BLUE-RIBBON SUMMIT ON FINANCING THE MBTA AND RTAS: OPTIONS PAPERS

This set of policy options papers was developed by the Dukakis Center for Urban and Regional Policy as part of its collaboration with the Conservation Law Foundation to address Massachusetts’ public transportation finance crisis. Prepared in advance of the November 1, 2010 Blue-Ribbon Summit on Financing the MBTA and RTAs, these brief white papers catalogue the nature, financial implications, advantages and disadvantages of some of the most frequently-mentioned potential policy options for addressing the structural financial crisis facing public transportation in Massachusetts.

Transit authorities generate fares and other “own source revenues”, with the remainder of their budgets generally coming from government sources in the form of dedicated revenues (which have been legislatively dedicated for the exclusive use of a transit authority) or grants. Transit authorities receive funding from local, state and federal agencies. There is also a growing interest in policies that allow transit authorities to leverage private sector investment. This set of options papers explores policy options that focus on the transit authorities themselves, revenue from local government, revenue from state government and private investment. These options papers do not, of course, represent the entire universe of potential policy solutions for stabilizing transit authority finances in Massachusetts.

Three potential policy options have been deliberately omitted from consideration. First, we did not consider federal funding, which is outside the control of Massachusetts policymakers. Second, we did not consider imposition of an income tax surcharge on those living in specific transit-served communities because the 44th amendment to the Massachusetts Constitution, which grants the state legislature the power to tax income, provides that such income taxes must be imposed statewide at a uniform rate on any given type of income. Finally, we did not consider placing new taxes to support transit on the ballot for popular approval (as has been done successfully in many states and localities) because the 48th amendment to the Massachusetts Constitution imposes limitations on the content of laws that may be submitted by popular initiative. The Constitution provides that no ballot measure may make a specific appropriation of money and therefore any new revenue enacted by popular initiative would have to be appropriated by the legislature and voters could not be certain that revenues would go to transit.

CLF and the Dukakis Center wish to thank our colleagues at three organizations for their assistance in gathering data and helping to prepare and review these options papers: A Better City, the MBTA Advisory Board and the Metropolitan Area Planning Council. While the authors are grateful to all of the aforementioned organizations, the options papers were prepared by the Dukakis Center in order to illustrate potential policy options and should not be seen as an endorsement of any particular policy by any organization, including CLF and the Dukakis Center.
POLICY OPTION: Increasing the gasoline tax

TYPE OF POLICY: State funding (expansion of existing source)

BRIEF DESCRIPTION: Massachusetts currently levies a 21 cents/gallon tax on gasoline, which was last increased on January 1, 1991. Each one cent increase in the gasoline tax would generate approximately $26 million annually in new revenue.

CURRENT MASSACHUSETTS POLICY: The Commonwealth's current 21 cents/gallon excise tax on gasoline and diesel fuel is projected to generate $664 million in fiscal year 2011. Other than the one hundredth of one cent credited to the Inland Fish and Game Fund, all gas tax revenues are credited to the Commonwealth Transportation Fund (formerly the Highway Fund) and used for transportation-related purposes. The Commonwealth issues bonds secured by a portion of gas tax revenues (with principal and interest payments made from the Commonwealth Transportation Fund), thereby leveraging gas tax revenues to provide for additional capital.

In February 2009 Governor Deval Patrick proposed a 19-cent increase in the gasoline tax in order to raise nearly $500 million in new revenue for transportation purposes, including funding for the MBTA. The Legislature instead approved a sales tax increase in June and directed $275 million of that revenue to be used for transportation purposes, including $160 million annually for the MBTA.

USE OF THIS POLICY OPTION IN OTHER STATES: State gasoline taxes are levied on top of the federal gasoline tax of 18.4 cents per gallon, which has not been increased since 1993. In July 2010, according to the American Petroleum Institute, the average state tax on gasoline (including both excise and other taxes) averaged 29.3 cents, putting Massachusetts’ 23.5 cents/gallon (including both the 21 cents/gallon excise taxes and other state taxes affecting gasoline) well below both the national average and gasoline taxes in the neighboring states of New York, Connecticut and Rhode Island.

Massachusetts’ gasoline taxes compare even more favorably with those in other states when considered as a percentage of income. The Massachusetts Budget and Policy Center has calculated that motor fuels tax revenue in Massachusetts was equal to 0.20 percent of state personal income in fiscal year 2008; only three states collected less revenue as a share of state personal income from motor fuels taxes than Massachusetts.

ADVANTAGES OF THIS POLICY OPTION:
- Massachusetts already has a system in place for collecting and distributing gasoline taxes
- Massachusetts (along with the federal government and most other states) has used gasoline tax revenues for transportation purposes, including transit, for many years
- This tax has not been raised for two decades and the increase can be justified as simply restoring the real (inflation-adjusted) buying power of the gasoline tax
- The small increase in gasoline prices will not unduly burden gasoline purchasers: in the first quarter of 2010, Americans spent only 46 cents on federal, state and local gas taxes for every $100 of income earned, the lowest rate since the government began tracking this metric in 1929.
• An increase in the cost of gasoline could discourage driving and increase transit use

**DISADVANTAGES OF THIS POLICY OPTION:**

• Gasoline taxes may be regressive, imposing a higher burden on lower income families (although this conclusion depends on how many low income families own cars and therefore buy gasoline)

• Raising gasoline taxes is politically unpopular, as demonstrated by the 2009 response to Governor Patrick’s proposed increase
  o Only 3 of the 15 states considering gasoline tax increases in 2009 actually adopted them
  o A June 2010 survey by the Mineta Transportation Institute found that only 23% of Americans would support a 10 cent/gallon increase in the federal gasoline tax

• If gasoline sales continue to decline due to consumer purchases of more fuel efficient vehicles and policy success in persuading Massachusetts residents to drive less, projected revenues from the gasoline tax will not be realized
  o Data from the Energy Information Administration indicates that gasoline sales in Massachusetts have dropped and are currently at levels not seen since 2000

**FINANCIAL ANALYSIS OF THIS POLICY OPTION:** Revenue generation from an increase in the gasoline excise tax depends on the number of gallons of gasoline sold and taxed in Massachusetts. The current tax is paid by licensed distributors and importers of gasoline based on the quantities sold and used. Gasoline consumption in Massachusetts varies from year-to-year but has been dropping recently. The “rule of thumb” that has been cited is that each one cent increase in the gas tax in Massachusetts would generate approximately $32 million in revenue. That revenue figure is, however, based on 2003 gasoline consumption and—as shown in the chart above—gasoline sales in Massachusetts have dropped since then. Using 2008 deliveries of approximately 7 million gallons/day, each one cent increase in the gasoline tax would generate approximately $26 million in new revenue.

The most recent data from the Energy Information Administration for Massachusetts indicates that per capita consumption of motor gasoline in 2005 was 445 gallons, a figure that may have dropped since then. This per capita gasoline consumption is well below the national average and ranked 39th among states. Each one cent increase in the gasoline tax would therefore cost each Massachusetts resident an additional $4.45 annually.

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POLICY OPTION: Vehicle Miles Traveled (VMT) Tax

TYPE OF POLICY: New state funding source

BRIEF DESCRIPTION: Many states and the Federal government are exploring the possibility of charging motorists a fee or tax for each mile traveled in addition to or instead of taxing gasoline as the primary form of “user fee” for financing transportation. Such “vehicle miles traveled,” or VMT fees, could be assessed on an annual basis (using odometer readings collected during mandated safety inspections) or at the gas pump. The resulting revenues could be used to fund both highway and transit.

CURRENT MASSACHUSETTS POLICY: As discussed in the options paper on increasing the gasoline tax, the Commonwealth’s current 21 cents/gallon excise tax on gasoline and diesel fuel is projected to generate $664 million in fiscal year 2011. Proceeds from the gas tax (and from motor vehicle fees) are retained in the recently-created Commonwealth Transportation Fund and then transferred to the Massachusetts Transportation Trust Fund to support the Massachusetts Department of Transportation, MBTA and RTAs. While no VMT tax is currently in place, revenue generated by such a tax in the future could flow through the two existing trust funds and be used to increase funding to the MBTA and RTAs. One major difference between the current gasoline tax and a potential VMT tax is that Massachusetts collects gas taxes directly from fuel distributors rather than individual retailers. Distributors incorporate the tax into the prices they charge to retailers, and retailers in turn pass the cost to consumers. A VMT tax would presumably be collected directly from consumers.

USE OF THIS POLICY OPTION IN OTHER STATES/COUNTRIES: While no state has yet adopted VMT charging, many states (and the federal government) have begun exploring the possibility in response to the political difficulties of raising gas taxes and the trend toward declining gasoline sales, and therefore tax receipts, caused in part by the advent of fuel-efficient and hybrid vehicles. The most advanced exploration has been in Oregon, where the Department of Transportation conducted a pilot test of a VMT-based fee structure using a system called Vehicle Miles Traveled Collected at Retail (VMTCAR). Volunteers’ vehicles were fitted with GPS devices to record miles driven; the device classified miles driven by time of day and geographic region. Each time a volunteer refueled at a service station, a radio frequency transmitter sent the GPS data to a receiver, which in turn communicated with a central database. The database analyzed the miles traveled since the last refueling, applied the appropriate rates to each class of miles driven, and automatically charged the calculated fee to a prepaid account. The pilot was designed to work alongside the existing gas tax revenue structure. Under the VMTCAR system, drivers were charged either the gas tax or the VMT fee of 1.2 cents per mile – there was no double-charging involved. Based on the evaluation reports generated by this pilot, Oregon as well as many other states are considering whether and how to phase in VMT charges.

ADVANTAGES OF THIS POLICY OPTION:
• A VMT-based tax may be more financially viable than a gas tax in the long term, because revenue from gasoline taxes will decline as more drivers choose fuel-efficient vehicles or choose to use transportation alternatives
VMT taxes are an appropriate form of user fee that ensures that drivers pay for the roadway system in proportion to their use of it and can also be used, like gas taxes, to cross-subsidize transit.

VMT fee structures can be customized to address other policy objectives, such as congestion relief, by setting differential fees to influence traffic patterns by time of day, region, or route.

VMT fees could take the income of the individual driver into consideration, so the fee would not have to be regressive.

VMT fees support the Commonwealth’s policy objective of reducing VMT under the Global Warming Solutions Act and GreenDOT initiative, providing a direct price signal to consumers that can discourage unnecessary driving and thereby reduce VMT and greenhouse gas emissions.

DISADVANTAGES OF THIS POLICY OPTION:

- VMT taxes will have to be collected directly from consumers, unlike the gasoline tax, which involves a relatively small number of payers.
- Consumers may resist the idea of having their travel “recorded” and have privacy concerns.
  - However, the system can be designed in a way that only transmits bulk data to the system, maintains no records, and gives the state only a limited ability to audit.
- Implementing VMT taxes will take many years and require substantial investment in technology and tax collection infrastructure.
  - Retrofitting every vehicle with the proper GPS technology is a massive undertaking.
  - The necessary hardware and software would come with a cost and that cost would need to be borne by the state, the consumer or a combination of both.
- Instituting a VMT tax would represent a fundamental change in the way driving is taxed in the state and political and voter opposition is likely.
  - A June 2010 survey by the Mineta Transportation Institute found that only 21% of Americans would support a 1 cent/mile charge, roughly the same as the 23% who would support a 10 cent/gallon increase in the federal gasoline tax.

FINANCIAL ANALYSIS OF THIS POLICY OPTION: Massachusetts drivers travel 53.7 billion miles each year so a VMT fee of 1.2 cents per mile would be needed to replace all current revenue from the gasoline tax and a higher fee would be needed to provide additional revenue to support the MBTA, RTAs and other transportation needs. In order to better understand how VMT charging might work in Massachusetts, the Metropolitan Area Planning Council analyzed available data on VMT (broken down by regional planning areas, which are roughly equivalent to transit districts) to calculate the revenues raised and household costs for fees of 0.5, 1 and 2 cents/mile. As a supplement to the current gas tax, this data indicates that a 0.5 cent/mile VMT charge would produce approximately the same amount of revenue as a 10 cent/gallon increase in the gasoline tax.
POLICY OPTION: Increasing local funding for transit

TYPE OF POLICY: Expansion of local funding sources

BRIEF DESCRIPTION: Local governments currently contribute a relatively small proportion of the cost of transit operations to both the MBTA and RTAs and provide little toward capital funding. Additional locally-generated revenues could be used to support both transit operations and capital projects either by lifting the cap on local assessments paid to the MBTA and RTAs or by implementing new mechanisms for generating and dedicating local revenues to transit.

CURRENT MASSACHUSETTS POLICY: Cities and towns served by the MBTA or by a local RTA pay a local assessment to help support the cost of transit operations. Local assessments totaling $150 million provided slightly more than nine percent of the MBTA’s FY2011 budgeted revenue. In FY2010, local assistance of $26 million accounted for ten percent of the combined operating costs of the fifteen RTAs. The annual growth in local assessments has been capped at 2 ½ percent since the passage of Proposition 2 ½. Assessments are deducted from the local aid given by the Commonwealth to each municipality. Since the 2000 passage of the MBTA’s forward funding legislation, local assessments to support the MBTA have been levied on 175 member communities, including 14 inner core communities, 51 outer communities and 110 “other served” communities that are also members of RTAs. This last group has the option of deducting 100 percent of the amount they pay to a local RTA from their share of assessments; the total amount deducted is then re-assessed to the remaining 65 communities. The forward funding legislation also mandated that total local assessments to support the MBTA decrease between 2001 and 2006 before once again being allowed to grow by the lesser of inflation or 2 ½ percent per year. As a result, the percentage of the total revenue covered by assessments decreased from 14.2 percent in FY 2000 to 10.8 percent in FY 2006; the Transportation Finance Commission calculated that, had assessments increased at the historic formula rate between 2001 and 2006, the MBTA would have received an additional $25 million in FY 2007 (see chart). Because of the statutory cap on the growth in local assessments, local participation constitutes a shrinking proportion of growing MBTA and RTA budgets over time. The TFC calculated that local assessments would account for only about 8 percent of the MBTA’s operating revenues by 2026. On the capital side, neither the MBTA nor the RTAs regularly use local revenues to finance capital projects.

USE OF THIS POLICY OPTION IN OTHER STATES/COUNTRIES: A recent study using 2005 data from the National Transit Database found that, across U.S. transit agencies of all sizes, local funding sources accounted for 20 – 25 percent of revenues for both capital and operations: a far greater proportion than in Massachusetts. One of the most noteworthy trends in transit funding over the past decade or more is the growing use of locally-generated taxes (particularly sales taxes) whose proceeds are dedicated to transit (often to support capital projects).
ADVANTAGES OF THIS POLICY OPTION:

- Local assessments or other dedicated revenue from local sources would provide the MBTA and RTAs with a higher guaranteed revenue stream on an ongoing basis.
- Many forms of dedicated local revenue (including local assessments and proceeds from tax increment and benefits assessment districts) can be used to secure issuance of bonds.
- The use of local revenues to support transit capital projects, not currently done in Massachusetts, would help address the shortfall in capital available to meet the maintenance and expansion needs of both the MBTA and RTAs.
- Local communities benefit from the availability of transit services and the presence of transit (which has been shown to increase property values and therefore property taxes) and should therefore contribute more toward transit.

DISADVANTAGES OF THIS POLICY OPTION:

- Lifting the cap on growth in local assessments or changing assessments in any shape or form would require an act of the legislature, which has been loath to make any changes to Proposition 2 ½.
- Increasing communities’ assessments at a time when local aid has been decreasing for years would be politically unpopular and would limit the availability of funds that municipalities need to meet other community needs.
- Local communities in Massachusetts have not historically been expected to contribute to transit capital projects and would object that such projects are the responsibility of the Commonwealth.
- Massachusetts lacks many of the mechanisms used by other states to generate local revenues for transit operations and capital, from local option sales or income taxes to tax increment financing for state-sponsored (as opposed to municipal) projects.

FINANCIAL ANALYSIS OF THIS POLICY OPTION: The financial impact of making additional local revenue available to the MBTA and RTAs would depend on the exact measures implemented. Lifting the cap on growth in local assessments and allowing them to grow at the same percentage as transit operating expenses would, for example, ensure that local assessments continue to account for a constant proportion of MBTA and RTA budgets.

Another mechanism for generating additional local revenues for transit would be to allow local communities to impose property or other local tax surcharges and dedicate the resulting revenue to transit operations or capital projects in their communities. Legislation would be required to authorize such a program. One incentive for local communities could be that a portion of funds generated could be used to pay MBTA or RTA assessments, effectively increasing local aid, or for local transportation projects such as bike paths and sidewalk improvements. While Massachusetts has no history of allowing local communities to adopt tax surcharges for transit, the popular Community Preservation Act (CPA) could serve as a model. In fiscal year 2010, 142 communities that had voluntarily adopted property tax surcharges to fund open space, affordable housing and historic preservation generated $82 million in local funds (which were matched by $26 million in state funds as provided by the CPA).

Local contributions to transit capital projects could be generated using mechanisms well established in other states such as benefits assessment districts or tax increment financing. Denver, for example, uses revenues assessed on downtown properties in a benefit assessment district to support operations of its Transit Mall. Tax increment financing is a method for capturing a portion of the increased property value generated by new or improved public infrastructure. While legislation would likely be required to allow for use of TIF for a state-sponsored project, this tool could help generate much-needed funds to provide the local match for federal grants.
POLICY OPTION: Parking fees and taxes

TYPE OF POLICY: New local or state funding source

BRIEF DESCRIPTION: In high demand destinations, travelers are willing to pay significant sums for parking, which means that parking can be taxed or surcharged with the resulting revenue used to support transit. Parking surcharges or taxes could be imposed either by specific municipalities or on a regional basis throughout the MBTA or RTA service area. A state-authorized, locally accepted tax/fee (structured either as a flat rate surcharge or as a percent of value) could be applied on non-residential parking in urban areas that are experiencing congestion, that have an adequate supply of premium parking and that are within the service area of the MBTA or an RTA. (Residential parking and small lots could be exempt, along with parking for the disabled and parking for car sharing services and car pools.) The state would impose the tax, even though it would then be distributed to local/regional transit purposes. Alternatively, state legislation could authorize cities and towns to adopt local option parking taxes (as is true for the meals tax).

CURRENT MASSACHUSETTS POLICY: Massachusetts has not embraced or established the legal basis for parking fees or taxes, so new parking taxes or fees would require legislation if they were to be imposed at either the state or local level. Parking fees have been used to support connecting modes in limited instances. The principal example is at Logan Airport, where Massport earned $103 million in airport parking fees in FY 2009.

USE OF THIS POLICY OPTION IN OTHER STATES/COUNTRIES: A number of cities have chosen to link parking fees and transit because the cost and availability of parking “meters” impacts roadway usage and so higher parking costs can lead to less driving. Policymakers wishing to reduce driving may choose to invest the parking revenues in transportation alternatives such as transit in order to further discourage driving. Since parking demand is often greatest in urban areas where transit is most feasible, cities such as Miami, Pittsburgh, San Francisco, Chicago, Los Angeles and New York City have chosen to use parking fees as a reliable revenue stream for transit. In most areas the local taxing authority (or in some cases the transit authority) levies the tax.

In some cases, parking taxes/fees are ad valorem taxes; others are surcharges. Charges can be calculated as a percentage of revenues (typically 10% and up) or as flat fees per transaction rate (for example, $1 on a daily rate or $14 on a monthly rate) or as an annual surcharge per space. The type of charge can affect the degree to which it is passed on to motorists, thus reinforcing the goal of congestion pricing without unduly restricting access to certain geographic areas. The rates can be tailored to the geography and the market. For example, in New York City parking charges are levied in Manhattan only and residential and commercial spaces are charged different rates. In Miami, a 20% tax is levied on off street commercial parking only. When the tax is on the transaction (and thus calculated on the revenue generated), rates tend to vary from 6% to 31%, but 10% and 12% seem to be the most common rates. This type of ad valorem tax is most easily directed to commercial operators. When rates are based on the parking space, they resemble a property tax, although they tend to be levied on a fee per space basis. Since this technique is more common in other countries, it is hard to equate prices, but
Vancouver charges $25-40 per space, Toronto charges $1 per square foot, and Melbourne Australia charges $400-$800 annually.

**ADVANTAGES OF THIS POLICY OPTION:**
- Increasing the cost of parking in order to support transit would support other policy objectives (such as smart growth and greenhouse gas reduction) because it would provide a price signal that would discourage driving
- While the primary purpose of the tax would be to support transit, the political acceptability of the tax could be increased by allowing communities to target a portion of the proceeds to more popular local alternative transportation needs, such as elderly and disabled transportation or bike lanes
- Parking taxes could work not only in dense urban areas, but could also be applied to new high-value parking markets, even in suburban areas. Given the increase in structured parking in some suburban areas, the demand for parking might sustain an additional charge that would support a transit alternative
- Increasing the cost of parking (either directly or indirectly) could tend to deter increases in parking supply, more generally, in auto-dependent land uses

**DISADVANTAGES OF THIS POLICY OPTION:**
- Legislation would be required to authorize local imposition of parking fees
- Taxing parking may be politically unpopular at both the state and local level
- Revenue potential cannot easily be calculated because the number of parking spaces is unknown
- While one of the benefits of parking fees/taxes is the ability to tailor the charges to geography and the market, that fine grain approach requires very careful work at the local level and municipalities may not have the resources available to conduct such an analysis
- Particularly if the tax is based on the parking spaces (rather than the price charged), a good inventory would be required in order to impose and later enforce parking taxes; such inventories do not commonly exist in Massachusetts
- Even if cities and towns choose to tax parking, they may want to use the revenues for purposes other than support for transit

**FINANCIAL ANALYSIS OF THIS POLICY OPTION:** The revenue potential of parking fees or surcharges can only be calculated based on both (1) an appropriate parking inventory for the municipality or transit district and (2) the amount to be charged and how it will be structured. Unfortunately, off-street parking inventories do not exist for most cities and towns in Massachusetts.

Some parking data is, however, available for the City of Boston because of that city’s parking freezes. The most recently available information for downtown Boston indicates that there are some 34,990 public spaces in the Central Business District (3985 in lots and 31,005 in garages) and 32,320 private spaces (7499 in lots and 24,821 in garages). If each public space generated $100 per year in taxes, the gross revenue would be about $3.5 million. If the private spaces were included, that sum would almost double. However, many of the private spaces (and some of the public ones) are very small facilities and might not be included in a parking surcharge program depending on how it was structured. Any community considering imposing a parking fee or surcharge (which would require state legislative approval) would need to start by creating a parking inventory in order to be able to analyze the financial and other impacts of the proposed fees.
POLICY OPTION: Cross-subsidies for transit

TYPE OF POLICY: New state funding source

BRIEF DESCRIPTION: Cross-subsidies involve the use of non-transit funding sources to support transit. In some cases, a larger transportation agency can use internal cross-subsidies, diverting excess operating revenue from a more profitable asset to benefit a less profitable one. In other cases, policymakers decide to require stakeholders other than transit riders to support transit and provide for the shifting of taxes or fees to transit agencies. Massachusetts already provides for some cross-subsidies in support of transit but could make more use of cross-subsidies such as tolls and motorist fees to support the MBTA and RTAs.

CURRENT MASSACHUSETTS POLICY: Massachusetts has used cross-subsidies to a limited extent for transportation. The Massachusetts Port Authority, for example, has traditionally used internal cross subsidies, applying excess funds from airport revenues and non-port development to support the Port of Boston. In 2009, development subsidies covered the $1.3 million port operations deficit and produced a surplus of $900,000. While not a classic cross-subsidy, Massachusetts has also dedicated $100 million annually from statewide Registry of Motor Vehicle fees to pay down Central Artery debt, thereby motorists from across the state are cross-subsidizing one particular highway facility.

One example of a cross-subsidy for transit in Massachusetts is Massport’s contract with the MBTA concerning Silver Line bus rapid transit service to Logan Airport. In order to ensure an adequate level of direct transit service to the airport, Massport purchased and owns Silver Line buses. The MBTA operates these Massport-owned Silver Line buses and remits a portion of fares collected at the airport to Massport. Finally, the use of gasoline tax revenues from the Commonwealth Transportation Fund to assist the MBTAs and RTAs is an example of the use of cross-subsidies in support of transit in Massachusetts.

USE OF THIS POLICY OPTION IN OTHER STATES/COUNTRIES: Cross-subsidization is a mainstay of New York’s Metropolitan Transportation Authority (MTA), which includes different units and transfers funds internally among them. The MTA includes the Triborough Bridge and Tunnel Authority (TBTA), which owns 7 toll bridges, 2 tunnels, and the Battery Park parking garage. In FY2010 the MTA’s Bridge and Tunnel division transferred $69m to the MTA (up from $51m in FY2009) to reduce the deficits of the transit and rail units. The FY2009-10 transfers represented approximately 17-21% of TBTA operating revenue in those years. In addition to the annual operating subsidy, the MTA’s transit and highway properties develop a joint capital plan that is financed, in part, with bonds issued by the TBTA.

On a smaller scale, San Francisco’s Golden Gate Transportation District (GGTD) uses bridge revenues to support bus and ferry service in the Golden Gate corridor. The cross-subsidy is reflected in management decisions to fund 47% of bus and ferry operating costs through bridge tolls. Bridge tolls provided 69.5% of FY2009 operating revenues, even though only 27.3% of the expenses were for the bridge. Bridge tolls have been increased notwithstanding the surplus – a toll increase of 20% was approved in July 2008. In 2009, tolls averaged $5.09 while regional bus fares averaged $2.98.
ADVANTAGES OF THIS POLICY OPTION:

- Cross-subsidization is easier when agencies are under common control (as with the MTA) and while transportation reform in legislation did not create common control, it created a unified basis for decision-making by linking the MassDOT and MBTA Boards, including the RTAs and MBTA in the Mass Transit Division of MassDOT, giving the new MassDOT oversight over the Registry and over the bridge/highway toll properties, and continuing to have the CEO of MassDOT on the MassPort board.
- Transportation reform also laid the groundwork for cross-subsidization through the creation of the Commonwealth Transportation Fund and Massachusetts Transportation Trust Fund, which can accept and disburse funds across modes.
- Cross-subsidization is a flexible policy tool because subsidy levels can easily be adjusted to address the Commonwealth’s most pressing transportation needs.
- Cross-subsidization can be justified by ensuring that the funds generated are used to support transit in the geographic area from which the funds (for example, tolls or Registry fees) are generated.

DISADVANTAGES OF THIS POLICY OPTION:

- Cross-subsidy from one transportation agency to another requires a consistent surplus somewhere, but in Massachusetts there appear to be substantial needs and insufficient revenue in almost every mode; there may not be any “cash cows” left.
- Policymakers may not support cross-subsidization, as evidenced by the provision in the transportation reform legislation guaranteeing that all toll revenues will be used to support the highway segment on which the tolls are collected.
- While Massachusetts does have a history of using gasoline taxes and registry fees to cross-subsidize transit, there is a lot of competition for these dollars and the MBTA and RTAs might not be allocated a substantial portion of the available funds.

FINANCIAL ANALYSIS OF THIS POLICY OPTION: The amount of revenue that could be generated by cross-subsidies for transit would depend on both the source of the subsidy and the portion of the revenue stream to be allocated to transit. If Massachusetts law were to be changed, a portion of toll revenues from the Tobin Bridge or Massachusetts Turnpike could be used to support transit services. Similarly, if the Commonwealth were to adopt open-road tolling or other tolling schemes, the legislation establishing those tolls would present an opportunity to dedicate a portion of toll revenue to transit. Existing or newly-established registry fees could also be used to support transit, just as they are currently used to pay down Central Artery debt. Registry fees could prove to be the easiest source of cross-subsidies for RTAs, as the fees could be allocated to the MBTA and RTAs based on the portion of the fee generated by motor vehicles registered, or licensed drivers living, in the communities served by the transit authority.
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POLICY OPTION: Leveraging Private Investment

TYPE OF POLICY: New, non-governmental funding

BRIEF DESCRIPTION: The MBTA and RTAs rely on a combination of fares, self-generated revenues and government subsidies and have not historically focused on bringing in revenue from non-governmental sources other than riders. In tight financial times, transit agencies around the country have increasingly identified and implemented non-traditional ways of bringing private funds into their systems, to support both operating budgets and capital projects. The MBTA and RTAs could increase operating revenues from the private sector using programs such as “unlimited access” passes marketed to universities and housing developers. On the capital side, the MBTA and RTAs undertaking substantial expansion projects could benefit from public-private partnerships that bring private equity to the transit agency.

CURRENT MASSACHUSETTS POLICY: Massachusetts transit agencies have limited experience working directly with private sector stakeholders to leverage private dollars in support of transit operations and capital projects, but some have begun exploring such opportunities.

USE OF THIS POLICY OPTION IN OTHER STATES/COUNTRIES: There are multitudes of ways that transit agencies large and small have brought private investment to their systems. Two examples, one focused on operating revenue and one on capital projects, are marketing of unlimited access passes to universities and residential developers and public-private partnerships.

Universal Access Passes: While pass programs have long been used to maximize rider and fare revenue, unlimited access programs are designed to leverage private dollars (rather than user dollars). These passes are marketed directly to, and paid for by, private entities such as universities or residential developers. The transit agency therefore gets a larger and more predictable revenue stream. Under Chicago’s U-Pass program, for example, 22 colleges and universities pay a per-student fee to the Chicago Transit Authority and all of their students receive unlimited use passes. Another potential market for such passes is the housing developer market. The Santa Clara Valley Transportation Authority offers a residential version of its Eco Pass, which provides unlimited rides on VTA bus and light rail seven days a week to housing developers. Any residential community with 25 or more units that is defined by a geographical boundary, such as an apartment building or condominium complex, may join Residential Eco Pass and must purchase passes for all residents five years of age or older.

Public-Private Partnerships: The U.S. Department of Transportation defines a public-private partnership (PPP) as a “contractual agreement formed between public and private sector partners, which allows more private sector participation than is traditional.” These may include innovative procurement techniques such as design-build contracts which have, in at least some cases, been shown to save taxpayer money. Increasingly, however, PPPs are being used as a tool not only for financing transportation infrastructure, but also as a tool for funding capital projects by bringing private equity into the projects. Initially these projects were primarily highway projects in which tolls would be charged to provide the requisite return on equity to private investors. Recently, however, the Federal Transit Administration has piloted this type of PPP on several New Starts, large-scale transit expansion
projects. The most prominent example is in Denver, where the private consortium Denver Transit Partners was recently selected for a $2 billion light rail construction project, in part because it could both reduce capital costs by $300 million and bring private equity to the deal. Denver Transit Partners will actually operate and maintain the rail service on a concession contract for 40 years, with the Denver Regional Transportation District maintaining control of service standards and schedules.

ADVANTAGES OF THIS POLICY OPTION:

- These programs bring an entirely new revenue source, involving neither fares nor government subsidy, to the MBTA and RTAs
- Private entities ranging from universities to housing developers to employers gain many benefits (financial and otherwise) from proximity to transit and it is therefore reasonable to ask them to provide funding to support transit services
- Both unlimited access pass programs and PPPs, as well as other innovative ways of leveraging private dollars, have been in use across the country for some time and so the MBTA and RTAs could build on experience and success elsewhere
- The USDOT and FTA are strongly supportive of these efforts; use of PPPs could, for example, improve the MBTA’s chances of securing New Starts funding

DISADVANTAGES OF THIS POLICY OPTION:

- Private sector and institutional stakeholders have been receiving the benefits of transit for free and may be reluctant or unwilling to invest in transit
- Many transit agencies have limited or no experience with these types of programs and will need to launch these efforts at a time of very tight staffing and resources
- The involvement of PPPs in transit capital problems has raised concerns about transparency and accountability as previously public responsibilities are shifted to the private sector
- Private actors need to see a “return on investment” and it is not always clear how transit can generate such a return; public policy in Massachusetts has historically favored keeping transit fares affordable and so allowing private investors returns on fares is more problematic than when PPPs for highway projects use tolls to provide the requisite return.

FINANCIAL ANALYSIS OF THIS POLICY OPTION: Because there are a wide variety of very different types of opportunities to bring private capital into transit operations and capital projects, there is no way to project specific revenue streams. One opportunity for Massachusetts would be to consider the Denver PPP model for planned expansion projects in order to substitute at least some private capital for the very limited amount of public funds available for capital expansion projects.

For the MBTA and RTAs that serve colleges and universities or larger housing developments, unlimited access pass programs could leverage private funding. The Dukakis Center recently conducted a comprehensive survey of enrollments at Boston-area colleges and universities and this data can be used to project potential revenues from a program like the Chicago Transit Authority’s U-Pass program, which currently charges enrolled institutions $100/semester/full-time student. Boston, Cambridge, Newton and a small number of other communities well-served by the MBTA are home to colleges and universities that currently enroll more than 300,000 full-time undergraduate and graduate students. If all of them were to participate in a $100/semester/student unlimited pass program, their annual payments to the MBTA would total $60 million. If just the eight largest colleges and universities with excellent MBTA access (BU, Harvard, Northeastern, BC, UMass-Boston, Bunker Hill Community College, MIT and Suffolk) were to participate, their annual payments would total $29 million (at $100) and $87 million (at $300).
POLICY OPTION: MBTA debt relief

TYPE OF POLICY: Reduction in MBTA budget expenses

BRIEF DESCRIPTION: The MBTA’s current outstanding debt is over $8.6 billion in principal and interest and the T devotes the highest percentage of its budget to debt service of any transit authority in the US. Debt relief could take one of two forms: either the Commonwealth could reclaim responsibility for debt payments (as occurred when the Turnpike Authority was abolished) or, more likely, the MBTA could be provided with new sources of dedicated revenue to pay for some or all of the principal and interest payments.

CURRENT MASSACHUSETTS POLICY: Before forward funding, the MBTA did not issue debt for major projects; the Commonwealth borrowed for transit projects on the T’s behalf and paid back these debts over time. Since 2000, the MBTA has been responsible for all of its transit capital spending. This enormous debt burden creates at least two sets of financial problems for the MBTA.

With respect to the MBTA’s operating budget, over $400 million, or roughly one-quarter of the MBTA’s FY2011 budget, is needed to pay the principal and interest on outstanding debt. The T also restructured over $2 billion in debt during fiscal years 2005-2008 to reduce principal and interest costs and has continued to restructure debt to lower short-term debt service payments. As a result, payments on the MBTA’s debt, including principal and interest, extend through 2039 and will be more than $400 million annually until 2022, even if no additional debt is issued.

With respect to the MBTA’s capital budget, the amount of outstanding debt and need to avoid further increasing debt service costs severely limits planned capital spending. The most recent five-year Capital Investment Program states that “[w]ithout debt relief or a more extensive pay-as-you-go capital program the Authority may not be able to afford to invest funds in many of the projects described in this document.” Limited access to capital inhibits the T’s ability to significantly reduce the over $2.7 billion backlog of State of Good Repair projects or even generate the funding to match available federal grants.

USE OF THIS POLICY OPTION IN OTHER STATES/COUNTRIES: All transit agencies have some debt, but as the MBTA Advisory Board explained in its Born Broke study, there are differences among transit agencies in both the financing sources available to service that debt and in the ultimate responsibility for it. Not all transit authorities are responsible for debt service; those which operate as units of government, for all intents and purposes, have their debts paid by their parent government organization. Other transit agencies which are responsible for debt service generally have dedicated revenue streams for debt service or maintenance. The Advisory Board (see chart) found that the “MBTA is unique among its peers in that it lacks a dedicated revenue source for debt service or capital maintenance.”
ADVANTAGES OF THIS POLICY OPTION:

- Every dollar not needed for debt service can be redeployed to cover other operating expenses or enhance the T’s small reserves, ensuring that debt service does not starve operational funding and providing stability to the operating budget
- Creates capacity for additional capital spending, allowing the MBTA to address its State of Good Repair backlog
- Enhances Massachusetts’ ability to leverage federal participation in capital transit projects by creating capacity to use state capital as matching funds
- Depending on what funding source is used, allows for a diverse array of revenue streams to support capital spending and can tie the revenue for capital funding to the benefits that transit generates

DISADVANTAGES OF THIS POLICY OPTION:

- Significant legislation action would be required soon after the passage of the Transportation Reform Act, either to redefine responsibility for debt or provide for a dedicated source of revenue for debt repayment
- The Commonwealth’s debt obligations would increase if it accepted responsibility for repayment of some MBTA debt (e.g., the prior obligation debt issued before forward funding)
- A new dedicated revenue source for debt repayment would require either expenditure of existing state revenues, creation of a new state revenue source or devolution of local taxing powers to communities in the MBTA service area – and none of these would be politically popular
- The maintenance and capital needs of the MBTA are so substantial that even extensive debt relief might only allow for better maintenance of the existing system, without creating the capacity for significant expansions of service

FINANCIAL ANALYSIS OF THIS POLICY OPTION: The pro forma that the MBTA is currently operating under assumes that debt service costs will reach about $500 million in 2013, if an additional $250 million per year in revenue bonds are issued to fund the capital program. (This funding level, as explained in the background paper, might not even be adequate to achieve State of Good Repair over the next twenty years.) Without debt relief, capital spending at this level will result in budget shortfalls of $252 million in FY2012, $342 million in 2013 and $390 million in 2014.

The financial impact of debt relief depends on how much dedicated revenue for debt repayment is provided to the MBTA. In the FY2011 budget, $77.7 million of debt service payments are for principal and interest on prior obligations debt, so if debt relief were provided solely for debt that incurred before forward funding, this amount would be freed up for the operating budget and/or reserves. Another approach that has been proposed is for the Commonwealth to take responsibility in some form for both the prior obligations debt and the legal commitments debt (associated with Central Artery transit mitigation commitments), which together account for $3.32 billion of the MBTA’s outstanding debt (principal only) of $5.5 billion.
POLICY OPTION: MBTA Operational Efficiencies

TYPE OF POLICY: Reducing in MBTA operating costs

BRIEF DESCRIPTION: The MBTA is frequently accused of spending too much for the services that it delivers. The MBTA could seek to operate more efficiently and thereby reduce operating costs by adopting a number of practices including reducing its employee headcount, rationalizing some of its operations and improving fare collection.

CURRENT MASSACHUSETTS POLICY: While many options are available for the MBTA to reduce its operating costs and improve its efficiency, this options paper will summarize three types of policy measures which have been proposed and discussed but not yet adopted.

Employee Headcount Reduction:
• Current policy is to staff every subway station during all hours of operation; three hundred and hour customer service agents (CSAs) are employed to staff subway stations. However, since the introduction of the CharlieCard, this classification has fewer job responsibilities and could be eliminated.
• Current policy is to employ two operators on all Green and Red Line train sets. The T could change its policy of dual operators on the Green and Red lines, as it currently does on the Orange and Blue lines.

Rationalization:
• Recently, the MBTA classified twenty-one bus routes as redundant because they either overlap or are within walking distance to other bus or rapid transit routes.
• Similarly, sixteen commuter rail stations and six Green Line surface stations have recently been considered for closure due to proximity to near-by stops and/or low utilization.
• Current policy is to provide paratransit service to entire municipalities that host a bus route. While it would be controversial, the MBTA could reduce the size of its paratransit service area by adopting the minimal federal standard for the RIDE, which would be to only provide service to eligible customers living within 0.75 miles of a fixed bus route, rather than providing service to the entire municipality.

Fare Collection:
• The current Automated Fare Collection system is deployed on the bus and rapid transit system. The introduction of the CharlieCard system to commuter rail and parking lots could make it easier for employees to check payment and for customers to pay, increasing fare collections.
• Current policy is to operate Green Line surface stations without any barriers. Barrier-style fare collection at certain Green Line surface stations could reduce scofflaws and increase revenue.
• The dissemination of new, smaller CharlieCard readers to all inspectors and select MBTA transit police officers could increase the number employees doing fare-payment auditing throughout the system.
• The MBTA police could have its mandate shifted to focus more on anti-fare evasion efforts and deterrence through a greater presence on revenue vehicles instead of squad cars.
USE OF THIS POLICY OPTION IN OTHER STATES/COUNTRIES:

- **Employee headcount reduction:** Many public transportation operators, including the NY MTA, do not staff each subway station during operating hours. At this time, the MBTA may be one of the only operators still employing dual operators on subway trains.
- **Rationalization:** Other transit operators, especially those running newer systems, are much more aggressive about stop spacing and route overlapping than the MBTA.
- **Rationalization:** Many, if not most, other large American public transit operators apply the federal standard to paratransit service area limits.

ADVANTAGES OF THIS POLICY OPTION:

- Cost savings
- Increased fare revenue (on remaining services)
- Increased travel speeds from less frequent stopping
- Additional buses for supplementary service
- Additional police presence on revenue vehicles and in stations

DISADVANTAGES OF THIS POLICY OPTION:

- Many of the proposed “rationalization” measures are politically unpopular and may be impossible to achieve in practice
- Service alterations can result in lost fare revenue
- The employee headcount reduction policies would result in nine hundred lay-offs and be opposed by transit unions and others
- Adverse impact on RIDE customers in areas no longer served
- Reduction in public transportation options where routes or services are eliminated
- Some proposed measures involve implementation costs to the capital budget (e.g., AFC on commuter rail, Green Line barrier gates)

FINANCIAL ANALYSIS OF THIS POLICY OPTION: Based on the “MBTA Menu to Close FY2010 Budget Deficit – Service Reductions” from April 2009 and additional analysis from MBTA Advisory Board staff, these proposed operational efficiencies could generate the following cost savings:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elimination of 304 CSA positions</td>
<td>$28,500,000</td>
</tr>
<tr>
<td>Elimination of an estimated 600 dual operator positions</td>
<td>$39,300,000</td>
</tr>
<tr>
<td>Elimination of 21 redundant bus routes</td>
<td>$10,400,000</td>
</tr>
<tr>
<td>Closure of 16 commuter rail stations</td>
<td>$725,000</td>
</tr>
<tr>
<td>Closure of 6 Green Line stations</td>
<td>$55,000</td>
</tr>
<tr>
<td>Reduction in RIDE service area</td>
<td>$5,400,000</td>
</tr>
<tr>
<td>Automated Fare Collection on commuter rail</td>
<td>Unknown</td>
</tr>
<tr>
<td>Barrier gates at some Green Line surface stations</td>
<td>Unknown</td>
</tr>
<tr>
<td>More CharlieCard readers</td>
<td>Unknown</td>
</tr>
<tr>
<td>Refocus transit police on anti-fare evasion</td>
<td>Unknown</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$84,380,000</td>
</tr>
</tbody>
</table>

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1 Estimated 150 red line and 450 green line
POLICY OPTION: Increasing fare revenue

TYPE OF POLICY: Expansion of MBTA own-source revenues

BRIEF DESCRIPTION: MBTA fares have been raised three times since forward funding took effect in 2000, most recently in 2007. Current fares and other self-generated revenues do not, however, cover as high a proportion of operating costs as in other transit agencies. Increasing fares would allow the MBTA to keep up with rising expenses and reduce the amount of subsidy needed to support operations.

CURRENT MASSACHUSETTS POLICY: The MBTA is required, under its enabling legislation (Chapter 161A, section 5) to “promote, in consultation with the advisory board, maximization of fare revenue and non-transportation revenue . . . through reasonable and equitable fares, ridership growth, and transit-oriented development of land and air rights controlled by the authority.” The legislation also provides that the MBTA “shall increase fares only to provide needed revenue and shall not increase fares solely for the purpose of funding” the statutorily-required stabilization fund.

Unlike many transit authorities, the MBTA is not subject to a statutory requirement or even policy target to achieve a specified “fare recovery ratio”, which is a measure of how much of a passenger’s trip is covered by the fare they pay. The ratio is calculated by dividing total fare revenues by the operating budget as a result of the MBTA’s disproportionately high debt service costs. The MBTA currently calculates this ratio excluding debt service in order to measure what proportion of operating expenses are covered by fares. A related measure which looks at all “own source revenues” (fares as well as advertising, parking and real estate leases) is the revenue recovery ratio. The revenue recovery ratio is considered a more accurate measure of how much of a trip is paid for by non-subsidy sources; the higher the revenue recovery ratio, the fewer subsidies are required. Data on all of these ratios, provided by the MBTA Advisory Board, is presented in the accompanying charts. Both the MBTA Blue Ribbon Committee in 2007 and the Transportation Finance Commission in 2007 recommended that the MBTA achieve a revenue recovery ratio of 50%. The FY2011 budget achieves a revenue recovery ratio of 44.7% if debt service is excluded.
USE OF THIS POLICY OPTION IN OTHER STATES/COUNTRIES: Transit authorities historically raise fares out of necessity. During the current economic downturn, many transit authorities have raised fares (or cut service or both). A March 2010 survey of 151 transit systems published by the American Public Transportation Association in March 2010 found that 44% had raised fares and an additional 34% were considering raising fares. A small number of transit authorities (including San Francisco, Denver and Portland) have instead adopted an approach dubbed “programmed fare increases” under which fares are raised on a periodic basis in order to “keep up” with expenses; there is some evidence that this approach has stabilized finances and possibly minimized ridership losses.

Many transit authorities have fare or revenue recovery targets or even requirements to achieve specified ratios. A Federal Transit Administration survey found that the average fare recovery ratio from 2002 to 2004 was thirty-five percent (about the same as the T’s if debt service is excluded). Using 2006 data from the FTA, the MBTA had the seventh highest fare recovery ratio among major transit systems; only New York and Washington achieved fare recovery ratios greater than 40 percent, with Boston and four other systems having fare recovery ratios in the mid-30s in 2006.

ADVANTAGES OF THIS POLICY OPTION:

• The MBTA is required by statute to maximize its “own source revenues,” including (but not limited to) fares, and could achieve higher transportation revenues by increasing ridership, fares or both
• Achieving the recommended fifty percent revenue recovery ratio would reduce the amount of subsidy needed to close the MBTA’s budget gap
• Increasing fares could minimize the need for service cuts
• Implementing regular, more modest fare increases could provide greater financial stability and have fewer ridership impacts than waiting until a larger fare increase is required

DISADVANTAGES OF THIS POLICY OPTION:

• Fare increases are regressive – many MBTA riders are students, seniors and low- and moderate-income who may have difficulty paying higher fares
• Fare increases can result in ridership loss (for example, New Jersey Transit recently increased system-wide fares by twenty-two percent and expects to lose five percent of its riders)
• MBTA passengers already pay roughly the same proportion of system costs as riders of other major transit systems
• The MBTA’s current financial situation is not the result of inadequate fare revenue, as the D’Alessandro Report found that fare revenues had actually exceeded Finance Plan projections

FINANCIAL ANALYSIS OF THIS POLICY OPTION: In 2010 the MBTA proposed raising fares from $1.70 to $2.00 for rapid transit trips and from $1.25 to $1.50 for bus trips made using Charlie Cards; Charlie Ticket fares would have risen to $2.50 for rapid transit and $2.00 for local buses. Similar fare increases were proposed for passes and other fares for a system-wide 19.5% overall fare increase. Although the proposal was withdrawn, it provides a basis for calculating potential revenues from a similar increase in the future. At the time, the MBTA projected that the proposed fare increases would generate $69 million in new revenues and allow the MBTA to retain all existing services for two years.

The Transportation Finance Commission recommended that the MBTA make regular and predictable fare increases designed to keep pace with inflation. The Commission calculated that such fare increases would generate an additional $1.9 billion in revenue over the next twenty years.