Transportation in an Era of Transition:

Key Findings From Massachusetts Taxpayers Foundation Report

A decade ago, the Transportation Finance Commission, an entity created by the Legislature to develop a comprehensive, multi-modal long-range transportation finance plan for the Commonwealth of Massachusetts, issued two reports that have shaped all subsequent transportation policy. Broadly speaking, lawmakers and the Transportation Finance Commission accepted the premise that the problems confronting the state's transportation system were largely due to an imbalance between available resources and expenses at transit agencies, and the Transportation Finance Commission's recommendations focused principally on additional revenues to close the projected shortfall.

Last September, the Massachusetts Taxpayers Foundation issued a report examining the current challenges to the state's transportation system. The data presented show that asset conditions of state and local roads and bridges remain problematic, despite capital spending amounting to billions of dollars more than what the Transportation Finance Commission projected would be available. This is partly a result of the underestimation of needs a decade ago—an issue now addressed by improved asset management systems and standards. But it also reflects a new understanding of the complexity of the problems confronting the Massachusetts Department of Transportation and the Massachusetts Bay Transportation Authority. These problems are exacerbated by the state's fiscal constraints, as well as other emerging realities with huge long-term implications—most notably the inevitable and irreversible impacts from climate change, and technological advancements in mobility unforeseen ten years ago.

The following are the key findings from the Massachusetts Taxpayers Foundation report:

Persisting Challenges

1. The state outspent revenue projections by $4.3 billion, but asset conditions of roads and bridges remain problematic.

Over the ten-year period covering 2007 to 2016, MassDOT more than doubled annual capital spending on transportation from $1 billion to over $2 billion. In the process, the state expended $4.3 billion more to fix state and local roads, bridges, and the Massachusetts Turnpike than the Transportation Finance Commission had projected would be available ($15.8 billion spent vs. $11.5 billion projected). The state has committed another $2.2 billion in its current five-year capital investment plan (CIP) that, if expended, would bring the total to $6.5 billion in additional resources available for the fifteen-year period.

The bulk of this additional investment was financed by an increase in the state bond cap, which is projected to add approximately $4 billion in spending through 2021 and borrowing against future federal funding and existing gas tax revenue to pay for the $3 billion Accelerated Bridge Program.

Despite these additional resources, asset conditions are still a problem for several reasons. One major cause stems from the inaccurate and/or incomplete data that the Transportation Finance Commission relied upon in making its projections. The state's asset management systems did not yet have in place the data and methods to accurately forecast the conditions of its full portfolio over time. Further, the lack of specific targets to define "good" condition vitiated the reliability of projections of infrastructure investment needs.

> **The Taxpayers Foundation report reflects a new understanding of the complexity of the problems confronting MassDOT and the MBTA, as well as other emerging realities with huge long-term implications.**

MassDOT has recently improved its asset management systems by incorporating tools that were unavailable in 2007 and which provide better data on infrastructure needs. This should lead to more accurate cost projections for future investments. The MBTA has also

Excerpted from Transportation in an Era of Transition: Re-Thinking Resources, *September 2017, and reprinted with permission from the Massachusetts Taxpayers Foundation (www.masstaxpayers.org).*

upgraded its state of good repair database following several years of inattention.

2. Failure to control operating costs broke the T and diverted billions of state dollars from potential capital investments to unchecked expenses.

The Transportation Finance Commission warned that the MBTA faced a likely budget shortfall of between $4 billion and $8 billion due to its inability to control operating costs. It recommended several ways for the MBTA to align operating expenses with revenues. Among these were a reduction in fringe benefit cost growth, restoration of MBTA management rights, and amendment of the Pacheco law to allow the authority to seek competitive bids for services.

Lawmakers implemented many of the Transportation Finance Commission's recommendations. To reduce fringe benefit cost growth, lawmakers transferred MBTA employees and retirees to the state's Group Insurance Commission, but the process took several years to complete. Pension eligibility requirements were changed for new hires, producing no savings for the agency within the twenty-year time horizon of the Transportation Finance Commission's report. Legislators did not restore management rights or amend the Pacheco law [suspended at the MBTA for three years starting in July 2015], leaving the MBTA without vital tools to control costs. As a consequence, expenses grew twice as fast as revenues, creating an even larger gap than the Transportation Finance Commission predicted.

Unable to wring sufficient savings from operations, the MBTA reduced capital spending and postponed principal payments on its debt that pushed hundreds of millions in debt obligations to the future. When these measures fell short, the state provided $2.1 billion in aid for operating budgets for fiscal 2010 through 2018. This action perpetuated a problem that "Forward Funding" was supposed to resolve and diverted resources that otherwise could have gone to capital investments.

The MBTA's failure to limit the growth in operating expenses has detrimentally impacted all aspects of the system. The consequences have been costly and unmistakable. Reduced capital spending over an extended period caused a further degradation of the MBTA's infrastructure, which will ultimately force the state to spend billions more than what the MBTA projected was needed to bring the system up to a state of good repair.

The state must contend with the impact of more frequent and more severe heat waves, storm surges, floods, heavy rainfall events, sea rises, and their impact on roads, rails, power, signals, tunnels, culverts and more.

3. The state, not the MBTA, now faces capital constraints that impede its ability to significantly increase investments.

The Transportation Finance Commission raised concerns about the MBTA's "crushing debt burden." A decade later, the debt picture has reversed, with the state facing constraints. Lawmakers issued bonds backed by the full faith and credit of the Commonwealth that increased the state's outstanding debt (principal) by $6.6 billion to $25 billion without raising sufficient revenues to cover the additional debt service costs. Meanwhile, MBTA debt service costs have fallen from 27 percent of total expenses in fiscal 2007 to 22 percent in fiscal 2017, as the total budget has grown from $1.3 billion to $2 billion in that period.

While the MBTA has the capacity to borrow more, the state is nearing its statutory debt limit. The debt limit and slow revenue growth impede the state's ability to ramp up capital investments for transportation infrastructure, particularly when other capital needs are extensive. Compounding the problem, the state has begun the repayment of $1 billion in federal funds borrowed, further reducing available resources for future capital investments.

The state's fiscal challenges are not limited to its capital budget. Slowed tax revenue growth for the past two years has strained the state's operating budget, constraining additional state assistance to the MBTA. This places a greater urgency on the Fiscal and Management Control Board and MBTA management to limit the growth of operating costs to no more than the projected 2 percent annual revenue growth so that the agency can balance its budget and preserve funds for capital investment.

Similarly, the state is not in a fiscal position to significantly increase the number of personnel at the Highway Division without substantial tradeoffs for other policy priorities. Finding new methods to escalate capital throughput without substantial increases in operating costs has become imperative to ensure progress on capital investment projects.

Emerging Challenges

The aforementioned challenges, while serious, are not new. In fact, they have been the focus of numerous reports and reform packages. Two major external influences are complicating this picture, and the state cannot afford to ignore them. Climate change and advancements in technology are both recent developments, which will have significant short- and long-term impacts on infrastructure costs and transportation services.

4. Climate change adds costs—now.

Climate change has emerged as one of the most pressing problems, as both a long-term trend and a short-term shock. The state must contend with the impact of more frequent and more severe heat waves, storm surges, floods, heavy rainfall events, sea rises, and their impact on roads, rails, power, signals, tunnels, culverts and more. Current capital plans are not developed and reviewed within this context, and projected expenditures do not reflect the priorities or costs associated with necessary climate change adaptations.

Going forward, project selection and capital planning must incorporate the implications and costs of maintaining transportation services in an era of rapidly changing climate conditions, or risk exposing our transportation systems to potentially catastrophic damage or investing in obsolete assets.

This is not an issue that can be ignored or postponed. Climate change impacts are already manifesting, and corresponding costs are rising as several components of the state's transportation system regularly confront excessive flooding and inadequate stormwater management. And the problems will worsen at a rate faster than state and municipal governments can prepare or keep pace.

5. Technology is changing transportation; tax revenues at risk.

The ways in which people use motor vehicles, and the nature of the automobile itself, are evolving at stunning speed. Car- and ride-sharing services that were nonexistent a few years ago are now commonplace, affecting patterns of use and ownership. Electric vehicles will begin to supplant gas-fueled vehicles, and automated vehicles are expected to be introduced to the public within the next five to ten years. None of these changes were anticipated or accounted for in the Transportation Finance Commission's recommendations or the state's previous capital investment plans, but they must become an integral part of the capital planning process moving forward. The case for doing so grows more compelling each day.

Changes in transportation services and technologies will almost certainly impact public transportation service delivery and future infrastructure needs. They will also disrupt state finances. Massachusetts tax revenues from the sale of motor vehicles ($850 million in fiscal 2017) and Registry and inspection fees ($570 million) will be at risk as automakers adjust to declining sales and transition to mobility services and subscription fees. Revenues from the tax on gasoline purchases, which reached $770 million in fiscal 2017, will be at risk as electric vehicles and hybrids replace gas-powered vehicles. Although the timelines are unknown, these are inevitable trends that must be considered as capital plans are made and revenue streams to pay for them are identified.

In this era of transition, it is time for a new independent review of the state's transportation financing to redefine capital needs and how best to meet them.

A New Blueprint

6. Re-thinking resources—what's next

The Transportation Finance Commission's narrative that a substantial increase in resources would solve the state's transportation challenges, long supported by the Massachusetts Taxpayers Foundation, has proven to be incomplete. The fact that the state spent nearly $16 billion on state roads and bridges over the past decade, $4.3 billion more than the Transportation Finance Commission projected would be available, yet asset condition problems persist, clearly demonstrates that more money is not sufficient to address the problem. Beyond resources, challenges likely include an incomplete inventory of assets and their conditions, inconsistent project management and/or inefficient spending, and a lack of metrics to monitor progress.

The inevitable impacts of climate change and technology advancements greatly increase the complexity of fixing the state's transportation system. Climate change adds to the costs of preserving and maintaining infrastructure while advances in transportation technology put current practices, priorities, and revenues at risk. How soon the state will feel these impacts is unknown.

What is clear is that the state lacks the requisite information to make profoundly difficult choices. Questions such as which projects to fund and when, and how revenue sources should be allocated must be included as part of a long-term sustainable transportation finance plan to address our transportation needs. Unfortunately, the state has not yet adopted such a plan.

The state should first assess the reliability of existing transportation revenues over the long term. Ride sharing and electric vehicles put $2.2 billion of revenues from the gas tax, motor vehicles sales tax, and Registry and inspection fees at risk. Two ballot questions in 2018—one that would raise the tax rate on income in excess of $1 million and one that would reduce the sales tax rate from 6.25 percent to either 5 percent or 4.5 percent—if passed, would cause a major restructuring of state finances that will directly affect transportation resources. Recent federal budget proposals would reduce funds for the MassDOT Highway Division and the MBTA. In other words, current transportation revenues are uncertain and could unravel.

In this era of transition, it is time for a new independent review of the state's transportation financing to redefine capital needs and how best to meet them. As the successor to the Transportation Finance Commission's report and recommendations, this long-range plan must account for revenue risks, recommend models to scale capital throughput without unnecessarily increasing staffing levels, select appropriate targets for transportation asset conditions, and devise a method to review and prioritize all large-scale projects while accounting for changes in climate and technology. While the scope of the work is a tall order for any single commission, the state must undertake such a robust planning process. Failure to do so will lead to an inadequate transportation system and a weaker economy in the Commonwealth.