MBTA Sources of Community Value

June 2024

BOSTON REGION MPO
METROPOLITAN PLANNING ORGANIZATION

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Section 1—Summary

In the wake of the COVID-19 pandemic, many transit agencies are facing significant budgetary challenges due to decreased fare revenue. The Massachusetts Bay Transportation Authority (MBTA) is expected to face an annual operating budget deficit of $600–700 million or more beyond state fiscal year (FY) 2025.[1] To better understand some potential solutions to this funding gap, the MBTA engaged the Central Transportation Planning Staff (CTPS) to the Boston Region Metropolitan Planning Organization to carry out a review of potential funding strategies.

CTPS worked with the MBTA to select 10 revenue strategies based on research of peer agencies conducted by the MBTA and presented to the MBTA Board of Directors in September 2022.[2] After identifying the 10 revenue strategies (Table 1), CTPS estimated the potential revenue each strategy could generate in the Boston region context. The MBTA then selected the six strategies with the highest estimated revenue for further analysis. CTPS refined the revenue estimates for these six strategies and evaluated various scenarios to provide a range of potential revenue outcomes.

This analysis was based on the best available data for Massachusetts and the experiences of peer agencies.

Table 1
Revenue Strategies Considered and Estimated Annual Revenue

Category	Strategy	Estimated Revenue
Vehicle access	Motor vehicle excise or registration fee	$33–570 million
	Gas tax	$22–356 million
	Vehicle rental tax	$6–10 million
Road usage	Increased highway tolling	$22–80 million
	Congestion pricing	$220–440 million
	High-occupancy toll lanes	$7.5 million
	Automated bus lane enforcement	$2–7 million
Value generated by transit	Transit-oriented development value capture	$25–85 million
	Sales, meals, and room occupancy taxes	$30–335 million
	District improvement financing	$2–11 million

Source: Central Transportation Planning Staff.

Section 2—Introduction

Transit agencies across the United States face significant financial challenges in the wake of the COVID-19 pandemic. Due to the increased popularity of hybrid work and working from home, fewer people are making five-day, peak-hour commutes, leading to significantly reduced ridership and fare revenue for many transit agencies. Fare revenue comprises a significant portion of most transit agencies' budgets, including that of the Massachusetts Bay Transportation Authority (MBTA). Prior to the pandemic, the MBTA financed 31 percent of its operating budget through fare revenue.[3] In the current state fiscal year (FY) 2024, fares are expected to cover just 15 percent of the agency's operating budget.[4]

Since March 2020, the MBTA has relied on one-time federal funding to cover its operating deficit and fund capital projects. This assistance will be exhausted in FY 2024. Beyond FY 2024, the MBTA is facing a potential budget shortfall of $600–700 million or more, often referred to as the "fiscal cliff."[5] One way to address this challenge is to understand the potential impact of altering existing revenue streams or implementing new funding strategies.

In February 2023, the MBTA requested that the Central Transportation Planning Staff (CTPS) evaluate the revenue potential of several funding strategies. This briefing presents an overview of the primary existing MBTA revenue sources, followed by evaluations of 10 strategies for their potential to raise revenue in the Boston region context. These strategies include modifications to existing revenue sources within the Commonwealth as well as new revenue sources that were identified based on strategies implemented by other agencies domestically or internationally.

Section 3—Existing MBTA Revenue Sources

Before 2000, the Massachusetts Bay Transportation Authority (MBTA) had no dedicated funding source from the state government. The net cost of operating the system (system operating expenses plus debt service minus fare and own-source revenue) was reported to the state legislature, which funded the agency 18 months in arrears.[6] In 2000, Governor Paul Cellucci signed legislation moving the MBTA to a system of "forward funding" whereby the agency would receive funds from "two predictable sources of revenue:"[7] the statewide sales tax and a revamped local assessment formula. Currently, these two funding sources along with fare collection comprise the primary sources of MBTA revenue.

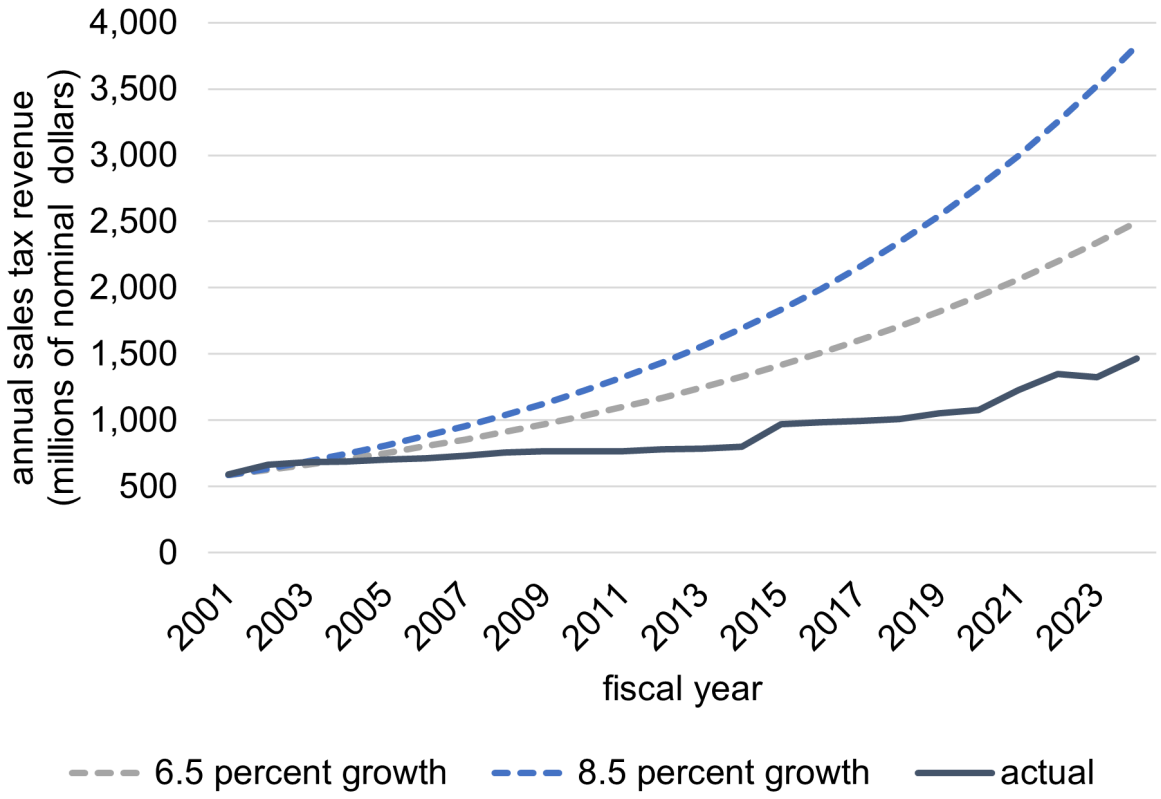
3.1 THE SALES TAX

The Commonwealth's primary yearly appropriation to the MBTA and the agency's single largest source of revenue is a portion of the statewide 6.25 percent sales tax. The MBTA receives one percent of the value of all applicable sales, equivalent to 16 percent of the statewide sales tax revenue. The MBTA received $655 million in state fiscal year (FY) 2001, the first year of the "penny" sales tax.

The MBTA's 2000 Forward Funding Finance Plan assumed that sales tax revenues would grow by an average of three percent per year after 2000, a conservative estimate given that sales tax revenues had grown by an average of 8.5 percent annually in the 20 years prior to 2000.[8] In the period after 2000, the rise of e-commerce dampened the trajectory of the sales tax. As a result, the MBTA's receipts from the state sales tax did not keep pace with the conservative three percent growth rate assumption. In the 20 years after 2000, sales tax revenues underperformed by $15.5 billion compared to the growth trend of the 20 years prior to 2000.[9] In FY 2024 the MBTA received approximately $1.46 billion in sales tax revenue.[10]

Figure 1 shows the MBTA's actual sales tax receipts compared to the historical growth rates of the sales tax over the previous 10 years (6.5 percent annually) and 20 years (8.5 percent annually). Actual receipts increased in FY 2015 due to the institution of state contract assistance and in FY 2020 due to legislation that more fully captured e-commerce in the statewide sales tax.

Figure 1
MBTA Sales Tax Receipts vs. Historical Sales Tax Performance, Fiscal Years 2001–23



Source: Massachusetts Bay Transportation Authority.

3.2 STATE CONTRACT ASSISTANCE REVENUE

Since FY 2010, when the statewide sales tax was increased from five percent to 6.2 percent, the MBTA has received funds from the Commonwealth Transportation Fund (CTF) in the form of State Contract Assistance to supplement the agency's dedicated sales tax revenue. Between FY 2010 and FY 2015, this assistance was worth $160 million annually; between FY 2016 and FY 2024, the state budgeted $187 million annually for contract assistance to the MBTA. For financial purposes, this revenue has been considered to be part of the MBTA's sales tax revenue since FY 2015.[11] The CTF is primarily funded by the 24-cent-per-gallon gas tax ($717 million in FY 2024) and the 6.25 percent motor vehicle sales tax ($835 million).

3.3 THE LOCAL ASSESSMENT

The forward funding legislation in 2000 also altered the structure of the MBTA local assessment. Each of the 176 communities that receive MBTA service contributes to the MBTA State and Local Assistance Fund. When the revised local assessment structure took effect in FY 2001, the state legislature pinned the total of these local assessments to a minimum annual value of $136 million. An annual adjustment for inflation was introduced in FY 2006,[12] though annual growth is capped at 2.5 percent per year by Proposition 2 ½.[13] In the most recent fiscal year (FY 2024) the local assessment dedicated to the MBTA totaled $188.4 million.[14]

Between FY 2001 and FY 2019, the MBTA's local assessment revenues grew by an average of 0.9 percent per year, or 17.6 percent overall.[15] The MBTA local assessment currently covers 8.5 percent of the MBTA's budget.

3.4 FARE REVENUE AND COVID IMPACTS

In early 2020, the outbreak of COVID-19 and the resulting stay-at-home orders caused a precipitous drop in transit ridership and fare collection. Fare revenue declined by more than 75 percent from $672 million in FY 2019 to $167 million in FY 2021.[16, 17] Other transit agencies across the country reported similar declines in fare revenue. In response, the federal government provided a total of $25 billion in temporary financial assistance to transit agencies through the Coronavirus Aid, Relief, and Economic Security (CARES) Act.[18] In total, the MBTA received $1.987 billion in federal assistance from the CARES Act.

Even several years after the initial pandemic ridership shock, the increased popularity of working from home and hybrid work has kept commuter numbers well-below pre-pandemic levels. In FY 2024, the MBTA expects to collect $418 million in fare revenue.[19] CARES Act funds will be exhausted by FY 2025, and fare revenue is not expected to recover to pre-pandemic levels within the foreseeable future.

Section 4—Methodology

Though the Massachusetts Bay Transportation Authority (MBTA) is facing significant financial strains ahead of state fiscal year (FY) 2025, there are several revenue sources, both new and existing, that may help to address the "fiscal cliff." Central Transportation Planning Staff (CTPS) conducted an initial analysis to estimate the annual revenue potential of 10 strategies to provide additional revenue to the MBTA. The MBTA selected the six strategies with the highest potential revenue estimates for a more in-depth analysis.

The 10 initial strategies were chosen in coordination with the MBTA based on their success in other jurisdictions, applicability within Massachusetts, and potential to provide other benefits to the MBTA, such as improving the customer experience, providing operational support, and incentivizing transit use. CTPS evaluated a range of potential scenarios, from conservative to optimistic. In the analyses, strategies with more uncertainty in their mode of implementation tended to have a larger range of potential revenue outcomes. Varying the rate or geographic extent of a tax, the assumed elasticities of demand, or the precise mechanisms of funding within a strategy created a wide range of estimated annual revenues. Higher-revenue strategies were evaluated under more scenarios, and often multiple variables were changed or several alternative mechanisms were examined to capture a wider range of possible outcomes.

For the purpose of these analyses, the MBTA's core service area was considered to be the 65 municipalities with rapid transit or bus service. The extended service area was considered to be the core service area plus the 111 municipalities that receive or are adjacent to commuter rail service, for a total of 176 municipalities.

Section 5—Six Highest Revenue Potential Strategies

The following six strategies were determined to have the highest revenue potential of the 10 evaluated by Central Transportation Planning Staff (CTPS).

5.1 VEHICLE ACCESS

Vehicle access fees charge for ownership or access to a private motor vehicle. This category contains two of the strategies with the highest revenue potential: the motor vehicle excise/registration fee and the gas tax.

5.1.1 Motor Vehicle Excise/Registration Fee ($33–570 million)

The Massachusetts motor vehicle excise charges 2.5 percent of the assessed value of every vehicle, where a vehicle's assessed value is its manufacturer-suggested retail price (MSRP) adjusted for depreciation. A vehicle's value is assessed to be 50 percent of its MSRP in the year preceding the model year (e.g., the 2023 excise applied to a 2024 model year vehicle), 90 percent in the model year, 60 percent in the second year, 40 percent in the third year, 25 percent in the fourth year, and 10 percent in the fifth year and beyond.[20]

An additional motor vehicle excise could annually charge vehicle owners in the MBTA's core or extended service area based on the assessed value of their registered motor vehicles. Alternatively, an annual licensing fee could be assessed.

Peer Agencies

Several other transit agencies employ a motor vehicle excise as a primary source of revenue. For example, Sound Transit—serving the Seattle, Washington, metropolitan area—receives 1.1 percent of assessed vehicle value across a three-county service district. In 2023, Sound Transit budgeted for $381 million in motor vehicle excise tax revenue, or 14.2 percent of its total yearly revenue.[21]

Vehicle registration fees also have precedent as a funding mechanism for transit. The New York Metropolitan Transportation Authority (MTA) receives revenue from a supplemental vehicle licensing fee in the Metropolitan Commuter Transportation District as part of its yearly state funding. For passenger vehicles, this fee varies from $13 to $70 annually according to the vehicle's weight.[22] In its 2023 budget,

Montreal's Metropolitan Regional Transportation Authority anticipates CA$150 million in total funding from automotive funding sources, including a gas tax and a vehicle registration fee.[23]

Legal Considerations

Charging an additional motor vehicle excise may be limited by Proposition 2 ½. A new motor vehicle excise might require an act of the legislature, a ballot initiative, or a Proposition 2 ½ override in each municipality. As an alternative, CTPS also evaluated an annual vehicle registration fee, which would not depend on the vehicle's assessed value, for its revenue potential. Such a fee would require legislative approval but would not amend Proposition 2 ½.

Revenue Assessment

Mechanism 1: Motor Vehicle Excise

The revenue potential for the motor vehicle excise varies by the percent of vehicle value to be charged as well as the geographic extent of the excise. CTPS assumed excise rates between 0.25 percent and two percent in the core service area and between zero and 2 percent in the extended service area. This gives a very wide range of potential revenues, between $36 million and $570 million. Table 2 shows potential revenue using FY 2023 excise data, assuming car ownership patterns would be constant with a new excise.

Table 2
Motor Vehicle Excise Revenue Assessment

Core Area Rate	Extended Area Rate	Estimated FY 2023 Revenue
0.25 percent	0 percent	$36 million
0.25 percent	0.25 percent	$71 million
0.5 percent	0 percent	$73 million
0.5 percent	0.5 percent	$143 million
1 percent	0 percent	$145 million
1 percent	1 percent	$285 million
2 percent	0 percent	$361 million
2 percent	1 percent	$430 million
2 percent	2 percent	$570 million

Source: Central Transportation Planning Staff and Massachusetts Department of Revenue.

Mechanism 2: Vehicle Registration Fee

Using data from the Massachusetts Motor Vehicle Census, CTPS estimated the annual yearly revenue from a vehicle fee. CTPS evaluated two mechanisms for a vehicle registration fee: a flat $20 registration fee for motor vehicles and a varying fee based on the age of the vehicle. Due to insufficient data available on vehicle weight, CTPS could not estimate the revenue potential of a weight-based fee. As low-income households tend to own older vehicles, a variable fee based on vehicle age could reduce the burden on low-income car owners.[24]

Table 3 shows the distribution of vehicles by age in the MBTA's core and extended service areas. As of January 1, 2023, there were 1,647,935 private passenger cars registered in the MBTA's core service area and 3,396,439 in the extended service area.

Table 3
Private Passenger Vehicle Registrations in MBTA Service District by Vehicle Age as of January 1, 2023

Vehicle Age	Core Service Area	Percent of Total	Extended Service Area	Percent of Total
New–1 year	20,733	1.3%	36,236	1.1%
1 year	105,778	6.4%	188,857	5.6%
2–5 years	469,412	28.5%	913,600	26.9%
5–10 years	525,659	31.9%	1,107,769	32.6%
10+ years	526,353	31.9%	1,149,977	33.8%
Total	**1,647,935**	**100.0%**	**3,396,439**	**100.0%**

Source: Massachusetts Motor Vehicle Census.

Table 4 shows the estimated revenue from a vehicle registration fee. For the age-based fee, based on the available data, CTPS assumed a fee schedule of $50 for a vehicle one year old or less, $40 for a vehicle between two and five years old, $30 for a vehicle between five and 10 years old, and $20 for a vehicle 10 years old or more.

Table 4
Vehicle Registration Fee Revenue Assessment

Scenario	Core Service Area	Extended Service Area
Flat $20 fee	$33 million	$68 million
Vehicle age–based fee	$51 million	$104 million

Source: Central Transportation Planning Staff.

5.1.2 Gas Tax ($22–356 million)

Currently, Massachusetts's statewide 24-cent-per-gallon gas tax is one of two primary funding sources for the Commonwealth Transportation Fund (CTF) along with the motor vehicle sales. The CTF is used to finance Massachusetts Department of Transportation (MassDOT) debt service, state highways, regional transit authorities, and a portion of the MBTA's operating budget through state contract assistance. The MBTA's FY 2024 allocation from the CTF is $187 million, or 12 percent of the CTF's total value. This allocation covers eight percent of the MBTA's operating expenses.[25]

An increase in the gas tax could be used to increase available funds for the entire CTF, which is subject to annual appropriations by the state legislature, or provide money solely to the MBTA. It is important to note that gas tax revenues are likely to decline in the near future as electric vehicle adoption continues to increase. The gas tax is not likely to provide stable revenues into the long-term future, though it does currently represent a significant revenue source for transportation financing in Massachusetts.

Peer Agencies

The New York MTA receives funds from the state's gas tax. These funds are grouped together with the aforementioned vehicle license fees and a "business privilege tax" in a funding category known as "Petroleum Business Taxes." Cumulatively, these taxes are expected to provide $610.8 million in 2023, or 3.2 percent of the MTA's total revenue.[26] The Toronto Transit Commission receives a small portion of Ontario's provincial gas tax, which provided CA$186 million in funds to the agency's operating and capital budgets in 2022,[27] about eight percent of the agency's total operating expenses.[28]

Legal Considerations

Updating the gas tax would require legislative authorization. There have been previous attempts to increase the statewide gas tax to provide more funding for transportation. In 2013, the Massachusetts Legislature approved increasing the gas tax from 21 to 24 cents per gallon and tying the gas tax to inflation, overriding Governor Deval Patrick's veto of the latter. However, the automatic yearly increase in the gas tax was defeated by a ballot measure in 2014, with 53 percent of voters in favor of the repeal; the one-time increase to 24 cents per gallon was not affected.[29] The statewide gas tax has not been changed since.

Revenue Assessment

For this analysis, CTPS assumed two separate mechanisms for revenue allocation from an increase in the gas tax, assuming no changes in the amount of fuel sold in the Commonwealth. Under the first mechanism, the 24-cent-per-gallon gas tax would be increased significantly, with revenues still directed towards the CTF. The CTF is subject to annual appropriations by the state legislature and there are no funding guarantees or formulas. Given this uncertainty, this analysis assumes that the MBTA would continue to receive the same proportion of the CTF as in FY 2024, 12 percent. Under the second mechanism, the MBTA would receive the entirety of a smaller cent-per-gallon increase, providing an additional source of gas tax revenue to supplement the MBTA's CTF transfer.

CTPS evaluated two benchmarks for increasing the gas tax under the first mechanism: the average gas tax of the other New England states (30 cents per gallon) and the average gas tax of the other states in the Boston–Washington, DC, corridor (36 cents per gallon). Under the first mechanism, the MBTA would receive an estimated $3.6 million per one-cent increase in the gas tax. The remainder of the increased revenue would be distributed among the other beneficiaries of the CTF. Under the second mechanism, the MBTA would receive $29.7 million per a one-cent increase in the gas tax. If the MBTA received the entirety of the gas tax increase, the tax would need to be increased by just 1.4 cents to achieve the same revenue for the MBTA as the 12-cent increase in the previous example.

Table 5
Gas Tax Revenue Assessment

Gas Tax Increase: Commonwealth Transportation Fund Scenario	Gas Tax Increase: Dedicated MBTA Revenue Scenario	Projected Additional Revenue
6 cents per gallon	0.74 cents per gallon	$22 million
12 cents per gallon	1.41 cents per gallon	$42 million
N/A	6 cents per gallon	$178 million
N/A	12 cents per gallon	$356 million

Source: Central Transportation Planning Staff.

5.2 ROAD USAGE

5.2.1 Increased Highway Tolling ($22–80 million)

Greater Boston has among the lowest tolls on the East Coast for major water crossings. Increasing tolls charged for water crossings and travel on Interstate 90 could provide significant financial resources to bolster highway and transit budgets.

Peer Agencies

Using toll revenue to support transit budgets is not without precedent in the United States. Currently, the New York MTA uses toll revenue from its Bridges and Tunnels division to support the overall agency's budget, including the multiple transit agencies it oversees. In 2023, tolls are expected to comprise 13 percent of the MTA's $19 billion in projected revenue.[30]

The Pennsylvania Turnpike Commission used to provide $450 million in funds annually to transit authorities in Philadelphia and Pittsburgh. As of 2023, this amount has been reduced to $50 million annually, with the remaining $400 million coming from Pennsylvania's general fund.

As of December 2023, a two-axle, privately owned vehicle with a Massachusetts EZ-Pass transponder is charged $1.50 one-way to cross the Boston Harbor tunnels and $1.25 to cross the Tobin Bridge, while enrollees in the resident toll program pay just $0.20 and $0.15, respectively.[31] Other regions tend to charge significantly higher tolls for water crossings than in Boston. The Philadelphia region's Delaware River Port Authority charges $2.50 one-way, the Maryland Transportation Authority charges $3.00 one-way in Baltimore, the MTA's Triborough Bridge and Tunnel Authority charges between $2.60 and $6.94 one-way, and the Port Authority of New York and New Jersey charges $7.38 one-way in peak hours.[32]

Legal Considerations

Currently, in most cases, spending of toll revenue is restricted to operations and maintenance of the toll roads themselves. State legislation was introduced previously that would allow revenues from the Tobin Bridge and Metropolitan Highway System (MHS) to be used to support transit and waterways in addition to the highway network.[33] It is uncertain whether this proposed state legislation is compatible with existing federal restrictions on tolled highways.

Revenue Assessment

CTPS evaluated multiple scenarios for increasing tolls on the existing tolled highway network to provide funding for transit. Currently, tolls on the MHS and Tobin Bridge comprise approximately 60 percent of toll revenue in Massachusetts, or roughly $250 million in FY 2024.[34] Under a moderate scenario, CTPS assumed a modest 50 percent increase in tolls and a relatively high price elasticity of 0.6.[35] Under an optimistic scenario, CTPS assumed tolls on the MHS and Tobin Bridge would be doubled with a lower price elasticity of 0.3. Table 6 shows the revenue estimates for increased highway tolling, assuming the MBTA would receive half of new toll revenue in both scenarios.

Table 6
Increased Highway Tolling Revenue Assessment

Scenario	Toll Increase (Percent)	Assumed Price Elasticity	Estimated Revenue
Moderate	50	0.6	$22 million
Optimistic	100	0.3	$80 million

Source: Central Transportation Planning Staff.

5.2.2 Congestion Pricing ($220–440 million)

Congestion pricing refers to charging a fee for road usage that varies either by time of day or by the number of vehicles on the road. This model is becoming a popular tool to discourage driving during peak periods, reduce congestion, and mitigate the environmental impacts of driving. On top of these benefits, congestion pricing can be a significant source of revenue for states and municipalities. In some cases, this revenue is used to fund highway maintenance, which often cannot be fully funded with gas taxes alone. However, a number of cities have used the funds to improve transit service and infrastructure.[36] In Massachusetts, revenue from a system of congestion pricing might be split between various stakeholders including MassDOT, the MBTA, regional transit authorities, and municipalities.

Peer Agencies

Several cities have implemented congestion pricing including London, Stockholm, and Singapore. These programs have proven successful at generating revenue for transportation improvements and reducing congestion. London's Congestion Charge Zone generates hundreds of millions of pounds of revenue each year (£223 million, or $280 million, in FY 2023). These funds are used to improve transit service, pedestrian infrastructure, and road safety.[37] Singapore's Electronic Road Pricing system provides 10 percent of the local transportation authority's annual revenue and led to a 24 percent decline in traffic in the Central Business Zone after it was implemented.[38, 39] New York City will begin charging drivers to enter Lower Manhattan in 2024, which is expected to generate $1 billion annually for the MTA.[40] In addition to increased revenue, London and Stockholm both saw 20 percent to 30 percent reductions in traffic congestion and considerable increases in traffic speeds after implementing their pricing schemes.[41]

Legal Considerations

Currently, no legal framework exists in Massachusetts for tolling highways beyond the Metropolitan Highway System, Tobin Bridge, and Interstate 90. New legislation would be required to administer the tolls and determine the allocation of its revenue. Furthermore, federal law prohibits tolling on Federal-aid highways, which includes all the highways considered in this analysis except Interstate 90 (Interstate 90 is an exception because the Massachusetts Turnpike existed before the establishment of the Federal Highway System).

As such, permission from the Federal Highway Administration (FHWA) would be required to implement the tolling program analyzed here. A number of US Department of Transportation programs exist to help states apply for exceptions to these regulations.[42] New York City, for example, is implementing its congestion pricing program under the Value Pricing Pilot Program (VPPP) program of the FHWA, which allows pricing on some Federal-aid highways to encourage experimentation with roadway pricing policies.[43]

Another obstacle to utilizing this strategy is the federal requirement that revenues from tolling on Federal-aid roadways be used only for operation and maintenance of the tolling facility (the highway on which the tolls are collected).[44] Again, this could be remedied with an exception granted by the FHWA. Alternatively, if the Commonwealth were to use toll revenue to fund highway maintenance, it would free up money from the general fund or CTF, which could be used to fund the MBTA.

Revenue Assessment

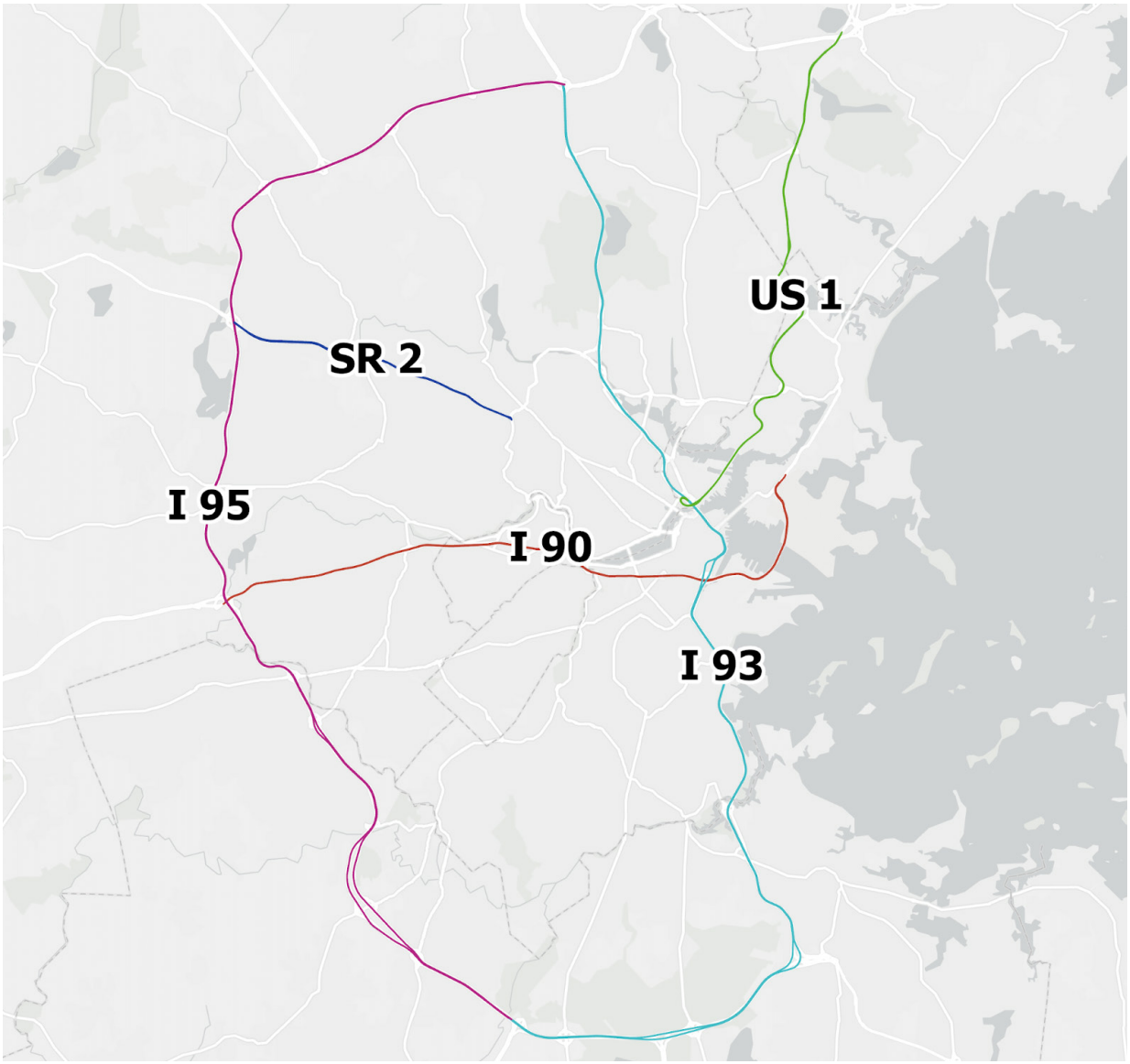
To estimate potential revenue from such a strategy, CTPS analyzed traffic volumes on the highway network described in previously introduced state legislation aimed at expanding tolling on highways and making the revenue available to fund the MBTA and other transit services (see Figure 2).[45] Using the average annual daily traffic (AADT) published by MassDOT, CTPS calculated the expected annual vehicle volumes on these roadways and assumed an average toll of either five or 10 cents per mile. A congestion-pricing program would likely use dynamic or variable pricing to better control congestion, but an average toll was used for ease of calculation. Table 7 shows the revenue assessment for congestion pricing. These numbers represent the total revenue collection for the congestion-pricing system; the MBTA would likely receive a portion of these revenues.

Table 7
Congestion-Pricing Revenue Assessment

Scenario	Average Toll per Mile	Estimated Revenue
Moderate	5 cents	$221 million
Optimistic	10 cents	$443 million

Source: Central Transportation Planning Staff.

Figure 2
Highway Network Analyzed for Congestion-Pricing Program



Source: Central Transportation Planning Staff.

5.3 VALUE GENERATED BY TRANSIT

5.3.1 Transit-Oriented Development Value Capture ($25–85 million)

MBTA service has significant impacts on the pattern and location of new real estate developments in the Boston region. The presence of MBTA service is a common selling point for new residential and commercial developments. As a result of these new developments, MBTA service increases the amount of property tax that municipalities are able to collect. A value capture mechanism would set aside a portion of this increased revenue for the MBTA and allow the agency to recover some of the value generated by transit service.

Peer Agencies

Several recent examples in the United States have demonstrated the effectiveness of value capture for transit agencies. First among them is the Transportation Development District (TDD) used to fund Kansas City's Streetcar. The TDD is a separate division of the Missouri state government, which has the authority to levy taxes, including a sales tax in its area and a special assessment against real estate. The streetcar's operations are entirely funded through this mechanism; the streetcar has no fares.[46]

Legal Considerations

In Massachusetts, a mechanism for transit-oriented development value capture would require new legislation to manage the diversion of tax revenue directly to the MBTA or an intermediate agency. Due to the restrictions imposed by Proposition 2 ½ on the local assessment, a value capture mechanism for the MBTA would need to be limited to new growth revenue. New growth revenue is the portion of property tax revenue generated from new real estate development.

Revenue Assessment

To evaluate this strategy, CTPS assumed a value capture program that would divert a portion of new growth property taxes within a one-half-mile radius of rapid transit stations. CTPS then estimated the annual revenue that would be available to the MBTA 10 years after implementation of such a program. The analysis leveraged asking rents per square footage for different types of commercial properties to weight the value of properties near stations. The expected revenue from this strategy would increase over time as more new developments are added to the pool of eligible properties. Educational institutions were excluded since they are unlikely to pay property taxes.

Because real estate development is difficult to project, CTPS evaluated three different economic scenarios: 75 percent, 100 percent, and 125 percent of the average annual new growth value between 2012 and 2022. Table 8 shows potential revenue under these scenarios.

Table 8
Transit-Oriented Development Value Capture Revenue Assessment

Economic Scenario (Percent of 2012–22 Value)	Estimated Revenue: Five Percent Captured	Estimated Revenue: Ten Percent Captured
Weak (75 percent)	$25 million	$51 million
Steady (100 percent)	$34 million	$68 million
Strong (125 percent)	$43 million	$85 million

Source: Central Transportation Planning Staff.

5.3.2 Sales, Meals, and Room Occupancy Taxes ($30–335 million)

Given that the statewide sales tax is already part of the MBTA's revenues, it may be possible to increase the amount of sales tax transfer the MBTA receives annually or expand the MBTA's tax transfer to other categories, such as meals and room occupancy.

Peer Agencies

The statewide sales tax is currently the Commonwealth's primary financial appropriation to the MBTA and its single largest source of revenue. Many other peer agencies rely on a similar sales tax structure to finance significant portions of their operations, including the Southeastern Pennsylvania Transportation Authority (SEPTA) in Pennsylvania ($806 million, 48 percent),[47] Chicago Transit Authority ($546 million, 30 percent),[48] and Los Angeles Metro ($4.8 billion, 53 percent).[49] SEPTA has advocated for a permanent increase in its sales tax transfer, initially worth nearly $300 million per year, to close its own post-COVID budget gap.[50]

Legal Considerations

Any increase in tax transfers to the MBTA would require legislative approval. There are also limitations to the current administrative structure of the statewide sales tax. Limiting a sales tax increase to the MBTA's service area is likely not possible. In Massachusetts, there are no mechanisms to increase the sales tax in one municipality or region without increasing it statewide. However, local option taxes exist for the meals and room occupancy taxes (currently, these taxes are decided upon by each individual municipality). Therefore, it may be more administratively feasible to institute an additional meals or room occupancy tax within the MBTA's service area.

Revenue Assessment

The current state sales tax in Massachusetts gives the MBTA one percent of the value of all applicable sales. This amount is equivalent to 16 percent of all revenue from the statewide 6.25 percent sales tax. Based on FY 2022 results and holding total sales constant, increasing the MBTA's sales tax transfer by one-quarter of a percentage point would have resulted in an additional $335 million in revenue.[51]

The Massachusetts meals and room occupancy taxes both have local option surcharges that remit money to municipalities based on the location of the transaction. This indicates that it may be administratively possible to institute an MBTA service area surcharge for meals or room occupancy. Currently, Massachusetts has among the lowest meals tax rates in New England at 6.25 percent, which is lower than the meals taxes in Connecticut (7.35 percent), Rhode Island (eight percent), New Hampshire (8.5 percent), and Vermont (nine percent).[52]

Combining the sales and use tax with the meals tax may also enhance the financial stability of the MBTA tax transfer. While sales tax revenues grew just 19.3 percent between FY 2001 and FY 2017, meals tax revenues grew by 65.6 percent over that time period (both adjusted for inflation).[53] In FY 2017, this would have represented nearly $50 million in additional yearly revenue for the MBTA.[54] In FY 2001, meals taxes represented 12 percent of the Commonwealth's sales tax revenues; in FY 2024, the Commonwealth is projecting this share to be 16 percent.

Based on 2022 filings, a one-percent surcharge on meals would have resulted in $110 million in revenue in the core service area and $175 million in the extended service area.[55] A one-percent room occupancy surcharge would have generated $30 million in the core service area and $35 million in the extended service area.[56] The results of all evaluated tax scenarios are summarized in Table 9.

Table 9
Sales, Meals, and Room Occupancy Taxes Revenue Assessment

Category	Geography	Rate	Estimated Revenue
Sales	Statewide	0.25 percent	$335 million
Meals	Core service area	1 percent	$110 million
Meals	Extended service area	1 percent	$175 million
Rooms	Core service area	1 percent	$30 million
Rooms	Extended service area	1 percent	$35 million

The “extended service area” geography is inclusive of all MBTA municipalities.

Source: Central Transportation Planning Staff.

Section 6—Four Additional Strategies Analyzed

The following strategies were also evaluated for their revenue potential. While these strategies may not represent as significant a funding source as the previous six strategies, the MBTA may still wish to pursue these strategies to increase or diversify funding for the system and further incentivize transit usage.

6.1 VEHICLE ACCESS

6.1.1 Vehicle Rental Tax ($6–10 million)

A vehicle rental tax would impose a surcharge on vehicle rentals in the Massachusetts Bay Transportation Authority's (MBTA) core or extended service area.

Peer Agencies

Seattle's Sound Transit currently receives funding from a 0.8 percent rental car tax in its service district. In 2023, Sound Transit budgeted for just under $4 million in revenue from this tax, or about 0.15 percent of its annual revenue.

Legal Considerations

There are multiple existing vehicle rental surcharges in Massachusetts that could serve as a model for implementing a surcharge in the MBTA service area. The Police Training Surcharge is a statewide $2 surcharge on rentals of cars, trucks, vans, and trailers to fund municipal police training facilities.[57] There are also two local surcharges: a $10 surcharge in Boston, $9 of which goes to the Commonwealth for Convention Center financing,[58] and a $10 surcharge in Revere.[59]

Revenue Assessment

The statewide $2 Police Training Surcharge generated just over $5 million in revenue in state fiscal year (FY) 2023, indicating that there were approximately 2.5 million eligible transactions across Massachusetts during that time period.[60] Boston, which receives $1 per transaction from the City's $10 surcharge, budgeted $750,000 in revenue in FY 2023.[61] Despite having roughly 10 percent of the state's population, the City of Boston accounts for a quarter of all vehicle rental transactions in Massachusetts. Therefore, for this analysis, Central Transportation Planning Staff (CTPS) assumed that the core service area, which has 41 percent of the state's population, represents 50 percent of the vehicle rental transactions. The extended service area, which has 75 percent of the state's population, was assumed to

represent 80 percent of the state's vehicle rentals. Holding the number of vehicle rentals constant, a $5 surcharge would have generated $6.25 million in FY 2023 if applied to the MBTA's core service area or $10 million if applied to the extended service area.

6.2 ROAD USAGE

6.2.1 High-Occupancy Toll Lanes ($7.5 million)

High-occupancy toll (HOT) lanes are tolled highway lanes that are available to high-occupancy vehicles (HOVs) and other exempt vehicles free of charge. Typically, tolls are dynamically adjusted throughout the day to maintain a predetermined free flow traffic speed. HOT lanes differ from standard HOV lanes, such as those on Interstate 93 in Boston, in that non-HOV road users may access HOT lanes for a fee.

Peer Agencies

HOT lanes have been constructed in several metropolitan areas throughout the United States, including Washington, DC; Seattle; Atlanta; and various regions of California. In Northern Virginia, the Express Lanes system on Interstates 95, 395, and 495 generated approximately $63 million in revenue in FY 2021. Annually, $15 million of toll revenue from these corridors is reserved for the Northern Virginia Transportation Commission's (NVTC) Commuter Choice program.[62] NVTC is a public body that finances public transportation in Northern Virginia, including the Washington Metro, Virginia Railway Express, and various local transit services. NVTC awards toll revenues from its Express Lanes to various projects throughout the region through a competitive bid process. Past projects have included a new Metro station headhouse, improved local bus service, and bikeshare expansion.[63]

Legal Considerations

HOT lanes are generally exempt from federal restrictions on tolled highways. However, the case for HOT lanes in Massachusetts is complicated by the fact that this infrastructure often accompanies highway expansion projects. At the very least, constructing new, fully separated HOT lanes represents a significant capital cost. New state legislation would be required for the construction and operation of any HOT lanes in Massachusetts.

Revenue Assessment

For this analysis, it was assumed that the two segments with HOV lanes on Interstate 93 (north and south of downtown Boston) would be converted to HOT lanes. To generate a revenue estimate, CTPS found the average annual toll revenue per mile of the HOT lane systems in Northern Virginia, Maryland, Seattle, San Diego, and Atlanta: $1.93 million per mile. This average was then applied to the length of the existing HOV lanes on Interstate 93 (5.4 miles on the Southeast Expressway and 2.6 miles on the Northern Expressway). Allocating 50 percent of this toll revenue to the MBTA would result in approximately $7.5 million in annual revenue.

6.2.2 Automated Bus Lane Enforcement ($2–7 million)

Automatic bus lane enforcement (ABLE) would utilize bus-mounted traffic cameras to enforce parking or travel restrictions in bus stops or dedicated bus lanes. In theory, this increased enforcement leads to fewer people attempting to park or drive in bus lanes, improving travel times and making transit more time-competitive with other modes. Lower travel times then cause increased ridership and thereby produce additional fare revenue. Typically, transit agencies' share of parking ticket revenues from ABLE are used only to pay for administration of the system.

Peer Agencies

New York City and Washington, DC, are both pursuing ABLE programs to improve bus travel times. As of April 2023, New York City's bus-mounted enforcement program had decreased travel times by five percent and decreased collisions by 25 percent on corridors where they were implemented. The M14 route experienced a 24 percent improvement in travel times, 14 percent higher ridership, and a 42 percent decrease in collisions after the introduction of ABLE.[64] Washington, DC's, Clear Lanes Program began its trial warning period in July 2023, with the first phase of ticketed enforcement beginning on November 15, 2023.[65]

Revenue Assessment

For this analysis, CTPS assumed that ticket revenue from bus lane enforcement would be restricted to the administration of the ABLE program. Therefore, these analyses assume that increased ridership would lead to additional fare revenue. Under a moderate scenario, CTPS assumed that 10 bus routes with 5,000 daily riders each experienced a 20 percent reduction in travel times. With a travel time elasticity of 0.4, this results in an additional 4,000 riders per day. If these riders pay an average fare of $1.25 per ride, this results in just less than $2 million in additional fare revenue each year. Under an optimistic scenario, CTPS assumed that the 10 highest-ridership bus routes each experienced a 30 percent decrease in travel times.

Using a higher elasticity of 0.5, this would increase bus ridership by four million riders per year. Assuming all of these riders pay the full $1.70 fare, this results in just less than $7 million in additional fare revenue.

6.3 VALUE GENERATED BY TRANSIT

6.3.1 District Improvement Financing ($2–11 million)

District improvement financing (DIF) is a method of project financing that diverts a portion of property tax increases due to a particular project, in this case a public transit improvement, to finance the project itself or further improvements. This new property tax revenue, or "tax increment," is typically used to back financing for a certain project. This strategy is similar to the "TOD value capture" strategy, but is specific to one project, generally has a shorter time frame, and is limited to a much smaller geographic area (an area near the project). The rationale for this strategy is similar to TOD value capture: if transit improvements encourage new development and thereby lead to increased property tax revenue, part of this revenue might be used to offset the cost of the project and any associated new operating expenses. Revenue would increase over time as more new growth occurs within the DIF district and the property tax increment increases.

Peer Agencies

Few if any peer agencies have extensively used DIFs—commonly called tax increment financing (TIF) elsewhere in the United States—as an ongoing revenue stream. The Chicago Transit Authority has used a TIF district to fund debt service for modernization of its Red and Purple Lines, and a DIF-like mechanism was used to help fund construction of the Transbay Transit Center in San Francisco. In both cases, these districts were established to secure up-front capital financing for the construction of these projects.

DIFs are relatively common for municipal projects in Massachusetts. Several municipalities have used DIFs to fund projects associated with transit, including the Green Line Extension. The City of Somerville has established two DIF districts, both in the vicinity of transit. Somerville first adopted a DIF district in 2010 near the site of the new Assembly Square Orange Line station, which supported $25 million in municipal infrastructure investments to support new development near the station site. In 2017, Somerville established a DIF district surrounding the future site of the Union Square Green Line station, financing $141 million in infrastructure improvements.[66]

Legal Considerations

In Massachusetts, DIFs are administered at the municipal level. Working within the existing legal structure of DIFs in Massachusetts would require coordination with municipalities on revenue sharing and administration. DIFs also tend to be geographically constrained, tied to a specific project, and time limited, which may limit their revenue potential.

Revenue Assessment

To assess the revenue potential for a future project, CTPS analyzed the proposed conversion of the Fairmount Line from commuter rail to a rapid transit service known as the Indigo Line. For this analysis, the DIF district was assumed to be a half-mile radius surrounding each Fairmount Line station (excluding South Station). The cumulative tax increment in this district was calculated for each year from 2012 to 2022 without adjusting for any possible improvements for the sake of a conservative estimate. If the MBTA captured 10 percent of this tax increment, it would receive $2 million annually after 10 years. If the MBTA captured 50 percent of the increment, it would receive $11 million annually after 10 years.

Section 7—Conclusion

The analysis presented in this report is an initial attempt to quantify the revenue potential of various funding sources if applied to Massachusetts. It provides a framework for considering the magnitude of impact these strategies could have on Massachusetts Bay Transportation Authority (MBTA) revenue. There are many factors that could influence each revenue generation strategy, including economic and political ones, but this analysis is based on the best available data for Massachusetts and the experiences of peer agencies. The methodologies presented here provide high-level revenue estimates that could be refined if any of the strategies advance towards implementation.

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Appendix: List of MBTA Communities

As of 2022, the MBTA service area is comprised of 176 municipalities in Massachusetts. The MBTA's "core service area" represents the 65 cities and towns in Massachusetts where the MBTA provides rapid transit or fixed-route bus services. The MBTA's "extended service area" represents the entire extent of the authority's service area, which also includes municipalities in Massachusetts that receive or are adjacent to commuter rail service.

The following cities and towns are in the MBTA's core service area:

- Arlington
- Bedford
- Belmont
- Beverly
- Boston
- Braintree
- Brookline
- Burlington
- Cambridge
- Canton
- Chelsea
- Cohasset
- Concord
- Danvers
- Dedham
- Dover
- Everett
- Framingham
- Hamilton
- Hingham
- Holbrook
- Hull
- Lexington
- Lincoln
- Lynn
- Lynnfield
- Malden
- Manchester-by-the-Sea
- Marblehead
- Medfield
- Medford
- Melrose
- Middleton
- Milton
- Nahant
- Natick
- Needham
- Newton
- Norfolk
- Norwood
- Peabody
- Quincy
- Randolph
- Reading
- Revere
- Salem
- Saugus
- Sharon
- Somerville
- Stoneham
- Swampscott
- Topsfield
- Wakefield
- Walpole
- Waltham
- Watertown
- Wellesley
- Wenham
- Weston
- Westwood
- Weymouth
- Wilmington
- Winchester
- Winthrop
- Woburn

The MBTA's extended service area consists of the above communities plus the following cities and towns:

- Abington
- Acton
- Amesbury
- Andover
- Ashburnham
- Ashby
- Ashland
- Attleboro
- Auburn
- Ayer
- Bellingham
- Berkley
- Billerica
- Bourne
- Boxborough
- Boxford
- Bridgewater
- Brockton
- Carlisle
- Carver
- Chelmsford
- Dracut
- Duxbury
- East Bridgewater
- Easton
- Essex
- Fitchburg
- Foxborough
- Franklin
- Freetown
- Georgetown
- Gloucester
- Grafton
- Groton
- Groveland
- Halifax
- Hanover
- Hanson
- Harvard
- Haverhill
- Holden
- Holliston
- Hopkinton
- Ipswich
- Kingston
- Lakeville
- Lancaster
- Lawrence
- Leicester
- Leominster
- Littleton
- Lowell
- Lunenberg
- Mansfield
- Marlborough
- Marshfield
- Maynard
- Medway
- Merrimac
- Methuen
- Middleboro
- Middleborough
- Millbury
- Millis
- Newbury
- Newburyport
- North Andover
- North Attleborough
- North Reading
- Northborough
- Northbridge
- Norton
- Norwell
- Paxton
- Pembroke
- Plymouth
- Plympton
- Princeton
- Raynham
- Rehoboth

- Rochester
- Rockland
- Rockport
- Rowley
- Salisbury
- Scituate
- Seekonk
- Sherborn
- Shirley
- Shrewsbury
- Southborough
- Sterling
- Stoughton
- Stow
- Sudbury
- Sutton
- Taunton
- Tewksbury
- Townsend
- Tyngsborough
- Upton
- Wareham
- Wayland
- West Boylston
- West Bridgewater
- West Newbury
- Westborough
- Westford
- Westminster
- Whitman
- Worcester
- Wrentham

Credits

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