



Commonwealth of Massachusetts
Office of the State Auditor
Suzanne M. Bump

Making government work better

Local Financial Impact Review Issued October 5, 2021

Public Infrastructure in Western Massachusetts: A Critical Need for Regional Investment and Revitalization

State House Room 230 ■ Boston, MA 02133 ■ auditor@sao.state.ma.us ■ www.mass.gov/auditor





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October 5, 2021

His Excellency, Charles D. Baker, Governor
The Honorable Karyn E. Polito, Lieutenant Governor
The Honorable Karen E. Spilka, President of the Senate
The Honorable Ronald J. Mariano, Speaker of the House
Honorable Members of the General Court
The Honorable Michael J. Rodrigues, Senate Chair of the Joint Committee on Ways & Means
The Honorable Aaron Michlewitz, House Chair of the Joint Committee on Ways & Means
The Honorable Daniel J. Hunt, Chair of the House Committee on Federal Stimulus & Census Oversight

Dear Colleagues:

This is a historic time to consider the opportunities for investment in public infrastructure. The federal government is engaged in a discussion of how to increase investment in neglected areas of roadways, ports, airports, broadband internet, and water and sewer systems. The Commonwealth is examining the use of funds from the American Rescue Plan Act and our significant budgetary surplus as sources for further investment in climate resiliency and critical infrastructure. Our local governments face the same discussion with competing capital needs, forcing hard choices as to which aspects of infrastructure get funding today and tomorrow.

For consideration during all of these important deliberations, it is my privilege to submit this study on the need for infrastructure investment in the counties of Berkshire, Franklin, Hampden, and Hampshire in Western Massachusetts. In this report, we focus on roadways, bridges, culverts, municipal buildings, and high-speed internet—the lifeblood of community life and commerce in Western Massachusetts and across the Commonwealth. This report also reviews existing programs and makes recommendations on funding and reform consistent with input from municipal officials and key stakeholders. The message is clear: investment in infrastructure is an important and necessary step to allow Western Massachusetts to fully become part of the growth and prosperity experienced by the Commonwealth since the end of the Great Recession.

This is not the first study from my office's Division of Local Mandates examining critical infrastructure needs in the Commonwealth, nor will it be the last. In 2017, my office released a study on water



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infrastructure, documenting the high need for investment in water and sewer systems and the gap between the spending of municipalities and their obligations. Before that, my predecessor, Auditor DeNucci, issued a report discussing unsafe dams and the financial burden on municipalities of their maintenance. Every infrastructure examination that has been conducted by my office to date has reaffirmed the need for greater investment in public infrastructure, particularly in the rural communities of Western Massachusetts.

This report was undertaken pursuant to Section 6B of Chapter 11 of the Massachusetts General Laws, which grants the Office of the State Auditor's Division of Local Mandates (DLM) authority to review any law or regulation that has a significant financial impact on local government. Copies of the report are available on the Office of the State Auditor's website, www.mass.gov/auditor, or by calling DLM at (617) 727-0025.

Please do not hesitate to reach out to my office with any questions or comments. As always, thank you for your continued support of our shared effort to improve the success, accountability, transparency, and efficiency of Massachusetts state government.

Sincerely,

A handwritten signature in black ink, appearing to read "S. M. Bump".

Suzanne M. Bump
Auditor of the Commonwealth



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LIST OF ABBREVIATIONS

ADA	Americans with Disabilities Act
CDBG	Community Development Block Grant
DER	Division of Ecological Restoration
DLM	Division of Local Mandates
DLS	Division of Local Services
DOR	Department of Revenue
EMS	emergency medical services
EQV	equalized property value
FHWA	Federal Highway Administration
FRCOG	Franklin Regional Council Of Governments
FY	fiscal year
HVAC	heating, ventilation, and air conditioning
MassDOT	Massachusetts Department of Transportation
MBI	Massachusetts Broadband Institute
Mbps	megabits per second
MBLC	Massachusetts Board of Library Commissioners
MFOB	Municipal Finance Oversight Board
MOBD	Massachusetts Office of Business Development
MSBA	Massachusetts School Building Authority
MVP	Municipal Vulnerability Preparedness
STRAP	Small Town Road Assistance Program
TIP	Transportation Improvement Program
USDA	US Department of Agriculture

EXECUTIVE SUMMARY

The roads on which the public travels and the buildings from which services are delivered are in constant need of maintenance and upgrade. The Commonwealth and its constituent municipalities invest huge sums in town halls, roadways, libraries, and public safety facilities, but the ability of municipalities to actually meet local needs varies widely. For rural communities, most of which are in Western Massachusetts, local needs are not and cannot be met without state assistance.

Aging and declining populations, stagnant or decreasing property values, increased education costs, and statewide policies that benefit urban areas all serve to disadvantage the largely rural areas in Berkshire, Franklin, Hampden, and Hampshire Counties. Small municipal staffs without professional engineers, grant writers, or planners are challenged to pursue funding for infrastructure, and state eligibility requirements or formulas make them ineligible for certain funds altogether.

With the possible infusion of federal investments, and a greater state-level focus on infrastructure issues, now is an opportune time to take stock of where investments are most needed in Western Massachusetts and where infrastructure policies in place can be improved to even the playing field for municipalities in that region of the Commonwealth.

There have been a number of commissions, legislators, and advocates who have called attention to issues of infrastructure maintenance in recent years, resulting in multiple state proposals for changes to formulas, granting procedures, and laws. This report builds upon that work, containing findings and recommendations that highlight areas of greatest concern to municipal officials, in the hope that our investigation of this topic may lead to better infrastructure investments in communities across Massachusetts. This report speaks to the need across broad categories of public infrastructure for less complex funding programs and higher levels of financial assistance.

Below is a summary of our findings and recommendations, with links to each page listed.

Finding 1 Page 32	Transportation infrastructure such as roadways, bridges, and culverts are an area of primary concern.
Finding 2 Page 42	Continued investment in high-speed broadband is critical to the success of the region.
Finding 3 Page 43	Lack of infrastructure investment undermines businesses and economic development.
Finding 4 Page 44	Many communities have outdated municipal buildings that are in need of replacement or significant repairs and renovations.
Finding 5 Page 51	There is a lack of formalized support for most municipal buildings.
Recommendation 1 Page 52	<p>1a. The Chapter 90 Program needs additional funding and formula reform.</p> <p>1b. Repair and replacement of small bridges and culverts need more funding and attention.</p> <p>1c. The Small Town Road Assistance Program requires greater funding and</p>
Recommendation 2 Page 57	The Massachusetts Broadband Institute (MBI) needs to continue to work with networks to make broadband cost effective for areas and customers who currently do not have it, in particular the nine communities for which MBI has not yet provided it. This work should continue at all deliberate speed.
Recommendation 3 Page 58	Create a public infrastructure authority to assist communities with renovation or replacement of municipal buildings.

PURPOSE OF THE STUDY

The uneven course of economic development across the Commonwealth is a significant cause of concern. It is an acute problem in Western Massachusetts, which also faces declining population, demographic changes leading to lower school enrollments, and loss of municipal services, all of which contribute to serious challenges for civic life. Many communities across the Commonwealth, but particularly in the western region, have property values that are still lower than before the Great Recession and have seen little new growth. The region's slow growth in its tax base leads to constrained municipal resources for spending on services and capital expenditures.

As noted by the National Research Council, "[Civil] infrastructure provides the range of essential services generally necessary to support a nation's economy and quality of life—arguably entire economies rely on the ability to move goods, people, and information safely and reliably."¹ Due to a lack of resources, as well as a state government policy focus on the Commonwealth's commercial centers, communities in Western Massachusetts do not have the tools necessary to maintain or develop their public infrastructure.

THE PURPOSE OF THIS STUDY IS TO DO THE FOLLOWING:



To conduct this study, the Division of Local Mandates (DLM) has conducted interviews with stakeholders, such as state and local elected officials, municipal department staff, regional planning agencies, professional organizations, and state agencies.² DLM also distributed a survey to the chief executive officers of the municipalities in Western Massachusetts, which were defined for the purposes of this study as those communities in Massachusetts' four westernmost counties: Berkshire, Franklin, Hampden, and Hampshire.³ Western Massachusetts as thus defined includes mostly rural municipalities, but also urban communities such as Springfield, Greenfield, and Pittsfield.

¹ Little, R.G. "Toward More Robust Infrastructure: Observations on Improving the Resilience and Reliability of Critical Systems." Proceedings of The 36th Annual Hawaii International Conference on System Sciences, 2003. Web. <https://ieeexplore.ieee.org/abstract/document/1173880>

² See [Appendix A](#) for a list of stakeholders contacted by DLM.

³ See [Appendix C](#) for a copy of this survey.

As there are many different types of infrastructure prevalent in a modern municipality, this report focuses on three types of infrastructure.

3 TYPES OF INFRASTRUCTURE



BROADBAND
(e.g., wires, equipment)



ROADWAYS
(e.g. roads, sidewalks,
streetlights, culverts and
small bridges,)



**MUNICIPAL
BUILDINGS**
(exclusive of educational
facilities)

Educational facilities, which have a dedicated state agency in the Massachusetts School Building Authority to help with project planning and funding, are not included as basic infrastructure in this report.

Through this survey, independent research, literature review, and contact with stakeholders, DLM aims to understand the state of infrastructure development in Western Massachusetts and better inform policymakers for future decision making. In fact, many of the issues highlighted in this report apply universally throughout the Commonwealth.

SITUATIONAL ANALYSIS

1. Infrastructure and Quality of Life

Poorly maintained roads, water main breaks that damage property and inhibit traffic, municipal buildings with leaking roofs and poor ventilation, and police and fire facilities inadequate for helping the public or maintaining safety—these are all examples of challenges caused by inadequate investment in public infrastructure. There is a recognized relationship between the equitable distribution of high-quality public infrastructure and the improvement of living standards. The investment itself acts as a direct economic stimulus and counteracts potential harms that come from lack of infrastructure development, such as lower productivity and reduced economic efficiency.⁴ According to the American Society of Civil Engineers, failure to properly invest in infrastructure could cost the national economy up to \$4 trillion in gross domestic product by 2025 and reduce household income by up to \$3,300 annually through the 2020s.⁵ A lack of infrastructure investment can also have cascading effects, such as power outages because of lack of electric infrastructure maintenance, lack of access to clean drinking water because of environmental hazards, and increased traffic congestion and automobile accidents because of poor traffic management and transportation investments.⁶

Such harmful effects are already being seen in Massachusetts. As noted in a 2020 report from the Massachusetts Small Bridges and Culverts working group, many small bridges and culverts are in a state of crisis.⁷ A state of disrepair among these structures, many of which are over five decades old, now contributes to “local flooding of roadways, public buildings, residences and businesses.”⁸ Additionally,

Flooding or failure of these structures also disrupts access for emergency services and can cause socio-economic impacts due to transportation disruptions. Access to businesses and schools as well as limited ability to transport goods and services quickly cause economic impacts.

⁴ *Infrastructure Development and Economic Growth: Prospects and Perspective*. Dr. B. Srinivasu and P. Srinivasa Rao. Journal of Business Management and Social Sciences Research. 2013. Retrieved from: https://www.academia.edu/24400230/Infrastructure_Development_and_Economic_growth_Prospects_and_Perspective at 84.

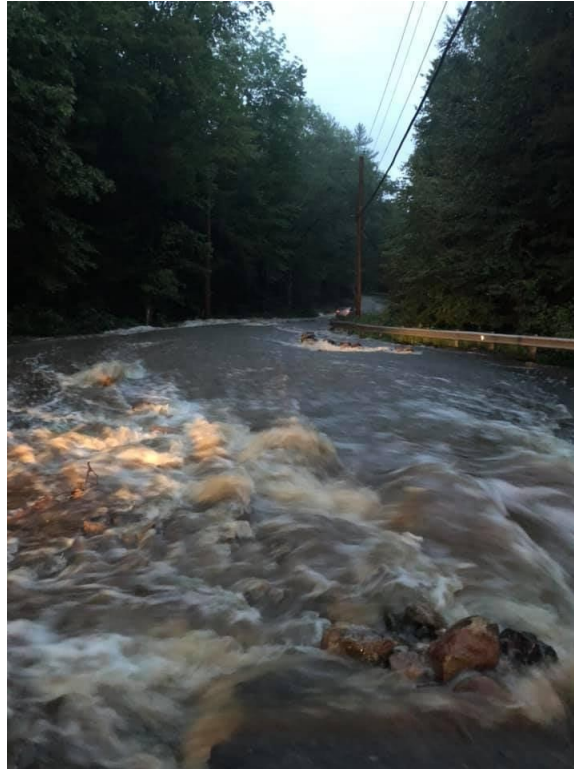
⁵ *2017 Infrastructure Report Card*. American Society of Civil Engineers. 2017. Retrieved from: <https://www.infrastructurereportcard.org/wp-content/uploads/2016/10/2017-Infrastructure-Report-Card.pdf> at 7.

⁶ *2017 Infrastructure Report Card*. American Society of Civil Engineers. 2017. Retrieved from: <https://www.infrastructurereportcard.org/wp-content/uploads/2016/10/2017-Infrastructure-Report-Card.pdf> at 37, 43 and 76.

⁷ *Improving the Efficiency of Culvert and Small Bridge Replacement Projects*. Culverts and Small Bridges Working Group. 2020. Retrieved from: <https://www.mass.gov/doc/massachusetts-culverts-and-small-bridges-working-group-report/download>

⁸ *Improving the Efficiency of Culvert and Small Bridge Replacement Projects*. Culverts and Small Bridges Working Group. 2020. Retrieved from: <https://www.mass.gov/doc/massachusetts-culverts-and-small-bridges-working-group-report/download>; *Congestion in the Commonwealth*. Massachusetts Department of Transportation. 2019. Retrieved from: <https://www.mass.gov/doc/congestion-in-the-commonwealth/download>

Potential solutions outlined in that report, such as expanding technical assistance grants or providing financing options, all require investments in infrastructure to alleviate potential harms to Massachusetts residents.⁹



Flooding that occurred as a result of a July 2021 storm on Doane Hill Road in Royalston (Worcester County).
(Photo courtesy of the Office of State Representative Susannah Whipps)

The American Society of Civil Engineers regularly issues scorecards assessing public infrastructure in an effort to raise awareness around infrastructure deficiencies. Its Massachusetts Infrastructure Report Card¹⁰ notes the following:

Driving on roads in need of repair in Massachusetts costs each driver \$620 per year, and 9% of bridges are rated as structurally deficient. Drinking water needs in Massachusetts are an estimated \$12.2 billion. At least 328 dams are considered to be high-hazard potential. The state's schools have an estimated capital expenditure gap of \$1.39 billion. This deteriorating infrastructure impedes Massachusetts's ability to compete in an increasingly global marketplace.

Without proper infrastructure maintenance and development, which is severely hampered by municipal finance restrictions, there are clear negative effects for businesses, residents, and households that devalue the quality of life in Massachusetts.

⁹ *Improving the Efficiency of Culvert and Small Bridge Replacement Projects*. Culverts and Small Bridges Working Group. 2020. Retrieved from: <https://www.mass.gov/doc/massachusetts-culverts-and-small-bridges-working-group-report/download>

¹⁰ *Massachusetts Infrastructure Report Card*. American Society of Civil Engineers. 2021. Retrieved from: <https://infrastructurereportcard.org/state-item/massachusetts/>

2. Municipal Finance in Massachusetts

General Principles

Municipal finance in Massachusetts is substantially governed by state-level laws and regulations that restrict municipal taxation. Proposition 2½, instituted in the early 1980s, is the most important law for municipal finance, as it places limits on how much tax revenue can be extracted from property wealth, even though property taxes are often the largest source of revenue for a municipality. Municipalities are further restricted to local-option and excise taxes that have been authorized by the state, such as restaurant meal taxes or vehicle excise taxes.¹¹

A notable exception to these limits is new property growth, which can provide tax revenue above the limits of Proposition 2½.¹² However, most new growth in Massachusetts since the Great Recession has been concentrated in the Greater Boston area, and there is very little, if any, property wealth growth in Western Massachusetts.¹³ This property effect is derivative of the real estate market; as more people look to work and live in the Boston area, properties there increase in value, while areas losing population in Western Massachusetts experience stagnation or a decline in value. This situation has led to a tale of two Commonwealths: one that is wealthy and growing, and one that is stagnating, or worse, caught in a downward spiral.

Since the economic pain of the Great Recession in 2008, the Massachusetts economy as a whole has grown by almost 50%.¹⁴ Yet, the four counties of Western Massachusetts have not experienced the booming recovery that is ongoing in the Greater Boston region. For example, the city of Boston had an 88.5% increase in total assessed property values between fiscal year (FY) 2010 and FY 2019. In Springfield, one of the metropolitan anchors of Western Massachusetts, growth was only 17.4% over the same period.¹⁵ As can be seen in Figure 1 below, in most Western Massachusetts communities there was either slight growth or negative growth in property assessments during this period. As municipal finance in Massachusetts is largely dependent on property taxes, stagnant or declining property values undermine a municipality's capacity to raise revenues and increase investments in education, public safety, or infrastructure.

¹¹ *Local Options Relating to Property Taxation*. Mass.gov. 2020. Retrieved from: <https://www.mass.gov/service-details/local-options-relating-to-property-taxation-cpa-meals-and-room-occupancy>

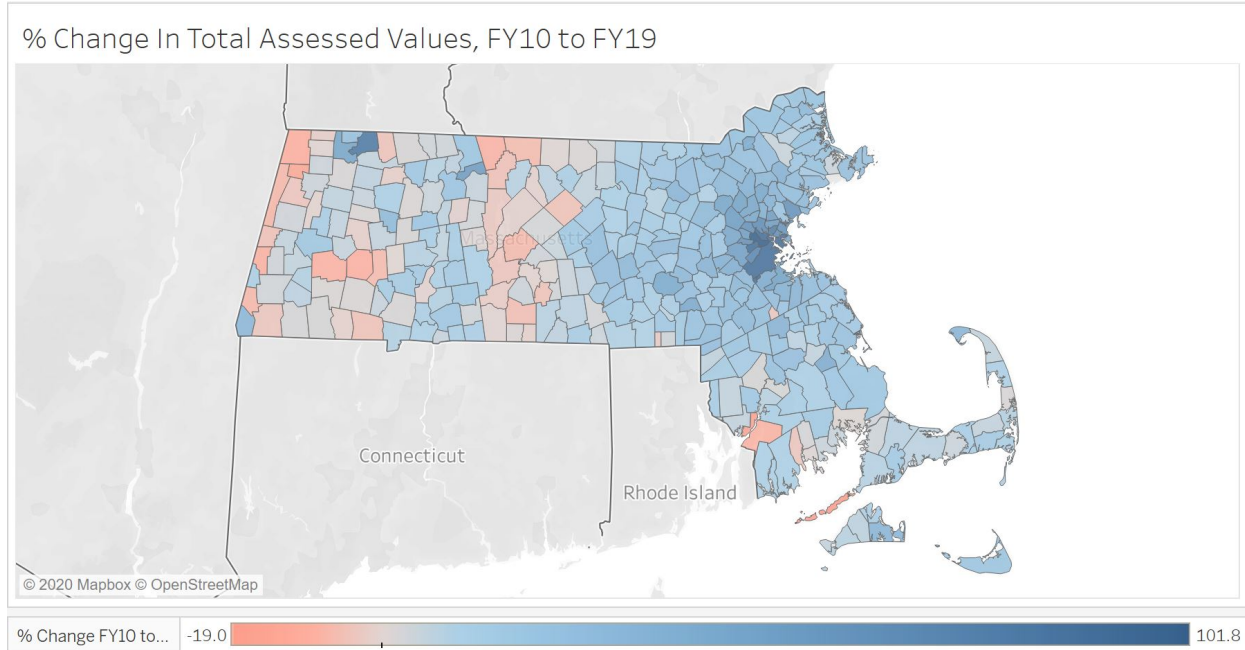
¹² G.L. c. 59 §21C. Retrieved from: <https://malegislature.gov/Laws/GeneralLaws/Chapter59/Section21C>

¹³ DLS Municipal Databank. 2020. Retrieved from: <https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=PropertyTaxInformation.AssessedValuesbyClass.assessedvaluesbyclass>

¹⁴ *FRED Total Gross Domestic Product for Massachusetts*. Federal Reserve Bank of St. Louis. 2020. Retrieved from: <https://fred.stlouisfed.org/series/MANGSP>

¹⁵ DLS Municipal Databank. 2020. Retrieved from: <https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=PropertyTaxInformation.AssessedValuesbyClass.assessedvaluesbyclass>

Figure 1—Percent Change in Total Assessed Values FY 2010 to FY 2019



Without new growth, and absent an override vote by the community, Proposition 2½ forces communities to stay at a 2.5% total tax levy increase on assessed properties and, therefore, face a set of difficult decisions in balancing current service needs with longer-term investment. Additionally, most municipalities with residential tax rates higher than \$20 per 1,000 of value are located in Western Massachusetts and many are approaching the \$25 ceiling. Worse yet, in FY 2021, five Western Massachusetts municipalities (Holyoke, Pittsfield, Shutesbury, Wendell, and West Springfield) were at their levy ceiling and could not vote for a Proposition 2½ override.¹⁶ This situation is an indication of deeper challenges in demographics and economics that have a real impact on municipal spending and capital investment.

3. Underlying Socio-Economic Issues in Western Massachusetts

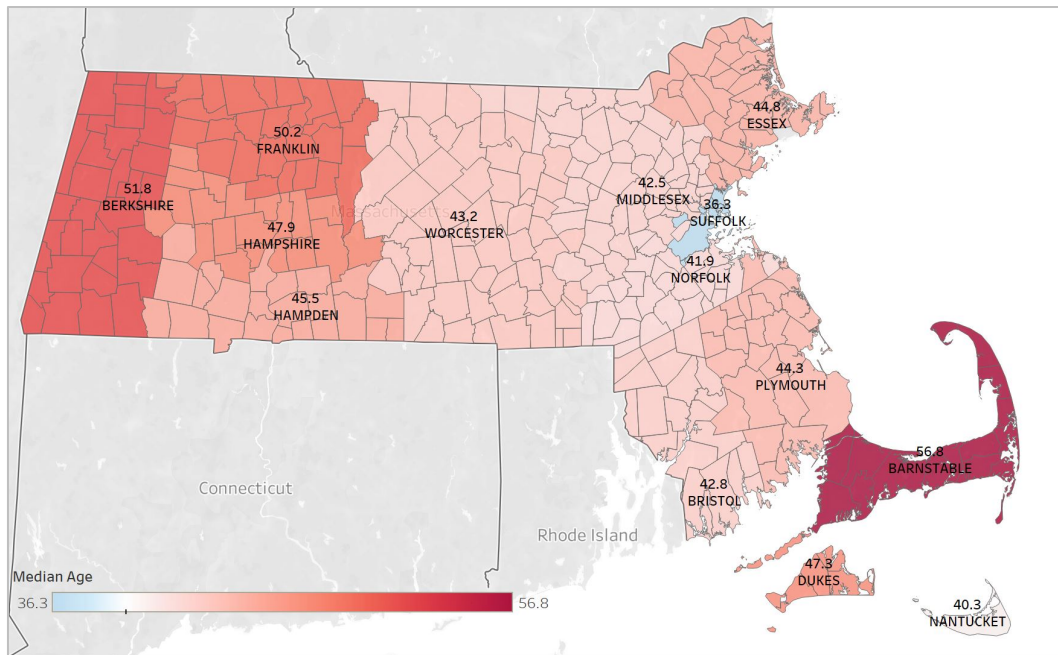
Aging Population

Over the past decade, Massachusetts has undergone a shift in demographics that has greatly benefited eastern cities and towns. A particular demographic problem experienced in Western Massachusetts is the phenomenon of aging communities, where people age in place and younger people migrate out. As communities age, their residents may be unable to continue working and become more dependent on social support services.

¹⁶ Email from Linda Dunlavy, August 18, 2021. On file with the Division of Local Mandates (DLM).

The median age in Massachusetts, based on census data, is 39.5 years old, whereas in most Western Massachusetts towns, the median age is 50 or higher.¹⁷ Alford, on the Western border of Massachusetts, has a median age of 63.1 years.¹⁸ As shown in Figure 2, this demographic situation has contributed to comparatively older western counties, while eastern counties are slightly younger. Suffolk County, which contains the city of Boston, is the youngest with a median age of 36.3 years.

Figure 2—Map of Median Age by County



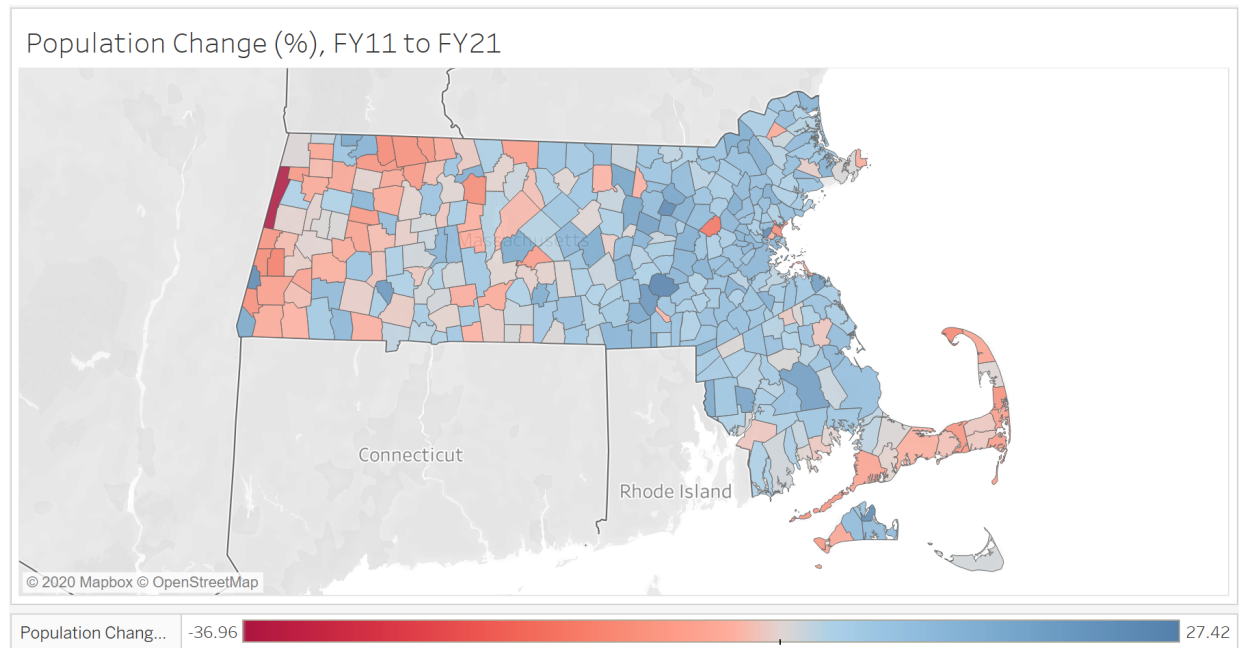
This problem is further compounded by population changes in the Commonwealth. Based on data from the Department of Revenue, Boston experienced population growth of 11.93% between FY 2011 and FY 2021.¹⁹ Most communities in Western Massachusetts experienced population loss during this time, as much as 36.96% in Hancock, or had almost no population change, as can be seen in Figure 3 below.

¹⁷ 2019 5-Year Estimates, American Community Survey. US Census Bureau. 2020. Retrieved from <https://data.census.gov/cedsci/table?q=age%20county%20sub%20divisions%20massachusetts&g=0400000US25.060000&tid=ACST5Y2019.S0101&tp=true&hidePreview=true>

¹⁸ *Id.*

¹⁹ DOR Income, EQV, and Population. Department of Revenue. 2020. Retrieved from: https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=DOR_Income_EQV_Per_Capita

Figure 3—Population Change from FY 2011 to FY 2021



This depopulation trend is increasingly important—as communities lose residents and their remaining population ages, there will be fewer working-age people available to support the local economies on which municipal budgets rely. This situation has the potential to lead to decreased services and intercommunal connections for seniors during a stage of their lives when they will need those services and supports the most.

Small, Dispersed Communities

The issue of declining population is further complicated by the geographic challenges of Western Massachusetts. In Berkshire, Franklin, Hampshire, and Hampden counties, there are approximately 829,000 residents, spread amongst 101 communities covering 2,850 square miles.²⁰ By comparison, Suffolk County has approximately 800,000 residents in four municipalities covering 61 square miles.²¹ The complications associated with distance between population centers in Western Massachusetts hamper infrastructure development, as more road miles have to be maintained, longer wires have to be run, and more buildings have to be kept up for the small amounts of people scattered amongst the foothills of the Berkshire Mountains. This issue is more acute in Hampden County, which houses most of the larger population centers in Western Massachusetts, as detailed below in Figure 4.

Figure 4—10 Largest Communities in Western Massachusetts

²⁰ *County Boundaries*. Massachusetts Geographic Information System. 2021. Retrieved from: <https://docs.digital.mass.gov/dataset/massgis-data-county-boundaries>

²¹ *Id.*

Municipality	County	2018 Population
Springfield	Hampden	155,032
Chicopee	Hampden	55,582
Pittsfield	Berkshire	42,533
Westfield	Hampden	41,680
Holyoke	Hampden	40,358
Amherst	Hampshire	39,503
Agawam	Hampden	28,854
West Springfield	Hampden	28,747
Northampton	Hampshire	28,726
Ludlow	Hampden	21,478

As shown above in Figure 4, Springfield is an anomaly in Western Massachusetts, being almost three times larger than the next largest community. In fact, the median community size in Western Massachusetts is 1,875 residents. Therefore, 50 out of 101 communities in the region have a population below this median, and 67 have a population of 5,000 or fewer.²² Of those 67 communities, 25 are in Berkshire County and 22 are in Franklin County.



These demographic issues impact municipal operations in various ways, but most pertinent are the shrinking municipal revenues caused by these changes. Limited state and local revenues result in a lack of development in critically needed infrastructure, which further perpetuates negative demographic and economic trends.

Shrinking Workforce

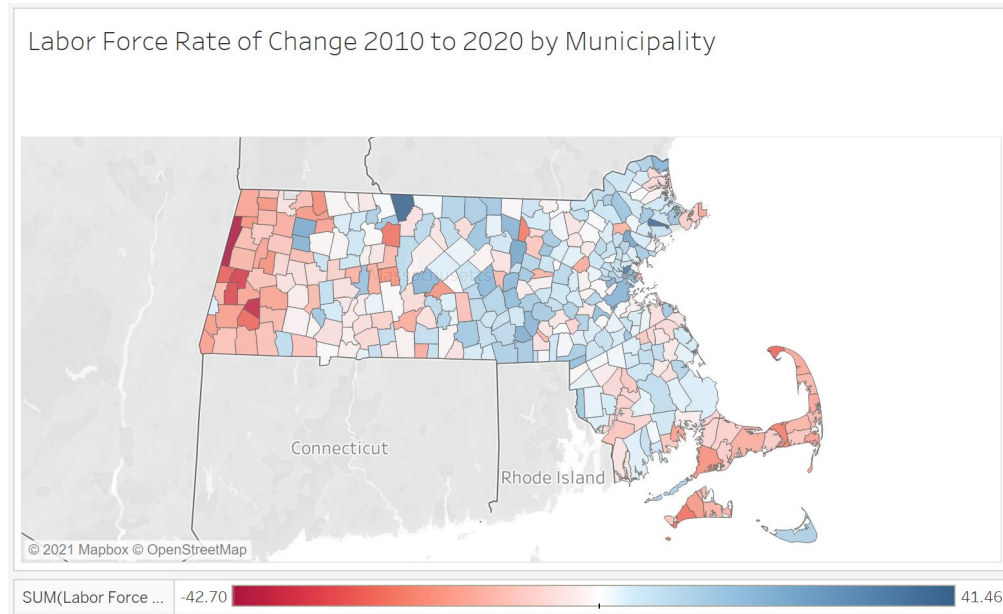
Further exacerbating the issue of a declining and aging population are changes to the labor base of Western Massachusetts. Between 2010 and 2020, Franklin County was the only Western Massachusetts county that saw positive growth in its workforce-eligible population, but the increase was only of 30 people. During the same time frame, Hampshire County lost 4,762 workers; Hampden lost 8,711; and Berkshire lost 11,988. Overall, the four counties faced a net loss of 25,431 persons from the labor force.²³ Contrast this situation with similarly-sized counties elsewhere in Massachusetts, such as Essex County, which gained 22,653 workers; Norfolk

²² DOR Income, EQV, and Population. Department of Revenue. 2020. Retrieved from: https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=DOR_Income_EQV_Per_Capita

²³ DOR Labor Force/ Unemployment. Division of Local Services. 2021. Retrieved from <https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=Dashboard.TrendAnalysisReports.LaborForce>

County, which gained 8,221 workers; and Suffolk County, which gained 63,523 workers.²⁴ Between 2010 and 2020, 7 out of the 10 communities that saw the biggest losses in their labor force were in Western Massachusetts counties. As shown below in Figure 5, there were greater negative changes in the labor force growth rate in Western Massachusetts and Cape Cod than in other parts of the state.²⁵

Figure 5—Labor Force Rate of Change by Municipality, 2010 to 2020²⁶



Many communities have seen their labor force shrink enormously, such as Lenox, which saw a loss of 949 people, or 34.62% of their labor force.²⁷ This declining employment is also an indication of a shrinking commercial and industrial base in Western Massachusetts.

Smaller School District Enrollments

Another area emblematic of the demographic changes occurring in the Commonwealth is school district enrollment. In the 2018–2019 school year, approximately 1,007,000 students attended K-12 schools in Massachusetts.²⁸ Almost all communities in the state had relatively flat growth in enrollment from the 2011–2012 school year to the 2018–2019 school year, and a large number also saw reduced

²⁴ *DOR Labor Force/ Unemployment*. Division of Local Services. 2021. Retrieved from <https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=Dashboard.TrendAnalysisReports.LaborForce>

²⁵ *DOR Labor Force/ Unemployment*. Division of Local Services. 2021. Retrieved from <https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=Dashboard.TrendAnalysisReports.LaborForce>

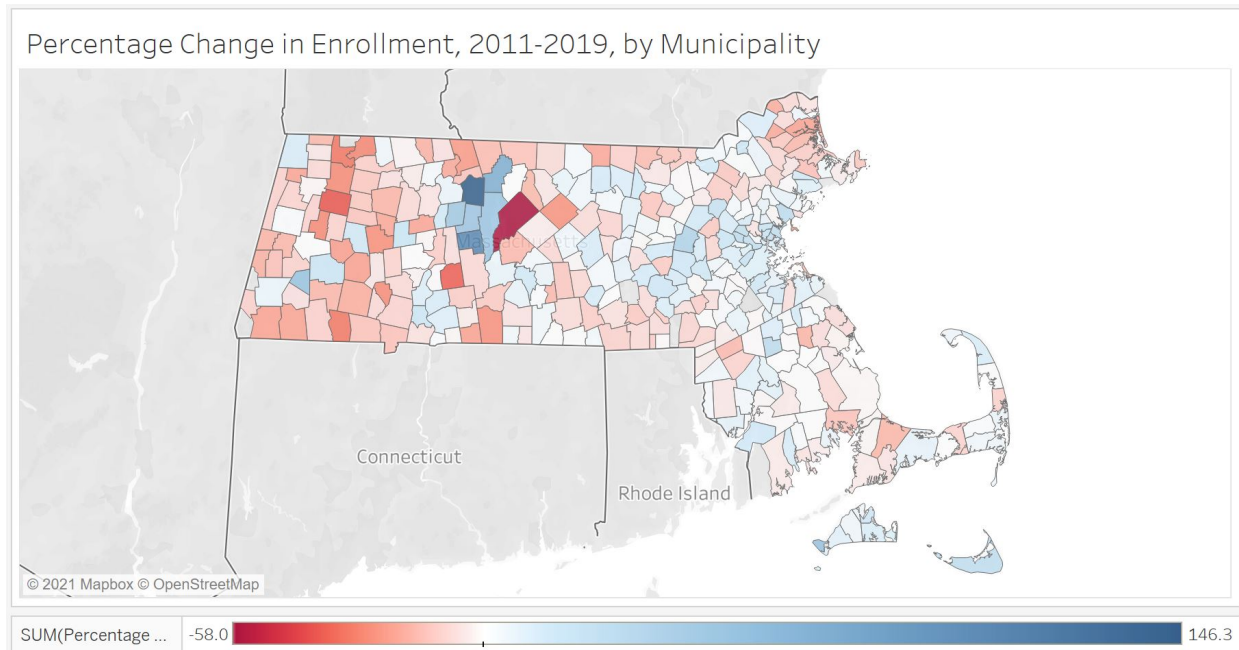
²⁶ This figure filters out the community of Monroe, which had a growth rate of 148.15%. However, this was an extreme outlier for Western Massachusetts and represented a change from 27 persons in the labor force in 2010 to 67 in 2020. Because of the small size and the outsized effect it had on other results shown in the figure, this data was removed.

²⁷ *DOR Labor Force/ Unemployment*. Division of Local Services. 2021. Retrieved from <https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=Dashboard.TrendAnalysisReports.LaborForce>

²⁸ *School Attending Children Report*. Massachusetts Department of Elementary and Secondary Education. 2020. Retrieved from <https://profiles.doe.mass.edu/statereport/schoolattendingchildren.aspx>

enrollments. As shown below in Figure 6, shrinking enrollments are a clear issue in Western Massachusetts communities, with most declines falling below the statewide median of -4.18%.

Figure 6—Change in Enrollment by Municipality as a Percentage, 2011–2019²⁹



Overall enrollment in the median Western Massachusetts community shrank by 11.26%.³⁰ With shrinking enrollment, communities are faced with the challenges of closing schools, regionalizing services, and increasing costs relative to the number of students they aim to educate. All of these developments illustrate a demographic phenomenon of children and families leaving Western Massachusetts, resulting in an aging population without a younger population base to replenish or support it.

Lack of New Property Value Growth

Without population to support it, new development does not occur in some municipalities, restricting the growth in taxable value. In FY 2021, most new growth has been concentrated in the eastern part of the state, particularly in Boston. Boston netted \$6.3 billion in new growth revenue, while the 101 municipalities in the four western counties, combined, only took in \$1.17 billion, as shown in Figure 7.³¹

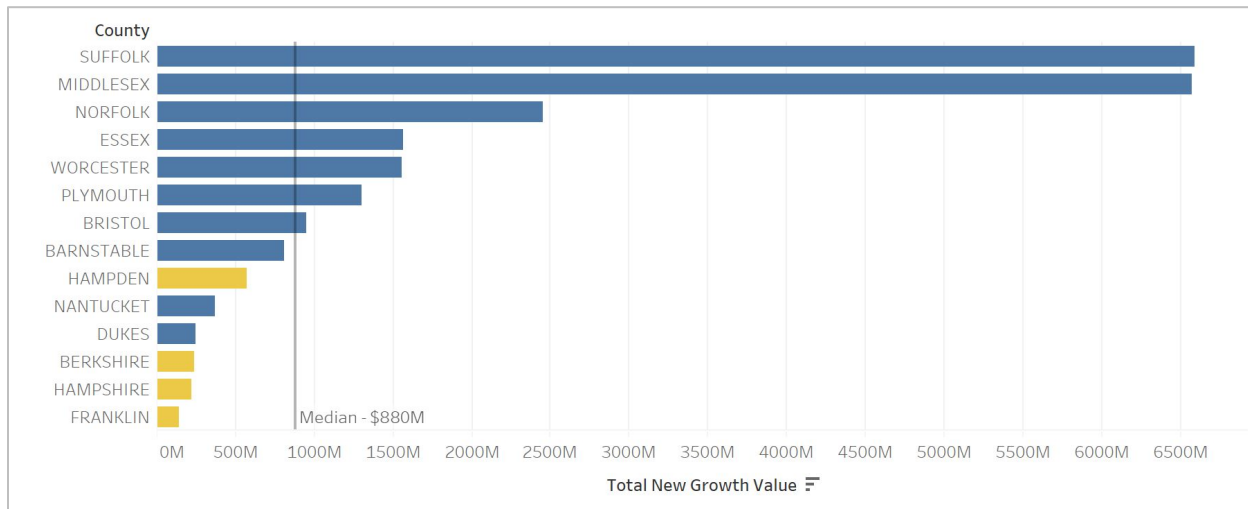
Figure 7—New Growth by County, FY 2021

²⁹ This figure excluded communities that had less than 20 students, those being Alford, Gosnold, Monroe, and Mount Washington. It also excluded communities that were extreme outliers in the data and skewed the figure as a result, those being Bellingham, Grafton, Scituate, and Westport. Canton was not included because of missing data in the 2011–2012 year. West Bridgewater’s 2018–2019 data was adjusted with DOE data after a data error was discovered.

³⁰ *School Attending Children Report*. Massachusetts Department of Elementary and Secondary Education. 2020. Retrieved from <https://profiles.doe.mass.edu/statereport/schoolattendingchildren.aspx>

³¹ *New Growth Analysis*. Mass.gov. 2020. Data retrieved from: https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=NewGrowth.NewGrowth_dash_v2_test

Infrastructure in Western Massachusetts Situational Analysis



Individually, these counties were all below the median in new growth, showing their lower levels of property development. Residential new growth in these counties was also lower than in other parts of the state.³²

As shown below in Figure 8, between FY 2011 and FY 2021, the four westernmost counties' cumulative growth was not even close to that of similarly populated counties in the eastern part of the Commonwealth.³³ Importantly, this figure does not include the close to \$1 billion in new growth that Springfield (Hampden County) could add from its casino, if it did not have a payment in lieu of taxes (PILOT) agreement in place, thus removing that property from the tax rolls.³⁴ Even with that billion dollars included, the western counties would still remain \$1.1 billion below Essex County in cumulative new growth.³⁵

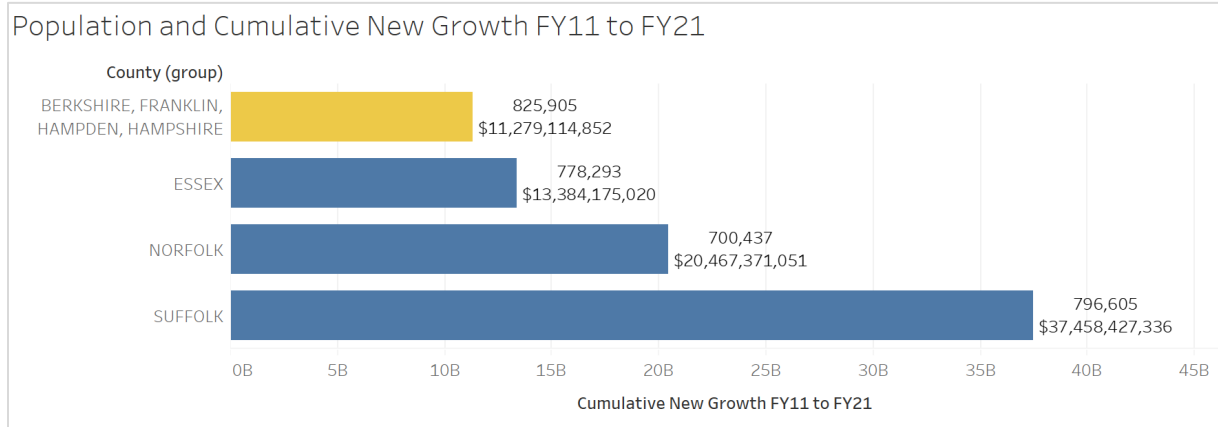
³² *New Growth Analysis*. Mass.gov. 2020. Data retrieved from: https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=NewGrowth.NewGrowth_dash_v2_test

³³ *Id; 2019 5-Year Estimates, American Community Survey*. US Census Bureau. 2020. Retrieved from <https://data.census.gov/cedsci/table?q=age%20county%20sub%20divisions%20massachusetts&g=0400000US25.060000&tid=ACST5Y2019.S0101&tp=true&hidePreview=true>

³⁴ *MGM Springfield casino 'credit positive' for city, Moody's says*. Masslive. 2018. Retrieved from: https://www.masslive.com/news/2018/08/mgm_springfield_casino_credit.html. See also *Host Community Agreement by and between the City of Springfield and Blue Tarp Redevelopment, LLC*. At Section 3.5. Retrieved from: <http://massgaming.com/wp-content/uploads/Springfield-Host-Community-Agreement.pdf>

³⁵ *MGM Springfield casino 'credit positive' for city, Moody's says*. Masslive. 2018. Retrieved from: https://www.masslive.com/news/2018/08/mgm_springfield_casino_credit.html

Figure 8—Population and Cumulative New Growth FY 2011 to FY 2021



4. Infrastructure Problems

Broadband Internet Connectivity

In the Division of Local Mandates' (DLM's) conversations with stakeholders such as municipal and state officials, business groups, and educators, the lack of broadband has repeatedly been mentioned as an impediment to improving the quality of life in Western Massachusetts. Slower internet speeds have far-reaching implications: businesses cannot efficiently reach markets and supply chains; schoolchildren cannot readily access online resources or their remote-learning classrooms; and consumers face slow speeds that hinder their access to information, goods, and services. In recognition of the impacts of lack of broadband access and the centrality of the internet to modern life, the Commonwealth has invested a significant amount of time and resources into developing broadband infrastructure in Western Massachusetts. The Massachusetts Broadband Institute (MBI), a division of the Massachusetts Technology Collaborative, has assisted 107 communities by its "Middle Mile" program, which connects almost 1000 community institutions, such as schools, town halls, and other municipal buildings, to the internet.³⁶

MBI has identified 53 unserved or underserved communities in Western and Central Massachusetts, and to date has helped to develop broadband with state funding in all but 9 communities. This work includes assisting some communities in developing a municipally provided network and working with private providers such as Comcast to serve others. Under the terms agreed upon between MBI and private providers, the private provider has to supply service for at least 10 years and assume associated risks, such as installing new connections or replacing transmission poles.³⁷ According to MBI's estimates, all communities will have access to broadband by the beginning of 2023.³⁸ Figure 9 below shows the project provider for the 53 communities being assisted by MBI, including those with private partners such as

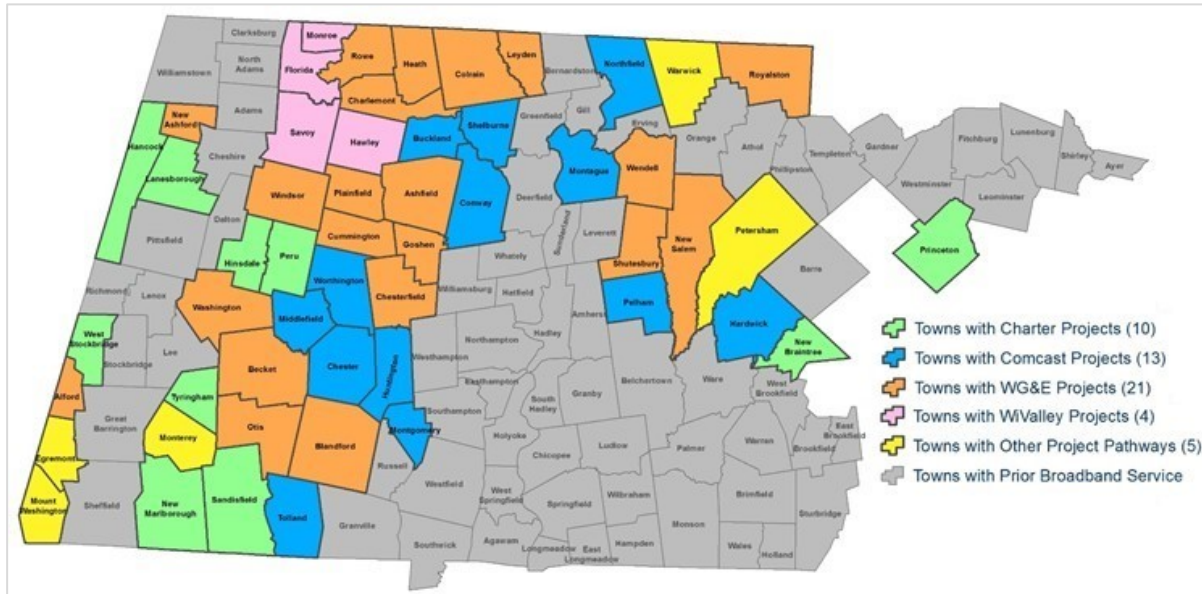
³⁶ DLM discussion with MBI and MassTech Collaborative, February 23, 2021. On file with DLM.

³⁷ DLM discussion with MBI and MassTech Collaborative, February 23, 2021. On file with DLM.

³⁸ DLM discussion with MBI and MassTech Collaborative, February 23, 2021. On file with DLM.

Charter or Comcast, those with municipally provided networks through Westfield Gas & Electric, and others.

Figure 9—Map of Last Mile Broadband Solutions and Project Partners³⁹



Despite significant state investment, there are still inequities in broadband speeds between Western and Eastern Massachusetts, as can be seen by census block in Figure 10 and by municipality in Figure 11 below. One measure for internet speed is the maximum advertised download speed in megabits per second (Mbps), which is the internet service provider’s advertised download speed. This measure differs from the actual download speed, which can be slightly faster or slower than the advertised speed in real usage depending on local conditions, making advertised speed a more useful metric to evaluate different cases. In Massachusetts, the average advertised download speed is 191.2 Mbps.⁴⁰ Among some Western Massachusetts communities however, the speeds are significantly slower. For example, Windsor has average speeds of only 14.1 Mbps.⁴¹ Franklin County as a whole sees average speeds of 109.7 Mbps, the slowest for any county in the state, though this situation may improve as some communities build out municipal fiber networks. However, this speed and access will come at a cost. Despite state and federal funding, the towns that built municipal fiber networks have made significant local investments to bring last mile broadband to their residents. This includes outstanding bonds through programs such as the State House Notes Program. Many municipalities felt this financial risk was their only option recognizing

³⁹ MBI. August 2021.

⁴⁰ *FCC Form 477 Data*. Federal Communications Commission. 2020. Retrieved from: <https://broadbandmap.fcc.gov/#/data-download>

⁴¹ *FCC Form 477 Data*. Federal Communications Commission. 2020. Retrieved from: <https://broadbandmap.fcc.gov/#/data-download>

that lack of broadband makes economic development and reversal of declining population trends impossible.⁴²

Figure 10—Maximum Advertised Internet Download Speeds by Census Block (Mbps)

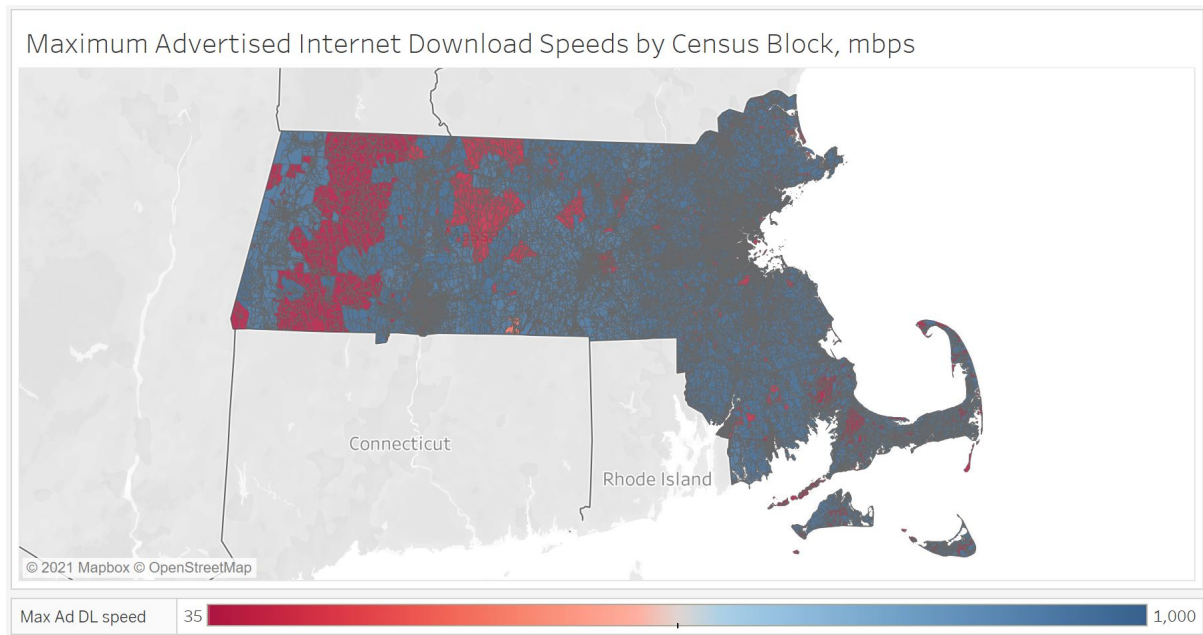
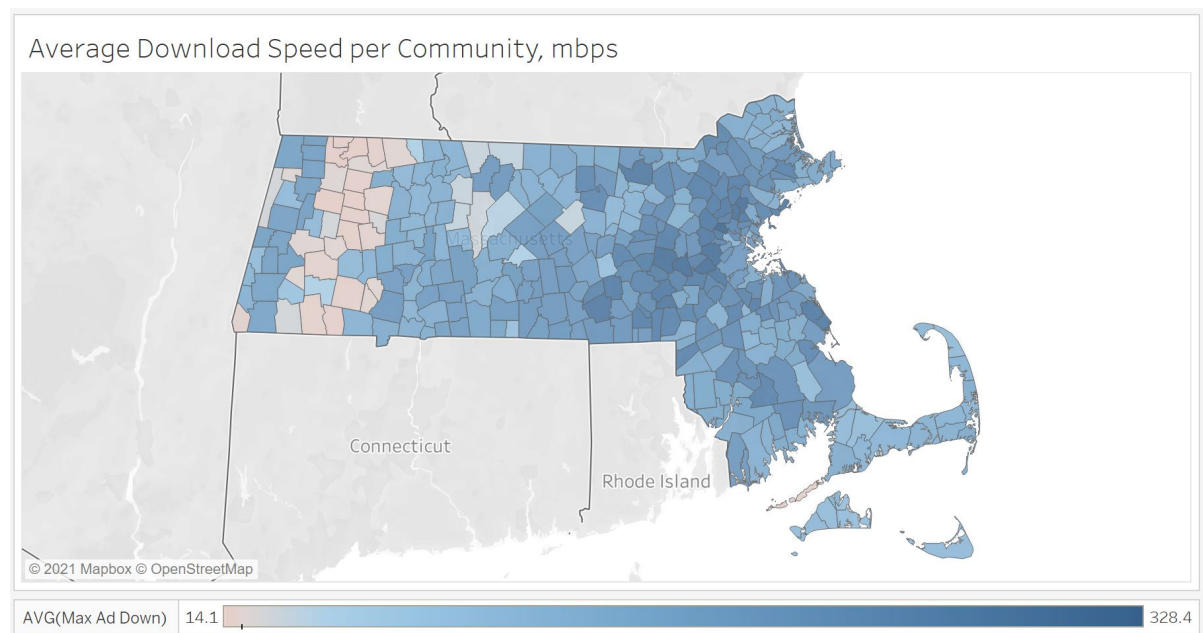


Figure 11—Average Advertised Download Speed per community (Mbps)



⁴² Email from Linda Dunlavy, August 18, 2021. On file with DLM.

Transportation

Among the most common concerns that DLM heard from stakeholders is the poor state of transportation infrastructure in Western Massachusetts, particularly roadways, small bridges, and culverts.⁴³ One obstacle to municipal officials improving transportation infrastructure is the lack of professional staff, such as engineers and planners, in smaller towns. Federal transportation programs often have a several-year waiting period before funds are released, and in the intervening time period, project requirements may change, requiring the community to start anew. By choosing not to commit money to designs, studies, and experienced professionals, many communities defer necessary repairs and maintenance that would be unlocked by greater funding, to focus instead on immediate, minor infrastructure issues. In time, this situation has the effect of producing large and costly maintenance backlogs.



Damage to a road in Warwick (Franklin County) as a result of a storm in July 2021.
(Photo courtesy of the Office of Senator Jo Comerford)

In discussions with stakeholders, DLM has identified small bridges and culverts as monumental issues for municipalities to overcome. In some cases, bridges are cordoned off and left to fail so they can qualify for emergency replacement, rather than going through a costlier renovation to modern engineering and environmental standards.⁴⁴ Based on data from the Federal Highway Administration (FHWA)'s National Bridge Inventory, Massachusetts has 5,210 bridges owned by local and state government. Of these, 1,321 are rated in "good" condition, 3,418 are rated "fair," and 471 are rated "poor," using a 7-point-scale performance metric designed by FHWA for bridge condition.⁴⁵ This scale rates the structure of bridges on

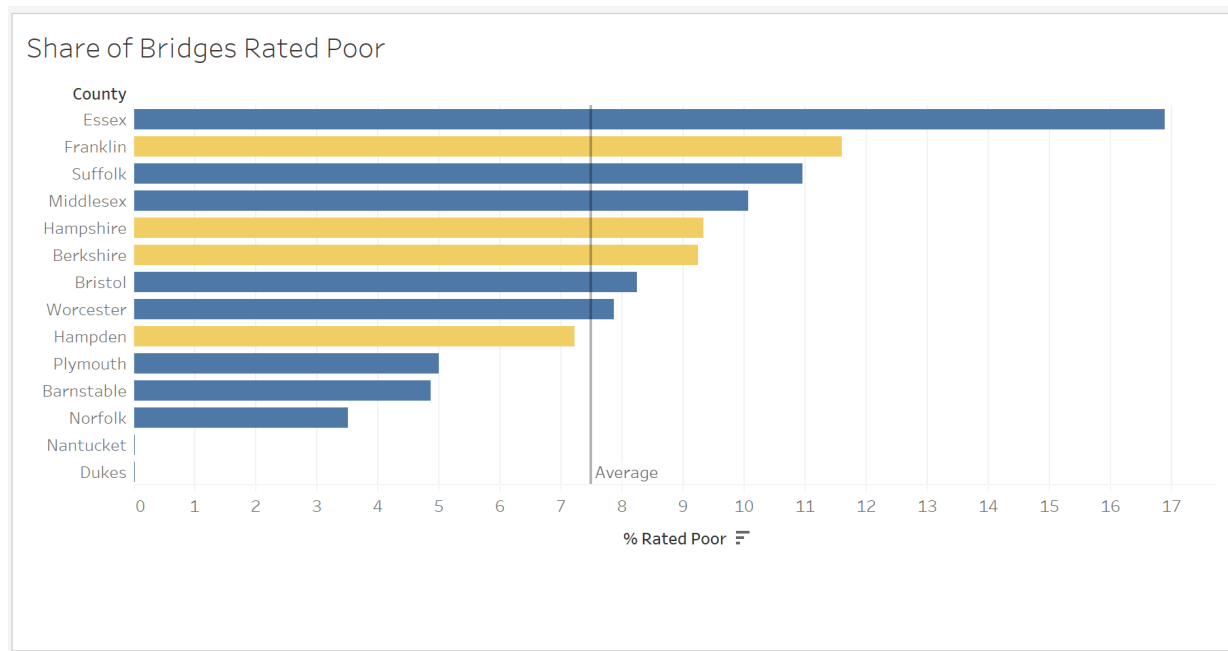
⁴³ Please see [Appendix I](#) for a discussion of proposed passenger rail solutions to transportation issues.

⁴⁴ DLM conversation with Franklin Regional Council of Governments (FRCOG), March 1, 2021. On file with DLM.

⁴⁵ *Bridge Condition by County 2020*. Federal Highway Administration. 2020. Retrieved from: <https://www.fhwa.dot.gov/bridge/nbi/no10/county20b.cfm#ma>

a number of criteria, including how much of the surface is cracked, how much of the surface is “rutted” based on usage, and how much the structure has “faulted” or moved in inches from its original position.⁴⁶ Of the 1,432 bridges in Western Massachusetts (27.48% of the state’s total), 61.96% are rated as “fair” and 9.35% as “poor.”⁴⁷ As shown below in Figure 12, 3 of the 4 Western counties have a share of bridges rated “poor” that is higher than the state’s average of 7.48%.

Figure 12—Share of Bridges Rated Poor



Public Buildings

One area that is a prominent cause of concern for legislators is funding for public safety buildings. In many Western Massachusetts communities, police and fire departments have had to deal with inadequate buildings because of a lack of funding. For example, in Pittsfield, the current police station is housed in a building from 1939 and does not have space for police vehicles, classrooms, or conference meeting rooms adequate for required training purposes. A 2014 study of the Pittsfield Police Station conducted by Kaestle Boos Associates noted, “There is currently no State and Federal mandated sight and sound separation between male, female and juvenile processing and holding facilities.” The Pittsfield Chief of Police also stated, on September 23, 2021, “With the boiler issues we had this winter, it is unlikely this facility will be able to house prisoners next year without major heating renovations.” Replacement of this facility is estimated to cost around \$50 million.⁴⁸

⁴⁶ *Transportation Performance Management*. Federal Highway Administration. 2020. Retrieved from: <https://www.fhwa.dot.gov/tpm/rule/170531pm2.pdf>

⁴⁷ *Bridge Condition by County 2020*. Federal Highway Administration. 2020. Retrieved from: <https://www.fhwa.dot.gov/bridge/nbi/no10/county20b.cfm#ma>

⁴⁸ Conversation with Chief Mike Wynn, February 8, 2021.



The holding cells (left) and boiler room (right) at the Pittsfield Police Station (Berkshire County) taken in 2011 that still reflect the current conditions of today.

(Photos courtesy of the Pittsfield Police Department)

Many public buildings in these areas are not compliant with the Americans with Disabilities Act (ADA), and there is significant investment needed to ensure their compliance with this law. One municipal official raised issues with ADA compliance, stating, “The entire building is in need of accessibility upgrades to meet ADA standards, the windows need to be replaced, [and] the holding cells are not adequate to meet the needs of the Police [Department]. The [heating, ventilation, and air conditioning] systems need to be replaced.”⁴⁹ Public safety infrastructure is not supported by state grants or loans and instead is paid for by municipal capital spending and rare earmarks in state appropriation or bond bills. There is a small federal loan and grant program that is administered by the US Department of Agriculture (USDA) that allows renovation and replacement of public safety and other facilities, but eligibility is restricted to the small, low-income rural municipalities and does not cover all project expenses.⁵⁰



Recent images of the Greenfield Police Department (Franklin County) depicting the lack of storage space and the need for infrastructure repairs.

(Photos courtesy of the Office of Greenfield Mayor Roxann Wedegartner).

⁴⁹ DLM survey results. On file with DLM. See [Appendix C](#) for a copy of the survey instrument and [Appendix D](#) for a summary of all survey results.

⁵⁰ See page 31 about the USDA Community Facilities Direct Loan & Grant Program.

5. Existing Infrastructure Funding Sources

Funding for infrastructure comes from many different state sources, such as direct appropriations, grants, bonds, and loans.⁵¹ For municipal buildings, a very small amount of state funds goes towards their repair or replacement, with most of the money coming from direct budgetary appropriation by the municipality. State funds are provided based on ad hoc appropriations decisions by the Legislature, typically through earmarks and not through applications or competitive processes, providing obstacles for municipal planning. Some appropriations can be planned for, such as Chapter 90 roadway funding, yet even this funding is determined by characteristics such as road miles, employment, and population.⁵² As Western Massachusetts has many roadway miles, but fewer people and jobs, municipalities in the region do not get monetary relief in amounts close to their infrastructure needs. This situation results in stark trade-offs among critical infrastructure needs and scarce local resources. This section is summarized in [Appendix H](#).

Broadband Internet and Communications Infrastructure

Chapter 231 of the Acts of 2008 allocated \$40,000,000 to MBI to build broadband infrastructure up to the last mile,⁵³ with the last mile built and operated by private entities.⁵⁴ In 2011, the federal government passed the American Recovery and Reinvestment Act in response to the Great Recession, and Massachusetts received \$45,400,000 for investment in expansion of broadband.⁵⁵ This amount was matched by \$44,300,000 in state funds for a total of \$89,700,000. Complementing the 2008 legislation, Chapter 257 of the Acts of 2014 also allocated \$50,000,000 to MBI for last mile connectivity to be constructed by the state.⁵⁶ Other awards have come from the Federal Communications Commission and the Last Mile Program run through the Massachusetts Technology Collaborative and MBI.⁵⁷

Chapter 90 Program

The Chapter 90 Program provides state funding to municipalities for roadways, bridges, bikeways, sidewalks, and other transportation improvement projects as defined in federal law.⁵⁸ Although the

⁵¹ For a summary of infrastructure sources and their eligibility requirements, please see [Appendix H](#).

⁵² *Chapter 90 Apportionment*. Mass.gov. 2020. Retrieved from: <https://www.mass.gov/service-details/chapter-90-apportionment>

⁵³ The last mile refers to the last point in infrastructure between a distributor and a consumer. In the context of broadband, it would be the point at which broadband directly connects to a home or business.

⁵⁴ Item 1599-7060 of §2 of c. 231 of the Acts of 2008. Retrieved from <https://malegislature.gov/Laws/SessionLaws/Acts/2008/Chapter231>

⁵⁵ *Audit of the MassTech Collaborative*, at pp. 2-3. Office of the State Auditor. 2017. Retrieved from: <https://www.mass.gov/doc/massachusetts-technology-collaborative/download>

⁵⁶ Item 1599-7061 of §2B of c. 257 of the Acts of 2014. Retrieved from: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter257>

⁵⁷ Email from Peter Larkin, March 13, 2021. On file with DLM.

⁵⁸ G.L. c. 6c §4(b)

program is funded at \$200,000,000 annually, and was recently reauthorized at this amount in the most recent Chapter 90 appropriation,⁵⁹ groups such as the Massachusetts Municipal Association advocate for funding to be set at \$300,000,000 each year. These groups also advocate for multiyear funding for better roadway maintenance planning.⁶⁰ In FY 2020, the Massachusetts House of Representatives initially endorsed a \$300 million funding program; however, because of revenue uncertainty from the 2019 coronavirus pandemic, this amount was reduced to \$200 million.⁶¹ In addition to the \$200 million in funding for the Chapter 90 Program in FY 2022, this legislation included provisions that increased bond caps by \$25 million each for various competitive grant programs involving traffic congestion mitigation, transit-supporting infrastructure, bus transportation, electric vehicle infrastructure, and enhancements to rail and transit stations.⁶² However, these competitive grants address the needs of urban and suburban areas, rather than the rural communities that predominate across Western Massachusetts.

Municipal Small Bridge Program

Created in 2016 and administered by the Massachusetts Department of Transportation (MassDOT), the Municipal Small Bridge Program has assisted municipalities in replacing or preserving bridges between 10 and 20 feet in length. The program, which was funded through MassDOT's capital improvement program and bonding authority, ran from FY 2017 to FY 2021.⁶³ It allowed municipalities to receive up to \$500,000 per year in aid for maintenance or replacement of municipally-owned bridges, covering up to 100% of the total design and construction costs of eligible projects.⁶⁴ Municipalities receiving program aid were responsible for handling the projects from design through construction, including securing all environmental permits and rights of way and coordinating with utility companies as needed.⁶⁵ In total, the program awarded \$45.5 million in funding to 102 projects in 80 municipalities over several years.⁶⁶ In the most recent grant round in 2020, \$6.3 million aided 27 communities, of which \$3.1 million

⁵⁹ Section 1 of Chapter 25 of the Acts of 2021. Retrieved from: <https://malegislature.gov/Laws/SessionLaws/Acts/2021/Chapter25>

⁶⁰ Testimony to Secretary Pollack, 2019. Retrieved from: <https://www.mma.org/advocacy/mma-letter-to-massdot-secretary-pollack-supports-capital-plan-but-calls-for-ch-90-increase/>

⁶¹ *House Winds Road Funding Bill Back to \$200 Mil*, Chris Lisinski. State House News Service. June 22, 2020. Web. Retrieved from: <https://www.statehousenews.com/brief/2020950>

⁶² Sections 3–11 of Chapter 25 of the Acts of 2021. Retrieved from: <https://malegislature.gov/Laws/SessionLaws/Acts/2021/Chapter25>

⁶³ *Municipal Small Bridge Program Funding*. MassDOT. 2021. Retrieved from: <https://www.mass.gov/service-details/municipal-small-bridge-program-funding>

⁶⁴ *Municipal Small Bridge Program Funding*. MassDOT. 2021. Retrieved from: <https://www.mass.gov/service-details/municipal-small-bridge-program-funding>

⁶⁵ *Municipal Small Bridge Program City and Town Responsibilities*. MassDOT. 2021. Retrieved from: <https://www.mass.gov/service-details/municipal-small-bridge-program-city-and-town-responsibilities>

⁶⁶ *Improving the Efficiency of Culvert and Small Bridge Replacement Projects*. Culverts and Small Bridges Working Group. 2020. Retrieved from: <https://www.mass.gov/doc/massachusetts-culverts-and-small-bridges-working-group-report/download>

benefitted communities in Western Massachusetts.⁶⁷ The program has been reauthorized with a bond cap of \$95 million (an increase of \$25 million from its previous authorization) and now includes culverts in addition to small bridges. While the Legislature sets a bond cap, it is up to the state administration to decide how much money is actually spent against the capital investment plan. MassDOT intends to continue to fund the program at the \$10 million per year level in FY 2022, based on legislative authorization to issue bonds over the next five years.⁶⁸

Municipal Pavement Program

In 2020, the state's transportation bond bill created a Municipal Pavement Program with bonding authority of up to \$100 million.⁶⁹ This new program is designed to focus on municipally owned portions of state numbered routes and would provide partnerships and grants to communities to repair and replace municipally owned pavement. In FY 2022, this program has been funded at \$15 million.⁷⁰

State-Numbered Road Program

In the 2020 transportation bond bill, the Legislature also authorized up to \$100 million in bonding authority for a State-Numbered Road Program.⁷¹ This program is designed to provide partnerships and grants for state-numbered routes under state or local ownership that do not benefit from federal highway funding, inclusive of study and design costs. In FY 2022, this program has been funded at \$30 million.⁷²

Municipal Vulnerability Preparedness Program

In 2016, the Executive Office of Energy and Environmental Affairs created the Municipal Vulnerability Preparedness (MVP) Program to encourage communities to plan for climate change resiliency. This program provides grants at a 25% municipal match, including planning grants to cities and towns certified as MVP communities, as well as action grants to allow communities to conduct projects such as

⁶⁷ *Baker-Polito Administration Announces \$6.3 Million in New Round of Municipal Small Bridge Awards*. MassDOT. 2020. Retrieved from: <https://blog.mass.gov/transportation/uncategorized/baker-polito-administration-announces-6-3-million-in-new-round-of-municipal-small-bridge-awards/>

⁶⁸ Email from Cassandra Gascon, MassDOT, July 14, 2021. On file with DLM.

⁶⁹ Line Item 6121-2128 of Chapter 383 of the Acts of 2020. Retrieved from: <https://malegislature.gov/Laws/SessionLaws/Acts/2020/Chapter383>

⁷⁰ *Capital Improvement Program*. MassDOT. 2021. Retrieved from: <https://www.mass.gov/doc/2022-capital-investment-program-cip/download>

⁷¹ Line Item 6121-2157 of Chapter 383 of the Acts of 2020. Retrieved from: <https://malegislature.gov/Laws/SessionLaws/Acts/2020/Chapter383>

⁷² Email from Cassandra Gascon, MassDOT, July 15, 2021. On file with DLM.

culvert upgrades and improving flood resilience.⁷³ In recent years, this program has provided almost \$2 million to Western Massachusetts for culvert improvements and replacements.⁷⁴

Culvert Replacement Municipal Assistance Grant Program

Beginning in 2017, the Department of Fish and Game's Division of Ecological Restoration (DER) began offering the Culvert Replacement Municipal Assistance Grant Program to replace undersized or degraded culverts on public ways owned and maintained by the applying community in areas of high ecological value.⁷⁵ The projects must be in proximity to important wildlife habitats and reconnect upstream and downstream habitats by removing barriers to wildlife passage.⁷⁶ Individual awards range from \$25,000 to \$200,000, depending on the project phase and work proposed.⁷⁷ In FY 2021, this program was funded at \$806,880,⁷⁸ a decrease from the program's highest allocation of \$932,000 in FY 2020.⁷⁹ DER also provides technical assistance to municipalities and conducts trainings on the replacement process. Municipalities can apply for only one culvert or bridge project in a grant round through this program and must commit to managing the project.⁸⁰ There are no required municipal funding matches for this program, making it an attractive option for a community to replace eligible infrastructure.

Massachusetts Board of Library Commissioners

Funding for municipal buildings also comes from the Massachusetts Board of Library Commissioners (MBLC). This agency provides grants that can be used for the planning, design, or construction of libraries across the Commonwealth. Currently, the agency has a \$20 million annual cap on bonding it can access to fund grants, allowing it to award funds to only one or two projects in a given year. There is also

⁷³ *MVP Program Information*. MA Executive Office of Energy and Environmental Affairs. 2021. Retrieved from: <https://www.mass.gov/service-details/mvp-program-information>

⁷⁴ *MVP Program Action Grant Projects*. MA Executive Office of Energy and Environmental Affairs. 2021. Retrieved from: <https://www.mass.gov/info-details/municipal-vulnerability-preparedness-program-action-grant-projects>

⁷⁵ *Frequently Asked Questions: FY22 Culvert Replacement Municipal Assistance Grant Program*. Division of Ecological Restoration. 2021. Retrieved from: <https://www.mass.gov/info-details/frequently-asked-questions-fy22-culvert-replacement-municipal-assistance-grant-program>

⁷⁶ *Frequently Asked Questions: FY22 Culvert Replacement Municipal Assistance Grant Program*. Division of Ecological Restoration. 2021. Retrieved from: <https://www.mass.gov/info-details/frequently-asked-questions-fy22-culvert-replacement-municipal-assistance-grant-program>

⁷⁷ *Frequently Asked Questions: FY22 Culvert Replacement Municipal Assistance Grant Program*. Division of Ecological Restoration. 2021. Retrieved from: <https://www.mass.gov/info-details/frequently-asked-questions-fy22-culvert-replacement-municipal-assistance-grant-program>

⁷⁸ *Culvert Replacement Municipal Assistance Grant Awards for FY21*. Division of Ecological Restoration. 2021. Retrieved from: <https://www.mass.gov/news/baker-polito-administration-awards-over-800000-to-municipalities-for-improvements-to-road>

⁷⁹ *Culvert Replacement Municipal Assistance Grant Awards for FY20*. Division of Ecological Restoration. 2021. Retrieved from: <https://www.mass.gov/news/932000-in-grants-awarded-to-upgrade-road-stream-crossings>

⁸⁰ *Frequently Asked Questions: FY22 Culvert Replacement Municipal Assistance Grant Program*. Division of Ecological Restoration. 2021. Retrieved from: <https://www.mass.gov/info-details/frequently-asked-questions-fy22-culvert-replacement-municipal-assistance-grant-program>

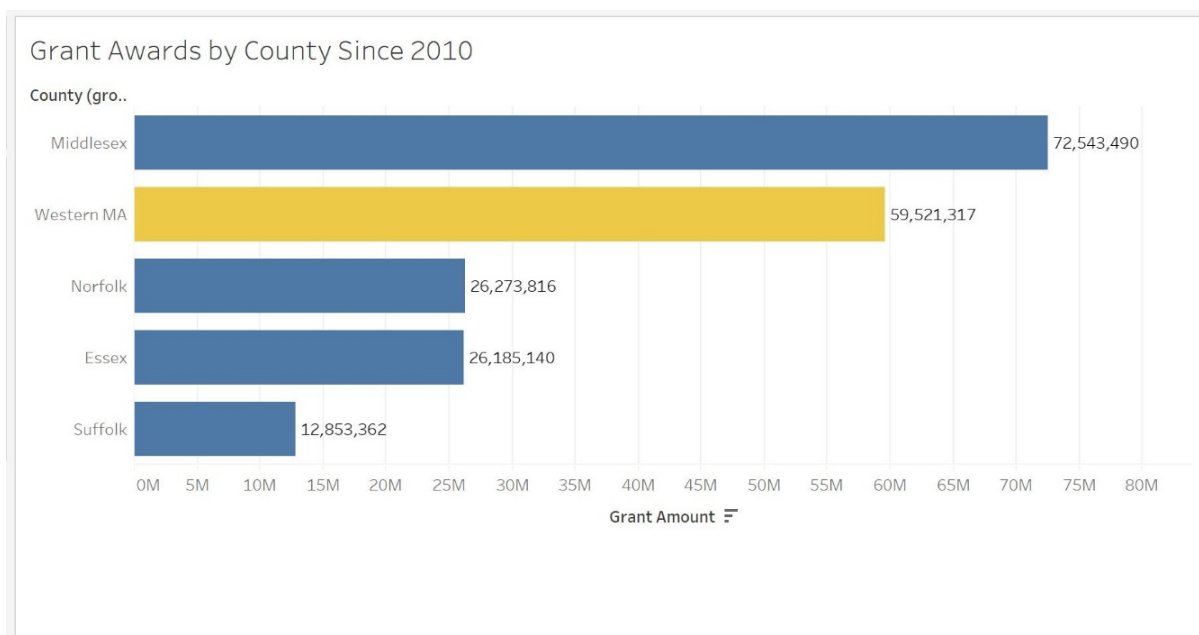
a project waiting list of approximately 33 projects, representing a years-long backlog.⁸¹ These projects are funded over a five-year period. As detailed below in Figure 13, this program allows the state to cover 30% to 60% of project cost based on size.⁸²

Figure 13—State Share of Library Project Costs

Eligible Cost	Incremental State Share
First \$3,000,000	60% of amount up to \$3,000,000
\$3,000,000–\$6,000,000	45% of amount between \$3,000,000 and \$6,000,000
\$6,000,000–\$15,000,000	40% of amount between \$6,000,000 and \$15,000,000
\$15,000,000 and up	30% of amount above \$15,000,000

There is also a need-based factor percentage, on top of the above state-shared project portion, that is used to provide up to 15% in additional funds to a municipality.⁸³ As part of its grant criteria, MBLC considers awards through a lens of geographic diversity. These criteria have given the four counties of Western Massachusetts a considerable amount of funding, comparable to counties with similarly sized populations, as seen below in Figure 14.⁸⁴

Figure 14—MBLC Grant Awards Since 2010



⁸¹ DLM conversation with MBLC, January 19, 2021.

⁸² DLM conversation with MBLC, January 19, 2021.

⁸³ Email from Lauren Stara, MBLC, January 20, 2021. On file with DLM. See [Appendix F](#) for a breakdown of this calculation.

⁸⁴ Email from Lauren Stara, MBLC, January 20, 2021. On file with DLM.

MassWorks and Small Town Road Assistance Programs

Across the Commonwealth, MassWorks is a popular infrastructure program. This program provides competitive grants for capital funding to be used in infrastructure projects that support housing or economic development. MassWorks was created in 2011 by combining seven different economic development programs into one with a focus on projects that create housing or jobs. There are no caps on MassWorks awards, but in the review process, equitable distribution of funds across the Commonwealth is taken into consideration.⁸⁵ MassWorks has a bond cap of \$100 million, although approximately \$70 million to \$80 million is spent in any given year because of project delays and amendments, which require some funds to roll over.⁸⁶ Since 2015, 219 grants have been awarded to 141 communities, investing \$456 million to support infrastructure.⁸⁷ A particularly useful aspect of the program is debriefing with each community after the grant round, which includes feedback on grant applications to assist communities in the future.⁸⁸

MassWorks also makes roadway funding available to towns of under 7,000 persons through the Small Town Road Assistance Program (STRAP). The MassWorks enabling statute requires at least 10% of annual funding to go towards STRAP projects, which rely on public health and safety concerns rather than housing or jobs like the traditional MassWorks program. Unlike MassWorks, however, there is a cap of \$1 million in STRAP funding for a particular project.⁸⁹ Due to demand, STRAP is a stressed resource. In the most recent MassWorks grant round, there were 100 applications, 38 of which were for STRAP and nine of which were funded.⁹⁰

Comments from municipal officials indicated that navigating state funding programs is complex and presents a barrier to applying for needed funds. Small towns have few or no professional staff members to fill out applications and handle paperwork.⁹¹ At the beginning of 2021, MassWorks and other economic development funding sources were rolled into a “Community One Stop for Growth” program administered by the Executive Office of Housing and Economic Development,⁹² which aims to reduce redundancy in applications and help match community goals to funding sources; municipalities report, however, that the application process remains onerous.⁹³

⁸⁵ DLM discussion with the Massachusetts Office of Business Development (MOBD), February 12, 2021. On file with DLM.

⁸⁶ DLM discussion with MOBD, February 12, 2021. On file with DLM.

⁸⁷ *2020 Massworks Infrastructure Program*. 2020. Massachusetts Executive Office of Housing and Economic Development. Retrieved from: <https://www.mass.gov/doc/massworks-2020-rfr-and-program-guidelines-revised-6302020/download>

⁸⁸ DLM discussion with MOBD, February 12, 2021. On file with DLM.

⁸⁹ DLM discussion with MOBD, February 12, 2021. On file with DLM.

⁹⁰ DLM discussion with MOBD, February 12, 2021. On file with DLM.

⁹¹ Email from Linda Dunlavy, August 18, 2021. On file with DLM.

⁹² DLM discussion with MOBD, February 12, 2021. On file with DLM.

⁹³ Email from Linda Dunlavy, August 18, 2021. On file with DLM.

Massachusetts Historical Commission

The Massachusetts Historical Commission has funds available for the preservation of sites listed in the State Register of Historic Places through the Preservation Projects Fund. These funds are limited in scope and amount; however, the 2021 grant round is funded at \$800,000.⁹⁴ Costs for routine maintenance are not allowable under this program, but costs related to structural preservation, building code compliance, accessibility where historic fabric is directly involved, and interior restoration based on historic evidence are eligible.⁹⁵ Funding requests range from \$5,000 to \$30,000 for predevelopment projects, and from \$7,500 to \$100,000 for development or acquisition projects.⁹⁶ Though small in amount, funding for protection of historic sites is one available option for eligible properties.

Qualified Bond Program

The state also offers the Qualified Bond Program, which is administered by the Municipal Finance Oversight Board (MFOB) chaired by the State Auditor. Under this program, MFOB considers applications from municipal governments to use the Commonwealth's bond rating to borrow money at a lower interest rate than the community could secure on its own, allowing municipal governments to save money over the term of a bond.⁹⁷ Since the creation of the program in 2013, MFOB has authorized upwards of \$727,105,133 in bonds for eight communities in Western Massachusetts: Greenfield, Holyoke, North Adams, Orange, Palmer, Pittsfield, Springfield, and Westfield. Although it is infrequently used by smaller, rural municipalities, this program sees continued use by larger, urban communities and regional school districts.

Transportation Improvement Program

The Transportation Improvement Program (TIP), largely funded by the federal government, is administered by regional planning agencies, which have to establish transportation improvement plans covering multiyear periods. These plans include funding targets, which are focused on alleviating congestion, reducing emissions, and bringing infrastructure up to a state of good repair.⁹⁸ As noted in the Rural Policy Advisory Commission's 2019 Rural Policy Plan, many communities struggle to pay for design studies to advance projects to a point at which they can be submitted to TIP for funding. Because TIP funding targets are set based on a formula that emphasizes population and employment, Western Massachusetts often has lower TIP funding targets, and projects in that region are therefore given less

⁹⁴ *Massachusetts Preservation Projects Fund*. Secretary of State. 2021. Retrieved from: <https://www.sec.state.ma.us/mhc/mhcmppf/mppfidx.htm>

⁹⁵ *Massachusetts Preservation Projects Fund*. Secretary of the Commonwealth. 2021. Retrieved from: <https://www.sec.state.ma.us/mhc/mhcmppf/mppfidx.htm>

⁹⁶ *Massachusetts Preservation Projects Fund*. Secretary of the Commonwealth. 2021. Retrieved from: <https://www.sec.state.ma.us/mhc/mhcmppf/mppfidx.htm>

⁹⁷ *Municipal Finance Oversight Board*. Office of the State Auditor. 2021. Retrieved from: <https://www.mass.gov/municipal-finance-oversight-board>

⁹⁸ Federal Highway Administration. 2020. Retrieved from: <https://www.fhwa.dot.gov/tpm/faq.cfm#targ>

priority than those in the Boston area, which have loftier goals to reduce emissions and alleviate congestion.⁹⁹ Federal funding is therefore slow to come to Western Massachusetts projects, because of both the competition and the large upfront planning costs.

Community Development Block Grant Program

Another important source of dedicated state-administered funds for municipalities comes from the Community Development Block Grant (CDBG) Program. This federally-funded program awards grants to communities to meet a broad range of goals, including infrastructure development.¹⁰⁰ These funds are awarded directly to “entitlement communities” that meet certain criteria for population and income. Most municipalities in Western Massachusetts are not designated entitlement communities, so they do not automatically receive CDBG funds. In Franklin County, only Greenfield is designated a minimum entitlement community and receives CDBG funds annually.¹⁰¹ Other communities may apply to Department of Housing and Community Development for competitive CDBG funds. This has resulted in thousands of dollars for infrastructure development.¹⁰² In FY 2019, 38 communities in Western Massachusetts received \$17,300,929 from this program, which contributed to the rehabilitation of 171 housing units, provision of social services such as food pantries or domestic violence prevention, and numerous streetscape and drainage improvements. This program also helped to alter municipal buildings in four communities to bring them into compliance with ADA.¹⁰³ This, however, is another grant program that requires professional assistance to prepare applications and administer the grant.

Community Facilities Direct Loan & Grant Program

Additional federal assistance for municipal buildings can be secured via the USDA’s Community Facilities Direct Loan & Grant Program. Under this program, rural municipalities with less than 20,000 residents are eligible for funds to renovate and/or replace “essential community facilities,” such as town halls, libraries, and public safety buildings.¹⁰⁴ Across fiscal years 2018 to 2021, four Western Massachusetts municipalities (Sheffield, Becket, Montague, and Plainfield) collectively received \$146,200 in USDA Community Facilities grant assistance.¹⁰⁵

⁹⁹ *Rural Policy plan*, at p. 20. Rural Policy Advisory Commission. 2019. Retrieved from: https://frcog.org/wp-content/uploads/2019/10/Rural_Policy_Plan_10.01.19.pdf

¹⁰⁰ *Community Development Block Grant (CDBG)*, Massachusetts Department of Housing and Community Development. Retrieved from: <https://www.mass.gov/service-details/community-development-block-grant-cdbg>

¹⁰¹ Email from Linda Dunlavy, August 18, 2021. On file with DLM.

¹⁰² *Id.*

¹⁰³ *FY 2019 Award List*. Community Development Block Grant (CDBG). 2021. Retrieved from: <https://www.mass.gov/doc/fy-2019-award-list/download>

¹⁰⁴ US Department of Agriculture. (2020, January). *Community Facilities Direct Loan & Grant*. https://www.rd.usda.gov/sites/default/files/fact-sheet/508_RD_FS_RHS_CFDirect.pdf

¹⁰⁵ US Department of Agriculture. (2021). *Grant awards*. <https://www.rd.usda.gov/about-rd/grant-awards>

FINDINGS


The Division of Local Mandates (DLM) sent a survey in late 2020 to all 101 communities in Western Massachusetts. Responses were received from 45 communities and show a deep need for continuing investment in infrastructure and a lack of sufficient resources to meet that need. Respondents indicated shortfalls in investment across all the areas of the survey, such as general municipal buildings, public safety, roads (including bridges and culverts), and senior centers.

Respondents graded the state of their infrastructure in various categories and were asked to supply comments related to each category. The scale ran from “A” to “F” with “A” being highly rated and “F” as total failure. Every community, except for eight, gave a grade of D or F to at least one category of infrastructure. The comments and survey responses help explain some of the variation in grading across communities.

1. Transportation infrastructure such as roadways, bridges, and culverts are an area of primary concern.

a. Chapter 90 Program

One of the areas of greatest concern among the surveyed communities is roadway maintenance. Respondents were asked to rate their roadways on an A to F scale; 27 rated their roads a C, 8 rated them a B, and 9 rated them a D. Notably, no respondent rated his/her community’s roads to be totally failing with an F rating, nor highly rated with an A rating.¹⁰⁶ Comments from the respondents, however, indicate a different side of the story, noting their transportation infrastructure is not well-maintained. The following comment summarizes the perception of multiple town officials:



"Some of our principal roadways are nearing **total failure and will require full depth reclamation. We may be headed for higher percentage of gravel roads than present. Road needs are our **greatest challenge**."**

- Municipal official in a rural community

¹⁰⁶ DLM survey results. On file with DLM. See [Appendix C](#) for a copy of the survey instrument and [Appendix D](#) for a summary of all survey results.

Forty responses included comments of this type, indicating deep needs for funds for paving dirt or gravel roads, fixing drainage problems associated with roadways, and addressing bridges and culverts. However, when we asked for information about cost sharing between the state's Chapter 90 Program and municipal spending on roadways, we learned that, on average, communities obtained 63% of their roadway funding from the state and just 37% from local sources. There were seven communities that indicated that greater than 90% of their road maintenance comes from Chapter 90 funding, and two of the seven communities indicated that Chapter 90 funds account for their entire roadway maintenance budget.



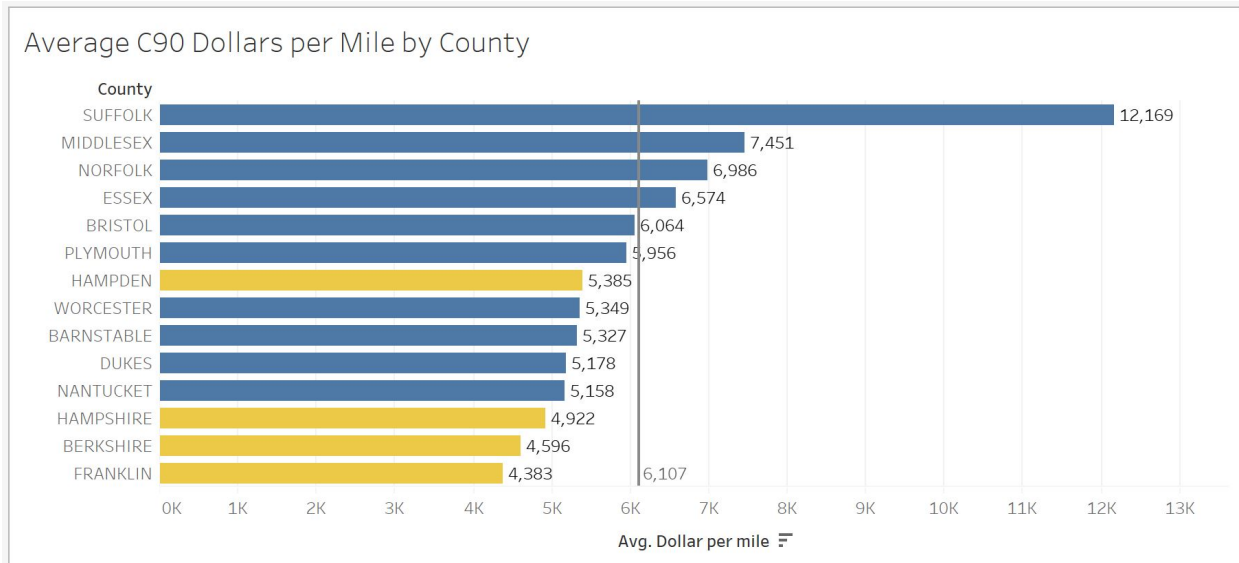
Damage to a road in Warwick (Franklin County) from a storm in July 2021 (left) and damage to Route 78 in Warwick (right). (Left photo courtesy of the Office of Senator Jo Comerford; right photo courtesy of Brian Snell, Warwick Selectboard member)

Although western towns rely on the Chapter 90 Program to help finance their roadways, they are disadvantaged by the allocation process set by the program. The funding allocation a community receives from the Chapter 90 Program is determined by a formula that uses weights based on population, employment (number of jobs within the town), and road miles to determine a final appropriation to a municipality. Currently the weights for the program are road mileage (58.33%), population (20.83%), and employment (20.83%).¹⁰⁷ These weights tend to disadvantage smaller communities, which do not have a large population or employment base. Although many western municipalities have extensive roadway networks, their significantly smaller population and employment base adversely influence their Chapter 90 allocations. As shown below in Figure 15, the average Chapter 90 allocation per roadway mile in fiscal year (FY) 2021 in the western counties is lower than average across the state.¹⁰⁸

¹⁰⁷ *Pignatelli Files Bill on Changing Chapter 90 Formula*. 2021. iBerkshires.com Retrieved from: <https://www.iberkshires.com/story/59401/Pignatelli-Files-Bill-on-Changing-Chapter-90->

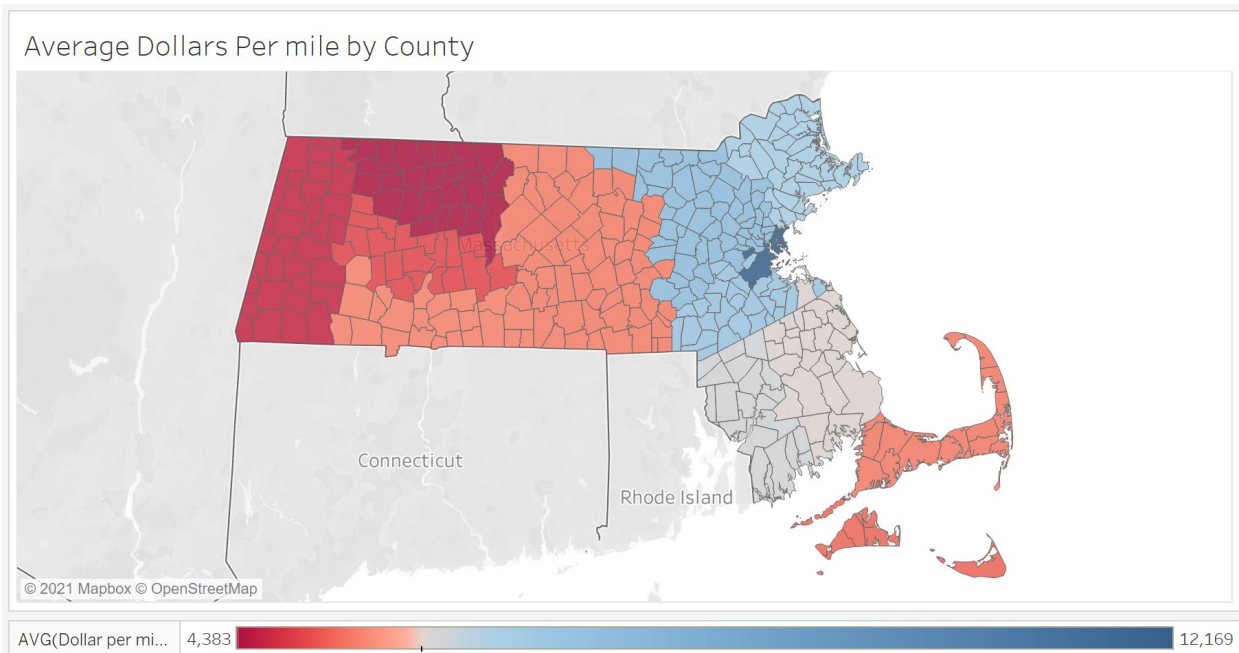
¹⁰⁸ *Chapter 90 Apportionment*. MassDOT. 2021. Retrieved from: <https://www.mass.gov/service-details/chapter-90-apportionment>

Figure 15—Average Chapter 90 Funds per Roadway Mile, by County, FY 2021



Furthermore, the Chapter 90 formula tends to heavily favor the city of Boston, in Suffolk County, as it has the highest population in the state, most road miles, and largest labor market, including many people who live outside the city yet work there. On average, this funding formula tends to allocate more funds into Eastern Massachusetts communities than into Western Massachusetts, as displayed in Figure 16.

Figure 16—Average Chapter 90 Funds per Roadway Mile, by County, FY2021



This disparity in funding leads to roadways in Western Massachusetts crumbling because of a lack of maintenance; lessens the quality of transportation networks there; and lowers the quality of life because of the challenges of moving people, services, and goods. This pattern is seen in Springfield, by far the

largest community in Western Massachusetts, with a heavy dependence on Chapter 90 funds for roadway maintenance. Additional context about Springfield's infrastructure disparities and its comments are contained in [Appendix E](#).

In addition, there are limited sources of funding for unpaved, dirt, and gravel roads available for Western Massachusetts communities, especially after major storms and floods in the region that wash out these roads. Unpaved roads are eligible for some Chapter 90 funding to repair flood and frost damage but not for routine maintenance.¹⁰⁹ Municipalities can also use Small Town Road Assistance Program (STRAP) grant assistance to upgrade roads to better serve residents and promote economic development, but funding is more difficult to obtain.¹¹⁰



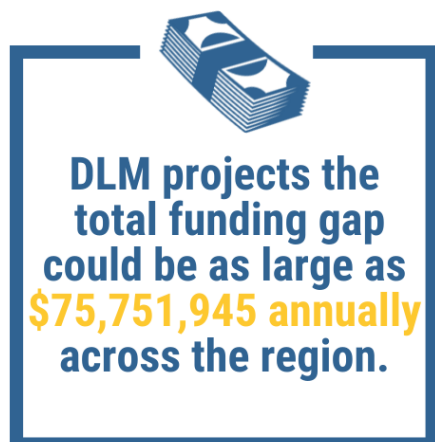
Damage to Chestnut Hill Road in Warwick (Franklin County) from a storm in July 2021.
(Photo courtesy of Brian Snell, Warwick Selectboard member)

We also asked communities to assign a dollar figure to the gap between what they spend and what they perceive to be the amount needed to adequately maintain their roadways each year. Among the 44 respondents who answered this question, the median annual gap was \$312,500. Pittsfield, which had the largest funding gap,¹¹¹ indicated it would need \$3.2 million each year to provide adequate roadway maintenance. The total annual funding gap among all respondents is \$31,044,000. When this number is projected across all 101 communities based on population, DLM projects that the gap could be as large as \$75,751,945 annually across

¹⁰⁹ Franklin Regional Council of Governments. (2001, September). *Answers to* <https://westfordvt.us/wp-content/uploads/2014/09/Appendix-B-Answers-Roads.pdf>; Email from David Stokes, August 25, 2021. On file with DLM.

¹¹⁰ *Id.* See page 37 for further analysis of STRAP grants in Western Massachuset

¹¹¹ This claim excludes the city of Springfield, which is analyzed in a separate ca:



the region.¹¹² The Massachusetts Municipal Association, which has consistently advocated for a funding amount of at least \$300 million annually,¹¹³ estimates that there is an annual total investment of \$588,391,743 needed to have all roads across the Commonwealth brought to a state of good repair, meaning there is an annual funding gap of \$388,391,743 between the current appropriation level and funding need.¹¹⁴ Deferred investment and chronic underfunding of the Chapter 90 Program has caused this gap to grow, and it will continue to do so without further investment from the state. Even when considering new programs such as the Municipal Pavement Program and the State-Numbered Road Program that may offer additional resources towards roadways, there is still a substantial gap between available resources and local need. A \$300,000,000 Chapter 90 funding level will represent an important step towards meeting these needs.

MassWorks and STRAP

Other state-level programs focused on infrastructure development are stressed resources and have administrative and fiscal constraints that lessen their impact. In particular, STRAP, which helps build out roadway infrastructure, has a limit on its spending as a part of the larger MassWorks program. In the FY 2020 award round for these programs, the \$9,183,000 in STRAP Program awards represented 13.48% of the total \$68,118,000, with MassWorks awards making up the remaining \$58,935,000 (86.52%).¹¹⁵ Western Massachusetts communities apply to STRAP at a higher frequency than those in other parts of the state. For example, in the FY 2020 award round, 25 (65.79%) of the 38 STRAP applications came from Western Massachusetts, while only 13 (34.21%) came from the rest of the state. Of the 9 STRAP awards distributed in FY 2020, Western Massachusetts communities received 5 awards.¹¹⁶ As seen below in Figure 17, targeted investments into smaller communities through STRAP are a fraction of the MassWorks total and are insufficient given the large gap between requests and awards.

¹¹² See [Appendix B](#) for the methodology of this projection.

¹¹³ *MMA asks Transportation Committee to boost Ch. 90 funding to \$300M per year and pass multiyear bill.* Geoffrey Beckwith, Massachusetts Municipal Association. 2021. Retrieved from: <https://www.mma.org/advocacy/mma-asks-transportation-committee-to-boost-ch-90-funding-to-300m-per-year-and-pass-multiyear-bill/>

¹¹⁴ Email from Alandra Champion of the Massachusetts Municipal Association, March 30, 2021. On file with DLM.

¹¹⁵ Email from Marc Horne, June 24, 2021. On file with DLM.

¹¹⁶ Email from Marc Horne, June 24, 2021. On file with DLM.

Figure 17—FY 2020 MassWorks and STRAP Project Award Amounts

MassWorks and STRAP Project Awards

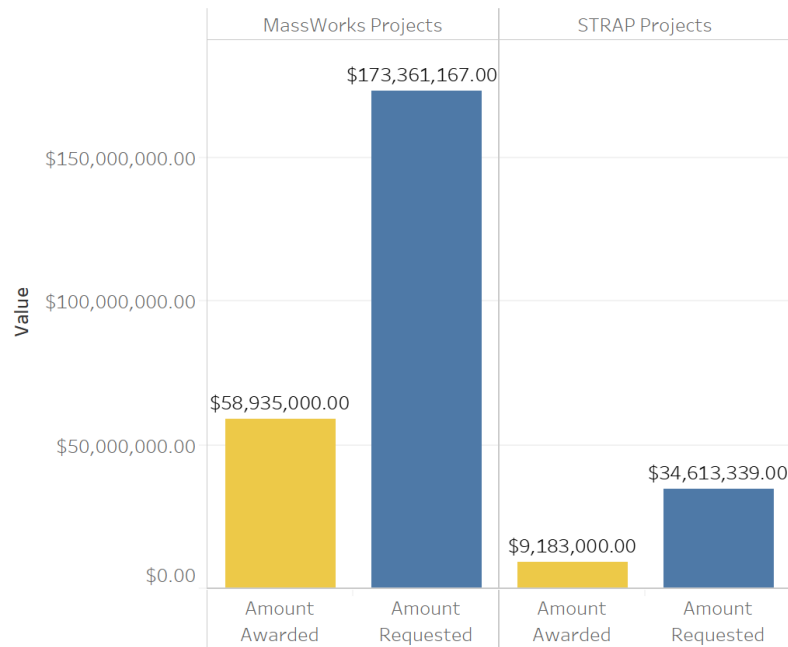
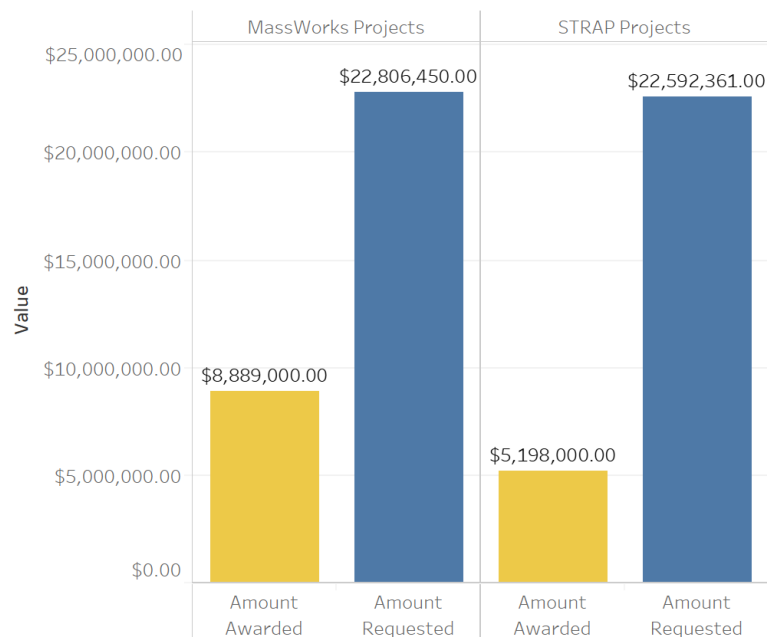


Figure 18—FY 2020 MassWorks and STRAP Project Award Amounts for Western Massachusetts

MassWorks and STRAP Project Awards for Western MA



Bridges and Culverts

A particular challenge for communities are the numerous bridges and culverts in Western Massachusetts. For example, one road in Berkshire County has approximately 200 culverts, which

dramatically increases the maintenance and replacement costs for the communities that maintain it.¹¹⁷ In comments from survey respondents, we were informed that, although many respondents were aware of state funding for small bridges and culverts, they felt that these resources were stressed and did not have enough funding to meet the need. For example, the maximum grant award from the Municipal Small Bridge Program (\$500,000) constrains bridge projects from being fully funded at all stages, from design and permitting to construction. According to historical project data obtained by the Massachusetts Small Bridges and Culverts working group, construction expenses under the program have ranged between \$300,000 and \$1.2 million, and the median construction cost was \$680,000 as of May 2019.¹¹⁸ As one respondent stated,

The state has tried the small bridge and culvert programs. They would be more helpful if they had more funding. It can cost \$50,000 - \$100,000 or more to just engineer and permit a good sized culvert - then it can cost hundreds of thousands more to actually build. There just isn't enough funding in these well-meaning, competitive programs to fund all the needed infrastructure in Western [Massachusetts].



Flagg Road in Orange (Franklin County) after storms in July 2021.
(Photo courtesy of the Office of State Representative Susannah Whipps)

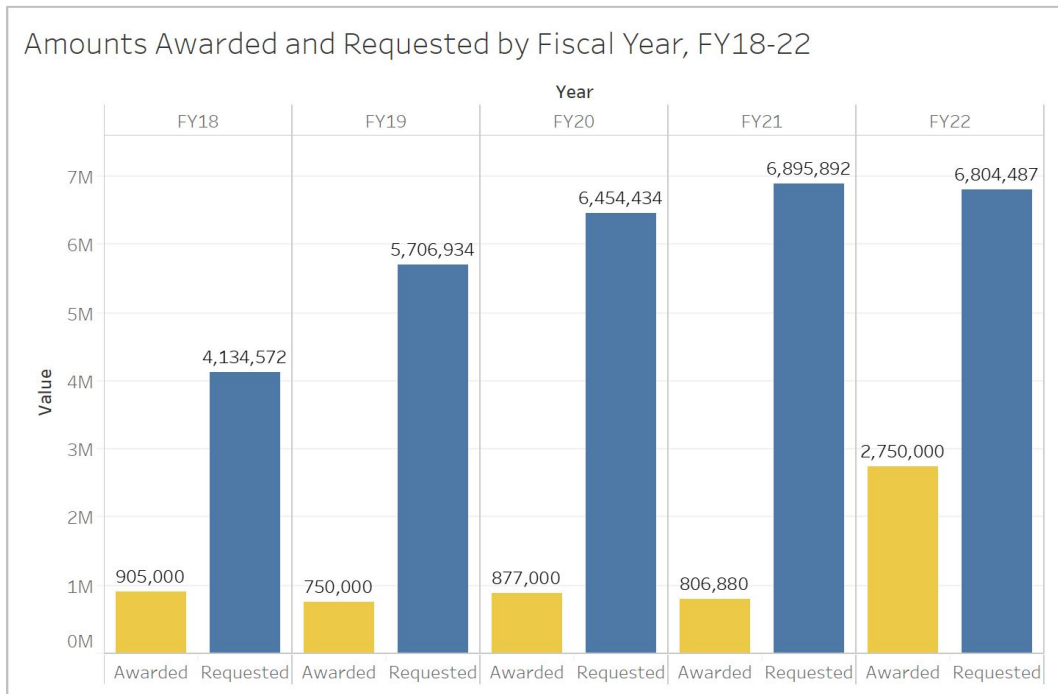
Another program, the Culvert Replacement Municipal Assistance Grant Program from the Department of Fish and Game's Division of Ecological Restoration, is also wholly inadequate to meet demand from communities. In FY 2021, for example, applications for the program totaled nearly \$6.9 million.¹¹⁹ However, awards for the program in that fiscal year, as shown below in Figure 19, totaled \$806,880. The five awards to Western Massachusetts in FY 2021 totaled \$254,000, shown below in yellow.

¹¹⁷ DLM conversation with Rep. Pignatelli, February 17, 2021. On file with DLM.

¹¹⁸ *Improving the Efficiency of Culvert and Small Bridge Replacement Projects*. Culverts and Small Bridges Working Group. 2020. Retrieved from: <https://www.mass.gov/doc/massachusetts-culverts-and-small-bridges-working-group-report/download>

¹¹⁹ Email from Bernadette DeBlander, August 6, 2021. On file with DLM.

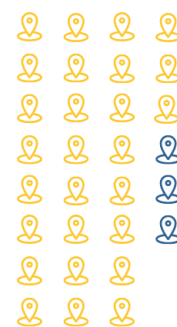
Figure 19—FY 2018–2022 Culvert Replacement Grant Awards and Requests



The Nilman Road culvert in Buckland is a good example of a project that had difficulty securing sufficient funding from state sources. According to stakeholders, the Nilman Road culvert is in need of critical replacement before the upcoming winter, as multiple households at a dead-end road are required to cross the culvert, and large trucks and public safety vehicles are hesitant to cross it.¹²⁰ Although the town was able to secure the maximum grant from the Municipal Small Bridge Program, officials are waiting for \$625,000 in bonds to be released by the Commonwealth after being authorized in the state’s FY 2021 transportation bond bill.¹²¹ The town of Buckland is moving ahead with the project in order to avoid further deterioration or collapse of the culvert but may have to turn to short-term emergency borrowing if the bonds are not released.¹²²

Transportation Improvement Project Program

Roadway, bridge, and culvert projects are particularly challenging for many small communities that do not have professional planning or engineering staff, making preparatory work such as studies, designs, permitting, and granting often unattainable. In Franklin County, for example, there are only three towns, out of all 26 communities, that



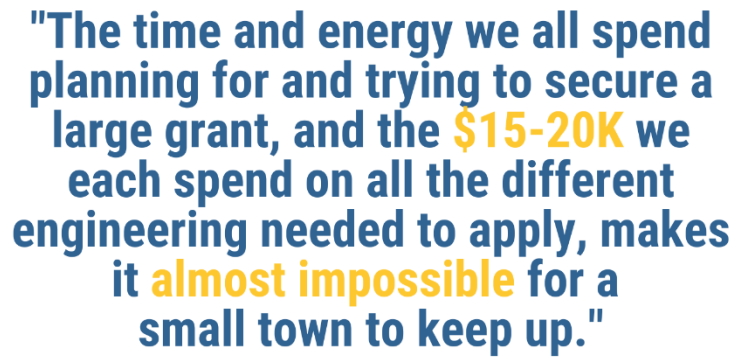
3
26
Communities in
Franklin County
have planning
staff

¹²⁰ DLM conversation with Jonathan Gould, August 19, 2021. On file with DLM; DLM com 25, 2021. On file with DLM.

¹²¹ *Id.*

¹²² *Id.*

have planning staff.¹²³ Without professional staff members to provide technical expertise to help a municipality access state or federal funds, many projects are not pursued in order to limit the community's financial risk in hiring experts to prepare a grant application. One survey comment illustrates this situation, stating:



"The time and energy we all spend planning for and trying to secure a large grant, and the \$15-20K we each spend on all the different engineering needed to apply, makes it almost impossible for a small town to keep up."

- Town Administrator in a rural community

In discussions with regional planning agencies, we discovered that there are actually not enough applications for available federal Transportation Improvement Program (TIP) funding, causing these funds to be diverted for county and state use instead.¹²⁴ Regional planning officials attributed this lack of applications to design and technical requirements that many small communities do not have the capacity to meet, leading them to forego federal TIP funding to focus on maintenance of existing infrastructure.¹²⁵ Currently, the Massachusetts Department of Transportation requires municipalities to fund design, engineering, and right-of-way costs for eligible TIP projects in order to demonstrate local commitment and buy-in. As TIP funding is a multiyear process, design requirements can change and many communities believe that it is not worth the risk in applying, investing in designs and studies, and having to change the designs as requirements shift. Communities may also not be willing to risk guaranteed infrastructure funding, such as Chapter 90 funds, on designs or studies for TIP funds that might not be provided. Planning officials also feel that funds from the Unified Planning Work Program, which provides resources to identify regional planning priorities on an annual basis, are not keeping pace with TIP funding, resulting in a situation where planning work is not available to unlock TIP funds.¹²⁶

The complexity and inadequacy of these programs, as well as the intensive preparatory work in designs, studies, and engineering required to participate in them, diminish the value of these funds for communities and make them a less-than-attractive option for infrastructure development.

¹²³ DLM conversation with Franklin Regional Council of Governments (FRCOG), March 1, 2021. On file with DLM.

¹²⁴ DLM conversation with FRCOG, March 1, 2021. On file with DLM.

¹²⁵ DLM conversation with FRCOG, March 1, 2021. On file with DLM.

¹²⁶ Email from Clete Kus, June 23, 2021. On file with DLM.

2. Continued investment in high-speed broadband is critical to the success of the region.

A consistent theme in discussions with stakeholders throughout the region is the inadequacy of broadband internet access. Fast and reliable broadband is necessary to support community efforts to amplify education and commerce and to spark job creation and population growth. Nationwide, during the 2019 coronavirus pandemic, as children studied from home and offices were closed, the availability of high-speed broadband became a focus of policymakers. In many of these communities, cellphone service is poor or completely unavailable and not a substitute for broadband.¹²⁷ Stakeholders have shared anecdotes of families commuting to libraries, town halls, or private businesses to use wireless internet because their homes do not have access.¹²⁸ However, the lack of population density in Western Massachusetts diminishes the incentive for private firms to supply a robust service. The Commonwealth's initiative, the Massachusetts Broadband Institute (MBI), has provided funding for 53 projects, with 50 projects on track to be completed by the end of FY 2022. Of these, 26 projects are run through municipally owned networks.¹²⁹

Because of the increasing centrality of the internet to modern life, many communities feel they must invest in broadband networks for their long-term survival.¹³⁰ With total expenditures of over \$100 million, including about \$90 million in state and federal funding, the investment in broadband is significant.¹³¹ However, the rapid change in technology will require continued investment in parts of Western Massachusetts that present an uncertain return on investment for the broadband firms.

Under their agreements with MBI, private broadband firms have to provide service and assume risks for at least 10 years. MBI has determined that a broadband network generates revenue once 70% of consumers in a coverage area are on their network. Of the towns that have completed broadband projects, only one town is short of meeting this goal.¹³² However, because of the young age of these networks, it remains to be seen if significant financial investments are sustainable in the long term.

Although continued investments in broadband may alleviate some of these issues, concerns still exist over broadband speeds, as detailed in the "Situational Analysis" section of this report.¹³³ Without broadband networks, communities would not be viable as places to live, start a business, or raise a family, threatening their survival.

¹²⁷ Discussion with Massachusetts School Building Authority, February 3, 2021. On file with DLM.

¹²⁸ DLM conversation with FRCOG, March 1, 2021. On file with DLM.

¹²⁹ DLM discussion with MBI and MassTech Collaborative, February 23, 2021. On file with DLM.

¹³⁰ DLM conversation with FRCOG, March 1, 2021. On file with DLM.

¹³¹ DLM discussion with MBI and MassTech Collaborative, February 23, 2021. On file with DLM.

¹³² DLM discussion with MBI and MassTech Collaborative, February 23, 2021. On file with DLM.

¹³³ See page 16, *supra*.

3. Lack of infrastructure investment undermines businesses and economic development.

In conversations with business groups and state officials, DLM has learned that macro-level trends, such as lack of broadband and a nonspecialized workforce, contribute to issues with attracting businesses to Western Massachusetts.¹³⁴ The lack of broadband access is a weakness for the materials manufacturers and suppliers that could benefit from infrastructure projects. Broadband connects them to supply chains, labor, and markets for their goods. Compounding this issue is a geographic disconnect in Western Massachusetts between jobs and workers, because of the dispersion of population and the distance between urban areas.¹³⁵ Without local materials suppliers, contractors working on public infrastructure may source materials from Eastern Massachusetts or out of state, out of necessity or cost considerations.

4. Many communities have outdated municipal buildings that are in need of replacement or significant repairs and renovations.

Public Safety and Communications Facilities

Another notable area of concern amongst stakeholders and survey respondents are public safety buildings. Public safety buildings have both the highest (25 A's and B's) and the lowest (13 D's and F's) ratings on the survey. Breaking down the comments, the concerns are equally distributed between fire and police facilities, which need periodic updating as new technology emerges, making them costly expenses. Police stations require specialized equipment (such as suspect intake and transport) and spaces (such as evidence storage and training rooms). Over the years, fire equipment has become larger and frequently has outgrown space allotted to it. In some communities, a public safety facility may be almost 100 years old and therefore has long outlived its useful life.



¹³⁴ Conversation with Massachusetts Manufacturing Extension Partnership (MMEP); Conversation with Executive Office of Housing and Economic Development (EOHED), February 10, 2021. On file with DLM.

¹³⁵ Conversation with MassMEP, January 28, 2021.

The booking desk at the Pittsfield Police Department (Berkshire County). Note: Since this photo was taken in 2011, the hardware on the desk has been updated, but other conditions still remain.
(Photo courtesy of the Pittsfield Police Department)

Most respondents identified a public safety facility in their municipalities in need of substantial renovation or replacement. One respondent noted,

"Police are housed in two small offices in [the] basement of Town Hall, [Emergency Medical Services] is in a rented old gas station building and [the] Fire building [is] **compromised [because of] cement issues with [the] ceiling dropping cement and other structural issues."**

- Town Administrator in a small community

These sentiments are common among respondents. At least 23 of the 45 respondents noted that facilities were too small, inadequate for their use, or were shared with other municipal offices such as administration or public works. Of the respondents, 15 shared that they had at least one fire or police facility that was recently constructed, in the process of construction, or nearing project approval. However, many of these communities also noted that, though they might have a new fire station, they had an inadequate police station, or vice versa. One typical comment noted that the fire station was "[too] small for trucks [and had no] bathrooms." Other comments of this nature can be seen in [Appendix D](#), which provides summary results from our survey as well as comments from the respondent communities.¹³⁶

Respondents indicated that repair and renovation of public safety facilities cost approximately \$16,720,549 each year.¹³⁷ DLM projects, based on survey responses representing 41.09% of the population of Western Massachusetts, that it could cost as much as \$40,689,359 annually to maintain or renovate public safety facilities across the entirety of Western Massachusetts.¹³⁸



DLM projects that it could cost as much as \$40,689,359 annually to maintain or renovate public safety facilities across the entirety of Western Massachusetts.

Compounding public safety facility issues are the varying states of police and fire communications facilities throughout Western Massachusetts. Some communities do not have any communication facilities because of weak information technology infrastructure, or they rely on other

DLM. See [Appendix D](#) for a summary of the survey results.

DLM. See [Appendix D](#) for a summary of the survey results.

ogy of these projections.

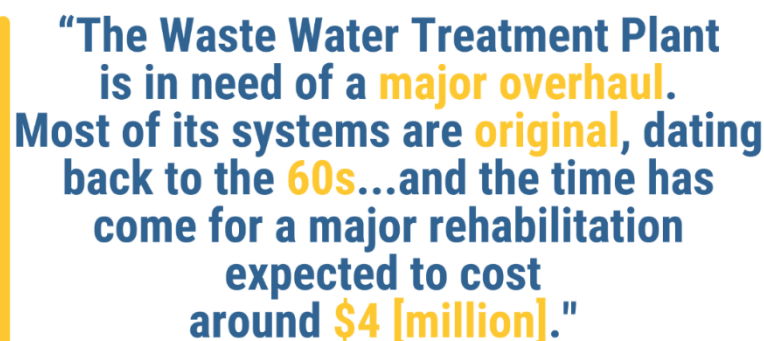
communities, such as Northampton, for their dispatching needs.¹³⁹ Of the 45 responses, communities had mostly neutral or negative reviews of their communications facilities. Communities reported \$2,500,000 in annual costs for repair and renovation of communications facilities, which, when extrapolated based on population, would be approximately \$6,083,737 for the four western counties.¹⁴⁰ This situation offers a major opportunity for the regionalization of dispatch services.

Public Works Buildings

A large share of respondents indicated that their public works facilities need to be replaced and/or to undergo major renovations because of building age and space issues. In our survey, 28 communities graded the status of their public works buildings as a C or below. Respondents identified problems with roofs; siding; heating, ventilation, and air conditioning (HVAC) systems; and storage space. For some communities, respondents indicated that public works buildings need to be replaced entirely and are in need of garage and administration space.

A few respondents indicated a need to update their transfer stations. One noted that his/her transfer station needed recapping, but this need has not been satisfied because of budget limitations. Another representative comment concerning these issues noted:

The Waste Water Treatment Plant [or WWTP] is in need of a major overhaul. Most of its systems are original, dating back to the 60s. Although there have been upgrades since then, overall the treatment facility has limited use of some of its components limiting its back up capacities, and therefore exposing it to risk in the event of a failure. The plant is in need of replacement/upgrade to bring the facility and its components up to speed in both technology and condition that will make it safe. Although the staff at our WWTP are extremely resourceful and skilled at making repairs, they can only do so much, and the time has come for a major rehabilitation expected to cost around \$4 [million].



**"The Waste Water Treatment Plant
is in need of a major overhaul.
Most of its systems are original, dating
back to the 60s...and the time has
come for a major rehabilitation
expected to cost
around \$4 [million]."**

- DPW Director of a small town

¹³⁹ DLM survey results. On file with DLM. A number of communities do have their own dispatch facilities. Across the state, there are over 240 system operators for 911; DLM conversation with Rep. Pignatelli, February 17, 2021. On file with DLM; see [Appendix D](#) for a summary of the survey results.

¹⁴⁰ See [Appendix B](#) for the methodology of these projections.

Among the communities that responded to the survey, annual expenditures for repair and renovation of public works facilities totaled approximately \$41,813,175.¹⁴¹ Based on this figure and the population of respondent communities (41.09% of the regional population), DLM projects that the total annual expenditures on public works facilities for all four counties will cost approximately \$101,752,118.¹⁴²

DLM projects the total annual expenditures on public works facilities for all four counties will cost approximately \$101,752,118.

However, \$30,000,000 of the \$41,813,175 total came from Great Barrington, representing a significant outlier in the data. Without Great Barrington included, the figure drops to \$11,813,175. A projection based on the population of respondent communities, excluding Great Barrington (38.99% of the regional population), results in an annual figure of \$30,300,133 for the 101 communities of Western Massachusetts.¹⁴³ Of the 7 communities that indicated a need for replacement of these facilities, the total cost is projected to be \$56,000,000.¹⁴⁴

Administrative Offices and Other Facilities

Administrative office buildings continue the survey response pattern of a plurality of communities giving the status of their buildings mixed ratings, mostly rating facilities with a C. Many of these buildings are older or repurposed and are experiencing issues as a result of deferred maintenance. Frequent concerns raised for administrative buildings include HVAC systems, lack of office and storage space, and Americans with Disabilities Act compliance. Across the 45 respondents, representing 41.09% of the regional population, annual costs for repair and renovation of administration buildings total approximately \$25,195,900, or a projection of approximately \$61,314,076 across Western Massachusetts based on population.¹⁴⁵

¹⁴¹ DLM survey results. On file with DLM. See [Appendix D](#) for a summary of the survey results.

¹⁴² See [Appendix B](#) for the methodology of these projections.

¹⁴³ See [Appendix B](#) for the methodology of these projections.

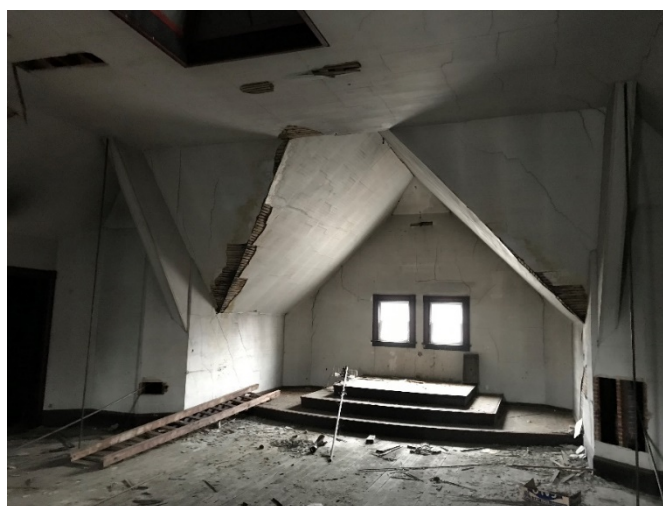
¹⁴⁴ DLM survey results. On file with DLM. See [Appendix D](#) for a summary of the survey results.

¹⁴⁵ DLM survey results. On file with DLM. See [Appendix B](#) for the methodology of these projections.



Rusting condition of the ramp at the Deerfield Regional Senior Center (Franklin County).
(Photo courtesy of the Town of Deerfield)

The gap in funding has led to situations where buildings are becoming less useful. For example, in one community, the response indicated that “[radon] in the basement has rendered the space unusable for offices. [It is] just used as storage. [The] building foundation has leaks.”¹⁴⁶ As illustrated in other comments, administrative buildings may be multipurpose in use, but not in design; some town halls also host police departments, libraries, and communications facilities. Like other forms of municipal infrastructure, administrative buildings are occasionally the subject of bond authorizations or legislative appropriations to fund capital projects, rather than having a dedicated revenue source.¹⁴⁷ However, for these more general-use facilities, there are limited revenue sources that could help with capital improvements. One comment that details common issues shared, “The Town Hall is in satisfactory shape, but needs a new HVAC system and windows, as well as some other deferred maintenance typical for a 25 year old building.”



¹⁴⁶ DLM survey results. On file with DLM. See [Appendix D](#) for a summary of the survey results.

¹⁴⁷ See Line Item 1100-3005 of Chapter 113 of the Acts of 2018.

Deteriorating conditions of the attic space at the Deerfield Regional Senior Center (Franklin County).
(Photo courtesy of the Town of Deerfield)

Other buildings have similar issues. Libraries and Council on Aging facilities in Western Massachusetts, for instance, are also more likely to be older and require accessibility modifications, HVAC updates, roof repairs, or other space needs. Library spaces range from a structure built in 1872 to a “tiny room in Town Hall,”¹⁴⁸ according to one comment. Spaces for Council on Aging facilities across the region are also uneven—ranging from brand new facilities to shared spaces inside aging town halls. Eleven communities have their Council on Aging facilities inside their town halls.¹⁴⁹



Deteriorating conditions of the upper floors of the Deerfield Regional Senior Center (Franklin County).
(Photo courtesy of the Town of Deerfield)

Many libraries are also historic buildings, and there are limitations on repairs and renovations that can be made without changing the historic nature of the structure.¹⁵⁰ Annual costs to repair and renovate libraries among respondent communities total \$6,661,175. DLM projects, based on the 41.09% population represented amongst respondents that total annual library expenditures for Western Massachusetts will cost at least \$16,209,931.¹⁵¹ Similarly, Council on Aging facilities would need \$161,675 for renovation and repair amongst respondent communities, which would put a projection, based on the population of all western counties, at \$393,436 annually.¹⁵² There is already some support

¹⁴⁸ DLM survey results. On file with DLM. See [Appendix D](#) for a summary of the survey results.

¹⁴⁹ DLM survey results. On file with DLM. See [Appendix D](#) for a summary of the survey results.

¹⁵⁰ DLM conversation with the Massachusetts Board of Library Commissioners, January 19, 2021.

¹⁵¹ DLM survey results. On file with DLM. See [Appendix B](#) for the methodology of these projections.

¹⁵² DLM survey results. On file with DLM. See [Appendix B](#) for the methodology of this projection.

for library facilities through the Massachusetts Board of Library Commissioners (MBLC), as detailed in the Situational Analysis section of this report. One comment that displayed a common sentiment among respondents noted that the “library needs a new roof and some heating system work that will be costly, and it is a historic building so all work is expensive and deferred.”¹⁵³

Our survey also identified other municipal facilities that may need renovation and/or repairs in other communities. Necessary repairs included roof replacements, bathroom renovations, and infrastructure upgrades in recreation buildings, field houses, outdoor pavilions, and beach facilities. Communities’ garages, community centers, town museums, and armories are also among other municipal facilities in need of repair. Among these other facilities, expenditures for annual repair and renovation totaled \$14,543,072. DLM projects that annual expenditures would be at least \$35,390,482 across all communities in Western Massachusetts based on population.¹⁵⁴

5. There is a lack of formalized support for most municipal buildings.

For most categories of municipal infrastructure, there is a lack of dedicated support from state or federal sources. The federal government made funds available in the late 1980s and early 1990s for public safety buildings. As mentioned earlier, the US Department of Agriculture (USDA) has a grant program for essential municipal structures in rural communities, but eligibility is restricted to the smallest, neediest municipalities, and grant awards do not cover all project expenses.¹⁵⁵ At the state level, funds are sometimes made available for different municipal building projects through legislative appropriation, though these funds are only a few million dollars for individual communities.¹⁵⁶ Funds for project design or construction are also included in state bond authorizations, such as the \$1 million provided for the town of Heath in 2018.¹⁵⁷ However, bonds authorized by the Legislature are not always issued by the Governor, and bond bill earmarks do not always receive funding. Additionally, these combined funding sources are insufficient to meet municipal needs. The concern of stakeholders in Western Massachusetts regarding their facilities reflects the limited resource base available for them and results in facilities that are too small, in various states of disrepair, and inadequate for modern municipal needs. Outside of school buildings, which have support from the Massachusetts School Building Authority, and libraries, which are supported by MBLC, there are no dedicated resources for municipal buildings. Bond authorizations and legislative appropriations provide some resources when funded but are unreliable and dependent on legislative and gubernatorial approval.

¹⁵³ DLM survey results. On file with DLM. See Appendix D for a summary of the survey results.

¹⁵⁴ DLM survey results. On file with DLM. See Appendix B for the methodology of this projection.

¹⁵⁵ See page 31 to read about the US Department of Agriculture’s Community Facilities Direct Loan & Grant Program.

¹⁵⁶ See Line Item 8000-0600 of Chapter 227 of the Acts of 2020. Retrieved from: <https://malegislature.gov/Budget/FY2021/FinalBudget>

¹⁵⁷ See Line Item 8000-3502 of Chapter 113 of the Acts of 2018. Retrieved from: <https://malegislature.gov/Laws/SessionLaws/Acts/2018/Chapter113>

RECOMMENDATIONS

While the research and survey explored the challenges of public infrastructure through the lens of Western Massachusetts, the recommendations will apply across the Commonwealth and address challenges seen universally among its municipalities. There are a variety of avenues available to finance the following recommendations. Increased funds for roadways may be forthcoming through proposals at the federal level to invest \$550 billion in new spending into infrastructure, including \$110 billion in funds for roads, \$14 billion for bridges, and \$16 billion for major infrastructure projects.¹⁵⁸ The American Rescue Plan Act provides \$8.7 billion in funds to state and local government in Massachusetts for expenditures over a multiyear period with the potential for funds to be used for infrastructure. In Massachusetts, there is a forthcoming ballot question about whether to institute a 4% tax on earned income over \$1 million, which would generate up to \$2 billion annually for transportation and education funding.¹⁵⁹ The Tax Expenditure Review Commission released a report in March 2021 that recommended various changes to state tax collections, representing millions in foregone revenue that is the subject of ongoing discussions.¹⁶⁰

1. Transportation

The Commonwealth should invest in making transportation funding more equitable in Western Massachusetts by reforming the Chapter 90 Program funding formula and boosting funding levels, as well as providing additional funding opportunities for small bridges, culverts, and unpaved roads.

¹⁵⁸ *FACT SHEET: Historic Bipartisan Infrastructure Deal*. The White House. 2021. Retrieved from: <https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/28/fact-sheet-historic-bipartisan-infrastructure-deal/>

¹⁵⁹ *The Massachusetts millionaire's tax is back, and it's a little different this time*. Nik DeCosta-Klipa, Boston.com. 2021. Retrieved from: <https://www.boston.com/news/politics/2021/05/05/massachusetts-millionaires-tax-ballot-question-2022/>

¹⁶⁰ *Final Report*. Tax Expenditure Review Commission. 2021. Retrieved from: <https://www.mass.gov/info-details/tax-expenditure-review-commission#reports->

a. Chapter 90 Program

RECOMMENDATION

The Chapter 90 Program needs additional funding and formula reform.

As discussed above,¹⁶¹ Chapter 90 funding is the most important source of funding for roadway work across the communities of Western Massachusetts. The funding formula places weights on road mileage, population, and employment within the municipality. Section 4(b) of Chapter 6C of the Massachusetts General Laws gives the Massachusetts Department of Transportation (MassDOT) the authority to distribute money for roadways, which they do through the Chapter 90 funding formula.¹⁶² Common criticisms of the state Chapter 90 Program are that it is underfunded and that its funding formula has not been updated since its implementation in 1972.¹⁶³ Criticism of the current formula is growing, as the weights for the formula benefit cities with high population and high levels of employment, particularly the city of Boston, which has the highest population of any community in Massachusetts as well as the highest number of employed people.¹⁶⁴ In response to these concerns, Rep. William Pignatelli filed a bill in the 2021–2022 legislative session (H.3572)¹⁶⁵ that would change the formula weights, as seen in the table below.

Figure 20—Chapter 90 Program Formula Weights, Current and Proposed

	Current Chapter 90 Formula Weights	Proposed Changed Formula Weights (H.3572)
Road Mileage	58.33%	69.334%
Population	20.83%	15.333%
Employment	20.83%*	15.333%†

* Rep. Pignatelli files bill on changing Chapter 90 Formula. 2019. Retrieved from: <http://northadams.com/story/59401/Pignatelli-Files-Bill-on-Changing-Chapter-90-Formula.html>

† H.3572 of the 192nd General Court. Retrieved from <https://malegislature.gov/Bills/192/h3572>

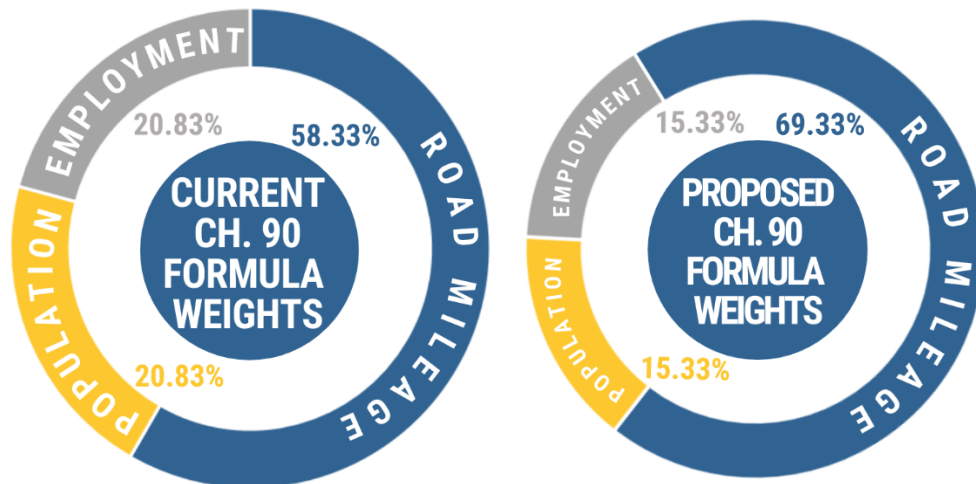
¹⁶¹ See page 24, *supra*.

¹⁶² G.L. c. 6C §4(b). Retrieved from: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter6c/Section4>

¹⁶³ Division of Local Mandates (DLM) conversation with Massachusetts Municipal Association, March 24, 2021. On file with DLM.

¹⁶⁴ DLM conversation with Rep. Pignatelli, February 17, 2021. On file with DLM.

¹⁶⁵ H.3572 of the 192nd General Court. Retrieved from <https://malegislature.gov/Bills/192/h3572>



This proposal would place more weight in the formula on road miles, rather than population and employment, benefitting municipalities with smaller populations by granting them more funds. Under this proposed formula, for example, 31 of the 32 communities in Berkshire County would see their allocations increased even while maintaining the current appropriation level.¹⁶⁶ Some communities that may lose money, being disproportionately larger, have competitive advantages over those that may gain funds, such as having professional planning and engineering staff, dedicated grant writers, and access to other funding sources for which smaller communities are ineligible.¹⁶⁷

The Chapter 90 Program formula can also be changed administratively by MassDOT without legislation, allowing the change to be implemented more quickly. Many Western Massachusetts communities have hundreds of road miles, including bridges and culverts that are costly to replace. By shifting funding to these communities, they would be better able to maintain this infrastructure and enhance the attractiveness and livability of their towns. MassDOT should use its administrative authority to enact changes to the Chapter 90 Program formula consistent with the percentages contained in H.3572.

In the absence of a significant increase of Chapter 90 funding to accompany this change, money would be shifted away from population centers like Boston, which would lose \$1.4 million under the new proposed formula weights.¹⁶⁸ To address this issue, overall Chapter 90 funding should be increased to allow more projects, in both large and small municipalities, to be funded. A solid mechanism for this transition is the proposal supported by the Massachusetts Municipal Association that increases the annual appropriation to \$300 million and funds the program over a two-year

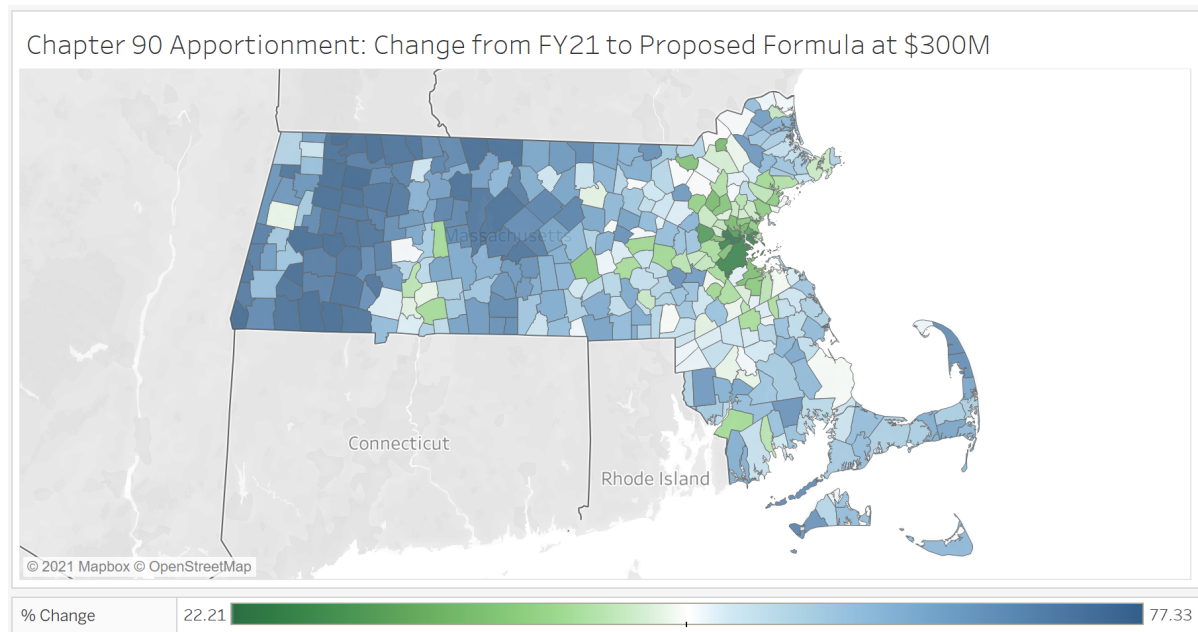
¹⁶⁶ DLM conversation with Rep. Pignatelli, February 17, 2021. Notes on file with DLM.

¹⁶⁷ DLM conversation with Rep. Pignatelli, February 17, 2021. Notes on file with DLM.

¹⁶⁸ DLM conversation with Rep. Pignatelli, February 17, 2021. Notes on file with DLM.

window. As shown below in Figure 21, this would provide all communities with an increased apportionment, even if the formula was shifted to place more weight on road mileage.

Figure 21—Change in Chapter 90 Program Apportionment from Fiscal Year 2021, \$200 Million, to Proposed Formula at \$300 Million



Greater investment in the Chapter 90 Program and a shift to the formula present a scenario where all communities would gain funding, with the greatest effects felt in Western Massachusetts. Coupled with a biennial apportionment, this allows for greater certainty of funding and better planning for communities over the construction cycle. The state should also consider a hold-harmless provision for Chapter 90 funding to further ensure that communities do not lose funds over time. For example, the town of Lenox in Berkshire County received \$436,051 in fiscal year (FY) 2015, but that amount had declined over 35% to \$282,098 in FY 2020.¹⁶⁹ Overall, all communities in the state would benefit from this higher level of funding.

Furthermore, the four counties of Western Massachusetts have networks of unpaved roads which have gravel or dirt surfaces. There is some confusion among stakeholders regarding which sources of funding are available to help maintain, repair, and replace these roadways. The Commonwealth should publicly catalogue revenue streams that are available for unpaved roads and consider these roadways for additional funding, given the increased risk of storms and flooding from climate change. A proposal introduced by Sen. Adam Hinds (S.2337) during the 2021–2022 legislative session would establish a working group that would identify and evaluate gaps in funding, as well as existing

¹⁶⁹ *Chapter 90 Past Apportionment*. MassDOT. 2021. Retrieved from: <https://www.mass.gov/service-details/chapter-90-past-apportionment>

funding streams, to support the maintenance and improvement of unpaved roads and paved low-volume roads.¹⁷⁰

b. Small Bridges and Culverts

RECOMMENDATION

Repair and replacement of small bridges and culverts need more funding and attention.

Western Massachusetts has over 2,000 small bridges and culverts, some of which are in poor condition.¹⁷¹ Given the large number of culverts and small bridges that need repair and replacement, the Small Bridge and Culvert Program dedicated to this challenge should be significantly expanded. This is another area for critical design and engineering assistance and compounds a growing need to account for flooding and drainage issues for roadways, particularly in light of the adverse impacts of climate change. In order to assist with the design and engineering of small bridges and other projects, MassDOT, or regional planning agencies, should provide technical assistance to municipalities in the form of engineering and planning expertise, which will require greater resources. These experts housed within MassDOT, or regional planning agencies, could unlock funding for smaller municipalities that cannot spend funds towards design requirements and feasibility studies, while also lowering the municipal burdens for infrastructure development. The Culvert and Small Bridge Working Group endorsed an effort, already underway within MassDOT, to create design templates for stream crossings that could potentially lower the costs of engineering these projects. As MassDOT and regional planning agencies are often involved in the approval process for infrastructure funding, there should be a firewall between this technical expertise and the various funding arms of these authorities to lessen the appearance of a conflict of interest among competing potential grantees. Alternatively, technical assistance programs could be housed elsewhere, such as in the Executive Office of Housing and Community Development, to ensure separation.

¹⁷⁰ S.2237 of the 192nd General Court. 2021. Retrieved from <https://malegislature.gov/Bills/192/S2337>

¹⁷¹ DLM conversation with Rep. Pignatelli, February 17, 2021. On file with DLM.

c. Small Town Road Assistance Program

RECOMMENDATION

The Small Town Road Assistance Program requires greater funding and modification to better meet the needs of small towns and rural communities.

The Small Town Road Assistance Program (STRAP), which is a stressed resource that is dedicated to the needs of small communities, should be enhanced in two ways. First, the MassWorks enabling statute should be amended to provide a larger percentage (15 or 20%) of MassWorks's annual funding towards STRAP projects, rather than the current 10%. In addition, the \$1 million cap per project for STRAP projects should be removed, which will allow larger projects to take advantage of the program.

2. Broadband and Communications Infrastructure

RECOMMENDATION

The Massachusetts Broadband Institute (MBI) needs to continue to work with networks to make broadband cost effective for areas and customers who currently do not have it, in particular the nine communities for which MBI has not yet provided it. This work should continue at all deliberate speed.

MBI should continue to invest in its grant programs, accompanied by requirements for providers to improve networks over time. This will necessitate continued funding of the municipal broadband networks. Such a system should motivate the network providers to provide good and reliable service that will encourage customers to enroll, while making it future-focused for technological development. Finally, steps need to be taken to create redundancy and resilience in the fiber-optic networks so damage to the lines at one point will not knock out communications for many customers at once.¹⁷²

¹⁷² Larry Parness, The Berkshire Eagle, "Towns ask state to improve reliability of 'middle mile' internet network," April 20, 2021. Retrieved from: https://www.berkshireeagle.com/news/local/towns-ask-state-to-improve-reliability-of-middle-mile-internet-network/article_fb01ab1e-a222-11eb-b47d-73d77b96c849.html,

3. Municipal and Public Safety Building Authority

RECOMMENDATION

Create a municipal and public safety building authority to assist communities with renovation or replacement of public buildings.

The Legislature should create an agency devoted to improving public building infrastructure in underserved areas, modeled on the Massachusetts School Building Authority (MSBA). MSBA works with school districts to provide them with capital funding for large portions of school construction and repair projects. MSBA is funded through a dedicated revenue stream of one cent from the state's 6.25% sales tax¹⁷³ and has provided \$13.6 billion in district reimbursements and benefited approximately 600,000 students since its inception in 2004.¹⁷⁴ Officials from MSBA noted in discussions with the Division of Local Mandates that, in FY 2021, the dedicated sales tax revenue amounted to approximately \$860 million. MSBA helps fund about \$1 billion in construction projects every year as a result of its revenue stream and bond authority.¹⁷⁵

Several pieces of pending legislation would establish a new public authority that would provide state building assistance for construction, renovation, or remodeling of other types of municipal facilities.¹⁷⁶ Legislators, municipal authorities, and community activists should advocate for creation of the new authority with a dedicated funding source like MSBA's. Such a funding source would eliminate the uncertainty in relying on bond bills and allow funding of infrastructure repair and replacement on a consistent basis. This agency should devote its money to projects in percentages approximating the percentages of different types of infrastructure about which it receives requests. This could include library construction, which is currently handled under an inadequately funded program by the Massachusetts Board of Library Commissioners (MBLC). Removing the construction grant program from MBLC and placing library construction and renovation under a new infrastructure agency would allow this new entity to adequately fund projects from a dedicated revenue stream or bond authority, while MBLC can focus on its core mission of developing and improving library services.

¹⁷³ G.L. c. 10 §35BB(a)

¹⁷⁴ *About Us* 2020. Massachusetts School Building Authority. Retrieved from: <https://www.massschoolbuildings.org/about>

¹⁷⁵ Discussion with MSBA. February 3, 2021. On file with DLM.

¹⁷⁶ Summaries of these pieces of legislation can be found in [Appendix G](#).

This new infrastructure agency, in addition to providing funding for new construction, should also have funds available for substantial repairs and improvements of government buildings. In addition, this new agency should have a department that provides planners and engineers to local communities to assist them in design of projects and application for funding for critical infrastructure needs. The program should account for financial needs of the communities and fair geographic dispersion of resources, while encouraging regionalization of facilities as programs for school buildings and libraries currently do.

APPENDIX A—CONTRIBUTORS

We want to offer our sincere appreciation to the following organizations and individuals who provided information, sat for interviews, and generally shared their views on the challenges and opportunities for infrastructure development in Western Massachusetts. We also appreciate the time from municipal officials who completed our survey. These stakeholders, along with their staff members and subject matter experts, provided significant context and data that we used in this report, though the findings and recommendations contained herein solely reflect the opinion and are the work of the Office of the State Auditor.

- Bob Dean and Linda Dunlavy of the Franklin Regional Council of Governments
- State Rep. Natalie Blais and her staff
- State Rep. Adam Scanlon and his staff
- State Rep. William “Smitty” Pignatelli and his staff
- State Sen. Edward Kennedy and his staff
- State Sen. Jo Comerford and her staff
- State Sen. Mike Brady and his staff
- State Sen. Eric Lesser and his staff
- State Sen. Adam Hinds and his staff
- Lauren Stara, Andrea Bunker, and the staff of the Massachusetts Board of Library Commissioners
- Jack McCarthy and the staff of the Massachusetts School Building Authority
- Marc Horne and the staff of the Massachusetts Office of Business Development
- Undersecretary Mark Fuller, Samantha Asker, Malia Allen, Peter Milano, Rory O’Hanlon, Assistant Secretary Juan Vega, Peter Larkin, William Ennen, and the staff of the Executive Office of Housing and Economic Development
- Michael Baldino, Jennifer Saubermann, and the staff of the Massachusetts Broadband Institute and the MassTech Collaborative
- Riley Ohlson of the Alliance for American Manufacturing
- John Killam and the staff of the Massachusetts Manufacturing Extension Partnership
- Chief Mike Wynn of the Pittsfield Police Department
- Mayor Roxann Wedegartner of the city of Greenfield

- Meghan Haggerty, Matt Bamonte, Cassandra Bligh, David Stokes, and the staff of the Massachusetts Department of Transportation
- Maria Pinaud, Kathleen Baskin, and the staff of the Massachusetts Department of Environmental Protection
- Nate Kennan and the staff of the Massachusetts Clean Water Trust
- Clete Kus and Thomas Matuszko of the Berkshire Regional Planning Commission
- John Robertson (now retired) and Ariela Lovett of the Massachusetts Municipal Association
- Bernadette DeBlander of the Massachusetts Department of Fish and Game's Division of Ecological Restoration
- Heather Butler, Town Administrator of the town of Buckland
- Kara Runsten and the staff of the Executive Office of Energy and Environmental Affairs

APPENDIX B—METHODOLOGY

Infrastructure development in Massachusetts is a highly complex topic, and to better understand the policy environment in which it exists, the Division of Local Mandates (DLM) undertook a review of numerous materials, conducted a survey and analysis of data, and interviewed more than two dozen people in the process of preparing this report.

Infrastructure Survey

In order to assess the cost and operational impacts of infrastructure development, DLM conducted a survey beginning in October 2020 to collect budgetary data and perceptions of infrastructure from municipal executives in the four westernmost counties of Massachusetts: Berkshire, Franklin, Hampden, and Hampshire Counties. We analyzed quantitative and qualitative data from survey responses by municipal executives across Western Massachusetts. Our survey asked a total of six main questions that were meant to assess the costs of municipal infrastructure maintenance and development, the size of municipalities' budgetary and staffing resources, and municipal executives' opinions on infrastructure resources and solutions. A copy of this survey can be viewed in [Appendix C](#), and summary statistics of the survey can be viewed in [Appendix D](#).

Infrastructure Cost Projections

Further methods were used to estimate the costs of infrastructure maintenance based on the sample data our survey collected. Our survey collected responses from 46 cities and towns, including the city of Springfield, which is by far the largest community in Western Massachusetts. Springfield is analyzed separately in a case study in [Appendix E](#). Projections in our survey were based on the population of our sample size of 45 communities and the population of Western Massachusetts as a whole. Towards the end of the drafting of this report, the US Census Bureau published figures relating to the 2020 decennial census. However, figures in this report are based on population estimates from the state Division of Local Services (DLS), which were readily available during the research and drafting of this report. 2019 5-year estimate US Census Bureau data was used in the creation of figures relating to the average and median age of geographic areas in Massachusetts. Among respondent communities, the population shifted by 2,302 people. For Western Massachusetts as a whole, the population change was 884 people based on comparisons of figures from DLS estimates and the 2020 decennial census. Owing to the small change, which changed response rates by not even one percentage point and did not significantly change projections, this report retains the usage of DLS population estimates that were available during drafting.

Public Safety Facility Projections

The total cost for repair and renovation of public safety facilities was estimated based on data from 45 respondent communities representing 41.09% of the population of Western Massachusetts. Among respondents, costs for repair and renovation of these facilities totaled \$16,720,549. By dividing this figure by 41.09%, DLM projects, based on population, that total repair and renovation costs of public safety facilities for Western Massachusetts could approach an estimated \$40,689,359.

Communications Facility Projections

The total cost for repair and renovation of communications facilities was estimated based on data from 45 respondent communities representing 41.09% of the population of Western Massachusetts. Among respondents, costs for repair and renovation of these facilities totaled \$2,500,000. By dividing this figure by 41.09%, DLM projects, based on population, that total repair and renovation costs of communications facilities for Western Massachusetts could approach an estimated \$6,083,735.

Public Works Projections

The total cost for repair and renovation of public works facilities was estimated based on data from 45 respondent communities representing 41.09% of the population of Western Massachusetts. Among respondents, costs for repair and renovation of these facilities totaled \$41,813,175. By dividing this figure by 41.09%, DLM projects, based on population, that total repair and renovation costs for Western Massachusetts of public works facilities could approach an estimated \$101,752,118. However, of the \$41,813,175 figure, \$30,000,000 came from one community, Great Barrington. When eliminating this outlier from the data, the total of repair and renovation for public works facilities among respondents is \$11,813,175. Excluding Great Barrington, respondent communities represent 38.99% of the population of Western Massachusetts. By dividing \$11,813,175 by this percentage, DLM projects a figure for total repair and renovation costs of the public works facilities of the 101 communities of Western Massachusetts to be \$30,300,133.

Administrative Building Projections

The total cost for repair and renovation of administrative buildings was estimated based on data from 45 respondent communities representing 41.09% of the population of Western Massachusetts. Among respondents, costs for repair and renovation of these facilities totaled \$25,195,900. By dividing this figure by 41.09%, DLM projects, based on population, that total repair and renovation costs of administrative facilities for Western Massachusetts could approach an estimated \$61,314,076.

Library Projections

The total cost for repair and renovation of libraries was estimated based on data from 45 respondent communities representing 41.09% of the population of Western Massachusetts. Among respondents,

costs for repair and renovation of these facilities totaled \$6,661,175. By dividing this figure by 41.09%, DLM projects, based on population, that total repair and renovation costs of library facilities for Western Massachusetts could approach an estimated \$16,209,931.

Council on Aging Building Projections

The total cost for repair and renovation of Council on Aging Buildings was estimated based on data from 45 respondent communities representing 41.09% of the population of Western Massachusetts. Among respondents, costs for repair and renovation of these facilities totaled \$161,675. By dividing this figure by 41.09%, DLM projects, based on population, that total repair and renovation costs of Council on Aging facilities for Western Massachusetts could approach an estimated \$393,435.

Other Buildings and Facilities Projections

The total cost for repair and renovation of other facilities was estimated based on data from 45 respondent communities representing 41.09% of the population of Western Massachusetts. Among respondents, costs for repair and renovation of these facilities totaled \$14,543,072. By dividing this figure by 41.09%, DLM projects, based on population, that total repair and renovation costs of these other facilities for Western Massachusetts could approach an estimated \$35,390,481.

Chapter 90 Program

Analysis of Chapter 90 Program data was based on fiscal year (FY) 2021 apportionment data for each municipality in the Commonwealth. This data was then manipulated to project apportionments at a funding level of \$200 million and \$300 million using the current Chapter 90 formula weights, as well as weights proposed by Rep. Pignatelli. We also received data from the Massachusetts Municipal Association's Chapter 90 Program survey, which, when using a state of good repair standard, provided a model to estimate total roadway maintenance costs. For figures on Chapter 90 dollars per roadway mile, information was sourced from the FY 2021 Chapter 90 Program apportionment. These figures were created by dividing the apportioned funds for a municipality by the roadway miles used in that year's formula.

Chapter 90 Program Funding Gap

In question 3c of the survey, we asked for data on the estimated funding gap for roadway maintenance. Among the 44 respondent communities, representing 40.98% of the population, the total estimated gap was \$31,044,000. By dividing this figure by 40.98%, DLM projects that for the entirety of Western Massachusetts, the gap could be as high as \$75,751,954.

Interviews

A large amount of quantitative and qualitative data used in this survey was collected from stakeholders in local, county, and state government. DLM used this data to illustrate issues arising from poor infrastructure, as well as to supplement the findings from our survey.

APPENDIX C—DRAFT SURVEY

Dear Chief Executive Officer:

You are being asked to respond to a survey offered by the Office of the State Auditor’s Division of Local Mandates (DLM) in regards to the costs of maintaining and operating municipal infrastructure and facilities in the four counties of Western Massachusetts. The responses to this survey will be used as part of a Municipal Impact Report to be prepared by DLM focused on the specific challenges of Western Massachusetts. It is hoped that this report will inform ongoing discussions regarding equitable economic and demographic growth in the Commonwealth. Please note that the responses to this survey are public information.

Name of Municipality:

Respondent Name:

Respondent Title:

Email:

Phone:

Number of full-time employees employed by municipality (not including schools):

Estimated annual municipal operating budget (Please use amount for last complete fiscal year, exclusive of school spending):

1. Does your municipality have a capital plan?
 - a. What is the time frame for this capital plan (e.g., 5 years, 10 years, etc.)?
 - b. Does your municipality follow the priorities laid out in the capital plan?
 - c. How much, as a percentage, does your municipality fund the capital plan in a given year?
 - d. On a scale of 1 to 5, how would you rate the impact of revenue loss from the COVID-19 pandemic on your ability to follow your capital plan?

1 – Not at All	2 – Low	3 - Moderate	4 - High	5 - Severe

- e. On a scale of 1 to 5, how would you rate the impact of uncertainty over local aid from the state budget on your ability to follow your capital plan?

1 – Not at All	2 – Low	3 - Moderate	4 - High	5 - Severe

- f. We are looking for annual estimated capital plan costs of repair, renovation, or replacement. Please provide an amount (\$) estimating your annual cost for infrastructure repair, renovation, or replacement for these categories:

Category	Repair	Renovation	Replacement
Administrative Buildings (e.g., town hall)			
Libraries			
Public Works Facilities			
Public Safety Buildings			
Communications Facilities			
Broadband Infrastructure (e.g., wires, equipment, etc.)			
Roadway infrastructure (e.g., roads, streetlights, sidewalks, etc.)			
Electric infrastructure exclusive of internet services (if municipally provided, e.g., TV services, electricity)			
Council on Aging Buildings			
Other Buildings or Facilities (exclusive of school facilities)			

2. For the following infrastructure categories, please provide a letter grade to rate your infrastructure (A, B, C, D, or F) and a brief explanation as to why you assigned that grade:

Category	Rating	Comments
Administrative Buildings (e.g., town hall)		
Libraries		
Public Works Facilities		
Public Safety Buildings		

Category	Rating	Comments
Communications Facilities		
Council on Aging Buildings		
Other Buildings or Facilities		

- 3a. What is the ratio between Chapter 90 state funds and local funds appropriated for roadway repairs (e.g., 50% state funds, 50% local funds)?
- b. What is the annual estimated cost of repairing and rebuilding local roads?
- c. What is the estimated gap between your annual spending on local roadway repairs/rebuild/replacement and the total needed spend for those repairs/rebuild/replacement? (e.g., You project \$100,000 annually for the total cost of needed roadway work, but you can only spend \$50,000 in a given year, so the gap is \$50,000.)
- d. Please assign a letter rating to the condition of roadways in your municipality (A, B, C, D, or F), and a brief explanation as to why you assigned that grade.
- e. Please provide an explanation why you assigned that letter grade.
4. What is the ability of your municipality to afford these aforementioned infrastructure expenses on the local level? Please assign this ability a number from 1 to 10, with 1 being not at all and 10 meaning your municipality can meet all infrastructure expenses.
5. Would a state agency similar to the Massachusetts School Building Authority, but focused on municipal infrastructure, be helpful for maintaining infrastructure in your municipality?
6. What other state relief could be implemented that would most assist your municipality in infrastructure maintenance? (e.g., direct appropriation, capital bonding, grants, etc.)

APPENDIX D—SUMMARY OF SURVEY RESULTS

Division of Local Mandates Survey: Local Cost Impacts of Necessary Maintenance and Replacements of Public Infrastructure in Western Massachusetts

Please note this summary does not include the response of the city of Springfield, as this municipality is a significant outlier and is analyzed separately in a case study in [Appendix E](#).

Total municipalities responding: 45

State population living in responding municipalities: 340,692 (41.09% of Western Massachusetts' 829,072 total population), which is an estimate from 2018¹⁷⁷

Approximate number of full time employees in respondent municipalities: 3964

Median number of employees in respondent municipalities: 15

Comments reproduced below are recorded verbatim from survey submissions.

Survey Results by Question

Q1: Does your municipality have a capital plan?

Yes: 24

No: 21

Q1a. What is the time frame for this capital plan?

Median time frame: 5 years

Q1b. Does your municipality follow the priorities laid out in the capital plan?

Yes: 24, almost all report being conditional on funding.

No/no answer: 21

Q1c. How much, as a percentage, does your municipality fund the capital plan in a given year?

Median percentage: 10%

Q1d. On a scale of 1 to 5, how would you rate the impact of revenue loss from the COVID-19 pandemic on your ability to follow your capital plan?

¹⁷⁷ DOR Income, EQV, and Population. Department of Revenue. 2020. Retrieved from: https://dlsgateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=DOR_Income_EQV_Per_Capita

Rating	Number of Responses
0/1	23
2	7
3	7
4	5
5	3

Q1e. On a scale of 1 to 5, how would you rate the impact of uncertainty over local aid from the state budget on your ability to follow your capital plan?

Rating	Number of Responses
0/1	22
2	0
3	9
4	10
5	4

Q1f. We are looking for annual estimated capital plan costs of repair, renovation or replacement. Please provide an amount (\$) estimating your annual cost for infrastructure repair, renovation, or replacement for these categories:

Category	Repair	Renovation	Replacement
Administrative Buildings (e.g., town hall)	Total: \$9,926,024 Average: \$220,578	Total: \$15,269,876 Average: \$339,331	Total: \$36,500,000 Average: \$9,125,000
Libraries	Total: \$759,175 Average: \$16,871	Total: \$5,902,000 Average: \$131,156	Total: \$75,000,007.70 Average: \$1,973,684.41
Public Works Facilities	Total: \$3,276,675 Average: \$72,815	Total: \$38,536,500 Average: \$856,367	Total: \$56,000,000 Average: \$1,400,000
Public Safety Buildings	Total: \$2,604,177 Average: \$57,871	Total: \$14,116,372 Average: \$313,697	Total: \$120,300,000 Average: \$3,251,351.35
Communications Facilities	Total: \$2,500,000 Average: \$55,5556	Total: \$1 Average: \$0.022	Total: \$0 Average: \$0
Broadband Infrastructure (e.g., wires, equipment)	Total: \$30,091,198 Average: \$668,693	Total: \$201,001 Average: \$4,467	Total: \$36,500,000 Average: \$7,300,000
Roadway Infrastructure (e.g., roads, streetlights, sidewalks)	Total: \$41,447,820 Average: \$921,063	Total: \$17,253,881 Average: \$383,420	Total: \$41,447,820 Average: \$921,062.67

Category	Repair	Renovation	Replacement
Electric Infrastructure Excluding Internet Services (if municipally provided, e.g., television services, electricity)	Total: \$0 Average: \$0	Total: \$25,000 Average: \$555.55	Total: \$0 Average: \$0
Council on Aging Buildings	Total: \$161,675 Average: \$3592.77	Total: \$0 Average: \$0	Total: \$44,506,000 Average: \$1,141,179.48
Other Buildings or Facilities (excluding school facilities)	Total: \$11,543,072 Average: \$256,513	Total: \$3,000,000 Average: \$66,667	Total: \$0 Average: \$0

Q2. For the following infrastructure categories, please provide a letter grade to rate your infrastructure (A, B, C, D, or F) and a brief explanation as to why you assigned that grade:

Category	Rating
Administrative Buildings (e.g., town hall)	A: 5, B: 8, C: 20, D: 11, F: 1
Libraries	A: 10, B: 10, C: 16, D: 3, F: 6
Public Works Facilities	A: 7, B: 10, C: 15, D: 11, F: 2
Public Safety Buildings	A: 6, B: 19, C: 7, D: 7, F: 6
Communications Facilities	A: 11, B: 6, C: 13, D: 3, F: 12
Council on Aging Buildings	A: 10, B: 12, C: 12, D: 1, F: 10
Other buildings or facilities	A: 5, B: 8, C: 9, D: 9, F: 14

Q3a. What is the ratio between Chapter 90 state funds and local funds appropriated for roadway repairs (e.g. 50% state funds, 50% local funds)?

Average split: 63% state, 37% local

Q3b. What is the annual estimated cost of repairing and rebuilding local roads?

Median cost: \$775,000

Total cost: \$42,919,000

Q3c. What is the estimated gap between your annual spending on local roadway repairs/rebuild/replacement and the total needed spend for those repairs/rebuild/replacement? (e.g., You project \$100,000 annually for the total cost of needed roadway work, but you can only spend \$50,000 in a given year, so the gap is \$50,000.)

Median gap: \$312,500

Total gap: \$31,044,000

Q3d. Please assign a letter rating to the condition of roadways in your municipality (A, B, C, D, or F), and a brief explanation as to why you assigned that grade.

Rating	Number of Responses
Blank	1
B	8
C	27
D	9

Q4. What is the ability of your municipality to afford these aforementioned infrastructure expenses on the local level? Please assign this ability a number from 1 to 10, with 1 being not at all and 10 meaning your municipality can meet all infrastructure expenses.

Rating	Number of Responses
0/1	16
2	10
3	6
4	5
5	4
6	2
7	1
8	1
9	0
10	0

Q5. Would a state agency similar to the Massachusetts School Building Authority, but focused on municipal infrastructure, be helpful for maintaining infrastructure in your municipality?

Municipality	Would a state agency similar to the Massachusetts School Building Authority, but focused on municipal infrastructure, be helpful for maintaining infrastructure in your municipality?
Adams	The fundamental problem in maintaining aging infrastructure in the Commonwealth is there simply is not enough local money available. Moreover, in many Western Massachusetts towns and cities, there is a lack of tax capacity to address this need – even if residents were willing to pay for it. When there is little or no growth in the tax base and no additional state or federal funds provided, there simply is no way to pay for the high cost to maintain and replace very old infrastructure. It is unclear how something like the State School Building Authority aimed at infrastructure will help, without associated dramatic amounts of associated funding. The Town of Adams is fully capable to expeditiously and professionally advance infrastructure projects. We do not need State assistance to perform that function; what we do need is significant increases in State financial assistance to enable us to address infrastructure needs.
Agawam	Any program that brings more funding to municipalities for roadway improvements and maintenance programs would be extremely helpful
Alford	Probably not. We are a very small town and get looked over on most State funded projects
Amherst	A State agency to help pay for some of the large infrastructure needs would be very helpful.
Ashfield	Would need the details of such a program
Becket	Yes
Bernardston	Yes.
Blandford	Definitely and my Highway Superintendent agrees.
Charlemont	Yes if it was to help with things like funding.
Chester	The question here is why wouldnt you expand DOT instead of creating a new agency. There is no reason why DOT cant handle this. The communities need the money not another state agency. And which ever way it goes, we need people versed in rural areas. A road in Boston, Worcester, Springfield, Pittsfield is honestly an easy fix. But work on a road that the elevation changes 1000ft from bottom to top, plus with curves, waterways, now that is the challenge. It really isnt hard to create a division in DOT with specialties depending on the district.
Chicopee	Yes, it would be very helpful as many buildings are not given the attention that they should to maintain them, sometimes until it becomes a safety risk. Also if there could be grant funds available like the MSBA that would be a major help!
Clarksburg	Yes
Colrain	Possibly
Conway	Probably not.
Cummington	No
Egremont	Not sure. A lack of people is not the problem - its a lack of available funds.
Granby	I WOULD NEED MORE DATA ON THE FUNDING AND STRUCTURE OF THE PROPOSED AGENCY. ADDITIONALLY, THE PROCESS FOR GETTING INTO THE PIPELINE WOULD NEED TO BE EXPLAINED. WHILE IT SOUNDS LIKE A GOOD IDEA, I HAVE CONCERNS OVER THE ACTUAL OPERATION OF THE AGENCY.
Great Barrington	No, we just need more money.

Municipality	Would a state agency similar to the Massachusetts School Building Authority, but focused on municipal infrastructure, be helpful for maintaining infrastructure in your municipality?
Greenfield	Absolutely! Massachusetts School Building Authority and the Massachusetts Board of Library Commission serve a very good purpose in helping fund schools and libraries. There absolutely should be one focused on the Public Safety sector of municipal government. As we have learned from fighting the COVID-19 pandemic, our public safety departments and structure serve a much greater function in our overall health and safety than just fighting fires and keeping our streets and residents safe from crime. They are the beating heart of safety for our entire infrastructure and residents. We had to locate our Emergency Operations Command Center in our Council on Aging/Community Center as our EOC in the 90 year old fire station could not be safely used for such a lengthy and overwhelming purpose. As for other municipal buildings (City Halls, Community Centers, etc.), specified assistance grants would be welcome.
Hadley	The Town feels MASS DOT could feel this role for the state.
Hampden	Yes.
Hawley	Very likely
Heath	Yes.
Hinsdale	No. The Mass School Building Authority recently led our regional school (the CBRSD) into a 30-year new high school, when enrollment was declining and four of seven towns voted against the plan. Here, the States School Building Authority model is not viewed as successful.
Leverett	yes, if they are willing to undertake small projects, i.e. under \$100,000, and the overhead paperwork is not too arduous.
Leyden	Possibly, except for mandates they may impose that are unfunded or not possible. Prevailing wage laws are sometimes outrageous as to the actual cost to build. In small towns the infrastructure is on a smaller scale and sometimes local labor could take care of the build/rebuild or repair at a cost that is much less than prevailing wage laws.
Montague	I think it is essential that structures such as MSBA, providing funding and technical expertise/planning, be considered for wastewater treatment, collection systems, and bridges. I think communities can do a good job with basic road repair and maintenance, though the limitations of Ch 90 and available local funds always leaves us falling a further step behind each year.
Monterey	I am not familiar with the MSBA so I can not say
North Adams	Helpful and absolutely necessary, especially for supporting capital investment in public safety facilities.
Northampton	Very much so.
Northfield	If it could help with funding. The state has tried the small bridge and culvert programs. They would be more helpful if they had more funding. It can cost \$50,000 - \$100,000 or more to just engineer and permit a good sized culvert - then it can cost hundreds of thousands more to actually build. There just isnt enough funding in these well meaning, competitive programs to fund all the needed infrastructure in Western Mass.
Otis	Yes

Municipality	Would a state agency similar to the Massachusetts School Building Authority, but focused on municipal infrastructure, be helpful for maintaining infrastructure in your municipality?
Peru	Not sure how to answer that question. It comes down to funding, and I am not sure another state agency is the answer. The Governor and Legislature have to provide more funding to small rural towns to maintain their roadways. It comes down to funding, and we have been stuck on 200 million for Chapter 90 for to many years. We dont get adequate payment for state owned land, we have to provide transportation & tuition for vocational education, because the regional school district doesnt provide it. There is a unfunded mandate for you! We finally designated one vocational school instead of two to cut transportation cost in half, but tuition & transportation for 9 children 220,000!
Pittsfield	YES..especially in the are of public safety buildings. The estimate cost of out new police station is \$50 million which is way beyond our ability to fund that locally.
Plainfield	MassDOT (District 1) and MassWorks are two agencies already working with state funding for infrastructure. Adding another might add unnecessary hurdles to the processes already in place. However, any new agency should work closely with MassDOT district offices.
Richmond	No
Savoy	This May Work? Mass DOT needs some independent body to oversee thier projects and decisions. Someone to anwser to. They beat to their own drum.
South Hadley	We do as much as we can but doing all the work needed in unaffordable
Southwick	yes very much so since mass dot does not plan for helping towns.
Stockbridge	Yes.
Ware	If funded, absolutely.
Warwick	Perhaps but my expeniernce with MSBA is they make things more expensive. If the entity envisioned provided grants / loans for highways based on infrastructure conditions and financial need that might help.
Washington	Yes!
Whately	Possibly, so long as the process for accessing these funds is not cumbersome and time consuming; however, this may provide a disincentive for towns to carry out preventative maintenance with town funds and just wait until the state comes in with funds to replace the infrastructure when it gets too bad. Any new program needs to require communities to show good faith efforts at maintenance before accessing funds.
Windsor	Yes

* These answers are quoted directly from survey responses and are not edited.

Q6. What other state relief could be implemented that would most assist your municipality in infrastructure maintenance? (e.g., direct appropriation, capital bonding, grants etc.)

Municipality	What other state relief could be implemented that would most assist your municipality in infrastructure maintenance (e.g., direct appropriation, capital bonding, grants, etc.)?*
Adams	Grants - We would recommend a significant expansion of the existing Small Town Rural Assistance Program (STRAP) within the MassWorks Infrastructure Program to help address the needs of municipalities. Raising STRAP's population threshold (currently communities 7,000 or less in population) to 20,000 and more aggressively funding the program could be a huge help to many more small municipalities (our population is 8,400 so STRAP is never an option for us). Broaden the focus of the MassWorks program on general transportation improvements so that the Commonwealth is not just assisting private developers to complete projects that they would likely do anyway. Maintaining a municipalities infrastructure overall is critical to economic development objectives.
Agawam	Any form off state relief that could increase the funding available to municipalities for infrastructure maintenance would be useful. Increasing funding to Chapter 90 would have the most immediate and useful impact. Increasing TIP funding would allow more regional significant projects to be funded annually. this would reduce the time municipalities have to wait for larger infrastructure projects to be completed.
Alford	Direct appropriation.
Amherst	A program similar to Chapter 90 but more flexible to be used on all municipal infrastructure would be easy to administer and allow municipalities to use the money where it is needed most. Low or no interest loans for certain municipal infrastructure projects.
Ashfield	Small Bridge and Culvert Replacement grants
Becket	More chapter 90 funding. Having to wait 2-3 years to \
Bernardston	We find that the reduction or outright elimination of prevailing wage demands would be beneficial. Bernardston is strapped enough and our ability to afford even the most basic maintenance is often impossibly expensive for us. Elimination of prevailing wage restrictions would free us to hire contractors at a significantly more reasonable rate, thus giving us the ability to utilize a better overall road maintenance plan.
Blandford	Grants are always good. Also, a much more equitable formula for distribution of Chapter 90 for small towns.
Charlemont	Funding is a big issue for a town of our size, we have more bridges (42) and road miles than we are able to financially keep up with. The last few years we have been trying to get projects done through some advanced planning and grants we were able to obtain, but any help in funding would be a relief.
Chester	Grants , direct appropriation, anything that would help us out. In Chester our school budget is going to be over \$2million, my town budget at roughly \$1.6million , we cant catch up.
Chicopee	All of the above....
Clarksburg	Increase appropriations (chapter 90) and make grant programs on a county basis. We are competing with both towns across the state and our area towns; yes we do have the opportunity to submit for some grants with a neighboring town, but why cant the northern berkshires have xx amount of dollars available, split between the towns in that county so we arent competing with the entire state simply because of the size of our town. Another option, if infrastructure improvements are needed for Emergency Operations Center, if 3 towns in a nearby area all need Police/Fire and/or DPW facility improvements, why not have (a county) facility(ies) that serve those 3 towns. I realize MOUs and/or Agreements etc must be in place and its not a simple solution.

Municipality	What other state relief could be implemented that would most assist your municipality in infrastructure maintenance (e.g., direct appropriation, capital bonding, grants, etc.)?*
Colrain	exemption from prevailing wage rates, reduced permitting requirements and fees, large scale projects that incorporate multiple municipalities.
Conway	Expanding MassWorks to include infrastructure not tied directly to immediate economic development would help. For small towns, including non-road infrastructure in the STRAP grant program would help tremendously, though the \$1M limit is obsolete and should be raised.
Cummington	Direct appropriation, capital bonding and grants are all great and would be appreciated. Also, gas taxes collected should be used for their original purpose: to maintain our roads.
Egremont	Increase Chapter 90 funds. Remove economic development component from many of the infrastructure grants.
Granby	WE HAVE HAD CAPITAL PROJECTS INCLUDED IN PAST CAPITAL BILLS. WHILE IT IS A FEEL GOOD EXERCISE, IT NEVER GETS FUNDING APPROVED BY THE GOVERNOR. GRANTS, DIRECT APPROPRIATIONS WOULD BE APPRECIATED BUT THE FUNDING OF THESE WOULD HAVE TO BE IDENTIFIED AND COMMITTED TO. TOO MANY TIMES IN THE PAST HAS A PROGRAM STARTED ONLY TO BE ABANDONED DUE TO LACK OF REVENUES TO FUND THEM.
Great Barrington	More Chap 90 funding , Massworks Grants, and TIP funding.
Greenfield	We attempt to utilize all of the above examples and have met with some degree of success in recent years due to due diligence on the part of the Executive Branch of the City and our State Legislators. Earmarks in bond bills tend to be a bit short of a joke on municipalities.
Hadley	Increase in Chapter 90 funds and state grants from MASS DOT, MASS DEP, DCR, ETC.
Hampden	A special local aid allocation for regionalization of services.
Hawley	Direct appropriation and grants (which require minimal staff time for application and reporting). Our full time employees are our treasurer and 2 highway staff. Our administrative staff of 1 person (excluding the Town Clerk) works 17 hours a week.
Heath	Greater amount of Ch. 90 funds, capital bonding, grants for equipment.
Hinsdale	A better model might be something more akin to the Franklin Regional County of Governments procurement office. Each time I call their office for help or advice, they deliver. They listen to the problem and help or put me in touch with someone who can get things done. We need a county-wide culvert and bridge replacement program, with some central oversight, working with all the county towns, and prioritizing the needs, funding, and priorities. Wed be happy to wait so that a bridge in North Adams or Sheffield gets repaired ahead of one in Hinsdale if we knew ours were going to get done in a year or two. The time and energy we all spent planning for and trying to secure a large grant, and the \$15-20K we each spend on all the different engineering needed to apply, makes it almost impossible for a small town to keep up. We should have several County engineers on retainer or staff, rather than pay so much project by project, town by town. The entire process needs to be examined and redesigned to be more efficient, productive, and cost-effective. (Sorry, you asked!)

Municipality	What other state relief could be implemented that would most assist your municipality in infrastructure maintenance (e.g., direct appropriation, capital bonding, grants, etc.)?*
Leverett	the old STRAP program (which has been enfolded into massworks) could be recreated just for small town road projects and funded, the small bridge program restrictions could be loosened so that more bridge repairs would qualify for it. grant funds (vs. loans) for municipal building and infrastructure projects could be made available. we have a \$3 million water construction project that is only eligible for loan support right now and construction projects on buildings, such as new roofs or new heating systems would be completed before they fail if grant funds were available. I am not sure why you have excluded the schools, since their infrastructure problems become those of the towns to figure out how to fund and finance and they are 2/3 of our budget and expenses.
Leyden	Grants - there should be accountability. Direct appropriation could be used in a wasteful manner unless there was a mechanism for reporting. I think grants makes departments prioritize what needs to be done. looking back at the homeland security money that was given to municipalities years ago it was spent in a wasteful manner.
Montague	Wastewater treatment and collection systems represent MASSIVE liability from an environmental and financial perspective. Small user base that is not expanding makes needed investment close to implausible. With a 1:3 debt to operating budget ratio, it must be grants. A well-funded and strategic bridge investment program is long overdue. The cost of engineering and complying with design requirements makes even a single bridge project a
Monterey	More chapter 90 funds, grants
North Adams	Permanently increased funding of Chapter 90 to at least \$300 million; multi-year chapter 90 allocations; more funding for dam, bridge, culvert, flood control systems; dedicated funding mechanism for IT infrastructure (e.g., a Chapter 90 for IT and cybersecurity).
Northampton	Direct appropriation. We have no problem bonding - we have a AAA bond rating. Direct appropriations would allow us to do more and borrow less.
Northfield	See answer to #5 above. Also help with the costs of engineering and bidding.
Otis	Unsure at this time
Peru	More funding for schools. We pay over 65 percent of the town annual budget on schools. It isnt sustainable! We have a very high tax rate because we have almost no businesses (commercial or industrial) We have only 815 people, mostly elderly, only 400 homes, with a significant number being trailers, so the actual real estate value is low, and it is a detriment to someone wanting to build a new home in this town, because the tax rate is high because of the cost of schools. It isnt a pretty picture! and now we are building a new high school which will increase taxes more! We need help! We also need to upgrade the town office building, the library is in terrible condition, and we have limited funds to just operate the town on yearly basis.
Pittsfield	direct grants
Plainfield	All of the above might work, but experience has shown that consistency in the application and reporting processes for any/all grants, etc. is a necessity.
Richmond	raise the transportation bond percentage to focus more on small towns. Especially those with out the use of public transportation.

Municipality	What other state relief could be implemented that would most assist your municipality in infrastructure maintenance (e.g., direct appropriation, capital bonding, grants, etc.)?*
Savoy	Less red tape in obtaining funds, small communities under 2,500 residents should have reduced requirements from larger ones. Generally increased funding for the DCR would help Savoy, possibly for a roads program along State Forest land. Increased recognition at the state level of the need to protect undeveloped areas in the state for the environmental benefits they provide like clean air and water thru increased funding of state land. Massachusetts is not very big, not making more land. The underfunding of state owned land can make folks bitter towards DCR and state owned land.
South Hadley	Sewer infrastructure, especially in older sections of town, sidewalks (more people are seeking pedestrian ways), parks
Southwick	all other sources would be great. direct federal dollars like in the 1960 and 1970.
Stockbridge	zero interest loans, more grants, direct appropriation.
Ware	Grants for water/sewer. Increase the Chapter 90 pool to \$300 million. Flexibility on the small bridges program participation
Warwick	\$6M statewide for STRAP is WAY TOO LITTLE FUNDING>
Washington	Direct appropriation with a long-term budget guarantee.
Whately	Financial assistance with culvert replacement. The new stream crossing standards make it extremely expensive to replace culverts. In the past, culverts could be replaced within a day... now it takes months and tens of thousands of dollars between design, permitting and construction for open bottomed culverts.
Windsor	Grants: STRAP, MVP PILOT - changes to this policy,. Direct appropriation - similar to Ch90

* These answers are quoted directly from survey responses and are not edited.

APPENDIX E—CASE STUDY: CITY OF SPRINGFIELD

The city of Springfield is the third largest municipality in the Commonwealth¹⁷⁸ and is largely an anomaly amongst the communities of Western Massachusetts. As detailed in the main report, communities in the western region of the state are mostly small and dispersed,¹⁷⁹ whereas Springfield is a large urban center with some demographic differences. Survey data from Springfield and discussions with officials from other western communities reveal that the largest city in the region also faces common infrastructure issues that were identified in this report, such as older facilities in need of repairs, deteriorating roadways and a reliance on Chapter 90 Program funds, and expensive design requirements for larger projects requiring state approval.¹⁸⁰ As 1 in 6 people in Western Massachusetts live in Springfield,¹⁸¹ the challenges the city faces concerning infrastructure are many times larger than those of other communities in the area.

Demographics

With a population of around 155,000 people, Springfield is almost three times larger than the second largest community in this region, Chicopee.¹⁸² Unlike most of Western Massachusetts, where communities are more likely to have aging residents, Springfield is the opposite; the median age in Springfield is 33.4 years of age, lower than the Hampden County average of 45.5 years, which contains the city of Springfield. It is also lower than the other western county average ages: Hampshire County at 47.9 years, Franklin County at 50.2 years, and Berkshire County at 51.8 years.¹⁸³ As other western

¹⁷⁸ 2019 5-Year Estimates, American Community Survey. US Census Bureau. 2020. Retrieved from <https://data.census.gov/cedsci/table?q=age%20county%20sub%20divisions%20massachusetts&g=0400000US25.060000&tid=ACST5Y2019.S0101&tp=true&hidePreview=true>

¹⁷⁹ See the “Small, Dispersed Communities” section of this report.

¹⁸⁰ Division of Local Mandates (DLM) survey results. On file with DLM. See [Appendix C](#) for a copy of the survey instrument and [Appendix D](#) for a summary of all survey results.

¹⁸¹ DOR Income, EQV, and Population. Department of Revenue. 2020. Retrieved from: https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=DOR_Income_EQV_Per_Capita

¹⁸² DOR Income, EQV, and Population. Department of Revenue. 2020. Retrieved from: https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=DOR_Income_EQV_Per_Capita

¹⁸³ 2019 5-Year Estimates, American Community Survey. US Census Bureau. 2020. Retrieved from <https://data.census.gov/cedsci/table?q=age%20county%20sub%20divisions%20massachusetts&g=0400000US25.060000&tid=ACST5Y2019.S0101&tp=true&hidePreview=true>; 2019 5-Year Estimates, American Community Survey. US Census Bureau. 2020. Retrieved from <https://data.census.gov/cedsci/table?q=age%20county%20sub%20divisions%20massachusetts&g=0400000US25.060000&tid=ACST5Y2019.S0101&tp=true&hidePreview=true>

communities saw a loss in school-aged children, Springfield saw a growth of 5.6% in its enrollment numbers between the 2011–2012 and 2018–2019 school years.¹⁸⁴

However, Springfield has seen some slight population loss similar to other Western Massachusetts communities. Between 2010 and 2020, Springfield’s labor force shrunk by 6.44%.¹⁸⁵ Over the same period, its population shrunk by 489 people or 0.3%, a relatively small loss compared to other communities in the region.¹⁸⁶ As a result of these demographic trends, Springfield has been able to avoid some of the infrastructure concerns that smaller towns encounter.

Infrastructure Issues

Like other communities in Western Massachusetts, Springfield has a large amount of road mileage to maintain but not enough funds to meet this obligation. The city has over 1,110 lane miles, and it estimates that it would need \$12–15 million per year to adequately maintain its roads, with a goal of resurfacing roadways every 20 years.¹⁸⁷ However, for roadway maintenance, the city relies *entirely* on Chapter 90 Program funding from the state, which provides only \$3.6 million per year. Only seven other communities in Western Massachusetts rely on Chapter 90 Program funding for greater than 90% of their road budget, and only two others rely entirely on Chapter 90.¹⁸⁸ The city assigned a D rating to the condition of its roadways, reflecting the lack of resources available for upkeep of the many roadway miles.

Compounding issues around transportation infrastructure are the expensive design requirements to undertake certain projects. Springfield noted¹⁸⁹ that, with the Massachusetts Department of Transportation,

A project usually takes 7 years from concept to final construction and places an undue burden on the community with the funds for the design portion that with recently modified rules and regulations cause municipalities to spend 25-35% of the construction cost out of pocket.

¹⁸⁴ *School Attending Children Report*. Massachusetts Department of Elementary and Secondary Education. 2020. Retrieved from <https://profiles.doe.mass.edu/statereport/schoolattendingchildren.aspx>

¹⁸⁵ *DOR Labor Force/ Unemployment*. Division of Local Services. 2021. Retrieved from <https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=Dashboard.TrendAnalysisReports.LaborForce>

¹⁸⁶ DOR Income, EQV, and Population. Department of Revenue. 2020. Retrieved from: https://dls.gateway.dor.state.ma.us/reports/rdPage.aspx?rdReport=DOR_Income_EQV_Per_Capita

¹⁸⁷ DLM survey results. On file with DLM. See [Appendix C](#) for a copy of the survey instrument and [Appendix D](#) for all survey results.

¹⁸⁸ See [Finding 1](#).

¹⁸⁹ DLM survey results. On file with DLM. See [Appendix C](#) for a copy of the survey instrument and [Appendix D](#) for all survey results.

In contrast to its experience with this program, Springfield noted that MassWorks has been a success for them and that, among state aid options, a “direct appropriation to [Springfield] would be most desirable allowing for the most flexibility.”¹⁹⁰

Even with more state aid, Springfield would still have a large price tag associated with its municipal infrastructure. In terms of municipal buildings, Springfield noted that most of its facilities are in need of repair. The city does have some new facilities, such as a modern communications facility and some Council on Aging buildings. However, other buildings are in need of extensive repair or replacement. Although fire facilities are noted to be in good condition, the police facility is in “horrible condition,” according to the city. Public works garages have “no indoor area to store vehicles,” and administrative buildings need updates such as roof, door, and window replacements, as well as heating, ventilation, and air conditioning improvements. Springfield also has numerous library facilities, and these are in a wide array of conditions.

The average grade Springfield gave in our survey to its municipal buildings was a C, with public safety and public works buildings receiving D grades, and the new communications facility receiving an A. Estimated total replacement costs by the City for these facilities total \$580 million, while total annual repair and renovation is estimated to cost around \$310 million. However, Springfield rated its ability to afford these infrastructure expenses at a 1, meaning “not at all.”¹⁹¹ Compounding the issue of limited resources are an uncertain local aid picture and the impact of the 2019 coronavirus pandemic on municipal finances, which Springfield highlighted as sources of concern. Overall, the city shares many financial and facilities concerns with other communities in Western Massachusetts, most notably an inability to provide necessary maintenance to aging or small facilities that do not serve modern municipal needs.

¹⁹⁰ DLM survey results. On file with DLM. See [Appendix C](#) for a copy of the survey instrument and [Appendix D](#) for survey results.

¹⁹¹ DLM survey results. On file with DLM. See [Appendix C](#) for a copy of the survey instrument and [Appendix D](#) for survey results.

APPENDIX F—THE MASSACHUSETTS BOARD OF LIBRARY COMMISSIONERS NEEDS FACTOR CALCULATION

According to Massachusetts Board of Library Commissioners (MBLC), the need factor is a percentage used to calculate additional grant money to be awarded to a municipality, based on comparative need as expressed in income per capita and EQV (equalized property value) per capita data. A grant for the municipality with the highest need factor (or combined rank) will receive an addition of 15% to its base award, while those municipalities with a lower need factor will receive correspondingly less on a sliding scale. The combined factor will be calculated by adding the EQV per capita rank and the income per capita rank as available from the Department of Revenue (DOR). The combined factor is then compared to the greatest combined rank as a ratio, resulting in the combined percentage. The need factor is then determined by multiplying the combined percentage by 15%. The resulting percentage will be used to increase the formula-based grant award for a construction project in that municipality.

The following is an example from the 2016–2017 grant round as provided by MBLC. The communities and their associated ranks for income per capita and EQV per capita are combined and then compared to the greatest combined rank as a ratio. This is then multiplied by 15% to find the increase. In this grant round, Newton had the lowest need-factor, while Springfield had the highest. Springfield's amount would have been boosted by 14.94% based on its calculated percentage.

Figure 22—MBLC Need Factor Calculation Example

DOR Code	Municipality	Income Rank	EQV Rank	Combined Rank	Need Factor: Combined Rank / Highest Combined Rank	Need Factor Percentage of Grant at +15%
207	Newton	9	54	63	0.09025788	1.35%
281	Springfield	345	350	695	0.995702006	14.94%

APPENDIX G—LEGISLATION TO ESTABLISH PUBLIC INFRASTRUCTURE AUTHORITIES

Legislatio	Sponsor	Summary	Source
S.1343	State Sen. Edward Kennedy	This legislation would create a municipal building authority modeled on the Massachusetts School Building Authority (MSBA). The authority would oversee programs to assist the construction of municipal facilities (excluding public safety buildings). The authority shall have the Treasurer as its chair, as well as a representative of the Massachusetts Municipal Association, and four additional members appointed by the Treasurer—two will have practical experience in public building construction, and two will be in the municipal management field with knowledge of facility needs	https://malegislature.gov/Bills/192/S1343
S.1601	State Sen. Edward Kennedy	This legislation would create a public safety building authority that is also modeled on MSBA. This authority would be separate from the municipal building authority Sen. Kennedy proposed in S.1343. It would oversee building programs to assist with police and fire stations and other public safety facilities. The State Treasurer would be the chair, and the authority would also consist of the Secretary of Administration and Finance, the Secretary of Public Safety and Security, and four members appointed by the Treasurer, two of whom have practical experience in public safety	https://malegislature.gov/Bills/192/S1601
S.2125	State Sen. Walter Timilty	This legislation has the same effect as S.1601.	https://malegislature.gov/Bills/192/S2125
S.1542	State Sen. Mike Brady	This legislation has the same effect as S.1601. However, the board of the new authority is slightly different. Instead of four additional members to be appointed by the Treasurer, there are six. Three of these shall have practical experience in public safety construction, one shall be from law enforcement, one from firefighting, and one from emergency medical services (EMS). There is also language	https://malegislature.gov/Bills/192/S1542

Legislatio	Sponsor	Summary	Source
S.2457/ H. 3821	State Sen. Joanne Comerford / State Rep. Natalie Blais	This legislation would create a municipal and public safety building authority, which would oversee a program of construction for municipal facilities, including, but not limited to, public safety facilities. The authority shall have the Treasurer as its chair, as well as the Secretary of Administration and Finance, the Secretary of Public Safety and Security, and five members appointed by the Treasurer. Of these five, two shall have practical experience in public safety and municipal facilities construction, one shall be a serving or former municipal official, one from the field of law enforcement, and one from the field of	https://malegislature.gov/Bills/192/S2457
H. 3186	State Rep. Patrick Kearney	This legislation would create a special commission to investigate and study the feasibility of establishing a municipal building finance authority. This commission would identify state and private funding sources, assess financing approaches for municipal buildings, and determine specific powers of such an authority. It shall be composed of 13 members: 2 members of the Senate appointed by the Senate President; 2 members of the House of Representatives appointed by the Speaker of the House; 1 member of the Senate and 1 member of the House of Representatives appointed by the minority leader of each; the State Treasurer or a designee, the Secretary of Administration and Finance or a designee, the Secretary of Public Safety and Security or a designee, the Secretary of Elder Affairs or a designee, the Secretary of Housing and Economic Development or a designee; the executive director of MSBA or a designee, and a	https://malegislature.gov/Bills/192/H3186

APPENDIX H—TABLE OF FUNDING SOURCES AND ELIGIBILITY

Program	Eligibility	Annual Funding	Distribution	Adequacy / Notes
Chapter 90	All communities	\$200,000,000	State reimbursement	Many small towns feel it is inadequate because of the weights of the program
Community Development Block Grants (CDBG)	Communities with a population of under 50,000 that do not receive CDBG funds directly from the	Variable dependent on federally defined demographic characteristics. In	Grants	The program is federally funded and is provided to eligible small cities and midsize towns, as administered by the state.
Culvert Replacement Municipal Assistance Grant	All communities. Eligible projects must be a culvert or bridge replacement on a public way, owned and maintained by the applying municipality,	Variable. The last funding round provided \$809,880.	Grants	This project is relatively popular in Western Massachusetts because of the large numbers of culverts and bridges there. However, funding is small in comparison to the need.
Federal Transportation Improvement Program	All communities	Project dependent	Metropolitan planning organizations develop a TIP project list and distribute funds	These projects require significant buy-in from communities at the planning and design stages. This requirement is a significant barrier to small communities
Massachusetts Board of Library Commissioners Grants	All communities	\$20,000,000 granted each year. Projects that are LEED certified or in disadvantaged	Grants	This program has a waitlist of 33 projects, which are completed at a rate of 1–2 per year.
Massachusetts Board of Library Commissioners—Small	All communities with a town under 2,000 population	Variable	Grants	This is unknown as it has not started. The aim is to deploy it over the next two years.
Massachusetts Broadband Institute (MBI)	Underserved or unserved communities as determined by MBI	Variable as it is a public-private partnership with public bonds and	Project dependent	The long term success is unknown because of the young age of the program.
Massachusetts Historical Commission Survey and	All communities	Variable and dependent on federal budget allocation	Grants representing 10% of federal funds must be	This program is relatively narrow and adequacy depends on project eligibility and federal funds.

Program	Eligibility	Annual Funding	Distribution	Adequacy / Notes
Massachusetts Historical Commission Preservation	All communities. This grant is a 50% reimbursable matching grant.	Approximately \$800,000	Grants	This program is subject to reauthorization of capital accounts and the availability of sufficient funds.
Massachusetts School Building Authority (MSBA)	All school districts. This is a cost sharing-arrangement between municipalities and MSBA, so some	Funded by 1 cent of the sales tax. In FY 2021, this was approximately \$860,000,000. This	Reimbursement for eligible project costs	This program is extremely popular. Currently MSBA receives approximately 100 applications in a year, and in a year MSBA takes on about
MassWorks	All community projects that grow jobs or	Bond cap set at \$100,000,000	Grants	This is a stressed resource because of increased
Municipal Pavement Program	All communities	Bond cap set at \$100 million. Funded in FY 2022 at \$15 million.	Grants and partnerships between the Massachusetts Department of Transportation	This program is new and demand is unknown.
Municipal Small Bridge Program	All communities with projects impacting bridges with spans	\$50,000,000 over 5 years. Each municipality can	Reimbursement s up to 100% of total design	This program was reauthorized with a bond cap of \$95 million and will be
Municipal Vulnerability Preparedness Program—Planning Grant	All communities. An in-kind staff time match is required of municipalities.	Variable; was created through executive order and is funded by the Executive	Variable; in the most recent grant round, \$644,500 was awarded.	Most communities have accessed and completed planning grants. Future adequacy is dependent on funding and demand.
Municipal Vulnerability Preparedness Program—Action Grant	All communities. A local match of 25% of project costs in cash or in-kind contributions is required.	Variable; was created through executive order and is funded by the Executive Office of Energy and Environmental	Variable; in the most recent grant round, \$20,585,193 was awarded.	Stressed resource because of variable funding and increased demand.
Qualified Bond Program	All communities	N/A	A community issues bonds under the state's borrowing	Dependent on community finances.
State-Numbered Road Program	Communities with locally-owned portions of state-numbered routes that do not	Bond cap set at \$100M. Funded in FY22 at \$30M.	Grants and partnerships between MassDOT and	Program is new and demand is unknown.

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Program	Eligibility	Annual Funding	Distribution	Adequacy / Notes
STRAP Program	Communities with population of 7,000 or less based on the decennial census.	Target spending set at 10% of MassWorks spending. Limited to \$1,000,000 per project; joint	Grants	Stressed resource because of limited funding and high demand.

APPENDIX I—PROPOSED PASSENGER RAIL PROGRAMS

In response to transportation conditions, there are two notable railway programs that have been proposed. The first of these is the East-West Rail Project, which aims to connect Boston to Springfield across a 151 mile passenger-rail corridor.¹⁹² The East-West Rail Study, which was completed by the Massachusetts Department of Transportation (MassDOT) in 2020, considered six potential ways to complete a passenger rail corridor, involving different methods such as upgrading rail tracks, bus service from Pittsfield to Springfield, and using the I-90 corridor. The report eventually narrowed in on three final alternatives that would provide Springfield to Boston service in under two hours and service from Pittsfield to Boston in approximately three hours.¹⁹³ Overall, the cost for such a project could be between \$2 billion and \$5 billion.¹⁹⁴ Even though there is a large price tag, there is support for the project among federal, state, and local officials in Western Massachusetts.¹⁹⁵

Another rail project focused on Western Massachusetts is the Northern Tier Rail Project, which aims to connect Boston to Greenfield and North Adams via passenger rail service. This project is likely to begin study in 2021.¹⁹⁶

These projects are shown in Figure 23 below with the Northern Tier project, currently being studied by MassDOT,¹⁹⁷ highlighted in yellow running from Boston to North Adams and the East-West rail corridor in green and framed by red running from Boston to Pittsfield.¹⁹⁸ There are also ongoing discussions at the federal level to invest \$22 billion in grants to Amtrak, \$24 billion to modernize Northeast Corridor railways, and \$12 billion for intercity rail service¹⁹⁹ that could potentially benefit a host of projects in Massachusetts relative to transportation.

¹⁹² *East-West Passenger Rail Study*. MassDOT. 2020. Retrieved from: <https://www.mass.gov/doc/chapter-1-executive-summary-0/download>

¹⁹³ *Id.*

¹⁹⁴ *Id.*

¹⁹⁵ *East-west passenger rail boosters see converging opportunities for Springfield, but doubts remain about state's commitments*. Jim Kennedy, The Springfield Republican. 2020. Retrieved from: <https://www.masslive.com/business/2020/11/east-west-passenger-rail-boosters-see-converging-opportunities-for-springfield-but-doubts-remain-about-states-commitments.html>

¹⁹⁶ Email from Sen. Joanne Comerford, January 20, 2021. On file with the Division of Local Mandates.

¹⁹⁷ *Scope of Work: Northern Tier Passenger Rail Study*. MassDOT. 2021. Retrieved from: https://trainsinthevalley.org/wp-content/uploads/2021/03/2021NTPRS_Scope-1.pdf

¹⁹⁸ *Northern Tier Rail Study*. Trains in the Valley. 2020. Retrieved from: <https://i2.wp.com/trainsinthevalley.org/wp-content/uploads/2019/05/northern-tier-rail-corridor-map-e1557945346165.jpg?ssl=1>

¹⁹⁹ *FACT SHEET: Historic Bipartisan Infrastructure Deal*. The White House. 2021. Retrieved from: <https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/28/fact-sheet-historic-bipartisan-infrastructure-deal/>

Figure 23—East-West Rail and Northern Tier Rail Corridors

