



# COMPLETE STREETS NEEDS ASSESSMENT AND PRIORITIZATION PLAN

DRAFT

TOWN OF CLARKSBURG, MA

2017



PREPARED BY:  
Berkshire Regional Planning Commission (BRPC)  
& the Town of Clarksburg

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## INTRODUCTION

The Town of Clarksburg recognizes the need for a multimodal approach to transportation investments, as there is a growing awareness that street design is traditionally focused on automobile travel rather than providing safe accommodations for bicycles and pedestrians. As nonmotorized transportation for travel and recreation becomes increasingly popular, the need to accommodate cyclists and pedestrians in Clarksburg is clear.

Complete Streets are roadways designed to accommodate all users safely and comfortably, regardless of age, ability, or mode of transportation. Users include motorists, cyclists, pedestrians, and all vehicle types, including school buses, emergency responders, and freight and delivery trucks among others. In addition to providing safety and access for all users, Complete Street design treatments should consider accommodations for disabled persons as required by the Americans with Disabilities Act (ADA). Design considerations for connectivity and access management are also considered with regards to nonmotorized users of the facility.

Enhancements to the multimodal network must be done in a balanced and context-sensitive approach that looks at a wide range of factors from safety to livability and economic development to connectivity. These criteria must be considered when thinking about Complete Streets improvements that accommodate all users and all abilities. Complete Streets components include typical roadway design features such as traffic calming, bicycle lanes, wayfinding, safe crossings, landscaping, sidewalks, and/or wide shoulders to accommodate nonmotorized travelers in more rural areas. However, not all streets need to include every Complete Streets element. Certain criteria generally dictate which design features are appropriate. In other words, the appropriate level of roadway completeness depends upon its context and function. Complete Streets can be planned as a retrofit to existing streets or incorporated into the design of new streets.

This report has three key expected outcomes. The first is to support Clarksburg's Complete Streets Policy, adopted by the Board of Selectmen on April 13, 2016. The second is to evaluate existing conditions for nonmotorized users of the transportation system. The third is to recommend an implementation strategy for Complete Streets projects that follows a template designed by MassDOT to fulfill the requirements for a Complete Street Project Prioritization Plan.

The newest federal transportation legislation, the Fixing American's Surface Transportation (FAST) Act, supports the multimodal approach to transportation planning and programming, and encourages communities to consider all users of the system in designing a safe, and well-connected system. MassDOT's Complete Streets Funding Program has provided Clarksburg with the opportunity to look at existing conditions, potential improvements, and implementation strategies that support Complete Streets in Clarksburg.

### MassDOT Complete Streets Funding Program

Technical assistance to the Town of Clarksburg by BRPC was made possible through funding from MassDOT's Complete Streets program. The Complete Streets program was "authorized by the 2014 Transportation Bond Bill, [and] offers Massachusetts municipalities incentives to adopt policies and practices that provide safe and accessible options for all travel modes." Technical assistance funding of up to \$50,000 was available to communities to "conduct a needs assessment, network gap analysis, and/or safety audit to determine a targeted investment strategy for Complete Streets infrastructure."<sup>1</sup>

To participate and maintain eligibility in the funding program, communities were required to proceed through three tiers of the program. At Tier 1, a Town employee was required to attend a Complete Streets 101

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<sup>1</sup> Mass. Dept. of Transportation (MassDOT). 2016. Complete Streets Flyer. Available from: <http://www.massdot.state.ma.us/Portals/8/docs/CompleteStreets/flyer.pdf>

training session and the Town had to adopt a policy affirming the community's commitment to Complete Streets in all aspects of transportation design and construction. At Tier 2, communities were required to draft a prioritization plan that outlined at least 15 eligible projects programmed over a 5-year period. This needs assessment and prioritization plan prepared by BRPC and the Town of Clarksburg Complete Streets Working Group meets the requirements for the town's Tier 2 eligibility. At Tier 3, communities were required to submit projects to MassDOT for potential construction funding. Up to \$400,000 is available in construction funding yearly through the Complete Streets program. However, this funding is distributed as in a grant program, with no guarantee of funding from year to year. **For fiscal year (FY) 2018, Clarksburg applied for XX (see Table XX).**

### *Eligible Roadways and Project Types*

The MassDOT Complete Streets funding program provides potential funding for projects of four main types including: traffic and safety, bicycle facilities, transit facilities, and pedestrian facilities. For a complete list of eligible project types, refer to MassDOT Complete Streets Program Guidance.<sup>2</sup> Additionally, only locally maintained roadways are eligible for potential funding, state highways and roads maintained by other entities are not. However, this assessment examines complete streets needs on all roadways within the Town of Clarksburg, regardless of jurisdiction to ensure maximum connectivity throughout the transportation network. While some projects identified may not be eligible for funding, this needs assessment could become a tool to advocate for future changes to state roadways.

## Background

The Town of Clarksburg developed this report with the support of their Complete Streets Working Group, and technical assistance provided by the Berkshire Regional Planning Commission.

The Town of Clarksburg's Complete Streets Working Group provided oversight, and is responsible for the implementation of the Complete Streets Policy. This working group includes the Town Administrator, DPW Superintendent, and the local Mass. in Motion Project Coordinator. The members on the working group at the time this report was developed were:

- Amanda Chilson, Mass. In Motion Project Coordinator, Northern Berkshire Community Coalition (NBCC)
- Kyle Hurlbut, Highway Superintendent
- Carl McKinney, Town Administrator

The Complete Streets Working Group discussed the benefits of implementing complete streets elements in Clarksburg and how these improvements can better the community for residents and visitors alike. For a complete summary of the public involvement for this planning process, please see **Appendix A**.

## PLANNING FRAMEWORK

Implementing Clarksburg's Complete Streets Policy will have various benefits that are experienced by many different stakeholders. With full-scale implementation of Complete Streets elements, the community can see benefits in safety, increased transportation options, support for the Towns economic vitality, environmental benefits, public health impacts, and accessibility for those that are mobility impaired.

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<sup>2</sup> Available from:

<http://www.massdot.state.ma.us/highway/DoingBusinessWithUs/LocalAidPrograms/CompleteStreets/FundingProgram.aspx>

## Vision and Intent

As it states in the Town of Clarksburg's Complete Streets Policy:

*The purpose of Clarksburg's Complete Streets Policy...is to accommodate all users by creating a roadway network that meets the needs of individuals utilizing a variety of transportation modes, whenever applicable. It is the intent of the Town of Clarksburg to formalize the planning, design, operation, and maintenance of streets so they are safe for all ages and abilities and provide a multi-modal transportation network. This Policy directs decision-makers, including staff, to consistently plan, design, construct, and maintain streets to accommodate a range of multi-modal transportation users including, but not limited to: pedestrians, cyclists, other nonmotorists, school bus riders, motorists, emergency vehicles, paratransit riders and freight/commercial vehicles.*

## Goals and Objectives

The goals and objectives of this Complete Streets Project Prioritization plan, guided by the Clarksburg Complete Streets Working Group, were developed to provide safety, comfort, mobility, and accessibility for all users of the street network, including pedestrians, cyclists, other nonmotorists, transit riders, motorists, commercial vehicles, and emergency vehicles.

1. **Connectivity** | Provide transportation choices by improving system connectivity within and between modes.
2. **Safety** | Prioritize safety for all users of the transportation system.
3. **Traffic Calming** | Promote traffic calming measures in Clarksburg to encourage access for all modes, reduce speeds in activity hubs, and promote attractive streetscapes.
4. **Cost Effectiveness** | Prioritize cost effective improvements that enhance the existing transportation network through maintenance and operations.
5. **Usability** | Prioritize projects that provide both biking and walking improvements.

## Performance Measures

### Mode Share

The Town of Clarksburg currently sees a commute mode-share dominated by automobile travel (90.9 of commuters). The mode-share is described in **Table 1**. The Town would like to see modest increases in all modes other than automobile, which collectively could reduce the number of car commuters by about 2.5%.

**Table 1. Clarksburg Mode-Share for Commuters**

Mode	Percent of Commuters
Car	90.9%
Transit	0.0%
Bicycle	0.0%
Walk	2.3%
Taxi	0.0%
Motorcycle	0.5%
Other	4.1%
Work at Home	2.3%

Source: 2006-2010 CTPP data

During the development of their planning framework, the Clarksburg Complete Streets Working Group developed system-wide performance measures for each of their five goals. The performance measures, listed by goal area, are shown in **Table 2**.

**Table 2. Annual System Performance Measures**

Goal	Performance Measure	Data Source
Connectivity	Share of non-automobile commuters	U.S. American Community Survey (ACS) <sup>3</sup>
Safety	Total crashes by severity and mode	MassDOT HSIP Crash Clusters <sup>4</sup>
Traffic Calming	Annual number of citations for speeding	Clarksburg Police Dept.
Cost Effectiveness	Maintenance and operations projects annually	Clarksburg Complete Streets Working Group
Usability	Number of residents within ¼ mile of a dedicated active mode facility	MassGIS – Land Use (2005) <sup>5</sup>

## Related Plans

The Town of Clarksburg worked with the Berkshire Regional Planning Commission (BRPC) in 2016 to develop this Complete Streets Prioritization Plan, which examines needs for Complete Streets in the town and maps out potential projects for implementation. The town also utilized BRPC’s transportation planners to develop a Road Condition Report in 2015. BRPC collected data per the Pavement Surface Evaluation and Rating (PASER) scale developed by The University of Wisconsin-Madison Transportation Information Center. PASER is a windshield road surface rating system that uses a 1 to 10 scale. In the PASER system a ‘10’ is a new or newly reconstructed roadway. A ‘1’ is a completely failed roadway. Ratings are assigned per the type and extent of visual defects. The report noted Carson Ave, Horrigan Rd., West Rd., and McLagen Dr. as roads in poor condition. The report also developed a budget and potential work program for the town.

## EXISTING CONDITIONS

### Sociodemographic Profile

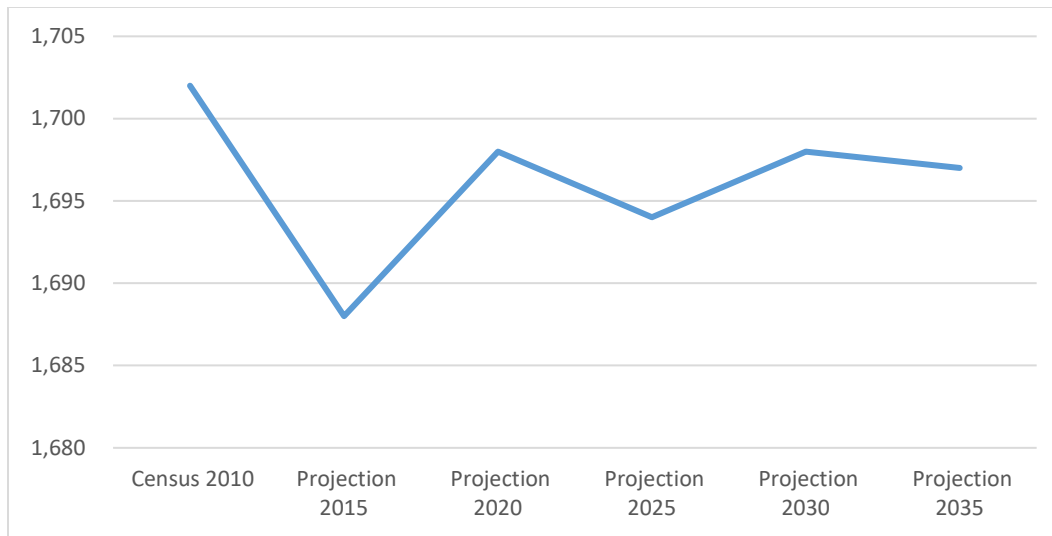
The Town of Clarksburg is a small town of 1,702 residents, which has seen population decline since 1970 (1,987 residents). Population projections from the UMass Donahue Institute anticipate that Clarksburg will have a relatively stable population over the next 20 years (see **Figure 1**).

**Figure 1. Population Projection**

<sup>3</sup> <http://factfinder.census.gov/>

<sup>4</sup> [http://geo.massdot.opendata.arcgis.com/datasets/cc323741010d4b17b71ca664e2050457\\_1](http://geo.massdot.opendata.arcgis.com/datasets/cc323741010d4b17b71ca664e2050457_1)

<sup>5</sup> <http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lus2005.html>



*Source: UMass Donahue Institute*

According to recent data, the median age of Clarksburg residents has increased from 41.3 in 2000 to 45.1 in 2010. The 2014 American Community Survey (ACS) places this estimate of median age even higher - at 49.4 years of age. These town trends match with other regional data, as overall, Berkshire county is aging much faster than the rest of Massachusetts. Already, Berkshire County is the second oldest county by median age in the state, just behind Barnstable County (Cape Cod).

As a rural community, active mode improvements in Clarksburg support public health and aging in place, enabling older residents to choose active modes by creating a connected network of town recreation areas, such as providing a safer link between the senior center and the town field. Beyond this, complete streets improvements could provide an alternative means of transportation for older individuals who no longer drive.

Although active modes for seniors is important, providing the same opportunities for adults and children are equally important. Safety improvements could encourage residents of all ages to adopt a healthier lifestyle of walking or biking to attend school, local events or visit neighbors.

## Climate

There are about 185 sunny days per year and about 146 precipitation days per year,<sup>6</sup> the latter of which may make travelling by bicycle or foot difficult at times. Berkshire County receives snowfall throughout the winter months, and is at a higher elevation than most of Massachusetts. That said, the summer months aren't as hot on average as the rest of the state, and many are great days to travel using active modes.

## Context and Topography

Clarksburg is located at the northernmost extent of Berkshire County. The town is directly north of North Adams, one of the Berkshire's largest municipalities, and is bordered by the Massachusetts towns of Williamstown and Monroe, and the Vermont town of Stamford. Clarksburg is situated at a much higher elevation relative to North Adams, with the town at an elevation of around 1100' and North Adams located at roughly 700' in elevation. Therefore, roadways leading to the town from the south are steep and gain elevation relatively quickly, making the pedestrian and cycling connection between Clarksburg and North Adams difficult.

<sup>6</sup> <http://www.bestplaces.net/climate/city/massachusetts/clarksburg>

Neighborhoods in Clarksburg are bordered on both sides by mountains. East and Bald Mountain, located in Clarksburg State Forest, form the western edge of the neighborhoods and development in town. To the east, neighborhoods are bounded by a steep ridge of the Hoosac Range. The North Branch Hoosic River flows through the middle of town.

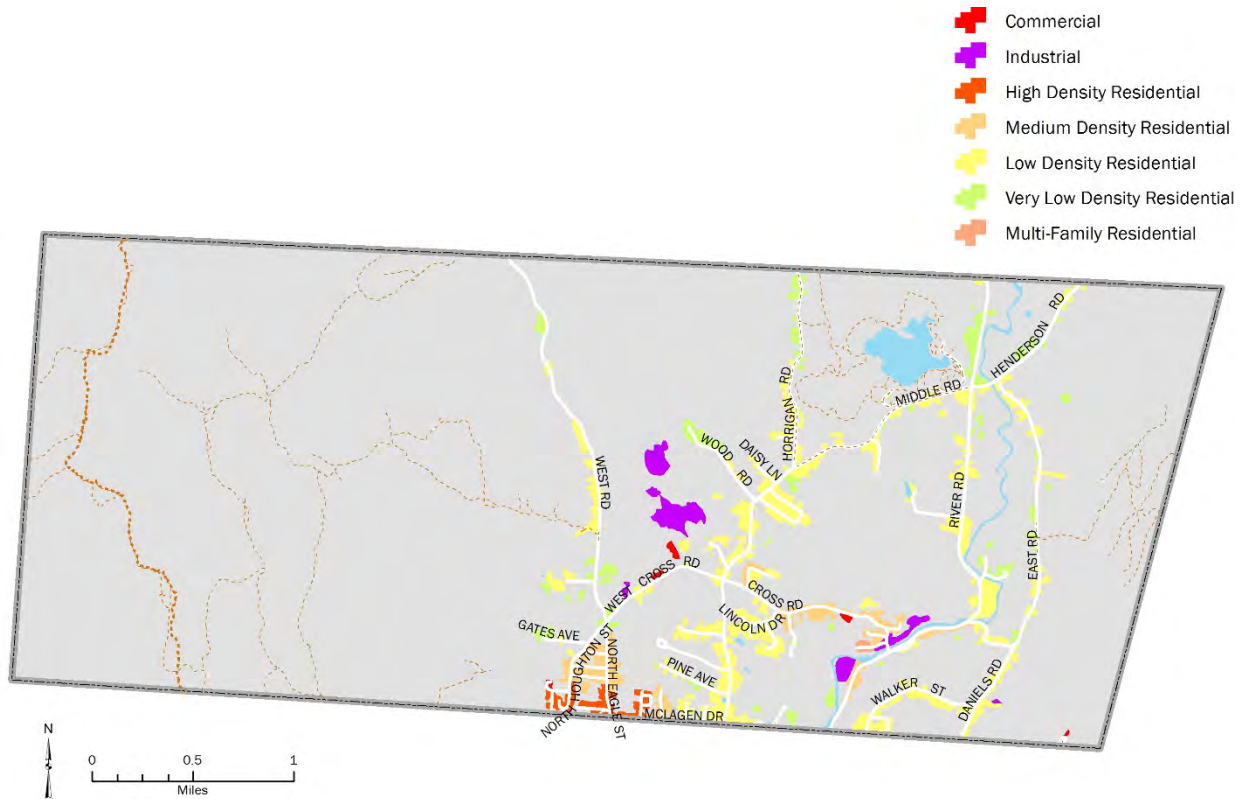
## Land Use Characteristics

The Town of Clarksburg is a rural community with an average population density of approximately 132 residents per square mile, based on the 2010 U.S. Census population for the town (1,702) and the town's total land area (12.82 square miles).

## Neighborhood Density

As explained above, development in the community is in the eastern half of the town. Neighborhood density can be seen in **Figure 2**. The densest neighborhoods in Clarksburg are located along the town's boundary with North Adams along Houghton and Eagle St. Medium density neighborhoods are also found along Cross Rd. The remainder of the community has low density development and the western portion of the town is mountainous and unpopulated. Neighborhood density is derived from the MassGIS Land Use dataset that was last updated in 2005. High density neighborhoods are identified as areas where housing is located on lots smaller than  $\frac{1}{4}$  acre. Medium density neighborhoods are areas where housing is located on  $\frac{1}{4}$  to  $\frac{1}{2}$  acre lots. Low density neighborhoods are areas where housing is located on  $\frac{1}{2}$  to 1 acre lots. Finally, very low density neighborhoods are areas where housing is located on lots greater than 1 acre in size and very remote rural housing. Notes from the land use dataset describe more about the residential land use interpretation process, stating: "residential densities were determined either from the parcel data, or by visually comparing the house to surrounding houses, observing the spacing between the houses as well as the relative amount of yard space between them. If housing in an area seemed to fall between two classes, the most accurate density was chosen in an attempt to maintain consistency throughout blocks and subdivisions or neighborhoods."

**Figure 2. Neighborhood Density**



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### Urban Area, Residential Villages, and Town Features

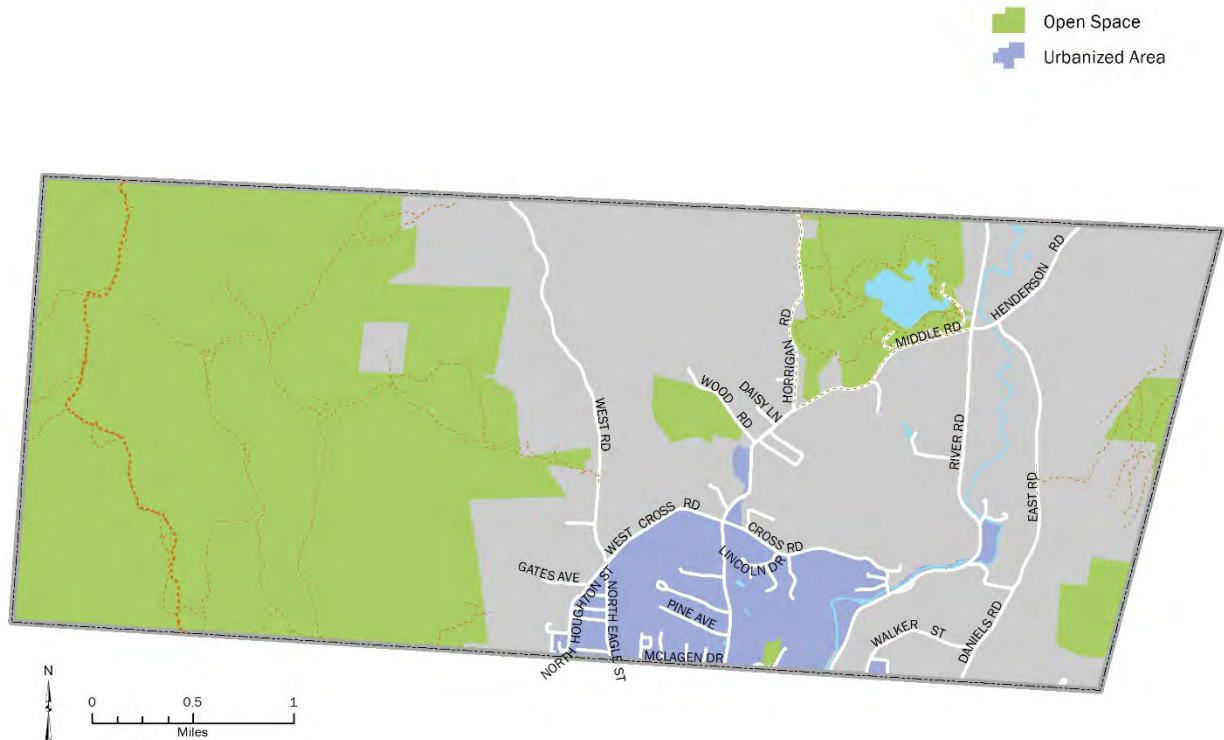
Due to the town’s proximity to North Adams, a portion of Clarksburg has been identified as an urban area by the U.S. Census Bureau (see **Figure 3**). Urban areas in the United States are defined by the Census Bureau and are defined as contiguous census block groups with a population density of at least 1,000/sq. mi. with any census block groups around this core having a density of at least 500/sq. mi.<sup>7</sup> While the Census defines a large portion of the town has urban, the majority of the area delineated in Fig. 3 as urban is more appropriately defined by the land use characterization in Fig. 2, by which dense housing is found only along the town’s border with North Adams. The rest of the Census block urbanized area is medium or low-density residential developments.

Clarksburg is primarily rural, and has a low population density. The town has its own elementary school which provides education up to eighth grade. Beyond this, students attend public high school in nearby North Adams.

The town offers many recreational opportunities including access to the Appalachian Trail, access to trails in Clarksburg State Forest, as well as Clarksburg State Park and Mausert’s Pond. Open Space areas can also be seen in **Figure 3**.

<sup>7</sup> <https://www2.census.gov/geo/pdfs/reference/GARM/Ch12GARM.pdf>

Figure 3. Clarksburg's Urban Area and Open Space



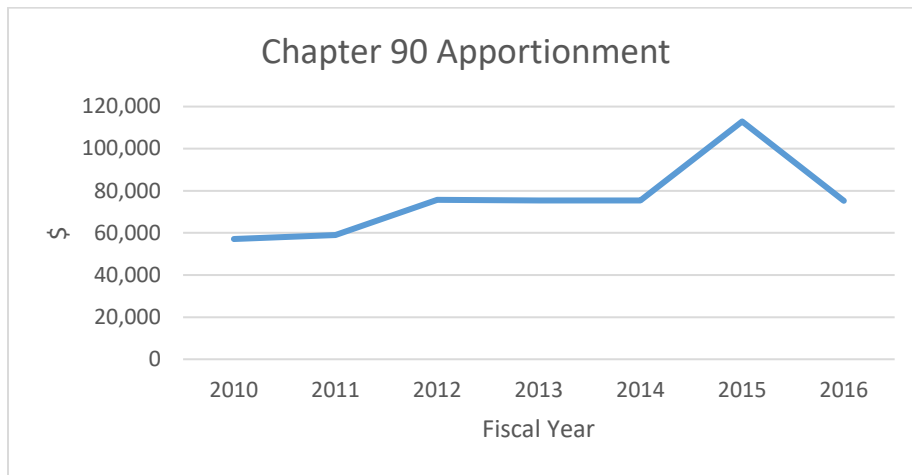
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## Fiscal Conditions

In Massachusetts, the Chapter 90 highway funding program was enacted in 1973 to entitle municipalities to reimbursement of documented expenditures on approved highway projects. Funds are provided through state Transportation Bond Issues, and can be used for a variety of project types and municipal uses including preservation and improvement projects that create or extend the life of capital facilities, garages, salt sheds, buildings for storage of equipment, and road building machinery, equipment, and tools.

Chapter 90 apportionments fluctuate from year to year and are distributed based on a formula that factors in road miles (58.33%), population (20.83%) and employment (20.83%). In Clarksburg, Chapter 90 funding is generally between \$60,000 and \$75,000 each fiscal year (FY), with a significant increase in 2015 to over \$112,000 due to additional statewide funding that fiscal year that was allocated by the Governor Baker administration (see **Figure 4**).

**Figure 4. Chapter 90 Apportionment FY2010-FY2017**



## Transportation Conditions

### Road Network

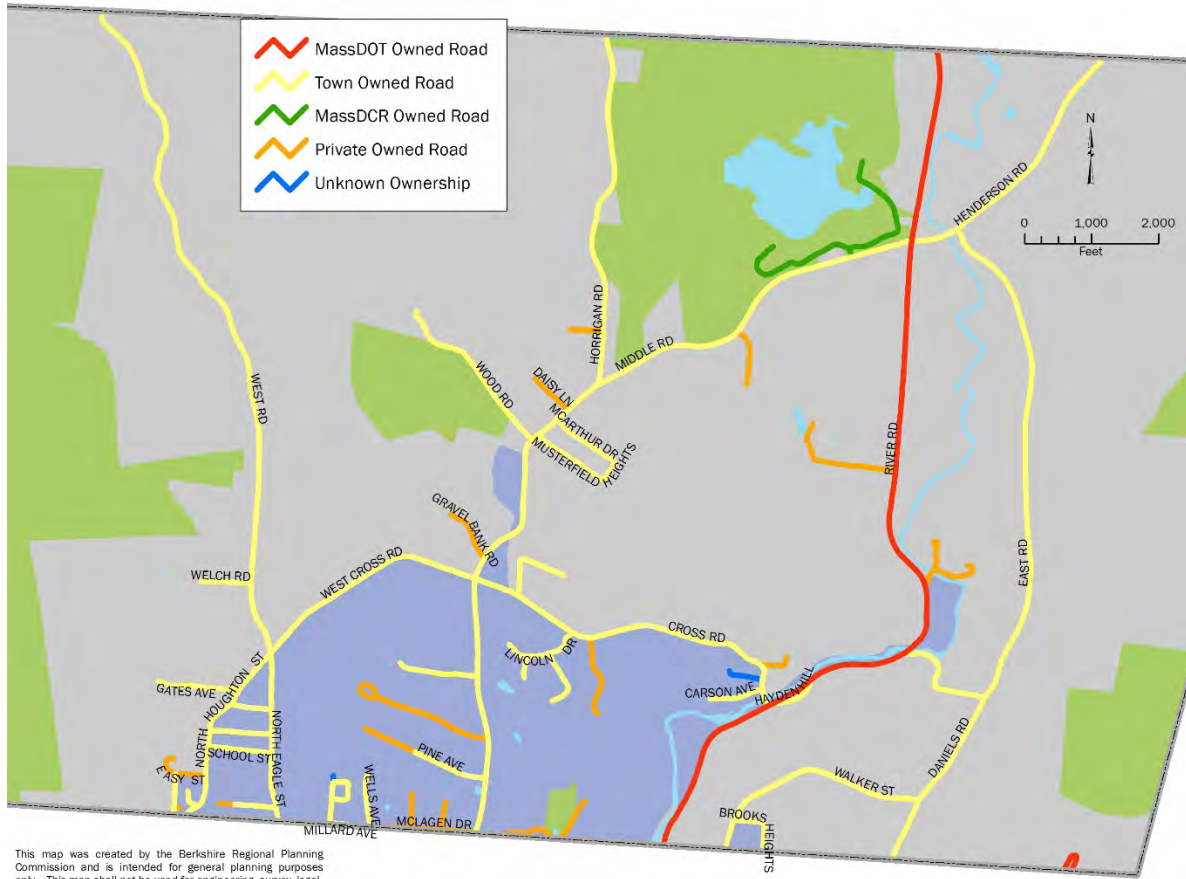
As noted in the 2015 BRPC Road Condition Report, Clarksburg has one of the smallest road networks in Berkshire County with around 23 miles of roadway in total. Of these the town has jurisdiction over 16 miles, or around 70%. Route 8, which is under the jurisdiction of MassDOT, makes up around 12% of the roadway miles in Clarksburg. Private roads total around 13% of road miles in the community.

Users of the roads include private motor vehicles, freight/commercial vehicles, emergency vehicles, bicyclists, pedestrians, school bus riders, and the occasional farm equipment and recreational vehicles that can be found in a small rural town.

**Table 3. Clarksburg Road Jurisdiction**

Jurisdiction	Mileage	Percent of Roads
MassDOT	2.83	12.3%
DCR	0.80	3.4%
Town	16.20	70.2%
Private	3.14	13.6%
Unknown	0.12	0.5%
<b>Total</b>	<b>23.09</b>	<b>100.0%</b>

**Figure 5. Roads by Jurisdiction**



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### Functional Classification

Functional classification is a way of grouping roadways into classes or systems based on character and type of traffic service they are intended to provide. Most roadways are grouped into one of three classes (arterial, collector or local), and provide for transportation based on a spectrum between overall mobility and land access. There are interstate and freeway classifications also, there are none of these roadways in the Town of Clarksburg. Arterials provide for travel over long distances, but offer less land access than local or collector roads. Conversely, local roadways provide a high degree of land access, but traverse shorter distances and provide less overall mobility (see **Table 5**).

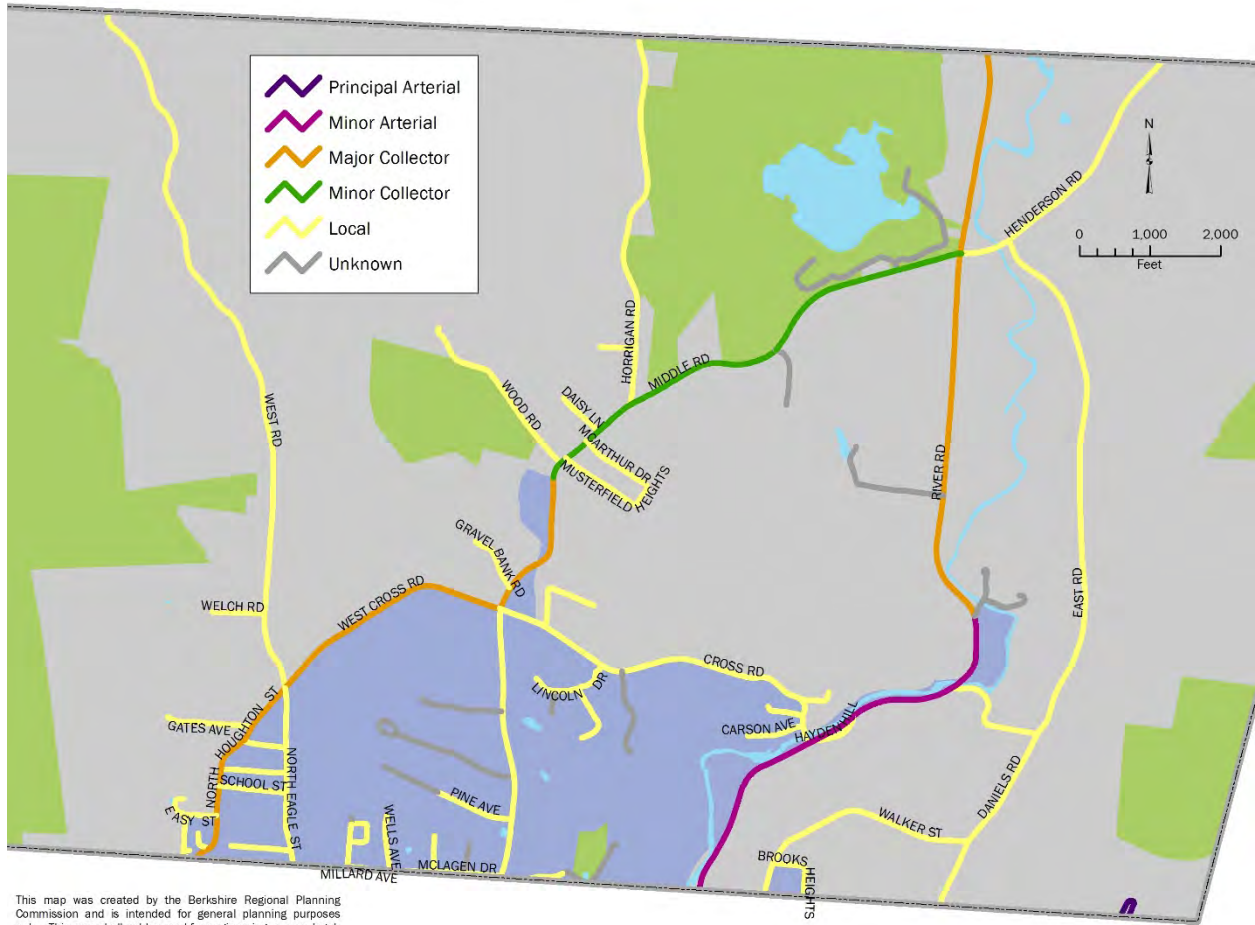
**Table 4. Functional Classification Descriptions<sup>8</sup>**

Functional System	Services Provided
Arterial	Provides the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control.
Collector	Provides a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials.
Local	Consists of all roads not defined as arterials or collectors; primarily provides access to land with little or no through movement.

Within Clarksburg, Route 8/River Road is an arterial road from the border with the City of North Adams. However, as the roadway moves north, it becomes a collector. Other collectors include West Cross Rd./N. Houghton St. and Middle Rd. (see **Figure 6**).

<sup>8</sup> Table adapted from Federal Highway Administration, Flexibility in Highway Design. Available from: <http://www.fhwa.dot.gov/environment/publications/flexibility/ch03.cfm>

**Figure 6. Roads by Functional Classification**



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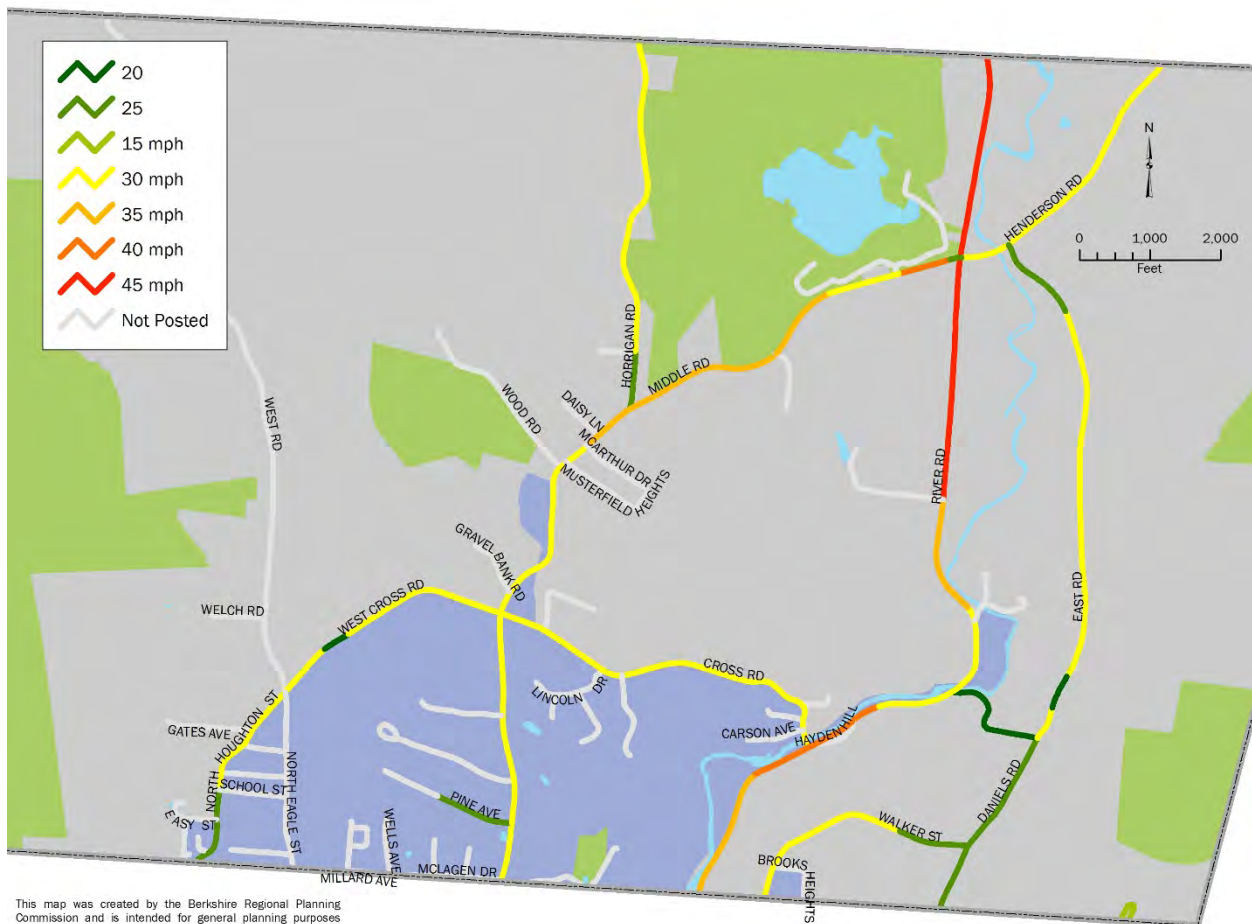
### Speed Limits

Speed limits, in conjunction with other factors like traffic volume, shoulder width, sight distance, have an impact on both the actual and perceived safety of nonmotorized travelers when they travel along a roadway without a dedicated facility. When speeds are higher, the severity of accidents involving nonmotorists is drastically increased, and separation from fast moving vehicle traffic is preferred. On low-volume roadways with high speed limits, ensuring safety for nonmotorized travelers within the corridor is critical for safety (actual and perceived). When speeds are high and there is little room to accommodate nonmotorists, looking at parallel routes, or separate facilities is important.

Route 8/ River Rd. has a speed limit of between 30 and 45 mph. A map of speed limits is shown below in **Figure 7**. MOST OF THE ROADS ARE NOT POSTED. WE'RE HEARING THAT MOTOISTS SPEED ON MIDDLE ROAD – MIGHT IT BE A PROJECT TO SET SPEEDS AND INSTALL SPEED LIMIT SIGNS? I LIKE THIS USED IN A HILLTOWN IN HAMPSHIRE.



Figure 7. Speed Limits



### Road Surface Type

Road surface type has potential implications for Complete Streets improvements, specifically for pedestrian and bicycling facilities. Generally, unpaved (dirt or gravel) roadways are considered exempt from many potential improvements. Unpaved roadways cannot be striped, and thus rely solely on warning signage to convey information, which means that elements such as bike lanes or shared lane markings cannot be added to these roadways. Moreover, pedestrian facilities, such as sidewalks are generally not included along unpaved roadways, unless they are in the form of an informal path alongside the roadway.

In general, vehicle speeds on unpaved roadways are lower due to road width and the surface type. Traffic volumes are generally lower as well. Low traffic speeds and volumes can make these roadways ideal for pedestrians, particularly recreational walkers. However, the surface type may create issues with accessibility as required by the Americans with Disabilities Act (ADA). ADA regulations requires that all accessible floor and ground surfaces be “firm, stable and slip resistant” and other ADA guidance notes that “most loose materials, including gravel will not meet these requirements unless properly treated to provide sufficient surface integrity and resilience.”<sup>9</sup> Additionally, cyclists sometimes use unpaved roads, particularly those who ride mountain bikes with wider tires, and may be preferred due to relatively low traffic volumes. The narrow tires of many road bikes limit their use on unpaved roadways.

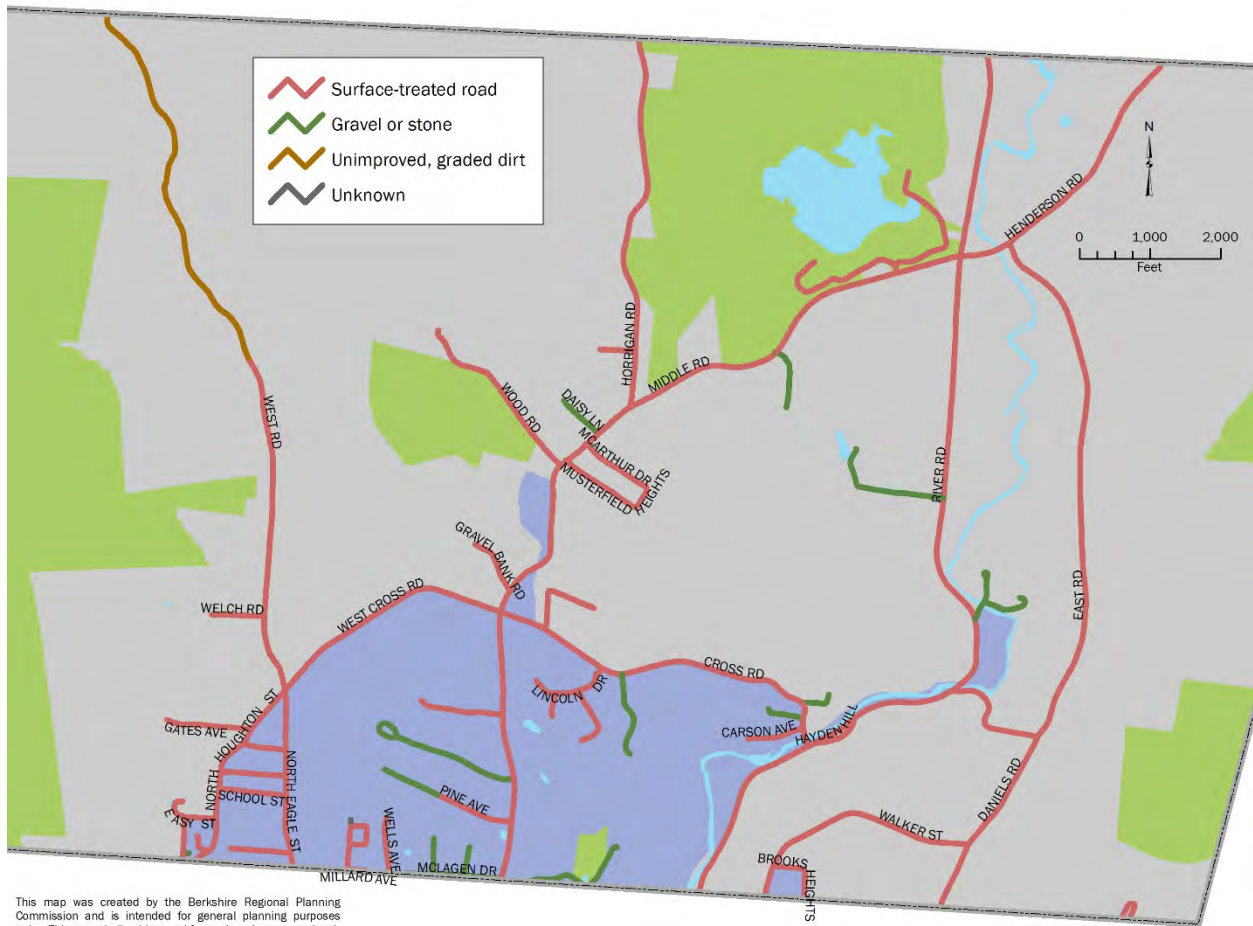
The vast majority (83%) of roads in Clarksburg are paved, with most of the remaining 16% being unpaved gravel or graded earth roadways. (See **Table 6** and **Figure 8**).

**Table 5. Clarksburg Road Surface**

Surface Type	Mileage	% of Roads
Paved	19.23	83.3%
Gravel/Stone	2.78	12.0%
Unimproved / Graded Earth	1.05	4.6%
Unknown	0.02	0.1%
<b>Total</b>	<b>23.09</b>	<b>100.0%</b>

<sup>9</sup> <https://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/guide-to-the-ada-standards/chapter-3-floor-and-ground-surfaces#3021>

**Figure 8. Roads by Surface Type**



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## Pedestrian Conditions

### *Sidewalk Network*

The current sidewalk network in Clarksburg is limited (see **Figure 9**). Existing sidewalk extends for a short length along one side of North Houghton St, connecting southward to neighborhoods in North Adams. Sidewalk is also located along Route 8/River Rd. Sidewalks along these roadways are narrow (<5' in width) and steep, with North Houghton having nearly a 10% grade in places. The North Houghton St. sidewalk is of concrete construction, while the sidewalk along Route 8 is made of asphalt and has a granite curb. The latter section of sidewalk is under the jurisdiction of MassDOT. Full reconstruction of Route 8 by MassDOT is scheduled to be funded in FY18 and is listed on the Transportation Improvement Program (TIP) list of projects maintained by the Berkshire County Metropolitan Planning Organization (MPO). This reconstruction project will also “improve sidewalk conditions for pedestrians.”

### *Crossings*

There are two marked pedestrian crossings on Route 8. The first is located where the sidewalk along Route 8 changes from the west to east side of the road near the RIBCO supply building. The second is located as the sidewalk crosses East Rd.

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Figure 9. Existing Sidewalk Network



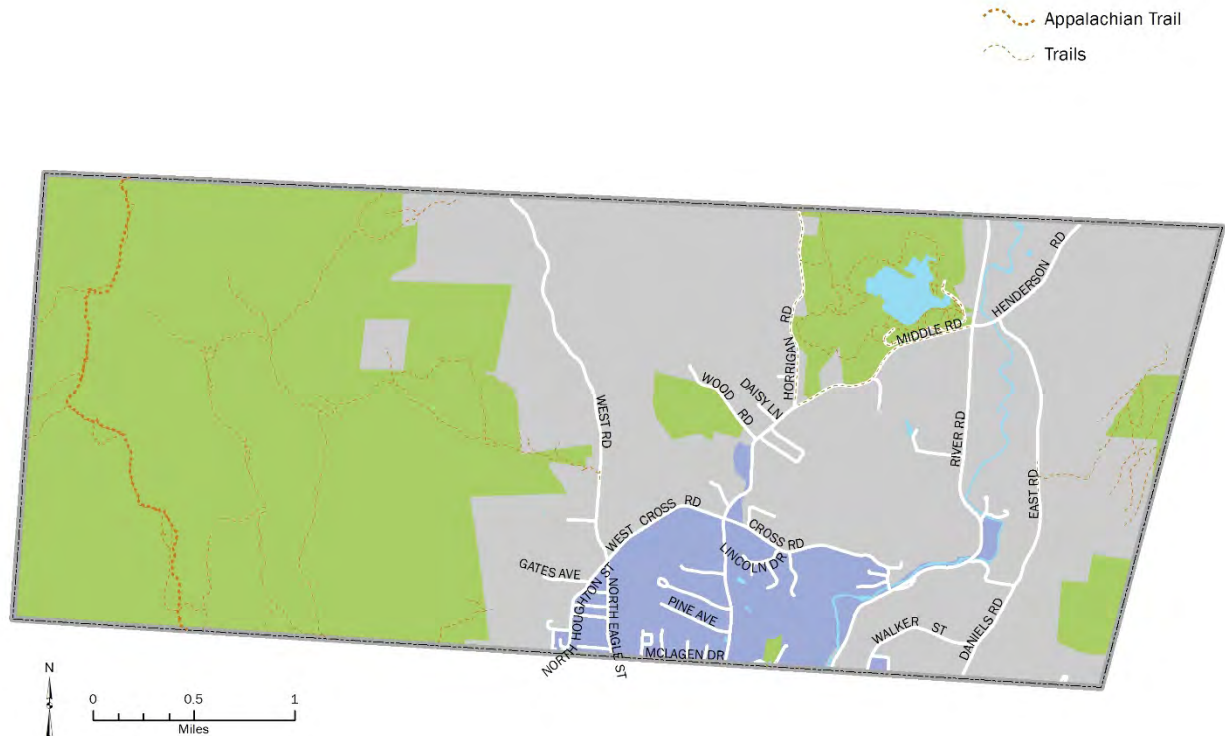
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## Off-Road Pedestrian Network and Trails

A portion of the Appalachian Trail passes through Clarksburg, although the nearest formal trailhead is located to the south in North Adams. Clarksburg State Forest contains a network of trails, some of which intersect with both Horrigan and Middle Roads. Along East Rd, a trailhead leads to trails that cross into the Town of Florida. Along West Road, another trailhead allows users to access a trail network in Clarksburg State Forest and eventually reach the Appalachian Trail (see **Figure 10**).

**Figure 10. Existing Trail Network**



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## Bicycle Conditions

While there is no dedicated on-road bicycle infrastructure in Clarksburg, there are cyclists (primarily recreational) that ride in the roadway or shoulder (if available). Additionally, Bike Berkshire North, a cycling promotion website maintained by the North Adams Partnership,<sup>10</sup> lists Clarksburg as part of several popular cycling loops in the area. If cyclists are traveling through Clarksburg recreationally, this presents an interesting potential economic development opportunity for the Town, as cycling (both day and long-distance) has been linked to economic growth. Nationwide, bike tourism is a growing segment of the travel market.<sup>11</sup> Studies have found that bike tourism brings millions of dollars annually to surrounding states such as Maine and

<sup>10</sup> <http://www.bikeberkshirenorth.org/>

<sup>11</sup> <https://www.adventurecycling.org/about-us/media/press-releases/10-new-indicators-that-bicycle-travel-and-tourism-are-booming-and-changing/>

Vermont.<sup>12</sup> Regionally in the Berkshires, communities and advocacy organizations are actively promoting bike tourism and nearby multi-use path projects such as the Ashuwilltcook Trail and proposed extensions seek to develop this activity and the Berkshires as a bike tourism destination.

### *On-Road Bicycle Conditions*

There are no roadways with bike lanes in Clarksburg, nor are there roadways with shared lane markings/signage.

### *Off-Road Bicycle Conditions*

There are no official off-road bicycle trails in Clarksburg.

### *Bicycle Parking*

No public bicycle racks currently exist in the Town of Clarksburg.

### *Road Shoulder*

Road shoulder widths vary in widths throughout the town's roadways. Recently, the town widened shoulders on a portion of West Cross Rd. between Middle Rd. and North Eagle Street. Shoulder widening along this section of roadway was constructed with the intention of improving accommodations for pedestrians and cyclists. Given the rural nature of the community, the town has selected shoulder widening as a Complete Streets strategy and accommodation type that benefits many user types. The town hopes to utilize this centrally located roadway project as a hub or spine on which to extend widened road shoulders throughout the community.

### *Signage/Wayfinding*

There are no existing wayfinding systems in town.

### *Safety*

Safety is a major reason many communities look at Complete Streets improvements, and though safer infrastructure is absolutely a way to reduce the injuries and deaths of cyclists, pedestrians, and other vulnerable users, there is also a behavioral component that must be supported through encouragement and education.

### *Crash Data*

**Table 7** shows all crash data in Clarksburg from 2012 through 2014. This includes all car crashes, with and without injuries, and not just those that involved bicyclists or pedestrians. Thankfully, there were few crashes in the community during the three-year time period; however, there was unfortunately one fatal crash that occurred near the intersection of West Rd. and North Houghton St. Although, there is some debate over whether the fatality was a result of the crash or occurred prior to it. Most crashes involved only a single vehicle, and occurred during warmer months and on primarily dry roads. Crashes over this period are mapped in **Figure 11**.

### *Crash Clusters*

MassDOT uses the crash data collected in each three-year time period to identify areas that have multiple crashes, these locations are called Crash Clusters. Each cluster is given a rating that measures the "equivalent property damage only" crashes. "Equivalent property damage only" is a method of combining the number of crashes with the severity of crashes based on a weighted scale where a fatal crash is worth 10, an injury crash is worth 5 and a property damage only crash is worth 1. Cluster locations are determined by grouping crashes that occur within a certain distance of each other (25 meters for vehicle crashes and 100 meters for bike and

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<sup>12</sup> <http://www.peopleforbikes.org/statistics/category/economic-statistics>

pedestrian crashes). The clusters are ranked based on the sum of the Equivalent Property Damage Only (EPDO) values of the crashes within the clusters.

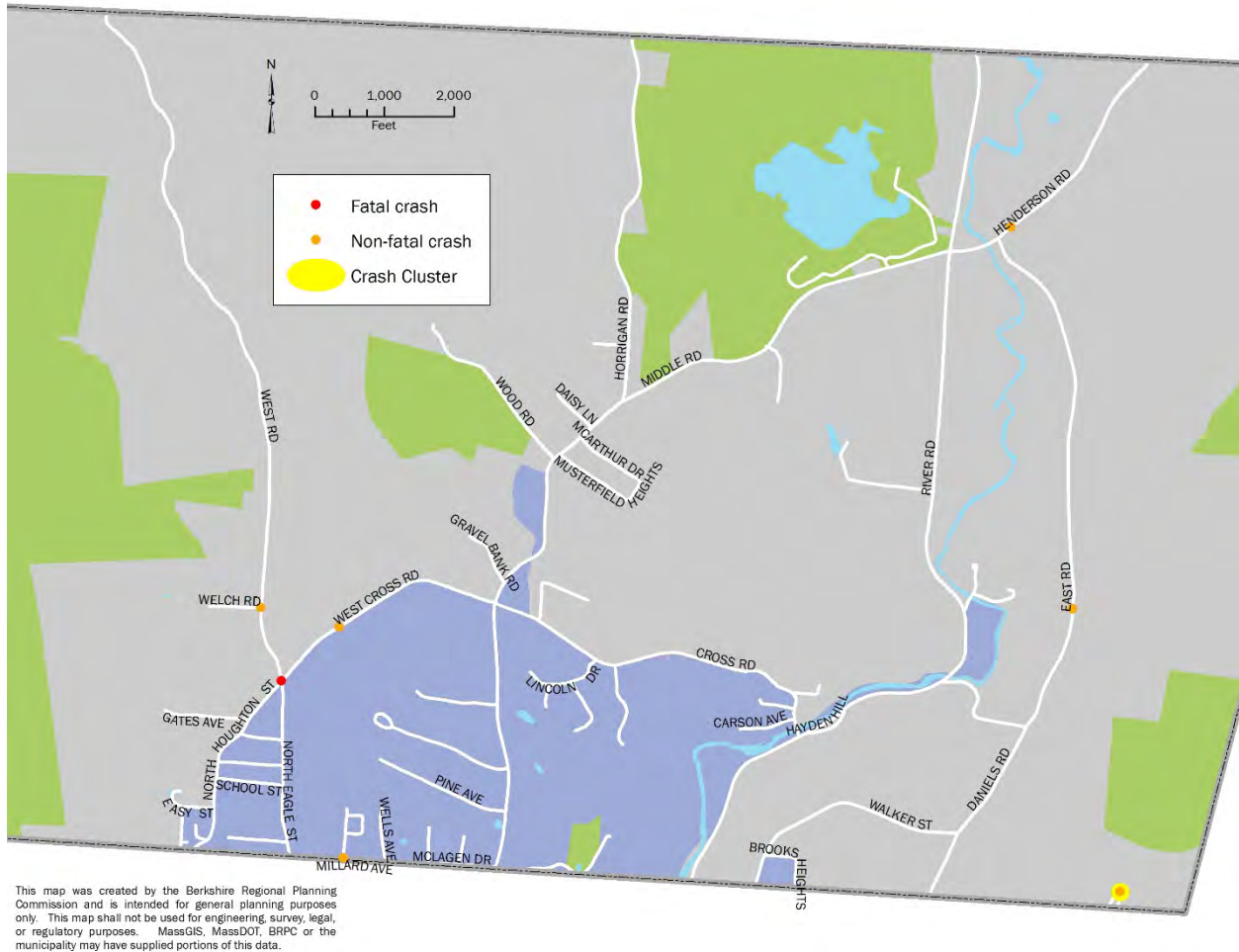
There is one identified crash cluster in Clarksburg, located at the “hairpin turn” found along a steep and winding section of Route 2. This switch back has been the scene of many accidents during the past 100 years, many of which involved commercial trucks unable to make the turn as they descended the steep grade of the road. This section of Roadway is under MassDOT’s jurisdiction.

**Table 6. Number of Accidents by Year, 2012-2014**

<b>LOCATION: Town of Clarksburg</b>				
<i>Data Source: MassDOT 2012-2014 Crash Data</i>				
<b>CRASHES BY TYPE</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>NOTES</b> Very small totals
Total Crashes	2	3	3	
Fatality	1	-	-	
Non-fatal Injury	1	2	2	
PDO	-	1	-	
Not reported	-	-	1	
<b>DAY OF WEEK</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>NOTES</b>
Sunday	-	2	1	
Monday	-	1	-	
Tuesday	-	-	-	
Wednesday	-	-	1	
Thursday	2	-	-	
Friday	-	-	-	
Saturday	-	-	1	
<b>TIME OF DAY</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>NOTES</b>
4 AM - 10 AM	-	1	-	
10 AM -4 PM	1	1	1	
4 PM - 10 PM	-	-	-	
10 PM - 4 AM	1	1	2	
<b>WEATHER</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>NOTES</b>
Clear	2	1	1	
Cloudy	-	-	-	
Rain	-	-	-	
Snow/Ice	-	-	1	
Not Reported	-	2	1	
<b>ROAD SURFACE</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	
Dry	2	3	1	

Wet	-	-	-	<b>NOTES</b> Most on dry roads
Ice	-	-	-	
Snow	-	-	2	
Dirt/Mud	-	-	-	
Not Reported	-	-	-	
<b>MONTH</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>NOTES</b> Primarily warmer months
January	-	-	1	
February	-	-	-	
March	-	-	-	
April	-	-	-	
May	-	1	-	
June	-	1	-	
July	-	-	-	
August	2	-	1	
September	-	1	-	
October	-	-	-	
November	-	-	1	
December	-	-	-	
<b>COLLISION TYPE</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>NOTES</b> Primarily single vehicle crashes
Angle	1	-	1	
Head-on	-	-	-	
Not Reported	-	-	-	
Rear-end	-	-	-	
Sideswipe	-	-	-	
Single Vehicle Crash	1	3	2	

Figure 11. Accidents by Severity, 2012-2014



## NEEDS

This needs assessment is a qualitative system gap analysis based on field observations, existing planning documents and GIS data, and aerial imagery. The analysis looks at on- and off-road networks and has identified gaps in the network and intersections that are barriers to nonmotorized travel. This is a baseline to be used for the identification of potential Complete Streets Improvements in Clarksburg.

### Linear Gaps / Town-Wide Challenges

Linear gaps are considered “missing links” >.5 mile where bike/pedestrian facilities are desired but do not currently exist or are not currently adequate if they do exist based on existing/future demand. Generally, these are areas that are main travel corridors or desirable in connecting residential areas to key activity centers.

Major linear gaps identified by the Complete Streets Working group include:

- There are no dedicated bicycle facilities in the community.
- Pedestrian facilities in the community are very limited.
- The school, library senior center and town field are located near each other on West Cross Road, less than a mile from the most densely developed neighborhoods in the North Houghton/North Eagle Street section of town, but there are no sidewalk or bike accommodations to connect these areas.

## Location-specific Gaps and Barriers

Location specific gaps and barriers are either point-specific locations such as a crosswalk or lack of ADA ramps or an entire intersection that presents a barrier to nonmotorized travel and is unsafe for vulnerable users. This might be due to inadequate crossing treatments, confusing geometry, long crossing distances, lack of crosswalks or traffic control devices. Generally, these are areas that provide access to or within major destinations or are desirable in connecting residential areas to primary activity centers.

### *Sidewalk Gaps*

A formal sidewalk gap analysis was not conducted due to the limited existing sidewalk network. However, the sidewalk along Route 8 is only located along one side of the roadway. As the sidewalk moves north, it crosses from the west side of the road to the east side near the RIBCO supply building immediately south of the intersection of the intersection of Route and Cross Rd. The town should advocate to MassDOT for sidewalks along both sides of the roadway, or at a minimum, continuous sidewalk along one side of Route 8 to eliminate the need to cross. As Route 8 is scheduled for full reconstruction with potential pedestrian improvements in FY18, this would be an ideal time to determine the potential for continuous sidewalk along this roadway.

There are no sidewalks that connect the elementary school/library building, playing field and senior center to any residential areas, and so walking and biking to these destinations is not an attractive mode of transportation, especially for families and children. Dense single family and multi-family development in the North Houghton/North Eagle Street neighborhood could benefit from a connection to these town properties.

### *Crossings*

Both existing marked crossings along Route 8 are faded. The town should advocate for the repainting of these crosswalks during proposed future reconstruction projects. A crosswalk connecting the senior center to the town field could encourage improved use of both facilities.

### *MAPC Local Access Scores*

The Metropolitan Area Planning Council (MAPC) acts as the Regional Planning Agency (RPA) for the Boston area, but also works on larger statewide planning projects. Recently, this organization released its Local Access Scores dataset, which examines biking and walking utility on roadways across the state. As explained in the MAPC dataset, utility scores ask “if this were a good place to walk or bike, would many people find it a useful route between point A and point B?”<sup>13</sup> The local access scores examine several aspects of transportation utility, including biking, walking, walking to school, and a composite score that combines the other three factors. The scores are calculated using a travel demand software that looks at populations and destinations and makes an estimate based on the potential number of trips that households are likely to make, the potential destinations of these trips, and the most direct routes connecting the two. When roadways are estimated to have more potential trips, they receive a higher utility score. For walking and biking score calculation, potential destinations included nearby shopping and retail, parks and open space, and available transit. For walk to school scores, destinations included local public schools, as would be expected. This dataset provides decisionmakers with another data point to look at in assessing potential complete streets improvements. This data is not intended to be used as a definitive source that says one project is better/worse than another, rather it is to be used as a tool in the decisionmaking process that supplements the conversation.

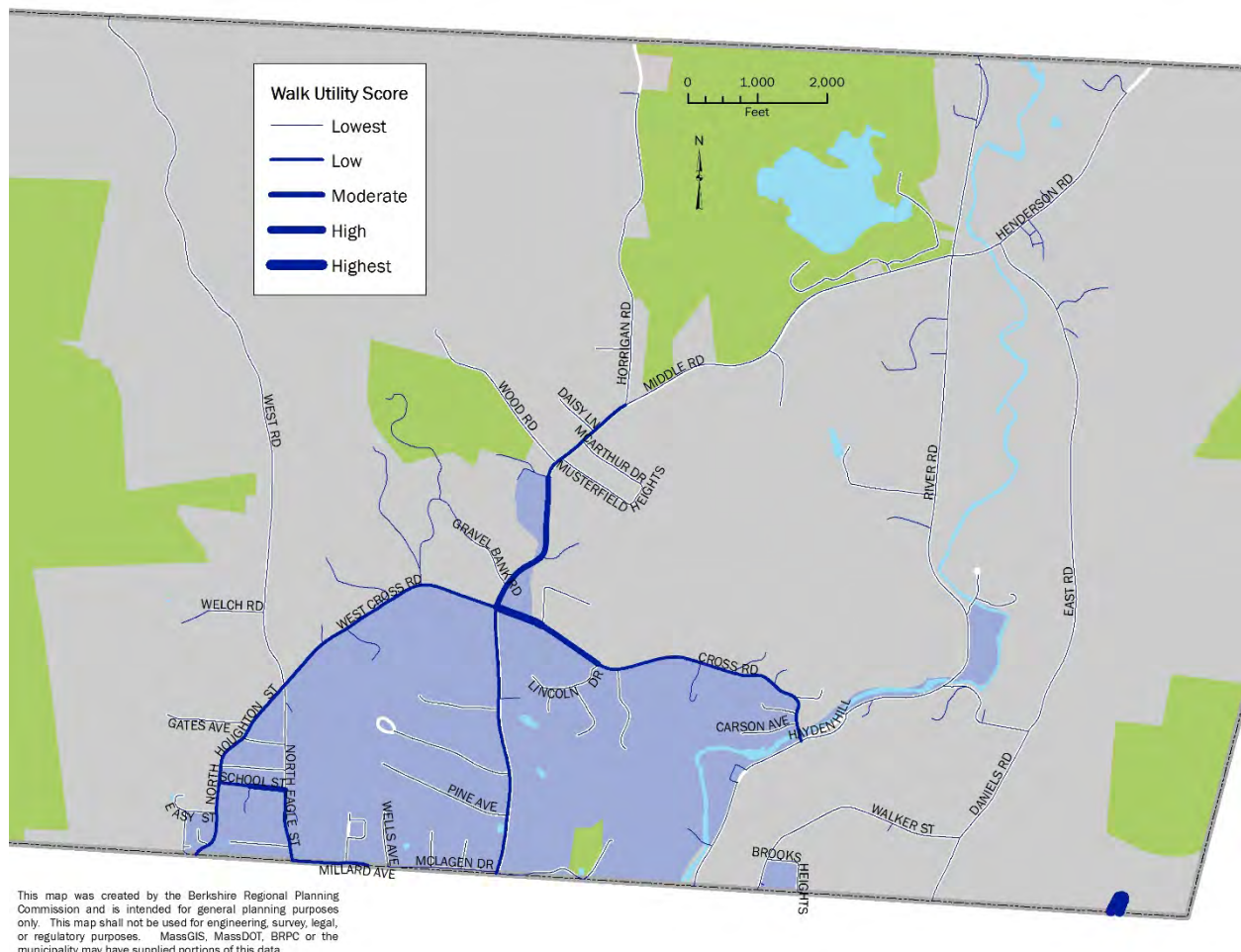
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<sup>13</sup> <http://localaccess.mapc.org/>

### Walk Utility Score

Based on the MAPC Local Access dataset, walk utility scores are highest on Middle and Cross Roads, as well as a small portion of School St (see **Figure 12**). Higher utility scores correlate to potential demand based on the factors described above. High scores do not necessarily reflect existing destinations, but can represent connectivity to residential areas with limited route options (lack of parallel facilities, etc.). The walk utility evaluates potential trips that are shorter than bicycle trips and those that are generally 1 mile or less.

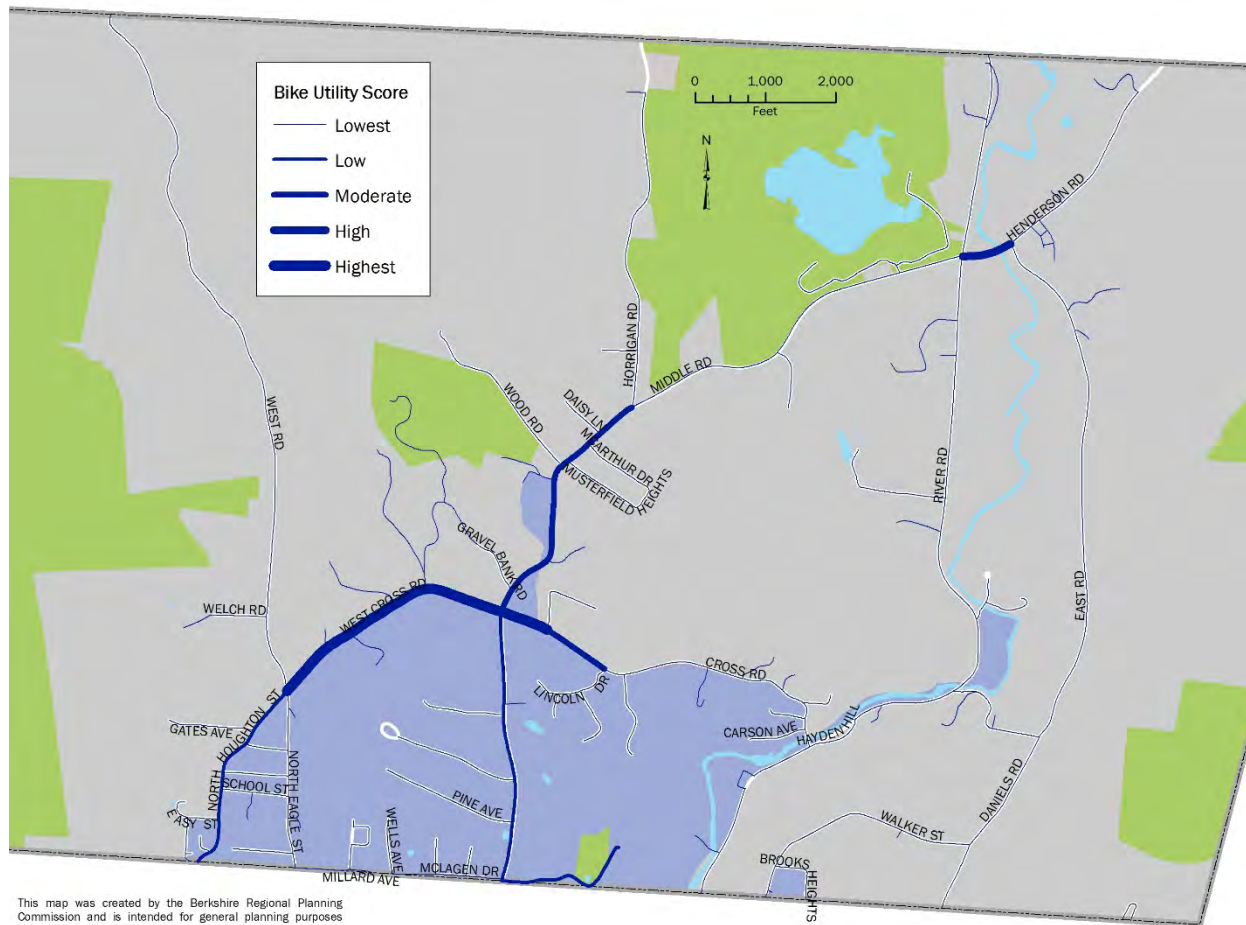
**Figure 12. Walk Utility Score**



### Bicycle Utility Score

Similar to the walk utility score, both Middle, Cross, and West Cross Roads received high bicycle utility scores. Additionally, a short section of Henderson Rd. received a high score (see **Figure 13**). The bicycle utility score shows potential demand; these are areas with higher residential populations and where there is potential to convert daily trips to nonmotorized modes (less than 3 miles, generally). A higher score suggests a facility that connects the most number of people to a network that accesses destinations. Because there are few alternative routes, it is natural to see higher scores near intersections that connect higher density residential areas to the transportation network.

Figure 13. Bike Utility Score

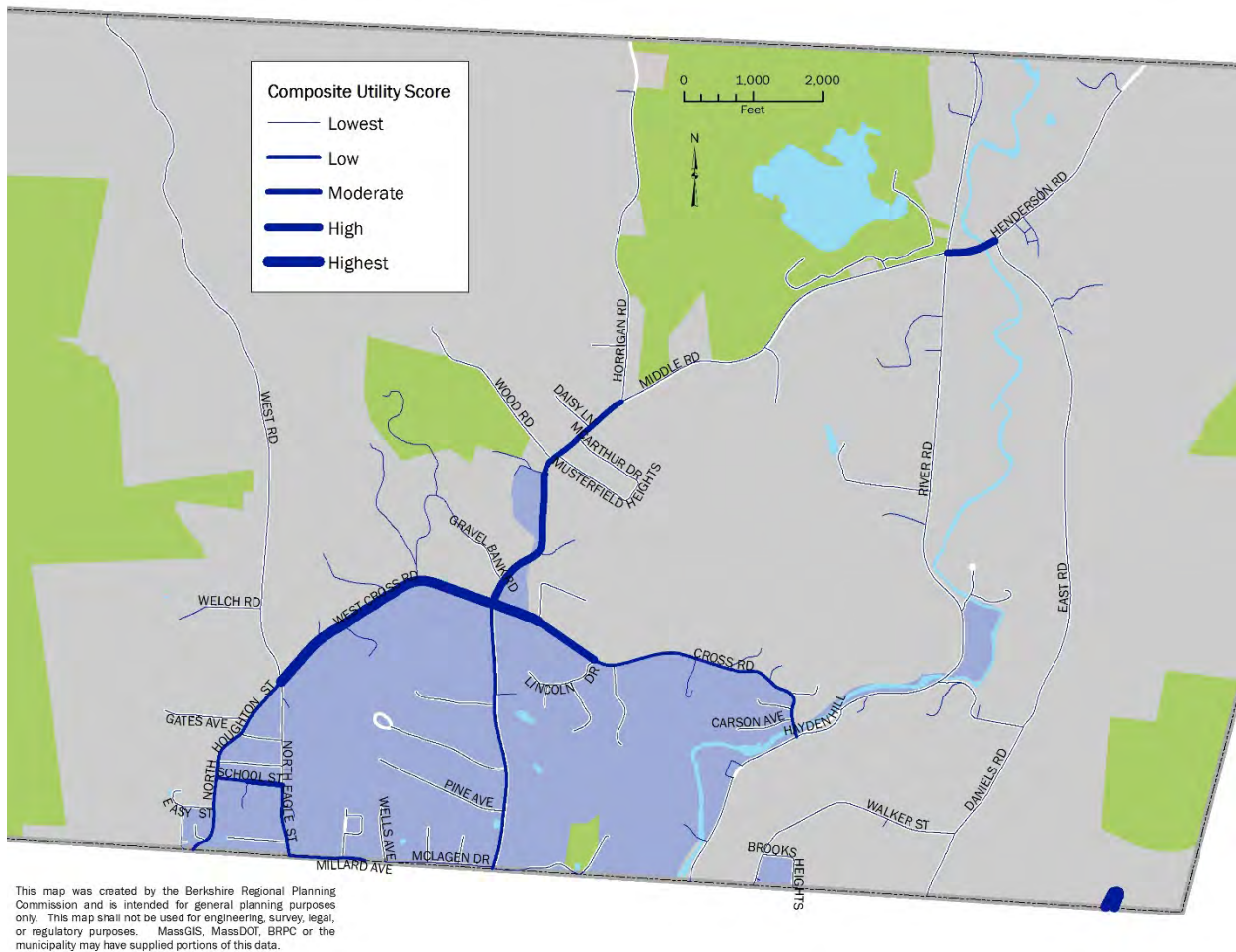


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### Composite Utility Score

Portions of Middle, Cross, and West Cross Roads received the highest composite utility scores in Clarksburg (see **Figure 15**). The thicker lines indicate areas where attention to complete streets elements may be especially beneficial as these facilities connect people to key destinations.

**Figure 15. Composite Utility Score**



### Intersections

Several intersections in Clarksburg were identified by the Complete Streets Working Group as being unsafe for both drivers, cyclists, pedestrians and in need of possible redesign and reconfiguration. Many of these intersections are currently in a “Y” configuration, where two roadways meet at an acute angle. Reconfiguring and redesigning these intersections to make the roadways meet at a 90° (right) angle could help to improve safety for drivers as well as reduce the distance needed to cross the intersection for pedestrians. The Federal Highway Administration (FHWA) states that:

*“There is broad agreement that right-angle intersections are the preferred design. Decreasing the angle of the intersection makes detection of and judgments about potential conflicting vehicles on crossing roadways much more difficult. In addition, the amount of time required to maneuver through the intersection increases, for both vehicles and pedestrians, due to the increased pavement area”<sup>14</sup>*

Right angle intersections can also provide a measure of traffic calming by preventing drivers from treating Y-intersections as a “merge lane” by requiring them to complete a full stop before proceeding through the intersection. Some intersections in Clarksburg that could benefit from reconfiguration include:

*Horrigan and Middle Road*

The intersection of Horrigan and Middle Rd was identified by the Complete Streets Working Group as in possible needs of realignment and reconstruction. These intersections meet at an acute angle (see **Figure 16**) and generous corner radii allow vehicles on Horrigan Rd. to quickly turn on to Middle Rd without stopping. The Working Group reported that drivers turning right (west) onto Middle Rd. from Horrigan Rd. often do not make a full stop before turning onto Middle Rd. Reconfiguring this intersection from a “Y” into a “T” could help to slow drivers, improve compliance with the existing stop sign, and reduce the crossing distance for pedestrians

**Figure 16. Intersection of Horrigan and Middle Rd.**



<sup>14</sup> <https://www.fhwa.dot.gov/publications/research/safety/humanfac/01103/ch1.cfm>

### *East Rd. and Route 8*

The intersection of Route 8 and East Rd. is another Y-configured intersection that could benefit from realignment to reduce the pedestrian crossing distance and slow traffic turning onto Route 8. The Working Group reported that drivers making a left turn from East Rd. onto Route 8 often do not comply with the existing stop sign. Potential reconstruction of this intersection would be challenging. Reconstruction would require coordination with and permitting through MassDOT as Route 8 is under state jurisdiction. Additionally, potential realignment is constrained by an existing bridge and several residences along East St. See **Figure 17**.

**Figure 17. Intersection of East Rd. and Route 8.**



### *Route 8 / Middle Rd / Henderson Rd.*

The intersection of Route 8, Middle Rd, and Henderson Rd. is another problem intersection identified by the Complete Streets Working Group. This intersection is in a 4-way or crossroad configuration, unlike others identified. The Working Group reported that topography near the intersection reduces visibility when turning from Henderson Rd. onto Route 8. Possible improvements might include regrading Henderson Rd. as it approaches the intersection to improve visibility for turning vehicles. See **Figure 18**.

**Figure 18. Intersection of Route 8 and Henderson Rd.**



## GENERAL RECOMMENDATIONS

This section outlines some general recommendations that are not site-specific and may occur at a higher level than the project level. These recommendations are intended to outline opportunities to support Complete Streets in Clarksburg and are known as the “5 E’s.”

### Engineering + Design

This element broadly covers some of the design and engineering recommendations that will enhance the multimodal accommodations, and encourage people to utilize active modes. For general and specific engineering recommendations, please see **Complete Streets Improvements** section.

### Education

Education is an important component of implementing any new traffic pattern, nonmotorized infrastructure, or trail. Safety increases as more people become aware of the rules of the road (see Enforcement section below), and as options become safer people are more likely to use facilities. Educating residents and visitors is an important part of encouragement too (see below), as visitors may not be aware of new facilities, sidewalks, or trails connecting them to key destinations.

### Encouragement

With new multimodal options, users must be encouraged to utilize multimodal infrastructure. Whether it is Bike to School day or a weekend walk to the town playing fields, the opportunities should be encouraged and highlighted so residents and visitors are aware of the multimodal options. Encouragement may mean

designated a Bike to Work day, or distributing walking maps to residents that show where safe sidewalks, paths, or trails exist and connect to their key destinations.

## Enforcement

Ensuring the rules of the road are enforced across all modes of transportation is an important component of ensuring safe travel for all. There are key violations that occur by vehicle drivers and cyclists which impact the safety of the road for everyone. Massachusetts General Law addresses some of the key rules of the road for motorists and cyclists across the Commonwealth, and enforcing these laws is important for vehicle drivers and cyclists alike. Cyclists must adhere to the rules of the road (ex. obeying traffic signals) and there are special regulations outlined in the Massachusetts General Law<sup>15</sup> that guide cyclist behavior:

- Cyclists may keep right when passing a motor vehicle moving in the travel lane.
- Cyclists must signal by either hand the intention to stop or turn, except when the use of both hands is necessary for the safe operation of the bicycle.
- Cyclists may ride on sidewalks outside of business districts when necessary in the interest of safety (unless expressly prohibited). When cyclists ride on sidewalks, they must yield the right of way to pedestrians and give an audible signal before passing any pedestrians.
- Cyclists riding together may not ride more than 2 abreast, but on a road with more than one lane in the direction of travel, must ride within a single lane.
- Cyclists must only ride on or astride a permanent seat attached to the bicycle, although passengers may ride on a permanent seat attached to the bicycle or in a trailer towed by the bicycle.
- Cyclists may not transport anyone between the ages of one to four (or weighing 40 pounds or less), on a bicycle except in a “baby seat.” Cyclists may not transport any person under the age of one year.
- Cyclists and passengers 16 and younger must wear a helmet.
- Cyclists must give an audible warning whenever needed to insure safe operation of the bicycle, however the use of a siren or whistle is prohibited.
- Cyclists must park the bicycle in a manner as not to obstruct vehicular or pedestrian traffic.
- Cyclists cannot be drawn by another moving vehicle, nor can they tow any other vehicle or person except when a bicycle trailer is properly attached to the bicycle that allows for firm control and braking.
- Cyclists cannot carry a package/bundle except in or on a basket, rack, trailer, or other device designed for such purposes. The operator shall keep at least one hand upon the handlebars at all times.
- Bicycles must be equipped with a braking system that enables the operator to bring the bicycle traveling at a speed of 15 mph to a smooth, safe stop within 30 feet on a dry, clean, hard, level surface.
- Cyclists riding between one-half hour after sunset to one-half hour before sunrise, must display to the front of the bicycle a white light from a distance of at least 500 feet, and to the rear a red light or reflector visible for no less than 600 feet when directly in front of lawful lower beams of motor vehicle headlights.
- Cyclists riding between one-half hour after sunset to one-half hour before sunrise, must display a reflector on each pedal of the bicycle or, around each angle a reflective material visible from the front and rear for a distance of 600 feet.

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<sup>15</sup> <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXIV/Chapter85/Section11b>

- Cyclists riding between one-half hour after sunset to one-half hour before sunrise, must display a reflector on each pedal of the bicycle or, around each angle a reflective material visible from the side for a distance of 600 feet.
- Cyclists may not operate a bicycle in the public way with handlebars raised so that the operator's hands are above their shoulders while gripping them.
- Cyclists must report any accident involving either personal injury or property damage in excess of \$100, or both, to the police department in the community in which the accident occurred.

Because bicycles are more commonly used as a mode of transportation for many people, it is important the rules of the road are understood and enforced. Additionally, there are laws<sup>16</sup> outlining motorist's responsibility as they relate to bicycle travel:

- Drivers of motor vehicles must slow down and pass cyclists at a safe distance and at a reasonable and proper speed.
- Drivers of motor vehicles that overtake and pass a cyclist proceeding in the same direction shall make a right turn at an intersection or driveway unless the turn can be made at a safe distance from the cyclist at a speed that is reasonable and proper.
- Drivers of motor vehicles approaching for a left turn on a two-way street must do so yielding the right of way to any vehicle approaching from the opposite direction, including a bicycle on the right of other approaching vehicles, which is within the intersection or so close thereto as to constitute an immediate hazard.
- Drivers and passengers of motor vehicles shall not open a door of the motor vehicle unless it is reasonable safe to do so without interfering with the movement of other traffic, including cyclists and pedestrians.

## Evaluation

Per the Town of Clarksburg's Complete Streets Policy, it is important to integrate Complete Streets elements into the daily operations, planning, design, and implementation of transportation projects. To make this easier, the Complete Streets Working group developed a checklist for the Highway Department to refer to during the project development process

### Context

- What is the adjacent land use? Are there any activity centers that might attract cyclists or pedestrians?
- What is the available right-of-way? How is it allocated by mode?
- What are the challenges for the project to address bicycle and pedestrian travel?

### Function

- What is the functional classification of the roadway?
- What connections does the roadway provide?
- Are there options for nonmotorized users on/near the facility (ex. path, multi-use trail, sidewalk)?

### Safety

- What is the crash history at or along the project area?
- Is there a high percentage of crashes involving nonmotorized travelers?

<sup>16</sup> <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXIV/Chapter90/Section14>

- Is there a difficult crossing or intersection for nonmotorized travelers?

## COMPLETE STREETS IMPROVEMENTS

Complete Streets improvements can come in many forms, whether signage or entire sidewalks, the different elements are based on their context and needs. Improvements are for a variety of modes, whether motorists, cyclists, or pedestrians, Complete Streets are for everyone.

Below are recommendations for specific improvements to the transportation network that support Complete Streets principles and goals. Any improvements will need design and/or engineering and it is encouraged that the Town reference the detailed best practices, as applicable, which include but are not limited to:

- MassDOT Project Development and Design Guide
- FHWA Manual of Uniform Traffic Control Devices (MUTCD)
- AASHTO A Policy on the Geometric Design of Highways and Streets
- NACTO Urban Street Design Guide
- NACTO Urban Bikeway Design Guide
- NACTO Transit Street Design Guide
- ITE Designing Walkable Urban Thoroughfares: A Context Sensitive Approach
- US Access Board Streets and Sidewalks Guidelines
- AASHTO Guide for Planning, Designing, and Operating Pedestrian Facilities
- National Complete Streets Coalition Resources

These improvements may be paid for by a variety of funding sources, which include but are not limited to:

- MassDOT Complete Streets Funding Program
- Chapter 90 Funds
- MassWorks Grants
- Federal TIP Funds (STPBG, CMAQ, STPBG Set Aside, etc.)

In addition to those general recommendations in the section prior, the Complete Streets Working Group has identified improvements by project type and they are outlined in the applicable category below.

### Advocacy

The approximately three-mile stretch of Route 8 in Clarksburg is under the jurisdiction of MassDOT and therefore outside the control of the town. Nevertheless, the town has a vested interest in the road and how it contributes to the implementation of Complete Streets in Clarksburg, in addition to how it impacts bicycle and pedestrian connectivity in and around the town.

In the Town of Clarksburg, the recommendation is to advocate strongly for pedestrian and cycling improvements along this roadway. As this roadway is scheduled to be reconstructed in FY18, there is a unique opportunity for the town to influence the design and address gaps to enhance this section of roadway.

### Intersection Reconstruction to Reduce Complexity and Pedestrian Crossing Distance

As discussed in the **Needs** section, intersections can be reconstructed to improve safety and visibility as well as reduce pedestrian crossing distance and the overall complexity of the intersection. In Clarksburg, several intersections could benefit from reconstruction, with the end goal of changing these “Y”- or other-shaped intersections into safer 90° (right) angle, or “T”-shaped intersections. These include the intersection of Route 8 and East Rd., as well as the intersection of Horrigan and Middle Rd. The Working Group also identified the

intersection of Route 8/Middle Rd/Henderson Rd. as one that could benefit from regrading to improve sight lines for vehicles turning from Henderson Rd.

## Sidewalks

Sidewalks are a critical component of many small village areas and as such, ensuring pedestrian movement and access improves connectivity, improves public health and safety, and promotes increased economic development. Sidewalks should be vertically and horizontally separated from the roadway. It is desirable for a sidewalk through zone to be a minimum of 6 feet, although 5 feet is acceptable if right-of-way does not allow it. The minimum of 5 feet is due to ADA requirements, to ensure all ages and abilities can use the facility. In non-village centers it may be more advantageous to look at combining pedestrians and cyclists on a shared use path.

In the Town of Clarksburg, due to the rural context of the town and the dispersed population therein, there are few opportunities for sidewalk installation. One potential location for sidewalk is along Carson Ave. This street contains condominiums and several single-family residences. Sidewalk along Route 8 crosses over a bridge and travels briefly along Cross Rd. before ending near the intersection with Carson Ave. Sidewalk could be extended along Carson Ave. to connect residences to the existing sidewalk there.

### *General Maintenance*

Once replaced or installed, it is important that sidewalks are cyclically maintained, including the maintenance and removal of vegetation adjacent to the sidewalk to ensure it does not encroach or overhang the sidewalk. This has been somewhat of an issue along Route 8. The town should advocate for regular vegetative maintenance along this sidewalk on this section of roadway to ensure it is passable.

## Pedestrian Crossings

### *Crosswalks*

Crosswalks are designated places where pedestrians cross the street. Crosswalks can be marked or unmarked, and are used widely throughout the spectrum of functional classes. Crosswalks are encouraged at all legs of an intersection and at approaches where there is a stop sign. Crosswalks can be used with a variety of other treatments like curb extensions, pedestrian refuge islands, and traffic calming measures. Ensure all curb ramps at each end of a crosswalk is accessible, as required by the Americans with Disability Act (ADA).

In the Town of Clarksburg, the recommendation is to replace existing crosswalks along Route 8.

## Traffic Calming

Traffic calming takes elements of design and landscaping together to slow down cars and increase awareness of pedestrians and cyclists. This can improve nonmotorized safety, enhanced walkability, improved stormwater management, and contribute to the beautification of the natural character in rural areas. Traffic calming comes in many different forms and may include vertical deflections (speed humps or raised intersections), horizontal shifts (traffic circle or chicane), and/or roadway narrowing (choker or center island). These treatments are often accompanied by visual enhancements like trees, plantings, wayfinding, and/or street furniture.

### *Speed Feedback Signs*

In the Town of Clarksburg, the recommendation is to include speed feedback signs on.....



## Site Furnishings

### *Street Furniture*

Street furniture can serve as a buffer between the roadway or cycle track and a walkway, which provides a safety benefit to all travelers. Additionally, incorporating street furniture (benches, bus shelters, kiosks, etc.) into a streetscape project improves the attractiveness/walkability of the pedestrian network. Street furniture costs vary depending on the type of street furniture, style, and manufacturer.

In the Town of Clarksburg, the recommendation is to consider street furniture in strategic locations, particularly as part of streetscape work.

### *Bicycle Parking and Amenities*

Bicycle parking is a key element to the usability of bicycles for transportation, if there is nowhere to safely park a bicycle, people will be less likely to rely on it for transportation. Bicycle parking is good to have in all the major activity centers (school, library, town hall, etc.) and in downtown areas for visitors to shops and restaurants. There are many options for bicycle parking, and for reference see the Association of Pedestrian and Bicycle Professionals' *Essentials of Bike Parking*.<sup>17</sup>

In the Town of Clarksburg, the recommendation is to include bicycle racks at key locations such as the town field, town hall, the elementary school, and the library. In order to encourage bicycle tourism and long distance cycling, the town should also select one of these locations to install a bicycle repair station – perhaps at the town fields.

## Wayfinding

Wayfinding is an important element that supports all modes. Ensuring all users of the transportation system can easily navigate the network is critical to the use of nonmotorized and motorized travelers. In the Town of Clarksburg, the recommendation is to include consistent and prominent wayfinding signage at important town destinations, such as town hall, the elementary school and town fields. Wayfinding signage could also be installed at trailheads to call attention to these locations. The town should coordinate trailhead signs with DCR.

## Shoulders and Lane Widths

Paved shoulders have benefits for vehicle drivers, cyclists, and pedestrians.<sup>18</sup> Shoulders are often an option to accommodate nonmotorized travelers in low density areas where dedicated facilities aren't feasible. Wide shoulders are shown to increase the safety for nonmotorized travelers by separating them from the vehicle lane, although there is the potential that with wider shoulders, speeds can increase. Cyclists report feeling more comfortable having extra space that is outside the vehicle lane, and an extra 4-6 feet<sup>19</sup> can provide them with precious separation from moving vehicles.

The Town of Clarksburg should implement wider shoulders to accommodate bicycle and pedestrian travelers where other dedicated facilities are infeasible. Providing paved shoulders as part of routine resurfacing, restoration, rehabilitation, and/or reconstruction work on roadways is a way to implement the Clarksburg Complete Streets Policy given due consideration. This can occur by either reducing lane widths, where this can occur safely, or by extending the paved road surface. Based on guidance from MassDOT, shoulder

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<sup>17</sup> <http://www.apbp.org/?page=publications>

<sup>18</sup> [http://safety.fhwa.dot.gov/ped\\_bike/tools\\_solve/walkways\\_brochure/](http://safety.fhwa.dot.gov/ped_bike/tools_solve/walkways_brochure/)

<sup>19</sup> [https://www.fhwa.dot.gov/environment/bicycle\\_pedestrian/publications/multimodal\\_networks/8\\_paved\\_shoulders.pdf](https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/multimodal_networks/8_paved_shoulders.pdf)

widths to accommodate pedestrians and cyclists should be at least 4' wide for a Case 4 Shared Bicycle/Pedestrian Accommodation.<sup>20</sup>

## PRIORITIZATION PLAN AND IMPLEMENTATION

### Methodology

In an effort to develop a data-driven process to guide the prioritization of Complete Streets projects in Clarksburg, the Complete Streets Working Group developed a planning framework that outlined: goals, performance measures, evaluation criteria/scoring, and weighting. This framework ensured the goals were measurable, and that scoring of the projects directly related to the plan's goals. The Working group was asked to weight and rank each goal, and that was integrated into the multi-criteria analysis used to prioritize the Town's improvements. Based on combined weighting and ranking scores from each working group member, projects related to the safety and traffic calming goal areas received the greatest weight. Projects related to the goal area of context sensitivity were weighted the lowest.

The planning framework matrix can be seen in **Table 10**.

**Table 7. Planning Framework Matrix**

SYSTEM			PROJECT-SPECIFIC	
Goal Area/Theme	Goal	System Performance Measure	Project Scoring	Weight
Connectivity	Provide transportation choices by improving system connectivity within and between modes.	share of non-automobile commuters (ACS)	0 - does not address connectivity within or between modes 1 - addresses existing gap, barrier, and/or connectivity between modes 2 - addresses more than one existing gap, barrier, and/or connectivity between modes 3 - addresses more than two existing gaps, barriers, and/or connectivity between modes	<b>X.xx</b>
Safety	Prioritize safety for all users of the transportation system.	total crashes by severity and mode	0 - project reduces or does not impact safety for users of the transportation system 1 - project addresses safety concern for one vulnerable user group (cyclist, pedestrian, etc.) 2 - project addresses safety concern for two vulnerable user groups (cyclist, pedestrian, etc.) 3 - project addresses safety concern for all users (drivers, vulnerable users, etc.)	<b>x.xx</b>
Traffic Calming	Promote traffic calming measures in Clarksburg to encourage access for all modes, reduce speeds in activity hubs, and promote attractive streetscapes.	annual number of citations for speeding	0 - project has no traffic calming component 1 - project has traffic calming component that impacts ONE of the following: speed reduction, streetscape improvement, encourages access for all modes 2 - project has traffic calming component that impacts TWO of the following: speed reduction, streetscape improvement, encourages access for all modes 3 - project has traffic calming component that impacts ALL of the following: speed reduction, streetscape improvement, encourages access for all modes	<b>x.xx</b>

<sup>20</sup> [https://www.massdot.state.ma.us/Portals/8/docs/designGuide/CH\\_5.pdf](https://www.massdot.state.ma.us/Portals/8/docs/designGuide/CH_5.pdf)

SYSTEM			PROJECT-SPECIFIC	
Goal Area/Theme	Goal	System Performance Measure	Project Scoring	Weight
Cost Effectiveness	Prioritize cost effective improvements that enhance the existing transportation network	Ratio of point awarded to other goal areas (connectivity, safety, traffic calming, usability) to estimated project cost	0 - 1 - 2 - 3 -	<b>x.xx</b>
Usability	Prioritize Complete Streets projects in Clarksburg that are "shovel ready", require minimal or no design/engineering work, or are currently under design.	number of projects in design/engineering phase	0 - project has been identified but requires design 1 - project at 25% design stage 2 - project at 50% or 75% design stage 3 - project does not require design, or is at 100% design stage	<b>x.xx</b>

### Project Selection and Final List

Using the final scores (weighted and unweighted), the Working group developed its final list of projects to submit to MassDOT. Project readiness was a key factor in decision making, as well as overall budgeting based on an anticipated \$400,000 per year for construction funding. It should be noted that as several recommended projects are located on MassDOT owned roads, cooperation with MassDOT District 1 will be necessary to move these projects forward. The Town of Clarksburg will submit these projects, in writing, to the District 1 Highway Director. For the final Tier 2 list, see **Table 11** below; for the complete list of potential improvements, see **Appendix B**.

**Table 8. Final Complete Streets Project Prioritization (Tier 2) List**

Project #	Project Type	Project Location
Project 1		
Project 2		
Project 3		
Project 4		
Project 5		
Project 6		
Project 7		
Project 8		
Project 9		
Project 10		
Project 11		

END OF DRAFT PLAN 2-6-17. DRAFT PROJECT  
PRIORITIZATION AND COST ESTIMATES TO BE SUPPLIED  
AFTER PROJECT FINALIZATION AND RANKING