

Chapter 8 – Circulation & Transportation

8.1 Introduction & Purpose

The Circulation chapter of a Master Plan is designed to examine the movement of people and goods in a community. The physical, social, and economic well-being of the Town depends on successful planning for those movements. The Circulation Element identifies Hubbardston's goals for circulation including: the classification framework, level of service standards, design requirements, and policies for circulation. These policies should be balanced with the Town's other planning, economic, social, and environmental goals. The underlying goals for the Circulation Element are to provide accessibility to essential destinations by as many modes of transportation as possible. Ideal plans should maximize the travel choices of residents, workers, and visitors.



Circulation is essential for economic development and financial stability. Circulation goals and planning done by the town can affect what modes of transportation are available to residents and the quality of that transportation. Limited funds must be used wisely for the good of as many citizens as possible. The efficiency of a transportation system can affect health and safety in a variety of factors including noise, energy use and air quality. Policies that encourage walking and biking provide clean air alternatives. Alternative transportation

options often also become essential for those who do not have the option or desire to operate personal vehicles. These and related factors must be considered when developing Circulation policies.

The data and analysis in this chapter are based on information obtained from the Montachusett Regional Planning Commission (MRPC) Transportation Department, Massachusetts Department of Transportation (MaDOT), and the U.S. Census Bureau. Methodology for the US Census estimates can be found at: <https://www.census.gov/programs-surveys/popest/technical-documentation/methodology.html>

8.2 Existing Roadway System

Existing Network

The road infrastructure of Hubbardston is comprised of two state highways (Route 62 and Route 68), and a network of local and connector roads serving the town center and the rural residential areas. Route 68 is the main roadway through town traveling north to south from the Gardner city line, through Hubbardston Center to the Rutland town line at the southern end of town.

Route 62 travels east-west from the Barre town line to the Princeton town line in the southern end of town. State Route 2, or the Old Mohawk Trail, is accessible via Route 68 north in the City of Gardner, providing a connection from Hubbardston to the major east-west highway across northern Massachusetts, linking Boston to the State of New York and providing access to Interstate 91 in Greenfield. It is a controlled access highway through Eastern and Central Massachusetts until it reaches Erving.

One of the oldest designated tourist and scenic routes in the country, the Mohawk Trail is the gateway to the Connecticut River Valley. Route 2 also links Hubbardston to the employment markets in Gardner, Fitchburg, Leominster and other regions to the east.

Functional Classification

Functional classification identifies a roadway's purpose and use as part of the highway network. The highway network consists of a hierarchy of streets and highways designed to channel traffic from location to location in a safe and efficient manner. Streets and highways are classified into four functional highway systems:

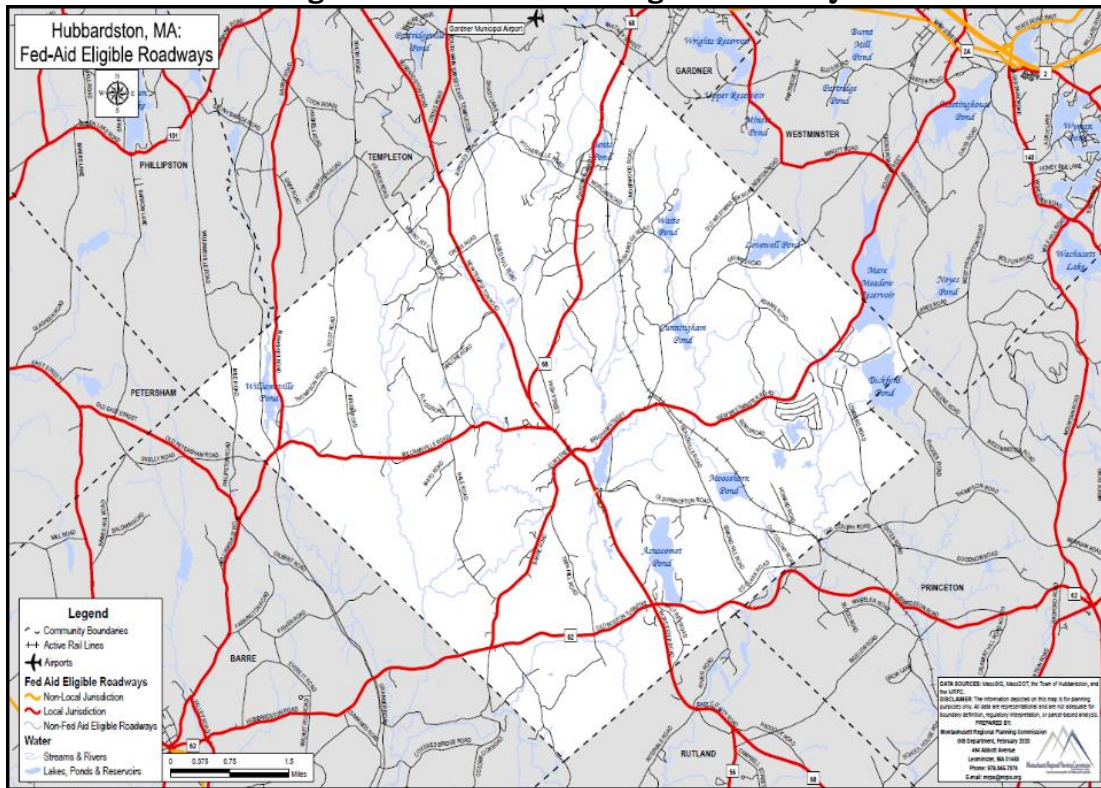
- Principal Arterials,
- Minor Arterials,
- Collector Streets and
- Local Streets.

These are further broken down into "urban" and "rural" classifications. Hubbardston can compete for limited federal aid funding to repair their Federal-Aid eligible roads through the annual TIP process. Roads classified as "local" are not eligible for Federal-Aid and are maintained solely by the municipalities. Local roads are eligible for State Highway funds under Chapter 90.

Principal Arterials: The principal arterials are multi-lane roadways that connect major activity centers. These arterials carry the highest volumes of traffic at high speed and are often entirely or partially controlled-access facilities with interchanges or grade separations at major crossings. Principal arterials not only carry a major portion of trips entering and leaving a community; they also carry a significant amount of traffic passing through the community.

Principal arterials generally carry the highest traffic volumes. In Massachusetts, traffic volumes on principal arterials usually exceed 25,000 vehicles per day. Because the function of principal arterials is mostly to provide mobility at a high level of service, service to abutting land is of secondary importance. Parking along principal arterials is usually forbidden or discouraged; driveway access onto principal arterials is also discouraged.

Just one road within the vicinity of town, just north of Hubbardston, fits the principal arterial classification: Route 2. Principal Arterials are eligible for Federal Aid. In Hubbardston, there are no Principal Arterials.

Figure C-1: Federal Aid Eligible Roadways

Minor Arterials: Minor arterials feed into principal arterials and serve the dual function of carrying high traffic volumes and providing access to adjacent land uses. Minor arterials place more emphasis on land access; on-street parking is generally permitted but is heavily regulated to maximize the street’s traffic-carrying capacity during peak travel periods. Minor arterials generally have four travel lanes during peak travel periods (on-street parking may occupy one or more lanes during non-peak hours), but a minor arterial may also have two travel lanes and widen out at signalized intersections. Minor arterials generally carry traffic volumes in the range of 10,000-40,000 average daily trips (ADT). Minor arterials serve as a distribution network to geographic areas smaller than the principal arterials. Trip lengths associated with minor arterials are of a moderate length and travel is at a lower speed than on principal arterials. In Hubbardston, Route 68 is classified as a Minor Arterial.

Collector Streets: Collector streets collect traffic from local streets and channel it into the arterial street system. The focus of collectors is more on land access than on mobility. Collector streets provide traffic circulation within neighborhoods and commercial and industrial areas. Travel speeds are generally lower and parking restrictions fewer than on minor arterial streets.

Collectors are usually two-lane roadways with minor widening at intersections with arterial streets. Collectors carry traffic volumes in the range of 3,000 to 20,000 ADT. The higher flows are associated with and where some element of through traffic between arterials is present. Roads classified as Collectors in Hubbardston are Route

62, Brigham Road, New Westminster Road, Williamsville Road, Burnshirt Road and New Templeton Road.



Local Road and Streets: The local streets include all the remaining streets that are not included in one of the higher systems. Local streets could be residential or industrial in character or could be access roads to recreation areas or parks. Traffic volumes on local streets are generally 4,000 ADT or less. A great majority of residential streets have volumes of 500 ADT or less. The high-volume local streets are very long residential roadways (over one mile in length) with access to subdivisions.

Local roads and streets’ main function is to provide access to land. Travel speeds on local streets are generally the lowest and parking restrictions generally do not apply. Travel on residential streets is often discouraged through traffic calming mechanisms. Although local streets carry relatively low traffic volumes overall, they constitute by far the greatest road mileage, accounting for 65% to 80% of roadway mileage in a typical community. Local roads and streets are NOT eligible for Federal Aid, but they are eligible for State Highway funds under Chapter 90.

Table C-1 illustrates the functional classification of all 85.61 miles of roadways within Hubbardston with Rural-Local classification being the most prevalent.

Table C-1: Miles of Road in Each Functional Classification Category

HUBBARDSTON	Rural - Arterial	8.18
HUBBARDSTON	Rural - Collector	19.83
HUBBARDSTON	Rural - Local	57.61
HUBBARDSTON	Total Mileage	85.61

Pavement Conditions

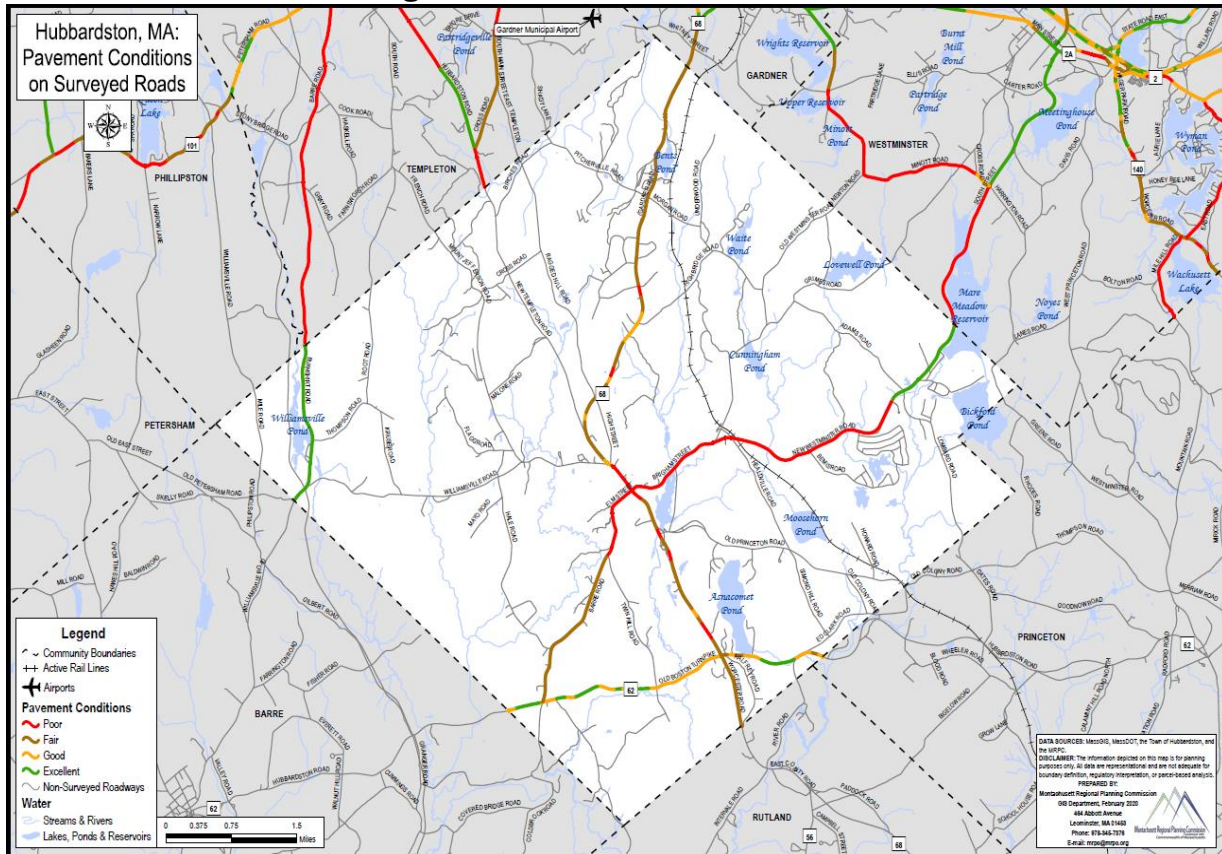
The structural conditions of most of the Federal Aid eligible roads in Hubbardston are determined by MassDOT and MRPC pavement surveys. The condition is expressed by assigning a Pavement Serviceability Index (PSI) number from 0 to 5 to segments along the roadway. PSI is an overall rating of the pavements condition.

Conditions are rated as Excellent, Good, Fair and Poor. The Map “*Fed-Aid Eligible Roadways*” (see Figure C-1)) shows all Federal Aid Eligible roads. These are all roads in Hubbardston which are eligible to receive federal aid, including both State and Local

Jurisdiction roads. Please note that due to the time frame between data collection and report preparation, conditions of the roadways may change.

Therefore, this information should be viewed in general terms regarding needs and conditions. These roads include all roads which are State maintained (State Jurisdiction) as well as a select number of roads which are maintained by the town of Hubbardston (Local Jurisdiction).

Figure C-2: Pavement Conditions



The table below shows a general correlation between PSI, condition, repair strategies and associated cost. The estimated repair cost was derived from conversations with a Pavement Management Users Group (PMUG) comprised of other Regional Planning Agencies, the MassDOT and the Federal Highway Administration (FHWA) and reflects the estimated cost to bring pavement conditions to “excellent.”

Table C-2: Cost Estimates¹

Hubbardston	State Jurisdiction			Local Jurisdiction			Combined			
	Miles	Sq. Yd	Cost	Miles	Sq. Yd	Cost	Repair Category	Miles	Sq. Yd	Total
Excellent			\$0	5.88	82790	\$62,093	Routine Maintenance	5.88	82790	\$62,093
Good			\$0	0.00	0	\$0	Preventative Maintenance	0.00	0	\$0
Fair			\$0	1.86	26189	\$484,497	Rehabilitation	1.86	26189	\$484,497
Poor	0.01	178	\$8,010	13.33	187686	\$8,445,870	Reconstruction	13.34	187864	\$8,453,880
Total	0.01		\$8,010	21.07		\$8,992,459	Total	21.08		\$9,000,469

¹ Associated cost estimates from 2017

Challenges

A major concern to communities is funding available for roadway maintenance (Chapter 90) lagging the rising price of such maintenance. On the following page is a chart showing the Chapter 90 allocations Hubbardston will receive in FY 2020 along with the roadway mileage that that money must maintain.

Table C-3: Chapter 90 Apportionment

CHAPTER 90 FUNDS							
Local Jurisdiction Miles (Fed Aid and Non-Fed Aid eligible)	FY 2016 Ch. 90 Apportionment	FY 2017 Ch. 90 Apportionment	FY 2018 Ch. 90 Apportionment	FY 2019 Ch. 90 Apportionment	FY 2020 Ch. 90 Apportionment	% Change (2016 - 2020)	
Ashburnham	74	\$346,340	\$345,504	\$343,472	\$343,284	\$341,939	-1.29%
Ashby	52	\$230,201	\$229,619	\$226,417	\$225,760	\$225,811	-1.94%
Athol	96	\$499,325	\$500,196	\$502,804	\$508,214	\$507,704	1.65%
Ayer	35	\$239,164	\$242,879	\$244,654	\$243,513	\$242,505	1.38%
Clinton	47	\$331,397	\$329,236	\$327,069	\$325,436	\$325,749	-1.73%
Fitchburg	179	\$1,122,369	\$1,127,480	\$1,122,926	\$1,120,288	\$1,119,259	-0.28%
Gardner	93	\$604,325	\$604,221	\$600,789	\$599,292	\$615,579	1.83%
Groton	100	\$505,608	\$505,008	\$504,132	\$502,295	\$501,734	-0.77%
Harvard	64	\$347,705	\$346,663	\$347,438	\$349,551	\$350,767	0.87%
Hubbardston	83	\$361,498	\$360,591	\$355,944	\$356,673	\$355,135	-1.79%
Lancaster	59	\$311,414	\$310,688	\$311,911	\$311,633	\$327,042	4.78%
Leominster	150	\$1,082,285	\$1,084,741	\$1,085,399	\$1,119,490	\$1,127,677	4.03%
Lunenburg	83	\$419,626	\$419,625	\$415,877	\$415,087	\$414,649	-1.20%
Petersham	62	\$255,951	\$255,744	\$252,089	\$251,354	\$250,869	-2.03%
Phillipston	45	\$189,823	\$189,594	\$186,873	\$189,780	\$189,271	-0.29%
Royalston	70	\$284,882	\$284,356	\$283,409	\$282,680	\$281,623	-1.16%
Shirley	44	\$253,904	\$253,372	\$252,029	\$252,036	\$252,072	-0.73%
Sterling	68	\$417,596	\$416,765	\$413,796	\$411,575	\$410,022	-1.85%
Templeton	87	\$338,351	\$335,950	\$333,245	\$333,029	\$335,718	-0.78%
Townsend	86	\$424,556	\$423,919	\$414,296	\$416,674	\$415,776	-2.11%
Westminster	91	\$419,830	\$418,675	\$414,252	\$410,852	\$419,901	0.02%
Winchendon	85	\$447,484	\$447,566	\$443,871	\$450,917	\$458,158	2.33%
TOTAL	1753	\$9,433,634	\$9,432,392	\$9,382,692	\$9,419,413	\$9,468,960	0.37%

Pavements are often the single largest expense in any municipal road maintenance budget. Chapter 90 allocations often do not provide sufficient funding to maintain local roads at the current condition let alone make major improvements. Due to inadequate funding, it is recommended that communities routinely target funding for federal aid eligible Local roadways through the Transportation Improvement Program (TIP). It is also encouraged that a Pavement Management Plan be implemented by communities to keep on track of maintenance needs and schedules to contribute to a cost-effective approach to maintaining roadways.

Road and street surfaces are the largest single cost of building and maintaining a transportation system. Forty to fifty percent of public funds spent on roadway systems are for the road surface. For smaller communities such as Hubbardston the percentage can be much higher. The role of a pavement management system is to provide an

opportunity to improve roadway conditions while making cost effective decisions on maintenance priorities and schedules.

Pavement management systems

A well-run pavement management system applies the principle that it is far more economical to preserve roads than to delay repairs and reconstruct roads. While it is important to preserve a pavement condition in good standing for as long as possible by implementing various preventative and routine maintenance techniques throughout its lifecycle to keep cost low, it is a reality that budgets often do not allow for this. It is encouraged that a pavement management plan be implemented to keep on track of maintenance needs and schedules to contribute to a cost-effective approach to maintaining roadways.

Hubbardston has developed a 5-year roadway management plan that began in 2021. The key goals and elements of the plan are:

- Route 68 Reconstruction Project (Three Phases)
 - Rutland Line to Brighamm St. (completed 2018)
 - Curtis Rec Field to Gardner Line (Summer 2020)
 - Town Center Project (est. 2022-2023)
- High St. Chapter 90 Road 5-year maintenance project
- Outline of ongoing maintenance
- Proposed Chapter 90 projects for years 2021 – 2026 with roads listed for consideration beyond 2026.

The plan is intended to be fluid and will experience change as it evolves. It will be maintained at a 5-year level, meaning that as one year is completed the plan will be upgraded with a new fiscal year and any changes will be made to the existing plan years.

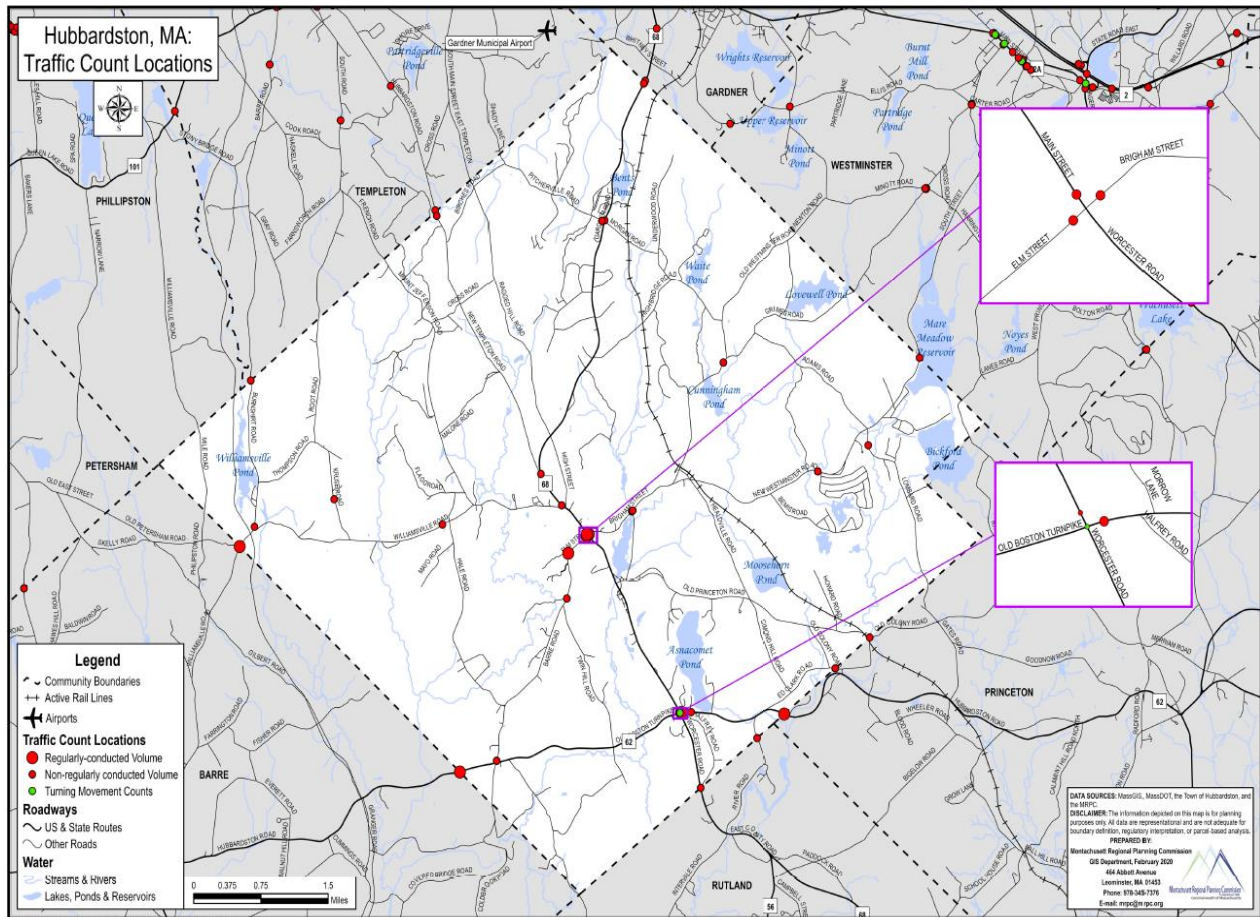
Traffic

For many years the MRPC and MassDOT Highway Division have taken traffic counts at numerous locations in Hubbardston, as part of its regional traffic count program. Table C-4 lists traffic counts that were taken along major routes over the past 10 years by location. Several locations mentioned in the table have been conducted regularly for volume comparison purposes, with other locations having less frequently conducted counts.

Table C-4: Traffic Counts

Street/Route	Location	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Barre Road	North of Old Boston Trpk		880								
Barre Road	South of Elm Street		1786		2393	1910				1894	
Brigham Street	East of Main Street (Rt. 68)				1734						
Burnshirt Road	North of Williamsville Rd.		1091								
Gardner Road	At Gardner C.L.	6222		6091				5439			6689
Gardner Road	North of High St.									4832	
Gardner Road	South of High St.									4834	
Gardner Road	North of Williamsville Rd	5157	5947								
High Street	South of Gardner Rd.									104	
Lombard Road	South of New Westminster						314				
Main Street	North of Brigham Street				6390						
Main Street	North of High St.									6173	
Main Street	South of High St.									6187	
New Templeton Rd.	At Templeton T.L.			3728							
New Westminster Rd.	West of Muskogee Ave.		1599								
Old Boston Turnpike	At Barre T.L.	2528	1196				2859			2439	
Old Boston Turnpike	At Princeton T.L.	1220					1600				
Old Boston Turnpike	East of Worcester Road	1197					2630				
Old Westminster Rd.	North of Grimes Rd.		138								
Pitcherville Road	West of Gardner Rd						277				
Williamsville Road	At Barre T.L.		1069								
Williamsville Road	North of Williamsville Rd. Cutoff	1002									
Worcester Road	At Rutland T. L						5156				
Worcester Road	North of Old Boston Trpk	4316		5246			6107			4680	

Figure C-3: Traffic Count Locations



The counts consist of data collected during a period of at least 24 weekday hours. To reflect seasonal differences in traffic volumes, MassDOT Uses Average Annual Daily Traffic (AADT) volume adjustment factors. These factors were applied to all counts listed on

Journey to Work

According to the American Community Survey 2022 estimates, about 99% of Hubbardston’s workforce worked in Massachusetts and 79.3% worked in Worcester County. Using data from the 2020 Census and 2022 ACS Estimates, a comparison can also be made as to how Hubbardston’s workforce gets to work and how its commuting patterns have changed during the past twelve years.

Table C-5: Commuting

	2010	2022
Drove Alone	85.6%	80%
Car-Pooled	9.%	4%
Walked	0%	2%
Public Transportation	.50%	0%
Worked at Home	5.%	14%
Other Means	0%	1%

The Census Bureau's American Community Survey (ACS) statistics show that 80% of the Town's labor force drives alone to work each day, with an additional 4% carpooling. This is a decline from 2010, when 85.6% of residents drove alone, with another 9% choosing to carpool. This 9% decline in driving alone is almost perfectly mirrored in the growth of the working from home category, which nearly tripled in size from 5% to 14%.

As indicated in Table C-6 below, the highest percentage of commuters travel 45 – 59 minutes to work. The mean time for a commuter from Hubbardston is 38 minutes, notably higher than Massachusetts (29.7), and significantly higher than the nation.26.4 minutes.

Table C-6: Commute Times

TRAVEL TIME TO WORK	
Less than 10 minutes	4%
10 to 14 minutes	5%
15 to 19 minutes	7%
20 to 24 minutes	12%
25 to 29 minutes	8%
30 to 34 minutes	15%
35 to 44 minutes	11%
45 to 59 minutes	21%
60 or more minutes	17%
Mean travel time to work (minutes)	38

An individual's access to a motor vehicle is a major driving factor in Hubbardston, with over 80% of residents commuting to work by driving. Even with recent changes due to technological advancements and societal impacts from the Covid-19 Pandemic, residents in Hubbardston are still overwhelmingly dependent on their own cars to travel to and from work.

Roadway Safety

Traffic crashes are often unpredictable, unavoidable events. Most traffic crashes are the result of driver error; however, driver error can be magnified by poor roadway or intersection design, or by inadequate traffic control measures. When crashes occur in high numbers at a particular location, there is probably a common reason for the crashes related to the design and/or signage of the road. These crashes can be predictable and the conditions that increase the chances of crashes are often correctable. Detailed study of crash records can identify these high-crash locations and lead to design improvements that will reduce the numbers and severity of future crashes.

MassDOT develops and uses crash data to create crash tables for each community in Massachusetts for use in traffic engineering studies, safety planning activities, and distribution to government agencies and the public. The MRPC Transportation Department maintains and continually updates a crash database for the purpose of gathering crash statistics on the Region using historical and the most recent MassDOT crash tables available that currently exist from 2016-2018. To develop crash statistics

from the database, MRPC staff has analyzed information such as number of crashes, crash location, and crash severity. Crash severity states the types of harm or the most serious outcome of a crash. There are essentially three possible outcomes:

1. Fatal Injury crash (Fatal Crash): Is the worst type of harm that involves at least one fatality or death of a person.
2. Non-fatal Injury crash (Injury Crash): Is the second worst type of harm that involves at least one injury to a person.
3. Property Damage Only crash (PDO Crash): Is the third worst type of harm that involves damage to property of any type.

Crash Statistics

The Region saw a total of 10,746 crashes occur between the 3-year period of 2016-2018 and 95 (1%) of those crashes occurred in Hubbardston. Of the Hubbardston total crashes, one (1) was a Fatal Crash and 23 were Injury Crashes (25% combined). PDO Crashes accounted for 69 and two (2) were not reported (75% combined) Below, Figure C-4 depicts crash locations and Table C-8 outlines the crash data.

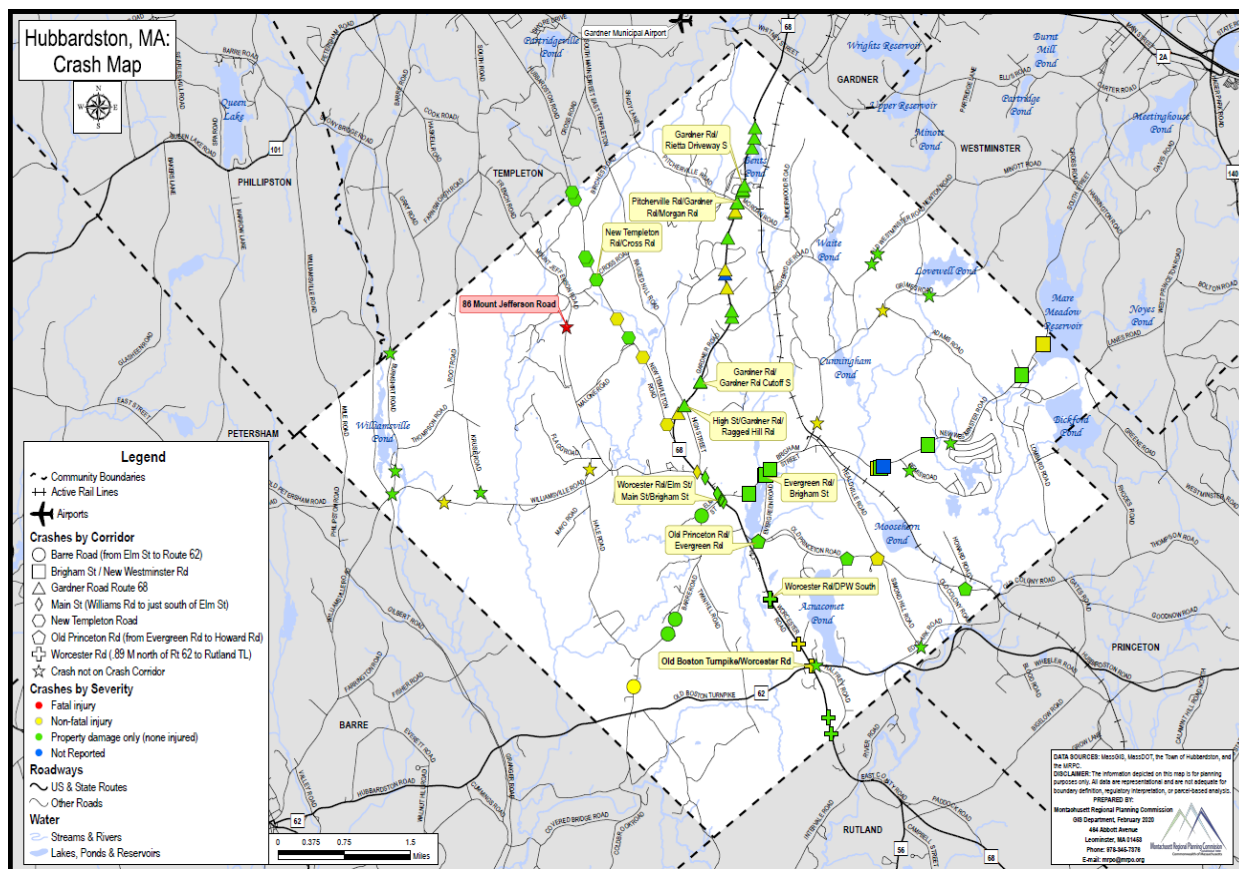


Figure C-4: Crash Locations

Crash clusters at intersections arise when two or more crashes occur in a 3-year period at the intersection (hereinafter called Intersection Crash Clusters). There was a total of ten (10) Intersection Crash Clusters in Hubbardston which accounted for 31 (65%) of

the 48 total crashes that occurred at intersections in Hubbardston. Crash Corridors on roadways arise when a minimum of three (3) crashes occurs on a roadway with the added requirement that they must also be within a .25-mile radius of each other.

There was a total of seven (7) roadways that experienced the minimum which accounted for 79 of the 95 total crashes that occurred in Hubbardston. The Crash Corridors include the intersection crashes that occurred on the Crash Corridor. Table C-7 below provides the Intersection Crash Clusters and Crash Corridors that occurred within Hubbardston in the 3-year period of 2016-2018.

Table C-8: Crash Counts

	Crash Count	Fatal Crashes	Injury Crashes	PDO/NR*
INTERSECTION CRASH TOTALS	48	0	11	37
MID-BLOCK CRASH TOTALS	47	1	12	34
TOTALS	95	1	23	71
Percent TOTALS		25%		75%
Intersections with Two or More Crashes				
	Crash Count	Fatal Crashes	Injury Crashes	PDO/NR
OLD BOSTON TURNPIKE/WORCESTER ROAD	9		2	7
WORCESTER ROAD/ELM STREET/MAIN STREET/BRIGHAM STREET	4			4
WORCESTER ROAD/DPW SOUTH	3			3
GARDNER ROAD/RIETTA DRIVEWAY SOUTH	3			3
EVERGREEN ROAD/BRIGHAM STREET	2			2
GARDNER ROAD/GARDNER ROAD CUTOFF SOUTH	2			2
HIGH STREET/GARDNER ROAD/RAGGED HILL ROAD	2			2
NEW TEMPLETON ROAD/CROSS ROAD	2		1	1
OLD PRINCETON ROAD/EVERGREEN ROAD	2		1	1
PITCHERVILLE ROAD/GARDNER ROAD/MORGAN ROAD	2			2
Totals	31	0	4	27
Percent of Intersection Crash Totals	65%	N/C	36%	73%
Crash Corridors				
	Crash Count	Fatal Crashes	Injury Crashes	PDO/NR
Gardner Rd (Route 68)	23		5	18
New Templeton Rd	10		4	6
Worcester Rd (.89 M north of Rt 62 to Rutland TL)	15		3	12
Main St (Williams Rd to just south of Elm St)	12		2	10
Brigham St / New Westminster Rd	10		2	8
Old Princeton Rd (from Evergreen Rd to Howard Rd)	5		2	3
Barre Rd (from Elm St to Route 62)	4		1	3
Totals	79	0	19	60
Fatal Crash Not in Crash Corridor				
	Crash Count	Fatal Crashes	Injury Crashes	PDO/NR
86 MOUNT JEFFERSON ROAD	1	1		

*Not Reported

Further study is recommended for the following top locations listed in Table 4 that may need corrective measures to improve safety:

- The Fatal Crash that occurred at 86 Mount Jefferson is the most severe crash severity outcome.
- The Old Boston Turnpike at Worcester Road Intersection Crash Cluster with its nine (9) total crashes that includes two (2) Injury Crashes.
- The Gardner Road (Route 68) Crash Corridor with its 23 total crashes and five (5) Injury Crashes.

The remaining 15 total crashes did not occur in an Intersection Crash Cluster, Crash Corridor or was not a Fatal Crash. Each crash occurred at its own intersection or mid-block location.

8.3 Public Transit System

Montachusett Area Regional Transit (MART) Service

There is no fixed route bus service provided in Hubbardston. However, the Montachusett Area Regional Transit Authority (MART) runs a bus service in the neighboring community Gardner, which connects to the wider system through the region. Individual route schedules are available online at MART's website at www.mrta.us. MART contracts with social and human service agencies for paratransit service. The Town and MART provide services in Hubbardston through the Council on Aging that employs a paid coordinator funded jointly.

Intercity Bus Service

There is currently no intercity bus service in the town of Hubbardston. Intercity bus service is provided by MART from Gardner to the Fitchburg Intermodal Center, and once a day in Leominster. Main Stops in Gardner are Mount Wachusett Community College and the City Hall. The service operates from 6:05 a.m. to 5:45 p.m. and is on weekdays and during the college school year only. MART also provides the "Hubbardston Link" Connects Gardner to Route 32 bus operated by the Franklin Regional Transit Authority (FRTA) to Greenfield via Hubbardston, Orange and Phillipston. Service operates from 5:33 a.m. to 7:00 p.m. on weekdays only.

Commuter Rail

The nearest commuter rail station to Hubbardston is in neighboring Fitchburg, allowing residents nearby access to the Fitchburg Commuter Rail Line and North Station in Boston. Service along the Fitchburg line to North Station includes the Wachusett Commuter Rail Station in West Fitchburg at the intersection of Route 2 & 31. The Station has seventeen (17) inbound trips and seventeen (17) outbound trips. Weekday departures from Wachusett Station to Boston begins at 4:50 a.m. and end at 10:35 p.m. Weekday Outbound trains from Boston to Wachusett begin at 6:35 a.m. and end at 12:10 a.m. Weekend service from this station includes seven (7) inbound trips to Boston and seven (7) outbound trips.

The Regional Transit Authority also provides a Wachusett shuttle service connecting neighboring Gardner with seven (7) inbound trains and six (6) outbound trains, the service starting at 5:15 a.m. and ending at 7:40 p.m. on weekdays only. The Wachusett shuttle schedule is available online at MART's website at www.mrta.us.

8.4 Other Transportation Systems

Freight Railroads

Freight rail service in Hubbardston is provided by Providence and Worcester Railroad (PW), which is one of New England's largest regional railroad systems. Providence and Worcester entered the rail business as two separate state-chartered rail companies in 1844 in Rhode Island and Massachusetts. They merged less than two years later in

1845 as Providence and Worcester Railroad Company, acquiring much of the Blackstone Canal and lands immediately surrounding it, building a main line to connect its two namesake cities. In 1892 the New York, New Haven and Hartford Railroad (NH) leased the P&W for 99 years.

In 1969, The New Haven merged into Penn Central, and in 1970 PW announced its intention to separate from the merger, which it did in 1972. Since then, they have taken over many other lines from the former Penn Central in addition to several from the Boston and Maine Railroad. Present day, PW's 566 miles of routes stretch from New York City, New York to Gardner, Massachusetts. As a Class II railroad, Providence and Worcester Railroad operates at a regional level as a freight hauler. Primary commodities handled include iron, cement, steel, food products, lumber, construction debris, limestone, chemicals and plastics, scrap metal, finished automobiles and aggregates. Within the region it runs north/south from Hubbardston to Gardner by way of the Freight Main Line. This rail line runs generally parallel to Route 68.

Aviation

Within the Montachusett Region, there are three general aviation municipal airports, the Fitchburg Municipal Airport located in Fitchburg on the Leominster City line; the Gardner Airport in Templeton near the Gardner City Line; and the Sterling Airport in Sterling. Each of these is classified as a general aviation airport. Outside of the Montachusett Region is the Orange Municipal Airport, in Orange, Massachusetts. It is a public airport owned by the Town of Orange that has two runways, averages 137 flights per day, and has approximately 52 aircraft based on its field. Flight training and parachuting services are available.

The former Shirley Airport is no longer a public use facility. According to the Massachusetts Aeronautics Commission website (www.massaeronautics.org), "The owner/operator of Shirley Airport has decided to change the airport's status from Privately-Owned/Public-use airport to Private Restricted Landing Area, which means that effective immediately, the airport is closed to public use. Pilots must receive prior permission from the owner/operator to use the airport." This location, located both in Shirley and Lancaster, has recently been turned into a solar farm where the electricity generated is supplied to the Town of Billerica, Ma.

The largest of the municipal airports, by far, is the Fitchburg Municipal Airport. Approximately 515 flights per day are handled on its two-runway system. The airport handles the general aviation needs for the greater Fitchburg area and provides facilities for personal, corporate and air taxi services. Access to the Fitchburg Municipal Airport is through Falulah Road, which provides indirect access to Route 2 (via Hamilton Street and Routes 12 and 13), and downtown Fitchburg (via Bemis Road, Route 12 and Summer Street). Improvements to the existing highway network would benefit the airport. In addition, commuter rail service is available at the North Leominster Train Station on Route 13 approximately one mile from the airport.

Bicycles and Pedestrians

Bicycle Travel

There has been a noticeable increase in the number of bicycles around population centers and on the highways. Bicycles have found a place on the highway network by default, as have pedestrians. Bicycles mixed with motor vehicle traffic can be dangerous and create traffic delays. Safety problems have increased as evidenced by the number of bicycle-automobile accidents.

There is strong support from the regional communities for designated bikeways for recreational and commuting traffic. Individual bikeway projects are being implemented in some towns within the region. Construction of bikeways will encourage cycle commuting by providing a direct, separate, and safe route between communities. Also, increasing concern for air quality and energy conservation is leading to renewed interest in the development of adequate facilities for bicycles throughout the Montachusett region.

Bikeways are special routes and/or facilities established to facilitate the movement of bicycles as an energy efficient transportation and/or recreation mode of travel. There are three types of bikeways: bike paths, bike lanes, and bike routes. These have been categorized as Class I, II and III bikeways respectively. Class I bike paths are routes totally separated from automobile or pedestrian traffic. Class II bike lanes are lanes at the edge of streets marked for exclusive use of bicyclists. Class III bike routes are roadways that bikes share with cars.

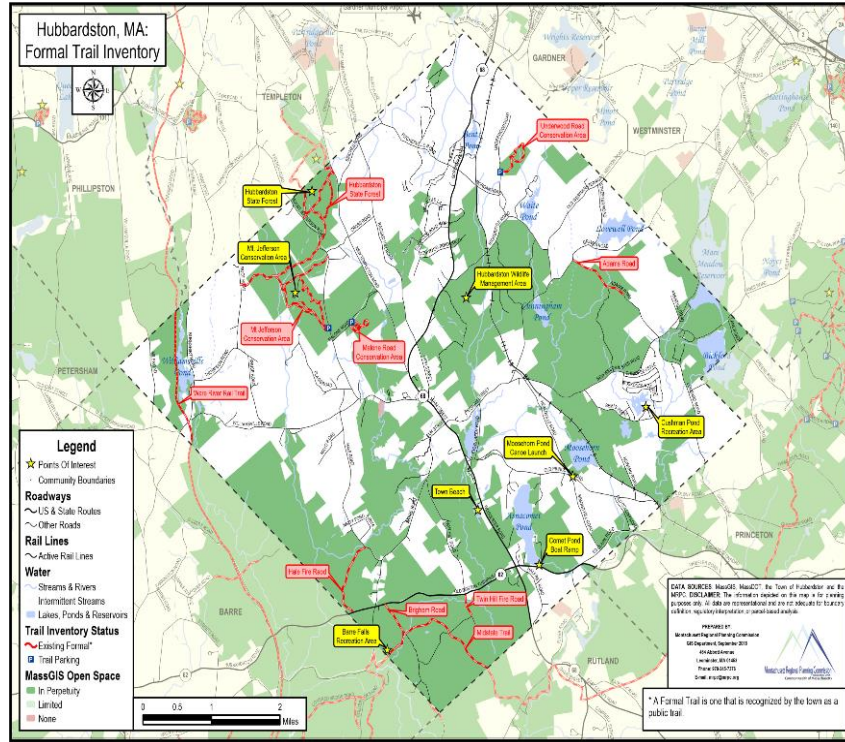
Legally, the bicycle has been recognized as a vehicle in Massachusetts since 1973; subject to basically all the rights and responsibilities of an automobile. Bikeways are public rights-of-way, maintained by a responsible state or local agency, just as a municipality's streets are owned and maintained. Where the land for a proposed bike path is privately owned, an easement to permit public passage may be obtained, or the right-of-way may be purchased outright. Bikeways which parallel roads may be located within the existing publicly owned right-of-way, extending beyond the roadway itself.

Pedestrian Access & Trail Systems

Pedestrian activity via sidewalks is generally limited to small areas within town (i.e. schools, libraries, senior center, town hall, parks, etc.). Some residential streets abutting these areas do not currently have sidewalks. Sidewalks should be included in new roadway construction, roadway improvements, and residential and non-residential subdivision development. Along major arterial roadways, land should be secured for sidewalks or pathways as development occurs. Pedestrian actuated signals should be in place in densely populated areas that were warranted to allow safer movement of pedestrians.

There is also pedestrian activity by walking trails within town. There is an abundance of nature trails that are mostly used for recreation as opposed to transportation. Creating sidewalk connections to these trailheads would be useful to have increased access to these vital recreation locations.

Figure C-5: Trail Inventory



Bridges

Throughout the Montachusett region, many of its road’s travel over numerous brooks, rivers and water bodies. Within the 22 communities of the Montachusett planning area, some 324 bridges are identified and rated by MassDOT as part of their inventory system. MassDOT provided a Bridge Rating Table to the MRPC. This table includes the town where the bridge is located, the road name the bridge is located on, functional classification of the road, year built, rebuilt date (if applicable), the deficiency status of each bridge, i.e. structurally deficient or functionally obsolete and AASHTO (American Association of State Highway and Transportation Officials) rating.

AASHTO is a method of evaluating highway bridge data by calculating four separate factors to obtain a numeric value which is indicative of bridge sufficiency to remain in service. The result of this method is a percentage in which 100 percent would represent an entirely sufficient eligible for federal aid for repair, a bridge must have a sufficiency rating of less than 80.

According to the MassDOT Project Development and Design Guidebook (January 2006), structurally deficient is defined as “a bridge structure that has a defect requiring corrective action.” Functionally obsolete bridges are defined as “a bridge which has no structural deficiencies but does not meet standards to adequately serve current user demands.” Due to the safety hazard factor, structurally deficient bridges are deemed to be a high priority to repair.

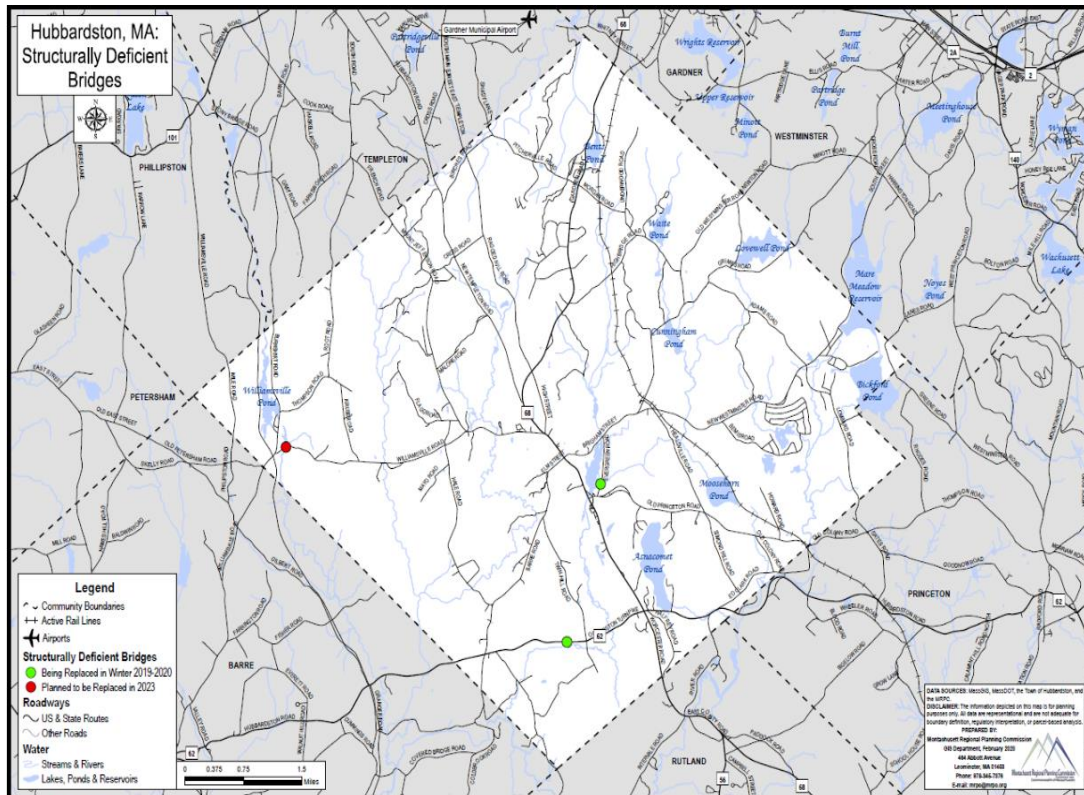
As of September 2018, there are 32 bridges rated as structurally deficient throughout the MRPC region and in Hubbardston there are three that are listed on Table C-7 and locations are mapped on Figure C-6. National Bridge Inventory Structurally Deficient & Functionally Obsolete Bridges along with AASHTO Rating. It should be noted that many of the Structurally Deficient bridges throughout the Commonwealth are being addressed through investments in the Accelerated Bridge Program. All the bridges in Table C-8 below are scheduled to be replaced within the next few years. Both Route 62 over the Ware River and Evergreen Road over Mason Brook were to be replaced in the winter of 2019/2020.

Table C-8: Structurally Deficient Bridges in Hubbardston

Over	Under	Owner	Year Built	Year Rebuilt	AASHTO Rating
HWY Williamsville	Water Burnshirt River	Town Agency	1939	N/A	66.4
HWY Evergreen Rd.	Water Mason Brook	Town Agency	1920	1938	43.3
ST 62 Old Boston Turnpike	Water Ware River	Town Agency	1950	N/A	5.0

The Williamsville Road/Burnshirt River bridge project 609187 is slated to be repaired in 2025 at a projected cost of \$5,232,105.

Figure C-6: Structurally Deficient Bridge Locations



8.4 Funding Opportunities & Resources

Safe Routes to School

In 2016 the Hubbardston Center School joined the Massachusetts Safe Routes to School program. This program is sponsored by the Massachusetts Department of Transportation and works to increase safe biking and walking among elementary and middle school students by using a collaborative, community-focused approach that bridges the gap between health and transportation.

As of December 2019, the program serves 921 partner schools in 236 communities across the Commonwealth. This equates to 61% of all schools in Massachusetts. At the time of this report, the town of Hubbardston has not been active in this program but has expressed renewed interest.

Complete Streets Funding Program

A Complete Street is one that provides safe and accessible options for all travel modes including walking, biking, transit and vehicles for people of all ages and abilities. To participate in the state's Complete Streets Funding Program, a municipality must pass a Complete Streets Policy and then develop a Prioritization Plan (list of projects) that will ultimately be used to apply for funding from MassDOT to begin the construction of projects on the plan.

In 2017, the town of Hubbardston had their Complete Streets Policy and Prioritization Plan approved. In February 2018, Hubbardston received a Complete Street grant to install a sidewalk on Gardner Road (Rt 68) from High Street to Curtis Recreational Field. However, to prioritize the RTE 68 North reconstruction, the project shifted to sidewalk improvements on Elm Street extending past Hubbardston Center School. This sidewalk work will begin in the fall of 2018. The sidewalk along Rt 68 to Curtis Recreational Field will be included in the Town Center Project.

One Stop for Growth

The One Stop framework is modeled around a Development Continuum that represents the life cycle of a major community development endeavor, from the initial community visioning to final construction. The Development Continuum shapes the Full Application and serves as a guide to help applicants understand where their project falls within the One Stop, both in terms of timing and readiness. The Development Continuum includes five distinct categories, broken into two broad groups:

Categories Related to Preparing for Growth

Grants to support activities and initial steps by community-based actors to attract and guide private investment in a community.

- Community Activation and Placemaking
- Planning & Zoning

- Site Preparation

Categories Related to Catalyzing Specific Projects

Grants to support implementation of construction activities to leverage private, commercial, industrial, residential investment projects, and other improvements that further the community vision.

- Buildings (vertical construction)
- Infrastructure (horizontal construction)

The FY22 and FY23 Rounds of the One Stop have resulted in a combined 532 successful applications, totaling over \$231.9 million in funding across 205 Massachusetts communities.

Role of the Regional Planning Agency

The Montachusett Regional Planning Commission (MRPC) acts as staff to the Montachusett Metropolitan Planning Organization (MPO) that has the responsibility of prioritizing transportation projects within the Montachusett Region. This presents municipalities with greater chances for input in setting local priorities. This shift in priority setting is intended to give municipalities a stronger role in planning transportation improvements that directly affect them. It is important to note that transportation projects and plans must be included in a regional transportation plan to receive federal funding for implementation.

Regional Transportation Plan (RTP)

The Regional Transportation Plan (RTP) outlines the transportation priority needs and policies for the region. Before projects receive federal funding, they must be identified and incorporated into the policy goals and visions of the RTP. The RTP is developed through studies, discussions with local officials, boards and commissions and public comment.

Each MPO in the Commonwealth of Massachusetts develops an RTP to provide guidance to local and state officials in deciding how to spend federal and state transportation funds. The RTP for the Montachusett Region identifies both short- and long-range projects for local roads, highways, bridges, rail, transit, bike and pedestrian trails, freight and airports as well as priorities, goals, visions and strategies. A copy of the plan can be found at: mrpc.org.

Transportation Improvement Program (TIP)

The Transportation Improvement Program (TIP) is a federally required, annually updated, prioritized listing of short-range highway construction and transit projects proposed for implementation during a five federal fiscal year cycle. It is a means of allocating scarce federal and state monetary resources across the state to projects that each region deems to be its highest priorities. The TIP must

be financially constrained to projections of available federal aid. The Massachusetts Department of Transportation (MassDOT) Highway Division, moreover, is committed to funding those projects that will be ready for advertisement in Federal Fiscal Year (FFY) 2020 and beyond. To this end the regional TIP contains a financial plan showing the revenue source or sources, current or proposed, for each project, for each anticipated FFY of advertisement.

To receive Federal or State funding, a transportation project must be included in the TIP. Projects listed in the TIP must also conform to the State Implementation Plan (SIP) for Air Quality Conformity in accordance with the Clean Air Act Amendments (CAAA), giving special consideration to "regionally significant" projects. Transportation projects funded with Federal funds from other Federal agencies, or with local or private resources, should be identified in the document to reflect the integrated and intermodal nature of the metropolitan transportation planning process.

The TIP must also be consistent with the current RTP for the Montachusett Region. In addition, the TIP estimates future funding sources for operating and maintaining the current transportation network as well as the costs of capital improvements. The agency responsible for implementing highway projects in the TIP, unless otherwise noted, is the MassDOT Highway Division and, for transit projects, the Franklin County or Montachusett Regional Transit Authorities.

The Montachusett TIP is the product of a comprehensive, continuing and cooperative effort (the 3C Process) to improve the regional transportation system by local officials, the Montachusett Joint Transportation Committee (MJTC), the Montachusett Regional Transit Authority (MART), the MRPC and the MassDOT. Together these organizations along with local officials comprise the signatories representing the MMPO.

Table C-8: Current Hubbardston TIP projects

Year	MPO	Municipality	MassDOT Description	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
2025	Montachusett	Hubbardston	HUBBARDSTON- BRIDGE REPLACEMENT, H-24-003, WILLIAMSVILLE ROAD OVER THE BURNSHIRT RIVER	\$5,232,105	\$5,232,105	\$4,185,684	\$1,046,421

8.5 Goals and Actions

Vision:

Construct and maintain a safe road system that is consistent with the desired Town's character.

Goal C1: Develop, maintain, and continue to implement both new and existing transportation planning documents and procedures as needed to improve Hubbardston's infrastructure.

- C1-1 The Town should consider the merits of applying the principals of Pavement Management when going forward with future maintenance schedules and the costs and benefits of utilizing a Pavement Management System.

- C1-2 Conduct and maintain an inventory of culverts within the community and seek to identify a mechanism to clean, repair and update the structures as needed.

- C 1-3 The town may seek to establish a Comprehensive Circulation Study/Plan of non-motorized users that could identify major travel routes, crosswalks, sidewalks, appropriate pavement markings and signage, etc.

- C 1-4 Schedule additional Traffic Counts with MRPC and analyze traffic crash data.

- C 1-5 Continue proactive participation with MRPC. Decisions related to project development, prioritization, funding, and scheduling are made through the metropolitan planning process and the MRPC serves as staff to the Metropolitan Planning Organization (MPO).

Goal C2: Improve pedestrian access throughout the Town.

- C 2-1 Make the neighborhoods more pedestrian - friendly through the construction and rehabilitation of sidewalks and perhaps bike lanes. Current design standards for ADA compliance should be incorporated.

- C 2-2 Work with neighboring communities and align the Town with regional trails groups i.e. Montachusett Regional Trail Coalition (MRTC) and North Quabbin Trails Association.

- C 2-3 Consider creating a community trail plan to assist with trail priority development and additional funding opportunities.

- C 2-4 Continue efforts to work with the Commonwealth's Complete Streets Program to bring additional state funds for transportation improvements to Hubbardston and enhance public safety.
