



March 27, 2015

TO: Governor's Special Review Panel for the MBTA, c/o Kate Fichter  
FR: Abbie Goodman, ACEC/MA Executive Director  
RE: Recommendations for the MBTA Panel

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BOARD OF DIRECTORS  
2014-2015**

On behalf of the American Council of Engineering Companies of Massachusetts, here are our Recommendations to Governor's Special Review Panel:

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1. The MBTA needs a full assessment of their enterprise-wide assets. All past efforts in this area have been resource-constrained and, therefore, primarily targeted safety critical issues, leaving redundancy, customer service and resiliency to fight for funding. Complete the Asset Management as a continuation of the pilot program laid out last year. Develop a 10 year mandatory capital program based upon the State of Good Repair (SGR) database with an emphasis on core system upgrades, i.e., power signals in support of prior and current system expansions with independent oversight.
2. Prioritize immediate Vehicle Maintenance Facilities rehabilitation to return existing facilities to full functionality. The emphasis should be on rapidly performing the repairs that take vehicles out of service: (door issues, motor failures, etc.)
3. Create a long-term funding plan that includes dedicated revenues with contributions from all those who benefit from the service including the federal, state, regional, and local governments, businesses, property owners, developers, roadway users and the public. Explore increasing non-fare revenues such as from advertising and value capture from real estate assets. Present the board with an annual list of capital projects that are unable to be funded.
4. Evaluate the role of the MBTA Commuter Rail Oversight group as it relates to rail operations. Re-examine the terms and conditions of the Keolis contract as it relates to infrastructure and equipment.
5. Update and generate Commuter Rail and Transit system SOPs for storms and natural disasters based on the new realities of recent storm intensities. Part of the process should be to identify required maintenance equipment and critical staff positions. Develop an annual budget to keep equipment in good working order and to cover reasonable expectations for storm events.
6. Perform an after-action assessment of recent snow storms and determine if Snow Plan was followed; if so, why did it not work and if not followed, why not. Develop an additional mitigation plan which will address other natural disasters, i.e., hurricanes, intense temperatures.
7. Analyze the MBTA organizational structure and determine whether it is an effective framework for how the MBTA should operate. Determine how to

arrange the hierarchical structure to deliver MBTA's Mission and goals and make sure organizational structure is understood by all personnel. Once this is completed, provide copies of the organization charts to all employees and update the organization charts on a regular basis.

8. The relatively short durations of the MBTA Commuter Rail Operating contracts do not encourage long-term planning and investment. Short-term contracting generates little loyalty by the employees charged with daily operations. Contract durations should either be 20 to 30 years, or the Commuter Rail Operations should be taken over by the MBTA. A commuter rail operator with a long-term contract could be tasked with vehicle and equipment procurements, taking those costs out of State bonding cap considerations.
9. The MBTA should conduct a vulnerability assessment of the key infrastructure, similar to a security analysis but with an emphasis on natural events. The universe of risks can be identified through a series of scenarios. A cost-benefit analysis could then be conducted to get a handle of the level of capital commitment that would be needed to mitigate the risk. Based on this exercise, resiliency design or mitigation guidelines could be developed for each part of the system with the goal of getting system back up and running as soon as possible. This process would also develop a prioritized list of areas of the system that are most susceptible to impact from climate events to focus investment priorities.
10. Eliminate single points of service failure - by creating redundancies through additional service options during emergencies and identifying where flexible service modes such as BRT could alleviate capacity constraints.

The American Council of Engineering Companies of Massachusetts (ACEC/MA) is the voice of the engineering industry. Our members include over 120 firms, representing more than 7,000 employees. ACEC/MA member firms design the environmental, transportation, educational, and recreation infrastructure of the state, which allows the residents of Massachusetts to be able to drink clean water, take advantage of new technologies, and travel safely and efficiently. We are dedicated to assisting our members in achieving higher professional, ethical, business and economic standards to provide quality consulting engineering services for their clients and the public. ACEC/MA members are the leading engineering firms in Massachusetts and Rhode Island. Our member firms range in size from single employee entrepreneurs to the corporate headquarters of international firms. About one third of our members are small businesses with ten or fewer employees.

ACEC/MA member firms are mostly private corporations who do work for state and municipal governments, private institutions and developers, as well as other public and private clients. ACEC/MA member firms are an important component of the larger construction industry because of the leading role engineers take during the planning and design phase of a project, without which there would be no construction.

We welcome the opportunity to discuss these recommendations with you. Please contact me at 617-305-4112 or [agoodman@engineers.org](mailto:agoodman@engineers.org).

Sincerely yours,

American Council of Engineering Companies of Massachusetts (ACEC/MA)



Abbie R. Goodman, ACEC/MA Executive Director