



ABOUT A BETTER CITY

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On the Right Track?

The Future of the Massachusetts Commuter Rail

November 2011

A white paper by A Better City



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Introduction

Winter is fast approaching; indeed, the hundreds of thousands of Massachusetts residents whose power was knocked out by a pre-Halloween Nor'easter might argue it has already arrived. Those first snowflakes may have conjured unpleasant memories of last winter for the more than 70,000 weekday inbound riders of the MBTA's commuter rail. Record snowfall in January and February took its toll on the entire T system, but commuter rail was particularly hard hit. In January, fewer than three-quarters of commuter rail trains arrived on time, well below the system's target of 95 percent. Many of those delays were attributed to the age of the commuter rail fleet — largely the same fleet that will be riding the rails this winter.

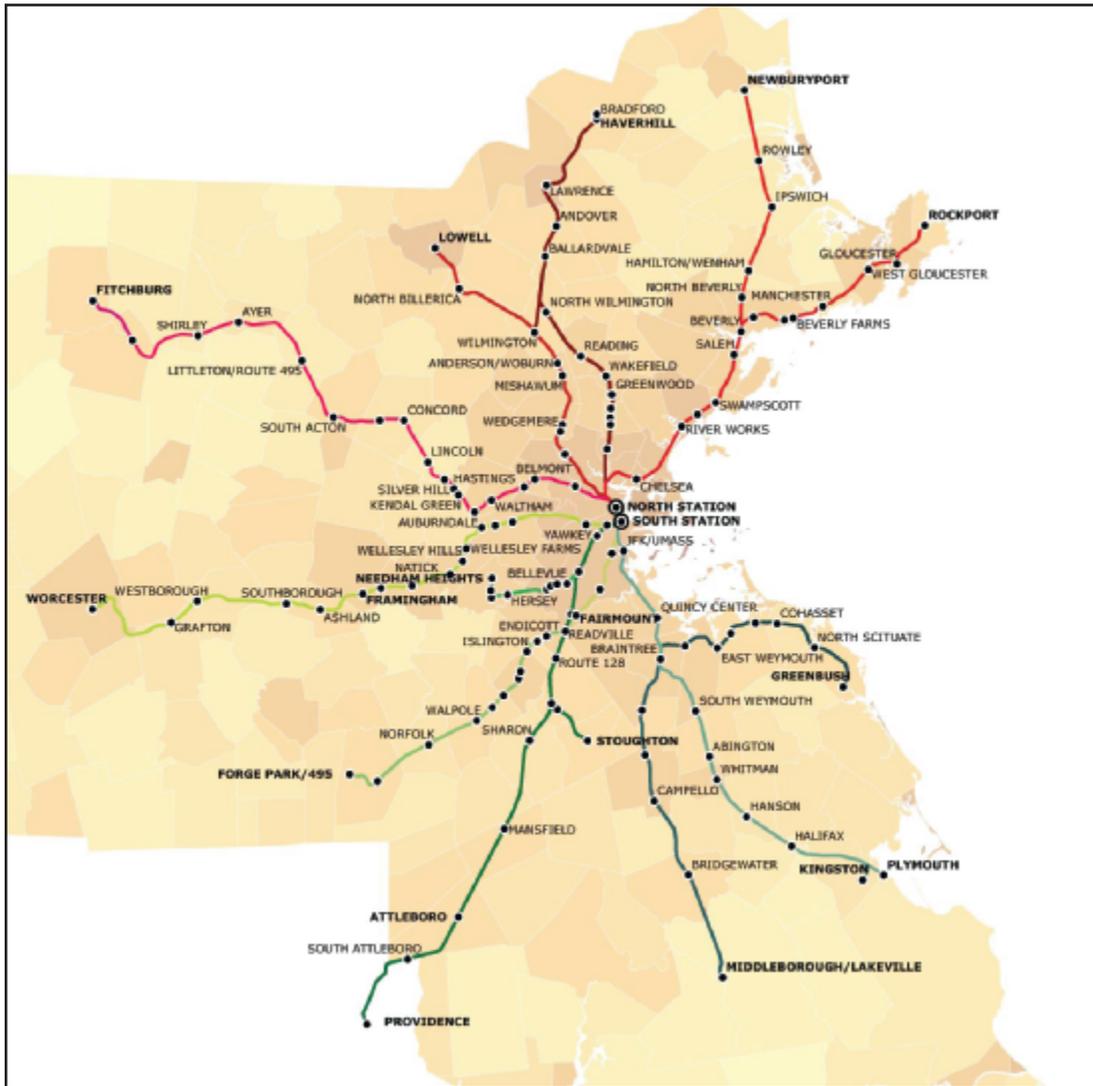
In the face of virtually inevitable breakdowns and delays, the MBTA announced this month that it would be implementing abbreviated schedules during winter weather, including cancelling 23 percent of commuter rail trains preemptively. Given the significant physical and financial challenges facing the T, a winter schedule is prudent and transparent. Still, the decision feels a bit like a retreat, albeit a tactical one.

This winter poses challenges for commuter rail, but it also presents an opportunity, as T officials begin the process of putting commuter rail service out to bid. The current contract, with concessionaire Massachusetts Bay Commuter Rail (MBCR), expires at the end of June 2013. As service lagged last winter, that contract came under scrutiny. An independent state audit and a subsequent investigation by *The Boston Globe* raised questions about payments made to MBCR for extra work, enhanced incentive payments and waived penalties for late performance. (Both the MBTA and MBCR have disputed the audit and the *Globe* report.) In the face of these revelations and poor on-time performance, some state officials even floated the option of bringing commuter rail services in-house.

This winter, then, presents a critical junction for commuter rail service. This paper aims to provide background and context to help frame the decisions facing the T. The first chapter lays out the basics of the system, its vital role in supporting the regional economy, and the significant challenges posed by aging equipment and infrastructure. The second summarizes the history and terms of the existing contract, including some of the questions surrounding it. The third lays out some of the options for a new contract: pursuing a revised contract of similar length and scope as the existing deal; pursuing a longer-term public-private partnership to bring private capital into the system; or internalizing commuter rail services within the MBTA.

The T's options are constrained; preparing for a long-term deal may require time and resources the MBTA may not have, while bringing service in house may create added staffing demands and complexity integrating railroad unions alongside the T's other labor groups. In the end, the T may have to pursue parallel tracks, agreeing to a short-term contract or extension while laying the groundwork for a more ambitious, long-term public-private partnership.

There are opportunities, then, but no easy answers. In the end, the question facing commuter rail is the same facing public transit throughout the Commonwealth: are we willing to make the investment to pay for the system we need for smart, sustainable economic growth?



MBTA Commuter Rail Service Map

The commuter rail network extends the T's reach as far west as Fitchburg and Worcester, as far north as communities on the New Hampshire border, and south even into Rhode Island. According to 2000 Census figures, 4.7 million people live in the commuter rail's service area.

Commuter Rail 101: A System Under Stress

The MBTA commuter rail is the fifth largest commuter rail system in the United States (Table 1). Greater Boston is behind only New York City (with its three commuter rails) and Chicago, both in terms of the number of trips made and miles traveled by passengers. Every morning, more than 70,000 commuters board trains at stations in over 80 communities, from Newburyport in the north, Worcester to the west and as far south Warwick, Rhode Island. The actual reach of the system extends beyond these 80 cities and towns into neighboring communities from which commuters drive. According to the 2000 Census data, 4.7 million residents live within the service area of commuter rail. It is this geographic reach that makes the entire MBTA system so essential to the regional economy.

| Transit Agency | Urbanized Area | Unlinked Passenger Trips | | Passenger Miles | |
|----------------|-------------------|--------------------------|----------|------------------|----------|
| | | Thousands | Rank | Thousands | Rank |
| MTA LIRR | New York, NY | 99,599.4 | 1 | 1,872,331.6 | 1 |
| NJ TRANSIT | New York, NY | 84,508.3 | 2 | 2,343,405.2 | 2 |
| MTA - MNCR | New York, NY | 82,960.7 | 3 | 2,181,694.4 | 3 |
| Metra | Chicago, IL | 76,937.6 | 4 | 1,749,113.7 | 4 |
| MBTA | Boston, MA | 39,207.4 | 5 | 792,889.4 | 5 |
| SEPTA | Philadelphia, PA | 34,031.3 | 6 | 486,427.9 | 6 |
| Metrolink | Los Angeles, CA | 12,681.0 | 7 | 436,565.5 | 7 |
| PCJPB | San Francisco, CA | 10,914.6 | 8 | 272,796.1 | 8 |
| MTA | Baltimore, MD | 7,897.6 | 9 | 242,661.3 | 9 |
| NICTD | Chicago, IL | 4,180.4 | 10 | 117,468.7 | 10 |

Table 1: Commuter Rail Agencies Ranked by Unlinked Passenger Trips for 2008

Source: American Public Transportation Association. "2010 Transportation Fact Book." 61st Edition.

A 2008-2009 ridership survey conducted by the T sheds light on the socioeconomic characteristics of the commuter rail ridership. Eighty percent of riders reported household incomes greater than \$60,000; 53 percent reported incomes of \$100,000 or more. Three-quarters of riders have access to a car or other vehicle they could use instead of riding the commuter rail. In other words, most commuter rail riders are riders *by choice*; if the commuter rail ceases to be a reliable option for them, many of these riders will choose to drive their commutes, increasing traffic on the Commonwealth's already congested roads.

Maintaining reliable commuter rail service, then, has important economic and environmental consequences. The Patrick administration has also touted expansion of the current system as a means to promote sustainable development and create jobs. The administration has estimated that extending commuter rail to the South Coast of Massachusetts will generate nearly

\$500 million in economic activity and 3,500-3,800 new jobs by 2030.¹

The entire commuter rail network — 394 route miles spread over 13 active trunk-line routes and serving 134 stations overall² — is among the most complex in the nation (Table 2). The system splits into two districts terminating in Boston, where South Station services eight trunk-line routes and North Station services five.³ These stations offer connections to local bus and subway, as well as Amtrak intercity service.⁴

Further complicating operations, several commuter rail routes share tracks with Amtrak intercity service, and most of the routes share tracks with freight traffic.⁵ The state's recent acquisition of rail assets from the freight company CSX, combined with CSX's decision to shift rail operations from Allston to Worcester, should alleviate some of the freight-related traffic on these shared lines.

| Transit Agency | Urbanized Area | Lines | | Stations | | Mileage | |
|----------------|-------------------|-----------|----------|------------|----------|------------|----------|
| | | Number | Rank | Number | Rank | Number | Rank |
| SEPTA | Philadelphia, PA | 13 | 1 | 153 | 3 | 447 | 6 |
| MBTA | Boston, MA | 13 | 2 | 134 | 4 | 394 | 7 |
| Metra | Chicago, IL | 11 | 3 | 240 | 1 | 1,155 | 1 |
| NJ TRANSIT | Newark, NJ | 10 | 4 | 164 | 2 | 544.4 | 4 |
| Metrolink | Los Angeles, CA | 7 | 5 | 55 | 7 | 512 | 5 |
| MTA - MNR | New York, NY | 5 | 6 | 121 | 6 | 765 | 2 |
| MTA | Baltimore, MD | 3 | 7 | 42 | 8 | 203 | 8 |
| MTA LIRR | New York, NY | 2 | 8 | 124 | 5 | 594 | 3 |

Table 2: Commuter Rail Network Characteristics
Source: Respective Transit Agency Websites

Ridership: Recovering from Downturn, Outpacing Investment

Over the last 30 years, commuter rail ridership has increased fourfold, from 9.3 million annual trips in 1980 to over 40 million in 2011⁶. Ridership fell off during the current economic downturn but is rebounding, albeit more slowly than other transit modes. When the MBTA announced record ridership figures for September 2011, all modes saw gains, but only the commuter rail remained below its pre-recession (2007 & 2008) ridership highs.⁷

Overall T ridership is surging at a time when the agency is facing serious physical and financial

¹South Coast Rail Economic Development and Land Use Corridor Plan: Executive Summary. June 2009.

²MBTA. "Ridership and Service Statistics." Thirteenth Edition 2010.

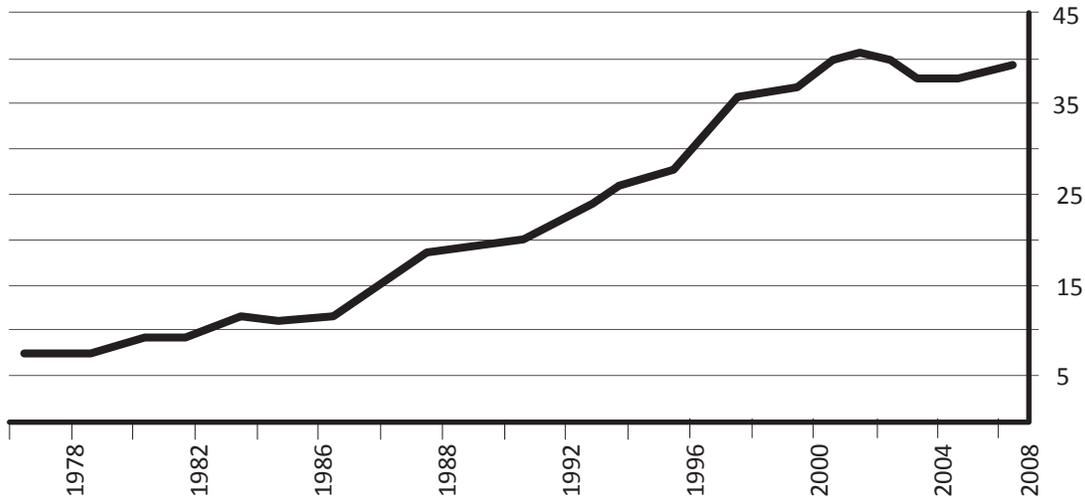
³MBTA. "Capital Investment Program." FY2009-FY2013.

⁴United States Department of Transportation. Federal Railroad Administration. "Northeast Corridor Main Line."

⁵MassDOT. Massachusetts State Rail Plan. September 2010. p. 5-3.

⁶MBCR. "Testimony of James O'Leary to the Joint Committee on Transportation." April 12 2011.

⁷MBTA Average Weekday Unlinked Passenger Trips, MBTA; Eric Moskowitz, "T Ridership Hits Record High," The Boston Globe, Nov. 2, 2011.



Graph 2: MBTA Commuter Rail Annual Ridership (in millions), 1976-2008

Source: MBTA Ridership and Services, Statistics, Twelfth Edition 2009

challenges. The T is currently contemplating fare hikes and service cuts to help close a projected \$161 million deficit for the coming fiscal year. Driving that deficit is the service on the agency's \$5.5 billion in debt (\$8.6 billion including interest). In the past fiscal year, the T's debt service payments equalled its revenues from fares. Debt is crowding out needed investment, and as a result, the gap in the T's state of good repair is growing. The agency's most recent capital plan identified \$4.5 billion in "critical infrastructure projects" it is unable to fund.⁸

A 2009 review of MBTA finances and infrastructure found that 69 percent of commuter rail locomotives and 84 percent of commuter rail coaches were in poor or marginal condition; 75 percent of locomotives and rail cars are near or beyond the 25 to 30 years of useful life recommended by manufacturers (Table 3). Problems are not limited to rolling stock; in November 2011, the T was forced to close one track over a drawbridge in Saugus used by the Newburyport/Rockport Line after an inspection "revealed structural issues that required immediate attention."⁹

The MBTA has managed to make some investments, purchasing two new diesel-electric locomotives from the Utah Transit Authority in February 2011. The deal "marks the first time in over two decades that new locomotives will join the MBTA's commuter rail fleet."¹⁰ Future additions include:

- 20 new diesel-electric locomotives from Motive Power, Inc. of Boise, Idaho, at a cost of \$114 million, for service by the end of 2013.¹¹
- 75 new passenger coaches from Hyundai Rotem USA — a division of Korean Hyundai Motor Cars headquartered in Philadelphia — under a \$170 million con-

⁸ MBTA Capital Investment Program FY 2012-2016, p. 6.

⁹ Eric Moskowitz. "Saugus drawbridge gets emergency fixes, delays." *The Boston Globe*, Nov. 19, 2011.

¹⁰ MassDOT. "Patrick-Murray Administration Introduces New Diesel-Electric Commuter Rail Locomotives." February 2011.

¹¹ MassDOT. "Patrick-Murray Administration Introduces New Diesel-Electric Commuter Rail Locomotives." February 2011.

| MBTA Commuter Rail Fleet | Qty. | Service Date | Age (Yrs) | Useful Life (Yrs) |
|--------------------------------|------------|--------------|--------------|-------------------|
| Pullman Coaches | 57 | 1979 | 32 | 25 |
| MBB Coaches | 67 | 1987-88 | 23-24 | 25 |
| Bombardier A Cars | 40 | 1987 | 24 | 25 |
| Bombardier B Cars | 106 | 1989-90 | 22-21 | 25 |
| Double-Decker Kawasaki Coaches | 75 | 1990-91 | 20-21 | 25 |
| Double-Decker Kawasaki Coaches | 17 | 1997-98 | 13-14 | 25 |
| Double-Decker Kawasaki Coaches | 15 | 2001 | 10 | 25 |
| Double-Decker Kawasaki Coaches | 33 | 2005-06 | 5-6 | 25 |
| F40PH-2 Locomotives | 18 | 1978-80 | 30-33 | 25 |
| F40PH-2C Locomotives | 25 | 1987-88 | 23-24 | 25 |
| F40PH-2M Locomotives | 12 | 1991-93 | 18-20 | 25 |
| GP40-MC Locomotives | 25 | 1997-98 | 13-14 | 25 |
| Total Fleet | 490 | | | |

Table 3: MBTA Commuter Rail Fleet Age and Useful Life

Source: MBTA Review. November 2009. (Age updated to reflect 2011 years)

tract, for service by 2012.¹²

- 3 locomotives, pre-owned (c. 1995) by Maryland's MARC commuter rail system, leased for \$300 per locomotive per day under a contract with Motive Power.¹³

Despite these recent investments, the capital needs of commuter rail continue to exceed the MBTA's resources. Commuter rail projects feature prominently on the T's \$4.5 billion list of needed but unfunded capital improvements, including \$115 million for the purchase of another 20 new locomotives, \$215 million for new coaches, and more than \$500 million to implement a safety measure known as positive train control.¹⁴

The Effects of Underinvestment

The capital spending gap has already begun to take its toll on commuter rail operations. Mechanical failures of all sorts — vehicle, track, signal, communications, and power — have become increasingly apparent as on-time performance has fallen below T's internal goal of 95 percent (Graph 2).

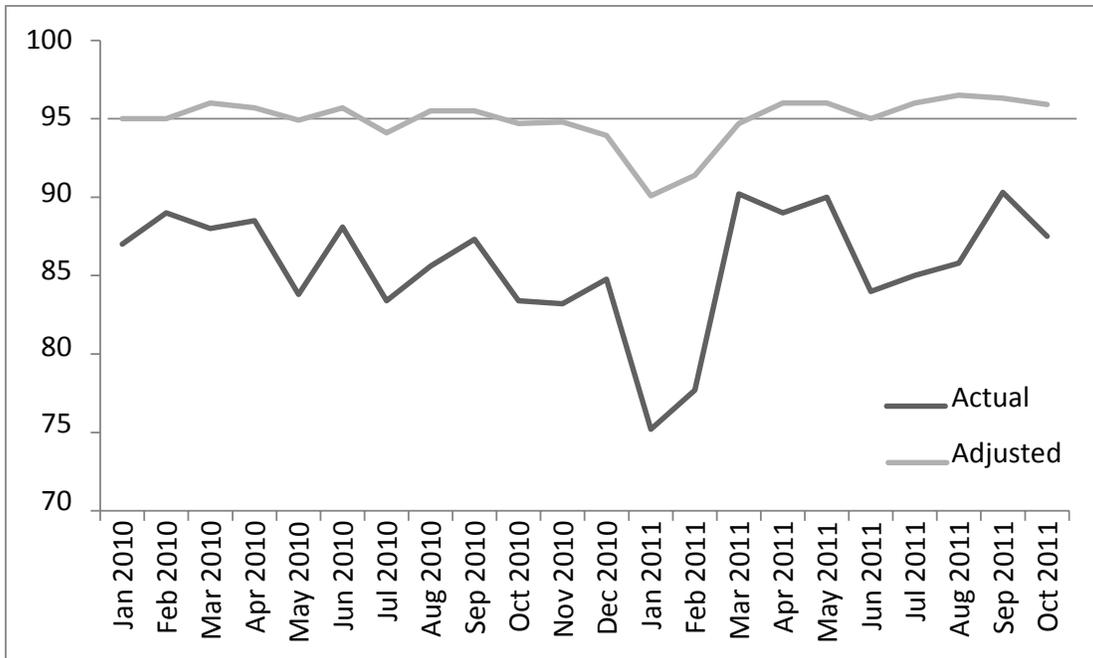
The record snowfall during the first two months of 2011 exposed the weaknesses of the aging system. In January 2011, fewer than 73 percent of commuter rail trains arrived at their final destination within five minutes of the scheduled time. Thousands of trains were delayed by more than 850 hours combined, and 111 trains were canceled altogether.¹⁵ January proved to be the commuter rail's worst month since 2008, generating over 1,300 customer complaints

¹² Noah Bierman. "T betting on untried firm to build fleet." Boston Globe. October 13 2008.

¹³ Eric Moskowitz. "T adds commuter rail engines." Boston Globe. March 24 2011.

¹⁴ MBTA Capital Investment Program FY 2012-2016, p. 6.

¹⁵ Eric Moskowitz. "Rail service to get scrutiny." Boston Globe. February 15 2011.



Graph 2: On-Time MBCR Performance (as percentage), January 2010 - October 2011

Source: MBCR Monthly Report Card

Note: "Actual" refers to "what the customer experiences," and "Adjusted" refers to "performance excluding incidents that are outside of the direct control of MBCR, including medical emergencies, police actions, and delays caused by other railroads and planned construction projects."

Target: 95% adjusted On-Time Performance.

via e-mail and telephone.¹⁶ The average number of miles between vehicle breakdowns during February 2011 was only 2,654 miles – just 26 percent of the 10,200 mile goal.¹⁷

Even in fair weather, the commuter rail continues to face vehicle breakdowns. In May 2011, mechanical issues disabled a Franklin-bound train just outside South Station in the midst of evening rush hour, resulting in the delay or replacement of 40 other trains.

Entering another winter season with largely the same aging equipment, the MBTA announced in November 2011 that they would be implementing special severe weather reduced service schedules on commuter rail. Under the plan, 23 percent of trains would be preemptively cancelled on select days in the event of severe winter weather.¹⁸ Given the significant physical and financial challenges facing the T, a winter schedule is prudent and transparent. Still, the decision feels a bit like a retreat, albeit a tactical one.

As these recent incidents demonstrate, the combination of aging equipment and inadequate investment have made the commuter rail susceptible to breakdowns and delays. They also call into question the feasibility of desired system enhancements, such as adding peak service to Foxborough or routing additional trains to and from Worcester via North Station along the newly acquired Grand Junction line.

¹⁶David Jroff. "Commuter rail trains affected by breakdown." Boston Globe. May 11 2011

¹⁷Tom Moroney and Brian K. Sullivan. "Snow-weary Boston commuter-rail riders slowed by agency's debt." Feb 28 2011.

¹⁸Eric Moskowitz. "T to cut train in severe storm." The Boston Globe, November 4, 2011.

But the most pressing concern for commuter rail is the effect of reliability on existing ridership. Left unchecked heading into another winter, these problems may force many commuter rail customers to abandon the service and drive to their jobs instead.

MBCR & MBTA: Contract, Context and Challenges

The commuter rail is not alone among T services facing physical and financial challenges, but it is unique in its operating arrangement. Bus and subway services are operated directly by the MBTA, while commuter rail is run by a concessionaire under a fixed price operations and maintenance agreement. It is an arrangement with the promise of bringing private sector efficiencies to the service, but which also raises questions of accountability and coordination between owner and operator.

Since 2003, the T's commuter rail services have been operated as a concession by Massachusetts Bay Commuter Rail Company (MBCR), a private joint venture of train-maker Bombardier, Veolia Transportation and Alternate Concepts, Inc. (Prior to that, from 1987 to 2003, commuter rail was operated by Amtrak.) In today's constrained fiscal climate, policy makers are eyeing P3s as a way to bring the efficiencies (and capital) of the private sector to bear on needed transportation infrastructure projects. The MBTA's current commuter rail contract is exemplary of this trend, but it also shows the challenges of balancing efficiency and accountability in the operation of public transportation services.

History of the Current Contract

In March 2002, the MBTA began a procurement process to competitively bid its commuter rail contract for service beginning on July 1, 2003. The MBTA published a Request for Letters of Interest to which 16 companies responded, and then a Request for Qualifications to which only four companies responded. The MBTA issued Request for Proposals to these four companies, deeming them qualified bidders. Among them were the incumbent operator Amtrak, Transit America, Boston & Maine Corporation (B&M), and MBCR.

Over the course of the year-long bidding process:

- Amtrak withdrew their bid because the proposed contract terms “posed too great a risk for Amtrak to bear,”
- Transit America's proposal was deemed noncompliant because it “omitted the issues of costs of insurance, bonding, and profit margins required by the RFP guidelines,” and
- B&M quoted too high a cost (almost 90 percent higher than the next bidder).

In December 2002, the MBTA entered into an Annual Fixed Price Contract Agreement with MBCR for commuter rail operations services for the five-year period from July 1, 2003 to June 30, 2008. The initial contract was worth \$1.05 billion and was later extended in 2007 to June 2011 for an additional \$738 million, and again in 2010 to June 2013 for another \$577 million¹⁹.

¹⁹A. Joseph DeNucci. “Independent State Auditor's Report on Certain Activities of the Massachusetts Bay Transportation Authority's Commuter Rail Operations.” The Commonwealth of Massachusetts Auditor of the Commonwealth. January 18 2011.

Contract Responsibilities

The operating agreement requires the MBCR to pursue the following goals:

- Improve the quality of commuter rail service.
- Minimize MBTA capital costs while maximizing revenue collection.
- Develop operational plans and goals, and objectives to meet service requirements.
- Implement the workforce and labor obligations of the Operating Agreement.
- Hire and train qualified employees as required.

According to the MBTA, two ancillary goals of the 2002 contract were to preserve harmony with existing labor unions during the transition from Amtrak to MBCR, and to establish a

Fare Recovery Ratio: How Subsidized is Commuter Rail?

Under the current contract, MBCR turns all fare revenues directly over to the T. Some other contracts allow the contractor to retain fares, putting the risk on the private operator to increase ridership.

A key question for a potential long-term deal is, to what extent do fares cover the operating costs of commuter rail service? Below are the Fare Recovery Ratios (FRRs) for the T and other comparable rail services, as reported to the American Public Transit Association in 2009.

| | | |
|---------------|-------------|--------------|
| New York City | MTA LIRR | 46.1% |
| New Jersey | NJ TRANSIT | 49.6% |
| New York City | MTA-MNCR | 58.5% |
| Boston | MBTA | 49.6% |
| Philadelphia | SEPTA | 56.1% |

stand-alone, dedicated and locally based staff to oversee commuter operations.

While the MBTA currently owns more than 500 pieces of commuter rail rolling stock — passenger locomotives, utility locomotives, work train equipment, snow plows, mid-train coaches and cab cars — MBCR is responsible for the operation, staffing and maintenance of this equipment.

The Operating Agreement also includes a Force Account to be used by MBCR to charge for labor, materials and equipment associated with capital improvements outside the scope of basic services (i.e., special track work, certain kinds of crossings, relocating stations or building temporary stations, signal design and upgrades, and flagging service). MBCR would be entitled to performance and revenue incentives if actual revenues exceeded the target for a given year. Conversely, MBCR would owe the MBTA penalty payments for poor on-time

performance and cancelled trains, poor customer service, and violating special assessments, including administrative procedures, safety and reliability, and mechanical failures.

Contract Under Scrutiny

In January 2011, as commuter rail service was beset by weather-related delays, a state audit concluded that the MBTA's contract with MBCR was costing the MBTA millions of dollars in erroneous charges, some authorized without approval from the MBTA Board of Directors.²⁰ Specifically, the audit cited:

- Double-billing of wages and benefits, once under the basic services agreement and again as part of the Force Account, that was expressly forbidden under the original Operating Agreement, costing the MBTA \$11.2 million from FY 2004 to 2008.
- Loss of \$2.5 million due to inadequate oversight of activities and incentives granted to MBCR, including questionable revenue growth incentive payments and questionable management fees paid for Force Account labor purchases.
- Loss of \$42.9 million in unallocated and waived penalties for contract nonperformance through the process of eliminated, reduced, reallocated or waived penalty caps from FY 2004 through 2008.

A subsequent May 2011 investigation by *The Boston Globe* found that amendments to the original contract reduced fines for late trains considerably and further offset those fines by adding rewards for on-time performance.²¹

Both MBCR and MBTA have defended the contract and its amendments, arguing that lack of investment in the system has resulted in higher than anticipated maintenance costs for MBCR and made the original system of penalties too punitive. "They [MBCR] could have done better, but we didn't provide the equipment that we said we would provide," said John D. Ray, the MBTA Director for Railroad Operations, at a February 2011 meeting of the MBTA Board of Directors. "There is culpability on our side."²²

Nonetheless, it is clear that the audit and the newspaper report, each coming on the heels of well-publicized delays and breakdowns, have influenced the climate in which a new contract will be pursued. In March 2011, after a breakdown on a Boston-to-Worcester train stranded passengers for hours, Lt. Gov. Tim Murray told reporters the state would examine the possibility of internalizing commuter rail service within the MBTA at the end of the current contract.²³

But T officials have also signalled a willingness to go in the opposite direction and actually pursue a longer-term contract. Speaking to reporters after a legislative hearing on commuter rail

²⁰ A. Joseph DeNucci. "Independent State Auditor's Report on Certain Activities of the Massachusetts Bay Transportation Authority's Commuter Rail Operations." The Commonwealth of Massachusetts Auditor of the Commonwealth. January 18 2011.

²¹ Sean Murphy and Scott Allen. "Commuter rail won bonuses as riders fumed." *The Boston Globe*, May 15, 2011.

²² Sean P. Murphy and Scott Allen. "Commuter rail won bonuses as riders fumed." May 15 2011

²³ Kyle Cheney. "LG Murray: State Examining Operational Takeover of Commuter Rail." *State House News Service*, March 1, 2011.

in April 2011, then-MBTA General Manager Richard Davey and then-Secretary of Transportation Jeffrey Mullan indicated that the T was considering contracts of 10, 25 or even 40 years, in order to incentivize private capital investment in the system.²⁴

However the T chooses to proceed, transparency and accountability in roles and responsibilities will be key to ensuring public confidence in commuter rail operations. The next operating arrangement will have to balance responsibility between the owner of commuter rail assets — the MBTA — and whichever entity ends up operating the system.

²⁴ Kyle Cheney. "State Eyes Longer Contract for Commuter Rail to Attract Investment," State House News Service, April 12, 2011.

Options Going Forward

With the current commuter rail contract set to expire at the end of June, 2013, the MBTA must now decide how to procure commuter rail services going forward. Roughly speaking, there are three options:

- A refined short-term contract;
- A more innovative, longer-term public-private partnership;
- Bringing commuter rail service in-house.

The choice facing the MBTA, first and foremost, is whether to bring commuter rail service in-house. If it elects to continue with a concession model, the T will then have to consider what sort of contract to pursue, for how long, and how to structure a deal to create incentives for a private partner to invest in the commuter rail system. While issuing an RFP similar to the current contract is perhaps the easiest option for the MBTA in the short run, making significant changes to the contract length, price structure and responsibilities may be the best option for sustained system growth.

Contract Length

The Federal Transit Administration (FTA) once required that transit systems receiving federal assistance competitively bid their contracts at least once every five years. Effective June 2003, however, the FTA allowed contracts with options greater than five years, as long as sound business practices were being used in the awarding of the original contract.²⁵ Thus, in 2003 the MBTA negotiated a 5-year contract with the MBCR, which was later extended in 2008 through 2011, and again in 2011 through 2013.



Graph 4: Risk Level of Contract Types

Source: Federal Transit Administration. “Contractor Performance Incentive Report.” November 10 2006

As a general rule, concessionaires tend to favor longer contracts as it gives security of tenure, while transport authorities prefer shorter deals to preserve flexibility. Contracts that are too short may not allow an operator time to develop experience and familiarity with the system, while contracts that are too long are feared to lead to stagnation in service.²⁶

²⁵A. Joseph DeNucci. “Independent State Auditor’s Report on Certain Activities of the Massachusetts Bay Transportation Authority’s Commuter Rail Operations.” The Commonwealth of Massachusetts Auditor of the Commonwealth. January 18 2011.

²⁶Theresa Meija and Bronwyn Lind. “Best Practice in Procurement of Commuter Rail Services.” Independent Transport Safety and Reliability Regulator, New South Wales.

Denver's Eagle P3

Given the age of the T commuter rail infrastructure, it is tempting to consider a longer-term contract which would provide incentives for a private partner to help recapitalize the system. One often cited model of such a contract can be found in Denver, Colorado. There, the Regional Transportation District (RTD) recently entered into a 30-year agreement with Denver Transit Partners (DTP) to design, build, operate, maintain, and finance their commuter rail Eagle P3 Project. It is the first public-private partnership for commuter rail in the United States to include design, build, financing and long-term operations. The hope is that making the concessionaire accountable for the system over its entire lifespan will create incentives to invest in resilient capital infrastructure and robust maintenance.²⁷

It is important to note the limited applicability of the Denver model to Boston's present situation. First off, the Denver contract is to build and operate a new commuter rail system, rather than to operate and maintain an aging one. The contract is also brand-new and is only in the very early stages of implementation; time will tell whether the deal turns out to be as good as it appears on paper. Nevertheless, the capital and maintenance needs of the MBTA system are so significant that a longer-term approach that brings private investment to the table should be considered carefully.

Contract Price and Price Structure

Another factor to consider is how a concessionaire is paid for performing its services under the contract. A new commuter rail contract must incorporate tight controls to manage financial risk, provide attractive profit incentives and thus enable good performance from the concessionaire.

Procurement contracts vary by the degree of risk assumed by each party (Graph 4). In a Cost Plus Contract, the concessionaire receives compensation from the contractee equal to its expenses plus a negotiated fee. If the concessionaire suffers cost overruns, it is still entitled to full compensation and its fee, leaving the concessionaire little to no financial incentive to minimize costs. Conversely, in a Fixed Price Contract, the concessionaire is entitled to a fixed amount originally reflected in its bid, regardless of what costs are incurred. Between these two extremes lie a variety of hybrid models involving incentive payments based on the concessionaire's ability to meet a targeted cost or to satisfy qualitative performance metrics.

Under its original contract, Amtrak provided commuter rail services to the MBTA under a Cost Plus Overhead and Profit Contract from 1987 through 1995, and thereafter until 2003 under a Negotiated Fixed Price Contract. MBTA operates the service under an Annual Fixed Price Contract Agreement, with added provisions of penalty fees for poor performance, incentive bonuses for revenue growth, and additional payment for capital improvement work.²⁸

²⁷ Kevin Flynn. "RTD Board selects Denver Transit Partners for Eagle P3, FasTracks' single largest contract." RTD FasTracks Press Release. June 15 2010.

²⁸A. Joseph DeNucci. "Independent State Auditor's Report on Certain Activities of the Massachusetts Bay Transportation Authority's Commuter Rail Operations." The Commonwealth of Massachusetts Auditor of the Commonwealth. January 18 2011.

One option the T might consider would be to alter the terms of payment throughout the life of the contract. For example, the first few years of a contract may operate under a Cost Plus Fee model in order to minimize risk for the concessionaire during a transitional phase, while the remainder of the contract may be under a Negotiated Fixed Price in order to incentivize economical spending and revenue generation. Alternatively, a Negotiated Fixed Price may be issued at first based on a percentage of the initial cost estimate, and the remainder may be amortized over the contract term based on standard performance, with the incentive of higher rates for better performance provided.

P3s: From Foreign Policy to Domestic

While America is just getting its feet wet with P3s, the rest of the world has been using them for some time to finance, build and operate transportation projects. Other projects around the world that have sustained their success in finance and operations relative to their long-term contracts, including:¹

- Manchester’s Metrolink (light-rail tramway), Phase 1 & 2 under 15- and 17-year DBFO (design, build, finance, and operate) concessions, respectively.
- Nottingham Express Transit (light-rail transit), under a 27-year DBFO concession.
- London’s Croydon Tramlink (light-rail tramway), under a 99-year DBFO concession.
- Singapore’s North-East Line (rapid transit) under a 30-year operating license.

Ironically, as P3 expert Michael Likosky observes in his book *Obama’s Bank: Financing a Durable New Deal*, P3s have played a major role in U.S. foreign policy. Through the Export-Import Bank and other vehicles, the U.S. has financed P3s to build capacity in trading partners for decades. Indeed, proposals for a domestic infrastructure bank to finance P3s at home are modeled on these foreign policy institutions.

¹“Success and failure in urban transport infrastructure projects.” A study by Glaister, Allport, Brown, and Travers. KPMG’s Infrastructure Spotlight Report. 2010.

Innovative Financing

Again, Denver serves as an interesting example, both in terms of payment structure and innovative financing. As part of its contract, the private entity Denver Transit Partners (DTP) has agreed to bring \$450 million in private financing to the table. In return, Regional Transportation District (RTD) — Denver’s transportation authority — will make annual service payments to DTP based both on inflation and on their performance in meeting RTD’s service standards. These revenues will be raised from sales taxes and FasTracks bonds, as well as an anticipated \$1 billion in federal funding.

In addition, RTD has issued nearly \$398 million in tax-exempt private activity bonds (PABs). The revenue raised from these bonds will be loaned to DTP, and DTP will be responsible for repaying bondholders over time. The tax-exempt status of the bonds lowers the bond interest rate, thereby reducing the cost of capital spent on the project. The structure effectively spreads out large up-front costs as a means to strategically preserve capital in the early years of the

project's implementation.²⁹

Laying the Groundwork for a Longer-Term P3

Even if the business case exists for a viable long-term public-private partnership for commuter rail service, the time and resources needed to prepare an RFP for such a contract may exceed the MBTA's current schedule and capacity. According to private infrastructure firm Meridiam Infrastructure, 24 months is a reasonable timetable for procuring a long-term concession agreement.

Future Improvements: A Punch List

If the T is to consider a longer-term deal to bring private capital into the system, it should be prepared to suggest what that capital should be spent on. Here are some suggestions.

- **New Vehicles:** The T is already bringing new vehicles online, but much more of the fleet needs to be replaced.
- **Track Infrastructure Improvements:** In some cases, rails, ties, bridges, switches and signals of the system are even older than the commuter rail rolling stock.
- **Electrification:** Converting commuter rail tracks over to electric power would reduce carbon emissions. This would be a capital-intensive project, well-suited to a longer-term deal.
- **Fare Collection:** Emulating the success of the Charlie Card, the T could work with a concessionaire to implement a more efficient means of collecting fares on commuter rail trains. An electronic system could also be explored for parking charges at commuter rail stations.
- **Real-Time Notifications:** Even the newest train will be late sometimes. Letting commuters know via their computers, smart phones and at the platforms would go a long way towards relieving frustrations.

During the first 6 months of that period, the MBTA would have to:

- Retain financial, technical and legal advisors with P3 experience;
- Consult with executive, legislative and other public sector stakeholders; and
- Conduct outreach to potential bidders.

The T's financial advisor would develop the business case for the procurement and conduct a "value for money" exercise to determine the maximum amount that the MBTA should pay for such a contract. The technical advisor would assess the physical condition of the system, in order to inform the value for money exercise and provide early guidance to bidders. The techni-

²⁹ Cathy Proctor. "Project manager realizes dream with Eagle P3 Project." Denver Business Journal. November 12 2010.

cal advisor would also examine the desired level of service to be provided and suggest interim procedures for modifying schedules over the term of the contract. Finally, the legal advisor would evaluate that all necessary laws and regulations are in place to execute the deal.

Following these steps, the T would issue a request for qualifications (RFQ), followed by a request for proposals (RFP) from bidders it has deemed qualified to compete. Meridiam estimates that preparing and issuing these documents and evaluating bids would take a full year. Concurrently, the MBTA would apply for federal grants under the Transportation Infrastructure Finance and Innovation Act (TIFIA), and for the ability for the winning bidder to issue Private Activity Bonds (PABs) to fund its investment in the system. TIFIA funds and PABs are essential to offsetting the higher cost of borrowing from the private sector.

The T would also have to complete all necessary environmental reviews and interagency agreements during this year. Finally, the T should allow 6 months to evaluate the bids it receives, select a winner and close on the transaction.

This schedule is more aggressive than the one for the Denver Eagle P3 project, where two full years elapsed between issuing an RFP and finalizing a deal with the winning bidder. (That two-year period excludes time for preparing to issue the RFP.)

This proposed 24-month timetable is longer than the 19 months remaining before the expiration of MBCR's existing contract, in June 2013. In addition, the T has indicated that it would prefer to select a bidder no later than January 2013, so as to allow a 6-month transition period. Unless aspects of the timetable can be compressed, it appears it would be exceedingly difficult for the MBTA to close on a long-term deal in the amount of time available. If the T wishes to pursue a longer-term, innovative P3 arrangement, it may have to first secure a more conventional, shorter-term contract, or to amend and extend its current contract with MBCR.

Bringing Commuter Rail In-House

Instead of relying on a private concessionaire, the MBTA may instead consider consolidating its commuter rail operations within its own organization. Out of the top six largest commuter rail systems in the nation, the MBTA is the only transit agency that contracts its train operations to a third-party concessionaire, although all systems have separate contracts for maintenance of trains, tracks and signals, dispatching, and to gain access to rights of way, which are often controlled by or shared with Amtrak or freight companies.

Among these major systems, the closest comparison to the MBTA is Philadelphia's transit system, SEPTA. Like the T, SEPTA operates subway, bus and commuter rail under one agency. The T's commuter rail and SEPTA's regional rail carry similar numbers of passengers, each on 13 lines and serving a similar number of stations. But where the T contracts its train operations to MBCR, SEPTA has operated its regional rail service in house since taking it over from Conrail in 1983.

While the MBTA may realize some efficiencies and cost savings by consolidating operations, there are significant challenges associated with integrating unionized railroad employees into the T's workforce. As noted previously, labor harmony during the transition from Amtrak to a new concessionaire was a key ancillary goal of the original MBCR contract. As a result, MBCR was required to assume all previous Amtrak employees under substantially equivalent collective bargaining agreements, including continuing "the Amtrak practice of providing free healthcare to all unionized employees".³⁰ (MBCR subsequently negotiated new agreements with its unions under which employees bear some health care costs.)

Adding railroad unions to the other unions representing 95 percent of MBTA employees may further complicate an already difficult management challenge for the T.³¹ When SEPTA took over commuter rail operations from Conrail, it attempted to impose transit wages and work rules on existing railroad employees, leading to a 108-day strike that disrupted service. The T may face a different problem: its existing unions may push to have the benefits and protections of the railroad unions extended to them. This would make controlling labor and benefits costs at the T much more difficult.

At a time when government is being asked to do more with less, adding staff (and attendant salaries and benefits) to the MBTA payroll may pose political challenges. Such a move would also close the door on the potential of private capital investment in the system. It may be wise for the T to explore internalization, but it should do so alongside and not to the exclusion of short- and long-term concession agreements.

³⁰ MBCR. "Boston's Commuter Rail Service." April 12 2011

³¹ MBTA. "The MBTA FY2009 Budget." October 9 2008.

Conclusion: No Easy Answers

As we have seen, there are challenges associated with pursuing a long-term public-private partnership for commuter services, as well as for bringing the system — and its railroad unions — into the MBTA. In the end, the T may have to pursue parallel tracks: procuring a shorter-term contract (or an extension with MBCR) to maintain continuity of service while vetting a viable long-term alternative.

During that time, MBTA officials should continue to monitor progress in Denver, to see whether the execution of its Eagle P3 project lives up to the innovation of its contract procurement and financing. If it does, and if the T can find a way to adapt that model to recapitalize its existing commuter rail infrastructure, such an arrangement could provide a stream of upfront capital that the public sector so far has been unable or unwilling to provide.

Ultimately, however, the T cannot rely on innovate financing alone to solve its financial and infrastructure challenges. A July 2011 financial analysis of transportation-related P3s, conducted by the Inspector General of the U.S. Department of Transportation, cautioned that P3s are not a panacea. The report states:

We found that PPPs are not likely to significantly decrease the [nation's] infrastructure funding gap because private sector investment in transportation through PPPs generally does not entail new or incremental funds. Rather, the funds paid upfront to the public sector under a PPP are paid in exchange for future revenues, often in the form of tolls. In other words, a PPP primarily changes the timing with which funds become available, not the amount of the funds.¹

In the case of commuter rail, the future revenues to be offered to investors would not be tolls but rather fares and, potentially, other revenues associated with the service (i.e. parking, revenues generated at stations, revenues from real estate development around stations). Traditionally, MBTA policy has been to maintain control over the cost of commutes (fares and parking); under a P3, the T may have to cede some control over those decisions to the operator in order to entice private interest.

Even if a P3 is not so much a means of increasing funding as frontloading investment, such a strategy may make sense for the commuter rail, given the immediate capital needs and the prospect of increasing debt payments and deficits over the next few years. But even if the MBTA pursues a long-term arrangement, it must be aware that even the most innovative financing will not absolve the public sector from investing in the system. Ultimately, the fate of the commuter rail, and the entire T system, will depend on the public's willingness to invest adequate resources to maintain and grow a smart, sustainable transportation network.

¹ Office of the Inspector General, Federal Highway Administration. Financial Analysis of Transportation-Related Public Private Partnerships. CR-2011-147. July 28, 2011.