportation has had a negative impact on individuals health. Two factors contribute to this problem more than other possible causes. They are inner city poverty and car-oriented suburban development. Obesity is linked to poverty and is highest among black women who are also the poorest segment of the population. According to the Massachusetts Department of Public Health 59% of all adults in western Massachusetts are overweight or obese.

To combat these health impacts the state developed a program called Mass in Motion that “promotes opportunities for healthy eating and active living in the places people live, learn, work and play.” Sixty communities across the state are Mass in Motion communities. Eight of those are in the Pioneer Valley Region and include Amherst, Belchertown, Northampton and Williamsburg (working under the name, Healthy Hampshire), Holyoke, Springfield, and West Springfield and Palmer. The City of Northampton is the lead agency for the four 'Healthy Hampshire' communities, and the cities of Holyoke and Springfield secured funds directly from the Massachusetts

Department of Public Health (MDPH). The Pioneer Valley Planning Commission collaborated with the health agents in Palmer and West Springfield, to help these communities become Mass in Motion communities.

These cities and towns are actively working toward health in all policies, increasing awareness of walking and bicycling opportunities in the community, improving safety for walkers and bicyclists, and working to increase access to healthy food through community gardens, working with local restaurants to assure healthy dining options and working with corner stores to assure healthy food options throughout each community.

3.4.1 Enhancing Safety

Safety from automobile crashes as well as from crime is the greatest concern for neighborhood residents. Safe streets and sidewalks offer the greatest hope of increasing physical activity and the long-term physical health of neighborhood residents, especially low-income neighborhoods. Recognizing this, concerned citizens formed the Springfield Walks campaign to change the conditions that prevent people from being able to walk safely. The current group of Neighborhood Councils and Healthy Hill Advocates are now called Walk Bike Springfield came out the LiveWell Springfield initiative in 2014. Since its inception, several successes and accomplishments helped make the city safer for pedestrians and bicycle users such as increased participation in the Safe Routes to School program and the city passing some Complete Streets policies.

Such is the effort required by local groups to make the region's neighborhoods safer for all travelers with special attention to vulnerable road users such as pedestrians and cyclists. Some towns have focused on making their communities age friendly. This includes accessible and barrier free pedestrian network with way finding elements. A little more information about these approaches follows.

a) Safe Routes to School

A major factor driving the safe routes to school funding is the desire to promote children's physical activity, while also reducing automobile use. Traffic congestion and air pollution combined with children's lack of physical activity are the targets of safe routes to school initiatives. Statewide the Massachusetts Safe Routes to School program supports several initiatives. Past initiatives have included "Walking School Bus", "Footloose Fridays", "Fuel up to Play" and several educational campaigns. The Massachusetts Safe Routes to School Program is a central source of safe route services to all interested schools in the state and currently provides services to 43% of public K-8 schools. The program provides safety training, classroom visits, presentations to parents and community members, special events, encouragement programs, free promotional items, infrastructure improvements and summer programs.

The Massachusetts Safe Routes to School program promotes healthy alternatives for children and parents in their travel to and from school. The program aims to reduce

congestion, air pollution, and traffic conflicts near participating schools, while improving health and mobility of school-aged children population. Safe Routes to School is a national movement to create safe, convenient, and fun opportunities for children to bicycle and walk to and from schools. The program's goal is to reverse the decline in children walking or biking to school. Nationally, only 15 percent of schoolchildren walk or bike to school compared to 50 percent in the 1950's. Most parents prefer to drop their children off at school using their personal automobile. The result is often increased congestion and higher vehicle emissions around the schools.

A total of 109 schools in the Pioneer Valley actively participate in the Massachusetts "Safe Routes to School Program" promoting healthy alternatives for children and parents in their travel to and from school. The program educates students, parents, and community members on the value of walking and bicycling and provides funding for sidewalks, crosswalks, and traffic calming measures. Funding for construction projects is also available through the Safe Routes to School Infrastructure Program. The Roberta G. Doering Middle School and Robinson Park Elementary School have implemented infrastructure projects in Agawam (Figure 3.40). In Springfield, the Rebecca M. Johnson Visual and Performing Arts Elementary School is participating in the Safe Route to School infrastructure program. Past participation includes the William E. Norris School in Southampton, Jackson Street School in Northampton, Blueberry Hill School in Longmeadow, and Bridge Street School in Northampton.

Figure 3.40 Bike Racks at School in Agawam

PVPC purchased bike racks through a Live Well Springfield Community Transformation Grant to support the "The Safe Routes to School Program" in Springfield. The Springfield Safe Routes to School program is coordinated by the Springfield Safe Routes to School Alliance and is supported by the Springfield Housing Authority, the Talk/Read/Succeed program, Baystate Health Safe Kids program and Brightwood Health Center, the state Department of Public Health,

Springfield Health and Human Services, Mass in Motion, Partners for a Healthier Community, the YMCA of Greater Springfield, and other groups.

b) Age Friendly Initiatives

One of the main goals of the age-friendly movement is to eliminate physical and social barriers for older adults. Age-friendly communities support policies, services, and infrastructure to support and enhance residents' physical and mental health throughout their lives. These efforts allow residents to continue to learn, grow and make decisions, remain mobile, to build and maintain a social network, and to contribute in meaningful and fulfilling ways to their communities.

In the Pioneer Valley Region, people over 65 are the fastest growing age group. Many of our communities are working to make safe and reliable transportation options a priority, including affordable and easy-to-use public transportation, walking and biking paths, and rideshare access.

In 2022, with a grant from Tufts Health Plan Foundation, PVPC began helping local communities achieve their AARP Age and Dementia Friendly designations and convene community and regional partners quarterly to hear from experts and share best practices in the designation, assessment, and implementation of strategies to make communities great places to live for people of all ages. Community partners include Agawam, Amherst, Belchertown, Hadley, Monson, Northampton, Palmer, South Hadley, and Ware.

The Pioneer Valley Planning Commission in collaboration with the City of Springfield, and other Live Well Springfield partners installed new map signs on the Connecticut Riverwalk and Bikeway in Springfield. In partnership with WalkBoston (now WalkMassachusetts) and with funding through Mass-in-Motion, 151 pedestrian wayfinding signs with distance markers were installed in Springfield, Belchertown, and Northampton. PVPC has worked with MassDOT and local partners to install bike route signs along Route 5 in Holyoke, "share the road" signs on many popular cycling routes, directional signs in Northampton, and signs on the Connecticut Riverwalk and Bikeway. PVPC also partnered with MassDOT and DCR on the installation of "Bay State Greenway" signs on the Manhan Rail Trail, the Southwick Rail Trail, Norwottuck Rail Trail and sections of Route 9 in Williamsburg.

c) Complete Streets Program

Massachusetts launched the Complete Streets program in 2014. Many Pioneer Valley communities are actively participating in the program and have committed to transforming our region's roads and streets to make them safe and comfortable for all road users. This has encouraged more people to walk, bike and use transit instead of driving a single occupant vehicle.

PVPC advocates for a "Complete Streets" approach as part of its transportation planning activities. A "Complete Street" improves livability by improving public safety,

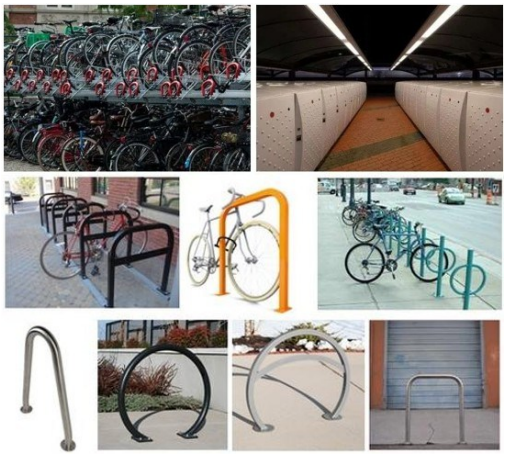
increasing usable public space, and making it easier for all modes of travel to share the street. It also creates a more welcoming environment for local businesses.

As of June 2023, 28 out of 43 communities in the region have participated in the Complete Streets Program and attended training through Baystate Roads. New infrastructure such as the Springfield Brightwood/ North End neighborhood underpass to the new Brightwood-Lincoln Elementary School on Plainfield Street enhances bicycle and pedestrian safety by eliminating at-grade crossing on roads with high traffic volumes and travel speeds.

d) Bicycle Parking

Having a safe and convenient place to lock bicycles and scooters is an important feature for a safe neighborhood (Figure 3.41). Not only does providing bicycle racks allow riders to secure their non-motorized vehicles but also encourages them to store them away from pedestrian paths to avoid blocking accessible pedestrian and wheelchair movement.

Figure 3.41 Bike Parking Types



The PVPC has worked with local communities to upgrade and expand existing opportunities for bicycle parking. Through a series of Transportation Demand Management funding commitments, PVPC has worked with local communities to install parking for more than 700 bicycles. Parking racks have included “U” style racks, ribbon racks, “rib” racks and bicycle lockers. PVPC purchased bicycle racks for several “Save Routes to School” partner schools in Springfield. PVTA initiated a bike rack purchase program to locate bike racks at high frequency bus stop locations. PVPC also coordinated the purchase of bike lockers for use at park-and-ride facilities.

These facilities offer designated sites for locking the bikes at desirable destinations and allow for safe keeping without obstructing movement along the pedestrian pathways. The availability of bicycle parking facilities indicates that bicyclists are welcome and that their driving mode of choice is valued for safe keeping. To assist in the installation of bike racks PVPC created a series of training videos. These and other

videos are available on the PVPC YouTube page:
https://www.youtube.com/watch?v=um6oagL7bfk

3.4.2 Improving Accessibility

Certain locations in the pedestrian network present certain users with barriers to independent active travel modes. The physically challenged, the elderly, and persons experiencing common physical ailments often require adequate rest areas and lighting along accessible pedestrian paths to facilitate safe movement. Lack of these also prevents them from relying on public transit for their travel needs if they cannot reach a bus stop safely or cannot wait while standing for long periods. While there are paratransit and senior van options offered by the regional transit authority, most individuals do not meet the functional disability or age-related eligibility criteria required to use these door-to-door services.

3.4.3 Increasing Mobility

To address bicycle and pedestrian needs on transit the Pioneer Valley Transit Authority implemented a bikes on bus program called "Rack and Roll" to improve access to transit in 1997. As part of the program bicycle racks were installed on the front of buses serving the Five-College area of Hampshire County. Early surveys of "Rack & Roll" users found that the new service increased transit ridership and also increased the number of bicycle trips, providing a viable alternative to the automobile. Many bicyclists use the racks to complete one leg of a journey, while others claim to use the bus for return trips during periods of inclement weather.

In 2003, PVPC secured funding from the Massachusetts Transportation Demand Management (TDM) Program (a sub-category of Congestion and Air Quality Mitigation (CMAQ) funds) for a comprehensive bicycle encouragement program called, Share the Road. Funding was used to update the very popular Pioneer Valley Bicycle commute map and to purchase and distribute bike parking racks as well as "Share the Road" signs for heavily-used bike routes. Member communities that were willing to participate in the program received this equipment free of charge. Since its implementation, PVPC has distributed bike lockers and "Share the Road" signs in conjunction with the Franklin County Regional Council of Governments. In addition to funding these programs, TDM funds have assisted in implementing PVTA'a Rack N' Roll Program, acquiring Sheldon Field and bicycle lockers for Northampton's Park & Ride Project. Providing bike racks on buses has extended the reach of our regional transit service area by facilitating the option to complete the first or last segment of a passenger's trip by bicycle. This has allowed for increased mobility of users by closing the first mile and last mile service gaps present in many of our rural communities.

The Pioneer Valley Transit Authority supports the popular "Rack and Roll" bikes-on-buses program in the entire region. All fixed route buses in the PVTA fleet are equipped with racks, allowing cyclists to transport their bikes on public service transit lines throughout much of Hampden and Hampshire County (Figure 3.42). This helps

increase the reach of transit to many residents whose destination is beyond a comfortable walking range, thus solving the problem of the last mile. In FY 2022 the PVTA bike racks were used 40,706 times, excluding UMass shuttle trips (Figure 3.43). The Pioneer Valley Transit Authority's bikes on bus program "Rack and Roll" has dramatically improved access for bicyclists to transit and given thousands of people another choice in their mode of travel (Figure 3.35).

Figure 3.42 Loading a Bicycle on the Bus Rack in Northampton

Figure 3.43 Bikes on Bus Usage (PVTA)

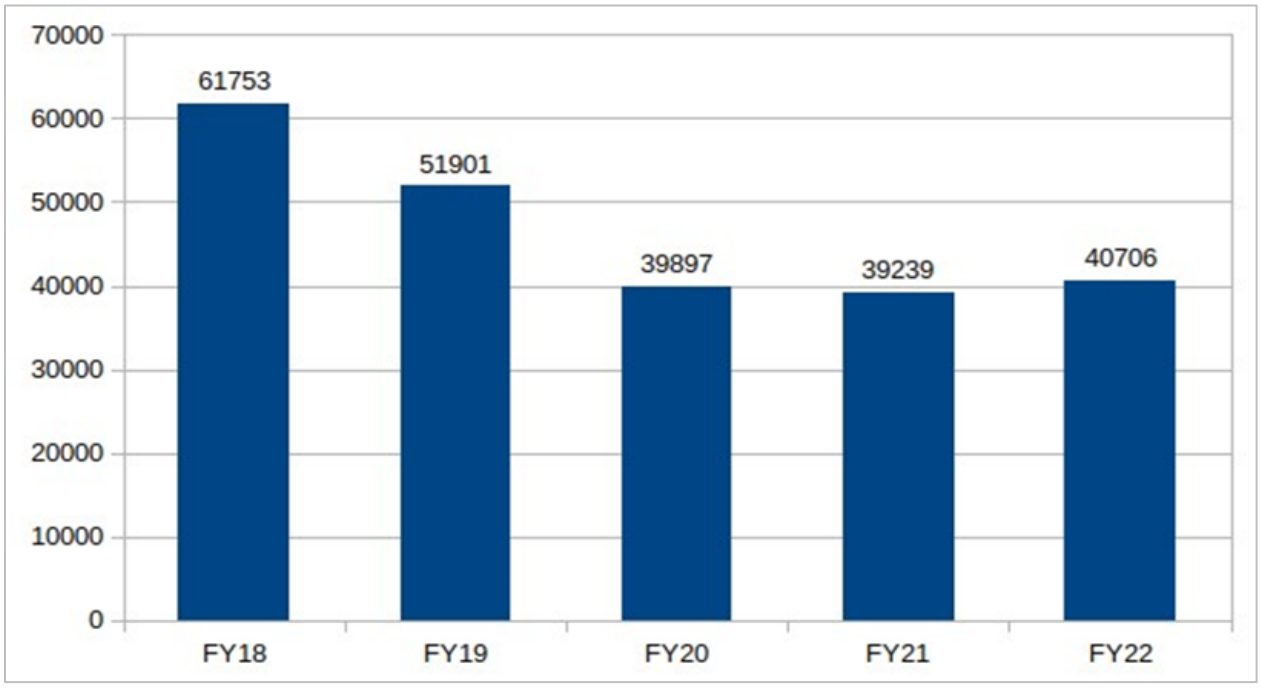
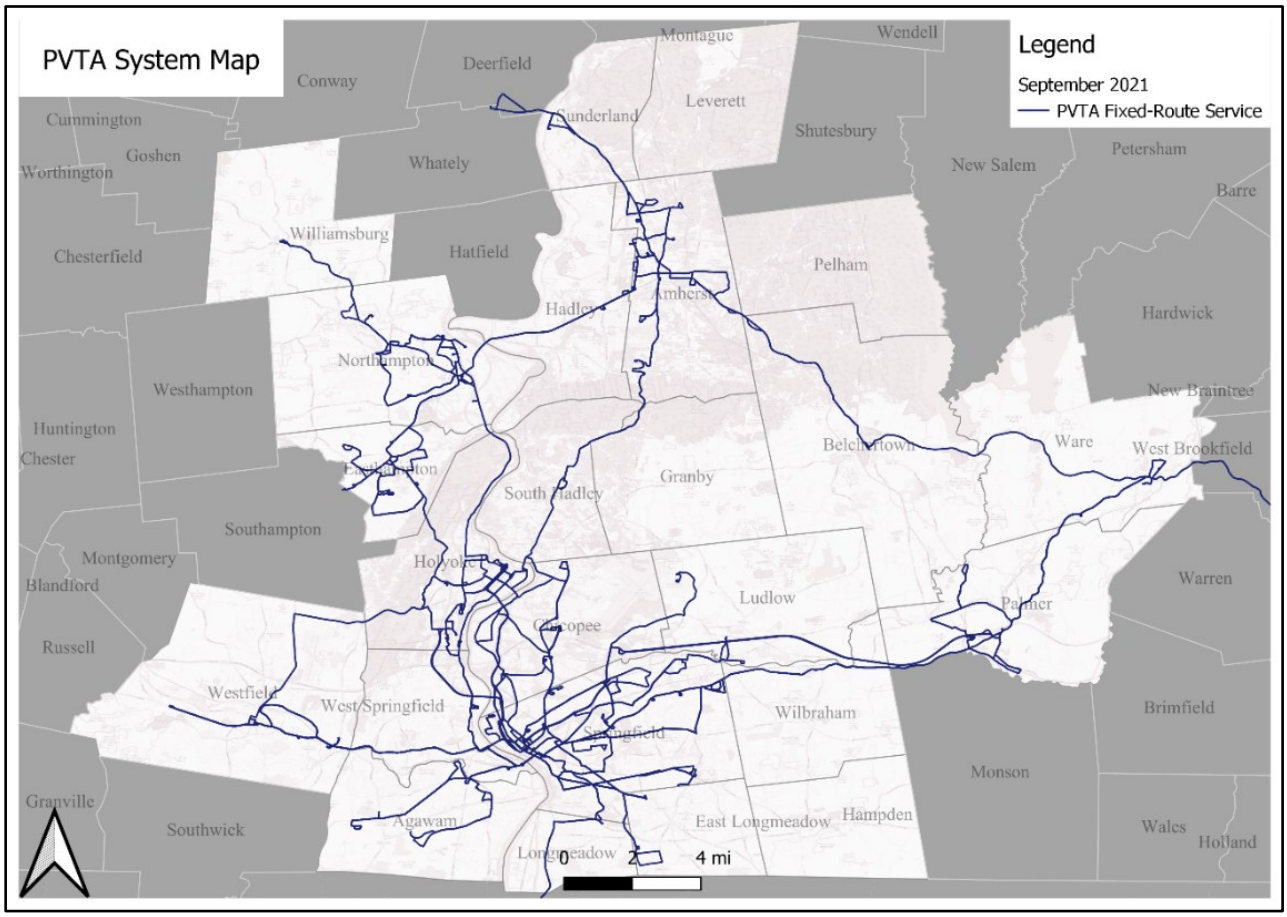


Figure 3.44 Bus Routes in PVTA Communities



Increased marketing and promotion for the service included an instructional video to acclimate new users. The video is available online in English and in Spanish at: https://www.youtube.com/watch?v=pNcW-ZaoEfg.

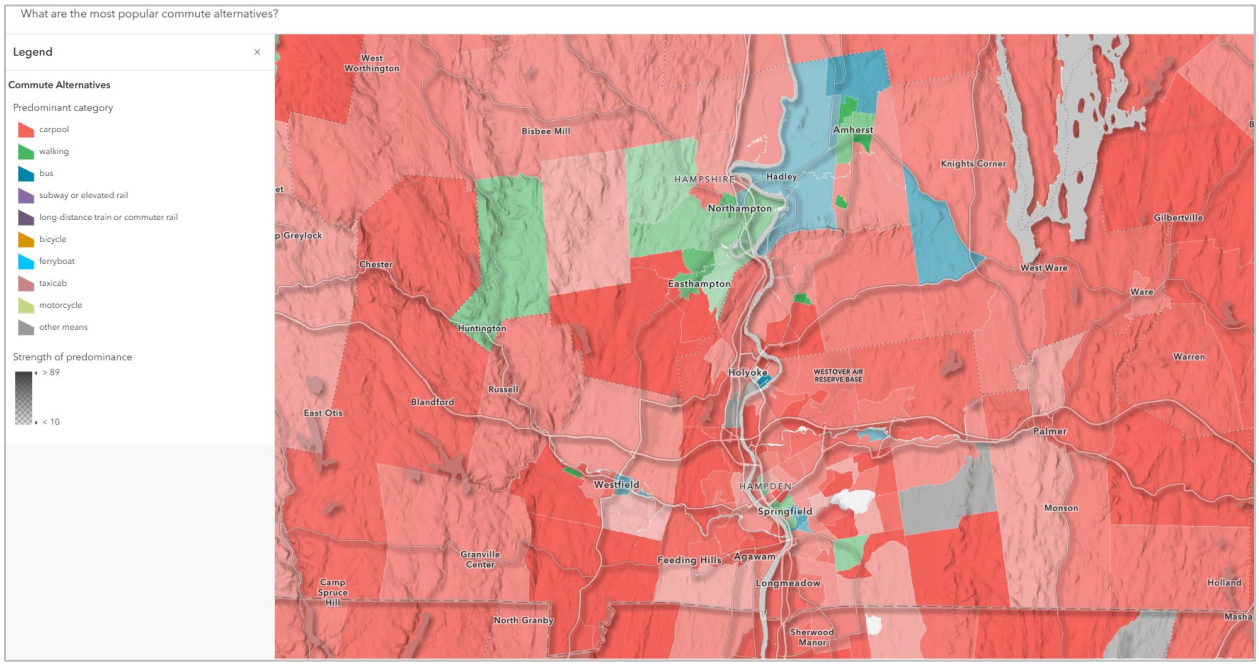
3.4.4 Reducing Economic Strain

Nationwide, families already spend 20% of their budget on transportation costs related to automobile travel. With more people commuting greater distances to work more public and private money is spent on transportation costs. Nationally, 70% of all state and local law enforcement activities are expended on traffic management and 20% of state budgets are consumed by cars. Active transportation can help reduce expenditure on fuel, car maintenance, and insurance.

Bikes are an affordable way to increase transit accessibility. People who live within a two-mile radius of local transportation might find that the walk is too far; but biking provides a faster solution to alleviate such transit deserts. This increases transit ridership as well as connectivity for people to access the places they need. Additionally, bike parking near transit stops will communicate to community members that bike travel is safe and encouraged. The most popular commute alternatives to

driving was analyzed in a form of a color themeatic online map (Figure 3.36). In the Pioneer Valley region these alternatives include carpooling, walking, and bus.

Figure 3.45 Most Popular Commute Alternatives



The above map can be viewed at the following website link: https://www.arcgis.com/apps/mapviewer/index.html?webmap=cabbd03603ce405bbacac205034b7143

Offering an accessible public transit service that is reliable and frequent extends the reach for pedestrians and bicyclists. This in turn offers travelers the flexibility to conduct most of their trips via modes that much more economic than a personal automobile. The PVTA's service area begins at the Connecticut state line and stretches north to Leverett, MA. PVTA serves 24 communities with a total population of 582,800 (2020 U.S. Census). A 2019/22 passenger survey found that 47% of PVTA riders on southern routes and 81% of riders on northern routes use the bus to commute to work or school. A total of 71.5% of riders report earning less than $20,000 per year and nearly 50% of riders report they do not have a driver's license or own a vehicle.

3.5 Bike Month

Calendar year 2024 was the 25th year of Bike Week that became Bike Month a few years ago in the Pioneer Valley. Bike Commute Week, the region's annual celebration of bicycle commuters, has steadily drawn participants and continues to be a prominent attraction in the spring. PVPC staff continue to use this event as an outreach and public awareness campaign. In the past the distribution of the area Bike Map aimed at increasing the rates of bicycling, by assisting potential cyclists in plot out a course using the safest routes. Today, the prevalence of smart phones, software applications, and online sites give access to similar virtual tools to cyclists. Education

about the availability and use of such resources remain a necessary service to the general public.

The bike month listing of events have grown to include educational sessions related to safety and maintenance, social gatherings, cultural tours, natural excursions, memorials of significant events, celebrations of community accomplishments, advocacy actions, sharing of resources for non-motorized travelers. They offer networking avenues for residents, agency staff, business owners, and elected officials. This annual month of events that are spread throughout the Pioneer Valley region during the month of May has become a catalyst for participation in active transportation and interagency collaboration on matters supportive for non-motorized transportation such as safety, accessibility, facility availability, accommodated, and policies.

The growing support of regional cycling businesses is testimony to the unique quality and growing popularity of bicycling in the Pioneer Valley. The region is also home to a local fixed base touring companies such as River's Edge Cycling and hosts nationally ranked races such as the Verge Northampton International Cyclocross.

Local bicycle shops provide a critical supporting role and many are active advocates and partners in the community and many such as New Horizons Bikes in Westfield have hosted numerous events, annual rides, and activities during bike week. Joe's Garage in Haydenville, Competitive Edge, Northampton Bicycle, Full Circle Bike Shop, Peak Performance Bicycles, Pro Bike, FJ Roberts, Valley Bike & Ski Werks, Hampshire Bicycle Exchange, New England Bicycle, Custom Cycle Bike Shop and Laughing Dog Bicycles are just a few of the many bike shops that play a critical role in supporting a vibrant cycling economy.

The Pioneer Valley has a long history of strong support and advocacy for bicycling. RadSpringfield is a volunteer-run bike shop in Springfield. Springfield is the largest city in New England without a commercial bike shop and RadSpringfield fills for the purchase of bikes, skill development and community.

Several communities in the Pioneer Valley have established bike advocacy or trails groups that volunteer their time and expertise to promote and improve bicycle facilities while supporting a strong bicycle culture. Some of these include, Williamsburg Mill River Greenway Committee, Holyoke Bike/Walk Committee, Walk/Bike Springfield, UMass Cycling Club, Pioneer Valley NEMBA, Friends of the Belchertown Greenway, Brimfield Trail Association, MassCentral Rail Trail Coalition, East Quabbin Land Trust, Northampton Cycling Club, Springfield Cyclonauts, MassBike Pioneer Valley, Friends of the Columbia Greenway Trail, Friends of the Manhan Rail Trail, Friends of Northampton Trails and Greenways.

4 MEASURING PROGRESS

Measuring the Pioneer Valley Region's progress and establishing metrics is an essential tool in planning for bicycling and walking. By relating community goals to the measurable effects of transportation investments in the region, we can prioritize planning tasks effectively and adjust that work based on our success. In deciding what to measure, we look for metrics that reflect the goals of the plan, captured through public outreach.

4.1 Public Outreach Results

This year, PVPC staff reached out to communities regarding the Pedestrian and Bicycle Plan in the period between April and June 2025. This outreach effort sought to identify challenges faced by cyclists and pedestrians, highlight areas that require improvement, and gather suggestions for enhancing safety and accessibility. Staff would then use this information to inform the planning process and address community needs. Public outreach activities included a Bicycle and Pedestrian Survey (online and paper), an online "Wiki Map" data collection tool, and a "Spin the Wheel" game presented during Bay State Bike Month in Amherst, Northampton, Springfield, UMASS-Amherst, and Westfield.

4.1.1 Spin the Wheel Game Results

The "Spin the Wheel" game activity allowed participants to prioritize investments in bicycling and walking in their community. Different types of Improvements were labeled on separate boxes as follows: Maintenance, Bike Lanes, Sidewalks, Stop Distracted Driving, Safe Crosswalks, Shared-Use Paths (Bike Paths), Bike Racks/Bike Parking, Slow Traffic, Expand Bikeshare, and Your Ideas. Participants dropped the play money they won in bills of "Million Dollars" into the improvement boxes to cast their response. The individual "Million Dollar" bills would then be counted/tallied as votes for each type of improvement requested. Voting with their money highlighted the improvement areas each community was interested in seeing. Several types of improvements were deemed essential to many of the surveyed communities. The types of improvements considered in this activity were explained to participants as described in Table 4.1 on the following page.

Table 4.1 Choices of Bicycle and Pedestrian Improvement Projects

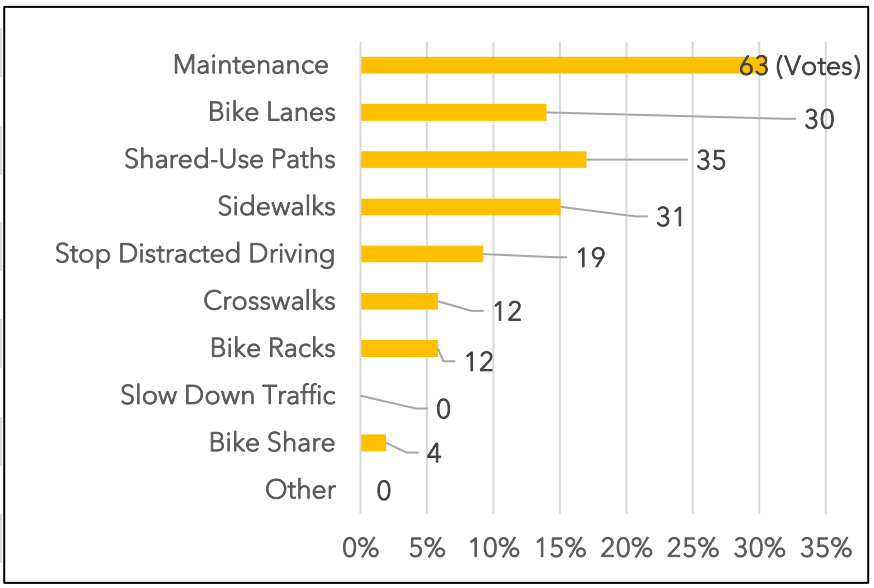
Improvement Categories	Description
Maintenance	Rehabilitating current infrastructure, while maintaining good condition infrastructure.
Bike Lanes	Adding and Improving Bike Lanes in areas with no Bike Lanes or Bike Lanes in need of improvements.
Sidewalks	Adding sidewalk connections or improving existing sidewalks accessibility and safety.
Stop Distracted Driving	Improving driver awareness through enforcement and roadway additions (Signage, rumble strip, etc.)
Safe Crosswalks	Adding crosswalks to areas in need of crosswalks and improving current crosswalks safety and accessibility.
Shared-Use Paths (Bike Paths)	Adding Shared-Use Paths in areas in need, and improving current paths accessibility, safety, and connections.
Bike Racks/Bike Parking	Providing Bike Racks/Bike Parking in areas of need, updating current Bike Parking accessibility.
Slow Down Traffic	Improving Traffic safety through slower traffic by speed limits, traffic calming (speed bumps, speed tables, etc.) and other safety measures.
Expand Bike Share	Adding Bike Share in areas with no existing bike share, improving current bike share infrastructure/system.
Your Ideas/Other	Other Improvements not listed, provided by community members.

Improvement Projects Priority Results by Community:

Votes cast during each of the five in-person outreach events were tallied and analyzed by location. These results offered a snapshot of the priorities and concerns expressed by participants at each location. By reviewing the vote tallies, one can identify the types of pedestrian and bicycle improvements that resonate most with residents of each local. Although the size of the data sample collected did not represent a statistically significant portion of community residents to provide a comprehensive view of the entire population, it offered some insight into the preferences of those who participated. These in-person public outreach events served as an essential venue for direct public input, allowing residents to share their opinions to influence the direction of future infrastructure improvements in their communities. The following pages include tables and charts displaying the results of the “Spin the Wheel Game” participants’ choices.

Figure 4.1 Amherst Votes on Pedestrian and Bicycle Improvements

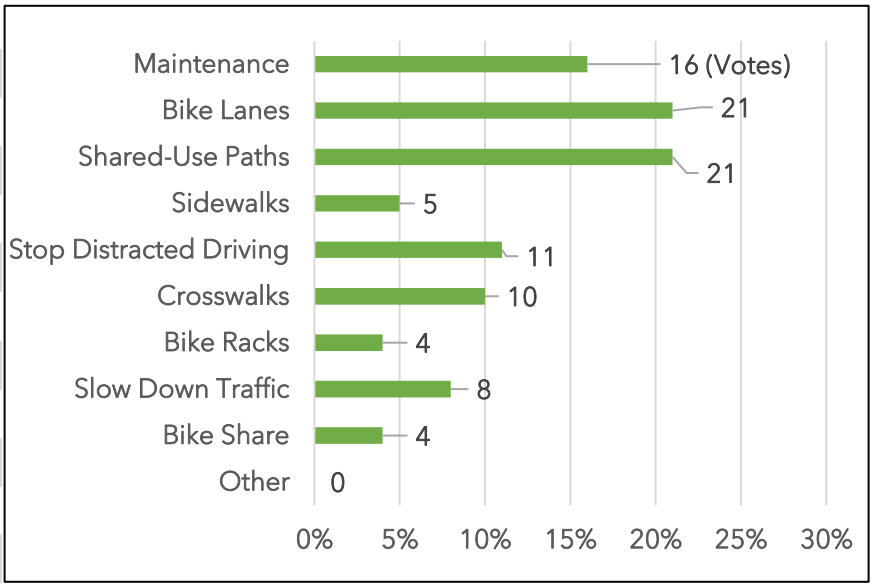
Improvement	Votes
Maintenance	63 (31%)
Bike Lanes	30 (14%)
Shared-Use Paths	35 (17%)
Sidewalks	31 (15%)
Stop Distracted Driving	19 (9%)
Crosswalks	12 (6%)
Bike Racks	12 (6%)
Slow Down Traffic	0 (0%)
Bike Share	4 (2%)
Other	0 (0%)
Amherst Total	**206 (100%)**



Out of 206 votes taken in the Town of Amherst regarding improvements to pedestrian and bicycle infrastructure, community members voted for many local improvements (Figure 4.1). The top vote at 63 was for the Maintenance category, which received 31% of votes. This high number of votes could indicate that the Amherst participants wish to focus on upkeep and rehabilitation of existing infrastructure to maintain its good condition. A few other categories received a lot of votes by community members. These were medium-ranking project categories that called for improvements in: Shared-Use Paths (17%) with 35 votes, Sidewalks (15%) with 31 votes, Bike Lanes (14%) with 30 Votes, and Stop Distracted Driving (9%) with19 votes.

Figure 4.2 Northampton Votes on Pedestrian and Bicycle Improvements

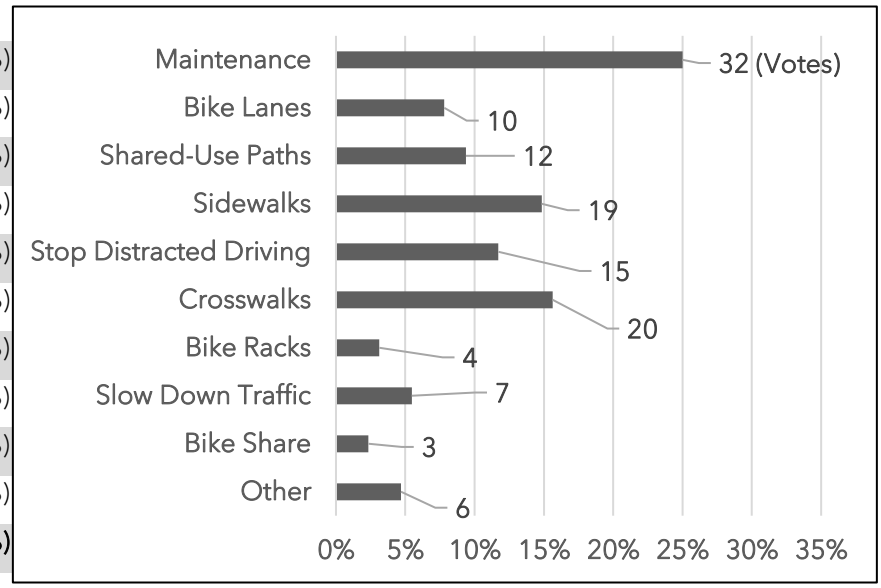
Improvement	Votes
Maintenance	16 (16%)
Bike Lanes	21 (21%)
Shared Use Path	21 (21%)
Sidewalks	5 (5%)
Distracted Driving	11 (11%)
Crosswalks	10 (10%)
Bike Racks	4 (4%)
Slow Down Traffic	8 (8%)
Bike Share	4 (4%)
Other	0 (0%)
Northampton Total	**100 (100%)**



Out of 100 votes taken in the City of Northampton regarding improvements to pedestrian and bicycle infrastructure, community members voted for many improvements (Figure 4.2). The top two categories of improvements tied at 21% of the votes with 21 votes each were for Bike Lanes and Shared-Use Paths. On-road improvements, including bike lanes, are a necessary improvement especially for roadways that connect people's homes with their desired destinations in a bike friendly community such as Northampton. Other medium ranking improvements were Maintenance (16% of votes), Stop Distracted Driving (11% of votes), and Safe Crosswalks (10% of votes).

Figure 4.3 Springfield Votes on Pedestrian and Bicycle Plan Improvements

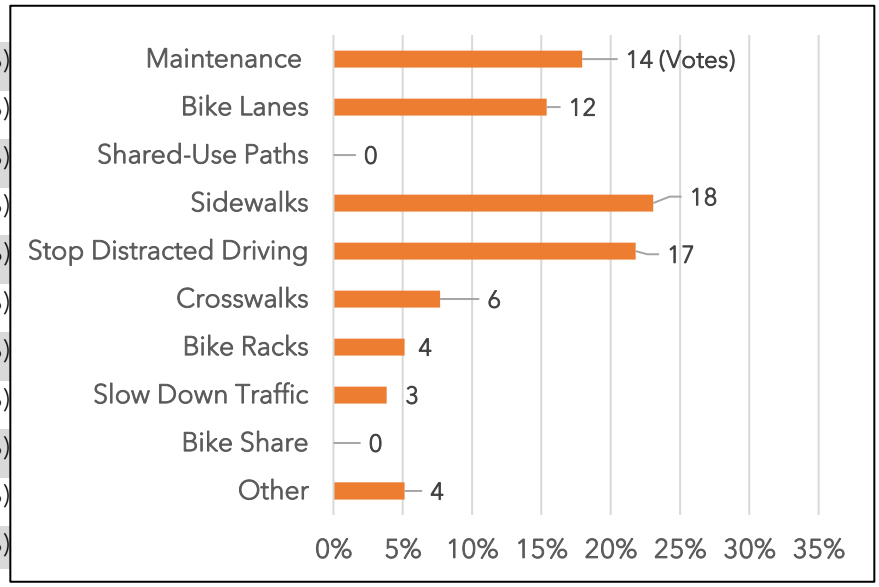
Improvement	Votes
Maintenance	32 (25%)
Bike Lanes	10 (8%)
Shared-Use Paths	12 (9%)
Sidewalks	19 (15%)
Stop Distracted Driving	15 (12%)
Safe Crosswalks	20 (16%)
Bike Racks	4 (3%)
Slow Down Traffic	7 (5%)
Bike Share	3 (2%)
Other	6 (5%)
Springfield Total	128 (100%)



Out of 128 votes taken in the City of Springfield regarding the types of improvements to pedestrian and bicycle infrastructure, participants voted for several improvements (Figure 4.3). Maintenance received top rank at 25% with 32 votes. This shows that respondents prioritized maintaining the current infrastructure. Other medium-ranking improvement types included: Safe Crosswalks at (16%) with 20 votes, Sidewalks at (15%) with 19 votes, Stop Distracted Driving at (12%) with 15 votes, Shared-Use Paths at (9%) with 12 votes, and Bike Lanes at (8%) with 10 votes.

Figure 4.4 UMASS Amherst Votes on Pedestrian and Bicycle Plan Improvements

Improvement	Votes
Maintenance	14 (18%)
Bike Lanes	12 (15%)
Shared-Use Paths	0 (0%)
Sidewalks	18 (23%)
Stop Distracted Driving	17 (22%)
Safe Crosswalks	6 (8%)
Bike Racks	4 (5%)
Slow Down Traffic	3 (4%)
Bike Share *	0 (0%)
Other	4 (5%)
UMass-Amherst Total	78 (100%)

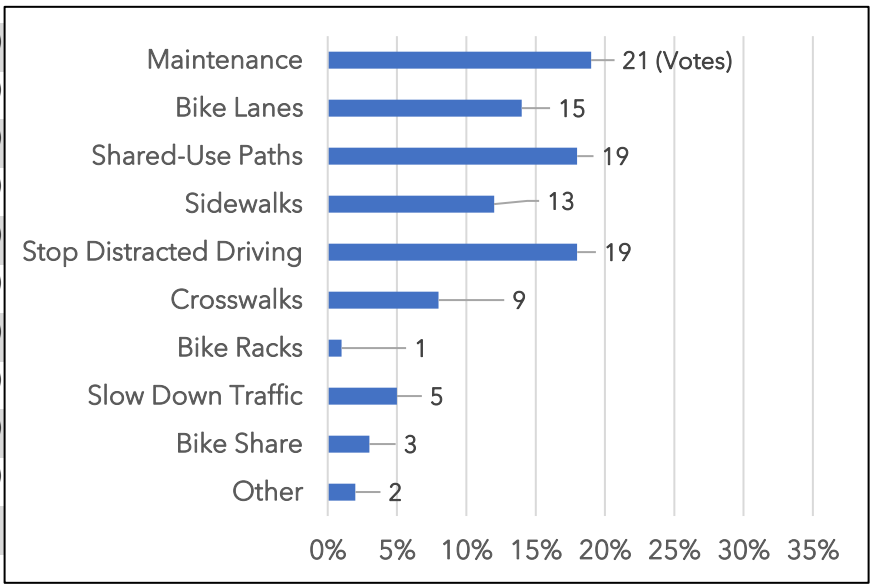


* This event location did not have Bike Share among the project categories

Out of 78 votes taken at the University of Massachusetts Amherst Campus regarding improvements needed to pedestrian and bicycle infrastructure, participants voted for several improvements to be made within the campus/Amherst area (Figure 4.4). The top two votes were for Sidewalks at (23%) with 18 votes and Stop Distracted Driving at (22%) with 17 votes. These votes indicate that improving sidewalk connectivity to keep pedestrians safely out of the roadway and implementing enforcement and other solutions to stop distracted driving are top priorities for campus community members. One can expect rural college campuses, such as UMass-Amherst, to be overwhelmingly made up of pedestrian zones, where most community members choose to walk because it is the most efficient and affordable mode of travel. Other medium ranking improvements were Maintenance at (18%) with 14 votes, Bike Lanes at (15%) with 12 votes, and Safe Crosswalks at (8%) with 6 votes.

Figure 4.5 Westfield Votes on Pedestrian and Bicycle Plan Improvements

Improvements	Votes
Maintenance	21 (19%)
Bike Lanes	15 (14%)
Shared-Use Paths	19 (18%)
Sidewalks	13 (12%)
Stop Distracted Driving	19 (18%)
Safe Crosswalks	9 (8%)
Bike Racks	1 (1%)
Slow Down Traffic	5 (5%)
Bike Share	3 (3%)
Other	3 (2%)
Westfield Total	108 (100%)

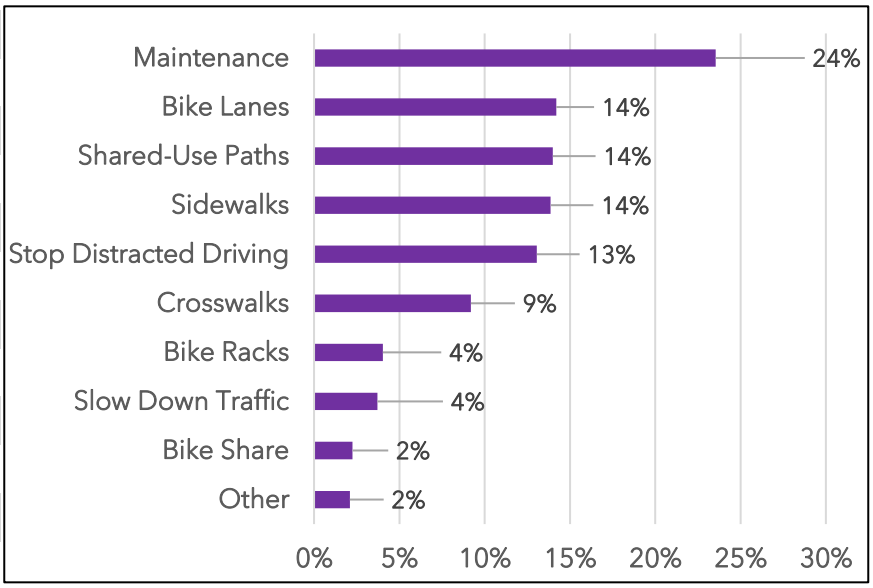


Out of 108 votes taken in the City of Westfield regarding improvements to pedestrian and bicycle infrastructure, participants voted for various improvements to be made within the city (Figure 4.5). Maintenance received the top vote at 19% with 21 votes. The prioritization of Maintenance could indicate that the surveyed community members wished to focus on maintaining the existing infrastructure in good condition. The second two high-ranking improvements tied at (18%) with 19 votes each were to Stop Distracted Driving and Shared-Use Paths. Medium ranking improvements included Bike Lanes (14%) with 15 votes), and Sidewalks at (12%) with 13 votes.

The following page contains the combined community total votes which represent regional priorities for improvements by project category (Figure 4.6). This is followed by a comparison between the various surveyed communities votes for improvement projects related to bicycles and pedestrians.

Figure 4.6 Combined Community Totals of Choices of Improvements

Improvement	Votes
Maintenance	24%
Bike Lanes	14%
Shared-Use Paths	14%
Sidewalks	14%
Stop Distracted Driving	13%
Safe Crosswalks	9%
Bike Racks	4%
Slow Down Traffic	4%
Bike Share	2%
Other	2%
Combined Totals	620 (100%)



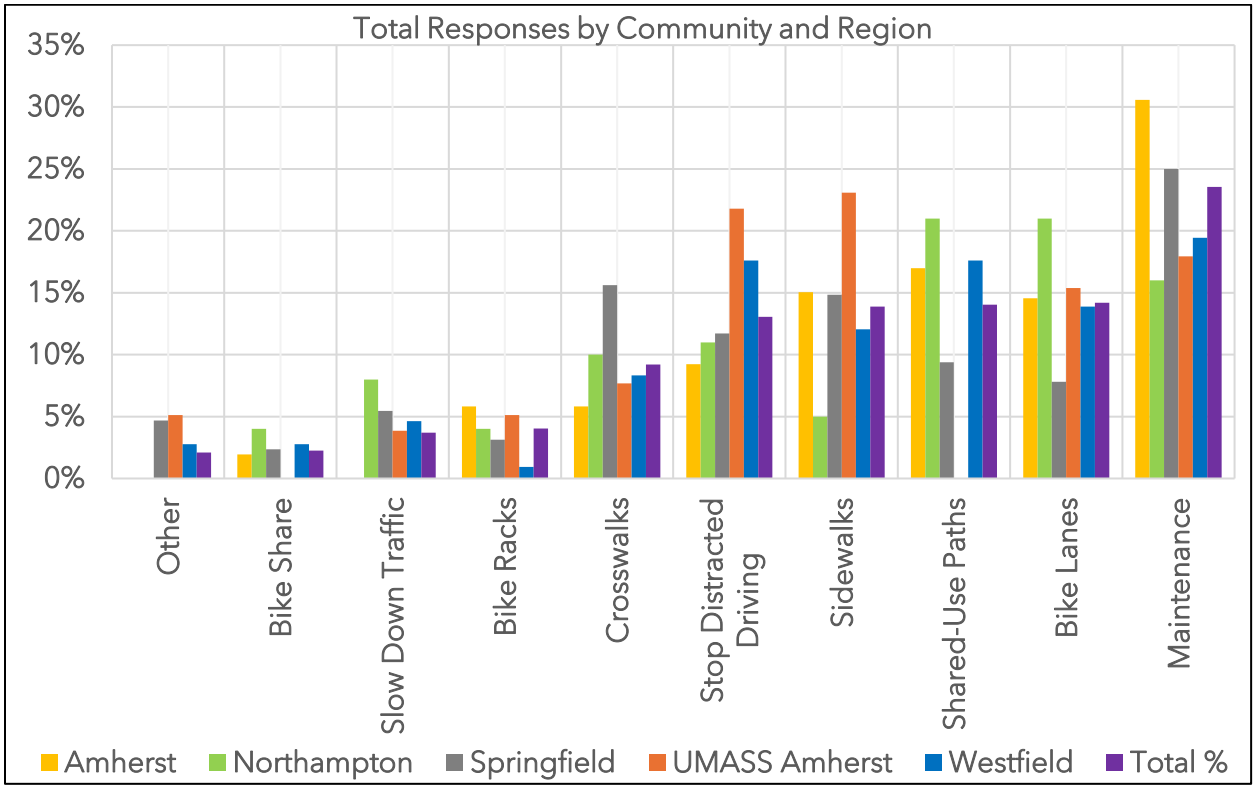
A total of 620 votes were taken for improvements to pedestrian and bicycle infrastructure at the five in-person public outreach events held in Amherst, Northampton, Springfield, Westfield, and on the UMASS-Amherst campus. Participants within the Pioneer Valley region voted for several improvements to be made within their respective locals. Their votes provided insight into the types of improvements they believed would enhance the quality of life for residents. The higher number of votes for Maintenance (24% total votes) indicates that communities within the Pioneer Valley region wished to focus on maintaining their existing good infrastructure. Medium ranking improvements that received 13% or14% of votes each included Shared-Use Paths, Safe Crosswalks, Bike Lanes, Sidewalks, and Stop Distracted Driving. It is important to note that some of these improvements can be accomplished while rehabilitating roadways for Maintenance and upkeep. Therefore, consideration for bicyclists and pedestrians should be made a standard component of any roadway project in the Pioneer Valley region.

The next page includes a table and a chart figure showing a comparison between project category votes for improvements at all five public outreach event locations (Table 4.2 and Figure 4.7). They also include the total votes per project category from all the events where the "Spin the Wheel" game was offered to engage visitors of the PVPC informational table in planning for bicycle and pedestrian improvements. The bolded percentage numbers highlight the top vote of a project category by participants at each of the community events. Participants from three communities gave Maintenance categories top vote. These were: Amherst, Springfield, and Westfield.

Table 4.2 Bicycle and Pedestrian Improvement Projects Chosen by Community

Improvement	Amherst	Northampton	Springfield	UMASS Amherst	Westfield	Combined Total
Other	0%	0%	5%	5%	3%	2%
Bike Share	2%	4%	2%	0%	3%	2%
Slow Down Traffic	0%	8%	5%	4%	5%	4%
Bike Racks	6%	4%	3%	5%	1%	4%
Safe Crosswalks	6%	10%	16%	8%	8%	9%
Stop Distracted Driving	9%	11%	12%	**22%**	**18%**	13%
Sidewalks	15%	5%	15%	**23%**	12%	14%
Shared-Use Paths	17%	**21%**	9%	0%	**18%**	14%
Bike Lanes	15%	**21%**	8%	15%	14%	14%
Maintenance	**31%**	16%	**25%**	18%	**19%**	**24%**
Total	100%	100%	100%	100%	100%	100%

Figure 4.7 Choices of Bicycle and Pedestrian Improvement Projects by Community



At each community event, participants voted for improvements they would like to see included in the Pedestrian and Bicycle Plan. The Maintenance category received many

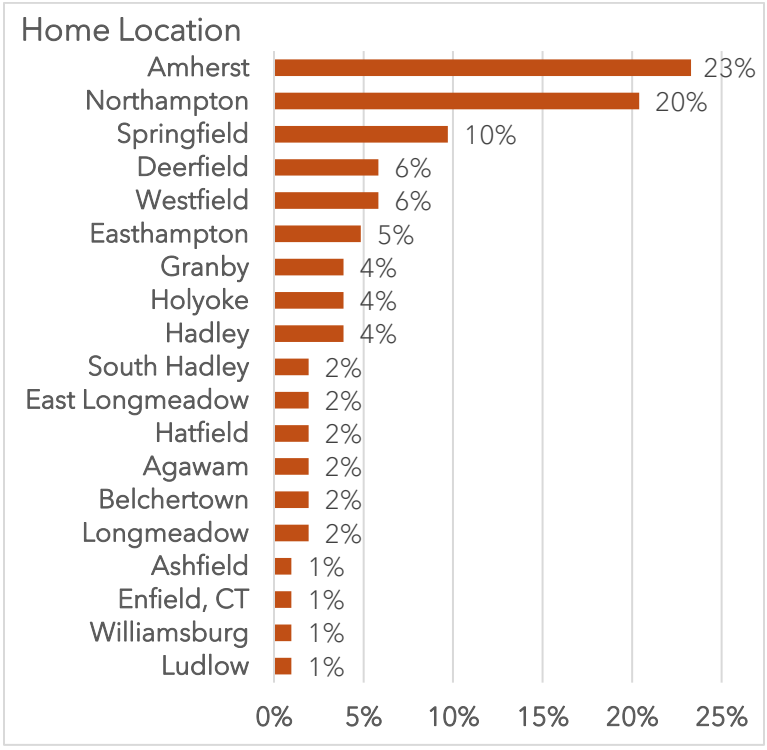
votes at each of the community events. It is important to recognize that other improvements, such as Bike Lanes and sidewalks, also received a fair share of votes. This would indicate that people were interested in upgrading the existing roadway infrastructure to accommodate Pedestrians and Bicyclists. In Northampton, the majority of votes were received by the categories of Bike Lanes and Shared-Use Paths, while Sidewalks received a lower number of votes. This may indicate that the community could have a higher priority for expanding the accommodation of bicyclists compared to the existing pedestrian infrastructure, which is already adequate.

4.1.2 Bicycle and Pedestrian Travel Survey Results

During the public outreach period, PVPC conducted a Bicycle and Pedestrian Survey to assess the active travel habits and needs of residents of the Pioneer Valley region. This survey was made available in paper format at community public outreach events as well as in digital form online on the website page dedicated to the plan. The following is a listing of the questions asked in this survey questionnaire and a summary of the answers received. A tally of answers received by participants for each of the questions follows, accompanied by charts that assist in visualizing the distribution of answers. A total of 103 survey responses were received. The survey sample size is not statistically significant, yet it offers a glimpse into the active travel habits of the residents of the Pioneer Valley region.

Figure 4.8 Respondents' Home Location

Question 1. Where do you live? Question 2. If other, where do you live?

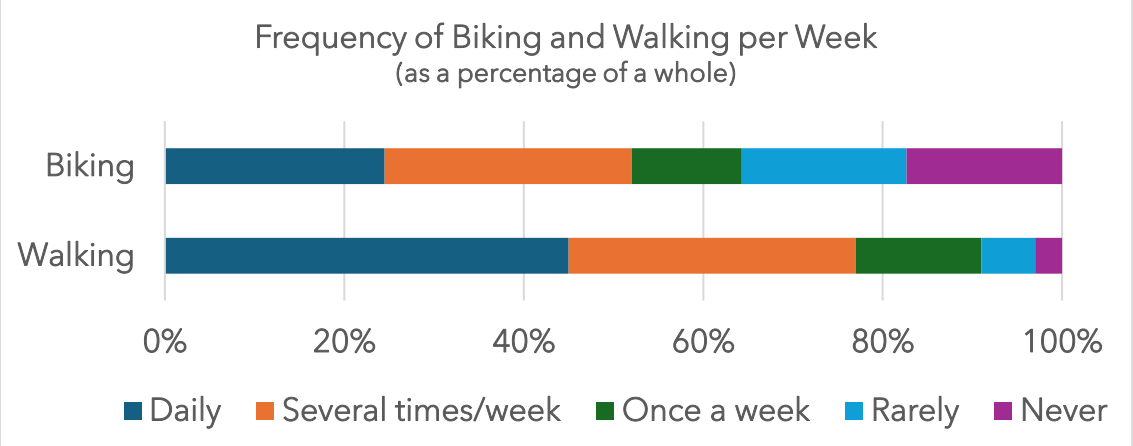


The first two questions were about home location (Figure 4.8). A respondent was able to select any of the 43 communities in the region or write in an answer for another community outside the Pioneer region that is comprised of Hampshire and Hampden counties. Three respondents did not indicate their home location. The chart figure above shows the percentage of responded from different communities around the Pioneer Valley and surrounding areas. The greatest number of respondents to this survey resided in the communities of Amherst and Northampton, 43% combined. The largest community in the valley, Springfield, had only 10% respondents. The majority of respondents were from upper valley Hampshire County at 63%, whereas 26% came from Hampden County. It is interesting to note that 7% were from Franklin County.

Figure 4.9 Frequency of Walking and Biking

Question 3: How often do you travel by each mode?

	Daily	Several times per week	Once a week	Rarely	Never
Walking	**45%**	32%	14%	6%	3%
Biking	24%	**28%**	12%	18%	17%

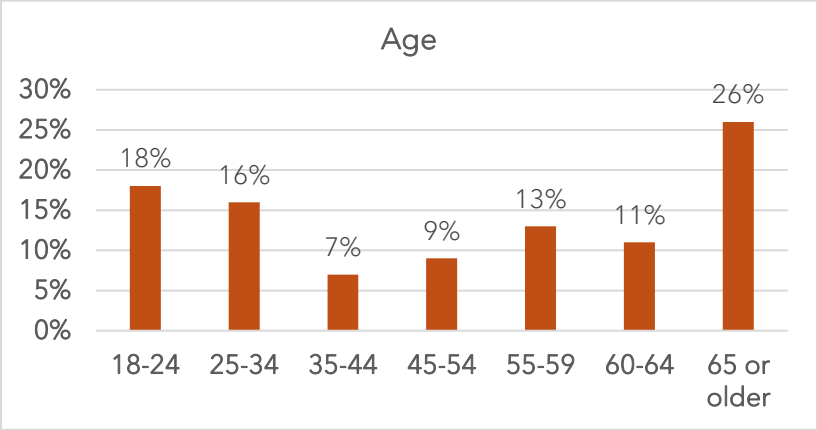


Almost half of respondents walked daily, whereas a quarter of respondents biked daily. About a third of all respondents either biked or walked several times per week. The survey data shows that most respondents had active travel habits (Figure 4.9). This is to be expected as many of the in-person outreach events were conducted at bike-friendly and outdoor pedestrian zone events. However, 17% or respondents said they never biked.

Figure 4.10 Respondents' Age Groups

Question 4: How old are you?

Age range	Percentage of respondents
18-24	18%
25-34	16%
35-44	7%
45-54	9%
55-59	13%
60-64	11%
65 or older	26%



A quarter of respondents, 26%, were 65 years or older (Figure 4.10). Those under the age of 35 capture a third of the sample, at 34%. Those between 35 and 65 years of age make up the remaining 40% of the sample.

Table 4.3 Respondents' Gender

Question 5: How do you identify?

Male	49%
Female	44%
Non-Binary/Third Gender	5%
Prefer not to say	3%

There were slightly more male respondents than female respondents in the sample (Table 4.3). Bicycling offers people both a way to be physically active and an environmentally friendly mode of transportation. Many trips are short enough to be considered "bikeable" or "walkable," yet significant barriers remain. These barriers are not experienced equally. Inequities, including those related to gender, shape how individuals engage with bicycling and walking.

Gender differences in perceptions of safety are often influenced less by an individual's skills or abilities and more by external factors. Societal expectations and norms—internalized over time and reinforced by the behavior of other road users—contribute to lower reported feelings of safety among those who identify as women.

At the same time, it is important to recognize the complexity of gender identities and norms, and the limitations of framing safety perceptions through a binary comparison between "men" and "women." Such simplifications risk reinforcing stereotypes. Our own gender identities and walking and cycling experiences influence the ways we interpret and understand these cultural and subjective experiences.

Table 4.4 Respondents' Race

Question 6: What is your race and/or ethnicity?

Race	Percentage of respondents
White	90%
Asian	9%
Black or African American	2%
Middle Eastern or North African	1%
Hispanic or Latino	1%
Another Race	1%
American Indian or Alaskan Native	0%
Native Hawaiian or Other Pacific Islander	0%

Most respondents identified as white, at 90% (Table 4.4). Out of those who identify as white, 4.3% also identify as another race. Note: respondents could select more than one race, therefore percentages sum to over 100 percent. The non-white categories combined total 14% and represent the percentage of participating people of color.

Respondents were also asked about their purposes for taking trips by foot and by bike. They were able to select more than one destination. The choices were work, shopping, medical appointments, social activity, exercise, grade school, and college or university. Respondents were also given an "other" option where they could write in another destination. The most frequent write-in responses to the question "What is the purpose of your trip when you travel by foot?" were dog-walking and exposure to nature. Write-ins for the same question about cycling received responses like 'enjoyment', 'unwinding', and 'fun'.

In both cases, a third of the active travel trip purposes were for exercise at 30% by foot and 31% by bike. Social activities came second in both instances with 20% of trip by bike and 23% of trips by foot. One fifth of active trips were for the purpose of shopping at 19% of trips by bike and 18% of trips by foot. Another fifth of active trips were for the purpose of work or going to college/university when commute trip purposes are combined. A detailed cross-tabulation analysis of the various common trip purposes by respondents using active mode of transport such as biking and walking are included in an online Appendix.

Looking at the following figures one could see that half of non-motorized trips were leisure trips, whereas commute trips comprised a fifth walking or biking trips. Shopping and medical trips combined reached close to quarter of active trips purposes (Figures 4.11 and 4.12). This shows the significance of walking and biking in respondents' everyday lives for both necessary activities and their overall well-being.

Figure 4.11 Walking Trip Purpose

Question 7. What is the purpose of your trip when you walk? (Check all that apply)

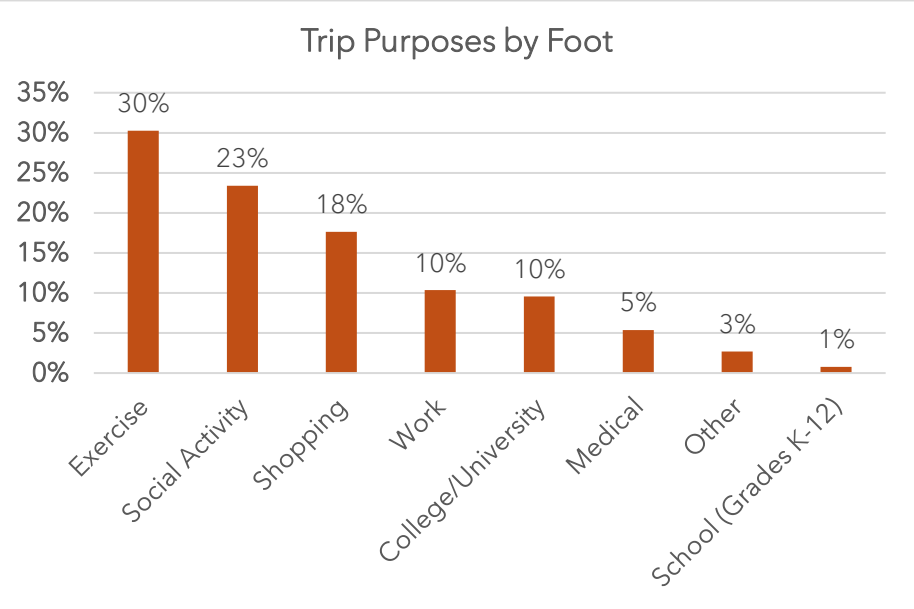
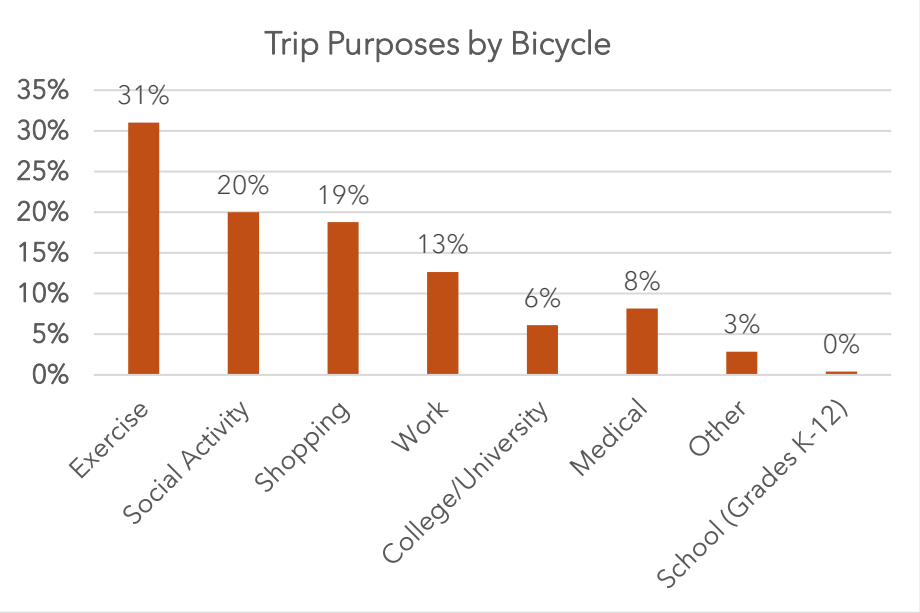


Figure 4.12 Biking Trip Purpose

Question 8. What is the purpose of your trip when you travel by bike? (Check all that apply)



Respondents were then asked about their usual methods for planning their walking and biking trips (Figures 4.13 and 4.14). Respondents had the opportunity to choose more than one answer for this question. A third of responses to the question about

how they planned their walking trips were for "I use map apps" and another third of choices were for the "Other" category. Most respondents who chose "Other" said that they did not plan, or that they know their routes well enough so that they do not need to plan. When the same question was asked about how they planned their biking trips, respondents' most frequent responses were tied between "I use online maps" and "I use map Apps," at 34% of responses each. Combined, these two categories add up to 68% or two thirds of respondents relying on digital mapping tools to plan their biking trips.

Figure 4.13 Method of Planning Walk Trips

Question 9. How do you usually plan your walking trips?

I use map Apps	32%
Other	32%
I use online maps	26%
I use wayfinding or street signs	19%
I use a paper map	2%

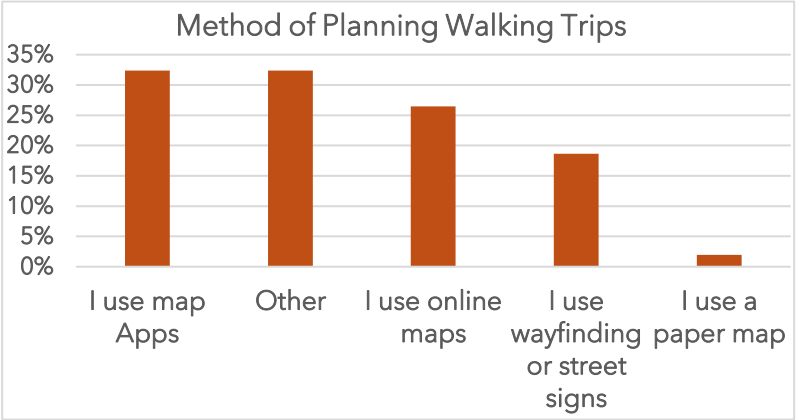


Figure 4.14 Method of Planning Bike Trips

Question 10. How do you usually plan your biking trips?

I use online maps	34%
I use map Apps	34%
Other	26%
I use wayfinding or street signs	15%
I use a paper map	5%

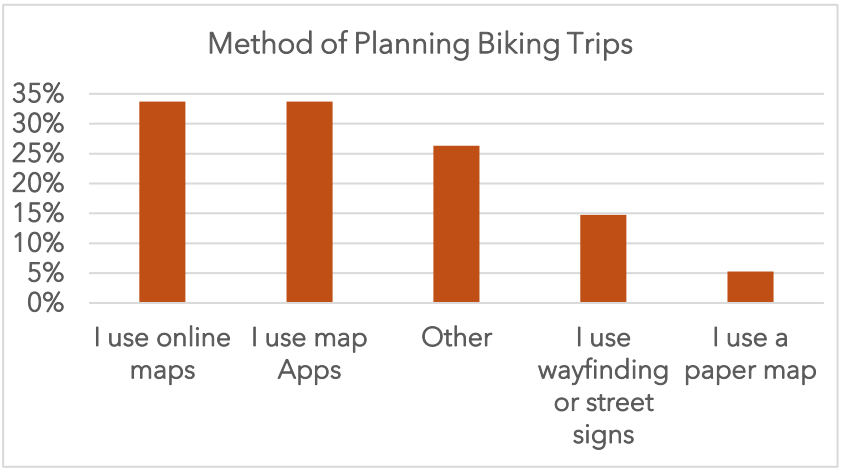
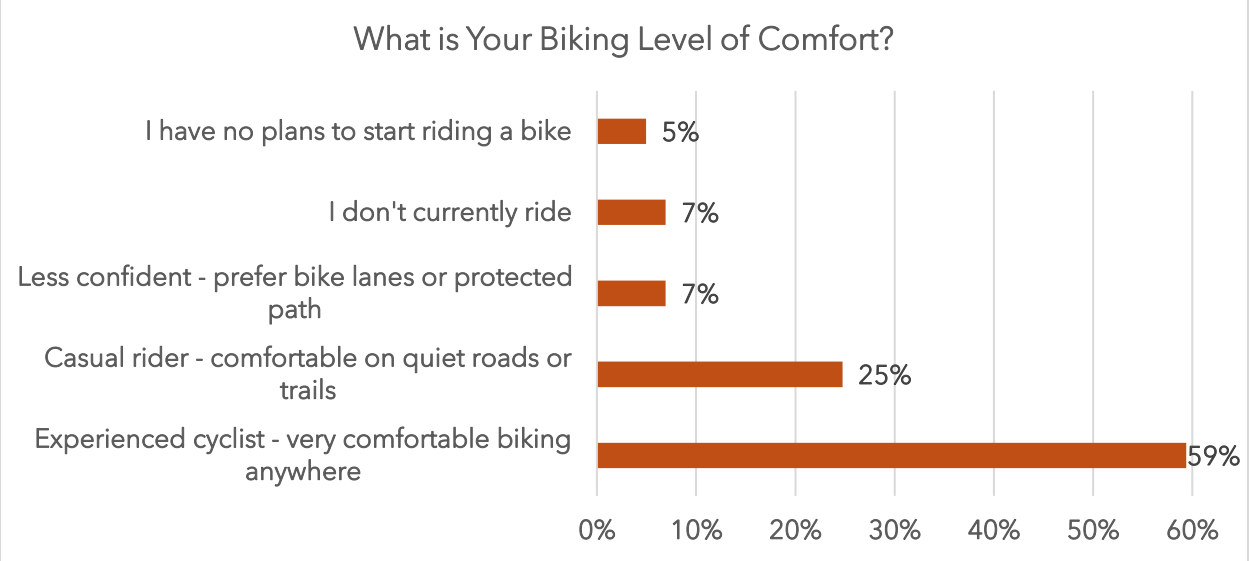


Figure 4.15 Biking Skill Level

Question 11. What is your biking level of comfort?

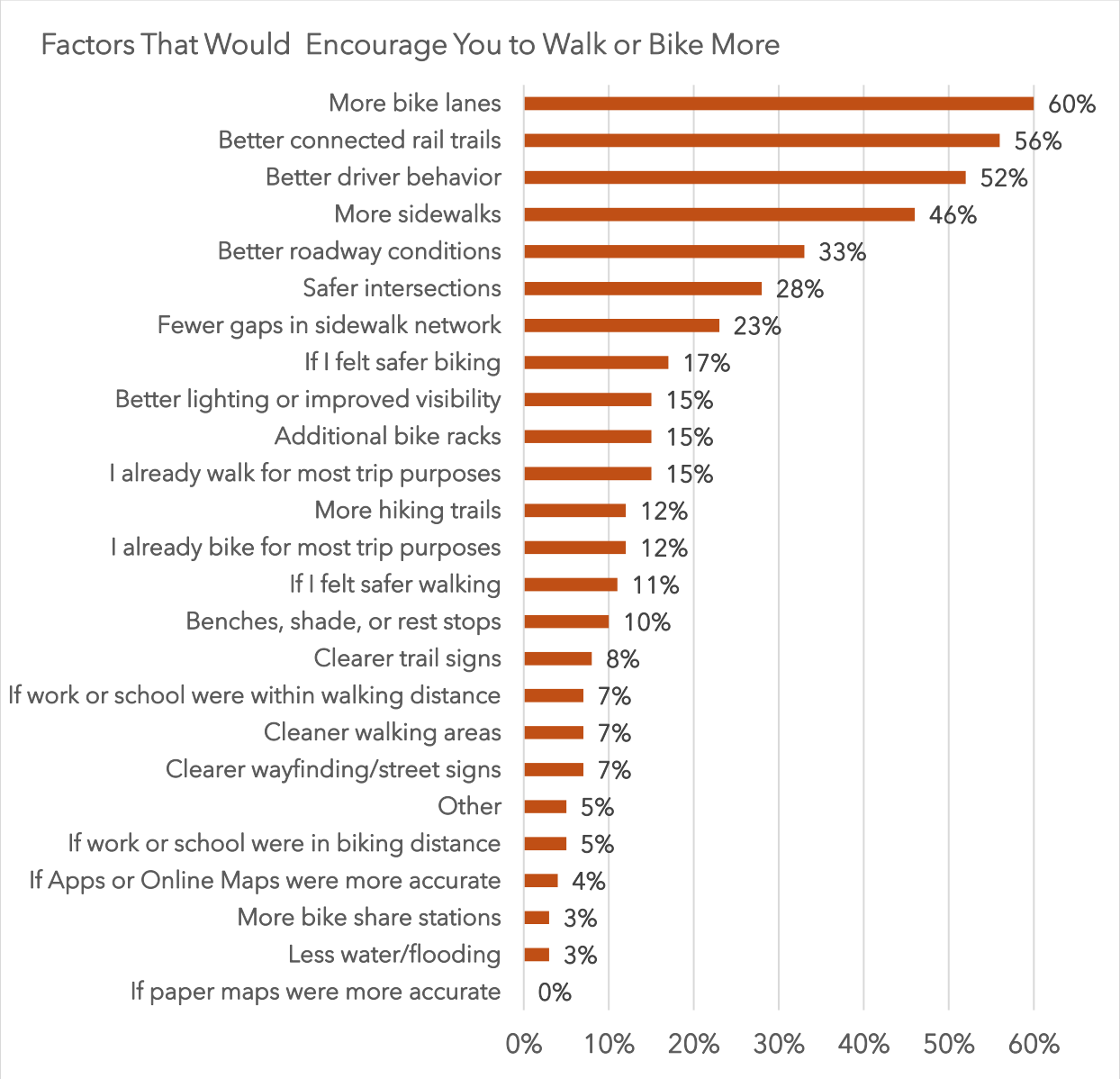
Experienced cyclist - very comfortable biking anywhere	59%
Casual rider - comfortable on quiet roads or trails	25%
Less confident - prefer bike lanes or protected path	7%
I don't currently ride	7%
I have no plans to start riding a bike	5%



Respondents were asked about their level of comfort while riding a bicycle (Figure 4.15). About two thirds of respondents, at 59%, reported that they were experienced and feel very comfortable riding a bike in any setting. A quarter of respondents reported being casual riders at 25%, while 12% did not ride at all. Given that several of the in-person public outreach events were conducted at some of the popular Bike Month events, it is no surprise that 84% of respondents were skilled cyclists as indicated by the answers received.

Figure 4.16 Improvements that Would Encourage Active Trips

Question 12. Would you walk or bike more often if any of the following were true?

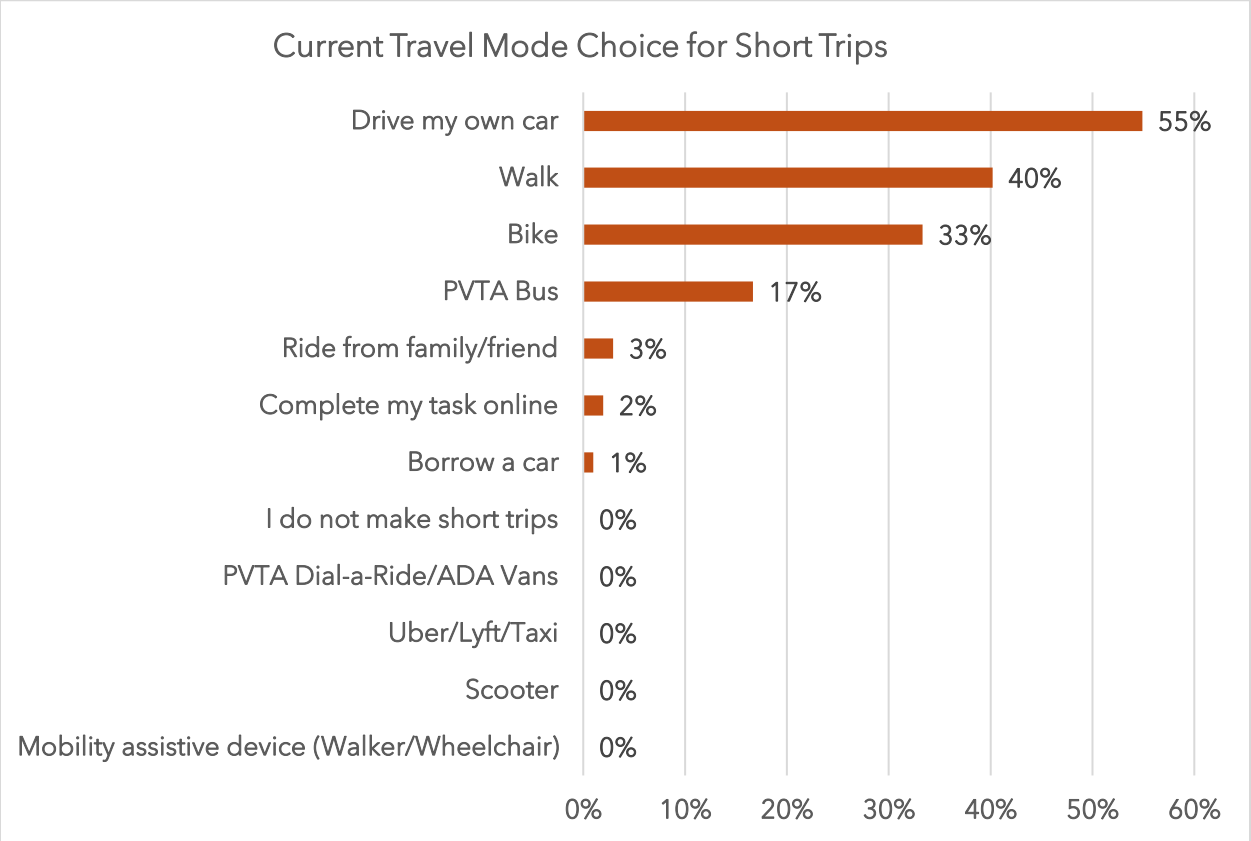


When asked about improvements that would encourage the respondents to walk or bike more frequently, they were given 24 possible options to select from, with multiple selections allowed (Figure 4.16). One of these options was an "Other" option. The results of this question show that more bike lanes and better trail connectivity are the most important factors to the surveyed population. Concerned about safety, many respondents also cited roadway conditions and driver behavior as reasons they were not comfortable walking or biking more often. Pedestrians would like to see more sidewalk connectivity in their communities. The most popular write-in response was

'more free time'. A complete list of response percentages is shown in the bar-chart Figure above.

Figure 4.17 Travel Mode Choice for Short Trips

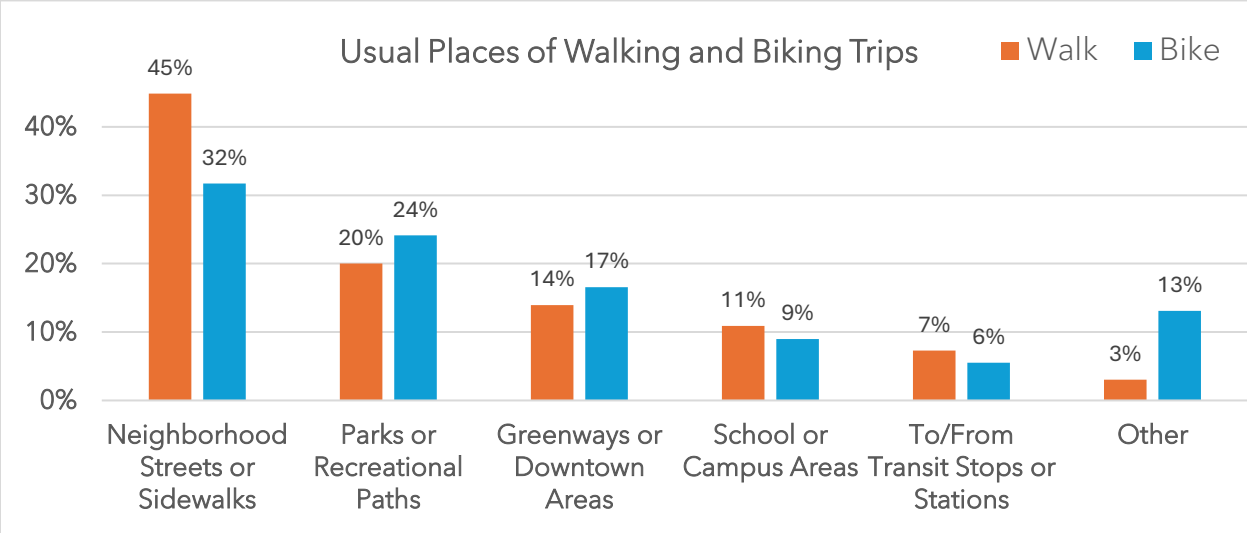
Question 13. How do you currently get to nearby destinations?



This question in the chart above pertains to users' current mode of choice for most short trips (Figure 4.17). When asked 'How do you currently get to nearby destinations', over 50 percent mention driving their own car as one of the ways that they get around. Walking and biking are also popular modes among the respondents surveyed.

Figure 4.18 Common Places for Walking and Biking

Question 14. Where do you usually walk?
Question 15. Where do you usually bike?

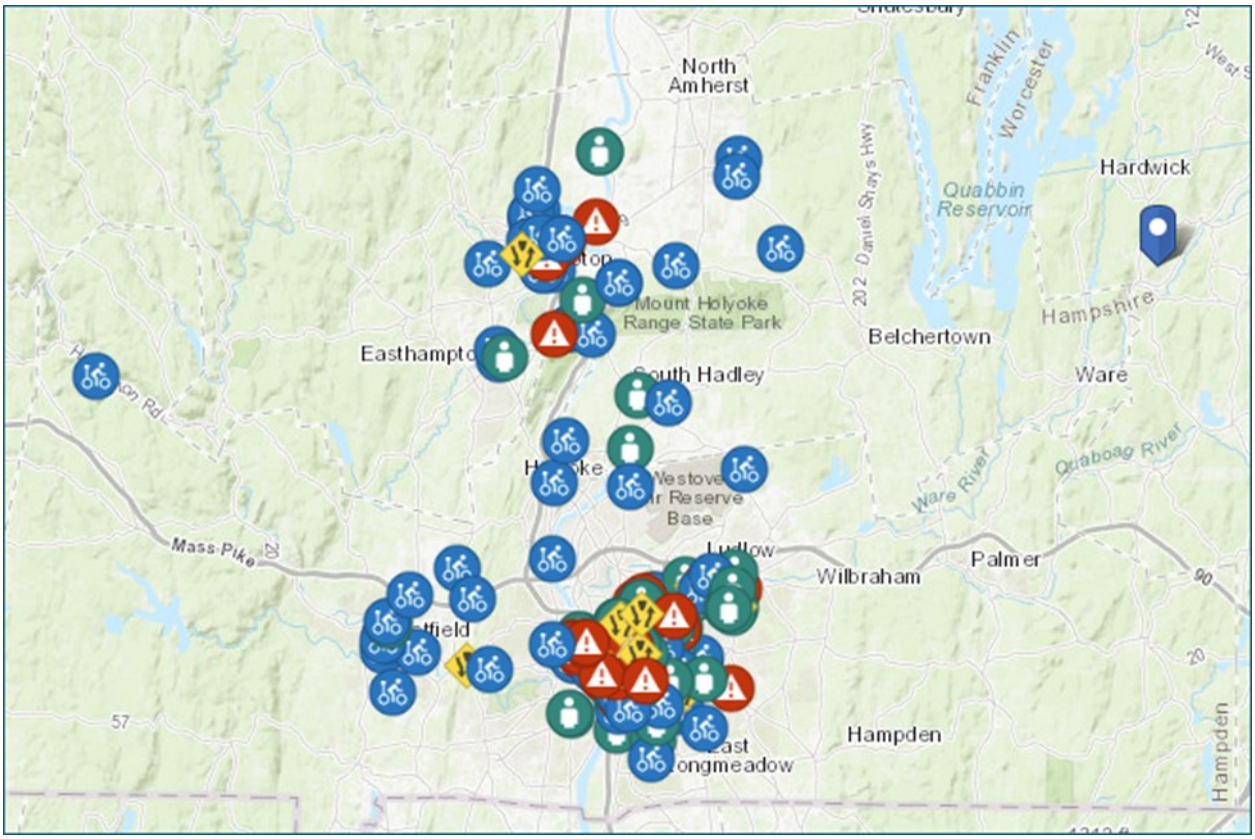


The preceding two questions were designed to identify popular destinations for walking or cycling (Figure 4.18). There was no write-in option for these questions. The majority of respondents reported that walking on neighborhood streets or sidewalks was their usual choice for active travel by bike at 32% and by foot at 45% of the choices selected. While most respondents chose multiple answers to the question about where they usually walk, respondents were less likely to select various answers for the question about their usual biking locations. It is expected that the people would select safer areas of slower traffic speeds and less vehicular conflicts for biking such as neighborhood streets/sidewalks, or parks and recreational paths, which were 32%, 24%, and 17% of the selected options respectively. A considerable number of responses, at 13%, were received with many write ins of other places respondents usually biked. A detailed discussion of these response can be found in the report Appendix online.

4.1.3 Online "Wiki Map" Data Collection Tool Results

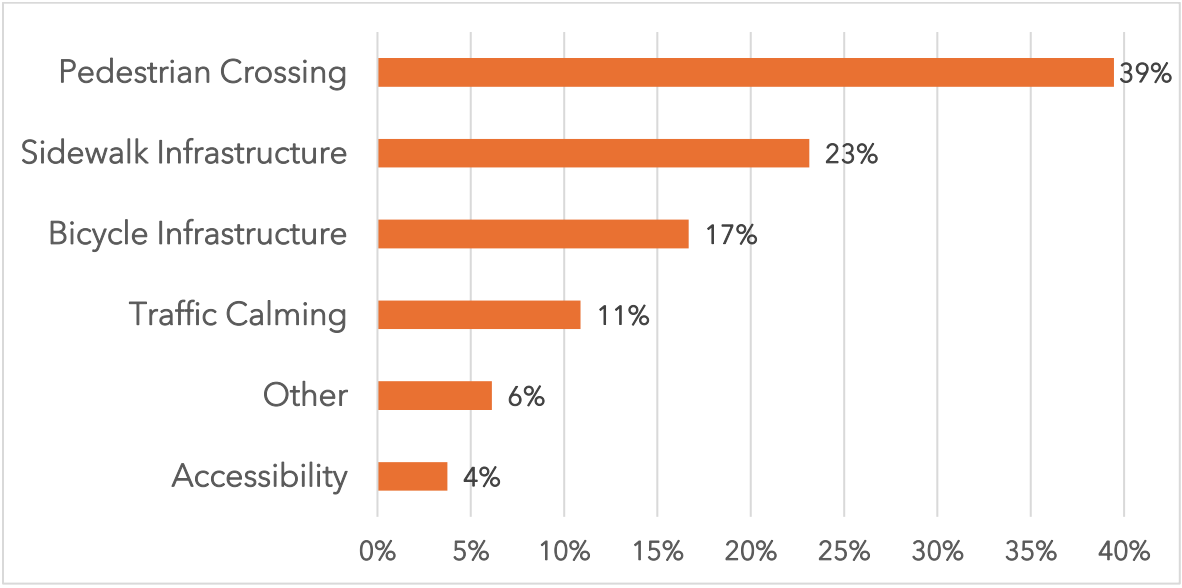
Users of the Wiki Map data collection tool suggested many improvements (Figure 4.19). A total of 294 public input entries were received. The areas of concern entered through the online form, were categorized into five major types: pedestrian crossings, sidewalk infrastructure, bicycle infrastructure, traffic calming, and accessibility. A total of 39% of data entries referred to pedestrian crossings (Figure 4.20). These responses accounted for 116 out of 294 responses from all five categories of concern. Connectivity between existing sidewalks and crosswalks was frequently mentioned as an area needing improvement. This included access to schools and parks; where 12% of responses mentioned connectivity or safety around a school area was a concern.

Figure 4.19 Online Crowdsourcing Data Collection Tool "Wiki Map"



Link Online to Wiki Map: [Wiki Map PV Regional Bicycle and Pedestrian Plan 2025]

Figure 4.20 Feedback Categories of via the Online Wiki Map



Many of the comments mentioning sidewalk infrastructure advocated for the installation of a new sidewalk in a busy area where current sidewalks are inadequate.

Other responses mentioned improving accessibility through curb cuts and bump-outs for visibility. Some remarked about the poor physical condition of the sidewalks. There were overlaps between this category and the traffic calming category, with respondents mentioning that sidewalk radii and bump-outs can serve as traffic calming measures for vehicles. Those whose comments fit into the "other" category mention wayfinding signage, adding new school zones, walking school bus routes, and visibility issues at intersections. The variety of comments received is vast in nature and pertains to many different locations in the Pioneer Valley, both urban and rural.

Upon request, the complete data set of suggested improvements gathered can be parsed by community. The online map can be used as a reference by professional staff and elected officials to incorporate the needed changes identified into their community plans and future projects. The public input data identifies areas where suggested improvements were needed to enable people to safely walk, bike, or use a wheelchair to get to school, work, shop, or recreate. These suggestions can be incorporated into priorities for future initiatives.

4.2 Performance Measures

Performance measures monitor and track performance over time and assess the effectiveness of projects and strategies in meeting the national goal areas. In the Pioneer Valley region, performance-based planning methods have been used in the development of the Transportation Evaluation Criteria to prioritize the programing of projects as part of the Regional Transportation Improvement Program.

Public input was used to establish metrics that target improving bicycling and walking. These evaluation metrics include the physical environment, such as sidewalks and bike lanes, as well as safety statistics, levels of activity, and relevant policies. Performance measures could also include health and economic development data markers.

As the MPO plans, funds, and implements projects that enhance walking and bicycling in the Pioneer Valley region, we need to objectively prioritize investments within our given funding constraints. Investments must yield the most significant benefit or impact for people residing in the region. This plan aims to have the performance metrics discussed here revisited every four years in coordination with updates to the Regional Transportation Plan.

4.2.1 Miles of Bicycle Facilities

The number of miles of bicycle facilities is the first performance measure chosen in this plan. This measure quantifies the total length, in miles, of all bicycle infrastructure within a designated geographic area. It includes various facility types such as bike lanes, separated bike lanes, and shared-use paths. It aims to monitor growth over time. The top 10 communities in total bicycle facility milage are displayed in Figure 4.21 on the following page. The City of Northampton outshines all other at 62.6 miles of bicycle facility, followed by Holyoke at 46.1 miles. Total mileage of bicycle facilities by community in the Pioneer Valley are displayed on the following page in Table 4.5.

Measure: Miles of shared-use path and bike lanes.

RTP Performance Target = Increase total regional bike facility mileage by 10% by 2030 over 2020 mileage.

Figure 4.21 Top 10 Communities in Total Bike Facility Mileage

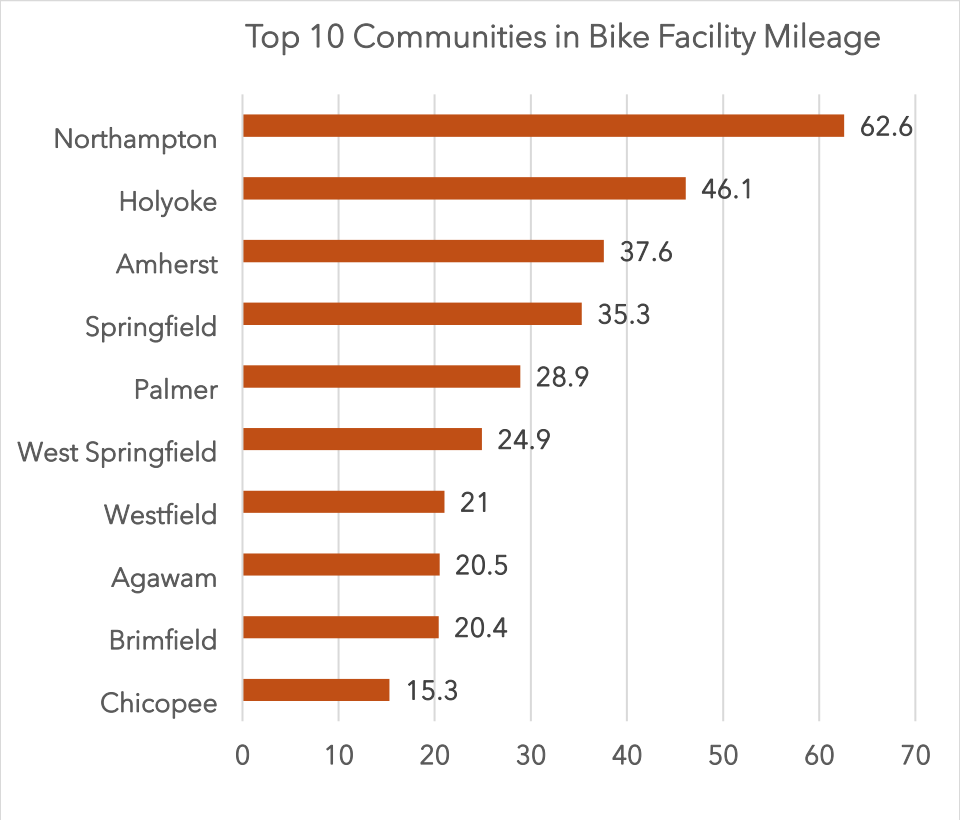


Table 4.5 Bicycle Facility Mileage by Community in the Pioneer Valley

Community	Bicycle Facility Mileage
Agawam	20.5
Amherst	37.6
Belchertown	15.1
Blandford	0.0
Brimfield	20.4
Chester	2.3
Chesterfield	0.0
Chicopee	15.3
Cummington	0.0
East Longmeadow	3.7
Easthampton	8.3
Goshen	0.8
Granby	4.8
Granville	0.0
Hadley	10.2
Hampden	0.0
Hatfield	0.0
Holland	0.0
Holyoke	46.1
Huntington	0.2
Longmeadow	4.5
Ludlow	4.6
Middlefield	1.6
Monson	1.4
Montgomery	0.0
Northampton	62.6
Palmer	28.9
Pelham	0.0
Plainfield	0.0
Russell	0.0
South Hadley	4.8
Southampton	6.7
Southwick	6.1
Springfield	35.3
Tolland	0.0
Wales	0.0
Ware	8.0
West Springfield	24.9
Westfield	21.0
Westhampton	0.2
Wilbraham	3.8
Williamsburg	2.6
Worthington	0.0
Total Miles	**402.3**

4.2.2 Miles of Pedestrian Facilities

The second performance measure is the number of pedestrian facility miles. This measure quantifies the total length, in miles, of sidewalk within the Pioneer Valley Region. The inventory of sidewalks by MassDOT online data portal shows a total of 1101.2 total miles in the regional (Table 4.6). The top 10 communities in total sidewalks are displayed in Figure 4.22 below. The City of Springfield outshines all other communities in the region with a total of 281.5 miles of sidewalks. The next city in magnitude of sidewalk milage is Chicopee at 108.2.

Measure: Miles of Sidewalks.

RTP Performance Target = Increase total regional sidewalk mileage by 10% by 2030 over 2018 mileage.

(The total mileage of any roadway with at least one side with sidewalks totaled 1,043 miles in 2018).

Figure 4.22 Top 10 Communities in Total Sidewalk Mileage

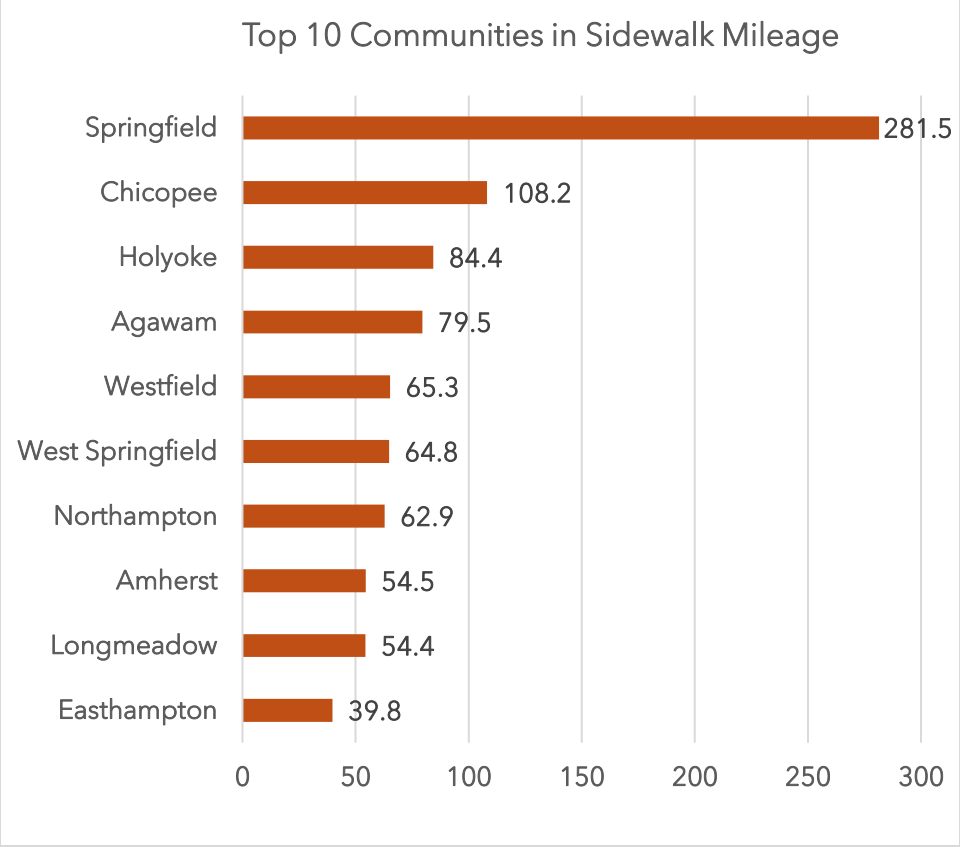


Table 4.6 Sidewalk Mileage by Community in the Pioneer Valley

Community	Sidewalk Mileage
Agawam	79.5
Amherst	54.5
Belchertown	11.9
Blandford	0.7
Brimfield	1.4
Chester	0.2
Chesterfield	0.0
Chicopee	108.2
Cummington	0.5
East Longmeadow	20.0
Easthampton	39.8
Goshen	0.0
Granby	2.0
Granville	0.0
Hadley	7.8
Hampden	0.0
Hatfield	5.4
Holland	0.0
Holyoke	84.4
Huntington	3.4
Longmeadow	54.4
Ludlow	28.5
Middlefield	0.0
Monson	11.0
Montgomery	0.0
Northampton	62.9
Palmer	28.9
Pelham	0.0
Plainfield	0.0
Russell	0.3
South Hadley	31.9
Southampton	6.1
Southwick	15.8
Springfield	281.5
Tolland	0.0
Wales	1.3
Ware	14.5
West Springfield	64.8
Westfield	65.3
Westhampton	0.0
Wilbraham	11.8
Williamsburg	2.5
Worthington	0.0
Total Miles	**1,101.2**

4.2.3 Volume of Bicycle and Pedestrian Usage

The third performance measure concerns the volume of bicyclists and pedestrians using transportation facilities in the region. This measure captures the number of bicyclists and pedestrians within a specific area over a period (Table 4.7). It provides insights into usage patterns and demand. By refining these counting measures over time, PVPC can better monitor usage and support a more equitable and efficient bicycle and pedestrian network. Each year, the Joint Transportation Bicycle, Pedestrian, and Complete Streets Subcommittee makes recommendations for count locations on shared-use paths and on bike lanes throughout the Pioneer Valley Region. Table 4.6 displays the average daily user counts on shared-use paths on various facilities and shows change over time at recurrent count locations from 2013 to 2025.

The Usage Volume Metrics include:

- Generally demonstrate an overall increase in the use of regional shared-use paths through UPWP counts on shared-use paths.
- UPWP task to count at least five shared-use paths.
- UPWP task: Count at least three bike lanes in coordination with the JTC subcommittee.
- Conduct counts of bicycle and pedestrian users as part of UPWP studies.

Table 4.7 Trails & Paths Average Daily Users Counts (May to October 2013 – 2025)

Trail	2013	2014	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Amherst Station Rd - Norwottuck Trail	X	X	X	X	X	X	X	X	X	X	540	508
Agawam CT Riverwalk Bikeway	X	X	X	120	X	X	158	X	X	X	121	X
Brimfield Grand Trunk Titanic Army Corp	X	X	X	X	X	X	153	X	X	X	27	X
Chicopee Sidepath	X	X	X	X	X	X	X	X	X	X	15	10
East Longmeadow Redstone Rail Trail	X	X	X	539	359	470	535	496	X	510	577	554
Easthampton Manhan Eastworks	X	X	X	X	X	X	X	186	567	X	X	X
Easthampton Manhan Ferry Street - New	X	X	X	X	X	X	X	X	X	X	605	536
Easthampton Manhan Ferry Street - Old	X	X	365	X	344	463	X	X	843	X	X	X
Easthampton Manhan Union St	X	X	X	X	X	X	504	X	X	X	X	X
Hadley Norwottuck (MassCentral)	X	X	519	598	559	783	985	767	828	775	864	718
Ludlow Mills Riverwalk	X	X	X	X	X	X	226	198	247	X	237	X
MT Tom Accessible Trail	X	X	X	X	X	X	X	X	123	55	X	X
Northampton MassCentral Leeds Look Park	X	X	X	X	163	150	225	168	154	X	183	219
Southwick Rail Trail - Sam West Road	X	X	X	X	X	X	X	X	X	X	277	236
Springfield Riverwalk 1 Brightwood	69	84	X	X	X	X	44	X	X	X	118	122
Springfield Riverwalk 2 Boathouse	97	139	X	X	X	X	103	111	66	66	94	X
Springfield Riverwalk 3 Depot -New	156	239	X	X	X	X	X	X	X	X	X	X
Springfield Riverwalk 4 Depot - Old	219	X	X	X	X	X	X	X	X	X	X	X
Ware Accessible Trail EQLT (MassCentral)	X	X	X	X	X	X	46	X	X	X	X	X
West Springfield CT River Walk & Bikeway	X	X	X	X	X	X	147	X	86	84	36	X
Williamsburg Mill River Greenway (Mass Central)	X	X	X	X	X	X	122	x	82	108	X	X

X = No Data from Timeframe

4.2.4 Institutional Integration of Bicycling and Walking

The fourth measure assesses the institutional integration of non-motorized modes of travel. This measure captures the extent to which bicycling and walking are incorporated or normalized as part of established activities and tasks. It is concerned with whether the concerns of bicyclists and pedestrians are understood and communicated in policies and in the planning, design, and construction of our neighborhoods and communities. Metrics of this performance measure include:

- Communities that are participating in the Complete Streets Program.
- Percent of PVPC work program tasks that address bicycling and walking, where appropriate.
- Safe Routes to School participating Elementary and High Schools
- Bay State Bike Month Participation

4.2.5 Safety of Bicyclists and Pedestrians

The fifth performance measure focuses on the safety of bicyclists and pedestrians. There are two components to this measure. There first is the regional adopted statewide safety targets and the second is a regional safety performance measure to be developed part of a future Regional Safety Action Plan to be funded by Safe Streets for All grant awarded recently to PVPC. These two efforts will be discussed in the following two sections.

Statewide Targets for Non-Motorized Fatalities and Serious Injuries:

The Pioneer Valley MPO has chosen to adopt the statewide safety performance measure targets set by MassDOT. Although MassDOT emphasizes that the state's goal is zero fatalities and serious injuries, the targets presented here are not "goals" but realistic targets considering the events of the last 4+ years. The Secretary of Transportation and Highway Division Administrator for MassDOT approved the targets, recognizing that MassDOT must demonstrate short-term incremental steps to achieve the Commonwealth's goal. In setting these targets, MassDOT has followed FHWA guidelines by using statewide crash data and Highway Performance Monitoring System (HPMS) data for vehicle miles traveled (VMT) to calculate 5-year, rolling average trend lines for all FHWA-defined safety measures.

The MPO is intently concerned and focused on reducing these fatalities and serious injuries. In 2024, the MPO adopted a Vision Zero Policy, recognizing the need to reduce injuries. The MPO has also introduced the Vulnerable Road Users Safety task to the UPWP and incorporated bicycle and pedestrian injuries into the Pioneer Valley Regional Safety Compass.

The following two Figures 4.23 and 4.24 show the five-year averages and the annual counts of non-motorized fatal crashes. The first chart compares fatalities in the state with fatalities in the Pioneer Valley region. The historic trend line shows a decline in fatalities followed by an increase then another decline and is targeted for another

decrease into the future as represented by the bright green bars. The grey bars reflect the statewide numbers and the deep orange bars represent the regional numbers of the 5-year averages. The next bar-chart shows the historic line of variable change in number of regional non-motorized annual fatalities from 2006 to 2024.

Figure 4.23 Five-Year Averages of Non-Motorized Fatalities in Region and State

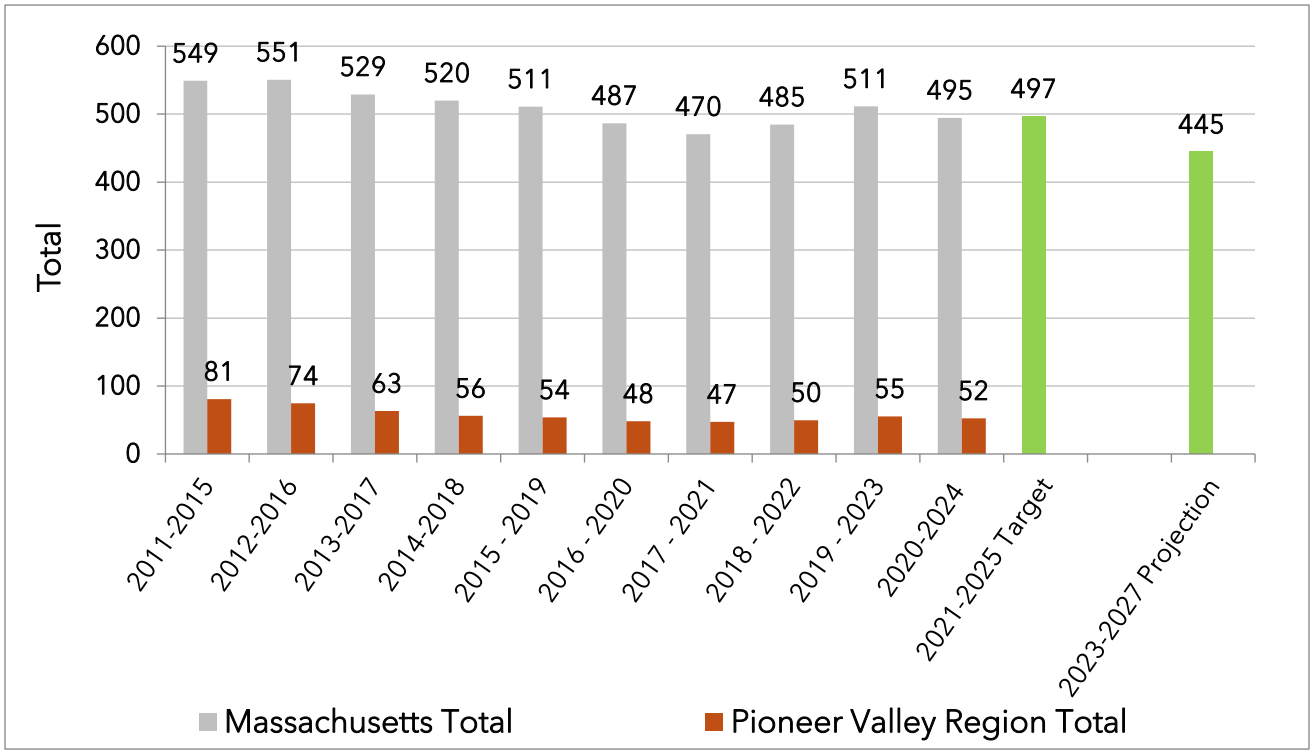
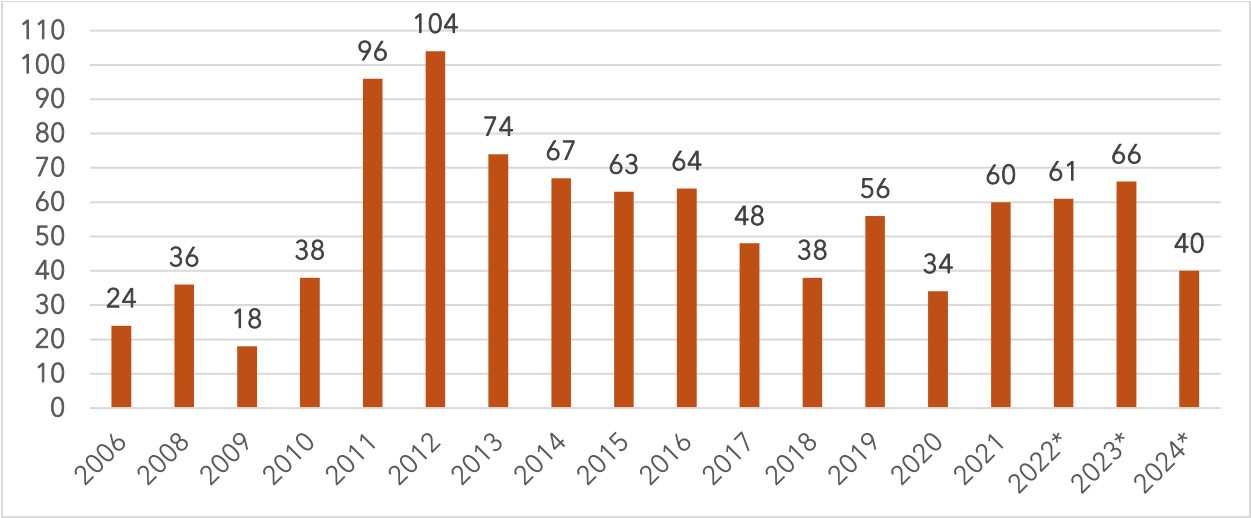


Figure 4.24 Annual Non-Motorized Fatalities and Serious Injuries in the Pioneer Valley Region



* What does the asterisk represent?

Safe Streets for All (SS4A) performance measures:

The PVPC received funding as part of the federal Safer Streets and Roads for All program to develop a regional safety action plan and demonstration project for the Pioneer Valley Region. The final component of this work will be to create and track a series of regional safety performance measures. The performance measures will build on the content of the Regional Safety Action Plan and provide supporting information to evaluate the effectiveness of the plan in improving roadway safety by significantly reducing and eliminating roadway fatalities and serious injuries across all users. The MPO will update these performance measures annually in coordination with the JTC. Once finalized, the performance measures will be incorporated into future updates to the RTP.

4.2.6 Aspirational Metrics for Bicycling and Walking

Finally, there were many more potential metrics identified during the preparation of this regional bicycle and pedestrian plan. People from across the Pioneer Valley Region shared a long list of desires, challenges, needs, and opportunities during public outreach. Not every concern can be defined as a metric that can be effectively measured at this time. These additional needs for monitoring performance are included as aspirational metrics that should be added where possible. It may be beneficial to add these measures to smaller studies in the future, or as technologies and methods for gathering data improve. They include the following:

- Collect and measure bicycle and pedestrian volume counts from traffic signal detection equipment. Many of the new signalized intersections use technology that captures bicyclists and pedestrians. Currently, the Morgan Sullivan bridge between Agawam and West Springfield, and a signal on Memorial Drive in Chicopee, are the only two signals that directly provide volume data to the MassDOT MS-2 online count database. However, many signalized intersections could provide this valuable data in the future using existing technology. This effort would require coordination with communities.
- Collaborate with communities to monitor participation levels among Valley Bike users in bikeshare programs. As data collection improves, collaborate with the vendor to develop an online resource for tracking usage.
- Monitor Vehicle Speeds – Speeding is a contributing factor in many fatal and serious injury crashes. Technologies that allow municipalities to monitor vehicles that run red lights or exceed posted speed limits can improve traffic enforcement. Many States, including Rhode Island and Connecticut, have laws on the books to facilitate data collection. Additionally, GPS data from vehicles and passengers (Probe data) can identify speed issues as these problems emerge and provide local officials with a helpful tool when implementing traffic calming initiatives.

- Monitor speeds on shared-use paths. Hi-speed differentials between bicyclists and pedestrians can exacerbate conflicts on shared-use paths. Moderating speeds in high-conflict areas can create a less stressful travel experience for pedestrians.
- Identify the number of communities that have completed ADA Transition Plans.
- Measure the economic benefit of the regional bicycle and pedestrian network. A 2021 study by MassTrails showed how shared-use paths generate increased economic output in jobs and tax revenue. The total number of jobs, the total economic output to the communities, and the total taxes generated (federal, state, and local) are presented in Table 4.8 below is taken from the "Impact of Shared Use Paths" study. Full report can be accessed at: https://www.mass.gov/doc/masstrails-shared-use-path-impacts-study/download

Table 4.8 Summary of Estimated Impacts

Shard Use Path Name	Minuteman	Northern Strand	MCRT-Norwottuck	Cape Cod
JOBS CREATED OR SUSTAINED	26	4	20	99
TOTAL ECONOMIC IMPACT	$2.6M	$378K	$1.8M	$9.2M
STATE/LOCAL TAXES COLLECTED	$363K	$49K	$250K	$1.5M

Note: Above numbers are based on surveys from one city along each trail

- Create a measure of the health impact of the Pioneer Valley Region's investment in bicycling and walking. As an example, a 2021 study by Mass Trails measured the impact of four shared-use paths on encouraging users to increase their levels of physical activity. Users saved between $700 and $1,300 annually on healthcare. The four paths saved a total of $2.8 million in annual healthcare expenditure based on user counts. The shared-use paths also contribute to reducing commuter-based GHG emissions and air pollution. The same study found that in just four months, GHG emissions and air pollution reductions translated into $23,000 in cost savings on an average weekday and approximately $3,600 on a weekend day. Active commuters contributed $2 million in environmental savings during that time.
- Measure of network completeness and connectivity: the extent to which the transportation network supports walking and biking. The measure of pedestrians/bicyclists access to businesses, community resources, and/or job opportunities: Destinations for this analysis includes schools, parks, retail sites, grocery stores, medical centers, businesses (with a threshold for employment),

Valley Bike stations, PVTA bus stops, senior centers, colleges, shared use paths, parks, farmer's markets, town hall, hospitals and other health facilities, libraries, tourist destinations and high-density residential locations. Access to destinations is measured in travel time (20 minutes for ½ mile). (Network distance does not account for the safety or comfort of a route) Metrics include:

  - Percent of residences within a ½-mile walking distance or 2-mile biking distance to specific key destinations, such as parks or elementary schools.
  - Percent of residences within a ½-mile walking distance or 2-mile biking distance to specific key destinations along a completed pedestrian or bicycle facility.
  - Percent of the network complete for pedestrians and bicyclists within ½ mile and 2 miles, respectively of each designated destination.
  - Number of destinations that can be accessed within a ½ mile along a walking network from a given point on the network.
  - Number of destinations within 3 miles along a bicycling network from a given point on the network.
  - Percentage of roadway miles with complete sidewalks or bike facilities on both sides.
  - Proportion of planned pedestrian and bicycle infrastructure that has been constructed.

- Measure of Access for Disadvantaged Populations: This measure evaluates how the pedestrian and bicycle infrastructure serve vulnerable populations, including low-income, minority, senior, and disabled groups. PVPC currently identifies these populations for the Title VI program, the TIP and RTP. This effort would take the existing network of bicycle and pedestrian facilities and use a spatial analysis (map) to analyze the distribution of these resources. The effort involves:

  - Percentage of disadvantaged populations within walking or biking distance to a shared-use path.
  - Percent of transportation-disadvantaged population within a ½-mile walking distance or 2-mile biking distance to a transit stop

4.3 Recurring Assessments and Overall Performance

The Bicycle and Pedestrian Plan is frequently updated every 10 years. The metrics will typically be updated every 4 years and coincide with updates to the Pioneer Valley Regional Transportation Plan. The proposed list of the performance measures metrics and their assessment frequency are listed in Table 4.9 below.

Table 4.9 Performance Measures Metrics

Performance Measure Metrics	Current Baseline	Proposed by 2030
Shared-Use Paths Bike Lanes Total Miles of Bicycle facilities	56.3 miles 63.2 miles 119.5 miles	 131.45 miles (10% increase)
Miles of Pedestrian facilities	1043 miles	1,147.00 miles (10% increase)
Shared-Use Path Volume Counts	5 per year	5 per year
Bike Lane Counts	3 per year	3 per year
Institutional Integration of Bicycling and Walking: • Complete Streets Participation • UPWP Tasks Address Bicycling and Walking • Safe Routes to School participation • Bay State Bike Month Participation	 23 100% 147 10	 26 100% 162 11
Bicyclists and Pedestrians Fatalities/Serious Injuries	(fatality numbers in section 4.2.5 figures)	Zero

5 SUMMARY

This final chapter of this report includes a summary of recommendations, a proposed implementation timeline, and a concluding thought about this update to the Regional Bicycle and Pedestrian Plan.

5.1 Recommendations

This plan's recommendations were developed collaboratively by PVPC staff and the Joint Transportation Committee's Bicycle and Pedestrian Complete Streets Advisory Committee. Additional input was gathered from public outreach events, local organizations, MassDOT, MassBike, and the JTC, and through surveys. PVPC staff conducted extensive public outreach, including various stakeholder engagements. The voiced concerns, ideas, questions, and comments were central to the development of recommendations. Developing a regional plan that addresses both walking and bicycling is challenging because of the inherent differences in these modes of travel. The following recommendations provide a broad range of opportunities for improving opportunities for both modes. These recommendations will further advance the development of a safe network that encourages mode shift and supports local communities in the implementation of bicycle and pedestrian initiatives. The recommendations have been categorized as immediate actions, long-term initiatives, and ongoing measures.

Not all recommendations will be easy to implement. The goal is to incorporate the work into the MPO's annual work program (UPWP) and also inform future planning efforts such as the Regional Transportation Plan, Coordinated Human Services Plan, Regional Safety Action Plan, and State and local initiatives. This work relies on the support of engineers, planners, public works, and elected officials, and advocates. Some require resources, tools, and funding to design, build, support, and maintain these initiatives that exist today; however, additional resources will need to be identified to build the infrastructure necessary for bicycling and walking to become a safe, dependable, and thriving option. Some communities may require millions to build a new facility.

Implementing the recommendations of this plan will create a safer community for bicyclists and pedestrians, and a healthier and more vibrant community for all residents. Expanding transportation options will result in increased numbers of bicyclists and pedestrians, less traffic, and a higher level of health. Linking our neighborhood and town centers together to create a regionally integrated network of healthy, safe places for residents to use for work and play is an effort with tangible returns.

5.1.1 Regional Recommendations

The Regional Bicycle and Pedestrian Transportation Plan offer an overview of how the Pioneer Valley can become a safer and more inviting place for people to walk and ride

bicycles. In the Pioneer Valley, we need to support enforcement and education of existing crosswalk laws, ensure sidewalk construction and maintenance, establish bylaws for sidewalks in new developments, and foster cooperation between private developers and municipalities. Safe and efficient pedestrian travel contributes to overall health and neighborhood vitality.

Investing in bicycle and pedestrian infrastructure and promoting transit can yield significant economic, health, and environmental benefits. The region needs to continue to support public transportation and provide the resources needed to maintain a high level of service. According to the American Public Transportation Association, encouraging bike travel has been positively correlated with an increase in transit ridership.

5.1.2 Local Recommendations

Setting community priorities in the development of local community plans (Comprehensive Plan, Bike/Ped Plans, Open Space and Recreation Plans, intersection designs, review of subdivision and site plans can facilitate improvements for biking and walking. The adoption of a Complete Streets Plan and Policy has proven to be a key step in mobilizing energy and resources for local initiatives. While the diverse geography and community types within the PVPC region make it challenging to develop a uniform approach to bicycle and pedestrian facilities, many communities have expressed interest in these facilities. The differences in the structure of local governance, geography, and population density make it difficult to find a one-size solution. Each community faces a unique set of challenges. Local governments and citizen groups play a critical role in modifying the built environment, changing public policies, and improving practices that make walking and biking a safe and attractive alternative.

Bicycle parking is a critical tool for local municipalities seeking to encourage cycling as a mode of transportation. Providing safe and convenient parking makes biking a more practical option for daily activities such as commuting, shopping, or running errands. When cyclists know their bikes will be secure, they are more likely to choose this mode of travel. Insufficient safe and secure bicycle parking is often cited as a key factor deterring individuals from cycling. Municipal bylaws that currently focus on vehicle parking requirements can also be adapted to address bicycle parking needs. Funding opportunities are available from a variety of sources, and businesses can invest in cost-effective racks and shelters that not only support cycling but also attract customers, benefiting local economic development. Short-term parking designed for brief stops includes inverted U-racks, post-and-ring racks, and other simple structures commonly located near shops, commercial areas, and other short-trip destinations. Long-term parking for all-day or overnight use includes bike lockers, indoor storage, sheltered racks, or covered parking areas. Weather protection and good lighting are particularly important, as they both encourage use and reduce theft. The MassDOT Municipal Resource Guide for Walking and the Guide for Bicycling provide additional resources

and opportunities.

5.2 Regional, State, and Federal Partnerships

Collaboration and coordination at all levels is the most effective and productive approach toward implementing change. National Standards included in the AASTHO Greenbook for Design, updates to the MassDOT Design Guide, Pioneer Vallley RTP, MassDOT Bicycle and Pedestrian Plans, Beyond Mobility, Strategic Highway Safety Plan, MUTCD, and the NACTO Guides all provide clear direction and foundation for decision-making and provide a framework for future collaboration.

5.3 Implementation Timeline

The Pioneer Valley Regional Bicycle and Pedestrian recommendations focus on creating comprehensive, connected networks by implementing infrastructure improvements, prioritizing safety for all users, especially vulnerable ones, and promoting active transportation to reduce reliance on motor vehicles. These recommendations resulted from a thorough outreach process and were reviewed by the Joint Transportation Committee (JTC) and the Bicycle, Pedestrian, Complete Streets Subcommittee. PVPC staff organized the recommendations into seven distinct categories, after which JTC representatives assisted in further classification via an online survey to help prioritize implementation. The three priority levels for implementation are:

- Immediate: Areas that are a high priority and must be addressed through the implementation of planning studies, programs, or projects in the next 2 to three years.
- Future: Areas of medium importance that should be addressed in the development of planning studies, programs, projects, or initiatives in the next 3-5 years.
- Ongoing: Areas that require routine attention and should be included as part of the ongoing regional planning process.

The recommendations are grouped into seven key areas. These recommendations will be added to upcoming Unified Planning Work Program tasks as resources allow. The following is a listing of the recommendations under each of the seven categories. Each recommendation is given one of the three implementation priority labels discussed above.

1) Infrastructure Inventory, Maintenance, and Improvements

Identifying existing facilities and creating connectivity for the future with a focus on building and maintaining complete, connected networks of bike paths, trails, and sidewalks that link residential areas, business centers, parks, and transit stations. A list of prioritized recommendations in this category is presented on the following page (Table 5.1).

Table 5.1 Recommendations in Infrastructure Inventory, Maintenance, and Improvements

Infrastructure Inventory, Maintenance, and Improvements Recommendations	Priority Level
Update the Regional Bicycle Infrastructure Inventory database.	Ongoing
Inventory of existing bicycle parking and identify where there is a need for bicycle parking facilities.	Future
Inventory raised crosswalks, speed tables, and related traffic calming installations in the Pioneer Valley.	Future
Identify bicycle lanes that are frequently blocked (loading or parked cars) and recommend solutions.	Immediate
Identify and inventory specific bicycle and pedestrian connectivity and safety improvements needed around underpasses or overpasses provide "best case" examples of potential improvements.	Immediate
Inventory current practices for winter maintenance and interview stakeholders on the effectiveness of snow and ice removal on bicycle lanes and monitor the progress of pilot projects on shared-use paths that improve winter conditions.	Immediate
Document and share with communities the best local street lighting policies and success stories that address pedestrian safety.	Future
Provide education on snow removal responsibilities on sidewalks and at bus stops	Future

2) Network Planning, Gap Identification, and Facility Design

There are many factors that go into developing sidewalk networks, on-street bike lanes, off-road trails, and safe pedestrian crossings. The availability of rights-of-way, safety concerns, wetlands, steep slopes, cultural resources, cost, public opinion, ADA accessibility, proximity to destinations, roadway volumes and speeds, utilities, sidewalk conditions, scenic qualities, and on-street parking. Decisions need to be considered all these factors and often there is no perfect answer. The goal is to identify routes that close gaps in the network. These strategies advance initiatives that support this effort. A list of prioritized recommendations in this category is presented on the following page (Table 5.2).

Table 5.2 Recommendations in Network Planning, Gap Identification, and Facility Design

Network Planning, Gap Identification, and Facility Design Recommendations	Priority Level
Conduct network analysis to identify gaps in the regional system and identify which types of projects could fill these gaps. Plan, identify and complete an age friendly regional bicycle network that provides connections between communities and to high value destinations. Identify connections that overcome significant physical barriers, such as river crossings, high traffic corridors that address the need for additional north-south corridors, and additional east-west corridors.	Immediate
Incorporate safety for bicycling and walking into all the MPO's future studies and prioritize a "Safe Systems" approach to this work.	Ongoing
Identify opportunities for improved navigation and wayfinding when walking and bicycling, including age friendly strategies to help users locate destinations and attractions.	Future
When requested, collect "before" and "after" data on effectiveness new crosswalk installations including raised crosswalks, high visibility midblock crosswalks and other safety improvements.	Ongoing
Identify traffic signal locations that do not provide MUTCD compliant pedestrian signal equipment.	Immediate
Identify, plan, design, and construct a low-stress network comprised of bicycle routes for people of all ages and abilities. Meet the MPO's goal of increases total regional bike facility mileage by 10% by 2030 over 2020 mileage.	Ongoing
Increase the total regional sidewalk mileage by 10% by 2030 over 2018 mileage.	Ongoing
Create an online resource for communities that provides access to the best practices for street design for rural, suburban, and urban communities that exemplifies the principles of Complete Streets and Vision Zero. Include "quick build" safety improvements such as striping, signage.	Immediate

3) Safety, Enforcement, Accessibility and Vision Zero

Designing for All by implementing "Complete Streets" concepts, ensuring that new and existing road projects accommodate users of all ages and abilities, including

pedestrians, cyclists, and people using mobility devices. Prioritize reducing severe and fatal crashes by identifying and addressing dangerous intersections and high-crash locations. Protecting Vulnerable Users: Design for the needs of vulnerable populations like children, the elderly, and people with disabilities, ensuring safe and comfortable access for everyone. Use infrastructure design to improve visibility, helping pedestrians and cyclists to be seen and be predictable to drivers. A list of prioritized recommendations in this category is presented below (Table 5.3).

Table 5.3 Recommendations in Safety, Enforcement, Accessibility and Vision Zero

Safety, Enforcement, and Vision Zero Recommendations	Priority Level
Work with the Massachusetts Bicycle and Pedestrian Advisory Board and other organizations to support efforts that address speeding, red light running, and dangerous driving.	Future
Continue to collaborate with the Baystate Trauma Center in Springfield, MA to identify high-risk VRU crash locations.	Ongoing
Continue to support the vulnerable road user law by providing education to the public during relevant outreach events such as Bay State Bike Month and through content posted to the MPO's website.	Ongoing
Assess the safety effects of an ongoing growth in electric bike usage along shared-used trails on non-motorized users. Explore the implications of speed disparity between users. Explore methods for addressing and lessening potential negative impacts, such as providing passing opportunities, posting restrictions and speed limits, and other traffic control devices appropriate for the types of trails.	Future
Study "pre" and "post" implementation of safety measures that have been implemented.	Ongoing
Perform an assessment of driver citation data to study trends related to speeding and distracted driving.	Immediate
Identify and implement strategies to meet the established performance measures as reflected in the RTP or as updated annually.	Ongoing
Work with local municipalities to identify locations for 20 mph Safety Speed Zones in compliance with MassDOT speed management principles.	Immediate
Assist municipalities in adopting MGL c. 90 § 17C, reducing the statutory speed limit from 30 mph to 25 mph in thickly settled or business districts.	Immediate

4) Data Collection, Monitoring, and Analysis

Information and data collection is a critical tool in advancing initiatives. PVPC continually collects bicycle and pedestrian traffic data along sidewalks, multi-use paths, and recreational trails throughout the region. We use "Trafx" and "Eco-counters" and "Jamar" on-road tubes to count traffic at new and recurring sites across the region. Volumes are also collected as part of studies. Data collected from these counts is used to analyze trends in bicycle and pedestrian activity and aid in project planning to accommodate and promote safe, non-motorized transportation and recreational travel. Counting how many people walking, biking, or scooting on a road or at an intersection can also help planners and engineers identify where sidewalks, crosswalks, or paths need to be built or improved, recognize where future demand should be anticipated. This data is also useful when applying for grant-based funding. A list of prioritized recommendations in this category is presented below (Table 5.4).

Table 5.4 Recommendations in Data Collection, Monitoring, and Analysis

Data Collection, Monitoring, and Analysis Recommendations	Priority Level
Improve the MPO's capacity to gather public feedback through online mapping tools and surveys. Research and incorporate new outreach technologies and methodologies that engage the public related to walking and bicycling issues and opportunities.	Immediate
Continue the bicycle and pedestrian count program and expand the counts to reach more locations. Improve access to count data, including the sharing of data from other sources and data platforms (such as MassDOT MS-2) and expand permanent and short-term counts to evaluate trends.	Ongoing
Work with the Regional Transit Agencies (RTA)s to review transit stop locations to determine the need for pedestrian and bicycle infrastructure improvements.	Immediate
Encourage and participate in local walk audits with community members and partner organizations to better understand pedestrian experiences and challenges.	Ongoing

5) Policy, Funding, and Interagency Coordination

Identify and pursue local, state, and federal funding sources to support plan implementation. Encourage policies that shift from automobile-dependent travel to walking, biking, and other forms of active transportation for short trips and errands. Recognize and promote the health benefits of active transportation, including reducing obesity and chronic diseases. A list of prioritized recommendations in this category is presented below (Table 5.5).

Table 5.5 Recommendations in Policy, Funding, and Interagency Coordination

Policy, Funding, and Interagency Coordination Recommendations	Priority Level
Continue to perform Complete Streets Analysis at the community level by official request and support local efforts to participate in Complete Streets initiative.	Ongoing
Collaborate with local, regional, and state partners to ensure that MPO bicycle and pedestrian initiatives, projects, programs and tasks align with the Massachusetts Bicycle Plan, the Massachusetts Transportation Plan, and Beyond Mobility, the Massachusetts 2050 Transportation Plan.	Ongoing
Work with MassDOT and local stakeholders to advance the goals of the Massachusetts Strategic Highway Safety Plan (SHSP).	Ongoing
Collaborate with regional housing, economic development, and environmental stakeholders to ensure bicycle and pedestrian access is included in the local planning process.	Immediate
Expand the MPO's work with MassDOT and other partners to expand Safe Routes to School activities and local participation (including local high schools).	Ongoing

6) Education, Outreach, and Community Engagement

Involve the public in the planning process to build support and ensure that plans meet community needs. PVPC should help local communities incorporate bicycling and walking projects into their own planning and development efforts. A list of prioritized recommendations in this category is presented below (Table 5.6).

Table 5.6 Recommendations in Education, Outreach, and Community Engagement

Education, Outreach, and Community Engagement Recommendations	Priority Level
Develop and distribute educational materials to the public to promote safe and legal bicycling and walking behavior.	Ongoing
Increase engagement with Title VI populations through tailored outreach on bicycle and pedestrian specific strategies.	Ongoing
Develop a regional branding strategy for the bicycle and pedestrian network to foster recognition and support.	Future
Partner with local organizations and schools to host community events that promote walking and biking.	Ongoing
Facilitate peer exchanges and best practice sharing between municipalities with support from the MPO's Joint Transportation Committee's Bicycle, Pedestrian and Complete Streets Subcommittee.	Future
Create training programs for municipal staff and boards on best practices in bicycle and pedestrian planning and design.	Future
Host walking and biking tours to highlight infrastructure successes and opportunities.	Ongoing
Educate elected officials and decision-makers on the benefits of investments in walking and biking.	Immediate

7) Shared-use Paths and Regional Connections

With longer-range regional trail networks expanding in the Pioneer Valley, there is an opportunity for communities to work together and leverage knowledge and expertise. Off-road facilities include shared-use paths and traditional rail trails, and sidepaths can be effective components of the transportation network when they:

- Introduce new users, including children and the elderly, to the benefits of walking and bicycling

- Isolate users from potential conflicts with motorized traffic and preserve existing corridors for future transportation use like light rail and express transit routes.
- Provide economic benefits from shared utility leases, increased property values, and tourism.
- Increase the percentage of bicycling and walking commutes and other utilitarian trips.
- Provide access not offered by the roadway system (shortcuts, links to road segments).

The growing list of multi-town project in the Pioneer Valley includes: Agawam, Springfield, West Springfield, Holyoke, South Hadley, Northampton and Hatfield are part of the Connecticut Riverwalk and Bikeway corridor; Northampton, Easthampton, Southampton and Westfield that join with twelve partner communities in the New Haven and Northampton Canal Greenway (NHNCG); Williamsburg, Northampton, Hadley, Amherst, Belchertown, Palmer, and Ware that are part of a 25 community effort on the Mass Central Rail Trail; Palmer, Monson, Holland, and Brimfield that are part of the 16 communities that comprise the Grand Trunk (Titanic Railroad) corridor. These partnerships need to be supported and recognized as catalysts for inspiration and innovation. A list of prioritized recommendations in this category is presented below (Table 5.7).

Table 5.7 Recommendations in Shared-use Paths and Regional Connections

Shared-use Paths and Regional Connections Recommendations	Priority Level
Identify opportunities to development of long-distance shared-use paths that connect the regional bikeway network to major destinations, central business districts, village centers, and neighborhoods and encourage private connections.	Immediate
Coordinate with local communities, MassDOT, community-based organizations, land trusts, DCR, public health institutions, and other entities to protect and enhance share-use path corridors for transportation.	Ongoing
Study opportunities to improve access to shared-use paths from bikeshare, the sidewalk networks, transit.	Future
Support the creation of rail-with-trail and rail-to-trail projects where feasible.	Future
Conduct an inventory of trail head amenities on shared-use paths such as restrooms, water stations, maps, benches and repair stations.	Future

5.4 Conclusion

The Pioneer Valley Metropolitan Planning Organization worked with many partners on this plan, including the 43 cities and towns in our region. For bicyclists and pedestrians, this relationship is significant, as 80% of roadways, and 92% of sidewalks are owned and maintained by our local communities. Together, FHWA, MassDOT, DCR, PVTA, FRTA, EOEEA, FRCOG, MassBike, UMass, Mill River Greenway Committee, Amherst Transportation Committee, Walk Massachusetts, Wayfinders, WalkBike Springfield, Friends of Northampton Trails, Friends of the Southwick Rail Trail, Friends of Columbia Greenway, East Quabbin Land Trust, the PVMPO, and municipalities can advance bicycle and walking for transportation and recreation for people across the Region.

By using resources such as the Safe Streets for All, the Transportation Improvement Program, Unified Planning Work Program, Complete Streets Funding Program, Chapter 90, ADA Transition Plans, and Safe Routes to School, municipalities can take advantage of programs and projects that support accessibility, connectivity, and mobility. This plan acknowledges the important relationship between walking, bicycling, and transit and the support from local transit agencies. Thank you to all of those who contributed to this Plan, including individuals who provided valuable feedback on the challenges and opportunities for walking and biking in the Pioneer Valley region. Together, these partnerships will be critical to achieving our collective vision:

> "The Pioneer Valley Region is a safe, accessible, and enjoyable place to walk and to ride a bicycle. An expanding network of bikeways, sidewalks, and friendly roadways to a variety of active modes of transport provides residents of all ages with many travel options for reaching any destination."

Learn more about ways you can get involved to help make your community safer for walking and bicycling, more sustainable, connected, efficient, and better able to meet the needs of all users by visiting the plan's online page at https://pvpc.org/our-work/regional-bicycle-and-pedestrian-plan/ .