# Beyond the Gas Tax:

Defining Transportation Needs, Emphasizing Economic Growth,
and Maintaining Our Assets

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## Introduction

Leaked reports about the long-awaited recommendations of the Commonwealth's Transportation Finance Commission suggest that raising the gas tax is one of their main recommendations. Such a move may be necessary, but the focus on taxes and revenue distracts from a much more important issue: What kind of transportation system does Massachusetts need? To justify seeking new transportation revenues, we must demonstrate how this funding will enhance our economic competitiveness.

Unfortunately, there is a void in the Commonwealth's transportation planning. There is no comprehensive, integrated, intermodal plan that lays out project priorities and the funds available to build them. A number of actors might fill this void – the Transportation Finance Commission (or its successor), a final Long-Term Transportation Plan from the Executive Office of Transportation, or perhaps a plan developed by the next Governor. But the search for new revenue, whether through taxes, tolls or other sources, should only proceed after we determine our transportation priorities through an objective, criteria-based process.

The lack of a true transportation plan leaves us with a choice in Massachusetts: Continue to spend limited transportation funds inefficiently through a politically driven process, or develop a more cost-effective and integrated approach. Governor Romney has committed to a series of high profile, high-cost transportation spending initiatives, and the major party gubernatorial candidates have followed suit. Business leaders repeatedly cite congestion levels and unpredictable delays as a major factor in their decisions to expand existing businesses and site new ones. Despite this consensus, our transportation planning process is fragmented by mode, politics, and bureaucracy.

Meaningful progress has been made. The Governor's draft Long-Term Transportation Plan represents an initial attempt to provide a comprehensive vision for state

transportation spending across modes and regions. The recent Transportation Reform Bill (Chapter 196 of the Acts of 2004, also known as the 'Transportation Bond Bill') provides the first steps toward a stronger (and more accountable) Secretary of Transportation. Its provisions lay the groundwork for the reforms discussed below, but we still have a long way to go.

The Transportation Finance Commission, created in the Transportation Reform Bill, represents our best opportunity to focus the transportation debate. Given its charge to "develop a comprehensive, multi-modal, long-range, transportation finance plan", the Commission should define a framework for transportation planning and management that:

- Prioritizes our transportation needs by applying common criteria across all modes, projects, and regions;
- Supports growth across the Commonwealth;
- Maximizes utilization of taxpayer and customer dollars.

The chief obstacle to creating such a process is the Commonwealth's competing transportation bureaucracies. The MBTA, Massport, Massachusetts Turnpike Authority (MTA), litigious interest groups, and other fiefdoms at the state and local level serve to obscure any clear vision of the Commonwealth's transportation needs.

Bureaucratic interests have led to a planning process that conflicts with each of the standards listed above. Priorities are dictated by the relative effectiveness of individual agencies and constituencies at pushing their own agendas. Bureaucracies typically seek to maximize their budgets and payrolls and are slow to adopt cost-saving innovations.

To counteract this organizational inertia, the Transportation Finance Commission should:

- Propose a set of transportation planning criteria that emphasizes dynamic and robust measures of economic growth, as well as cost-effective utilization of funds.
- Fully implement the vision of centralized transportation planning at the Executive Office of Transportation to allow for comprehensive, intermodal, statewide planning.

With this framework in place, the Transportation Finance Commission should propose and prioritize projects for the next 20 years, then develop a 'gap analysis' of the resources needed to build, operate, and maintain these projects. This sequence is the key — resources must be directed in response to our priorities, not vice-versa.

Our goal in this paper is to highlight how current thinking on transportation is needlessly and wastefully constrained by the bureaucratic structures of the past. To maximize the region's economic potential and conserve scarce fiscal resources, transportation planning needs to be objective, transparent, and data driven.

The Transportation Finance Commission faces a difficult, but not insurmountable challenge. Their report provides a valuable opportunity to frame the debate over transportation planning and funding for the next generation. This opportunity demands a rigorous reworking of the current planning process that provides a framework for developing and funding a true transportation system for the region.

## The Current Project Planning Process

The 'funding gap' between available resources and transportation needs has become an article of faith. However, for the term to mean something more than "additional funding", assumptions about the use of current resources and planned future projects must be made clear. A framework for project selection and sequencing must be developed that looks across all modes of transportation and sets priorities based on a common set of criteria.

Our current project selection process encourages the myopic focus on planning by mode. For example, major roadway project planning flows through a multi-stage process at the Massachusetts Highway Department (MHD) that involves the various Metropolitan Planning Organizations (MPOs) and three Regional Planning Agencies. The MPOs, whose membership consists of state and regional transportation personnel as well as municipal officials (and are effectively staffed by regional planners), control the bulk of federal funds and a significant portion of state funding. The MPOs prioritize roadway projects through the State Transportation Improvement Plan (STIP).

In approximate dollar terms, the MPOs control the distribution of $300 million in construction funds ($240 million in federal funds and $60 million in matching state capital contribution). MHD controls $180 million in construction funds. It also distributes $120 million in transportation-related local aid and spends $200 million ($140 million in state capital and $60 million in federal funds) for project operations (i.e. payroll and overhead). The non-federal funds allow MHD to plan and execute roadway projects independent of the MPO/STIP process. Both planning processes use similar criteria, but the decision-making body is different in each case.

**Transportation Planning Criteria Across Modes**

| MassHighway | MBTA PMT | MBTA Capital Plan |
|---|---|---|
| Condition/Surface Quality | Service Quality | State of Good Repair |
| Safety & Security | | Safety, Health, and Environment |
| Mobility | Mobility/Utilization/ Service Quality | Operational Impact |
| Community Effects & Envir. Justice | Environmental Justice | " |
| Land Use & Econ. Dev. | Economic and Land Use | " |
| Environ. & Air Quality Effects | Air Quality | " |
| Cost Effectiveness | Cost Effectiveness | Cost/Benefit |
| | | Legal Commitments |

Other transportation agencies have different processes. The MBTA's Program for Mass Transportation (PMT) evaluates a wide assortment of projects every five years on the basis of several criteria. The PMT measures the cost-effectiveness of projects, but is not capital constrained and considers a wide range of projects regardless of political and financial concerns. After this evaluation and ranking, projects are integrated into the MBTA's rolling five-year capital investment plan. The capital plan is developed by MBTA staff and approved by the board of directors

Massport and the Massachusetts Turnpike Authority also engage in transportation project funding, albeit on a more limited scale. Each entity develops an internal capital plan that is approved by its board. Funding for their projects is also self-contained, and typically comes from bond funds. If we planned our entire transportation system holistically, these funds would be available for other projects under a different administrative structure.

### Forces of Integration

Despite the profusion of planning processes detailed above, several forces are pushing the integration of transportation infrastructure planning. The move to forward funding at the MBTA has brought attention to the size of its current debt and the effect of debt service on its operating budget. The T's FY05 budget was over $1.2 billion with an estimated $350 million in debt service costs. With increased operating expenses (due to system expansion, wage and benefit increases, and increased fuel costs) and limited ability to increase revenue, the MBTA is on an unsustainable path and cannot realistically finance any meaningful expansion on its own. As part of Governor Romney's Long-Term Transportation Plan, the state has committed to paying for any additional MBTA expansion, although its unclear how this capital funding fits into the Commonwealth's existing administrative bond cap. However, the state's central funding role gives it exceptional leverage over the MBTA's planning process.

The pressure on the MBTA is a largely unforeseen consequence of the forward funding structure, not an intentional policy. Under forward funding, the T receives one cent of the Commonwealth's five-cent sales tax, together with assessments from the municipalities it serves. Since fares cover only about 30 percent of MBTA costs (far behind New York and other systems that are at or above 50 percent), service expansions and other costs put additional pressure on their budget, particularly during several recent years of relatively flat revenue from the sales tax. Put more bluntly, since fares cover only 30 percent of operating costs, expansions necessitate further operating subsidies. There is nothing intrinsically wrong with a subsidy, but it represents an additional cost that should be acknowledged and addressed in the planning process.

Massport and the MTA have more robust revenue sources, and have not had to depend on the state. Recent reports suggest that this situation may be ending for the MTA, as it has become clear that one-time revenues from the sale of Allston Landing and several swaption transactions have masked a structural operating deficit.

Administrative changes at the state level are also altering the transportation project planning and management process. The Transportation Reform Bill set the process in motion to create a 'strong' Secretary of Transportation with oversight of almost all state transportation activities. It allowed the Secretary to assume the chair of the Massachusetts Turnpike Authority in 2006 and makes the Secretary a member of the Massport board beginning in 2007. Previously, the Massachusetts Secretary of Transportation did not control the major transportation construction project and central roadway in the state's largest city (Central Artery/Tunnel Project), the main airport, or the primary port in the state. As the recent tunnel tragedy so painfully illustrated, there should be a central point of accountability for transportation issues in the state.

The Transportation Finance Commission should continue the push for a strong Executive Office of Transportation by continuing to centralize control of major transportation resources. Important steps include the transfer of responsibility for all roadway assets, including those currently run by DCR, to EOT. In addition, a mechanism should be developed that allows EOT to consolidate redundant transportation maintenance operations across MHD, MTA, and Massport.

### Enhanced Criteria

With a strong Secretary of Transportation as the driver, all transportation infrastructure projects should be evaluated, across modes, on a common set of criteria. The criteria listed above should remain part of the decision making process, but greater emphasis should be placed on maintenance and economic growth. In particular, economic growth should be measured more robustly and in a dynamic manner that leverages transportation dollars to induce additional growth.

*Maintenance*

Analysis and anecdote support the need to prioritize maintenance of existing transportation assets. The MBTA has a multi-billion dollar maintenance backlog, which

will require spending roughly $500 million per year (with the T's annual operating budget of $1.3 billion and $350 million in debt service costs as reference points) over 20 years to address. Exasperated commuter rail and Red Line riders can attest to the lack of reliability that is a consequence of deferred maintenance. Despite system expansion that began in the 1980s, MBTA ridership has remained flat or fallen in recent years. The T cannot hope to significantly increase current utilization without addressing these issues.

Our highway system faces a similar maintenance challenge. Twelve percent of the bridges under MHD jurisdiction are structurally deficient and these bridges are budgeted to receive $200 million per year in capital spending for at least the next five years. Again, anecdotal evidence abounds about the dangers of deferred maintenance.

Expansion of road and transit systems is a worthwhile goal, but only if we can maintain both the existing and new assets. Politically, the urge to build new projects is irresistible. Mundane maintenance lacks the appeal of ribbon-cuttings. Governor Romney's "Fix-It-First" initiative is valuable first step toward prioritizing maintenance and his emphasis on maintenance has been the strongest of any governor in recent memory. Yet, it has still not been enough to arrest the increase in deferred maintenance of vital public assets.

The prioritization of maintenance must be embedded in any future transportation planning process. Project budgeting should be based on the lifecycle cost of transportation assets, not just planning and construction. There are a number of procurement, budgeting, and statutory reforms that would begin to address this issue. Projects could be bid out on a design-build-maintain basis. When bonding, covenants requiring lock-boxed capital reserves could be utilized. The Legislature could put in place minimum maintenance spending standards that force future public managers (and budgeters) to responsibly address maintenance needs. In Missouri, maintenance spending is mandated by a constitutional provision. Each of these solutions would cost money in the short term, but would prevent the ultimately wasteful and expensive 'run-to-failure' approach currently practiced on too many public assets.

*Economic Growth*

Economic growth should be measured in a more sophisticated manner and have greater influence within the transportation planning process. Economic growth measures in the current planning process are static and bureaucratic. They reward consistency with existing regional land use and economic development plans and measurements of increased traffic and parking, and air quality improvements.

**Current Economic Growth Metrics**

| MHD Land Use and Economic Criteria | MBTA PMT Economic and Land Use Impacts |
|---|---|
| Business effects: right-of-way, access, noise, traffic, parking, freight access other | Service to a State-Designated Revitalization Area/Initiative |
| Sustainable development effects | Consistency with Local Plans for TOD and Sustainable Land Use |
| Consistent with regional land-use and economic development plans | Consistency with Regional Plans |
| Effect on job creation. | Support for Brownfield and Infill Development |
| Population/Employment Served | |

Economic growth measures should be robust, dynamic and should leverage the participation of local actors. Robust measures capture *and quantify* the economic impact of transportation projects using a common methodology across projects and modes. They should also be dynamic, to incentivize municipalities and communities to participate actively in the planning process. A desired scenario might be a planned commuter rail line that increases its economic growth potential through the rezoning actions of local communities that decide to allow denser residential and commercial development near planned stations. Rather than assigning a static grade or rating to a project's economic development impact, we should use transportation planning to encourage growth.

Another aspect of economic growth beyond the calculation of project value is the focus on specific areas where growth is occurring. Transportation can serve as a catalyst for growth, but given limited dollars, it makes strategic sense to focus resources on the most promising areas. For example, the Metropolitan Area Planning Council's MetroFutures project predicts four major areas of job growth for metropolitan Boston: I-93 North (Andover, Chelmsford, Wilmington area), 128 South (Braintree, Canton, Quincy, Weymouth), MetroWest (Framingham, West/South/Northborough), and MetroCore (Boston, Cambridge, Somerville). In terms of leveraging transportation investment to deliver economic growth and mobility, these areas represent the most effective use of resources.

All of the transportation planning criteria detailed previously should remain part of the process, but economic growth should receive greater emphasis through the application of more robust and dynamic measurement.

### Practical Application

In practice, an emphasis on economic growth with better metrics, including specific areas of geographic focus, would alter our transportation priorities and the current queue of projects.

*Arborway Line Restoration*
As an example, the restoration of trolley service to the Arborway branch of the Green Line represents a poor allocation of transportation resources by two important measures. First, it's close to the front of the current project queue (which may change shortly based on the regulatory process) not because of objective criteria, but due to litigation-related pressure. Second, its economic/land use impacts rating is suspect.

Overall, the objective ranking process, as expressed through the PMT, rates Arborway a medium priority. It rates as a high priority for service quality and economic/land use impacts, a medium priority for environmental justice and cost-effectiveness, and a low priority for utilization, mobility, and air quality.

It is risky, however, to accept these rankings blindly. The Arborway restoration was estimated to cost $71.9 million to build, as of 2003. It was expected to add only *200* additional riders per day to the system, (it would substitute for an existing bus route) giving it one of the highest capital costs per new rider of any proposed project.

Despite the fact that it would increase ridership by just 1.5 percent, the project scores high on economic and land use impacts (the only area of the PMT criteria that considers economic growth). From this admittedly limited data, the potential for economic growth appears extremely limited, but the criteria currently in place gives the project its highest rating.

*Orange Line Station at Assembly Square*
Another instructive example is the addition of an Orange Line Station at Assembly Square in Somerville. Like Arborway, this project is rated a medium priority overall. It is expected to attract 1100 new daily transit riders and is rated "high priority" for economic and land use impacts. But the PMT does not credit this high rating to ridership increases or high-density development in the area, but rather to the location of the project in a "state-designated revitalization area."

Under our scenario, an economic growth rating would be more complex, but ultimately more valuable to the community and taxpayers. First, data would be developed to quantify the value of the potential economic growth caused by the Assembly Square project. Then, those numbers would move (as would the position of the project in the queue to the extent feasible from a planning perspective) as the planning process progressed. The intent would be to utilize the potential funding of the project to leverage zoning and permitting decisions by the city of Somerville and state agencies. As new or higher density housing and commercial development was allowed, the economic impact of the project would be credited. Rather than our current static approach, a stronger and more effective measure of economic growth would increase the return on our transportation investments.

*New Bedford-Fall River Line*
The proposed rail link to New Bedford and Fall River would extend the Stoughton Line and split into a separate rail line to each city. This project is rated a high priority and is

expected to attract 7,100 new riders. It receives 'high priority' ratings for utilization, and mobility, and 'medium priority' rankings for cost-effectiveness, economic and land use impacts, and environmental justice.

Due to its enormous cost and the strong political pressure on its behalf, this project warrants particularly close scrutiny. The cost was estimated at $670 million in the 2003 PMT, but current estimates are reportedly up to $900 million. The project has strong backing from political leaders in and around the two terminal communities, as well as from Deval Patrick and Lieutenant Governor Healey.

The line is touted as a catalyst for economic revitalization in the southeastern portion of the state, but the numbers and current planning paint a mixed picture. The new rail line is estimated to attract 7,100 new (net) riders to transit, but current planning around the proposed stations is less than inspiring – several feature large parking lots stuck in isolated industrial parks.

The point here is not to render a judgment on the project. Rather, it is to ask if the prioritization of the New Bedford – Fall River rail line is a product of sound and data-driven transportation planning, or if it is a product of political priorities. Further, it would be useful to encourage more aggressive corridor planning by applying dynamic economic growth measures to the project. If the state plans to use its limited resources to develop a project of this size, it should ensure that the value of the project is maximized.

## Conclusion

The key question for transportation infrastructure planning in Massachusetts is: What type of transportation system do we need? Funding questions flow from this initial question, they do not precede it.

To answer that primary question, the Commonwealth must develop a framework for evaluating projects across modes and agencies. Our proposed framework emphasizes a dynamic measurement of economic growth that leverages transportation spending and engages local decision makers. The state's transportation planning process is evolving towards a centralized, cross-modal planning and funding process, but that evolution should be accelerated.

The current approach for determining and funding transportation needs is driven by a legacy project queue that does not consider each proposal in the context of a transportation network and downplays the role of transportation in leveraging economic growth. An integrated approach using a common framework is necessary to maximize use of limited resources. Project selection should be a cross-agency process, led by a strong EOT, based on common criteria and common understanding of growth areas. Our current fragmented approach wastes resources and is a threat to the Commonwealth's competitiveness.

*About the Author*

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