



South Hadley Comprehensive Bicycle and Pedestrian Plan

ACKNOWLEDGEMENTS

This plan is the result of the work and input of many people. We would like to thank the Project Team for South Hadley who invested numerous hours in meetings and reviewing and commenting on drafts:

- Mark DuBois (Recreation Commission member)
- Richard Harris (Town Planner)
- Sharon Hart (Health Department Director)
- Kevin McCaffrey (MHC Representative)
- Melissa O'Brien (Bike/Walk Committee Representative)
- Jim Reidy (DPW Superintendent)
- Mike Sullivan (Town Administrator)

We would also like to thank the Bike/Walk Committee who proved detailed comments and useful information throughout the process.

Thank you to the people of South Hadley who provided meaningful input through the survey, public forum and stakeholder interviews.

EXECUTIVE SUMMARY

This Executive Summary briefly summarizes the key components of the **South Hadley Comprehensive Bicycle and Pedestrian Plan**, including goals, data collected, strategies and funding strategies.

Visions for the Future

In Chapter 1, South Hadley has identified goals for the future of the walking, bicycling, and hiking network in South Hadley, which are summarized here:

Walking

1. Provide safe and convenient pedestrian access within and between South Hadley Falls and South Hadley Center.
2. Ensure that commercial, residential, institutional and public development projects provide safe and convenient pedestrian access and circulation.
3. Ensure that every student and faculty living within 1.5 miles of a school can walk to school safely and conveniently.
4. Ensure that every PVTA transit customer has safe access to bus stops in South Hadley.
5. Ensure that all major sidewalks are relatively free of tripping hazards, ADA compliant, and cleared of debris and snow in a timely manner.

Bicycling

6. Provide safe and convenient bicycle access to and between South Hadley Falls and South Hadley Center.
7. Establish a recreational bicycle loop in town.
8. Develop and publicize a low-stress bicycle network that connects all major points in South Hadley.
9. Develop connections between the bike network in South Hadley and bike networks in adjacent communities.
10. Ensure that commercial, institutional and public development projects provide safe and convenient pedestrian and bicycle access and circulation.
11. Establish opportunities for off-road bicycling.
12. Identify a bicycle route network appropriate for advanced on-road bike commuters.

Hiking

13. Increase hiking and biking access to the Connecticut River.
14. Increase knowledge of, and access to, existing parks and conservation areas;
15. Connect existing and new hiking trails into regional networks;

Community Culture

16. Develop a culture of walking bicycling, and hiking in South Hadley.

Public Input and Review of Past Plans

Chapter 2 details the public input received during the plan's development, and reviews previous plans completed for the town.

Project Management Team Meetings

A Project Team was designated by the South Hadley Board of Selectmen for the Bicycle and Pedestrian Plan, to guide the planning process, and provide local input and expertise to the plan. This team of seven members met quarterly, six times, over the course of the project.

Survey Results

A comprehensive survey was developed to obtain public feedback on existing bicycle and pedestrian use and the types of bicycle and pedestrian improvement projects that are desired. The survey was distributed in the Spring of 2015 with a total of 520 unique responses.

Visioning Session

Pioneer Valley Planning Commission and the Town of South Hadley held a Public forum and Visioning Session to solicit public input on September 16, 2015. About 20 members of the public as well as Town and PVPC staff attended the meeting. Participants in the meeting strongly supported a vision of South Hadley as a more walkable and bikable community. They identified a suite of challenges and opportunities in the existing pedestrian and bicycle networks in the community.

Interviews with Town Officials

A number of officials representing various interests in the Town of South Hadley were interviewed to perform an assessment of existing bicycle and pedestrian safety, and these results were used to inform the plan.

Existing Conditions

Chapter 3 provides an overview of South Hadley's existing bicycle and pedestrian network and conditions. South Hadley's bicycle and pedestrian networks are based upon its road network and are of mixed quality reflecting the historical development of the town's roads, streets, and sidewalks.

Sidewalk Network

The sidewalk network in South Hadley varies in quality and contiguity. Route 116, Route 202, and Route 33 have the most consistent sidewalks in the town, but even these have significant gaps. South Hadley Falls is notable for both its network connectivity as described earlier, but also for its sidewalks. It is the only part of town where virtually every street has a sidewalk. Route 116 in the vicinity of Mount Holyoke College is also notable for its pedestrian environment.

ADA Accessibility

Many locations in the study area South Hadley do not meet current Americans with Disabilities Act (ADA) requirements. The ADA guarantees that people with disabilities have the same opportunities as everyone else to participate in all activities. This includes accessibility to public infrastructure such as sidewalks via ramps that allow wheelchairs safe and efficient access to sidewalks and crosswalks.

Hiking Networks

South Hadley has a large number of hiking trails in diverse settings. Nationally and regionally prominent trails pass through South Hadley, including the New England National Scenic Trail. The town provides local hiking trails including Bachelor Brook, Black Stevens, Bynan conservation areas. In addition, the town has a short riverwalk adjacent to the Connecticut River in South Hadley Falls at Texon Mill Park.

Bike Network

South Hadley currently has a limited on and off road network to accommodate bicycles. All public roads in South Hadley, with the exception of Purple Heart Drive in the vicinity of Route 116, are technically available for bicycle use but some currently provide better accommodations than others. Major roadways such as Route 202 and the Route 116 bridge connecting South Hadley Falls to Holyoke currently provide 8 foot marked shoulders that can be used for bicycle travel. Other roads such as Morgan Street, Lyman Street and portions of Route 116 provide more modest shoulder that allow for bicycle travel but not much separation from motor vehicle traffic.

Walk Score

Walk Score is a very robust tool for evaluating the functional walkability and bikability of a location. Walk Scores for South Hadley show that the majority of the community has very low walk scores and is “Car-dependent”. Compared to a sample of similar communities in the region, South Hadley has the third highest levels of walking to work (9.8%), after Amherst (18%) and Northampton (11.9%). South Hadley has very low rates of people bicycling to work.

Preliminary Evaluation of Key Routes

In Chapter 4, PVPC identified several types of key routes in South Hadley. This identification was based on a review of:

- past planning documents;
- public input provided through the survey, key informant interviews, the public forum and project management team meetings;
- examination of the existing conditions of South Hadley—its transportation system and its land use patterns.

The key routes identified and evaluated in this report include:

- safe routes to schools and parks;

- hiking trails throughout the community—especially those that make long-distance connections;
- bicycle and pedestrian connections between South Hadley Falls and the Town Center;
- bicycle and pedestrian routes near the Connecticut River.

Route Evaluation

Chapter 5 summarizes the data collected on roadway traffic volumes, pavement condition, safety, roadway geometry, transit, and traffic signals. It is important to understand the existing features of the transportation system to develop appropriate recommendations to improve bicycle and pedestrian opportunities in South Hadley.

The route evaluation includes an assessment of: traffic volume; pavement condition; safety; roadway geometry; existing traffic signals; transit; pedestrian amenities; and complete streets. This chapter also includes an evaluation matrix, which lays out the most critical characteristics necessary for the development of an on-road bicycle network, and evaluates existing roads based on these characteristics.

General Recommendations

In Chapter 6, the general recommendations section of the report includes strategies for:

- Street Network Recommendations: for improving pavement conditions, upgrading streetlights, traffic counts, pavement markings and traffic signal improvements.
- Walking Network Recommendations: for sidewalks and upgrades, sidewalk provisions in Subdivision Regulations, Safe Routes to School and age-friendly and dementia-friendly initiatives.
- Bicycle Network Recommendations: for bicycle route evaluation, on-road bicycle improvements, bicycle parking, a South Hadley Bike-Ped Trail Route, an off-road trail network linking conservation areas, Route 47 bike improvements and bicycle rodeos.
- Hiking Network Recommendations: include creating a Connecticut River greenway, creating linkages to other regional trail networks, exploring trail development along utility lines, extending the River to Range trail, enhancing the Connecticut River Paddlers Trail, and adopting the Community Preservation Act.

Site Specific Recommendations

Chapter 7 details site specific recommendations, which include projects that are ranked by priority:

Project #1 (High priority)

Bicycle Connections, South Hadley Falls

This project includes striping of bicycle lanes on the South Hadley Falls bridge; on-road bicycle lanes along Route 116, the Route 116 bridge, and along Bardwell Street; on-road bicycle amenities along School Street and Lamb Street; signs and bike sharrows on Bridge Street; an off-road facility to connect the Beachgrounds parking lot to Main Street; an off-road connection from the Beachgrounds to Texon Mill Park.

Project #2 (High Priority)

Hiking Trail, River to Range Trail

The River to Range Trail (R2R) project will create an accessible loop trail with scenic views of the Connecticut River and Bachelor Brook in South Hadley.

Project #3 (Medium-High Priority)

Bicycle Connections, Route 202

The Route 202 corridor would benefit from the construction of a separated bike lane to enhance safety while providing accommodations for bicyclists.

Project #4 (Medium Priority)

Connecticut River Loop at Ledges Golf Club, Carver-Newton-Jones, Upper River Road, Sans Souci Drive and Alford Street

This loop provides an opportunity for a highly desired Connecticut River loop for walking and possibly bicycling in South Hadley. The loop builds off the significant land holdings that the Town already has in the area and takes advantage of two of the highest ranked bicycle-appropriate roads in the town—Mulligan Drive and San Souci Drive.

Project #5 (Medium Priority)

Bicycle Connections at Route 202 with Route 33

The intersection of Route 202 with Route 33 is a busy and complicated intersection that requires upgrades to better accommodate bicycle and pedestrian travel.

Project #5 (Medium Priority)

Public Trails, Ledges Golf Club

Providing year-round, full-day, public access to this property would require careful planning to minimize potential conflicts between pedestrians and golfers..

Project #7 (Medium Priority)

Hiking Trail at Bynan Conservation Area

The Bynan Conservation Area has an extensive trail system, but it is difficult to find and access the trails. The conservation area would benefit from improved

wayfinding from major roads, improved signage at trailheads, trail maps, and improved parking. Explore expanding the trail network by providing a loop trail around the former landfill.

**Project #7 (Medium Priority)
Bagg Pierce and Popp Conservation Area**

The Bagg Pierce and Popp Conservation Area has rare frontage on the Connecticut River. Wayfinding from Alvord Street could improve utilization of this high value conservation area.

**Project #9 (Low-Medium Priority)
Black Stevens Conservation Area**

This property sits within a very valuable east-west corridor that, with improvements, could provide high quality pedestrian and bicyclist connections between Route 116 and the intersection of Route 33 and Route 202.

**Project #10 (Low-Medium Priority)
New Trailhead for New England National Scenic Trail**

The New England National Scenic Trail, also known as the Metacomet Monadnock Trail, is a major 215-mile long distance trail, which runs from Long Island Sound to Mount Monadnock. There is a need for a new gateway and trailhead for the NENST, where it begins on the east side of the Connecticut River.

Funding Options

Chapter 8 provides suggested options for grants and funding sources that can be used by the town to advance recommended bicycle and pedestrian improvements, including:

Transportation Improvement Program (TIP):

Most large-scale transportation improvements are funded through the TIP. Most federal support for bicycle and pedestrian projects comes from the following funding sources:

Congestion Mitigation Air Quality (CMAQ)

The CMAQ program requires projects to demonstrate a reduction in harmful pollutants through the removal of single occupant vehicle trips from the roadway.

Highway Safety Improvement Program (HSIP)

The HSIP program provides funding to reduce traffic fatalities and serious injuries on public roadways.

Transportation Alternatives Program (TAP)

TAP provides funding for smaller scale projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, and historic preservation.

Local Aid (Chapter 90)

Chapter 90 funding is a local aid reimbursement program for road projects funded from the Commonwealth.

Community Preservation Act

The Community Preservation Act (CPA) is a state matching program that serves to promote the preservation of open space, historic sites, and affordable housing in the Commonwealth's communities.

MassWorks

MassWorks has been used to fund transportation improvement projects that support mixed-use, multi-family housing.

Massachusetts Complete Streets Funding Program

The new Complete Streets Funding Program offers Massachusetts municipalities incentives to adopt policies and practices that provide safe and accessible options for all travel modes - walking, biking, transit and vehicles - for people of all ages and abilities, with funding up to \$400,000 to construct projects identified in a prioritization plan.

Safe Routes to School

Infrastructure improvements to the roads and walkways surrounding schools can be funded as part of the Massachusetts Safe Routes to School program.

Massachusetts Recreational Trails Program Grants

The Massachusetts Recreational Trails Program grants are awarded for a variety of trail protection, construction, and stewardship projects throughout Massachusetts.

Federal Lands Access Program (FLAP) Grants

The Federal Lands Access Program is another good potential option for trails and river access projects, and provides funds for projects located on or adjacent to, or that provide access to Federal lands.

Massachusetts LAND Grants Program

The LAND (Local Acquisitions for Natural Diversity) Program (formerly the Self-Help Program) was established to assist municipal conservation commissions in acquiring land for natural resource protection and passive outdoor recreation purposes.

Comprehensive Recreation & Land Management Plan (CRLMP)

As part of Holyoke Dam relicensing process under the Federal Energy Regulatory Commission, the dam owners, Holyoke Gas and Electric, have been

required to make improvements to recreational access along the Connecticut River.

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1. Visions for the Future

OPPORTUNITIES AND NEEDS

Like many communities in the region and around the world, South Hadley is recognizing the many benefits of walking and biking. It is looking to its future, and foresees that many of its residents want to be physically active while they carry out the normal activities of their days. They want to experience the benefits of walking and biking, including improved physical fitness, better mental health, increased social opportunities and connections, increased transportation choices, reduced greenhouse gas emissions, enhanced property values, improved business viability in walkable village centers, and reduced personal costs associated with motor vehicles.

South Hadley wants to take advantage of its two centers: South Hadley Falls and South Hadley Town Center. It wants to improve the centers' walkability and connect them. South Hadley is privileged to have plentiful conservation areas and magnificent trails. It wants to improve their usability and increase their use. South Hadley is a river town and wants to incorporate the river into its daily routines, to open opportunities for its residents to experience the magic of walking, running, hiking, or bicycling next to the flowing water—an experience that has become a much loved pass-time on riverwalks in communities across the country including locally in Hadley, Springfield, and Chicopee.

South Hadley looks to its neighbors and sees a growing bicycle network in Northampton, Amherst, and Easthampton, and other communities. South Hadley residents drive to those towns to bicycle, but would prefer to ride in their own town. South Hadley residents want a place where children can safely learn to ride a bicycle and older adults can comfortably realize they really did never forget how to ride a bike.

South Hadley wants to answer the Surgeon General's historic 2015 call to action to "Step it Up!" to promote a more walkable community.

At the same time, South Hadley is mindful of its ability to transition from a community that was built out largely in an auto-dependent pattern. Road and sidewalk maintenance already strain the town's finances. The Town's sidewalk network is limited and it is unlikely that the Town will ever be able to afford to build and maintain sidewalks on all streets in the Town. While some of the town's roads have ample room for new sidewalks or bike facilities, many have narrow right of ways and physical constraints such as wetlands, ledge, or steep side slopes. Unlike many neighboring communities, South Hadley does not have an abandoned railroad right-of-way to convert to an off-road multi-use path.

Looking to its future South Hadley has decided to create a plan for moving from where it is to where it wants to be. This plan lays out the current conditions for walking and biking in South Hadley, describes the Town's goals, proposes options for improvements, and prioritizes the concrete projects that will be most impactful, cost-effective, and doable. This plan will help South Hadley walk, bicycle, hike and wheel into its future.



Figure 1: Photo courtesy of Flickr user Pete Stanton

GOALS

South Hadley has identified the following goals for the future of the walking, bicycling, and hiking network in South Hadley:

Walking

1. Provide safe and convenient pedestrian access within and between South Hadley Falls and South Hadley Center **within ¼ mile¹** of those locations;
2. Ensure that all new commercial, residential, institutional and public development projects provide safe and convenient pedestrian access and circulation;
3. Ensure that every student and faculty living within 1.5 miles of a school can walk to school safely and conveniently;
4. Ensure that every PVRTA transit customer has safe access to bus stops in South Hadley;
5. Ensure that all major sidewalks are relatively free of tripping hazards, ADA compliant, and cleared of debris and snow in a timely manner;

Bicycling

6. Provide safe and convenient bicycle access to and between South Hadley Falls and South Hadley Center within 2 miles² of those locations for bicyclists of all ages and abilities;
7. Establish a recreational bicycle loop in town suitable for riders who are interested in bicycling but concerned about safety, and where a child can safely practice riding a bicycle without adult supervision;
8. Develop and publicize a low-stress bicycle network that connects all major points in South Hadley including: public buildings like libraries, municipal offices and schools; parks and conservation areas; commercial destinations like restaurants and stores; and medium and high density residential neighborhoods;
9. Develop connections between the bike network in South Hadley and bike networks in adjacent communities;
10. Ensure that all new major commercial, institutional and public development projects provide safe and convenient pedestrian and bicycle access and circulation including bicycle storage, and shower facilities as appropriate;
11. Establish opportunities for off-road bicycling of easy to moderate difficulty;
12. Identify a bicycle route network appropriate for advanced on-road bike commuters, such as a share the road network;

¹ ¼ mile is about a 10 minute walk. It is the distance that is generally accepted to be about as far as an average person is willing to walk for functional purposes.

² 2 miles is approximately the length of an average trip by bicycle based on National Household Travel Survey data

Hiking

13. Increase non-motorized access to the Connecticut River via walking, bicycling and hiking paths;
14. Increase knowledge of, and access to, existing parks and conservation areas;
15. Connect existing and new hiking trails into regional networks, where possible, including linking South Hadley Falls and South Hadley Center to the New England National Scenic Trail network;

Community Culture

16. Develop a culture of walking bicycling, and hiking in South Hadley, as evidenced by: increased participation in walking, biking, and hiking clubs; high visibility events related to walking, bicycling and hiking; programs to increase knowledge of the rules of the road; and a community commitment to prioritize safety for pedestrians and bicyclists over motor vehicle speeds (i.e. traffic calming).

BENEFITS OF BIKE AND PEDESTRIAN IMPROVEMENTS

Bicycling and walking are great exercise and sustainable modes of transportation. They are also a great option for getting around whether to work, school or visiting friends and neighbors. Walking and bicycling have many health, economic, and environmental benefits. Studies have shown that walking and bicycling can improve fitness, cardiovascular risk factor levels, elevated blood pressures and obesity which are issues of concern in most communities. Walkable and bikeable neighborhoods contribute to increased feelings of community pride, lower crime rates, and higher levels of social interaction among neighbors. Safe walking and biking also play an integral role in promoting transit use since the first and last leg of any trip is usually on foot. Many elements contribute to the quality of the walking and bicycling experience including infrastructure, traffic speed and volumes, economic vitality, and confidence in personal safety.

Physical Activity Benefits

The health benefits of routine physical activity have been well established, yet less than half (48%) of all adults meet the Surgeon General's recommended minimum of 30 minutes of moderate intensity physical activity on most days of the week (Centers for Disease Control and Prevention 2010; Besser and Dannenberg 2005; Freeland et al. 2013). A recent study by Lee et al. (2012) estimates that physical inactivity causes 6% of the global burden of disease from coronary heart disease, 7% of type 2 diabetes, 10% of breast cancer, 10% of colon cancer, 9% of premature mortality. If inactivity were decreased by 10% to 25%, between 533,000 and 1.3 million deaths could be prevented worldwide every year (Lee et al. 2012).

In recent years, consistent research has linked features of the built environment to active transportation, defined as walking, biking, and public transportation (which typically requires some walking or biking). This literature demonstrates that active transportation correlates with built environment characteristics including: density, mixed land-use, availability of destinations, street design, and distance to transit (Ewing and Cervero 2010; Freeman et al. 2012; Giles-Corti et al. 2013; McCormack and Shiell 2011; Litman 2013).

Neighborhoods that have higher population densities, access to destinations, more grid-like street patterns, and access to high quality bicycle and pedestrian infrastructure are positively associated with higher rates of physical activity. Additionally, several studies show that walking to and from transit help people meet physical activity recommendations (Besser and Dannenberg 2005; Freeland et al. 2013; Lachapelle et al. 2011).

In sum, there is convincing evidence that the built environment is associated with physical activity and active transportation, although it is important to note that

most studies are cross-sectional and observational (Ewing and Cervero 2010; Freeman et al. 2012; McCormack and Shiell 2011; Ding and Gebel 2012).

Recent studies have revealed that the health economic benefits of increased physical activity are quite substantial (Mueller et al. 2015). Well-conceived infrastructure improvements to encourage walking and bicycling can result in increased physical activity at the population level—and those upticks can result in significant societal cost-savings related to averted loss of life and/or averted medical care costs. In other words, investments in infrastructure for bicycling and walking are worth making from an economic perspective—their health economic benefits typically more than outweigh their cost (Mueller et al. 2015).

As the South Hadley survey results demonstrate, most pedestrians choose to use sidewalks when they are available, and nationally sidewalk availability in a neighborhood is positively associated with the amount of walking activity. Residents of areas with features such as streetlights, pedestrian crossings, public parks, and traffic calming are more likely to walk. In central business districts, pedestrian scale features such as public art, and street furniture, sidewalk cafes are encourage pedestrian and bicycling activity. Similarly onstreet infrastructure such as bike lanes and off road bicycle trails have been shown to increase cycling. This increase in walking and bicycling leads to increased physical activity which can improve health through weight-loss, lower blood pressure and cholesterol levels, and improved circulation. Walking is also a “low-impact” exercise that can strengthen muscles, enhance joint function, and reduce the effects of osteoporosis.

Social Benefits

Walking and bicycling provide an important element of social cohesion for the Town of South Hadley. While not always an easy measure of “place”, social cohesion provides a sense of belonging and connection. Communities and neighborhoods that are good for biking and walking foster social interaction, build community trust, support social equity, and create a shared sense of identity. Walkable streets lead to social interaction—planned or unplanned, one-time or repeated—with other members of a neighborhood or community. These types of interactions, especially when repeated over time, can build community cohesion and trust. The result can be a productive, resilient community that is responsive to the needs of residents. A vibrant walking neighborhood creates more “eyes on the street” which supports community policing efforts and deters both actual crime and fear of crime. Planning for walking and cycling supports social equity and is important when considering those who depend on alternatives to the automobile. These groups may include socioeconomically disadvantaged populations, disabled individuals, older adults, and children. Public involvement in the planning and creation of bikeable/walkable neighborhoods can build social capital and empower community members to improve their neighborhoods.

Public Safety Benefits

Street-scale interventions that create dedicated facilities for pedestrians and bicyclists, as well as those that are intended to calm traffic can have safety benefits for all street users. Bicycle and pedestrian facilities can raise awareness and visibility of these travel modes within the transportation network and traffic calming measures can slow traffic speeds, thereby reducing the number of crashes that result in injury. Pedestrian-specific infrastructure interventions such as improved crosswalks, sidewalks, pedestrian refuge islands, exclusive pedestrian signal phasing, more intense roadway lighting, and single-lane roundabouts have been shown to reduce injuries. Cyclist-specific infrastructure improves safety by increasing driver awareness of cyclists and providing for safer passing by motor vehicles. Separated bike lanes, improved lighting and the maintenance of bike routes lower the rate of injury for bicyclists. Traffic calming measures that reduce the speed and volume of traffic on residential streets can improve safety for all street users by reducing the frequency and severity of crashes. Efforts to educate the public and enforce local traffic laws have safety benefits for the entire community.

Mental Health Benefits

Walking and cycling can have multiple benefits for both physical and mental health. Both modes are associated with reduced anxiety symptoms, better sleep quality, a more positive attitude (happiness, enthusiasm, contentment), and better cognitive performance. As previously described, walkable neighborhoods can foster social cohesion and in turn improved mental health.

Economic Benefits

Economic benefits are also associated with walking and biking and include higher property values, an increase in visitors, an increase in pedestrian and bicycle traffic near businesses, and job creation as a result of the necessary construction and maintenance of bicycle and pedestrian facilities. Moving at a slower pace, pedestrians and bicyclists may be more likely than motorists to stop at local businesses, frequent them more regularly, and more likely to notice window displays and new restaurant menus. Shoppers who arrive on foot spend more per trip than shoppers who arrive by car—up to six times more in one study (“The Pedestrian Pound: The Business Case for Better Streets and Places | Living Streets” 2015). There is a consistently positive relationship between property values and walkable neighborhoods (Pivo and Fisher 2011), as well as their proximity to bike facilities. “Near Bikepath” real estate listings are not uncommon in the region and are known to have a positive impact on property values. Access to bicycle and walking facilities makes employers more competitive in attracting applicants in the labor market by providing workers with the option of bicycle commuting/walking to work.



Figure 2: Photo courtesy of Massachusetts Office of Travel and Tourism

2. Public Input and Review of Past Plans

PROJECT MANAGEMENT TEAM MEETINGS

A Project Team was designated by the South Hadley Board of Selectmen for the Bicycle and Pedestrian Plan, to guide the planning process, and provide local input and expertise to the plan. This Team included the following members:

- Mark DuBois (Recreation Commission member)
- Town Planner Richard Harris
- Sharon Hart (Health Department Director)
- Kevin McCaffrey (MHC Representative)
- Melissa O'Brien (Bike/Walk Committee Representative)
- Jim Reidy (DPW Superintendent)
- Mike Sullivan (Town Administrator)

The Project Team met quarterly throughout the planning process, including meetings on:

- March 25, 2015
- August 12, 2015
- December 2, 2015
- March 9, 2016
- June 8, 2016
- September 14, 2016

The Project Team provided guidance on the selection of preferred biking and walking routes, assisted in coordinating the public visioning session, and reviewed all working papers leading to the development of the full Bicycle and Pedestrian Plan.

REVIEW OF RECENT TOWN ACTIVITIES AND PLANS RELATED TO WALKING, BICYCLING AND HIKING

The Town of South Hadley has previously completed a variety of bicycle and pedestrian initiatives. These initiatives are:

- Bike/Walk Committee activities
- Organized Events
- Bicycling and Walking Infrastructure
- Mount Holyoke Range Trails

Bike/Walk Committee

The Town's Bike/Walk Committee was originally a working group of the Town's Sustainability and Energy Commission. The group was made an official town committee in October of 2015. The Committee meets monthly to discuss strategies for improving bicycling and walking in South Hadley, with particular focus towards bicycle and pedestrian street infrastructure, pedestrian safety, bicycling safety and encouragement, and potential new routes for off-street recreational trails.

The Bike/Walk Subcommittee held a town forum in 2013 during which residents expressed the following desires for improvements to walking and biking:

- Bike lanes on Routes 116 and 202
- Safer biking options on regular streets
- Off-road bike trail
- Improved cyclist and motorist safety
- Better signage for non-motorized transportation

The Bike/Walk Committee conducted a public survey in 2014 to determine resident interest and opinions about the development of an off-road recreational trail in South Hadley (see Appendix). The survey received approximately 307 responses. Key takeaways from the survey are as follows:

- Over 96 percent of respondents would like to see a bike/walk trail developed in town
- Two-thirds of respondents would like to see a trail developed from South Hadley Falls to the Hadley line.
- Over half of respondents indicated that the primary reason for wanting to see a bike/walk trail is because they do not feel safe biking/walking on existing roads and sidewalks
- Almost three-fourths of respondents indicated they would be willing to financially contribute to the trail - either through a local fee or tax, or a one-time contribution

Organized Events

There are several organized events related to bicycling and walking that have occurred in recent years in South Hadley:

- The Bike/Walk Committee organizes monthly events that have attendance of 10-30 people. Events include biking / walking at Bynan conservation land, Ledges Golf Course, Lithia Springs Conservation Land, and Black Stevens Conservation Land.
- During Bike Week in May of 2015, the Bike/Walk Committee assisted in the organization of an event on Sunday, May 18th, which involved a group 5-7 mile road ride from McCray's Farm. The ride had 6 people attend, with more expected this year.
- Each Memorial Day a 5K run and 1-mile walk are held at Buttery Brook Park.

Goals and Actions Identified in Town Plans that Relate to Walking, Bicycling and Hiking

PVPC reviewed South Hadley's 2010 Comprehensive Plan and its Open Space and Recreation Plan (2012-2019) for information about existing conditions, goals, and action items related to Walking, Bicycling and Hiking. Relevant excerpts of the plans can be found in the Appendix.

Overarching themes include:

- The need for a comprehensive plan for bicycle and pedestrian networks
- A strong desire for places to bicycle, especially a connection between South Hadley Falls and the Town Center, and scenic bicycle routes
- A desire for additional off-road trails, especially long-distance trails connecting various parts of the town and connecting various parks and conservation areas together.
- A need for pedestrian improvements across the full range of land use types in the community—from private developments to streets to parks. Including policies to ensure that future development and infrastructure improvements in the community improve its overall pedestrian network.
- A desire to connect hiking and bicycling trails and routes in South Hadley to trails and routes in neighboring communities

SURVEY RESULTS

A comprehensive survey was developed in cooperation with the Town of South Hadley and the project advisory committee to obtain public feedback on existing bicycle and pedestrian use and the types of bicycle and pedestrian improvement projects that are desired. A copy of the survey is included as part of the Appendix to this document.

The survey was distributed in both digital and paper format in the Spring of 2015. All total, 520 unique responses were collected by the July 31, 2015 deadline. Nearly 83% of all survey respondents reported they are resident of South Hadley. The 17% of respondents that did not live in South Hadley were primarily employees that work in town and students that go to a school in town.

Residents of South Hadley were asked to identify the closest intersection to their home. In general, the responses show a good pattern of response across the town. Table 1 summarizes the most common responses. The intersection of Route 116 with Morgan Street south of Mount Holyoke College was the most popular response. This was closely followed by the intersection of Route 202 with Route 33 near the Plains School. A total of 19 surveys reported the intersection of Brainerd Street with Lathrop Street, which is more residential in nature but also in close proximity to potential destination areas such as McCray’s Farm.

Closest Intersection	Count
Route 116 and Morgan Street	24
Route 202 and Route 33	22
Route 116 and Route 47	21
Brainerd Street and Lathrop Street	19
Route 116 and Silver Street	19
Route 116 and Lyman Street	18
Route 202 and East Street	12
Morgan Street and Mosier Street	10
Route 116	9
Brainerd Street and Lyman Street	8
Morgan Street and East Street.	8
Route 116 and Woodbridge Street	6
Route 47 and Ferry Street	6
Mosier Street and Westbrook Road	5
Route 116 and Jewett Lane	5
Silver Street and Chapel Hill Road	5

Table 1 - Summary of Closest Intersection to Place of Residence

The survey included questions on the frequency in which people walk as well as where they currently walk or would like to walk. Over 83% of all respondents reported they walk at least 10 minutes per day and over 40% reported they walk at least 30 minutes per day. This information is shown in Table 2.

Walking Time	Response Percent	Response Count
0 - 10 minutes	19.5%	101
10 - 30 minutes	42.1%	218
30 - 60 minutes	33.0%	171
60 minutes or more	8.7%	45

Table 2 - Average Daily Walk Time

Nearly 90% of all respondents reported they would like to walk more. Almost 70% of respondents considered their neighborhood to be good to walk in. This correlated well with the responses on walking safety where over 78% of respondents reported that South Hadley was either “very safe” or “somewhat safe” for walking. This information is shown in Table 3.

How safe do you feel South Hadley is for walking?	Response Percent	Response Count
Very Safe	34.0%	177
Somewhat Safe	44.6%	232
Somewhat Unsafe	13.3%	69
Very Unsafe	7.7%	40
Don't Know	0.4%	2

Table 3 - Walk Safety

Most survey respondents reported they lived within walking distance of a restaurant. Other popular choices considered to be within walking distance included banks, churches, and the library. A summary of the most popular choices is included in Table 4. Only 25% of respondents (25%) reported they lived within walking distance of their workplace.

Which of the following neighborhood services are within walking distance?	Response Percent	Response Count
Restaurants	73.3%	337
Bank	63.0%	290
Library	54.8%	252
Church	52.0%	239
Post Office	51.5%	237
Movie Theater	51.1%	235
School	47.4%	218
Farmers Market	42.4%	195
Park	35.4%	163
Museums/ Art Gallery	34.8%	160
Workplace	25.2%	116
Grocery Store	15.7%	72
Health Center	15.2%	70
Community Center	7.8%	36

Table 4 - Locations Within Walking Distance

Survey respondents were asked to identify up to four locations that require improvements to improve pedestrian access. Table 5 provides a summary of the most popular answers. The South Hadley Town Center was the most popular choice as it provides a variety of options for shopping, recreation, dining, and services. Many respondents chose to identify a roadway that requires improved access. In these cases the name of the roadway was not edited in order to identify the specific location of the roadway that people chose. This is most

significant along the Route 116 corridor that changes its street name (Bridge Street, Newton Street, College Street, etc.) along its length.

Location	Count
Village Common	35
Route 116	32
Schools	23
Grocery Stores	28
Morgan Street	21
Park Street	21
Mt. Holyoke College	20
Lathrop Street	18
North Main Street	18
Route 202	15
Alvord Street	14
East Street	13
McCray's Farm	12
College Street	11
Ferry Street	9
South Hadley Falls	9
Brunelle's Marina	8
Newton Street	8
Amherst Road	7

Table 5 - Locations for Improved Walking Connections

The survey identified a number of pedestrian improvement options to determine the types of improvements that respondents would like to see implemented in South Hadley. Up to three choices could be made as part of this question. The most popular choice was the extension of the existing network of recreational trails. Other popular choices included better pavement markings to indicate the roadway shoulder in locations with no sidewalks as well as having a better network of sidewalks that are in good condition. Less than 30% of respondents identified lighting, crosswalks, and traffic calming as a preferred improvement option. A summary of the responses are shown in Table 6.

Which of the following improvements would you like to see in South Hadley to make it better for walking?	Response Percent	Response Count
Extended network of recreational trails	61.3%	313
Safer, better marked shoulders on roadside where sidewalks are not available.	57.1%	292
Sidewalks on every block	50.9%	260
Sidewalks in good condition	47.9%	245
Lighting	29.4%	150
Pedestrian cross walks	28.6%	146
Calming traffic to slow vehicles	22.5%	115

Clean streets	14.9%	76
Curb cuts	7.4%	38

Table 6 - Desired Pedestrian Improvements

Responses on existing recreational trail uses in South Hadley did not correspond well with the desire to see improvements made to the trail network. Most respondents reported they use recreational trails either a few times a year or less than once a year. Approximately 11% of respondents reported using recreational trails daily or a few times a week.

How often do you use existing recreational trails in South Hadley?	Response Percent	Response Count
Almost every day	3.7%	19
Few times a week	7.6%	39
Few times a month	18.0%	92
Few times a year	31.8%	163
Less than once a year	38.9%	199

Table 7 - Recreational Trail Use

The most popular improvement that survey respondents identified for recreational trails was better marketing to designate trails. Many surveys included comments indicating they were not aware of any recreational trails in South Hadley. A number of respondents indicate that existing recreational trails required better access and more connections both within and outside of South Hadley. This information is summarized in Table 8.

What is the most important improvement you would like to see made to recreational trails in South Hadley?	Response Percent	Response Count
Better marketing to designate trails	31.9%	149
More access to existing trails	19.1%	89
Better connections between trails in South Hadley	17.6%	82
Better connections to trails outside of South Hadley	12.2%	57
Parking near all trail heads	10.1%	47
Improved maintenance of existing trails	9.2%	43

Table 8 - Desired Recreational Trail Improvements

Seventy five percent of all survey responses indicated they would like to bicycle more often. The most popular challenge that prevented people from bicycling more was the lack of on-road bicycle lanes and not feeling safe while riding a bicycle in traffic. Some of the common responses listed under the “other” category included the need for more bicycle paths, a lack of safety, poor maintenance, and lack of bicycle ownership.

If so, what challenges keep you from bicycling more often?	Response Percent	Response Count
Bicycle lanes are too few, and not interconnected	60.9%	265
I don't feel safe riding a bicycle in traffic	57.9%	252
Road surfaces are poorly maintained	38.9%	169
Other	17.5%	76
No posted trail map(s) along routes	10.8%	47
Not enough bicycle parking	10.1%	44
Destination is too far from my home	9.0%	39
Poor weather	8.0%	35
It takes me too long to bike where I want to go	7.6%	33
I am physically limited from riding a bicycle	6.7%	29
My destination does not have shower/locker facilities	5.3%	23

Table 9 - Bicycling Challenges

Respondents were asked to identify the three worst roadways for bicycling in South Hadley. All roads that received more than 10 responses are identified in Table 10. Again, the name of the roadway was not edited in order to identify the specific location of the roadway that people chose. Most responses indicated that Route 116 was the worst road for bicycling, however, many people chose to identify specific sections of the Route 116 corridor, i.e. Newton Street, as the worst for bicycling. Seventy four people chose Alvord Street as the worst road for bicycling and eleven people indicated that all roads were bad for bicycling in South Hadley.

Worst Roads for Bicycling			
Roadway	Count	Roadway	Count
Route 116	110	Morgan Street	23
Alvord Street	74	Brainerd Street	21
Route 202	69	North Main Street	20
Route 47	60	College Street	18
Ferry Street	48	Amherst Road	13
Newton Street	40	Main Street	12
Lathrop Street	37	All Roads	11
Route 33	34	Park Street	11
East Street	33	Pearl Street	11
Lyman Street	29		

Table 10 - Worst Roads for Bicycling

Route 116 and sections of Route 116 were identified as being some of the best roads for bicycling by survey respondents. Overall, less people responded to this question than the question on the worst roads for bicycling. Twenty one people responded that no roads in South Hadley were suitable for bicycling. All roads that received more than five responses are shown in Table 11.

Best Roads for Bicycling			
Roadway	Count	Roadway	Count
Route 116	40	Mosier Street	12
College Street	25	Pearl Street	11
Route 202	24	Lathrop Street	10
Morgan Street	22	Granby Road	9
None	21	MHC Campus	9
Newton Street	20	Woodbridge Street	9
Ferry Street	17	Silver Street	8
Route 47	15	Amherst Road	8
Alvord Street	14	Route 33	7
Side streets with little traffic	14	Ridge Road	6

Table 11 - Best Roads for Bicycling

Survey respondents had the option to identify up to six locations that require improved bicycle parking. Overall the response to this question was quite low, however the Town Center was the most popular location at which people would like to see more bicycle parking. All responses to this question are summarized in Table 12.

Locations Which Need New or Expanded Bicycle Parking			
Location	Count	Location	Count
Town Center	52	Town Hall	5
Big Y	21	Canal Park	4
All Schools	16	McCray's Farm	4
Library	16	Route 47	4
Beach Grounds	11	Buttery Brook	3
Friendly's/Ace Hardware Plaza	14	None	3
Unsure	10	Trail Heads	3
Post Office	7	Alvord Street	2
Route 116	6	Dunkin Donuts	2
South Hadley Falls	6		

Table 12 - Locations for Bicycle Parking

Nearly 85% of survey respondents reported they have a strong or medium level of interest to connect on road and off road trails to neighboring towns and colleges. The survey also asked people to identify specific locations where they would like to see bicycle lanes, off road paths, and hiking trails constructed in the future. This information is summarized in Table 13. Most major roads, with Route 116 being the most popular, were identified as locations for future bicycle lanes. The Connecticut River was chosen as a preferred location for both off road paths and hiking trails. A number of respondents also indicated a desire to see off road paths and hiking trails in the vicinity of the Ledges Golf Course and Mount Holyoke College.

Where specifically would you like to see each of the following in South Hadley:					
Striped Bike Lane	#	Off Road Path	#	Hiking Trail	#
Route 116	83	Along the CT River	21	Along the CT River	30
Route 47	20	Anywhere	19	Anywhere	14
Alvord Street	16	Connecting to Norwottuck Trail	9	Ledges Golf Course	7
Route 202	16	Along Route 116	6	Mount Holyoke College	7
On all major roads	15	Ledges Golf Course	6	All conservation areas	4
Everywhere	8	Mount Holyoke College	6	Bachelor Brook Conservation	4
Lathrop Street	8	Lithia Springs	5	Lithia Springs	4
Ferry Street	6	Byrnan Conservation Area	4	Byrnan Conservation Area	2
East Street	4	None	4	Connecting to Holyoke Range	2
Morgan Street	3	Along Route 202	3	East Street area	2

Table 13 - Locations for new Bicycle Lanes, Paths and Trails

The survey identified a number of locations to determine if people currently walk or bicycle there, have a desire to walk or bicycle there, or no desire to walk or bicycle there. Nearly 80% of respondents indicated they have walked for fun or exercise while only 50% have bicycled for fun or exercise. The most popular destinations that people do not currently walk or bicycle to but would like to are the grocery store, library, and parks. Most people currently do not wish to walk or bicycle to church, their workplace, or school. This information is summarized in Table 14.

For each of the following destinations, please indicate whether you have walked or bicycled there. If you have not walked or bicycled to the destination, please indicate whether you would like to do so if it were convenient.

Answer Options	I have walked there	I have bicycled	I have not walked there, but would like to	I have not bicycled there, but would like to	I do not want to walk or bike to	Response Count
Workplace	39%	23%	6%	14%	40%	376
School	44%	24%	9%	16%	34%	325
Fun or exercise	78%	48%	9%	12%	6%	416
Church	30%	6%	6%	6%	61%	277
Grocery store	24%	13%	29%	27%	31%	353
Park	44%	25%	29%	24%	14%	350
Library	44%	19%	22%	28%	17%	366

Table 14 - Desire to Bicycle and Walk

Table 15 summarizes the responses received on where Safe Routes to School Improvements are necessary in South Hadley. In general this question appears to have been misunderstood as most people either indicated improvements should be made “everywhere” or “near all schools.” The most popular roadway on which people would like to see improvements is the Route 116 corridor with a particular emphasis along the Newton Street portion of the road.

Where do you feel Safe Routes to School improvements need to be made?			
Location	Count	Location	Count
Near all Schools	25	Newton Street	8
Everywhere	15	Route 202	8
Unsure	13	Morgan Street	6
Route 116	9	Lathrop Street	5
Brainerd Street	8		

Table 15 - Safe Routes to School Improvements

VISIONING SESSION

Pioneer Valley Planning Commission and the Town of South Hadley held a Public forum and Visioning Session to solicit public input on September 16, 2015. About 20 members of the public as well as Town and PVPC staff attended the meeting. Participants in the meeting strongly supported a vision of South Hadley as a more walkable and bikable community. They identified a suite of challenges and opportunities in the existing pedestrian and bicycle networks in the community.

During the course of the visioning session, input was gathered in several ways: a show of hands about opinions on key issues related to walking and bicycling in the Town; break out groups that mapped barriers to bicycling and walking, mapped key opportunities for improvements to bicycling and walking in South Hadley, and produced a top 5 list of improvement priorities; and a group discussion.

Visioning Session Work Maps: Challenges and Opportunities for Walking and Bicycling in South Hadley

The break out groups captured a wealth of local knowledge about conditions for walking and bicycling in South Hadley. The following maps (see Figure 3, Figure 4, Figure 5, Figure 6) were compiled from the four break out groups' marked-up work maps. These maps are a key information source for the development of the Comprehensive Bicycle and Pedestrian Plan.

Visioning Session Citizen Input Map: Bicycle Network Challenges

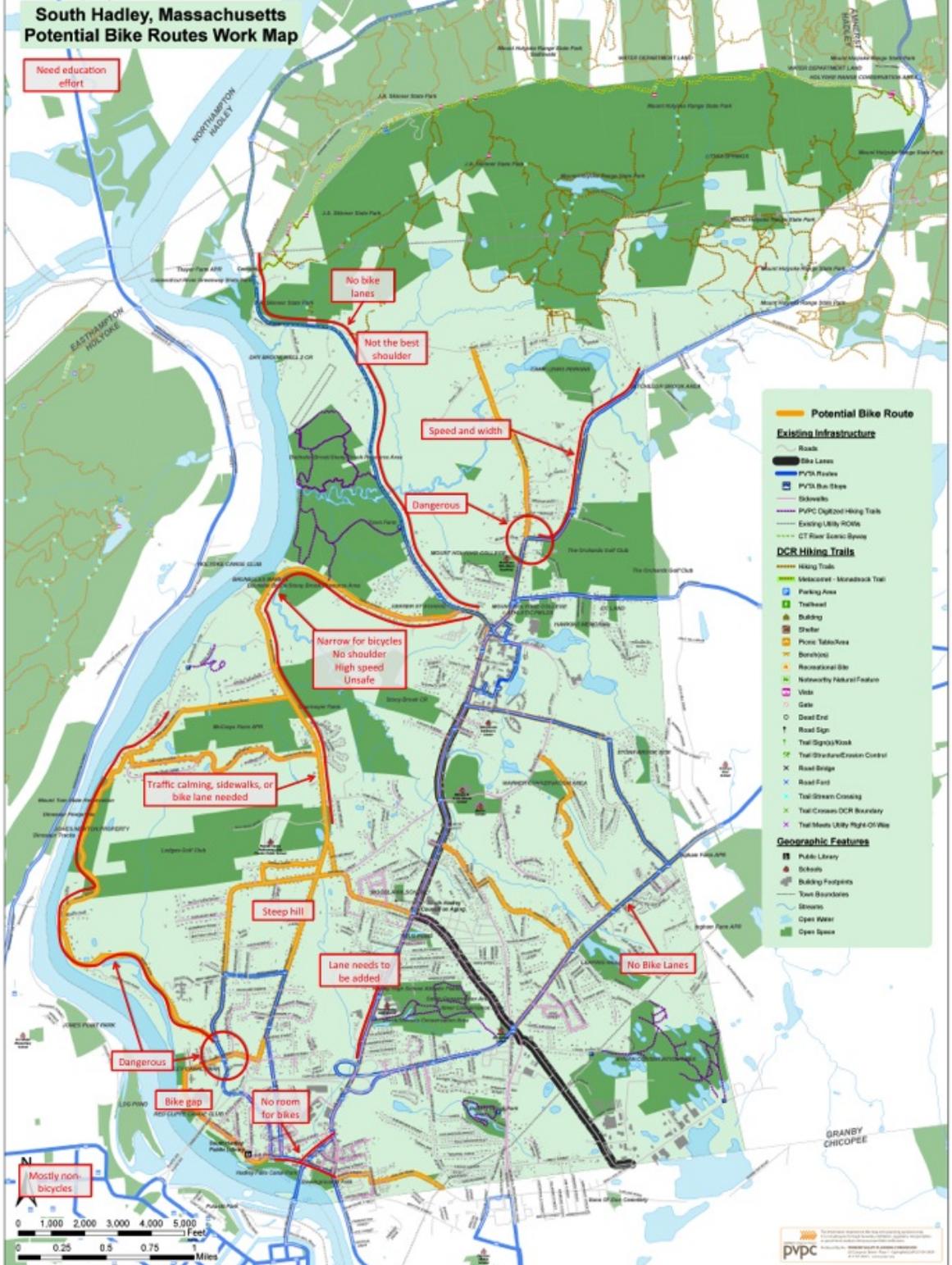


Figure 3: Bicycle Network Challenges from Visioning Session Input

Visioning Session Citizen Input Map: Bicycle Network Opportunities



Figure 4: Bicycle Network Opportunities from Visioning Session Input

The Bicycle Network Challenges Map

The Bicycle Network Challenges Map (see Figure 3) identifies a variety of barriers to bicycling in South Hadley. Major challenges include narrow roads with no bike lanes, limited shoulders and/or no shoulders. High speed traffic was identified repeatedly as a barrier to bicycling. Two intersections were called out as especially dangerous: North Main Street and West Summit Street just north of the Route 202 rotary; and Woodbridge Street and Amherst Road. A steep hill was called out on Brainerd Street. During group discussions it became clear that participants' level of comfort with bicycling in South Hadley varied widely. One or two participants indicated that they actively ride in South Hadley and would be willing to ride just about anywhere in town. A large number of participants indicated that they do not ride a bicycle in South Hadley and would never ride a bicycle on the road in South Hadley due to concerns about safety. This latter group of participants stated that they would only ride in South Hadley if there were separated bike lanes, and/or off-road paths. The feedback confirms what literature about bicycling tells us about the demographics of bicyclists and their broad preferences. Most people will not take up bicycling unless they routes are available in which bicycle lanes are physically separated from traffic, or motor vehicle traffic is very slow with very low volumes.

The Bicycle Network Opportunities Map

The bicycle network opportunities map (see Figure 4) reveals that forum participants saw opportunities for six kinds of bicycle improvements.

First, participants saw opportunities for dedicated bicycle lanes on roads that provide convenient, direct connections to major destinations and neighboring towns. Examples of opportunities identified include continuing to add bicycle lanes on Route 116, providing bicycle lanes on Amherst Road and Silver Street and Granby Road.

Second, participants identified potential scenic routes that might be appropriate for recreational riding. Ferry Street and upper Alvord Street were called out for what we will call the "Farm Route." Several streets were identified for a potential Connecticut River loop, including Upper River Road, San Souci Drive, and River Road.

Third, participants called out potential opportunities to add bicycle facilities on existing parks, conservation, and/or town owned lands. Examples include, potential bike trails at Batchelor Brook/Stony Brook, Black/Stevens Conservation Area, and Bynan Conservation Area areas. Presumably these would be mountain bike trails. Participants also identified Camp Lewis Perkins as a site for a potential bike loop and Ledges Golf Course as a potential location for a bicycle connection between Alvord Street and River Road.

Fourth, participants picked out new locations for off-road paths, presumably multi-use paths. Routes to investigate further include two major stream corridors, a

sewer right of way, power line rights of way, and an old trolley right of way. These routes have the potential to provide unique, low-stress, long-distance connections within South Hadley. However, implementing these routes would require a significant investment of time, money, and citizen advocacy.

Fifth, participants singled out potential opportunities for site-specific improvements to make key connections and/or eliminate key barriers to comfortable cycling. Participants identified the following: improve the intersection of Woodbridge Street and Amherst Road; publicize and improve the connection between Mountain View Street and Red Bridge Road; Connect River Road to Canal Street; and Bridge Street to Holyoke, especially the Train Station.

Sixth, participants expressed a strong desire for connections to off-road paths in neighboring communities, including Amherst, Holyoke, Easthampton and Northampton. Participants would like South Hadley to participate in creation of a regional network of multi-use paths. Unfortunately, unlike other communities in the region that have developed multi-use paths, South Hadley does not have existing abandoned rail lines that can be converted to rail trails. In order to create off-road multi-use paths, South Hadley will need to pursue innovative solutions, which will likely require long-term, concerted effort including acquiring property or easements and significant constructions costs.

Visioning Session Citizen Input Map: Walking Network Challenges



Figure 5: Walking Network Challenges from Visioning Session Input

The Walking Network Challenges Map

Break out group discussions identified a broad range of challenges to walking South Hadley (see Figure 5). The large number of comments recorded and their geographic distribution likely indicates that participants commented mostly on the areas they knew best. There are likely additional challenges to pedestrians in South Hadley that were not revealed by the exercise simply because participants in the visioning session did not represent every street in the Town.

Sidewalk gaps:

- Brainerd Street between Lyman Street and Lathrop Street
- Sidewalk connection to Loomis Village
- Route 202 from the Bridge through the rotary
- Hartford Street from Bolton Street to Spring Street
- Park Street
- Morgan Street
- Ferry Street (recently improved by the Town)
- Alvord Street
- Lathrop Street

Safe walking access to schools throughout South Hadley

Unsafe site design for pedestrians at Big Y and Autozone on Willimansett Street

Deficiencies at existing parks and conservation areas

- Lack of signage at Bynan Conservation area
- Poor access to Buttery Brook Park from streets
- Lack of parking at the Lithia Springs Road trail access to Mount Holyoke Range State Park
- Poor access, erosion, and overgrown trails at Black Stevens Conservation Area
- Lack of publicly accessible walking trails at Ledges Golf Club

Intersection and Road Crossing challenges

- Granby Road PVTA stop at Lorraine Avenue—difficult crossing
- Lack of safe crosswalks on Route 116 between Mosier and South Hadley High School
- Bad turn at Amherst Road and Woodbridge Street
- Lack of safe crosswalks on Lathrop Street

- Sidewalk maintenance
- Lamb Street
- Woodbridge Street in the vicinity of Woodbridge Terrace

Fast Traffic Speeds

- Lathrop Street

- Alvord Street
- and 116 between Mosier Street and South Hadley High School

Poor visibility for pedestrians

- Park Street
- Charon Terrace (street lighting)

The Walking Network Opportunities Map

The Walking Network Opportunities Map shows diverse opportunities to improve the pedestrian network in South Hadley (see Figure 6).

Forum participants called out the opportunity to provide better access to specific destinations including, the library, the Big-Y grocery store, McCray's Farm, the Train Station in Holyoke, the Community Garden at the Town Fields, and Brunelle's Marina. They noted the need for a cut-through between South Hadley Falls and the neighborhoods to the west and north (bypassing the interchange at the intersection of Route 116 and Route 202).

Participants called out opportunities to improve streets that are already somewhat pedestrian friendly. Examples include extending the high quality pedestrian environment that exists on Route 116 in the vicinity of Mount Holyoke, improving or extending pedestrian facilities on Woodbridge Street, improving or extending the sidewalk loop on Mosier Street/Morgan Street/Route 116, and taking advantage of the scenic nature of Alvord Street by extending the sidewalks on Ferry Street all the way to McCray's Farm or beyond.

The walking path connection between Red Bridge Road and Hillside Avenue was seen as a significant opportunity that deserves greater publicity. In addition, its precedent is significant—it improves network connectivity by linking adjacent a loop street and a dead end street. There are numerous disconnected adjacent neighborhoods in South Hadley that could theoretically be connected with pedestrian paths.

Trails improvements opportunities included an improved trail head to connect to Mount Holyoke Trails at Lithia Springs Road. In addition participants desired a safe walking access along Route 47 to Skinner Mountain. Participants noted opportunities for new trails to create long-distance connections along the Connecticut River from South Hadley Falls to River Road, and from Ferry Street to Route 47 through the Bachelor Brook conservation area. Finally, participants noted the existing trails at Mount Holyoke College and the opportunities for cross-country skiing and/or snowshoeing at the Ledges and Orchards Golf Clubs.

Prioritized Improvements from Break out Groups

Break-out groups in the public forum were asked to identify the top five opportunities for improving walking and bicycling in South Hadley. The results follow.

Group #1

Walking and hiking improvement priorities

1. Sidewalks are needed
2. Restore trails at Black Stevens area
3. River Road walking connections. Walking trail on River by Canal
4. Traffic calming on Alvord and Lathrop
5. Cut throughs to reach falls from Memorial Drive

Bicycling improvement priorities

1. Link to Norwottuck & Manhan Rail Trails
2. Bike trails in conservation area. Town-wide as well as Ledges
3. Link College to Big Y
4. Alvord/Lathrop Rd. improvements
5. River Rd. improvements & linkage

Notes and Comments: Education on share the road
Maybe with license renewals
School education

Group #2

Walking and hiking improvement priorities

1. Sidewalks everywhere. Falls to Commons on multiple routes for family and kids
2. Lathrop/Alvord/Community Gardens. Access to Mullen Bridge
3. River Access
4. Signage to Bynan Conservation Area and trail signs
5. Bus access by sidewalks

Notes and Comments: More recreation trails for kids/family/handicapped

Bicycling improvement priorities

1. Making roads safe from traffic
2. Connect to existing bikes trails (Amherst/Hadley)
3. Bike routes to libraries and schools
4. Bike lane onto Mullen Bridge

5. Route 47 scenic route on Lathrop/Alvord

Notes and Comments:

Rumble strip between cars and bikes

Scenic loop along river

Connections to Commons and Falls section

Group #3

Walking and hiking improvement priorities

1. H.S. walk access from Granby Road
2. Mosier/Park/Morgan sidewalks, intersection improvements, signage
3. Alvord/Ferry St - destinations
4. Route 116 (Newton St.) More trees, slower traffic to H.S.
5. Sidewalks Brainerd to McCray's

Bicycling improvement priorities

1. Investigate possibilities for off-road routes (including along stream corridors and ledges/farm/McCray)
2. Less used roads, River Rd., Upper River Lodge Rd.
3. Use residential streets for bike routes. Connect residential streets where there are breaks (Mt. View/Redbridge land)
4. Create a system of off road bike paths that connect to on road sections (e.g. bike paths in conservation areas with on road bike lanes that connect the conservation areas).
5. Bike paths around Camp Lewis Perkins and its ponds

Group #4

Walking and hiking improvement priorities

1. CT River
2. McCray to Brunelles
3. Mount Holyoke
4. Library connection
5. Big Y

Bicycling improvement priorities

1. Ferry/Alvord (widen)
2. River Road (off-road)
3. Rt. 47

4. 202 Bike Lane
5. Bridge Path

Flip Chart Notes from Group Discussion

- Education is important
 - Motor Vehicles need to know the rules of the road
 - Police enforcement of unsafe bicycling
 - Education/safety programs in schools
 - Bike helmet laws
- Create a bicycle culture
 - Transform community to be bike friendly
 - Bike clubs, events, etc.
 - Set aside certain days of the year where specific places are for bicycles and pedestrians only [cyclovia]
- Identify short-term improvements
- Complete streets for new improvement projects
 - Desire 30' roadway width
 - Expand shoulders on Alvord St as part of a future project
- South Hadley has applied for a MassWorks grant for the Falls which would create better pedestrian connections to the Holyoke Train station.
 - Will require removal of on-street parking. That will require community support.

Notes from show of hands exercise during forum

- about 95% of attendees completed the survey
- about 20% of attendees bike regularly
- about 90% of participants walk regularly
- most of bikers, bike for functional purposes
- almost none participants walk for functional purposes
- most of participants walk for recreational purposes
- Changes that would help participants walk more:
 - Reducing vehicle speed
 - Adding sidewalks
 - Better access to trails
- Changes that would help participants bike more:
 - If drivers obeyed laws
 - More trails/off-road bike paths



Figure 7: Photo Courtesy of Flickr user Chad Elliot

INTERVIEWS WITH TOWN OFFICIALS

A number of officials representing various interests in the Town of South Hadley were interviewed to perform an assessment of existing bicycle and pedestrian

safety. A copy of the survey is included as part of the Appendix to this document. All total eleven local officials participated in this telephone survey.

- South Hadley Superintendent of Schools
- South Hadley School Resource Officer
- Plains School Principal
- South Hadley High School Principal
- South Hadley Department of Public Works Superintendent
- Pioneer Valley Performing Arts Charter Public School Head of School
- South Hadley Chief of Police
- South Hadley Council on Aging Director
- Mount Holyoke College Associate Professor of Environmental Studies
- Mount Holyoke College Director of Government and Community Relations in the Office of the President
- South Hadley Bike Walk Committee Representative

Most local officials rated the existing infrastructure to support walking and bicycling in South Hadley as either good or fair. Two considered the infrastructure poor and one had no opinion.

Excellent	0
Good	3
Fair	5
Poor	2
Unknown	1

Table 16 - Condition of Existing Infrastructure

Route 116 and the new bicycle lanes installed by the Massachusetts Department of Transportation (MassDOT) during the summer of 2015 were cited as an example of an area in South Hadley that currently provides excellent bicycle and pedestrian accommodations. Other locations included the Mount Holyoke College campus and the new path along the Connecticut River in South Hadley Falls.

New CT River Path	1
Stony Brook Conservation Area	1
Stevens Pond	1
Hadley Street	1
Newton Street	3
New Route 116 bike lanes	3
Mount Holyoke College Campus	2

Table 17 - Areas That Excellent Bicycle and Pedestrian Accommodations

Areas that were considered to provide poor bicycle and pedestrian accommodations included Route 116 along the curve in the vicinity of Woodbridge Street, Alvord Street due to the narrowness of the road, and Hadley Street (Route 47) due to higher travel speeds and narrow sections of the road. An existing offroad path that connects the High School to the Plains School was cited as an area that is currently in poor condition but that could provide many positive benefits if properly maintained.

Path between High School and Plains School	1
Amherst Street	1
Route 116 South (curve area)	3
Alvord Street	1
Walnut Street	1
Elm Street	1
River Road	1
Mosier Street	1
Hadley Street	1
South Hadley Falls	1

Table 18 - Areas that Provide Poor Bicycle and Pedestrian Accommodations

School personnel were asked the percentage of students that currently walk or ride their bicycle to school. Approximately 25% of students in the elementary and middle school are currently walking or riding a bicycle to school. Approximately 20% of High School students walk to school, but only a very low number of students ride bicycles to the High School. The Performing Arts Charter School has only a modest number of students that ride a bicycle due to the location of the school and the distance that many students need to travel to attend school.

School	Walk	Bike
South Hadley High School	20%	2%
Performing Arts School	0%	1%
Middle Schools	25%	25%
Plains School	25%	25%?

Table 19 - Percentage of Students that Walk or Bike to School

Conversations with school personnel indicate that no formal bicycle and pedestrian safety education program currently exists for students in the South Hadley Schools. All students do receive a safety briefing at the beginning of the school year, but a formal safety program is not included as part of the current budget. One official considered the current level of bicycle and pedestrian safety skills of South Hadley students to be “Good,” three responded “Fair,” and three did not know the current student skill level.

Excellent	0
Good	1
Fair	3
Poor	0
Unknown	3

Table 20 - Current Level of Bicycle and Pedestrian Safety Skills for Students

Both Route 116 and Route 47 were considered by local officials to be the most unsafe for bicycles and pedestrians. Route 47 was considered to be unsafe due to a lack of sidewalks, higher travel speeds, and narrow travel lanes. Route 116 was considered unsafe due to erratic driver behavior, the curve near Woodbridge Street, and the high concentration of businesses can cause drivers not to focus on bicycles and pedestrians.

Route 116	3
East Street	1
South Hadley Falls	2
Purple Heart Drive	1
Route 47	3
River Road	1
Lathrop Street	1

Table 21 - Locations Deemed Most Unsafe for Bicycles and Pedestrians

Route 116 was also identified as a location where safe routes to school and other bicycle and pedestrian improvements are necessary by four officials. Most roadways that link to local schools were also identified as locations where additional improvements are necessary.

Route 116	4
All roads linking to schools	1

Route 202 in vicinity of rotary	1
Mosier Street	1
East Street	1
To Plains School	1
Route 47	1

Table 22 - Routes that Require Safe Routes to School Improvements

Schools, parks, libraries, and the Village Commons were all top locations that are considered the most important to have safe bicycle and pedestrian accommodations and amenities. Other locations included the South Hadley Falls area, McCray’s Farm, and Mount Holyoke College.

Schools, parks and libraries	4
Main roads	1
Mt. Holyoke College	1
McCray’s Farm	1
Mulligan Drive	1
Village Commons	4
South Hadley Falls	1

Table 23 - Priority Locations for Safe Bicycle and Pedestrian Accommodations

Most officials did not feel that drivers are generally aware of the rules of the road with respect to bicycling and walking. Ten out of the eleven officials interviewed believe there are opportunities to increase the level of bicycling and walking in South Hadley. When asked what ongoing projects or programs there are in South Hadley to improve bicycle and pedestrian safety, officials cited the recent installation of bike lanes on Route 116, the expansion of school health education program, ongoing sidewalk replacement projects, the success of past bike rodeos, and an active Bike Walk Committee. There were a wide variety of opinions on the most important bicycle or pedestrian safety improvement project needed in South Hadley as follows:

- A Master Plan should be developed to identify ways to link existing routes in town.
- The Town should focus on designating specific bike routes and marked lanes.
- A north/south route along Rout116 should be developed to connect Amherst and Holyoke.
- Bicycle and pedestrian improvements are necessary along the back roads that connect to the dockside area.
- Bicycle and pedestrian improvements are necessary along the Route 47 corridor.
- More off road bicycle paths should be developed.
- The Town should continue to expand on its sidewalk replacement program.

All of the local officials were asked to evaluate the need for a series of fourteen facilities to promote bicycling and walking in South Hadley. Each facility was rated on a scale of one to five with five being the most important. More on street bike lanes were considered the greatest need followed closely by improved pedestrian crossings and sidewalk connections. A bike sharing program and better bicycle amenities were considered to be of least importance. A summary of the responses to this question are shown in Table 24.

Facilities Needed to Promote Safe Walking and Bicycling	Total	Average Score
More on-street bike lanes	49	4.45
Improved sidewalk connections (less gaps in sidewalk network)	46	4.18
Improved pedestrian crossings (signals, crosswalks, warning signs)	44	4.00
Improved buffers between pedestrians/bicyclists and vehicles	43	3.91
Better bike accommodation through intersections and interchanges	41	3.73
More off-road bicycle paths and trails	40	3.64
Increased enforcement and education of traffic laws	39	3.55
Increased maintenance (street sweeping/repair of roads and sidewalks)	38	3.45
Improved signs, maps and roadway markings	38	3.45
Improved curb ramps and accessibility for people with disabilities	36	3.27
Slower traffic	36	3.27
Better lighting or security measures	32	2.91
Better bicycle parking, storage and workplace amenities (eg. showers)	24	2.18
A bike sharing program	23	2.09

Table 24 - Facilities Most Needed to Promote Safe Walking and Bicycling

Other significant comments related to bicycle and pedestrian safety from the survey of local officials centered around the other positive impacts that a robust bicycle and pedestrian infrastructure can provide such as economic impacts for the business community in the vicinity of facilities that are well used. The perception of safety was also discussed as better buffers may be necessary in many areas to encourage more bicycle and pedestrian activity.

3. Existing Conditions

OVERVIEW OF SOUTH HADLEY 'S ROAD NETWORK

South Hadley's bicycle and pedestrian networks are based upon its road network and are of mixed quality reflecting the historical development of the town's roads, streets, and sidewalks. Up until the 20th century there were only a small number of roads in South Hadley. These older roads established the basic network connectivity of South Hadley, providing routes between various parts of town and connecting to neighboring communities. Many of the older roads are still the town's major routes. They include many of the numbered routes, for example Route 116, Granby Road, and Route 47.

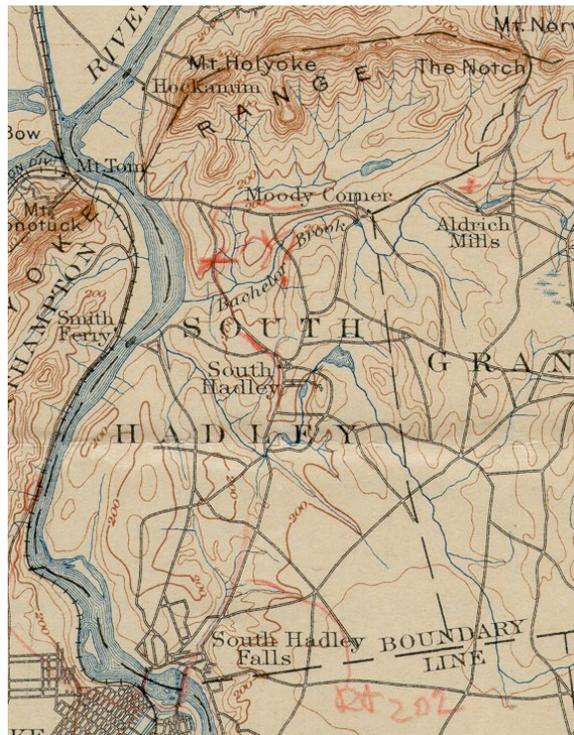


Figure 8: USGS map of South Hadley Falls in 1901. Note the small number of roads. For example, compare South Hadley 's street network to Holyoke 's street grid in the lower left of the image.

For most of South Hadley's history, development happened along this basic network of roads. Villages grew up at their key nodes: South Hadley Falls, the area around Newton Corner, and the area around Mt. Holyoke College. Of these, South Hadley Falls was the densest village, with the shortest blocks, the most

grid-like street pattern, and sidewalks on virtually every street. This area remains one of South Hadley’s most walkable areas.

After the middle of the 20th century, a large number of streets were added to South Hadley’s inventory. Most of these streets were built to serve residential subdivisions, often in a pattern of short dead end spurs, culs-de-sac, or residential loops. These streets were primarily designed to connect residents of new houses to the existing major roads. Most of the new streets did not improve the network connectivity in South Hadley. In other words, most newer roads in South Hadley are not useful for getting from one part of town to another; they don’t connect one major road to another, or one part of town to another.

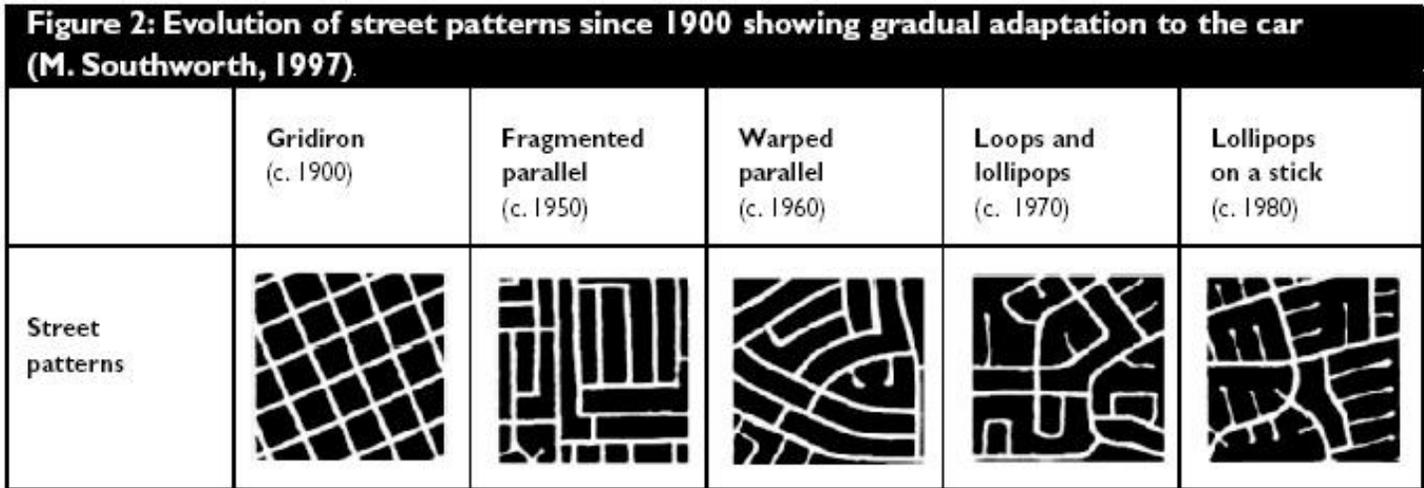


Figure 9: Examples of street patterns. South Hadley ’s more recent streets follow a dispersed “loops and lollipops ” pattern with examples of “lollipops on a stick ”

While non-connected residential roads are common in many communities that have experienced significant residential development since World War II, the pattern is particularly prevalent in South Hadley. This is, in part, because they town has numerous wetlands and several prominent stream corridors. Residential development and its associated streets, has expanded to the edges of these regulated environmental features, but generally has not bridged them. The result is that streams and wetlands divide the town into pockets of residential development off of major roads with limited paths between the various pockets.

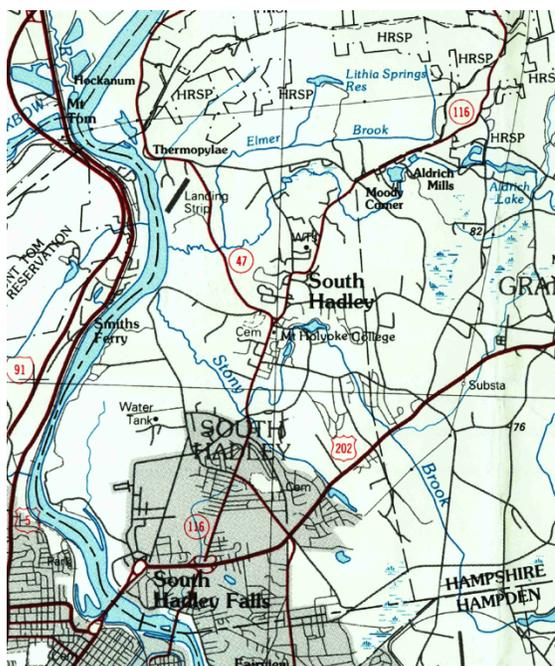


Figure 10: USGS map of South Hadley in 1985.

On the one hand, the town’s “loops and lollipop” street pattern enables quiet residential streets with little to no through traffic. On the other hand, it concentrates most of the Town’s traffic on a small number of through streets. When residents of South Hadley leave their homes, they generally all end up on the same major roads. In other words, South Hadley’s street pattern results in relatively high traffic volumes on a small number of roads, compared to the volumes that would exist if the street network were more connected and grid like. In addition, the limited network connectivity of South Hadley’s street pattern increases the length of routes between destinations. While these increased distances may not be significant while driving, even modest increases in distance can be significant for a person who is choosing whether to walk, bike, or drive. The typical American will only consider walking about 5 minutes to a destination (1/4 mile) before they opt to drive. The average bicycle trip is under 2 miles. Ultimately, South Hadley’s street network is the starting point, the basis for the town’s pedestrian and bicycle network. It is the starting point for making improvements. This is not to say that off-road paths do not also provide opportunities for walking and biking. They can and do. However, these paths generally fulfill recreational needs and ultimately they are accessed via the driving lanes, sidewalks, and bike facilities that make up the street network.

Legend

- Town Boundaries
- Major Roads (Arterials & Collectors)
- Local Connecting Roads
- Local Roads that do not Increase Network Connectivity

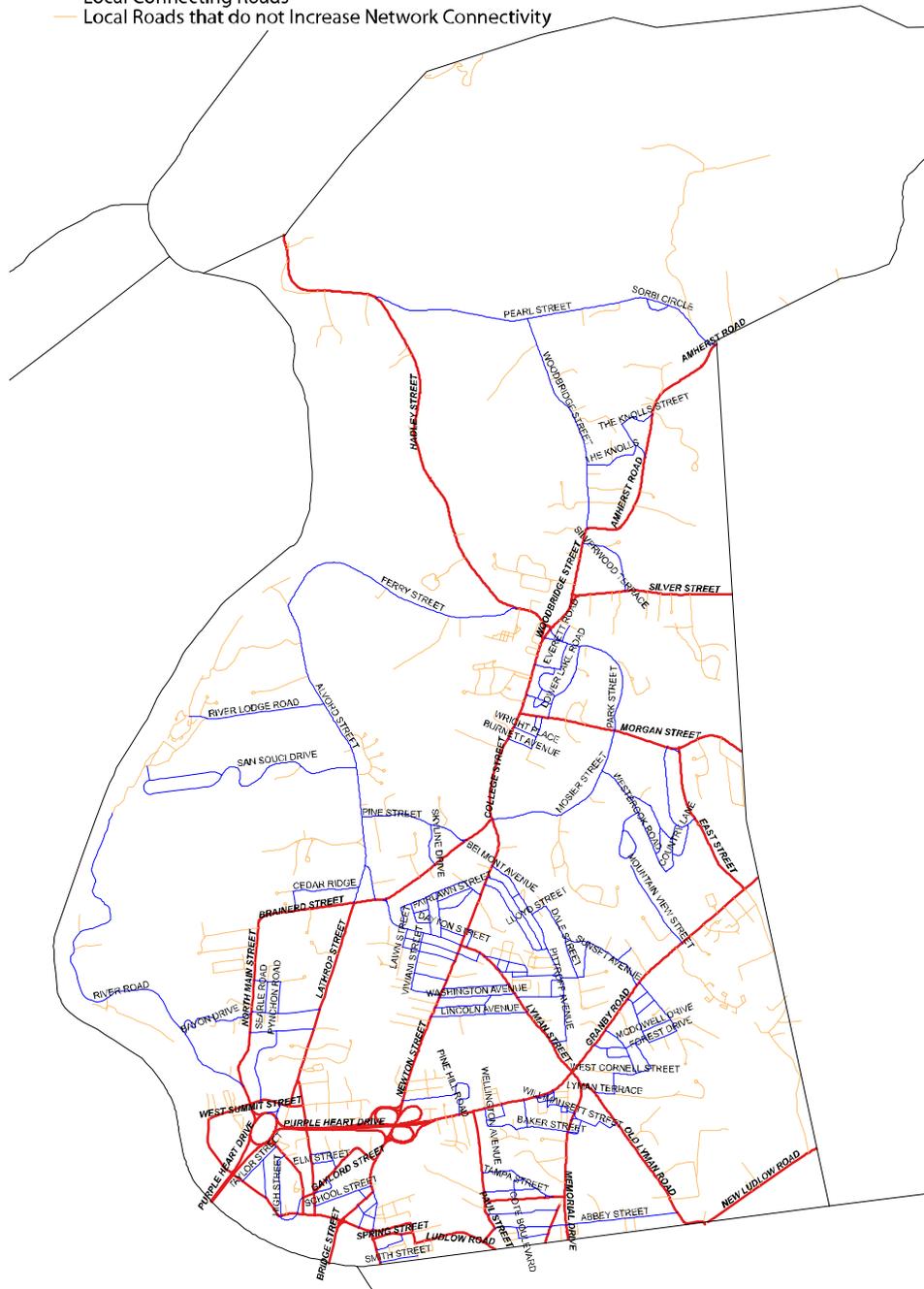


Figure 11: South Hadley's road network. Roads in red provide the major connections within the Town and to neighboring communities. The roads in blue provide some degree of connectivity between major roads. Roads that do not provide connectivity are shown in orange. These include dead ends and cul-de-sacs. This map does not infer public ownership of roads shown.

There are many ways to describe roads. Functional classification is common in transportation planning and includes types like, local roads, collectors, and arterials. Urban designers, on the other hand, often describe types of roads based on their basic cross section. For example, boulevards, avenues, yield streets, roads. From a network perspective, the Town of South Hadley has three basic types of roads: major roads that connect through the town and to neighboring communities; local connecting roads that connect between major roads or to neighboring towns; and local roads that do not increase network connectivity. The last category includes dead ends, culs-de-sac, and other roads that do not provide a reasonably direct route between other streets or roads. These road types are illustrated in Figure 11.

The major roads are predominantly state numbered roads. These roads have mostly been in existence for more than a century. They provide the backbone for connectivity in South Hadley and almost all functional trips must use them at some point. These roads vary widely in traffic volume. Some carry as little as 1000 vehicles per day. While others carry over 20,000 vehicles per day. These roads include Route 116, which generally runs north/south through the center of the Town and connects the Town Center/Mount Holyoke College to South Hadley Falls. Route 116 is also called Bridge Street, Lamb Street, Newton Street, College Street, Woodbridge Street, and Amherst Road. Route 202 (Purple Heart Drive/Granby Road) runs generally east-west through the southern part of Town connecting Holyoke to Granby. Route 47 (Hadley Street) connects Hadley with the Town Center. Route 33 (Lyman Street/Willimansett Street) connects Route 116 to Route 202 and continues on to Chicopee. Silver Street and Morgan Street connect Route 116 to points west. East Street connects Granby Road to Morgan Street. Brainerd Street, Lathrop Street and Northampton Street provide an alternate route between Route 116 and Route 202/Holyoke and also provide access to South Hadley Falls via West Summit Street, Bardwell Street or North Main Street. Finally New Ludlow Road connect Old Lyman Road to Granby.

Local through roads connect between the major roads and/or connect to neighboring towns. These roads generally do not run the full length or width of South Hadley. Almost all of these roads carry less than 2000 vehicles per day. This category of roads includes Pearl Street, Ferry Street, Alvord Street, Pine Street, and Mosier Street. It also includes lesser known streets, such as Pitroff Avenue/Richview Avenue, Silverwood Terrace, or Park Street, which may be used as “cut throughs,” and/or could function as walking and biking routes for residents who are averse to traffic (given the right facilities).

Local roads that do not provide network connectivity are generally only used by people who live on them or are visiting those who do. These streets generally have very low traffic volumes—although not necessarily low speeds.

Silver Street, Morgan Street, Pine Street, and Brainerd Street are examples of roads which provide east/west connections either between major roads or to adjacent communities. Lyman Street and Pitroff Avenue/Richview Avenue

connect 202 to 116. East Street connects 202 to Morgan Street, which in turn connects to 116. Mosier Street and Park Street fill out the local through road network by providing a loop between 116 to and Morgan Street in the vicinity of Mount Holyoke College. These streets also carry traffic to the Michael E. Smith Middle School and Mosier Schools.

Connected residential streets provide pockets of gridded streets or provide redundant connections between major streets or local through roads. These were generally built before World War II. They include the streets in South Hadley Falls.

The street network of South Hadley largely reflects a history of incremental residential subdivision. There are several grid types.

MAPS OF THE PEDESTRIAN AND BICYCLE NETWORKS IN SOUTH HADLEY

PVPC compiled maps of existing pedestrian and bicycle networks in South Hadley. The maps show existing bike lanes, existing sidewalks, existing hiking trails, and major destinations. The maps follow.

