COMPLETE STREETS NEEDS ASSESSMENT AND PRIORITIZATION PLAN

TOWN OF EGREMONT, MA
Spring – Summer 2016

PREPARED BY:
Berkshire Regional Planning Commission (BRPC)
& the Town of Egremont Complete Streets Committee

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INTRODUCTION

The Town of Egremont 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 cyclists and pedestrians. As nonmotorized transportation for travel and recreation becomes increasingly popular, the need to accommodate cyclists and pedestrians in Egremont is readily apparent.

Complete Streets are roadways designed to safely and comfortably accommodate all users, 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 take into account accommodations for disabled persons as required by the Americans with Disabilities Act (ADA). Design considerations for connectivity and access management are also taken into account with regards to nonmotorized users of the facility.

Enhancements to the multimodal transportation 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. All of 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 including (but not limited to): 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 Egremont's Complete Streets Policy, adopted by the Board of Selectmen on February 8, 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 fulfil 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 Egremont with the opportunity to look at existing conditions, potential improvements, and implementation strategies that support Complete Streets in Egremont.

MassDOT Complete Streets Funding Program

Technical assistance to the Town of Egremont 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.[1]"

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

To participate and maintain eligibility in the funding program, communities were required to meet three tiers. At Tier 1, a community employee was required to attend a Complete Streets training session and the community was required 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 Egremont Complete Streets Committee 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) 2017, Egremont submitted several projects to MassDOT for a total funding request of around $57,000 (see **Table 10**).

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[2]. 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 Egremont, regardless of jurisdiction. While some projects identified may not be eligible for funding, this needs assessment could become a tool to advocate for future improvements to state roadways.

Background

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

The Town of Egremont's Complete Streets Committee was established in 2016, after the town adopted their Complete Streets Policy. This Committee is made up of various stakeholders, with representation from the Board of Selectmen, Public Works, Public Health, Planning, Historical Commission, and administration. The members on the Committee at the time this report was developed were:

- Susan Bachelder, Historical Commission
- Mary Brazie, Select Board
- Charles Flynn, Select Board
- Juliette Haas, Board of Health
- Tim Hosier, Highway Superintendent (resigned from position during planning process)
- Jim Noe, Highway Superintendent (hired by town during planning process)
- Lucinda Vermeulen, Planning Board
- Jared Kelly, Resident of Egremont

Complete Streets have many benefits including safety, multimodal transportation options, economic development, environmental benefits, public health, and accessibility. The Complete Streets Committee discussed these benefits and how completing the streets in Egremont can better the community as a whole, for residents and visitors alike. For a complete summary of the public involvement for this planning process, please see **Appendix A**.

[2] Available from: http://www.massdot.state.ma.us/highway/DoingBusinessWithUs/LocalAidPrograms/CompleteStreets/FundingProgram.aspx

PLANNING FRAMEWORK

Implementing Egremont'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 would see benefits in safety, increased transportation options, increased economic vitality, environmental benefits, public health impacts, and accessibility for persons with limited mobility.

Vision and Intent

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

> *Envisions a transportation system where all modes, users, and abilities can move safety and efficiently. The purpose of the Town of Egremont's Complete Streets Policy, therefore, is to accommodate all users by creating a roadway network that meets the needs of individuals utilizing a variety of transportation modes. It is the intent of the Town of Egremont to formalize the planning, design, operation, and maintenance of the streets so they are safe for all ages and abilities and provide a multi-modal transportation network… [and] 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, transit users, motorists, emergency vehicles, and freight/commercial vehicles.*

Goals and Objectives

The goals and objectives of this Complete Streets Project Prioritization plan, guided by the Egremont Complete Streets Committee, 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. **Economic Vitality** | Enhance activity hubs in Egremont so they are walkable, bikeable, and can be used by all modes.
2. **Livability** | Increase the livability of Egremont by improving access to active mode facilities by residents.
3. **Connectivity** | Provide transportation choices by improving system connectivity within and between modes.
4. **Safety** | Prioritize safety for all users of the transportation system.
5. **Context Sensitivity** | Develop a multimodal transportation system that is sensitive to the historic districts and rural/scenic character of Egremont.
6. **Traffic Calming** | Promote traffic calming measures in Egremont to encourage access for all modes, reduce speeds in activity hubs, and promote attractive streetscapes.
7. **Public Health** | Promote the health and wellbeing of residents and visitors of all ages across Egremont by providing active mode infrastructure that is safe and accessible.

Performance Measures

Mode-Share Goal

In Egremont's Complete Streets Policy, the town committed to measuring the following performance measures:

- Total Miles of Bike Lanes
- Linear Feet of New Pedestrian Accommodation
- Number of New Curb Ramps Installed
- Number of Crosswalk and Intersection Improvements

The Town of Egremont currently sees a commute mode-share dominated by automobile travel (80% of commuters). The mode-share is described in **Table 1**. The Town would like to see an increase in the percent of residents utilizing active modes for safe travel within and around Egremont.

Table 1: Egremont Mode-Share for Commuters

Mode	Percent of Commuters
Car	80%
Transit	3%
Bicycle	0%
Walk	2%
Taxi, Other (motorcycle, etc.)	2%
Work from Home	13%

Source: 2006-2010 CTPP data

During the development of their planning framework, the Egremont Complete Streets Committee developed system-wide performance measures for each of their seven goals. The performance measures, listed by goal area are as follows:

Table 2: Annual System Performance Measures

Goal	Performance Measure	Data Source
Economic Vitality	Annual number of improvements in activity hubs	Town of Egremont Complete Streets Committee (see **Figure 2**)
Livability	Number of residents within 1/4 mile of a dedicated active mode facility	MassGIS – Land Use (2005)[3]
Connectivity	Share of non-automobile commuters	U.S. American Community Survey (ACS)[4]
Safety	Total crashes by severity and mode	MassDOT HSIP Crash Clusters[5]
Context Sensitivity	Annual number of projects in historic districts, in rural areas, and/or adjacent to open space areas	Town of Egremont
Traffic Calming	Annual number of citations for speeding	Egremont Police Department

[3] http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lus2005.html
[4] http://factfinder.census.gov/
[5] http://geo.massdot.opendata.arcgis.com/datasets/cc323741010d4b17b71ca664e2050457_1

Goal	Performance Measure	Data Source
Public Health	Annual heart attack hospitalizations	Mass. Dept. of Public Health – Bureau of Environmental Health – Egremont Community Profile[6]

Related Plans

The Town of Egremont worked with the Berkshire Regional Planning Commission in 2016 to develop this Complete Streets Project Prioritization Plan, which examines needs for Complete Streets in the town and maps out potential projects for implementation. Additionally, the town has a 2003 *Egremont Master Plan*,[7] which was referenced in the development of this plan.

The transportation and mobility chapter of the *Egremont Master Plan* outlines a series of broad goals related to this topic area, as well as Complete Streets. The first is that the town should "consider long term infrastructure needs for all transportation needs." Additionally, the town set the goal that it should "recognize and encourage the use of main roads for heavy local and through transportation and other roads for lower impact purposes such as local access and recreation." The 2003 *Egremont Master Plan* recognized the need for curbing along the roadway, particularly in places like South Egremont, and states that the lack of curbing "creates chaos among drivers trying to enter and exit shops."

The plan also recognized the need for context sensitive complete streets design elements, "in order to maintain rural character while also ensuring safe pedestrian access." The master plan notes that "the character of the town is great affected by the nature of the roads which wind their way through it" and that "Egremont's character can best be maintained by keeping its roads appropriate to the scale of the town."

EXISTING CONDITIONS

Sociodemographic Profile

The Town of Egremont is a small, rural town just over 1,000 residents, which has seen population decline since 2000. From the US. Census estimate of population in 2010 (1,225), the UMass Donahue Institute predicts that the population of the town will decline to just over 800 residents by the year 2035, based on the town's current birth and death rates, as well as out-migration of the population. Population decline has been occurring in Berkshire County since the 1970s, and all but a few municipalities are predicted to decline in population over the next few decades.

Additionally, Egremont, along with many communities throughout the Berkshires, is aging much faster than the rest of the state. Already, Berkshire County is the second oldest county in the state by median age, behind Cape Cod (Barnstable County). According to recent data, about 40% of the population is over the age of 60, and by 2035 it is expected that around 50% of the population will be over the age of 60. According to the 2010-2014 American Community Survey (ACS), a rolling five-year statistical survey conducted by the U.S. Census Bureau, Egremont is the third oldest community by median age in Berkshire County, behind the communities of Mt. Washington and Tyringham.

As aging in place becomes more popular among seniors, the composition of the population is important to consider when addressing things like wayfinding, walkability, and roadway safety. Additionally, as a rural

[6] https://matracking.ehs.state.ma.us/?utm_source=Outreach&utm_medium=behlandingpage&utm_campaign=community-profiles

[7] Master Plan for the Town of Egremont. 2003.

community, complete streets improvements create a vital public health infrastructure, enabling residents to utilize active transportation and access an interconnected network of town parks and recreation areas.

Climate

In Berkshire County, there are about 185 sunny days per year, and about 126 precipitation days per year,[8] which may make travelling by bicycle or foot difficult at times throughout the year. 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 in the spring, summer, and fall to travel using active modes.

Land Use Characteristics

The Town of Egremont is a rural community with an average population density of about 65 residents per square mile based on the 2010 US Census population of the town (1,225) and the town's total land area (18.92 miles^2). Due to its rural character and low density it is impossible to replace all trips by active modes, but for shorter, local trips the opportunity is present, especially for residents in and around the two village centers.

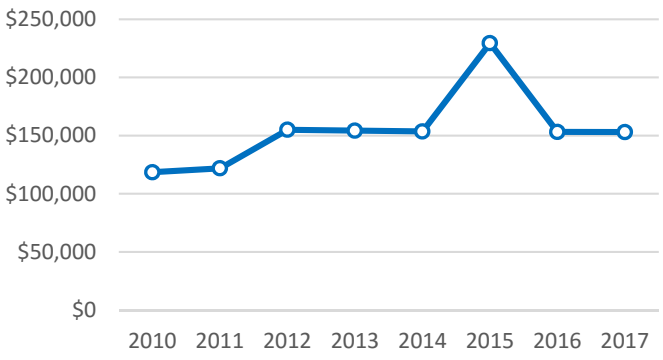
Fiscal Conditions and Other Considerations

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 Egremont, Chapter 90 funding is generally between $110,000 and $160,000 each fiscal year (FY), with a significant increase in 2015 of nearly $230,000 due to additional statewide funding that fiscal year that was allocated by the Baker administration. The Town's apportionment of Chapter 90 funds can be seen in **Figure 1**. In the past, the town has utilized most of this funding for roadway projects. However, in recent years, the Town has been saving its yearly Chapter 90 funding to complete a bridge replacement project on Mt. Washington Road (roughly $500,000).

[8] http://www.bestplaces.net/climate/county/massachusetts/berkshire

Figure 1: Historic Chapter 90 Apportionment



Source: MassDOT[9]

Egremont Highway Department

Beyond the Chapter 90 apportionment, the town spends approximately $70,000 of its own funding on roadway projects, in addition to salaries and wages for its highway department staff members. The Egremont Highway Department has a full time staff of four including a highway superintendent and three employees. An extra driver is hired each winter season for snow plowing and three private contractors are hired to help meet other winter plowing needs.

Highway Department Equipment

- Grader (1)
- Large Dump Truck (3)
- Pick-up Truck (1)
- One-ton Dump Truck (1)
- Loader (1)
- Back-hoe/Loader (1)
- Tractors (3)
- Small Roller (1)
- Army Surplus Dump Truck (1)

Activity Hubs and Town Features

To help inform plan development and project selection criteria, the Egremont Complete Streets Committee was asked to identify activity hubs within the town (**Figure 2**). Activity hubs refer to areas of town where potential Complete Streets projects should be prioritized due to additional pedestrian or cycling activity and encompass a range of features and town destinations including town recreation areas and economic and population centers. In planning for potential complete streets improvements, activity hubs can be seen as places where pedestrian and cycling infrastructure should be included as they encompass primary destinations and link to residential areas. Additionally, activity hubs are areas that should be connected as a network, such as linking town green and open space, or village centers.

The Town of Egremont has two main commercial and residential centers, the village centers of North Egremont and South Egremont. Although most major shopping/retail is conducted outside of the Town in

[9] Historical Chapter 90 apportionment data available from: http://www.massdot.state.ma.us/highway/DoingBusinessWithUs/LocalAidPrograms/Chapter90Program/PastApportionments.aspx

neighboring communities like Great Barrington, there are local destinations (US Post Office, Town Library, etc.) that make these centers important to town residents. Both North Egremont[10] and South Egremont Village[11] are listed as National Historic Districts in the National Register of Historic Places. Linking the designation (and related tourism) to Complete Streets could enhance existing activities, for example the Egremont Historical Commission developed a walking tour of historic resources in South Egremont.[12]

Egremont's expansive open and green space opportunities make it a destination for recreation, including camping, hiking, and skiing. The Appalachian Trail passes through town, crossing Jug End Road and Undermountain Road. The Appalachian Trail Conservancy also as a headquarters along Undermountain Road at the Kellogg Conservation Center.

Egremont's rural setting and low volume roadways make it a desirable destination for cyclists. One measure of cycling and pedestrian activity is the Strava Heat Map.[13] Strava is a mobile application that allows users to track speed and location while cycling or running to measure progress and engage in friendly competition with other users of the application. The Strava Labs Heat Map provides a measure of the relative use of roadways by runners and cyclists who also use the Strava application. Based on the Heat Map, one can expect cyclists on major roadways such as Routes 71, 23 and 41, as well as on Prospect Lake, Boice, Baldwin Hill (all), Creamery, Blunt, Jug End, and Mt. Washington Roads.

Patterns for runners are quite different. There is a distinct "loop" used by runners which combines portions of Route 71, Prospect Lake Road, Blunt Road, and Baldwin Hill Road. Additionally, portions of Mt. Washington Road, Main St. (Route 41 and 23) and Sheffield Road are utilized by Strava Users.

North Egremont Village (Primary Activity Hub)

North Egremont Village center is roughly defined by the area surrounding the intersection of Boice Road and Prospect Lake Road with Route 71, and extending south from this area along Route 71 to Town Hall. This "four corners" is also the home of the Old Egremont Country Store. Further northwest along Prospect Lake Road is Prospect Lake Park, a popular campground, and Prospect Lake itself. Visitors of the campground often use Prospect Lake Road to travel between the campground and the country store.

French Park is also located along Prospect Lake Road (as well as Baldwin Hill Road). This municipal park contains baseball diamonds, tennis courts, a children's playground, as well as a fenced-in dog park. This is a regional destination, particularly the dog park, where visitors come from across the Berkshires with their pets.

South Egremont Village (Primary Activity Hub)

South Egremont Village is the larger of the town's two village centers. It is bounded roughly by the intersection of Routes 23 and 41 on the east and to the west by the intersections of Creamery Road and Buttonball Lane with Route 23.

Egremont is part of the Southern Berkshire Regional School District, so students in Second Grade and above travel substantial distances to attend school each day. However, South Egremont Village is home to the South Egremont School, a small school that offers education at the kindergarten and first grade levels.

South Egremont Village is also home to several important town destinations, including a bank (Salisbury Bank and Trust), the town's US Post Office, the Town Library, two restaurants, and retailers including

[10] https://en.wikipedia.org/wiki/North_Egremont_Historic_District
[11] https://en.wikipedia.org/wiki/South_Egremont_Village_Historic_District
[12] http://egremonthistory.org/our-town-history/historic-homes-of-south-egremont/
http://egremonthistory.org/our-historical-resources/north-egremont-walking-driving-tour/
[13] http://labs.strava.com/heatmap

Kenver Ltd. and antique shops. Complete Streets Committee members reported that the Library parking lot is used by cyclists who park their cars and then bike throughout Egremont.

Jug End Secondary Activity Hub

The Jug End activity hub extends south and west from the western edge of the South Egremont Village activity hub. This activity hub includes two important destinations in Egremont, the Jug End Reservation and Wildlife Management Area (WMA), and the Appalachian Trail crossing/trailhead along Jug End and Undermountain Roads. This area also includes an important informal parking and pull-off area near Smiley's Pond which is used by cyclists to park and then bike in the area.

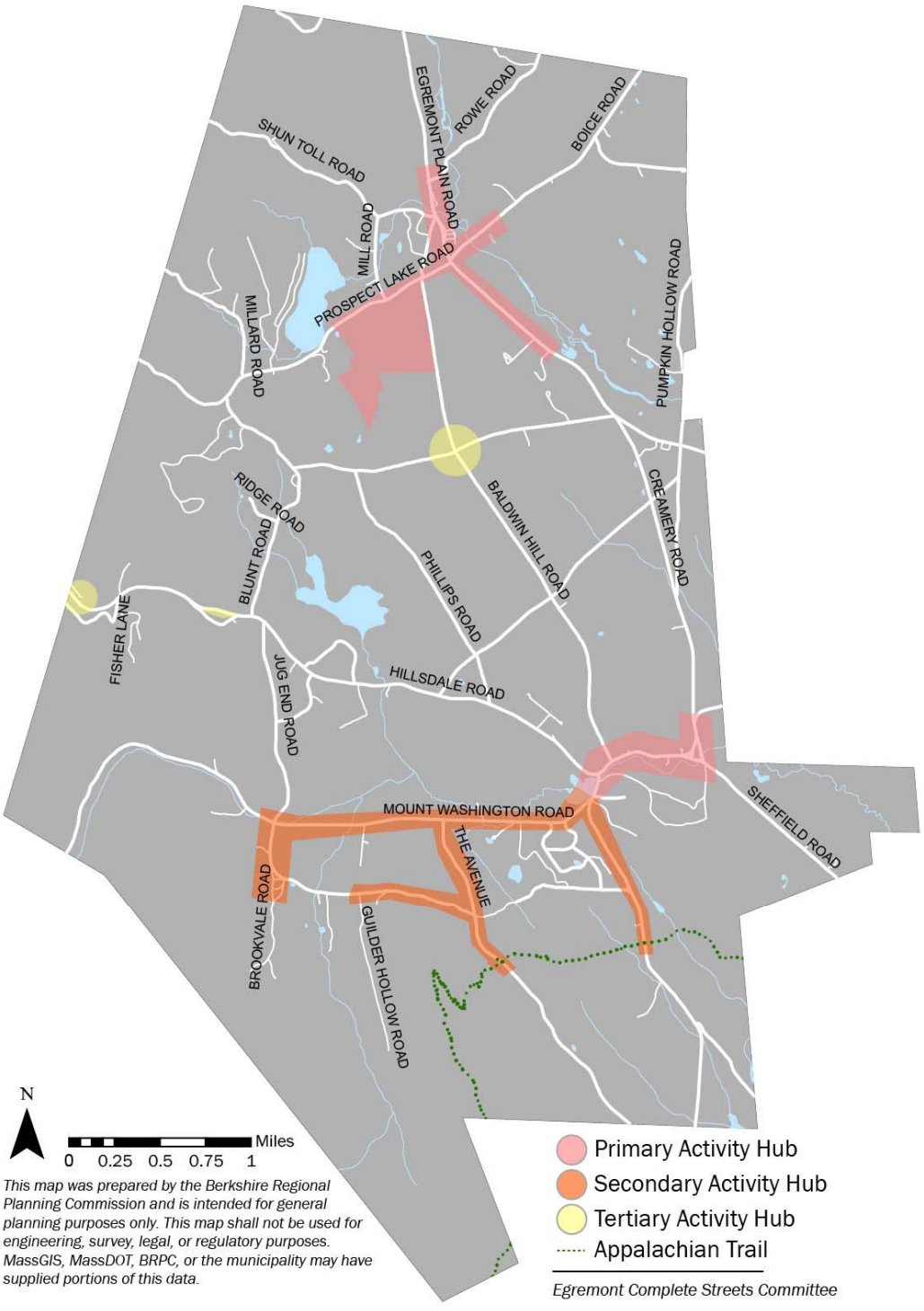
Baldwin Hill Tertiary Activity Hub

The area around the summit of Baldwin Hill (intersections of Baldwin Hill Road East, West, North and South) is a popular area for recreation including running, walking and dog-walking. The area is also a destination for photographers and those viewing the sunset. Baldwin Hill is home to the Baldwin Hill Elm, a solitary Elm tree that stands in an agricultural field near the top of the hill. Baldwin Hill Road North has a small parking area that serves Egremont's fenced dog park (part of French Park).

Route 23 Amenity Area Tertiary Activity Hubs

These areas include informal parking and roadside pull-offs where cyclists park their cars. Two are located along Route 23 near the western edge of the town.

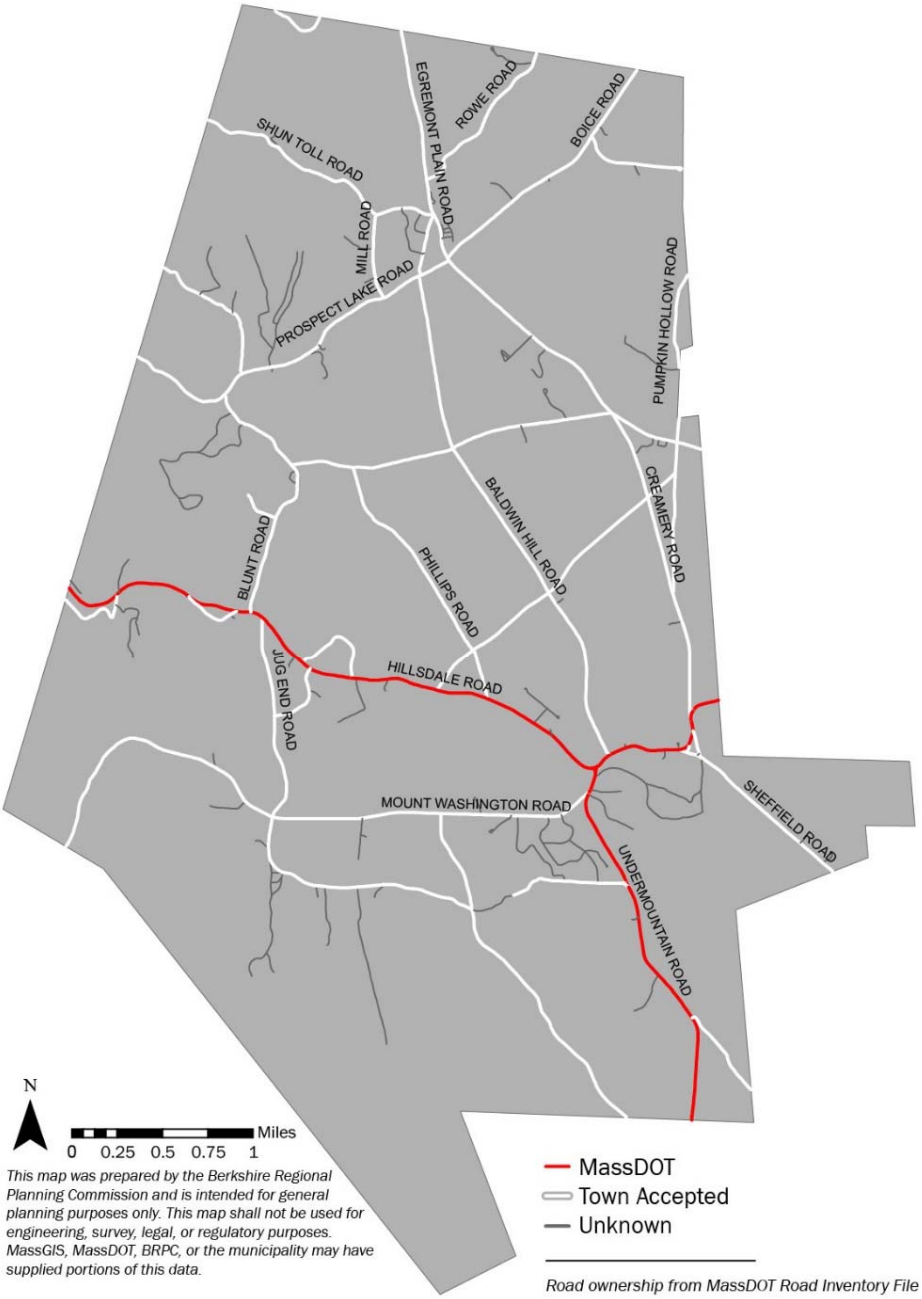
Figure 2: Town of Egremont Activity Hubs



Road Network

The Egremont road network is about 43 miles; 6 miles are under MassDOT's jurisdiction, 36 miles are Town Accepted, and the remaining 1 mile is unaccepted.[14] There are long driveways and private routes that are not part of the network, and those are not included in the 43 miles. Routes 23 and 41, which pass through the town, including South Egremont Village are under MassDOT jurisdiction. Route 71 (Egremont Plain Road), while a numbered state route is under the jurisdiction of the town.

Figure 3: Roads by Jurisdiction



[14] MassDOT Road Inventory Report 2014

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. All 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. Arterials provide for travel over long distances, but offer a lesser degree of 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 3**).

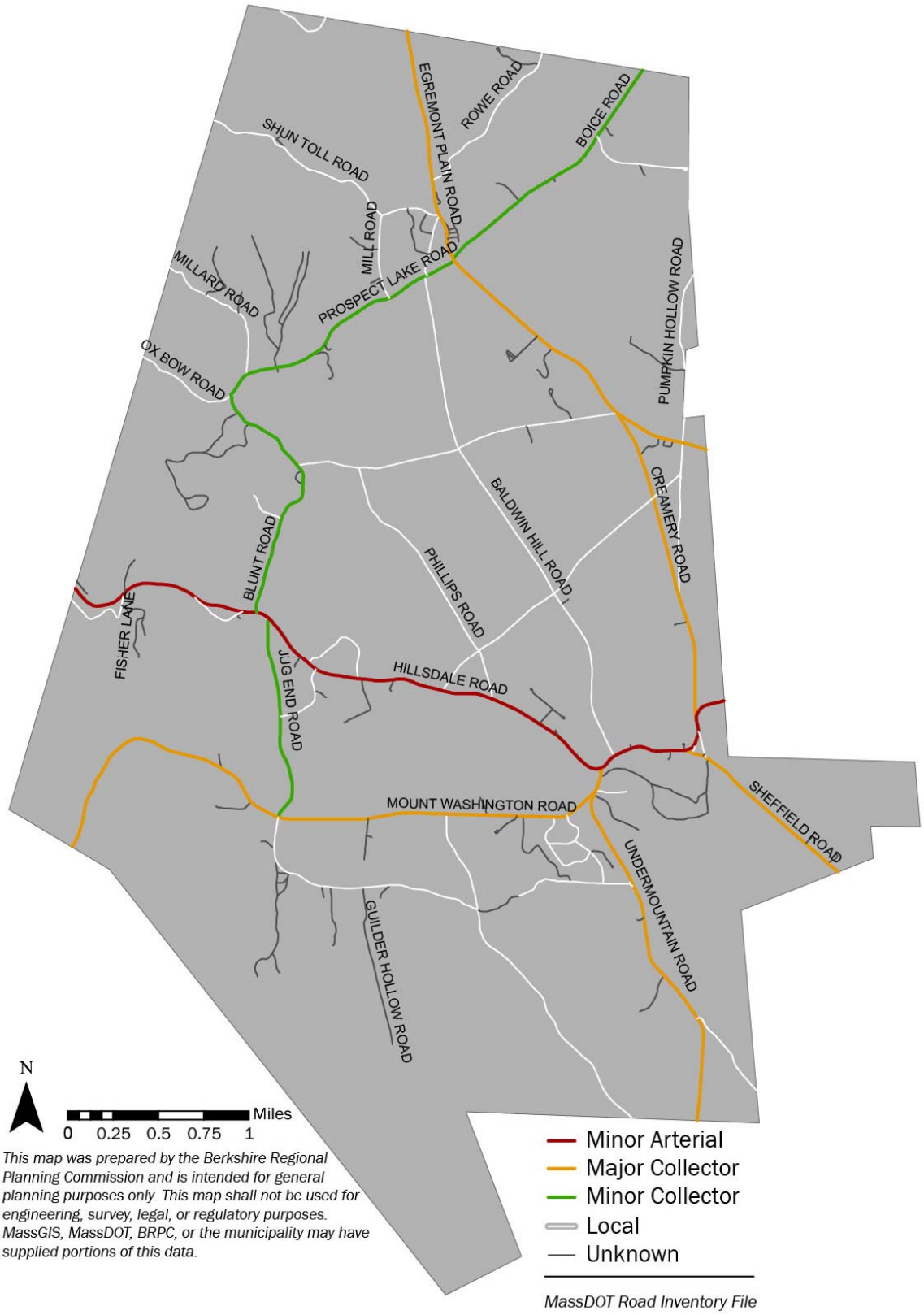
Within Egremont, the only roadway classified as an arterial is Route 23 and Main St. All other roadways are classified as either collectors or local roadways (see **Figure 4**).

Table 3: Functional Classification Descriptions[15]

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.

[15] Table adapted from Federal Highway Administration, Flexibility in Highway Design. Available from: http://www.fhwa.dot.gov/environment/publications/flexibility/ch03.cfm

Figure 4: Roads by Functional Classification

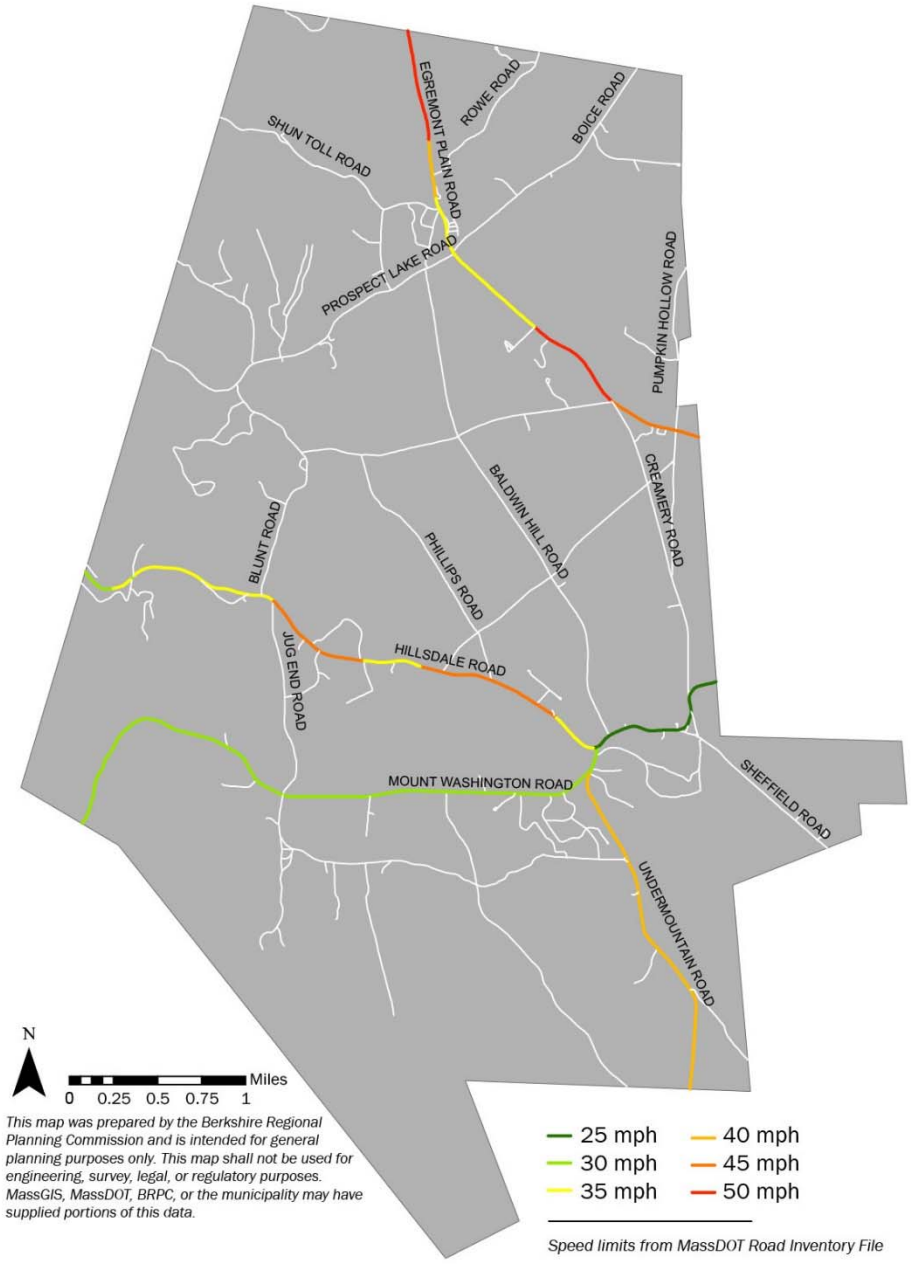


This map was prepared by the Berkshire Regional Planning Commission and is intended for general planning purposes only. This map shall not be used for engineering, survey, legal, or regulatory purposes. MassGIS, MassDOT, BRPC, or the municipality may have supplied portions of this data.

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. Town Speed Limits are shown below in **Figure 5**.

Figure 5: Speed Limits



Traffic Volumes

As Egremont is a primarily rural town, volumes on Egremont's roads tend to be low. Relative to the Town volumes, highest volumes are along Route 23, then Route 41 and Route 23. This is typical given the functional classifications of these roadways and important to consider, especially as higher traffic volumes often suggest the need to separate nonmotorists from vehicles. Given that Route 23, a MassDOT facility, passes through one of the two major village centers, safety (crossings, separated infrastructure like sidewalks, signage, and enforcement) should be a major concern when implementing Complete Streets projects. Historic traffic count data is shown below in **Table 4**.

Table 4: Traffic Counts

Numbered Route	Street	Location	Year	Source	ADT
23/41		W of Gt. Barrington T.L.	2003	BRPC	6,129
23/41		W of Village Green	2003	OTH	5,640
23/41		E of Rte. 23	2004	MassDOT	5,500
23/41		W of Gt. Barrington T.L.	2001	BRPC	5,037
23		@ New York S.L.	2000	MassDOT	4,735
23		@ New York S.L.	1998	BRPC	4,474
23		@ New York S.L.	1999	BRPC	4,300
23		@ New York S.L.	2003	BRPC	4,170
23		@ New York S.L.	2004	BRPC	4,116
23		W of Rte. 41	1999	BRPC	4,043
23		@ New York S.L.	2004	MassDOT	4,000
23		@ New York S.L.	2008	BRPC	3,700
23		W of Rte. 41	2004	MassDOT	3,600
23		@ New York S.L.	2001	BRPC	3,284
23		@ New York S.L.	2012	BRPC	3,000
23		@ New York S.L.	2010	BRPC	2,800
71		@ Gt. Barrington T.L.	2001	BRPC	1,877
71		S of Prospect Lake Rd.	2003	OTH	1,875
71		S of Prospect Lake Rd.	1999	BRPC	1,822
41		S of Rte. 23	2004	MassDOT	1,600
	Sheffield Rd.	@ Sheffield T.L.	1995	BRPC	1,515
71	Alford GTB Rd.	@ Alford T.L.	2007	BRPC	1,300
71	Alford GTB Rd.	@ Alford T.L.	2007	MassDOT	1,300
71	Alford GTB Rd.	@ Alford T.L.	2001	MassDOT	1,300
71	Alford GTB Rd.	@ Alford T.L.	1992	MassDOT	1,200
71	Alford GTB Rd.	@ Alford T.L.	1995	MassDOT	1,200
71	Alford GTB Rd.	@ Alford T.L.	2004	MassDOT	1,200
71	Alford GTB Rd.	@ Alford T.L.	1998	MassDOT	1,100
	Mt. Washington Rd.	W of Rte. 41	2004	MassDOT	1,100
71	Alford GTB Rd.	@ Alford T.L.	1989	MassDOT	1,024
71	Alford GTB Rd.	@ Alford T.L.	1981	MassDOT	1,000

Numbered Route	Street	Location	Year	Source	ADT
41		@ Sheffield T.L.	1978	MassDOT	900
71	Alford GTB Rd.	@ Alford T.L.	1986	MassDOT	900
71	Alford GTB Rd.	@ Alford T.L.	1985	MassDOT	850
	Mt. Washington Rd.	Between Farm Ln and The Ave	2013	BRPC	795
41		@ Sheffield T.L.	1977	MassDOT	750
71	Alford GTB Rd.	@ Alford T.L.	1980	MassDOT	700
71	Alford GTB Rd.	@ Alford T.L.	1982	MassDOT	700
	Mt. Washington Rd.	@ Mt. Washington T.L.	1999	BRPC	596
	Mt. Washington Rd.	@ Mt. Washington T.L.	1997	BRPC	595
	Mt. Washington Rd.	@ Mt. Washington T.L.	1995	MassDOT	550
	Mt. Washington Rd.	@ Mt. Washington T.L.	2001	MassDOT	520
	Mt. Washington Rd.	W of Jug End Rd.	2008	BRPC	520
	Mt. Washington Rd.	@ Mt. Washington T.L.	2004	MassDOT	500
	Mt. Washington Rd.	@ Mt. Washington T.L.	1998	MassDOT	470
	Mt. Washington Rd.	@ Mt. Washington T.L.	2007	BRPC	450
	Mt. Washington Rd.	@ Mt. Washington T.L.	2007	MassDOT	450
	Mt. Washington Rd.	@ Mt. Washington T.L.	1992	MassDOT	410
	McGee Rd.	S of Rte. 71	2001	BRPC	408
	Mt. Washington Rd.	@ Mt. Washington T.L.	1981	MassDOT	400
	McGee Rd.	S of Rte. 71	2002	BRPC	351
	Oxbow Rd.	W of Blunt Rd.	2008	BRPC	340
	Mt. Washington Rd.	@ Mt. Washington T.L.	1985	MassDOT	300
	Mt. Washington Rd.	@ Mt. Washington T.L.	1986	MassDOT	300
	Blunt Rd.	N of Rte. 23	1994	MassDOT	290
	Blunt Rd.	N of Rte. 23	1991	MassDOT	280
	Jug End Rd. N	Btwn. Mt. Washington Rd. and Rte. 23	1999	BRPC	278
	Blunt Rd.	N of Rte. 23	1988	MassDOT	270
	Mt. Washington Rd.	@ Mt. Washington T.L.	1989	MassDOT	241
	Blunt Rd.	S of #88 Blunt Road	2002	BRPC	213
	Blunt Rd.	N of Rte. 23	2002	MassDOT	210
	Blunt Rd.	N of Rte. 23	1980	MassDOT	200
	Blunt Rd.	N of Rte. 23	1981	MassDOT	190
	Blunt Rd.	N of Rte. 23	1985	MassDOT	180
	Town House Hill Rd.	Near Baldwin Rd.	2001	BRPC	173
	Town House Hill Rd.	Near Baldwin Rd.	2002	BRPC	166

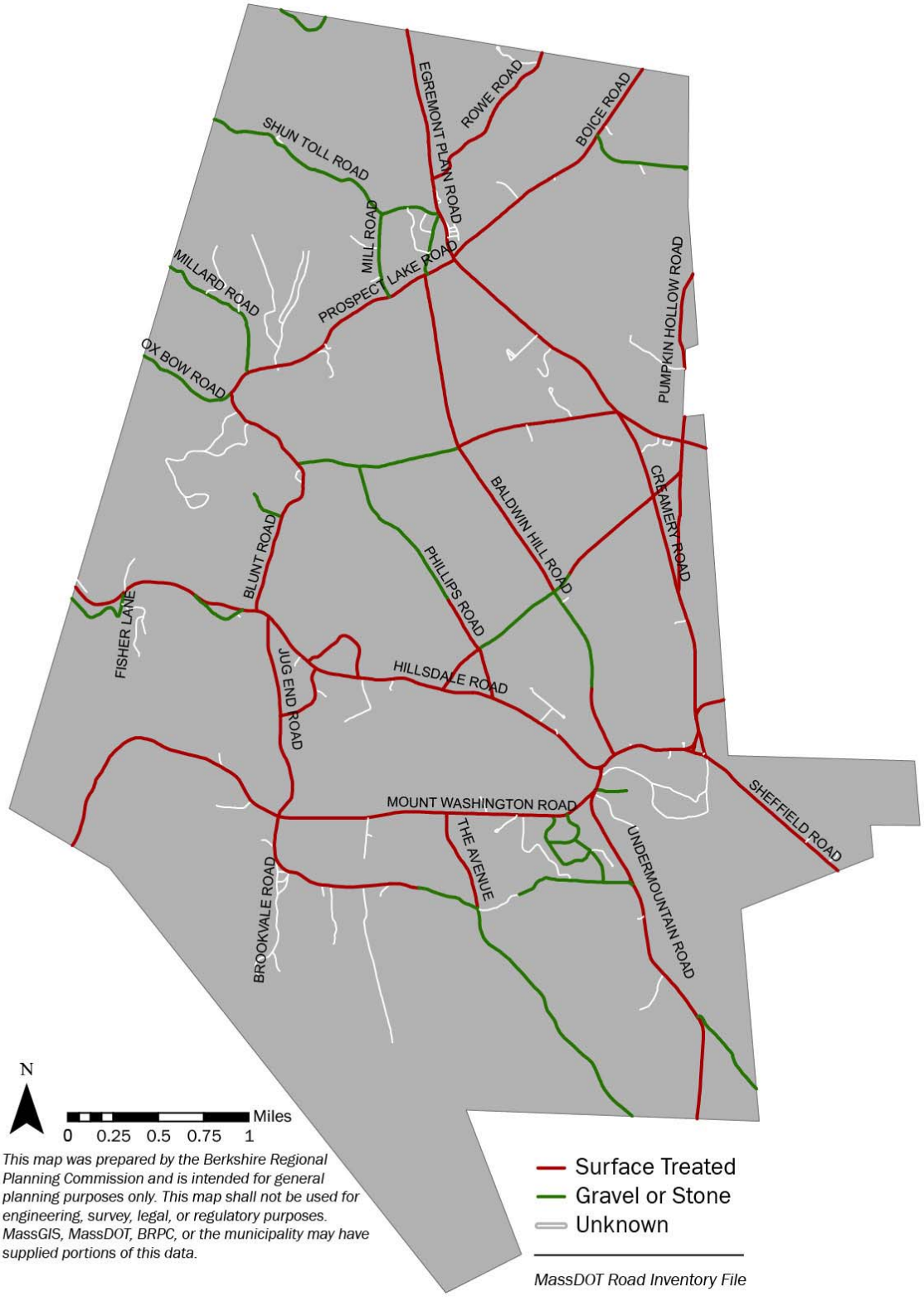
Road Surface Type

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. The road surface types can be seen in **Figure 6**.

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."[16] Additionally, unpaved roads are sometimes used by cyclists, 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.

[16] 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 6: Road Surface Type



Pedestrian Conditions

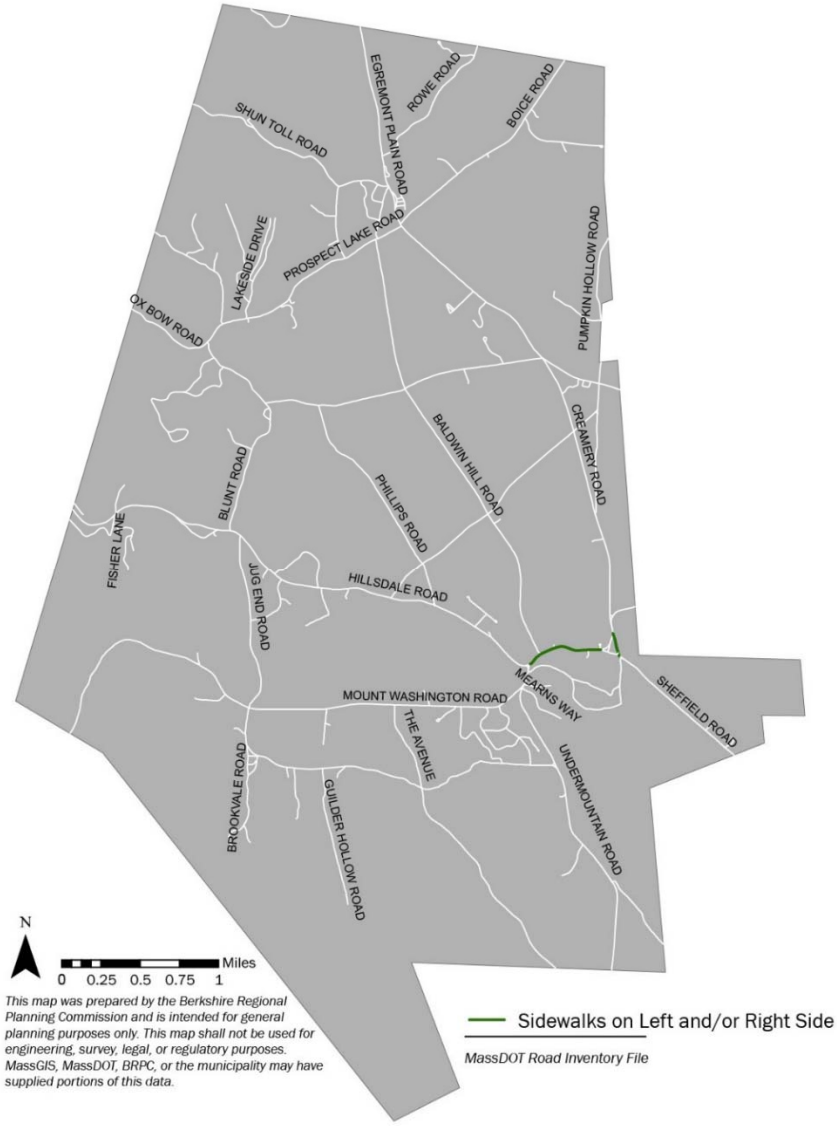
Sidewalks

Currently, sidewalks extend through much of South Egremont Village from near Smiley's (Mill) Pond east to Buttonball Lane and the Egremont Library. Sidewalks are primarily concrete with a granite curb. However, there are sections of asphalt sidewalk with either concrete or asphalt curb. Much of the existing asphalt sidewalk, on the south side of Main Street and along Buttonball Lane is in very poor condition. While much of the concrete sidewalk is of relatively recent construction, it has started to heave and deteriorate in sections, creating trip hazards which can undermine complete street efforts.

Crossings

Due to the lack of sidewalks on both sides of Route 23 in South Egremont, the crossings are very important connection points for pedestrians. There are two existing crosswalks in South Egremont: one in front of the South Egremont School and one in front of the US Post Office.

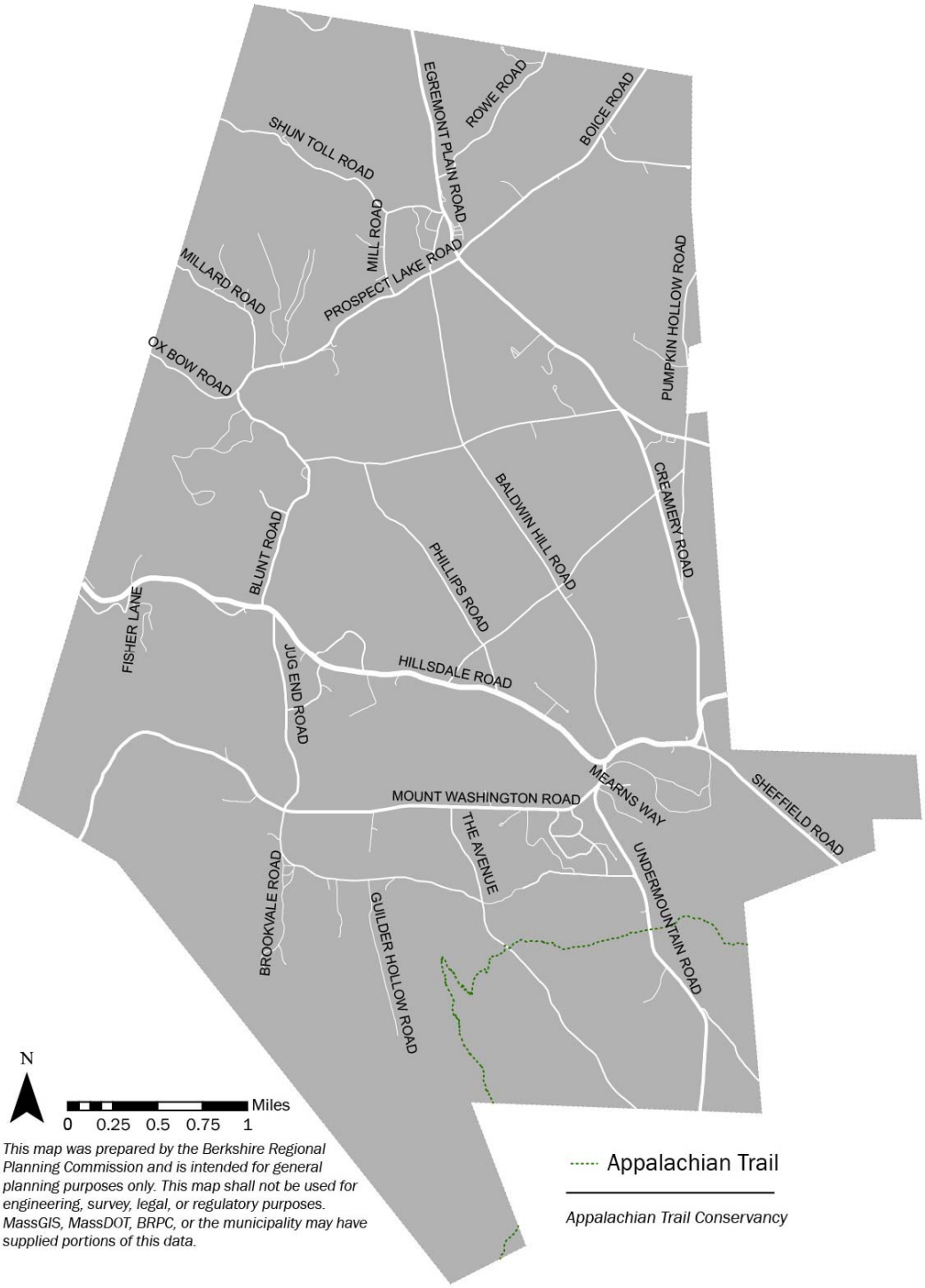
Figure 7: Existing Sidewalk Network



Long-Distance Pedestrian Travel

The Appalachian Trail is the longest hiking-only footpath in the world. The trail is used by day, section, and thru-hikers and it passes through the Town of Egremont. There are two roadway crossings at Jug End Road and at North Undermountain, where minimal signage currently exists.

Figure 8: The Appalachian Trail



On-Road Bicycle Conditions

While there is no dedicated on-road bicycle infrastructure in Egremont, there are cyclists (primarily recreational) that ride in the roadway or shoulder (if available). The Egremont Complete Streets Committee noted several locations where people (from Egremont and the greater region) drive, park, and then cycle around the town. Some of the key locations where people park and cycle from are: the library, Kenver Ltd., two pull-off areas along Route 23 (near Catamount Ski Area and Tyrell Rd.), as well as another pull-off area along Undermountain Rd. near Smiley's Pond. If people are driving to Egremont specifically to cycle, 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[17]. Studies have found that bike tourism brings millions of dollars annually to surrounding states such as Maine and Vermont[18].

Bike Lanes

There are currently no bike lanes in Egremont. Cyclists currently ride in the roadway or shoulder (if available).

Shared Lane Markings

There are currently no shared lane markings in Egremont.

Crossings/Signalization

There are two existing crosswalks in South Egremont. There are no crossing facilities or intersection treatments for cyclists.

Americans with Disabilities Act (ADA) Conditions

As an aging community, considering ADA accessibility throughout the Town of Egremont will become increasingly important. In conjunction with Complete Streets, improving the conditions of sidewalks and crossings to encourage active transportation also improves the quality of life of those with limited mobility.

Signage/Wayfinding

There is currently no comprehensive wayfinding and/or signage in the Town. Wayfinding and signage could complement existing walking tours within Egremont, and promote active modes. Wayfinding can also serve as an economic development and promotion tool for the town.

Bicycle Parking

There is currently no bicycle parking in Egremont.

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 enforcement and education. The Egremont Complete Streets Committee identified both Safety and Traffic Calming as goals for this planning process.

As part of MassDOT's data collection process, accident data is compiled each year and staff was able to evaluate the types of vehicle crashes that have occurred in the town recently.

[17] https://www.adventurecycling.org/about-us/media/press-releases/10-new-indicators-that-bicycle-travel-and-tourism-are-booming-and-changing/

[18] http://www.peopleforbikes.org/statistics/category/economic-statistics

Crash Data

Crash data is available for a three-year period from 2011 to 2013. Crashes are grouped into four types based on damage including, fatality, non-fatal injury, property damage only (PDO) and when information is unavailable the crash type is listed as "not reported." Between 2011 and 2013, there were 90 reported crashes and the details can be seen in **Table 5**. Fortunately, most crashes in Egremont in the three-year period fall into the PDO category. Unfortunately, there was a fatality recorded in Egremont, due to a crash near the intersection of Creamery Road and Townhouse Hill Road, which also contributes to this location's status as a crash cluster (see **Crash Clusters** later in this section).

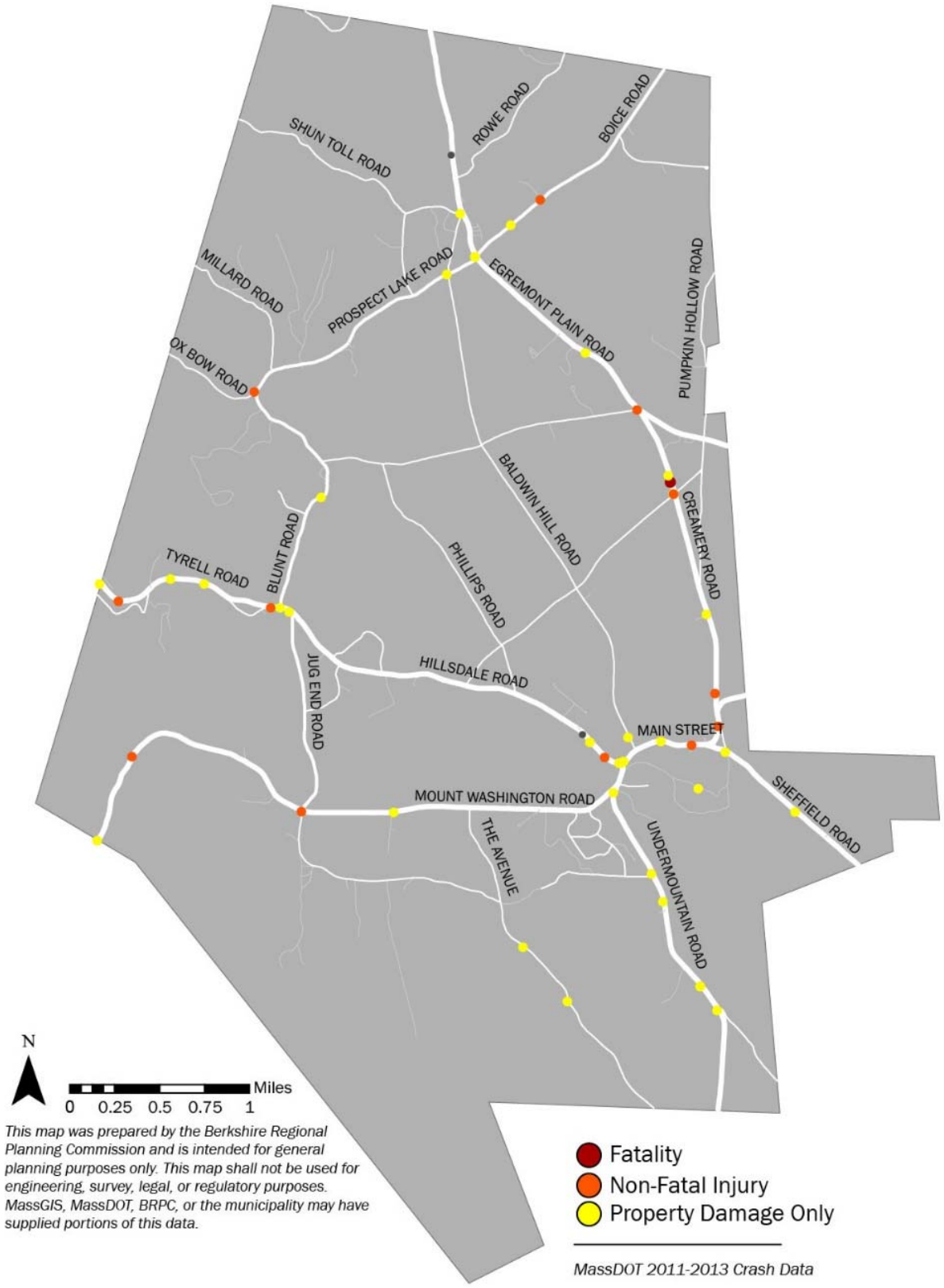
Table 5: Egremont Crash Data 2011-2013

Town of Egremont Crash Data 2011-2013					
CRASHES BY TYPE	**2011**	**2012**	**2013**		**NOTES**
Total Crashes	19	39	32		Increasing non-fatal injury crashes
Fatality	-	-	1		
Non-fatal Injury	2	8	10		
PDO	16	31	20		
Not reported	1	-	1		
DAY OF WEEK	**2011**	**2012**	**2013**		**NOTES**
Sunday	1	5	4		Relatively steady throughout week
Monday	4	5	5		
Tuesday	-	6	6		
Wednesday	4	4	1		
Thursday	4	6	6		
Friday	2	6	5		
Saturday	4	7	5		
TIME OF DAY	**2011**	**2012**	**2013**		**NOTES**
4 AM - 10 AM	1	10	5		Daytime
10 AM -4 PM	7	15	14		
4 PM - 10 PM	10	6	10		
10 PM - 4 AM	1	8	3		
WEATHER	**2011**	**2012**	**2013**		**NOTES**
Clear	7	19	15		
Cloudy	7	5	16		
Rain	3	7	1		
Snow/Ice	2	8	-		
ROAD SURFACE	**2011**	**2012**	**2013**		**NOTES**
Dry	8	17	25		Over 50% on dry roads
Wet	6	9	4		
Ice	2	7	-		
Snow	3	5	2		
Dirt/Mud	-	-	1		
Not Reported	-	1	-		

Town of Egremont Crash Data 2011-2013					
MONTH	2011	2012	2013		NOTES
January	5	10	3		
February	-	2	2		
March	1	1	2		
April	1	2	2		
May	-	-	1		
June	1	2	2		
July	1	1	3		
August	2	4	7		
September	2	2	2		
October	2	3	3		
November	1	2	3		
December	3	10	2		
COLLISION TYPE	2011	2012	2013		NOTES
Angle	4	9	6		Primarily Single Vehicle Crashes
Head-on	-	1	3		
Not Reported	-	1	1		
Rear-end	3	4	2		
Sideswipe	2	1	2		
Single Vehicle Crash	10	23	18		

Source: MassDOT 2011-2013 Crash Data

Figure 9: Accidents by Severity



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

In Egremont there are several crash clusters including at the intersection of Route 71 (Egremont Plain Road) with Prospect Lake and Boice Road (North Egremont four corners), near the intersection of Creamery Road with Townhouse Hill Road, two near the intersection of Route 23 (Hillsdale Road) and 41 at the western side of Main St. in South Egremont and two clusters along Undermountain Road near the intersection of this road with Bow Wow Road.

Figure 10: MassDOT Crash Clusters

Crashes related to Bicycles and Pedestrians (injury v PDO)

During the three years of available data (2011-2013), there were no reported crashes in Egremont related to cyclists and pedestrians. However, there may be crashes involving pedestrians or cyclists that have gone unreported.

Egremont Police Department Traffic Citation Data

As part of the development of this analysis, the Egremont Police Department provided traffic citation data for the period from January 1, 2014 to June 8, 2016. These data include all recorded traffic violations from speeding to other infractions such as failure to obey signs or traffic signals. Data on individual infractions were not provided and thus are presented in aggregate by location and ranked based on total number of citations. Citations by location are shown below in **Table 6**.

Main St. had the highest number of citations over the two-and-a-half-year period with nearly 500; because this is not normalized based on ADT, this is expected as this road carries the majority of vehicles in town. This roadway is followed by Hillsdale Road (Rt. 23), Egremont Plain Road (Rt. 71), Undermountain Road (Rt. 41) and Sheffield Road, where over 100 citations were issued in each of those locations. All of these roadways are classified as either major arterials or major collectors.

Table 6: Citation Data

Egremont Citation Data 1/01/14 - 6/08/16	
Roadway Name	# of Offenses
Main St (Rt 23 & 41)	489
Hillsdale Rd (Rt 23)	180
Egremont Plain (Rt 71) Rd	171
Undermountain (Rt 41) Rd	152
Sheffield Rd	147
Creamery Rd	41
Prospect Lake Rd	21
Mount Washington Rd	20
Boice Rd	15
Baldwin Hill South Rd	11
Baldwin Hill East Rd	10
Jug End Rd	8
Baldwin Hill North Rd	6
Baldwin Hill West Rd	6
Blunt Rd	4
Phillips Rd	4
Unknown/Unrecorded	4
Town House Hill Rd	3
McGee Rd	2
Bow Wow Rd	1
Buttonball Ln	1
General Knox Ln	1
Oxbow Rd	1
Taconic Ln	1

Source: Egremont Police Department 2016

GAPS/NEEDS

Qualitative system gap analysis based on field observations, existing planning documents and GIS data, and aerial imagery. The analysis looks and 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 Egremont.

Linear Gaps (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 hubs.

1. There are no existing pedestrian or bicycling facilities in North Egremont Village, other than existing road shoulder, which is minimal. Many paved roadways in North Egremont are not striped with either centerlines or fog lines. Providing roadway striping has been shown to provide a measure of traffic calming[19], and could help to define the portion of the road shoulder available for walking or biking.

2. Major town destinations, many identified as "activity hubs" by the Egremont Complete Streets Committee, lack a pedestrian or bicycle connection. The town should prioritize complete streets improvements that link activity hubs, forming a network of destinations connected by an active transport mode. For example, the town should consider providing a continuous pedestrian and/or cycling connection between North Egremont Village, Town Hall and the town facility complex, and South Egremont Village. This concept could be further expanded in North Egremont to include French Park and Prospect Lake Park Campground, and in South Egremont to include open space areas such as the Appalachian Trail and Jug End WMA. Due to road jurisdiction shifts, particularly in South Egremont Village, the town should make sure that MassDOT is aware of the town's desire for Complete Streets throughout Egremont, not just on local roadways.

Location-specific Barriers (either point-specific locations like 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 hubs.

1. The Egremont Highway Department has noted that there are several location specific pedestrian barriers in South Egremont. In particular, these are related to pedestrian activity from the South Egremont School to the Town Library. A pedestrian travelling from the school to the library encounters degraded sidewalk along Main St., which then ends as it moves south along Sheffield Road creating a gap until the next area of sidewalk on Buttonball Lane, the only true gap within Egremont's existing sidewalk network. Additionally, there is no crosswalk for a pedestrian to travel from Sheffield Road toward the Library on Buttonball Lane.

2. South Egremont Village is the location of most of town's existing sidewalk infrastructure. However, sidewalk does not extend along both sides of the roadway. A pedestrian travelling, for example, from the Town Library west towards Smiley's Pond must cross the roadway twice if they wish to remain on the sidewalk. Sidewalk along both sides of the roadway could help to address a significant gap.

[19] http://nacto.org/docs/usdg/roadway_striping_as_a_traffic_calming_option_kahn.pdf

There is also a significant gap between existing sidewalk on Buttonball Lane and sidewalk along Main St. There are no existing bicycling accommodations or facilities in South Egremont Village.

Intersections

Several intersections in Egremont were identified by the Complete Streets Committee as being unsafe for both drivers and 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 90º (right) angle, or "T"-shaped intersection 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"*[20]

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.

Moreover, several intersections in Egremont include large turning or corner/curb radii. Curb radii add additional area to the corners formed at the intersection of two streets. They are most common along busy collectors and arterials, and they act as a traffic calming measure, decrease the pedestrian crossing distance, and improve the visibility of pedestrians crossing. Larger curb radii permit vehicles to make turns at higher speeds, and are also necessary to accommodate larger vehicles, such as tractor-trailers, delivery vehicles, and farm equipment. Smaller curb radii can reduce vehicle turning speeds and pedestrian crossing distances.[21]

Some intersections in Egremont that could benefit from reconfiguration or reduction in curb or corner radii include:

Creamery Road and Route 23/41 (Main St.)

Creamery Road and Route 23/41 meet at an acute angle along a curve on Route 23/41. As Creamery meets Route 23/41, it splits into two sections of two-lane roadway separated by a triangular traffic island. The two sections of roadway increase pedestrian crossing distance and complexity. Although a stop sign provides traffic control along this intersection, the Complete Streets Committee reports that anecdotally, many drivers turning right from Creamery onto Route 23/41 treat this intersection as a merge lane and dart into traffic without stopping.

[20] https://www.fhwa.dot.gov/publications/research/safety/humanfac/01103/ch1.cfm
[21] http://nacto.org/publication/urban-street-design-guide/intersection-design-elements/corner-radii/

Figure 11: Intersection of Creamery Road and Route 23/41

Sheffield Road and Route 23/41 (Main St.)

Sheffield Road and Route 23/41 (Main St.) meet at an acute angle, presenting a hazard for driver's hoping to make a left turn and increasing the distance needed to cross this intersection as a pedestrian. Due to the intersection's proximity to a curve on Route 23/41 with limited visibility, this danger is compounded. Anecdotally, committee remembers report that drivers making a left turn onto Route 23/41 from this intersection treat it as a merge lane, ignoring the stop sign and darting into traffic. Moreover, there is currently no crosswalk available at this intersection, and the southern side of the intersection is the terminus of Egremont's Main St. sidewalk, which creates a barrier for pedestrians.

Figure 12: Intersection of Sheffield Road and Route 23/41

Buttonball Lane and Route 23/41 (Main St.)

This intersection is essentially the mirror image of the Sheffield Road and Route 23/41 Intersection, and the two are located only a few hundred yards from each other. The intersection's proximity to a curve along Route 23/41 limits visibility for drivers, and the Y-configuration increases pedestrian crossing distance. Anecdotally, committee members reported that drivers turning right from this intersection onto Route 23/41 treat this intersection as merge lane, ignoring the stop sign and darting into traffic.

Figure 13: Intersection of Buttonball Lane and Route 23/41

Mt. Washington Rd. and N. Undermountain Rd.

The intersection of North Undermountain Rd. and Mt. Washington Rd. creates increased crossing distance for pedestrians and its "Y"-configuration reduces visibility for drivers.

Figure 14: Intersection of Mt. Washington Rd. and N. Undermountain Rd.

Buttonball Lane and Sheffield Road

This intersection presents a challenge to both drivers and pedestrians. As Buttonball Lane meets Sheffield Road, it splits into two separate and distinct two-lane sections organized around a central traffic island. The Y-configuration increases pedestrian crossing distance, and the intersection also lacks a crosswalk, which creates a barrier and safety hazard to pedestrians traveling from existing sidewalk on Main St. to sidewalk along Buttonball Lane. The intersection's low elevation relative to points south along Sheffield Road creates problems with visibility. The traffic island at the center of this intersection hosts a large utility pole, which could create a significant challenge during redesign, as it will likely need to be relocated.

Figure 15: Intersection of Buttonball Lane and Sheffield Road

Boice Rd/Prospect Lake Rd/Route 71

The intersection of Boice Rd. Prospect Lake Rd and Route 71 is listed as a crash cluster due to several traffic accidents in this location (refer to **Figure 10**). This intersection could benefit from realignment, as well as reduced corner and curb radii. While sidewalks may not be appropriate in this location, widened shoulders could help to accommodate cyclists and pedestrians in this area, particularly those travelling from the Prospect Lake Park Campground to the Olde Egremont Country Store at this intersection. These improvements would enhance visibility and safety for all user groups.

Figure 16: Intersection of Boice Rd/Prospect Lake Rd/Route 71

Village Green Lane and Sheffield Road

Village Green Lane is a short section of road that abuts the Village Green in South Egremont and passes between Route 23/41 and Sheffield Road. The overall alignment of this intersection is not much of an issue, but it could benefit from a reduction in corner radii. A wide turning radius is created as the roadway meets Sheffield Road at its southern end. Reducing this turning radius would help to slow turning traffic, reduce pedestrian crossing distance and could significantly expand the unpaved area around the village green.

Figure 17: Intersection of Village Green Lane and Sheffield Road

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 Egremont 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 engineering and design recommendations 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. The Complete Streets Committee along with other key boards in town should identify a lead individual or board responsible for education and outreach to Egremont residents. This individual or board should also be afforded the opportunity to attend relevant training opportunities to keep up to date with the latest safety trends and other current topics regarding complete streets and transportation.

Encouragement

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

Moreover, BRPC recommends that the town plan for regular and continuing meetings of its Complete Streets Committee. As projects are advanced through design and engineering phases, this committee will be essential for reviewing draft materials to ensure community needs are met. As no Chair was elected during meetings of the Complete Streets Committee during the development of this Project Prioritization Plan, the Committee should elect a chair who would help to organize meetings and advocate for projects.

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[22] 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 town any other vehicle or person except when a bicycle trailer is property 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.

[22] https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXIV/Chapter85/Section11b

- 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 beans 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.
- 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 many 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[23] 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.

Snow and Ice Removal

In Massachusetts, the recent (2010) Supreme Court ruling (*Papadopoulos v. Target Corp*[24]) overruled 125 years of legal precedent and announced that all Massachusetts property owners can be held legally responsible for failing to remove snow and ice from the property. This ruling rejects the old common law rule that property owners could simply leave naturally accumulated snow and ice untreated and still escape liability. The court held that all property owners must remove or treat snow and ice like any other dangerous property condition.[25]

[23] https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXIV/Chapter90/Section14
[24] http://masscases.com/cases/sjc/457/457mass368.html
[25] http://massrealestatelawblog.com/tag/massachusetts-snow-removal-law/

Evaluation

Per the Town of Egremont'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 following questions might be posed as the Town goes through the project development process.

As a rural community, the majority of Egremont's major roadway projects are focused on repaving and/or reclamation. As such, it should develop an evaluation process that integrates nonmotorized improvements into these types of projects. The town should seek out ways to increase shoulder width in all of its repaving and maintenance projects, either through lane width reduction or increases in paved area. Additionally, the town should seek out low cost ways to value add to its repaving projects, such as through the addition or replacement of existing signage or through tree and shrub plantings at strategic locations. Signage, plantings and lane width reduction especially, will do little to increase overall project costs.

Context

- What is the adjacent land use? Are there any Activity hubs that might attract cyclists or pedestrians?
- What is the available right-of-way? How is it allocated by mode?
- Is a potential project located within one of the National Register Historic District boundaries in Town?
- Is a potential project located near an open space area or scenic views?
- What are the challenges for the project to address bicycle and pedestrian travel?
- Do existing conditions allow for shoulder widening (by even a few inches)?

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

Design/Other

- Does the design speed of the road allow for lane widths to safely be reduced to increase shoulder width? (Will need to be confirmed by an engineer).
- Does remaining Chapter 90 budget leave room for tree or shrub planting to be included in routine road maintenance?

Other Recommendations

New Master Plan

Discussions and meetings of the Egremont Complete Streets Committee brought up a range of issues in addition to the topic at hand, including open space and parks, schools, and the future of Egremont in general. The town's current Master Plan was developed in 2003. It is recommended that the town update this plan to reflect the changes that have occurred in the 13 years since its development and establish a clear direction for town pursuits in the future. The Master Plan should include a robust public process that comprehensively

engages town residents as well as staff, committees, and boards to think about the direction of the town and develop consensus around a vision for its future.

Advocacy for Needs on State Roadways (Routes 23/41)

Discussions for ensuring consistency of the implementation of Complete Streets projects within the Town of Egremont is critical. Because the major roadway passing through South Egremont Village is under MassDOT's jurisdiction, it will be key to engage town decision makers and stakeholders in a discussion with MassDOT about the needs (many identified during this process as a top priority for the Town) of Egremont to improve the safety, walkability, and bikeablity of nonmotorized travelers in Egremont.

Main St./Route 23/41

The Town of Egremont should advocate for a comprehensive redesign of the section of this state roadway that passes through South Egremont Village. Approximate boundaries are the intersection of Route 23/41 and Undermountain Rd. to the west and the intersection of Creamery Rd. and Route 23/41 to the East. Redesign should examine vehicular and freight traffic, bicycle accommodations (shoulders, shared lane markings or bike lanes where possible) as well as significant improvements to the streetscape and pedestrian movement.

At the very least, the feasibility of sidewalks along both sides of the roadway in this area should be considered. If this proves to be unrealistic or unattainable, repair of existing sidewalks should occur. Crossing enhancements should examine if high visibility crosswalks can be installed, possibly in combination with curb extensions or "bump-outs." As part of potential streetscape improvements, opportunities for site furnishings, such as benches, bike racks or the occasional trash receptacle should be examined. Pedestrian scale lighting appropriate with the historic and rural context of the village should be explored, along with opportunities for locating pedestrian wayfinding signage. For additional information about projects in this location, see **Complete Streets Improvements**.

Bicycle Pull-Off Areas on State Roadways

Complete Streets Committee members reported that several roadside pull-off areas are used as parking areas for cyclists who drive to Egremont to then cycle on its roadways (see **On-Road Bicycle Conditions** section). These areas could also be enhanced with landscaping and asphalt or gravel paving. The town should encourage MassDOT to include amenities at these areas, such as wayfinding or bicycle repair stations to encourage and enhance Egremont as a cycling destination. Improvement of these areas would be a minimal additional cost if included as part of other state roadway work.

General Maintenance

The town should appropriate funds for routine maintenance activities to enhance walking and biking in town. Given the limited existing network of dedicated pedestrian and cycling facilities in town, relatively minor investments in routine maintenance activities could have a large impact on biking and walking. The town should consider funding road striping, vegetation removal (particularly trees and shrubs overhanging the roadway or extending into the shoulder), sweeping, snow removal, and the elimination of tripping hazards, particularly as part of routine roadway work.

Figure 18: Pull-Off Area on Route 23 near Catamount Ski Area

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 Committee has identified improvements by project type and they are outlined in the applicable category below.

Shared Lane Markings

Shared Lane Markings (sharrows) allow vehicles and cyclists to share the road. Massachusetts General Law states that cyclists "shall have the right to use all public ways in the commonwealth except limited access or express state highways where signs specifically prohibiting bicycles have been posted, and shall be subject to the traffic laws and regulations."[26] Shared lane markings provide awareness to drivers that there may be cyclists along the roadway and that they should use caution when turning or passing a cyclist.

Where volumes and speeds are lower, shared lane markings may provide adequate accommodation for cyclists. Shared lanes are also an option where the existing right of way is lacking and congestion is not an issue. Signage and pavement markings provide guidance to users, and where the lane is adjacent to on-street parking, guardrails, and/or a curb, pavement markings should be adjusted accordingly. When implementing sharrows, it is important to provide consideration for cyclists and pedestrians at congested or complicated intersections. As the Town moves forward in implementing Complete Streets components, this should be considered as an option given the right circumstances and it is deemed an acceptable and safe accommodation. The Town should consider "Bike May Use Full Lane" sign where practical.

Shoulders

Paved shoulders have benefits for vehicle drivers, cyclists and pedestrians.[27] 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 nomotorized 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[28] can provide them with precious separation from moving vehicles.

The Town of Egremont should evaluate the usage of wide 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 Egremont 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.

In particular, the town should consider widening shoulders along Prospect Lake Rd. (from the campground to the Olde Egremont Country Store), Route 71 (between Prospect Lake Rd. and Creamery Rd) and for the entire length of Creamery Rd. Shoulder widening along this route would provide a pedestrian and cycling connection between major town destinations, including the Prospect Lake Campground, French Park, Olde Egremont Country Store, Town Hall Complex, and South Egremont village. Shoulder widening efforts should also be explored between South Egremont village and Jug End WMA as well as the Appalachian Trail crossings on Jug End Rd. and Undermountain Rd. Shoulder widening along these stretches of road would encourage nonmotorized connectivity of these recreation areas with the village center.

Bike Lanes

Bike lanes are dedicated, delineated lanes for bicycle travel. Bike lanes are generally used on collectors and minor arterials, and are encouraged where speed limits are 35 mph or below. Bike lanes enhance safety for cyclists, and provide comfort and mobility improvements by providing a dedicated lane to ride in, which

[26] https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXIV/Chapter85/Section11b
[27] http://safety.fhwa.dot.gov/ped_bike/tools_solve/walkways_brochure/
[28] https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/multimodal_networks/8_paved_shoulders.pdf

reduces the potential conflict points between motorized and nonmotorized travelers. There are both conventional, and buffered bike lanes, the difference being a designated buffer space via pavement marking.

An important consideration when designing and implementing bike lanes, is attention to where bike lanes and on-street parking are adjacent is critical. When a bike lane passes by on-street parking, additional width is suggested to provide extra room for bicycle maneuverability. Parking which requires vehicle drivers to back out should be evaluated to ensure safety for cyclists. Similarly, when speeds on roadways are higher, or the facility is located along a heavy truck route, extra space is necessary to better separate motorists and nonmotorists.

It is important on these dedicated facilities to ensure drainage infrastructure doesn't impact the cyclists, and in some cases removal of grates, or additional signage is necessary to ensure safety for the cyclist.

The Town of Egremont does not have enough existing bicycle traffic that dedicated bicycle lanes are immediately necessary in any one location, but should be considered in higher traffic/volume areas, especially where a complex intersection might be improved with respect to nonmotorized movements.

Cycle Tracks (Protected Bike Lanes)

When speeds on the roadway are above 35 mph, the safety risks for cyclists and pedestrians sharply increases. For roadways with higher speeds it is desirable to implement a cycle track (also called Protected Bike Lanes). Cycle tracks are exclusive bike facilities that are a combination of a bike lane and a shared use path. There are many different kinds of cycle tracks, they can be one-way or two-way, at street level or sidewalk level, they can be separated from traffic by grade, raised medians, on street parking, or bollards.

The Town of Egremont does not have enough existing bicycle traffic that cycle tracks are immediately necessary in any one location, but could be considered in the event of narrow bridge crossings, and/or in place of a shared use path.

Shared Use Path

A shared use path (also referred to as a multi-use trail) is the safest facility type for both bicyclists and pedestrians, as they provide physical separation from the roadway. Additionally, separated facilities encourage users of all ages and abilities to utilize active modes. Generally, shared use paths are at least 8' wide, and can be paved or unpaved. The Town of Egremont should think about shared use paths when planning off-road facilities, so that a greater number of residents and visitors can utilize them for transportation and recreation.

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. However, the clear width of the sidewalk can narrow to 3 feet at a minimum, especially to pass obstacles such as a utility pole, tree or other obstruction.

In the Town of Egremont the recommendation is to prioritize maintenance and upgrades of existing sidewalk in South Egremont and ensure gaps are filled to enable pedestrians to walk on both sides of the street in and around South Egremont Village. Because these are along a MassDOT roadway, the Town will continue to engage MassDOT in discussions about improving the walkability in South Egremont as it is a major activity center for the Town. As far as sidewalks that fall under Town control, it is a priority of the committee to connect the sidewalk to the library and along Buttonball Lane and Sheffield Road.

Pedestrian/Bicycle Detection and Signals

Detection devices and related technology is improving each year, and the use of such devices at signalized intersections improves the safety of nonmotorized travelers. These devices are used to determine if a nonmotorized traveler is waiting for a signal. There are detectors for bicyclists and for pedestrians and there are a range of options available.

Signals are used to help regulate all modes of traffic and play a key role in reducing conflict points between users of different modes. These can include bicycle signals and pedestrian signals (with/without timers).

Though not within the scope of the Town's Complete Street jurisdiction, it would be advisable that MassDOT look into pedestrian detection devices, especially given the necessity to cross a major road twice to stay on the only sidewalk in South Egremont. If sidewalks are not upgraded, pedestrian detection/signals will at least provide warning to vehicle drivers at critical crossings.

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 Egremont the recommendation is to improve existing crossings so that they are more visible. As improvements are made to the walkability of the Egremont village centers, it will be key to pay attention to potential conflict points and ensure safety for all users of the road.

Pedestrian Safety Islands/Landscaped Medians

When the road is more than three lanes (total), it is good to consider the crossing distance and time it would take a pedestrian to cross at both signalized and unsignalized intersections. Landscaped medians and/or pedestrian safety islands are located in the center of the roadway, and provide physical separation between vehicles and pedestrians.

These crossings provide increased safety for pedestrians, and are especially good for seniors and those that hay have impaired mobility. Not only do they provide a safe stopping place, but they can act as traffic calming treatments, and access management improvements. Pedestrian safety islands should be at least 6 feet wide.

In the Town of Egremont the recommendation is to consider crossing distance/time and use medians where it would benefit pedestrians crossing the roadway.

Curb Extensions

Curb extensions (sometimes called bulb-outs or bump-outs) are an extension of the curb into the street, which reduces the roadway width and acts as a traffic calming measure, decreases the pedestrian crossing distance, and improves the visibility of pedestrians crossing.

In the Town of Egremont the recommendation is to further investigate opportunities at existing intersections where speed, distance, and sight distance are safety concerns.

Intersection Reconstruction to Reduce Complexity and Pedestrian Crossing Distance

Intersections can be reconstructed to improve safety and visibility as well as reduce pedestrian crossing distance and the overall complexity of the intersection. In Egremont several intersections could benefit from reconstruction, with the end goal of changing these "Y"-shaped intersections into safer 90º (right) angle, or "T"-shaped intersections. Priority intersections for reconstruction identified by the Egremont Complete

Streets Committee include: Creamery Road and Route 23/41 (Main St.); Sheffield Road and Route 23/41 (Main St.); Buttonball Lane and Route 23/41 (Main St.); Buttonball Lane and Sheffield Road and Village Green Lane and Sheffield Road.

Curb/Corner Radii

In the Town of Egremont the recommendation is to examine major intersections for opportunities to reduce corner radii. This should occur at intersections listed as crash clusters, as well as others where the town deems there are issues with speeding. Corner radii reduction should be included as part of intersection reconstruction at the intersection of Village Green Lane with Sheffield Road as well as at the intersection of Prospect Lake Rd, Boice Rd. and Route 71.

Striping and Lane Widths

Many paved roadways in Egremont are not striped to delineate vehicle lanes and road shoulders. The town should stripe its paved roadways to delineate lanes and shoulders more clearly. Pavement striping is one of the cheapest ways to reduce vehicle speeds and in areas without dedicated pedestrian and cycling facilities, can help to define the road shoulder for these users. Consider also lane widths throughout town. For collector type roads, the FHWA and MassDOT note that vehicle lane widths can range from 10-12' in width[29,30]. For local roadways, guidance from these agencies notes that lane widths can be 9-12' in width.[31]

These widths are of course dependent on other local conditions such as the design speed of the road. For instance, MassDOT guidance suggests that for collector streets, 10' lane widths may be possible on roads where the design speed is below 45 mph. The town should consult with MassDOT or a traffic engineer for specific guidance on lane widths. By narrowing lanes, it may be possible to gain additional right of way for sidewalks, bike lanes, or increased road shoulder. Narrower lane widths could be easily incorporated into routine repaving or restriping projects.

Lighting

Lighting enhances the safety (and perceived safety) of the roadway and poor/nonexistent lighting can lead to difficulty when using infrastructure at night or when visibility is less than optimal. Lighting enhances the safety for all users, and can vary depending on the adjacent land uses. Costs for lighting can vary depending on fixture type (in pavement or streetlight) and frequency.

In the Town of Egremont the recommendation is to include pedestrian scale lighting in North and South Egremont Village. In North Egremont, the town should work with a lighting designer or engineer to identify a context sensitive light fixture appropriate for the village. These lights should replace existing street cobra lights attached to utility poles. The town will need to coordinate with the utility to remove these fixtures.

In South Egremont Village, pedestrian scale street lighting can also replace cobra lights. However, as many other design needs have been identified for South Egremont Village, pedestrian scale lighting should likely be included as part of a more comprehensive streetscape design for the area including landscaping, site furnishings, additional sidewalk and other features.

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[29] https://www.massdot.state.ma.us/Portals/8/docs/designGuide/CH_5_a.pdf (See Exhibit 5-14)
[30] http://safety.fhwa.dot.gov/geometric/pubs/mitigationstrategies/chapter3/3_lanewidth.cfm (See Table 3)
[31] The Vermont Agency of Transportation (VTrans) recently issued a Highway Safety and Design Engineering Instruction stating Vermont state highways "should have a maximum lane width of 11 (eleven) feet for all directions of travel." Noting that when "greater widths are used shoulder widths are typically reduced, resulting in a shoulder width that is less than ideal for bicycle traffic."
http://vtrans.vermont.gov/sites/aot/files/highway/documents/structures/HSDEI%2015-103%20-%2011%20Foot%20Lane%20Width.pdf

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. In the Town of Egremont, the recommendation is look at traffic calming measures to reduce vehicle speeds within and entering into its two village centers.

Speed Feedback Signs

In the Town of Egremont the recommendation is to include speed feedback or "Your Speed" signs at strategic locations, such as roadways entering the town's two village centers. While these can be added to locally maintained roadways, the town will need to coordinate with the state and MassDOT to see if these signs can be placed on state owned roadways, such as Routes 41 and 23. In the short term, the town can install these signs along Route 71 (north and south of the Boice/Prospect Lake/Rte. 71 four-corners intersection), along Creamery Road (southbound towards South Egremont Village), and along Sheffield Rd. (northbound towards South Egremont Village).

Speed feedback signs, particularly newer or enhanced models can also collect data about roadways, such as total number of vehicles and the number of speeding and non-speeding vehicles that pass the sign. Feedback signs can be powered via solar panel, AC power connection, or battery. In Egremont, the use of solar powered speed feedback signs will reduce maintenance needs and installation costs associated with use of either battery powered or AC powered signs respectively. For an example speed feedback sign see **Figure 19**.

Figure 19: Example Speed Feedback Sign

Pedestrian Wayfinding

Wayfinding is an important element of Complete Streets 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 Egremont the recommendation is to include a pedestrian and bicycle wayfinding system that links open space areas, activity hubs, parking areas, and town destinations. A wayfinding system could help to provide a measure of economic development by serving as a resource for visitors to the town and helping to direct them to the areas and features that make Egremont unique. The Egremont Historical Commission has already developed a walking tour of both North and South Egremont Village. These walking tours could form the basis for some of the content to be including in the wayfinding system, but would likely expand to direct pedestrians and cyclists and other locations such as the summit of Baldwin Hill, French Park, Jug End trails, the Appalachian Trail and Kellogg Conservation Center, and other locations.

Developing a town wayfinding system is a unique opportunity to "brand" the town as part of economic development activities and creates a coordinated system for navigating the area. The town should consult a designer who will assist the town in developing a wayfinding system and planning sign locations and content. Additionally, wayfinding content, such as maps, should be integrated into the town's website to ensure that visitors can use mobile phones to navigate the town and explore destinations before visiting the community.

While wayfinding can be an important aspect of the town's transportation system that addresses basic issues of navigation and orientation, it can also work to brand the town, creating a unified, consistent, and distinct system that conveys the town's story and personality to visitors. Typically, wayfinding systems include simple directional signage as well as more detailed nodes that convey more in-depth information, such as through interpretive signage or kiosks. These two signage systems are unified through design elements such as fonts and typography, imagery, and color scheme. For examples of wayfinding signage see **Figure 20**.

Figure 20: Example Pedestrian Wayfinding

Street Furnishings

Street furniture can serve as a buffer between the roadway or bicycle facility and a walkway, which provides a safety benefit to all travelers. Additionally, incorporating street furniture (benches, bus shelters, kiosks, trash

receptacles, bollards, 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 Egremont the recommendation is to work with designers to incorporate street furniture into streetscape projects as they are implemented, particularly in South Egremont Village.

Bicycle Parking and Bicycle Repair Stations

Bicycle parking is a key street furnishings 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 of the major Activity Hubs (school, library, town hall, etc.) and in village center 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.*[32] Bicycle repair stations are components of cycling infrastructure that include tools and an air pump for repairing or maintaining bicycles. Repair stations can help cyclists "in a pinch" who may not have a set of tools on hand, and show that the town is bike friendly and encourages cycling in town.

In the Town of Egremont the recommendation is to include bicycle parking in several key destination areas identified by the Egremont Complete Streets Committee: Buttonball Lane, French Park, Town Hall, Jug End WMA Trails. The town should also install a bicycle repair station at Town Hall and/or the Library.

The town should also advocate for bike parking at parking or pull off areas used by cyclists along Route 23 east of South Egremont Village, and on Undermountain Rd. The inclusion of bicycle repair stations at one or more of these locations could also help promote this recreational activity in Egremont.

Landscaping

Landscaping and street trees can provide benefits to motorists, pedestrians, and cyclists. Landscaping can be used as a feature in traffic calming, slowing automobiles down and enhancing the safety for nonmotorized travelers. Additionally, landscaping can be used to separate vehicles and nonmotorists, whether downtown or along a rural roadway. Additional pervious areas also contribute to a reduction in stormwater runoff and provide air quality benefits.

In the Town of Egremont the recommendation is to include landscaping as a vital part to placemaking and ensuring successful streetscaping in Egremont. On repaving or road reclamation projects, the town could invest in strategically placed tree or shrub plantings to beautify the roadside (and at minimal additional cost to projects). The town should also consider investing in landscaping and streetscaping around its public buildings and facilities, such as Town Hall and the Library. Larger projects aimed at Egremont's village centers should also include significant landscaping. The town should work with a designer on these projects to ensure landscaping is included. In South Egremont Village, the town should ensure that future roadway projects by MassDOT involving Route 23/41/Main St. will include landscaping.

PRIORITIZATION PLAN AND IMPLEMENTATION

Methodology

In an effort to develop a data-driven process to guide the prioritization of Complete Streets projects in Egremont, the Complete Streets Committee 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 Committee 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 committee member,

[32] http://www.apbp.org/?page=publications

projects related to the traffic calming and economic vitality goal areas received the greatest weight. Projects related to the goal areas of public health and livability were weighted the lowest.

Each potential project was scored using the criteria below, and the weights were applied to the project scores in each category. The results of this scoring exercise can be found in **Table B-1 in Appendix B**. For a graphic that locates all potential projects see **Figure B-1 in Appendix B**.

The planning framework matrix can be seen in **Table 7**.

Table 7: Planning Framework Matrix

SYSTEM			PROJECT-SPECIFIC	
Goal Area/Theme	Goal	System Performance Measure	Project Scoring	Weight
Economic Vitality	Enhance activity hubs so they are walkable, bikeable, and can be used by all modes.	annual number of improvements in activity hubs	0 - not in an identified activity hub 1 - Located within a tertiary activity hub 2 - Located within a secondary activity hub 3 - Located within a primary activity hub	1.61
Livability	Increase the livability of the town by improving the access to active mode facilities by residents.	number of residents within 1/4 mile of a dedicated active mode facility	0 - not in a residential area 2 - in/adjacent to a low-density residential area 3 - in/adjacent to a medium-density residential area	1.03
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	1.54
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 vulnerable user (cyclist, pedestrian, etc.) 2 - project addresses safety concern for all users (drivers, vulnerable users, etc.) 3 - project addresses safety concern for all users and is in a Crash Cluster (2011-2013)	1.57
Context Sensitivity	Develop a multimodal transportation system that is sensitive to the historic districts and rural/scenic character of Egremont.	annual number of projects in historic districts, in rural areas, and/or adjacent to open space areas	0 - project has a negative impact on the existing character of the project area 1 - project has no impact on the existing character of the project area 2 - project protects the existing character of the project area 3 - project protects and enhances the character of the project area	1.36
Traffic Calming	Promote traffic calming measures in Egremont 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	1.86

SYSTEM			PROJECT-SPECIFIC	
			impacts ALL of the following: speed reduction, streetscape improvement, encourages access for all modes	
Public Health	Promote the health and wellbeing of residents and visitors of all ages across Egremont by providing active mode infrastructure that is safe and accessible.	annual heart attack hospitalizations	0 - project has no active mode component 1 - project has an active mode component but does not link to green space 2 - project has an active mode component and connects to green space 3 - project has an active mode component and improves green space	1.03

Project Selection and Final List

Using the final scores (weighted and unweighted), the Committee 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. For this reason, proposed shoulder widening projects (See Table B-1 and accompanying narrative) were not included on the final list. The town should not overlook the possibility of revising its Tier 2 Prioritization Plan list and adding additional projects at regular intervals. For the final Tier 2 list, see **Table 8** below**.**

It should be noted that 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 Egremont will submit these projects, in writing, to the District 1 Highway Director.

Those projects in the Town of Egremont jurisdiction are prioritized and listed below. For the spreadsheet that was submitted to MassDOT, please see **Appendix C**.

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

Project	Description
Buttonball Lane and Sheffield Road Intersection Reconstruction	Reconstruction of the intersection of Buttonball Lane with Sheffield Road to reduce pedestrian crossing distance and complexity. Project will include new ADA compliant curb ramps and a new crosswalk.
Buttonball Lane Streetscape Enhancements	Replacement and extension of approximately 700' of existing sidewalk along Buttonball Lane. Project will include landscaping and site furnishings around the town library and installation of a bike rack and bike repair station. Construction will include ADA compliant curb ramps and new crosswalks.
Sheffield Road Sidewalk	Installation of approximately 600' of new sidewalk along Sheffield Road. Project will include construction of new ADA compliant curb ramps and new sidewalks.
Boice Road/Prospect Lake Road/Route 71 Intersection Reconstruction	Reconstruction of the intersection of Boice Road/Prospect Lake Road/Route 71. Project will reduce pedestrian crossing distance and complexity.
Egremont Wayfinding System	Installation of a pedestrian wayfinding system to guide pedestrians to major town destination and recreation areas.
Village Green Lane Corner Radii Reductions	Reduction of the size of corner radii at the intersection of Village Green Lane and Sheffield Road. Project will reduce pedestrian crossing distance, calm traffic, and reduce impervious surface area.
Sheffield Road and Route 23/41 Intersection Reconstruction	Reconstruction of the intersection of Sheffield Road and Route 23/41. Project will reduce pedestrian crossing distance and complexity.

Project	Description
North Egremont Street Lighting	Installation of eight pedestrian-scale light poles and fixtures along Route 71 and Prospect Lake Rd. in North Egremont.
Town Hall Bicycle Parking and Repair Station	Installation of a bike rack and repair station at Egremont Town Hall.
Creamery Road and Route 23/41 Intersection Reconstruction	Reconstruction of the intersection of Creamery Road and Route 23/41 to reduce pedestrian crossing distance and intersection complexity.
Buttonball Lane and Route 21/41 Intersection Reconstruction	Reconstruction of the intersection of Buttonball Lane and Route 23/41 to reduce pedestrian crossing distance and intersection complexity.
Route 71 Traffic Calming	Installation of 2 speed feedback "your speed" signs along Route 71 to provide traffic calming in the village center.
French Park Bike Parking	Installation of a bike rack at French Park.
Sheffield Road Traffic Calming	Installation of a speed feedback "your speed" sign along Sheffield Road.
Creamery Road Traffic Calming	Installation of a speed feedback "your speed" sign along Creamery Road.
Jug End Bike Parking	Installation of a bike rack at Jug End WMA area. Project to be coordinated with DCR.
Appalachian Trail Crossing Signage	Installation of 2 new "Trail X-ing" signs along Jug End Road near the Appalachian Trail crossing to warn drivers of the presence of hikers and pedestrians.

Implementation

In an effort to ensure the Town of Egremont is able to successfully implement their Complete Streets Policy, the Complete Streets Committee and BRPC staff developed several tables that detail short-term next steps, and annual steps that ensure timely implementation of Complete Streets projects in the Town of Egremont. Immediate implementation steps can be seen in **Table 9** and annual steps in **Table 10**.

Table 9: Immediate Implementation Tasks

Action	Responsible Party	Timeline	Others Interested
Complete Streets Committee Meeting – Follow up to MassDOT project selection response	Complete Streets Committee	Following feedback on prioritization plan; for FY 2017 projects, if accepted MassDOT will alert Town by September 30 and Town will respond with necessary paperwork by October 15	Board of Selectmen, Finance Committee
Elect Chair	Complete Streets Committee	Immediate	Board of Selectmen
Organize walking tour of South Egremont Village and discussion with MassDOT officials to review Complete Streets needs for the Village	Complete Streets Committee, Residents	Summer or Fall 2016	Board of Selectmen, Historical Commission

Action	Responsible Party	Timeline	Others Interested
Determine budget for design and engineering work for potential FY 2018 and FY 2019 projects	Highway Dept.	Fall 2016	Board of Selectmen, Finance Committee, Complete Streets Committee
Contract with engineering firm to begin design of other projects on prioritization plan	Highway Dept.	Winter 2016/Spring 2017	Board of Selectmen, Finance Committee, Complete Streets Committee

Table 10: Annual Implementation Tasks

Action	Responsible Party	Timeline (annual)	Others Interested
Project Identification	Complete Streets Committee	Late Spring	Board of Selectmen, Highway Dept., Residents
Score and rank new projects, Revise Tier 2 List	Complete Streets Committee	Late Spring	Board of Selectmen, Highway Dept., Residents
Project Budgeting	Complete Streets Committee, Highway Department	Summer or Fall	Board of Selectmen, Finance Committee
Prepare RFP for design needs on identified projects requiring engineering or design	Highway Dept., Complete Streets Committee	Fall	Board of Selectmen, Finance Committee
Construction	Highway Dept.	Following Spring	Board of Selectmen, Complete Streets Committee
Evaluate and document performance (See **Performance Measures** section)	Complete Streets Committee	Following Summer or Fall	Board of Selectmen, Highway Dept., Residents

Funding Schedule

In FY 2017, Egremont applied for roughly $57k in construction funding for seven projects. These projects include bike parking, traffic calming through speed feedback signs, and safety signage along Jug End Rd. at the Appalachian Trail Crossing there. These projects were selected due to the low barrier for implementation and the lack of design and engineering required for construction. See **Table 10** for a 6-year schedule for implementation of the Town of Egremont Tier 2 Prioritization Plan (**Table 8**). This schedule is contingent on construction funding from MassDOT, as well as investment in design and engineering from the town necessary to advance many of these projects. Please note that project cost estimates identified in this schedule are for conceptual purposes only. As the Town of Egremont invests in design and engineering to make these projects construction ready, these estimates will change, which may necessitate changes to this schedule. Only by investing in design and engineering will a more accurate estimate of project costs be realized.

Table 10: 6-Year Funding Schedule

Project	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Amount Available	*$400,000*	*$400,000*	*$400,000*	*$400,000*	*$400,000*	*$400,000*
Town Hall Bike Parking and Repair Station	$7,188					
French Park Bike Parking	$4,313					
Jug End Bike Parking	$4,313					
"Your Speed" Sign - Route 71 (x2)	$20,125					
"Your Speed" Sign - Creamery Rd.	$10,350					
"Your Speed" Sign - Sheffield Rd.	$10,350					
Trail X-ing Signs - Jug End Rd.	$1,294					
Buttonball Lane Streetscape Enhancements		$199,685				
Sheffield Road Sidewalk		$141,583				
Intersection Reconstruction - Sheffield Rd. and Route 23/41			$169,414			
Intersection Reconstruction - Buttonball Lane and Sheffield Road			$183,873			
Intersection Reconstruction - Creamery Road and Route 23/41				$240,663		
Intersection Reconstruction - Buttonball Lane and Route 23/41				$159,192		
North Egremont Street Lighting					$144,800	
Intersection Reconstruction - Boice Road at Prospect Lake Road and Rte. 71					$223,354	
Reduce Corner Radii- Village Green Lane						$78,259
Pedestrian Wayfinding System						$54,750
Amount Proposed	$57,931	$341,269	$353,287	$399,855	$368,154	$133,009
Amount Remaining *(RED text indicates proposed funding requests from MassDOT are < $400k)*	($342,069)	($58,731)	($46,713)	($145)	($31,846)	($266,991)

APPENDIX A: PUBLIC OUTREACH AND ENGAGEMENT

Complete Streets Committee Meeting #1: June 2, 2016

The first meeting of the Complete Streets Committee meeting occurred on Thursday, June 2 at 1:30pm at Egremont Town Hall. The participants were:

Complete Streets Committee Members
Susan Bachelder, Historical Commission
Mary Brazie, Select Board
Charles Flynn, Select Board
Juliette Haas, Board of Health
Tim Hosier, Highway Superintendent
Lucinda Vermeulen, Planning Board

Egremont Residents
Bill Wood

BRPC Staff
Eammon Coughlin, Senior Planner
Emily Lindsey, Senior Transportation Planner

The goal of this meeting was to kick-off the project and provide committee members an outline of the process. The committee reviewed goals, performance measures, and preliminary ideas. The committee discussed and mapped activity hubs. Initial data and documentation needs were also discussed.

Complete Streets Committee Meeting #2: June 9, 2016

The second meeting of the Complete Streets committee occurred on Thursday, June 9 at 1:30pm at Egremont Town Hall. The participants were:

Complete Streets Committee Members
Susan Bachelder, Historical Commission
Mary Brazie, Select Board
Juliette Haas, Board of Health
Tim Hosier, Highway Superintendent
Lucinda Vermeulen, Planning Board

Egremont Residents
Bill Wood

BRPC Staff
Eammon Coughlin, Senior Planner
Emily Lindsey, Senior Transportation Planner

During this meeting the committee finalized goals/performance measures and discussed existing conditions. The Committee worked on developing a map of activity hubs and discussed proposed projects/needs in the Town.

Complete Streets Committee Meeting #3: July 13, 2016

The third meeting of the Complete Streets committee occurred on Thursday, July 13 at 1:30pm at Egremont Town Hall. The participants were:

Complete Streets Committee Members
Susan Bachelder, Historical Commission
Charles Flynn, Select Board
Juliette Haas, Board of Health
Tim Hosier, Highway Superintendent
Jared Kelly, Resident of Egremont
Lucinda Vermeulen, Planning Board

Egremont Residents
Eileen Vining

BRPC Staff
Eammon Coughlin, Senior Planner
Emily Lindsey, Senior Transportation Planner

During this meeting the committee discussed the planning framework, looking at the goals, performance measures, weights and evaluation criteria. The committee finalized the map of activity hubs and then paired down the complete street project universe in Egremont.

Complete Streets Committee Meeting #4: July 26, 2016

The fourth meeting of the Complete Streets committee occurred on Tuesday, July 26 at 1:30pm at Egremont Town Hall. The participants were:

Complete Streets Committee Members
Charles Flynn, Select Board
Juliette Haas, Board of Health
Jared Kelly, Resident of Egremont
Lucinda Vermeulen, Planning Board

BRPC Staff
Eammon Coughlin, Senior Planner
Emily Lindsey, Senior Transportation Planner

The committee finalized the project list and reviewed the scores (weighted and unweighted) and discussed the final project prioritization of the projects and next steps to implement Complete Streets in Egremont.

Complete Streets Committee Meeting #5: September 6, 2016

The fifth meeting of the Complete Streets committee occurred on Tuesday, September 6 at 1:30pm at Egremont Town Hall. The participants were:

Complete Streets Committee Members
Susan Bachelder, Historical Commission
Charles Flynn, Select Board
Jared Kelly, Resident of Egremont

Jim Noe, Highway Superintendent

BRPC Staff
Eammon Coughlin, Senior Planner
Emily Lindsey, Senior Transportation Planner

The committee reviewed the final documentation, project costs, and next steps for FY 2017 implementation of Complete Streets in Egremont.

*Full meeting minutes are on file with the town for each of the five meetings.

APPENDIX B: COMPLETE LIST OF POTENTIAL IMPROVEMENTS

Table B-1 outlines the complete list or "universe" of all potential complete streets improvements identified by the Egremont Complete Streets Committee. Projects in this list were further refined into a final list for submittal to MassDOT. **Figure B-1** shows the location of all potential complete streets improvements.

Red text in the table denotes projects that are located along state highways, and which are not eligible for funding through the MassDOT Complete Streets Program. The town should work closely with MassDOT to advocate for and include these improvements in future state roadway work. It should be noted, that while not eligible for funding, potential sidewalk repairs and additions in South Egremont village were the highest ranked projects according to the weighting and ranking system developed by committee members.

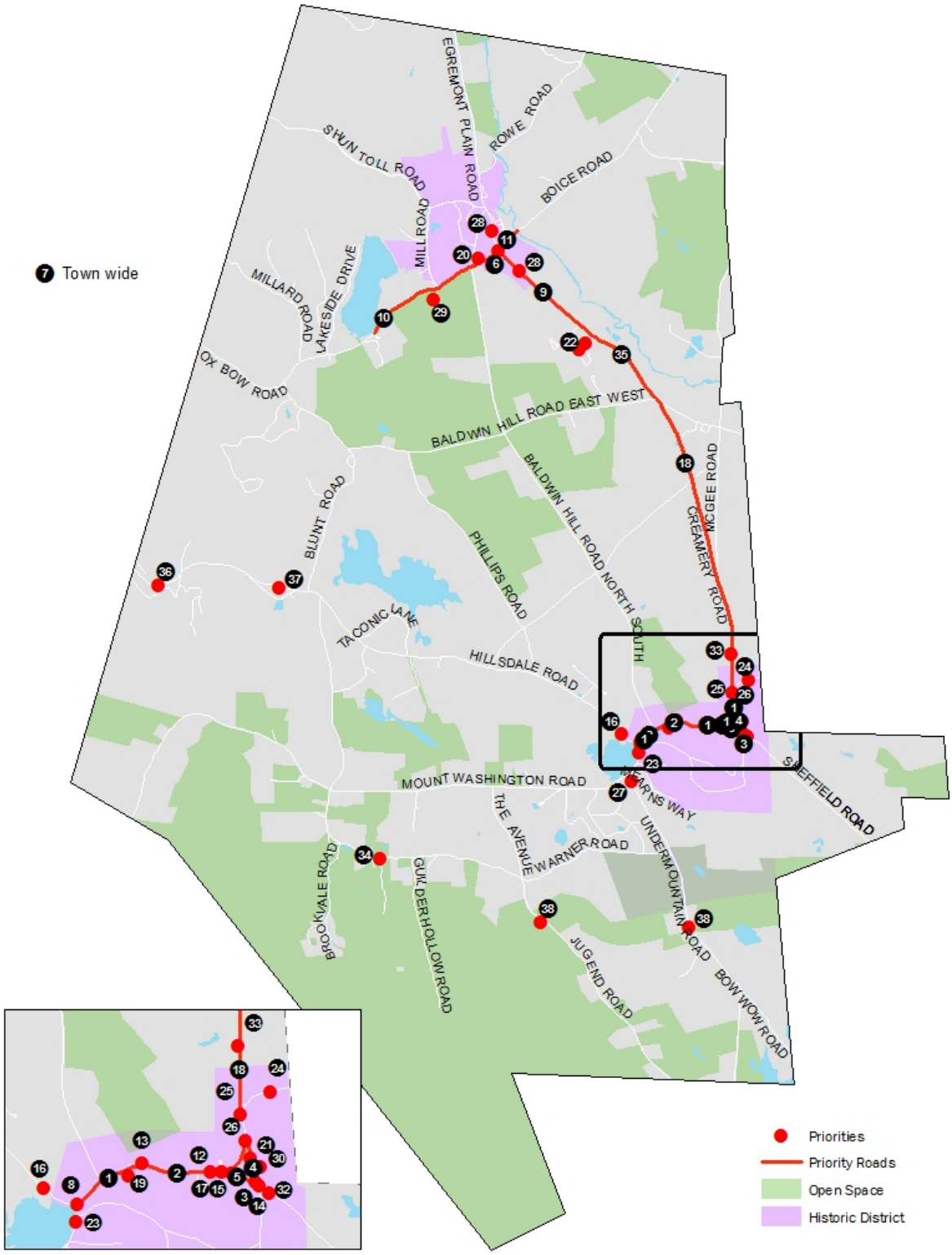
Table B-1: Complete List of Potential Improvements

		GOAL	Economic Vitality	Livability	Connectivity	Safety	Context Sensitivity	Traffic Calming	Public Health	Score Unweighted	Score Weighted
Project	Type/Location	WEIGHT	1.61	1.03	1.54	1.57	1.36	1.86	1.03	-	-
PROJECT 1	Sidewalk Repairs	South Egremont Village - all sidewalks	3	3	3	3	3	3	2	20	28.97
PROJECT 2	New Sidewalk	South Egremont Village - fill existing gaps	3	3	3	3	3	3	1	19	27.94
PROJECT 3	Intersection Reconstruction	Buttonball Ln at Sheffield Rd	3	2	2	2	3	3	1	16	23.8
PROJECT 4	Sidewalk Repairs	Buttonball Lane	3	2	2	2	3	3	1	16	23.8
PROJECT 5	New Sidewalk	Sheffield Rd to Buttonball Ln	3	2	2	2	3	3	1	16	23.8
PROJECT 6	Intersection Reconstruction	Boice Rd at Prospect Lake Rd and Rd 71	3	3	1	3	2	3	1	16	23.5
PROJECT 7	Pedestrian Wayfinding	Pedestrian Wayfinding System for Town	3	3	3	0	3	2	3	17	23.43
PROJECT 8	New Crosswalks	South Egremont Village across N Undermountain Rd at Hillsdale Rd	3	3	2	3	1	2	2	16	22.85
PROJECT 9	Shoulders	Rte 71: North Egremont: 4-corners to Town Hall (both sides)	3	3	2	3	0	2	1	14	20.46
PROJECT 10	Shoulders	Prospect Lake Rd: 4-corners to Campground (both sides)	3	2	2	3	0	2	2	14	20.46
PROJECT 11	Shoulders	Boice Rd: 4-corners to Bridge over Green River	3	2	2	3	0	2	1	13	19.43
PROJECT 12	Crosswalks	Update existing crosswalk at Post Office	3	2	2	2	1	2	1	13	19.22
PROJECT 13	Crosswalks	Update existing crosswalk at Egremont Village School	3	2	2	2	1	2	1	13	19.22
PROJECT 14	Crosswalks	Sheffield Road (south if intersection of Buttonball Ln)	3	2	2	2	1	2	1	13	19.22
PROJECT 15	Reduce Corner Radii	Village Green Lane (at Sheffield Rd)	3	2	0	2	3	2	0	12	17.83
PROJECT 16	Traffic Calming - "Your Speed" Sign	Hillsdale Rd west of Village	3	3	0	3	1	2	0	12	17.71

		GOAL	Economic Vitality	Livability	Connectivity	Safety	Context Sensitivity	Traffic Calming	Public Health	Score Unweighted	Score Weighted
PROJECT 17	Intersection Reconstruction	Route 23 and Sheffield Rd	3	2	0	3	1	2	0	11	16.68
PROJECT 18	Shoulders	Creamery Rd (both sides)	0	3	2	3	0	2	1	11	15.63
PROJECT 19	Street Lighting	Pedestrian-scale lighting South Egremont (x 11)	3	3	0	1	3	1	0	11	15.43
PROJECT 20	Street Lighting	Pedestrian-scale lighting North Egremont (x 8)	3	3	0	1	3	1	0	11	15.43
PROJECT 21	Library Streetscape Enhancements	South Egremont Library	3	2	1	0	3	1	1	11	15.4
PROJECT 22	Town Hall Bike Plaza	Town Hall	3	2	1	0	3	1	1	11	15.4
PROJECT 23	Smiley's Pond Bike Plaza	Pull-off B: Near Smiley's Pond	3	2	1	0	3	1	1	11	15.4
PROJECT 24	Traffic Calming - "Your Speed" Sign	Hillsdale Rd east of Village	3	2	0	2	1	2	0	10	15.11
PROJECT 25	Intersection Reconstruction	Creamery Rd and Rt 23	3	2	0	2	1	2	0	10	15.11
PROJECT 26	Intersection Reconstruction	Buttonball Lane and Route 23/41 (Main St.)	3	2	0	2	1	2	0	10	15.11
PROJECT 27	Traffic Calming - "Your Speed" Sign	N. Undermountain Rd	2	2	0	3	1	2	0	10	15.07
PROJECT 28	Traffic Calming - "Your Speed" Sign	Route 71 (near Boice Rd) x2	2	2	0	3	1	2	0	10	15.07
PROJECT 29	Bicycle Parking	French Park	3	2	1	0	2	1	2	11	15.07
PROJECT 30	Bicycle Parking	Buttonball Ln	3	2	1	0	2	1	1	10	14.04
PROJECT 31	Bicycle Parking	Town Hall	3	2	1	0	2	1	1	10	14.04
PROJECT 32	Traffic Calming - "Your Speed" Sign	Sheffield Rd and Pinecrest Rd	2	2	0	2	1	2	0	9	13.5

		GOAL	Economic Vitality	Livability	Connectivity	Safety	Context Sensitivity	Traffic Calming	Public Health	Score Unweighted	Score Weighted
PROJECT 33	Traffic Calming - "Your Speed" Sign	Creamery Rd (near Village Center)	2	2	0	2	1	2	0	9	13.5
PROJECT 34	Bicycle Parking	Jug End WMA Trails	2	2	1	0	2	1	2	10	13.46
PROJECT 35	Shoulders	Rte 71: North Egremont: Town Hall to Creamery Road	0	2	2	2	0	2	1	9	13.03
PROJECT 36	Catamount Bike Plaza – Route 23	Pull-off A: Near Catamount	1	2	1	0	3	1	1	9	12.18
PROJECT 37	Route 23 Bike Plaza	Pull-off C: Near Tyrell Road	1	2	1	0	3	1	1	9	12.18
PROJECT 38	"Trail X-ing" Signs	AT Crossings x4 (N. Undermountain Rd. & Jug End Rd.)	2	0	1	1	1	0	2	7	9.75
Red text denotes improvements on state highways that are ineligible for funding through the MassDOT complete streets program											

Figure B-1: Map of Potential Improvements



Project Descriptions (in order of weighted score) and Cost Estimates

The following are project descriptions for each project described in **Table B-1**. Projects from Table B-1 that were also included in Egremont's Tier 2 project list (**Table 8**) have an associated cost estimate that was developed by BRPC. Additionally, some projects from Table B-1 were combined to create projects in Table 8, and are noted in the descriptions.

Cost Estimates

Cost estimates were prepared by BRPC for the Town of Egremont. Cost estimates are for conceptual purposes only and are not based on construction drawings or other engineering design. Project area sizes and sidewalk lengths were estimated using Google Earth Pro and conditions were evaluated through field work by BRPC. Estimated costs were prepared using data from the MassDOT Weighted Bid Averages.[33] All projects costs were estimated with a 15% contingency added to the total.

Project 1: Repair existing sidewalks in South Egremont Village (Main St.)

This project would repair all existing sidewalks and curb ramps in South Egremont Village to meet ADA accessibility guidelines.

Project 2: New sidewalk in South Egremont Village (Main St.)

This project would fill gaps in the existing sidewalk network in South Egremont Village along Main Streets with the goal of establishing accessible sidewalk on both sides of the roadway from the Smiley's Pond area east toward the Library on Buttonball Lane. Opportunities to extend sidewalk from its current limits should also be explored. This project would eliminate the need to cross Main St. twice to walk its entire length.

Project 3: Buttonball and Sheffield Intersection Reconstruction

This project would address the intersection of Buttonball Lane and Sheffield Road with the goal of eliminating the Y-shaped intersection and reduce the crossing distance and complexity for any pedestrians or cyclists. Opportunities to address sight distance issues should also be addressed in design if possible. Project challenges include a traffic island with utility pole that will likely need to be relocated.

Table B-2: Project 3 Cost Estimate

Intersection Reconstruction- Buttonball Lane at Sheffield Road				
Materials	NA			
Assumed Project Area (SF)	10000			
Side	NA			
General	**Unit**	**Cost/Unit**	**Estimate**	**Total Cost**
Design & Engineering	Allowance	$8,000.00	1	$8,000.00
Permitting	Allowance	$3,000.00	1	$3,000.00
Erosion Control	Allowance	$7,000.00	1	$7,000.00
Flagger - Assume $55/hour @ 8 hours/day = 2200/week	Week	$2,200.00	2	$4,400.00
Police Detail - Assume $75/hour @ 8 hours/day = 3000/week	Week	$3,000.00	2	$6,000.00
Utilities/Drainage Allowance	Allowance	$15,000.00	1	$15,000.00

[33] Available from: https://hwy.massdot.state.ma.us/CPE/WeightedAverageCriteria.aspx

Intersection Reconstruction- Buttonball Lane at Sheffield Road				
Site Prep and Demolition	**Units**	**Cost/Unit**	**Estimate**	**Cost**
Excavation (370 CY) - Assume 1' depth across entire project area	CY	$37.50	370	$13,875.00
Utility Pole Relocation	Each	$10,000.00	3	$30,000.00
Remove and Reset Mailbox	Each	$240.00	3	$720.00
New Asphalt	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Gravel Borrow (150 CY) -6" Depth - Assume 20% reduction in pavement area (8000 SF total)	CY	$54.00	150	$8,100.00
Asphalt (200 tons) -Assume 20% reduction in pavement area	Tons	$247.00	200	$49,400.00
Relocate Guardrail	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Relocate ex. guardrail	Allowance	$5,000.00	1	$5,000.00
Curb Ramps	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
New curb ramps	Each	$2,500.00	2	$5,000.00
Crosswalks	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
New Crosswalk	Each	$2,000.00	1	$2,000.00
Landscaping	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Loam and seed disturbed areas	Allowance	$3,000.00	1	$3,000.00
Revegetation	Allowance	$7,000.00	1	$7,000.00
Signs	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Remove and Reset Signs	Each	$240.00	4	$960.00
New Signage	Allowance	$1000.00	1	$1,000.00
Subtotal				$169,455.00
15% Contingency				$25,418.00
Total				**$194,873.00**
Total Requested from MassDOT (Total minus design and permitting)				**$183,873.00**

Project 4: Buttonball Lane Sidewalk Repairs

This project would replace all existing asphalt sidewalk along Buttonball Lane and extend the sidewalk north towards Main St. Project challenges will include sidewalk that abuts a bridge along Buttonball Lane. This project was combined with projects 14 (Sheffield Rd. Crosswalk) and 30 (Library streetscape and bike parking/repair station) and was named "Buttonball Lane Streetscape Enhancements" to clarify that additional elements were added to the project.

Table B-3: Project 4 Cost Estimate

Buttonball Lane Streetscape Enhancements				
Materials	Concrete w/ Granite Curb			
Side	East			
Length Total	700			
General	**Unit**	**Cost**	**Estimate**	**Total Cost**
Design & Engineering	Allowance	$5,000.00	1	$5,000.00
Permitting	Allowance	$3,000.00	1	$3,000.00
Erosion Control	Allowance	$5,000.00	1	$5,000.00
Flagger - Assume $55/hour @ 8 hours/day = 2200/week	Week	$2,200.00	1	$2,200.00
Police Detail - Assume $75/hour @ 8 hours/day = 3000/week	Week	$3,000.00	1	$3,000.00
Site Prep and Demolition	**Units**	**Cost/Unit**	**Estimate**	**Cost**
Remove ex. Sidewalk (approx. 500')	SY	$22.50	250	$5,625.00
Excavation	CY	$37.50	154	$5,775.00
Utility Pole Relocation	Each	$10,000.00	2	$20,000.00
Remove and Reset Mailbox	Each	$240.00	3	$720.00
New Sidewalk	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Gravel Borrow	CY	$54.00	64	$3,456.00
Granite Curb	LF	$60.00	700	$ 42,000.00
Concrete Sidewalk	SY	$87.00	385	$ 33,495.00
Asphalt Patching	Ton	$203.00	35	$7,105.00
Streetscape @ Library	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Bike Repair Station	Each	$2,000.00	1	$2,000.00
Bike Rack	Each	$500.00	1	$500.00
Bench	Each	$1,000.00	2	$2,000.00
Concrete Pad for site furnishings	Each	$1,000.00	3	$3,000.00
Landscaping (tree, shrub & perennial planting)	Allowance	$5,000.00	1	$5,000.00
Loam and Seed disturbed areas	Allowance	$5,000.00	1	$5,000.00

Buttonball Lane Streetscape Enhancements				
Relocate Fence	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Relocate ex. Fence	Allowance	$10,000.00	1	$10,000.00
Curb Ramps	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
New Curb Ramps	Each	$2,500.00	3	$7,500.00
Crosswalks	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
New Crosswalks	Each	$2,000.00	3	$6,000.00
Signs	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Remove and Reset Signs	Each	$240.00	3	$720.00
New Signage	Allowance	$2,500.00	1	$2,500
Subtotal				$180,596.00
15% Contingency				$27,089.00
Total				**$207,685.00**
Total Requested from MassDOT (Total minus design and permitting)				**$199,685.00**

Figure B-2: Buttonball Lane near the Egremont Library

Project 5: Sheffield Road Sidewalk

This project would address a gap in sidewalk between Main St. and Buttonball Lane by installing new sidewalk along Sheffield Road. Project challenges include homes and driveways along Sheffield Road, the relocation of a guardrail near a bridge and "tie-in" of sidewalk with the bridge itself, as well as possible mailbox relocation.

Table B-4: Project 5 Cost Estimate

New Sidewalk - Sheffield Road				
Materials	Concrete w/ Granite Curb			
Side	South			
Length Total	600			
General	**Unit**	**Cost**	**Estimate**	**Total Cost**
Design & Engineering	Allowance	$5,000.00	1	$5,000.00
Permitting	Allowance	$3,000.00	1	$3,000.00
Erosion Control	Allowance	$5,000.00	1	$5,000.00
Flagger - Assume $55/hour @ 8 hours/day = 2200/week	Week	$2,200.00	1	$2,200.00
Police Detail - Assume $75/hour @ 8 hours/day = 3000/week	Week	$3,000.00	1	$3,000.00
Site Prep and Demolition	**Units**	**Cost/Unit**	**Estimate**	**Cost**
Excavation	CY	$37.50	111	$4,162.50
Utility Pole Relocation	Each	$10,000.00	2	$20,000.00
Remove and Reset Mailbox	Each	$240.00	4	$960.00
New Sidewalk	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Gravel Borrow	CY	$54.00	55	$2,970.00
Granite Curb	LF	$60.00	600	$36,000.00
Concrete Sidewalk	SY	$87.00	330	$28,710.00
Asphalt Patching	Ton	$203.00	30	$6,090.00
Relocate Guardrail	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Relocate ex. guardrail	Allowance	$7,000	1	$7,000.00
Curb Ramps	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
New Curb Ramps	Each	$2,500	1	$2,500.00
Crosswalks	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
New Crosswalks	Each	$2,000	1	$2,000.00
Signs	**Unit**	**Cost/Unit**	**Estimate**	**Cost**

New Sidewalk - Sheffield Road				
Remove and Reset Signs	Each	$240.00	2	$480.00
New Signage	Allowance	$1,000.00	1	$1,000.00
Subtotal				$130,073.00
15% Contingency				$19,511.00
Total				**$149,583.00**
Total Requested from MassDOT (Total minus design and permitting)				**$141,583.00**

Project 6: Boice Road, Prospect Lake Road and Route 71 Intersection Reconstruction

This project would reconstruct the intersection of Boice Road, Prospect Lake Road and Route 71 – the North Egremont "four corners". The goal of this project would be to reduce pedestrian crossing distances and complexity at the intersection and improve safety at this identified crash cluster. Additional project goals include traffic calming for vehicles along Route 71, possibly through reduction in turning radii at the intersection. Moreover, wider shoulders throughout the intersection would help to better accommodate pedestrians and cyclists. The town's desire is that this intersection remain unsignalized.

Table B-5: Project 6 Cost Estimate

Intersection Reconstruction- Boice Rd at Prospect Lake Rd and Rd 71				
Materials	NA			
Assumed Project Area (SF)	20000			
Side	NA			
General	**Unit**	**Cost/Unit**	**Estimate**	**Total Cost**
Design & Engineering	Allowance	$10,000.00	1	$10,000.00
Permitting	Allowance	$5,000.00	1	$5,000.00
Erosion Control	Allowance	$10,000.00	1	$10,000.00
Flagger - Assume $55/hour @ 8 hours/day = 2200/week	Week	$2,200.00	2	$4,400.00
Police Detail - Assume $75/hour @ 8 hours/day = 3000/week	Week	$3,000.00	2	$6,000.00
Utilities/Drainage Allowance	Allowance	$30,000.00	1	$30,000.00
Site Prep and Demolition	**Units**	**Cost/Unit**	**Estimate**	**Cost**
Excavation - Assume 1' depth across entire project area	CY	$37.50	7	$262.50
Remove and Reset Mailbox	Each	$240.00	3	$720.00
New Asphalt	**Unit**	**Cost/Unit**	**Estimate**	**Cost**

Intersection Reconstruction- Boice Rd at Prospect Lake Rd and Rd 71				
Gravel Borrow -6" Depth - Assume 10% reduction in pavement area (18000 SF total)	CY	$54.00	333	$17,982.00
Asphalt -Assume 10% reduction in pavement area	Tons	$240.00	430	$ 103,200.00
Road Striping	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Road Striping	Allowance	$3,000.00	1	$3,000.00
Relocate Fence	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Relocate ex. guardrail	Allowance	$7,000.00	1	$7,000.00
Crosswalks	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
New Crosswalk	Each	$2,000.00	1	$2,000.00
Landscaping	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Loam and seed disturbed areas	Allowance	$5,000.00	1	$5,000.00
Signs	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Remove and Reset Signs	Each	$240.00	5	$1,200.00
New Signage	Allowance	$1500.00	1	$1,500.00
Subtotal				$207,265.00
15% Contingency				$31,090.00
Total				**$238,354.00**
Total Requested from MassDOT (Total minus design and permitting)				**$223,354.00**

Project 7: Pedestrian Wayfinding

This project would create a pedestrian wayfinding system for the town that would help to direct residents and visitors to important destinations.

Table B-6: Project 7 Cost Estimate

Pedestrian Wayfinding System				
Materials	NA			
Assumed Project Area (SF)	NA			
Side	NA			
General	**Unit**	**Cost/Unit**	**Estimate**	**Total Cost**
Design & Engineering	Allowance	$15,000.00	1	$15,000.00
Permitting	Allowance	$5,000.00	1	$5,000.00
Wayfinding System	**Unit**	**Cost/Unit**	**Estimate**	**Total Cost**
Wayfinding Interpretive Sign	Allowance	$3000.00	5	$15,000.00
Wayfinding Directional Sign	Allowance	$600.00	25	$15,000.00
Wayfinding Map	Allowance	$5000.00	3	$15,000.00
Wayfinding Trail Signs (French Park and other locations)	Allowance	$500.00	15	$7,500.00
Subtotal				$65,000.00
15% Contingency				$9,750.00
Total				**$74,750.00**
Total Requested from MassDOT (Total minus design and permitting)				**$54,750.00**

Project 8: South Egremont Village Crosswalks (Main St.)

This project would replace the two existing crosswalks at current locations in South Egremont Village with high visibility crosswalk.

Project 9: Shoulder Widening - North Egremont Four Corners to Town Hall (Both Sides of Route 71)

This project is the first of several segments of shoulder widening along Route 71. The ultimate goal of this shoulder widening effort would create a pedestrian and cycling accommodation along Route 71 between North Egremont and South Egremont villages. Based on guidance from MassDOT, shoulder widths to accommodate pedestrians and cyclists should be at least 4' wide for a Case 4 Shared Bicycle/Pedestrian Accommodation[34]. Design challenges for this project include guardrails that may need to be relocated, as well as several drainage structures that will need to be adjusted to new grades.

[34] https://www.massdot.state.ma.us/Portals/8/docs/designGuide/CH_5.pdf

Project 10: Shoulder Widening – Prospect Lake Road from North Egremont Four Corners to Prospect Lake Park Campground (Both Sides)

This project would widen shoulders to at least 4' on both sides of Prospect Lake Road from the intersection of Prospect Lake Road with Route 71 to Prospect Lake Park Campground. The goal of this project is to create a pedestrian and cycling accommodation between the campground, French Park, and the Olde Egremont Country Store. Field measurements taken by BRPC and the Town of Egremont DPW indicate that between the intersection of Prospect Lake Road and Route 71 and the intersection of Baldwin Hill Road with Prospect Lake Road, the paved road surface is at least 30' wide and unstriped. Striping this portion of the roadway to include two 12' vehicle lanes, would leave approximately 6' of paved surface that could be devoted to shoulder (3' on either side), meaning the roadway would only need to be widened 1' on either side. However, between the intersection of Baldwin Hill Road and the Prospect Lake Campground, the road narrows to approximately 24' (or two unstriped 12' vehicle lanes). Prospect Lake Road would need to be widened by 8' in total (4' on either side) to provide a shoulder for walking or biking. Design challenges include driveways, mailbox relocation, tree removal and several drainage structures which will need to be adjusted to meet new grades.

Project 11: Shoulder Widening – Route 71/North Egremont Four Corners to Green River Bridge on Boice Road (Both Sides)

This project would construct a widened shoulder of at least 4' on both sides of Boice Road from the intersection of Boice Road with Route 71 to the bridge over the Green River. The intent of this project is to create a pedestrian and cycling connection between the North Egremont village center and the river, which is a destination for swimmers and anglers. Design challenges include driveways and potential relocation of mailboxes. Shoulder widening may require permitting through the Conservation Commission and may require review under the Mass. Environmental Protection Act (MEPA).

Project 12: Post Office Crosswalk on Main St

This project would install a new high visibility crosswalk near the US Post Office on Main St. in South Egremont. Consider placing portable in-street pedestrian crossing indicators (MUTCD R1-6) at this crosswalk location.

Project 13: South Egremont Village School Crosswalk on Main St

This project would install a new high visibility crosswalk near the South Egremont School on Main St. in South Egremont. Consider placing portable in-street pedestrian crossing indicators (MUTCD R1-6) at this crosswalk location.

Project 14: Sheffield Road Crosswalk

This project will install a new crosswalk from Sheffield Road to Buttonball Lane. This project is intended to help address a gap in sidewalk between Main St. and Buttonball Lane and should occur after new sidewalk is installed along Sheffield Road (see Project 5).

Project 15: Village Green Lane Intersection Improvements

This project will reduce the corner radii at the intersection of Village Green Lane and Sheffield Road. The intent of this project is to reduce vehicle speeds along Village Green Lane and reduce use of Village Green Lane as a "cut-through" between Main St/Route 23/41 and Sheffield Road. An added benefit of this project is that it will reduce impervious surface on the Village Green and expand the open space available in this small park area.

Table B-7: Project 15 Cost Estimate

Reducing Corner Radii - Village Green Lane at Sheffield Road				
Materials	NA			
Assumed Project Area (SF)	4500			
Side	NA			
General	Unit	Cost/Unit	Estimate	Total Cost
Design & Engineering	Allowance	$3,000.00	1	$3,000.00
Permitting	Allowance	$3,000.00	1	$3,000.00
Erosion Control	Allowance	$5,000.00	1	$5,000.00
Flagger - Assume $55/hour @ 8 hours/day = 2200/week	Week	$2,200.00	2	$4,400.00
Police Detail - Assume $75/hour @ 8 hours/day = 3000/week	Week	$3,000.00	2	$6,000.00
Utilities/Drainage Allowance	Allowance	$10,000.00	1	$10,000.00
Site Prep and Demolition	Units	Cost/Unit	Estimate	Cost
Excavation - Assume 1' depth across entire project area	CY	$37.50	166	$6,225.00
New Asphalt	Unit	Cost/Unit	Estimate	Cost
Gravel Borrow -6" Depth - Assume 20% reduction in pavement area (3600 SF total)	CY	$54.00	66	$3,564.00
Asphalt -Assume 20% reduction in pavement area	Tons	$240.00	90	$21,600.00
Landscaping	Unit	Cost/Unit	Estimate	Cost
Loam and seed disturbed areas	Allowance	$5,000.00	1	$5,000.00
Landscaping	Allowance	$5,000.00	1	$5,000.00
Signs	Unit	Cost/Unit	Estimate	Cost
Remove and Reset Signs	Each	$240.00	2	$480.00
Subtotal				$73,269.00

Reducing Corner Radii - Village Green Lane at Sheffield Road				
15% Contingency				$10,990.00
Total				**$84,259.00**
Total Requested from MassDOT (Total minus design and permitting)				**$78,259.00**

Project 16: Hillsdale Road (Route 23) Traffic Calming – West of Village

This project will install a "Your Speed" or speed feedback sign west of South Egremont Village to help reduce vehicle speeds entering the village center area. This project is located along a state highway (Route 23).

Project 17: Sheffield Road and Route 23/41 Intersection Reconstruction

This project will reconstruct the intersection of Sheffield Road and Route 23. The intent of this project is to reconstruct Sheffield Road so that it meets Main St/Route 23/41 closer to a right angle. This reconfiguration will improve safety for drivers and reduce the crossing distance required for pedestrians to navigate this intersection.

Table B-8: Project 17 Cost Estimate

Intersection Reconstruction- Sheffield Road and Rte 23/41				
Materials	NA			
Assumed Project Area (SF)	7500			
Side	NA			
General	**Unit**	**Cost/Unit**	**Estimate**	**Total Cost**
Design & Engineering	Allowance	$10,000.00	1	$10,000.00
Permitting	Allowance	$5,000.00	1	$5,000.00
Erosion Control	Allowance	$10,000.00	1	$10,000.00
Flagger - Assume $55/hour @ 8 hours/day = 2200/week	Week	$2,200.00	2	$4,400.00
Police Detail - Assume $75/hour @ 8 hours/day = 3000/week	Week	$3,000.00	2	$6,000.00
Utilities/Drainage Allowance	Allowance	$30,000.00	1	$30,000.00
Site Prep and Demolition	**Units**	**Cost/Unit**	**Estimate**	**Cost**
Excavation - Assume 1' depth across entire project area	CY	$37.50	280	$10,500.00
Ex. Pavement Excavation	SY	$22.50	416	$9,360.00
Remove and Reset Mailbox	Each	$240.00	3	$720.00
Relocate utility pole	Each	$10,000.00	1	$10,000.00
New Asphalt	**Unit**	**Cost/Unit**	**Estimate**	**Cost**

Intersection Reconstruction- Sheffield Road and Rte 23/41				
Gravel Borrow -6" Depth - Assume 0% reduction in pavement area (7500 SF total)	CY	$54.00	140	$7,560.00
Asphalt (150 tons) -Assume 10% reduction in pavement area	Tons	$240.00	190	$45,600.00
Road Striping	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Road Striping	Allowance	$2,000.00	1	$2,000.00
Crosswalks	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
New Crosswalk	Each	$2,000.00	1	$2,000.00
Landscaping	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Loam and seed disturbed areas	Allowance	$5,000.00	1	$5,000.00
Signs	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Remove and Reset Signs	Each	$240.00	3	$720.00
New Signage	Allowance	$1500.00	1	$1,500.00
Subtotal				$160,360.00
15% Contingency				$24,054.00
Total				**$184,414.00**
Total Requested from MassDOT (Total minus design and permitting)				**$169,414.00**

Project 18: Shoulder Widening - Creamery Road

This project would install 4' minimum shoulders along both sides of Creamery Road. The intent of this project is to provide a pedestrian and cycling connection between North and South Egremont Villages. Design challenges include driveways, potential relocation of mailboxes and a bridge, which could constrain the project. Shoulder widening along this section of roadway may require permitting through the Conservation Commission and may require review under the Mass. Environmental Protection Act (MEPA).

Project 19: South Egremont Street Lighting

This project will replace 11 existing utility pole mounted "cobra"-style street lights in South Egremont Village with pedestrian scale and context sensitive street lights.

Project 20: North Egremont Street Lighting

This project will replace eight existing utility pole mounted "cobra"-style street lights in North Egremont Village with pedestrian scale and context sensitive street lights.

Table B-9: Project 20 Cost Estimate

Pedestrian Lighting - North Egremont				
Materials	NA			
Assumed Project Area (SF)	NA			
Side	NA			
General	**Unit**	**Cost/Unit**	**Estimate**	**Total Cost**
Design & Engineering	Allowance	$5,000.00	1	$5,000.00
Permitting	Allowance	$2,000.00	1	$2,000.00
Site Prep and Demolition	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Excavation per pole location	Allowance	$1,000.00	8	$8,000.00
Utilities Trenching	Allowance	$10,000.00	1	$10,000.00
Junction Box	Allowance	$7,000.00	1	$7,000.00
Existing light fixture removal	Allowance	$500.00	8	$4,000.00
Street Lighting (8 locations)	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Pedestrian scale street light w/ concrete footing, LED fixture, timing and dimming options, and bracket for banners and hanging baskets	Each	$12,000.00	8	$96,000.00
Subtotal				$132,000.00
15% Contingency				$19,800.00
Total				**$151,800.00**
Total Requested from MassDOT (Total minus design and permitting)				**$144,800.00**

Project 21: Library Streetscape Enhancements

This project will beautify the streetscape along Buttonball Lane near the Egremont Library. Potential elements of this project include site furnishings, such as benches, as well as new landscaping.

Project 22: Town Hall Bike Plaza

This project will install a bike rack and repair station at Town Hall. The cost estimate presented for this project can also be applied to project 30. For some potential products see **Appendix D**.

Table B-10: Project 22 Cost Estimate

Bike Parking & Repair Station - Town Hall				
Materials	NA			
Side	NA			
Length Total	NA			
Item	Unit	Cost	Estimate	Total Cost
General				
Site Prep and Demolition	Units	Cost/Unit	Estimate	Cost
Concrete Pad	Each	$ 2,500.00	1	$2,500.00
Bike Rack	Unit	Cost/Unit	Estimate	Cost
Bike Rack	Each	$1,500.00	1	$1,500.00
Bike Repair Station	Each	$2,000.00	1	$2,000.00
Delivery	Each	$250.00	1	$250.00
Subtotal				$6,250.00
15% Contingency				$938.00
Total				**$7,188.00**
Total Requested from MassDOT (Total minus design and permitting)				**$7,188.00**

Project 23: Smiley's Pond Bike Plaza

This project will install a bike repair station, bike rack, bench, and paving at a pull-off area along Route 41/N. Undermountain Road. The intent of this project is to promote bicycling in Egremont by providing accommodations and amenities at parking locations used by cyclists. This pull-off area is reportedly used as a parking area for bicyclists who travel to Egremont.

Project 24: Hillsdale Road (Route 23) Traffic Calming – East of Village

This project will install a "Your Speed" or speed feedback sign east of South Egremont Village to help reduce vehicle speeds entering the village center area. This project is located along a state highway (Route 23).

Project 25: Creamery Road and Route 23/41 Intersection Reconstruction

This project will reconstruct the intersection of Creamery Road and Main St/Route 23/41. The intent of this project is create a right-angle intersection of the two roadways to reduce the crossing distance and complexity for pedestrians as well as increase vehicle safety.

Table B-11: Project 25 Cost Estimate

Intersection Reconstruction- Creamery Road and Route 23				
Materials	NA			
Assumed Project Area (SF)	15000			
Side	NA			
General	**Unit**	**Cost/Unit**	**Estimate**	**Total Cost**
Design & Engineering	Allowance	$10,000.00	1	$10,000.00
Permitting	Allowance	$5,000.00	1	$5,000.00
Erosion Control	Allowance	$10,000.00	1	$10,000.00
Flagger - Assume $55/hour @ 8 hours/day = 2200/week	Week	$2,200.00	2	$4,400.00
Police Detail - Assume $75/hour @ 8 hours/day = 3000/week	Week	$3,000.00	2	$6,000.00
Utilities/Drainage Allowance	Allowance	$30,000.00	1	$30,000.00
Site Prep and Demolition	**Units**	**Cost/Unit**	**Estimate**	**Cost**
Excavation - Assume 1' depth across entire project area	CY	$37.50	560	$21,000.00
Ex. Pavement Excavation	SY	$22.50	800	$18,000.00
Remove and Reset Mailbox	Each	$240.00	3	$720.00
Relocate utility pole	Each	$10,000.00	1	$10,000.00
New Asphalt	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Gravel Borrow -6" Depth - Assume 20% reduction in pavement area (12000 SF total)	CY	$54.00	444	$23,976.00
Asphalt -Assume 20% reduction in pavement area	Tons	$240.00	300	$72,000.00
Road Striping	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Road Striping	Allowance	$2,000.00	1	$2,000.00
Crosswalks	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
New Crosswalk	Each	$2,000.00	1	$2,000.00
Landscaping	**Unit**	**Cost/Unit**	**Estimate**	**Cost**

Intersection Reconstruction- Creamery Road and Route 23				
Loam and seed disturbed areas	Allowance	$5,000.00	1	$5,000.00
Signs	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Remove and Reset Signs	Each	$240.00	3	$720.00
New Signage	Allowance	$1,500.00	1	$1,500.00
Subtotal				$222,316.00
15% Contingency				$33,347.00
Total				**$255,663.00**
Total Requested from MassDOT (Total minus design and permitting)				**$240,663.00**

Project 26: Buttonball Lane and Route 23/41 Intersection Reconstruction

This project will reconstruct the intersection of Buttonball Lane and Main St/Route 23/41. The intent of this project is create a right-angle intersection of the two roadways to reduce the crossing distance and complexity for pedestrians as well as increase vehicle safety.

Table B-12: Project 26 Cost Estimate

Intersection Reconstruction- Buttonball Lane and Route 23/41				
Materials	NA			
Assumed Project Area (SF)	4500			
Side	NA			
General	**Unit**	**Cost/Unit**	**Estimate**	**Total Cost**
Design & Engineering	Allowance	$10,000.00	1	$10,000.00
Permitting	Allowance	$5,000.00	1	$5,000.00
Erosion Control	Allowance	$5,000.00	1	$5,000.00
Flagger - Assume $55/hour @ 8 hours/day = 2200/week	Week	$2,200.00	2	$4,400.00
Police Detail - Assume $75/hour @ 8 hours/day = 3000/week	Week	$3,000.00	2	$6,000.00
Utilities/Drainage Allowance	Allowance	$30,000.00	1	$30,000.00
Site Prep and Demolition	**Units**	**Cost/Unit**	**Estimate**	**Cost**
Excavation - Assume 1' depth across entire project area	CY	$37.50	166	$6,225.00
Ex. Pavement Excavation	SY	$22.50	500	$11,250.00
Remove and Reset Mailbox	Each	$240.00	3	$720.00
Relocate utility pole	Each	$10,000.00	3	$30,000.00

Intersection Reconstruction- Buttonball Lane and Route 23/41				
New Asphalt	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Gravel Borrow -6" Depth - Assume 0% reduction in pavement area (4500 SF total)	CY	$54.00	84	$4,536.00
Asphalt -Assume 0% reduction in pavement area	Tons	$240.00	113	$27,120.00
Road Striping	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Road Striping	Allowance	$2,000.00	1	$2,000.00
Crosswalks	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
New Crosswalk	Each	$2,000.00	1	$2,000.00
Landscaping	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Loam and seed disturbed areas	Allowance	$5,000.00	1	$5,000
Signs	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Remove and Reset Signs	Each	$240.00	3	$720.00
New Signage	Allowance	$1,500.00	1	$1,500.00
Subtotal				$151,471.00
15% Contingency				$22,721.00
Total				**$174,192.00**
Total Requested from MassDOT (Total minus design and permitting)				**$159,192.00**

Project 27: Undermountain Road Traffic Calming

This project will install a "Your Speed" or speed feedback sign along Undermountain Road as it enters South Egremont to help reduce vehicle speeds entering the village center area. This project is located along a state highway (Route 41).

Project 28: North Egremont Traffic Calming

This project will install two "Your Speed" or speed feedback signs along Route 71 on either side of the North Egremont village area. The intent of this project is to reduce vehicle speeds entering the village center.

Table B-13: Project 28 Cost Estimate

Speed Feedback Sign - Rte 71 (North and South of 4-Corners)				
Materials	NA			
Side	NA			
Length Total	NA			
Item	**Unit**	**Cost**	**Estimate**	**Total Cost**
General				
Allowance for tree trimming (for solar panel)	Allowance	$2,000.00	2	$4,000.00
Site Prep and Demolition	**Units**	**Cost/Unit**	**Estimate**	**Cost**
Concrete Footing	Each	$ 1,000.00	2	$2,000.00
Feedback Sign	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Speed feedback sign w/ solar panel	Each	$5,000.00	2	$10,000.00
Delivery	Each	$500.00	1	$500.00
Mounting Pole	Each	$500.00	2	$1,000.00
Subtotal				$17,500.00
15% Contingency				$2,625.00
Total				**$20,125.00**
Total Requested from MassDOT (Total minus design and permitting)				**$20,125.00**

Project 29: French Park Bicycle Parking

This project will install a bike rack at French Park to encourage cycling to and from this open space area and public park. The cost estimate presented for this project can also be applied to projects 31 and 34. For some potential products see **Appendix D**.

Table B-14: Project 29 Cost Estimate

Bike Parking - Multiple Locations				
Materials	NA			
Side	NA			
Length Total	NA			
Item	**Unit**	**Cost**	**Estimate**	**Total Cost**
General				
Site Prep and Demolition	**Units**	**Cost/Unit**	**Estimate**	**Cost**
Concrete Pad	Each	$2,000.00	1	$2,000.00
Bike Rack	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Bike Rack	Each	$1,500.00	1	$1,500.00
Delivery	Each	$250.00	1	$250.00
Subtotal				$3,750.00
15% Contingency				$563.00
Total				**$4,313.00**
Total Requested from MassDOT (Total minus design and permitting)				**$4,313.00**

Project 30: Buttonball Lane/Library Bicycle Parking

This project will install a bike rack and bicycle repair station at the Egremont Library to encourage cycling to and from this public facility.

Project 31: Town Hall Bicycle Parking

This project will install a bike rack at Town Hall to encourage cycling to and from this public facility.

Project 32: Sheffield Road Traffic Calming

This project will install a "Your Speed" or speed feedback sign along Sheffield Road to help reduce vehicle speeds entering the South Egremont Village area.

Table B-15: Project 32 Cost Estimate

Speed Feedback Sign - Sheffield Road, Creamery Road				
Materials	NA			
Side	NA			
Length Total	NA			
Item	**Unit**	**Cost**	**Estimate**	**Total Cost**
General				
Allowance for tree trimming (for solar panel)	Allowance	$2,000.00	1	$2,000.00
Site Prep and Demolition	**Units**	**Cost/Unit**	**Estimate**	**Cost**
Concrete Footing	Each	$ 1,000.00	1	$1,000.00
Feedback Sign	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
Speed feedback sign w/ solar panel	Each	$5,000.00	1	$5,000.00
Delivery	Each	$500.00	1	$500.00
Mounting Pole	Each	$500.00	1	$500.00
Subtotal				$9,000.00
15% Contingency				$1,350.00
Total				**$10,350.00**
Total Requested from MassDOT (Total minus design and permitting)				**$10,350.00**

Project 33: Creamery Road Traffic Calming

This project will install a "Your Speed" or speed feedback sign along Creamery Road to help reduce vehicle speeds entering the South Egremont Village area.

Project 34: Jug End Bicycle Parking

This project will install a bike rack at Jug End WMA to encourage cycling to and from this open space area. This project should be coordinated with the Mass. Department of Conservation and Recreation.

Project 35: Shoulder Widening – Route 71 - Town Hall to Creamery Road

This project would construct a widened shoulder of at least 4' on both sides of Route 71 from the Town Hall to the intersection of Creamery Road with Route 71. The intent of this project is to create a pedestrian and

cycling connection between North and South Egremont village center, which is a destination for swimmers and anglers. Design challenges include driveways and potential relocation of mailboxes. Shoulder widening may require permitting through the Conservation Commission and may require review under the Mass. Environmental Protection Act (MEPA).

Project 36: Catamount Bike Plaza – Route 23

This project would install a bike repair station, bike rack, bench and paving at a pull-off area along Route 23 near the Catamount Ski Area. The intent of this project is to promote bicycling in Egremont by providing accommodations and amenities at parking locations used by cyclists. This pull-off area is reportedly used as a parking area for bicyclists who travel to Egremont.

Project 37: Bike Plaza – Route 23

This project would install a bike repair station, bike rack, bench and paving at a pull-off area along Route 23 near Tyrell Road. The intent of this project is to promote bicycling in Egremont by providing accommodations and amenities at parking locations used by cyclists. This pull-off area is reportedly used as a parking area for bicyclists who travel to Egremont.

Project 38: Appalachian Trail Crossing Signs

This project would install four total MUTCD "Trail Crossing" (W11-15A) signs on N. Undermountain and Jug End Roads near the crossing of the Appalachian Trail. The intent of this project is to warn drivers of potential hikers along these roadways.

Table B-16: Project 38 Cost Estimate

Trail X-ing Signs - Appalachian Trail - Undermountain and Jug End Roads				
Materials	NA			
Side	NA			
Length Total	NA			
Item	**Unit**	**Cost**	**Estimate**	**Total Cost**
General				
Bike Rack	**Unit**	**Cost/Unit**	**Estimate**	**Cost**
New Sign & Installation	Each	$500.00	2	$1,000.00
Delivery	Each	$125.00	1	$125.00
Subtotal				$1,125.00
15% Contingency				$169.00
Total				**$1,294.00**
Total Requested from MassDOT (Total minus design and permitting)				**$1,294.00**

APPENDIX C: MASSDOT COMPLETE STREETS PROJECT PRIORITIZATION PLAN

The following Appendix section is a copy of the Tier 2 Prioritization Plan that was submitted to MassDOT. Projects are identical to those found in **Table 8** but includes additional information such as estimated start and end locations, anticipated construction duration and other information.

Project Details			EJ	Complete Streets Location			Project Origin and Type		Complete Streets Needs								Complete Streets Funding Request			Construction Schedule	
Rank	**Project Name**	**Project Description**	**Environmental Justice Population**	**Project Limits**	**Project Start Location: X,Y Coordinates** (MA State Plane meter)	**Project End Location: X,Y Coordinates** (MA State Plane meter)	**Complete Streets Project Origin** (planning documentation or supporting analysis)	Complete Streets Project Type (refer to the Eligible Projects Worksheet)	Safety	ADA Accessibility	Pedestrian Mobility	Bicycle Mobility	Transit Operations and Access	Vehicular Operations	Freight Operations	**Will this project be in Coordination with other Communities?** (list, if applicable)	**Total Estimated Project Cost**	**Complete Streets Funding Requested**	**Other Funding Source(s) and Amount** (if applicable)	**Anticipated Construction Duration** (number of months)	**Desired Construction Start Date** (month/year)
1	Buttonball Lane and Sheffield Rd. Intersection Reconstruction	Reconstruction of the intersection of Buttonball Lane with Sheffield Road to reduce pedestrian crossing distance and complexity. Project will include new ADA compliant curb ramps and new crosswalk.	No	Intersection of Buttonball Lane and Sheffield Rd.	42093, 880643		CS Needs Assessment	S6, S13, P2, P9	X	X	X					No	$194,873	$183,873	11,000 (town)	3	04/01/18
2	Buttonball Lane Streetscape Enhancements	Replacement and extension of approx. 700' of existing sidewalk along Buttonball Lane. Project will include landscaping and site furnishings around the town library and installation of a bike rack and bike repair station. Construction will include new ADA compliant curb ramps and new crosswalks.	No	Buttonball Lane	42046, 880843	42100, 880637	CS Needs Assessment	P2, P5, P9, BO	X	X	X	X				No	$207,685	$199,685	8,000 (town)	3	04/01/17
3	Sheffield Road Sidewalk	Installation of approx. 600' of new sidewalk along Sheffield Rd. Project will include construction of new ADA compliant curb ramps and new crosswalks.	No	Sheffield Road from the intersection of Route 8 with the intersection of Buttonball Lane.	41922, 880678	42103, 880624	CS Needs Assessment	P2, P5, P9	X	X	X					No	$149,583	$141,983	8,000 (town)	2	04/01/17

Project Details			EJ	Complete Streets Location			Project Origin and Type		Complete Streets Needs							Complete Streets Funding Request			Construction Schedule	
4	Boice Rd/Prospect Lake Rd/Route 71 Intersection Reconstruction	Reconstruction of the intersection of Boice Rd/Prospect Lake Rd & Rte 71. Project will reduce pedestrian crossing distance and complexity.	No	Intersection of Boice Rd/Prospect Lake Rd/Route 71	39939, 884906		CS Needs Assessment	S6, S13	X		X			X		No	$238,354	$223,354	15,000 (town)	3	04/01/20
5	Egremont Wayfinding System	Installation of a pedestrian wayfinding system to guide pedestrians to major town destinations and recreation areas.	No	Multiple Locations throughout town	39583, 884700 39925, 884904 40788, 884130 42086, 882045 39979, 884865		CS Needs Assessment	P4	X		X	X				No	$74,750	$54,750	20,000 (town)	1	04/01/21
6	Village Green Lane Corner Radii Reductions	Reduction of the size of corner radii at the intersection of Village Green Lane and Sheffield Road. Project will reduce pedestrian crossing distance, calm traffic and reduce impervious surface area.	No	Intersection of Village Green Lane and Sheffield Rd.	41996, 880669		CS Needs Assessment	S6, S13	X		X					No	$84,259	$78,259	6,000 (town)	1	04/01/21
7	Sheffield Rd. and Route 23/41 Intersection Reconstruction	Reconstruction of the intersection of Sheffield Rd. and Route 23/41. Project will reduce pedestrian crossing distance and complexity.	No	Intersection of Sheffield Rd. and Route 23/41	41936, 880679		CS Needs Assessment	S6, S13	X		X			X		No	$184,414	$169,414	15,000 (town)	3	04/01/18
8	North Egremont Street Lighting	Installation of pedestrian scale light poles and fixtures along Route 71 in North Egremont	No	Multiple Locations throughout town	40050, 884789 39941, 884889 39824, 884829 39761, 884793 39979, 884865		CS Needs Assessment	S9	X		X	X				No	151,800	144,800	7,000 (town)	2	04/01/18
10	Town Hall Bicycle parking and repair station	Installation of a bike rack and repair station at Egremont Town Hall.	No	Egremont Town Hall, Route 71	40789, 884118		CS Needs Assessment	B3, BO				X				No	$7,188	$7,188		1	04/01/17

Project Details			EJ	Complete Streets Location			Project Origin and Type		Complete Streets Needs							Complete Streets Funding Request			Construction Schedule	
11	Creamery Rd. and Route 23/41 Intersection Reconstruction	Reconstruction of the intersection of Creamery Rd. and Route 23/41 to reduce pedestrian crossing distance and intersection complexity.	No	Intersection of Creamery Rd. and Route 23/41	42025, 881013		CS Needs Assessment	S6, S13	X		X			X		No	$255,663	$240,663	15,000 (town)	3	04/01/19
12	Buttonball Lane and Route 23/41 Intersection Reconstruction	Reconstruction of the intersection of Buttonball Lane and Route 23/41 to reduce pedestrian crossing distance and intersection complexity.	No	Intersection of Buttonball Lane and Route 23/41	42049, 880838		CS Needs Assessment	S6, S13	X		X			X		No	$174,192	$159,152	15,000 (town)	2	04/01/19
13	Route 71 Traffic Calming	Installation of 2 speed feedback "your speed" signs along Rte 71 to provide traffic calming in the village center.	No	Route 71	39881, 885099	40251, 884614	CS Needs Assessment	S5	X					X		No	$20,125	$20,125		1	04/01/18
14	French Park Bike Parking	Installation of a bike rack at French Park.	No	French Park, Prospect Lake Rd.	39556, 884673		CS Needs Assessment	B3				X				No	$4,313	$4,313		1	04/01/17
15	Sheffield Rd. Traffic Calming	Installation of a speed feedback "your speed" sign along Sheffield Rd.	No	Sheffield Rd.	42291, 880495		CS Needs Assessment	S5	X					X		No	$10,350	$10,350		1	04/01/21
16	Creamery Rd. Traffic Calming	Installation of a speed feedback "your speed" sign along Creamery Rd.	No	Creamery Rd.	42016, 881265		CS Needs Assessment	S5	X					X		No	$10,350	$10,350		1	04/01/21
17	Jug End Bike Parking	Installation of a bike rack at Jug End WMA area. Project to be coordinated with DCR.	No	Jug End WMA, Jug End Rd.	38819, 879416		CS Needs Assessment	B3				X				No	$4,313	$4,313		1	04/01/17
18	Appalachian Trail Warning Signage	Installation of 2 new "Trail X-ing" signs along Jug End Road near the Appalachian Trail crossing to warn drivers of the presence of hikers and pedestrians.	No	Jug End Rd.	40338, 878947		CS Needs Assessment	S7	X		X					No	$1,294	$1,294		1	04/01/21

APPENDIX D: DESIGN ELEMENTS

Potential products

Products listed in this appendix are for consideration of the Town of Egremont and do not constitute endorsement. Listing in this appendix is to provide examples of the range of products and prices available.

Bike Repair Station
Dero Fixit with Air Kit 3 – Estimated Cost $1500[35]
Bike Fixtation – Deluxe Public Work Stand – Estimated Cost $2000[36]
Saris Parking – Cycle Aid Station – Estimated Cost $800[37]

Bike Rack
Belson Outdoors Downtown Bike Rack – Estimated Cost $150[38]
Belson Outdoors "U" Bike Rack – Estimated Cost $100[39]
Landscape Forms Ride Bike Rack – Estimated Cost $500[40]
Forms and Surfaces Cordia Bike Rack – Estimated Cost $500[41]
Dumor Bike Rack 293 – Estimated Cost $400[42]

Speed Feedback Sign
Trafficalm iQ1200 Driver Feedback Sign – Estimated Cost $4500[43]
Traffic Safety Corp. SafePace 475 Driver Feedback Radar Speed Sign – Estimated Cost $2500[44]
Radarsign – TC-1000 – Estimated Cost 5000[45]

[35] http://www.dero.com/product/fixit/
[36] http://www.bikefixtation.com/products/
[37] https://www.sarisparking.com/product/cycle-aid-station
[38] http://www.belson.com/Downtown-Bike-Rack
[39] http://www.belson.com/U-Bike-Racks
[40] http://www.landscapeforms.com/en-US/product/Pages/Metro40-Ride-Bike-Rack.aspx
[41] https://www.forms-surfaces.com/cordia-bike-rack
[42] http://dumor.com/products/bike-racks/bike-rack-293
[43] http://trafficalm.com/iq1200-driver-feedback-sign/
[44] http://www.xwalk.com/pages/safepace-475-radar-speed-sign.htm
[45] http://www.radarsign.com/radar-speed-signs/tc-1000-radar-speed-sign/