

Massachusetts Intercity Passenger Rail Governance White Paper

November 12, 2021

I. Executive Summary

The Massachusetts Department of Transportation conducted the East-West Passenger Rail Study to examine the potential benefits, costs, and investments necessary to implement a new passenger rail service connecting Western Massachusetts communities with Central and Eastern Massachusetts.

After public meetings and input from a Task Force consisting of representatives from municipalities and other stakeholders, the study concluded in January 2021 with the publication of a final report identifying three potentially viable service alternatives as well as a set of recommendations and next steps to advance the study. One next step was to understand the governance options for expanded passenger rail in Western Massachusetts. To advance that effort, this white paper provides background on issues that influence passenger rail operations in Western Massachusetts and provides specific recommendations on passenger rail operations and governance options for future services.

This approach is a slight departure from the original conception for the paper which contemplated a menu of options examining different ways to approach governance and service models for further discussion.

The Infrastructure Investment and Jobs Act (IIJA) passed by Congress on Friday, November 5 includes several discretionary grant programs for intercity passenger rail and unprecedented levels of funding for Amtrak. MassDOT officials believe the recommendations in this white paper will help position the Commonwealth to take advantage of the federal funding opportunities and is the most logical course to develop an East-West rail corridor and grow other rail services in Western Massachusetts.

Intercity Passenger Rail Service Operator: Amtrak is proposed

After examining the functional characteristics and legal/regulatory framework of different types of passenger rail, it is clear all three East-West Service Alternatives would be considered Regional Intercity Passenger Rail and therefore should be operated by Amtrak. As the primary operator responsible for the nation's Intercity Passenger Rail, Amtrak is the **only** railroad that has rights of access to the facilities of any other railroad or regional transportation authority. These access rights provide Amtrak with access to any rail line in the United States and give Amtrak the ability to use any host railroads' facilities, such as stations or railyards.

The cost for Amtrak to use those rail lines and facilities are based on the incremental costs (added costs resulting from Amtrak's operation) and not the full cost of capital and maintenance. Furthermore, Amtrak is provided preference in train dispatching, which minimizes delays to Amtrak trains when operating on tracks with both freight and passenger services.

The unique rights provided to Amtrak through federal law make it a preferred operator when considering passenger rail services and the preferred operator for the East-West Passenger Rail Service. Although the process of exercising Amtrak's unique rights takes a considerable amount of time and is costly, Amtrak has the right to bring any seemingly unresolvable issues to the Surface

Transportation Board (SB) for ultimate resolution. Although recent federal law allows other passenger rail operators to bring issues to the STB for mediation, it is a process that has not yet been tested. If other rail operators, such as the MBTA, were considered to operate the East-West Service, the difficulties in accessing the CSX-owned portion could render the service unfeasible.

The Passenger Rail Investment and Improvement Act of 2008 (PRIIA) includes a provision that establishes a cost sharing approach for regional intercity rail services operated by Amtrak. Consistent with this provision, titled PRIIA Section 209, a cost allocation model has been developed by Amtrak and sponsor states that is used to determine how to allocate costs for state sponsor reimbursement. This model, which would be used to determine annual operating costs for the East-West Service, will improve clarity on the annual operating cost of the service for the Commonwealth.

Engaging Amtrak for the service operations does not mean that Amtrak can or should handle all aspects of the service as a "turnkey" operation. At a minimum engaging Amtrak would mean Amtrak would operate the train service by providing Amtrak labor for on-board conductors, engineers, and daily train maintenance. Other aspects of the service could be evaluated to understand if Amtrak or others would be the preferred provider. These aspects include:

- Service Plan Development
- Safety System Compliance
- Ticket Sales / Fare Collection
- Food Service Provisioning
- Rolling Stock Capital
- Rolling Stock Maintenance

Other aspects of the service would be best addressed by the owner/primary operator of each segment of the rail corridor. These aspects include:

- Train Dispatching
- Right-of-way Maintenance
- Station Maintenance
- Layover Facility Maintenance
- Capital Renewal

Engaging Amtrak to operate the East-West Intercity Passenger Rail Service would provide the best chance at a successful service by leveraging its unique federal benefits, extensive experience, and national resources. The Commonwealth of Massachusetts can work cooperatively with Amtrak to provide successful services that meet the regional travel needs of Western Massachusetts.

Governance: proposed to establish focused, mission-driven authority

To progress the East-West passenger rail service, an entity is required to develop, manage, and oversee the service.

There are several benefits for passenger rail to be managed by a local authority; in this case, an entity focused on passenger rail service in Western Massachusetts (*i.e.*, a Western Massachusetts Intercity Rail Authority). These benefits include:

- A more efficient allocation of resources and decision making related to service development, operating plans, transportation network connectivity, and service schedules. Developing

operating plans that best fit with the local transportation network would be improved through detailed understanding of local conditions. Coordination of the service with local bus connections or responding to transportation demand surges could be implemented more quickly at the local/regional level.

- A unified Western Massachusetts voice at the state and federal level when advocating on Western Massachusetts intercity rail issues.
- Coordinated passenger services such as ticketing, marketing/advertising, and information systems and potential efficiencies to be gained from more localized efforts.
- Coordinated capital improvement priorities that benefit the entire corridor and the ability to focus resources on the projects that would generate the most benefit. A local authority that includes the rail owners and operators along the corridor would be in a better position to coordinate these improvements.
- More focused oversight and management of on-time performance, schedule integration, mechanical issues, and customer service by local staff. Local authority board members and senior management who are also located along the corridor mean that customer-related issues could more easily be identified and addressed.

The benefits of establishing a focused, mission-driven authority to govern intercity passenger rail services in Western Massachusetts are clear. The ability to match local governance of the service with local transportation needs would undoubtedly lead to a more effective service. It is assumed that the authority would be governed by a Board of Directors appointed by the Governor of Massachusetts, consistent with other state authorities such as the Massachusetts Water Resources Authority and Massport, and made up of qualified Western Massachusetts residents with a strong interest in providing intercity rail service to Western Massachusetts.

The initial role of the Authority should be to guide the development and implementation of the East-West intercity passenger rail service. Other responsibilities could be included such as to provide management oversight of the existing “State-Supported” Amtrak services (Amtrak Vermonter, Amtrak Hartford Line, and Amtrak Valley Flyer), to coordinate with Amtrak on financial and operational policies, and to manage capital improvements and capital renewal activities on lines where Amtrak “State-Supported” services operate.

In addition to a governing structure, the authority will require the following capabilities to operate an effective Western Massachusetts Intercity Rail Authority:

- Ability to enter into agreements and contract for intercity service
- Eligibility to receive and manage federal and other funds
- Ability to manage risk through liability limitations and purchase of insurance

The Authority would need to establish the resources and support staff to develop, manage and oversee the service. The Authority would need the ability to administer large capital investment programs. Familiarity with federal capital grant programs and procedures would be essential. Legal support, accounting, bills payable, receivables, payroll, and human resources support are all functions that would need to be established.

Establishing a new authority would be significant effort, however the benefits of establishing a Western Massachusetts Intercity Rail Authority would provide the mission focused effort necessary to implement a major new passenger rail service. An entity focused solely on passenger rail service in Western Massachusetts will ensure the resulting service will meet the transportation needs of the region.

QUESTIONS AND ANSWERS

Q: Could the East-West Service be provided by an operator other than Amtrak?

Only Amtrak has access rights established through federal law that would allow for access to the corridor regardless of the railroad owner's access principles. All other rail operators must meet the terms established by the railroad owner.

CSX has established Passenger Train Access Principles that include several items that may be inconsistent with the feasible operation of East-West passenger rail. One notable principle is a requirement that any passenger train traveling at maximum speeds higher than 90 MPH would need to be on its own dedicated tracks and right of way, separated by at least 30 ft. from freight rail service.

Unfortunately, commuter rail agencies do not have much leverage in access negotiations. There are many issues that may cause freight railroads to be hesitant to negotiate away a portion of the company assets, ranging from future growth to existing liability concerns. Each corridor and situation are different, and therefore the approach to securing access would likely be different for each corridor.

Q: Could the East-West Service be operated by the MBTA?

The MBTA provides transit services to many of the communities of Eastern Massachusetts. The passenger rail service that the authority provides is categorized as commuter rail service and is typically focused on providing peak period commutes into and out of Boston. This focus on transit and servicing the daily transportation needs of the Greater Boston area is very different than the rail system that would need to be developed to serve the transportation needs of Western Massachusetts and the East-West corridor.

Operation of service on the East-West corridor by the MBTA would not resolve railroad access issues. The MBTA would still need to gain access to the CSX-owned corridor west of Worcester, which would need to be done without the rights of access that Amtrak can exercise. Although the MBTA has an existing contract with Keolis to operate commuter rail service, the operation of East-West service would likely require an additional operator, or at the very least hiring additional staff to be based out of Western Massachusetts in order to effectively operate the service. Operation of the service could not be initiated as an extension of existing MBTA commuter rail services to Worcester. Any passenger rail services to Springfield and Pittsfield would be operated as a separate service, requiring separate crews and equipment. The additional operator, or expansion of staff, for the new service would mean that any efficiencies that would be contemplated through operation of the service by the MBTA would be limited.

Significantly, the existing MBTA commuter rail service is primarily governed through the Federal Transit Administration as transit service (though the Federal Railroad Administration regulates safety). The East-West service would not be eligible for transit funding and would receive any federal support through the Federal Railroad Administration instead. Therefore, it would be important to keep the two services separate and would likely require establishing

a separate management structure for the intercity service. This management structure would operate under different goals and performance criteria than the MBTA.

Although operation of the East-West service by the MBTA would be technically possible, there would not be many benefits achieved from the expansion of the MBTA's mission and oversight to include intercity rail service in Western Massachusetts.

Q: Could the East-West Service be operated by a private operator similar to the Brightline Service in Florida?

Since the majority of the U.S. rail network is owned by private freight companies that control the use of their tracks, there are limited examples of private operators providing intercity passenger rail service. Since a portion of the East-West service would be on a line owned and controlled by CSX, a service operated by a private intercity service operator would need to negotiate terms of access that would be both operationally feasible and financially feasible and would not have any of the access rights or liability limitations that Amtrak provides.

The following are the recent examples of initiatives to provide intercity passenger rail service by a private operator. There are specific conditions on each corridor which made it an approach to consider pursuing.

Brightline Service

Brightline is the only privately operated intercity rail service operating in the country. It initiated service in January 2018 and operates between Miami and West Palm Beach, Florida along the Florida East Coast Railroad.

When Florida East Coast Railroad was divided into separate railroad and real estate companies following an ownership change in 2007, Florida East Coast Industries (FECI) retained the right to operate passenger rail service along the Florida East Coast Railroad corridor. FECI was in a unique position to use those passenger rail operating rights to create a new intercity rail service, known as the Brightline, which is operated by All Aboard Florida, a subsidiary of FECI. Brightline operates between Miami and West Palm Beach with plans underway to extend the service to Orlando. All Aboard Florida and FECI were able to work cooperatively with the affiliated Florida East Coast Railroad throughout the development process in order to secure the necessary rail access and railroad improvements. FECI is also working on plans to develop a reported 2 to 4 million square feet of multi-use real estate space around the stations. Development of Brightline has been a unique combination of passenger rail operating rights, strong corridor travel demand, and a robust real estate market. The alignment of conditions and a forward-thinking development company has led to the creation and operation of a privately operated intercity passenger rail service.

Texas Central High Speed Railway

The Texas Central Railroad, a private consortium that includes the Central Japan Railway Company, is proceeding on a plan to build a dedicated high-speed line connecting Dallas-Fort Worth and Houston. Trains on the 240-mile route would operate at up to 200 miles per hour, providing a 90-minute trip between the two cities. The estimated cost of the project is \$20 billion and is now expected to be in operation in 2023. The project is assembling its own

right of way using rights of eminent domain, which has proven to be a significant challenge for the private company. There have been several legal challenges to development of the railroad, however after going through several appellate court decisions, a decision by the Texas Supreme Court this summer appears to clear the way for the project to advance.

Brightline West

Brightline West (formerly known as XpressWest and DesertXpress), is a project now backed by Fortress Investment Group, with the goal to build a dedicated high-speed rail line from Victorville, CA (a community northeast of Los Angeles), to Las Vegas, NV. The planned line would be constructed primarily in the median of the Interstate 15 right-of-way as well as on property owned by the Bureau of Land Management and National Park Service. Trains would operate non-stop over the 169-mile route running at speeds up to 150 mph. Although the project has secured a portion of the necessary right-of-way, funding for the \$8.4 billion project has been more of a challenge. The project has had numerous supporters and investment approaches since it was started in 2004. The funding/financing approaches have included combinations of public and private funding, however none of them have come to fruition. However, Fortress Investment Group is optimistic it will be able to start construction next year using an approach that includes the sale of state Private Activity Bonds along with private and federal funding.

As noted in the descriptions of the three projects, one of the major issues in implementing a private intercity rail project is securing project right-of-way. Each project described above has progressed though that process using a different approach; leveraging a previously acquired right of access; assembling a new right-of-way; and utilizing the interstate highway right-of-way. Each of those approaches were not considered feasible as part of the East-West Passenger Rail Study. To implement the East-West service alternatives currently under consideration, a private operator would need to successfully negotiate access with the railroad owners (CSX, MBTA and MassDOT) under terms that are more advantageous than Amtrak currently is able to do.

Q: Could the East-West Service be governed by the MBTA?

Prior to July 1, 2000, the MBTA was subsidized by the Commonwealth to provide various forms of assistance to offset the MBTA's annual operating deficit and to subsidize and guarantee its annual debt service requirements. To finance its capital programs, the MBTA was authorized to issue debt secured by its general obligation. If the MBTA lacked the funds to pay the debt, the Commonwealth, through its full faith and credit, would guarantee to pay the debt service due to the bondholders. However, Chapter 127 of the Acts of 1999 repealed and restated the Commonwealth's funding mechanism for the MBTA. This legislation, effective July 1, 2000, established a "Forward Funding" procedure, which allows the MBTA to receive a dedicated revenue stream comprised of annual assessments to the 175 member cities and towns in the MBTA's service area, which represents an increase from the prior 78 members.

In addition, each year the MBTA would receive "dedicated sales tax revenues," which are equivalent to 20% of the Commonwealth's current state sales tax levy. Since the mission of

the MBTA is to provide transit service, and the framework of the MBTA is established to manage and oversee transit service, expanding the function and framework of the Authority to include intercity passenger rail service would require a significant change to the organizational framework of the MBTA, which would include legislative action necessary to amend the agency's financial structure.

I. Study Summary

The Massachusetts Department of Transportation conducted the East-West Passenger Rail Study to examine the potential benefits, costs, and investments necessary to implement a new passenger rail service connecting Western Massachusetts communities with Central and Eastern Massachusetts.

The goals of the study were to:

- Provide better transportation options to and from Western Massachusetts
- Support economic development through the East-West rail corridor
- Improve the attractiveness of Western Massachusetts as an affordable place to live
- Reduce the number of automobile trips along the corridor
- Reduce greenhouse gas emissions and air quality impacts from transportation

The study concluded in January 2021 with the publication of a final report. The final report documented the existing conditions along possible rail corridors, potential service and route alternatives, findings from analysis of the alternatives, and a set of recommendations and next steps. One of the next steps was to understand the governance options for expanded passenger rail in Western Massachusetts.

II. Background

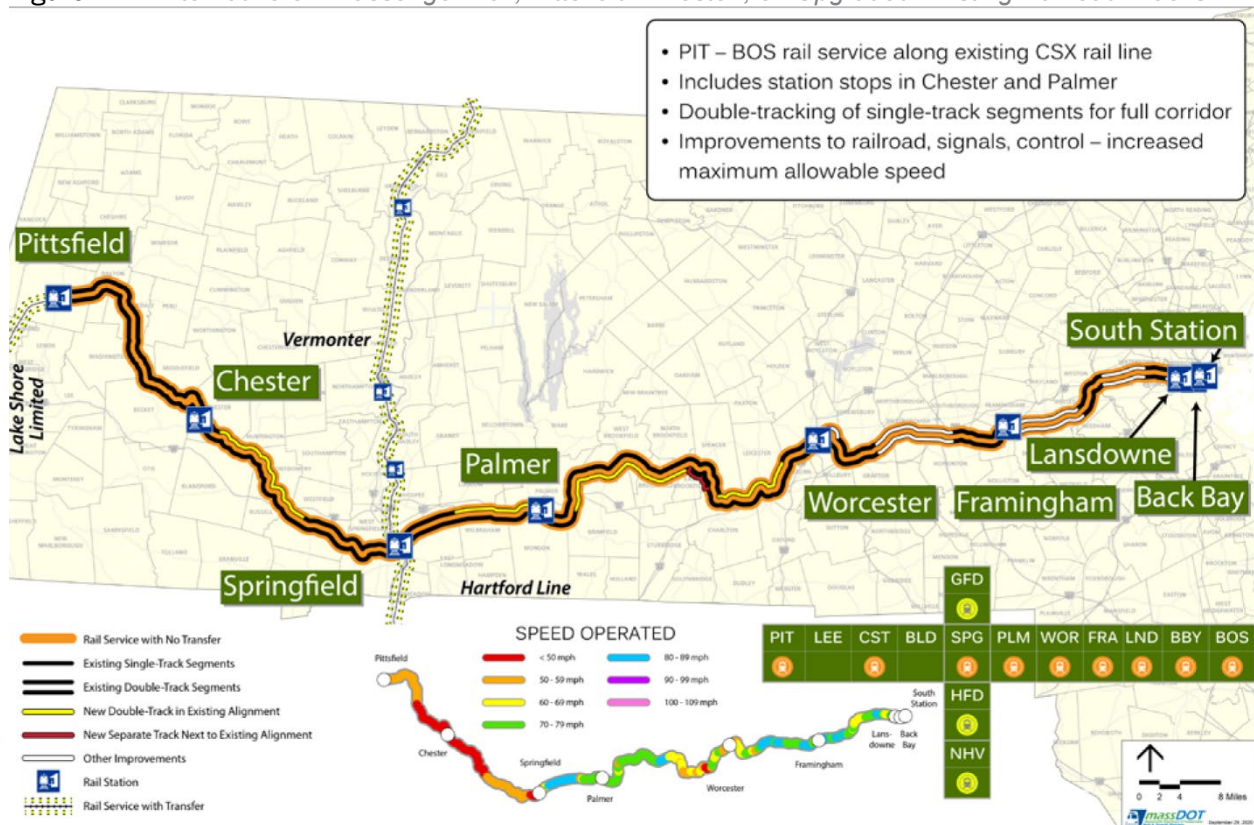
East-West Passenger Rail Study

The East-West Passenger Rail Study concluded by framing three potentially viable alternatives out of six identified by the study team and as discussed at several public events by the Task Force which could advance one or more of the goals established for passenger rail service between Pittsfield and Boston. A summary of the three alternatives follows:

Alternative 3

Alternative 3 would provide a new direct passenger rail service along the existing rail line within the shared corridor between Pittsfield and Boston (South Station). Portions of the existing rail line are owned by CSX, the Massachusetts Department of Transportation, and the Massachusetts Bay Transportation Authority (MBTA). The service would include intermediate stops in Chester, Springfield, Palmer, Worcester, and Boston (Lansdowne and Back Bay). The service would include up to eight weekday rail round trips between Pittsfield and South Station. Travel time between Springfield and Boston would be less than two hours (1:57), and between Pittsfield and Boston would be approximately three hours, twelve minutes (3:12).

Figure 2-1 - Alternative 3 – Passenger Rail, Pittsfield – Boston, on Upgraded Existing Railroad Tracks



Alternative 4

Alternative 4 would provide a new direct passenger rail service along the shared corridor between Pittsfield and Boston (South Station). Portions of the existing rail line are owned by CSX, the Massachusetts Department of Transportation, and the MBTA. The service would operate along a new passenger-only track between Springfield and Worcester within the CSX-owned rail corridor but offset from the existing railroad track. The service would include intermediate stops in Chester, Springfield, Palmer, Worcester, and Boston (Lansdowne and Back Bay). The service would include up to 10 weekday rail round trips between Pittsfield and South Station. Travel time between Springfield and Boston would be less than two hours (1:47), and between Pittsfield and Boston would be approximately three hours (2:59).

Figure 2-2 - Alt. 4 – Passenger Rail, Upgraded Existing Rail (PIT – SPG), New Rail in CSX Corridor (SPG – WOR)



Alternative 4/5 Hybrid

Alternative 4/5 Hybrid would provide a new direct passenger rail service along the shared corridor between Pittsfield and Boston (South Station). Portions of the existing rail line are owned by CSX, the Massachusetts Department of Transportation, and the MBTA. For this Alternative, the service would operate along a new passenger-only track between Springfield and Worcester. Portions of the passenger-only track would be along a new alignment outside of the CSX-owned rail corridor to improve train speeds and travel times. The service would include intermediate stops in Chester, Springfield, Palmer, Worcester, and Boston (Lansdowne and Back Bay). The service would include up to 10 weekday rail round trips between Pittsfield and South Station. Travel time between Springfield and Boston would be approximately 1 ½ hours (1:37), and between Pittsfield and Boston would average under three hours (2:49).

Commuter Rail: Commuter rail provides frequent service connecting urban and suburban stations to a large city center. Historically, a high proportion of commuter rail riders are typically commuting daily to jobs in the city center. Although the Covid-19 pandemic has altered the timing and level of transit demand, commuter rail remains focused on serving daily commute trips, with some systems increasing mid-day services to better match daily demand patterns.

The MBTA operates commuter rail service on the Worcester/Framingham line between Worcester Union Station and Boston South Station. This service operates with schedules focused on providing trips to Boston before 9 a.m. and from Boston after 4 p.m. Station stops are generally 1 to 5 miles apart with maximum trip distances of 30 to 45 miles. The *CTrail* Hartford Line provides another link to Western Massachusetts, with its commuter rail service to Springfield. The *CTrail* Hartford Line schedule focuses on accommodating daily travel to Hartford and New Haven, Connecticut. Commuter rail services typically receive public financial support to offset between 25% and 75% of the service's operating costs.

(The MBTA also operates commuter rail service from the North Shore, South Shore and along a portion of the Route 2 corridor of Massachusetts.)

Intercity Passenger Rail: Intercity passenger rail provides connections among different urban centers, with longer distances between stops and lower frequencies than commuter rail. Amtrak is the principal national operator of intercity passenger rail in the United States, although there are private operators that are pursuing or have recently initiated service. (See page 24 regarding details related to privately operated intercity services).

Long-Distance Intercity Service operates with limited frequencies, typically only one or a few daily trips. Long-distance intercity service typically includes station stops that are 15 to 75 miles apart and routes between 750 and 2,800 miles long. Many passengers use these services for personal/recreational travel. The Amtrak Lake Shore Limited is an example of a long-distance intercity service that travels through Western Massachusetts enroute between Boston and Chicago.

High-Speed Intercity Rail Service operates with frequent service; station stops 30 to 50 miles apart, a maximum line distance of 500 miles, and a top speed of 160 mph. High-speed rail generally serves the business travel market. Currently, the only high-speed intercity rail service in the United States is the Amtrak Acela that operates between Washington, DC, New York City, and Boston. Between Boston and New York, Amtrak Acela operates with top speeds of 150 miles per hour and average speeds of 82 miles per hour.

Regional Intercity Rail Service operates with moderate frequency; station stops 10 to 50 miles apart, maximum runs of 750 miles, and a maximum speed of 125 mph. A high proportion of trips are for business and personal/recreational travel. Rail services in Western Massachusetts considered Regional Intercity Rail include:

- Amtrak Vermonter from Washington, DC to St. Albans, VT,
- Amtrak Northeast Regional Service from New York City to Springfield,
- Amtrak Valley Flyer Service from New Haven, CT to Greenfield, and
- Amtrak Hartford Line Service from New Haven, CT to Springfield.

The East-West Service Alternatives are identified as having eight to ten daily round trips between Pittsfield and Boston, have station stops spaced an average of 26 miles apart, and a total corridor distance of 150 miles. With these characteristics, all East-West Service Alternatives would be defined as Regional Intercity Rail Service.

Legal/Regulatory Characteristics

Commuter Rail /Intercity Rail

There are specific federal definitions that distinguish between intercity and commuter rail services. The definitions were initially established in the 1970s during Amtrak's inception to establish which rail services Amtrak would operate and which ones were the responsibility of the freight railroad owner/operator. At that time, under the Interstate Commerce Commission (the predecessor agency to the Surface Transportation Board), commuter rail service was defined as passenger rail service on routes less than 100 miles; services used by daily or regular passengers, either within a metropolitan area or between a metropolitan area and its suburb; and service provided primarily in peak weekday travel times and service where 70% or more of the passengers travel on multi-ride tickets. Since that time, the federal definition has evolved to:

"commuter rail passenger transportation" means short-haul rail passenger transportation in metropolitan and suburban areas usually having reduced fare, multiple-ride, and commuter tickets and morning and evening peak period operations.¹

Intercity passenger rail is defined under federal regulation as:

"intercity rail passenger transportation" means rail passenger transportation, except commuter rail passenger transportation.²

Given the federal definitions, the East-West Service Alternatives would be defined as Intercity Passenger Rail.

Passenger Rail Access

As noted in the East-West Passenger Rail Study Final Report, passenger railroads can gain operating rights over freight railroads, subject to coordination and operating agreements. There are several different approaches used to secure rail line access. The Rail Passenger Service Act of 1970, which created Amtrak, provided Amtrak with rights of access to operate

¹ 49 U.S. Code § 24102 (3)

² 49 U.S. Code § 24102 (4)

over the nation's freight lines.³Amtrak already has established some operating rights over the line between Boston and Albany to operate the Lake Shore Limited.

Amtrak is the **only** railroad that has rights of access to the facilities of any other railroad or regional transportation authority. These access rights provide Amtrak with access to any rail line in the United States and give Amtrak the ability to use any host railroads' facilities, such as stations or railyards.

Amtrak access and use of rail lines and facilities still requires payment to the host railroad, but with a payment structure based on the incremental costs⁴. Use payments based on incremental costs, instead of fully allocated costs, represent a significant cost reduction for Amtrak in comparison to costs paid by other passenger railroads. This is especially true on corridors with regular freight traffic, where operating passenger trains do not introduce significant added maintenance or inspection costs. In addition to the incremental cost structure, the Railroad Passenger Service Act of 1970 provided Amtrak with a right to train dispatching preference over freight trains, a preference that is exclusive to Amtrak.

The process for Amtrak to secure access to a host railroad's line and facilities typically includes negotiating an operating agreement that defines the operation of the existing services, the process for implementing new services, expected service standards, the payment amounts and terms for services provided by the host railroad, apportionment of liability, and a dispute resolution process. Part of this operating agreement process is often an assessment of the capacity of the corridor, evaluation of the ability of the rail line to accommodate the additional services, and identification of any additional infrastructure necessary to accommodate the service, if any. As noted, Amtrak is authorized to make agreements for the use of freight railroad facilities, for a fee. If Amtrak and the freight railroad cannot come to an agreement on the terms of use or the fee, the Surface Transportation Board (STB) has jurisdiction over the dispute and authority to prescribe reasonable terms for Amtrak to use the freight facilities.

Although a dispute resolution process exists through the STB, the process of negotiating terms and securing Amtrak access can be an extended one. The process of negotiating access for the Amtrak Downeaster service between Boston, MA and Portland, ME took approximately five years as Amtrak, the State of Maine and the railroad Guilford Industries (now Pan Am Railways) worked through issues related to train speed limits and track conditions. In this instance the STB was brought in to resolve issues specifically related to incremental costs.

In Alabama, Louisiana and Mississippi, Amtrak has been working with the three states, the Federal Railroad Administration and the two operating railroads (CSX and Norfolk Southern) to restore Amtrak service in the Gulf Coast region that ceased operation after Hurricane Katrina. Since 2015 the entities have been conducting engineering reviews and capacity studies to determine the appropriate schedules and capacity improvements. As a result of

³ 49 U.S. Code § 24308

⁴ The Railroad Passenger Service Act of 1970 requires Amtrak to compensate the freight railroads that Amtrak operates over but only for the incremental cost for the use of their tracks. Incremental costs typically include: Incremental maintenance costs resulting from Amtrak's use of freight railroad tracks, Cost of developing and maintaining tracks and other facilities for Amtrak's exclusive use; Cost of incremental services provided by freight railroads for Amtrak service (i.e. additional train dispatchers).

the extended 5 -year time period the process has taken, Amtrak recently filed with the STB with a request to order the railroads to provide access.

Other railroads can gain access to a freight railroad's lines and facilities. However, the process requires a negotiation between the owner/operator of the railroad right of way and the passenger rail service sponsor on commercial terms. Importantly, there is no guaranteed right of access and no mediation process that will define a path to resolution, as Amtrak has with the STB. Important attributes that must be kept in mind through the negotiation process include:

- Active railroad property cannot be taken by eminent domain
- A freight railroad is a private business that has a responsibility to its owners/shareholders to earn a fair return on investment
- Maintaining corridor capacity is important for a freight railroad. Capacity is impacted differently by different types of service (intercity, commuter and freight) and different service frequencies,
- Capital improvements to improve corridor capacity requires realistic budgets and schedules
- Liability protection is an important component of the negotiation

Financial Characteristics

The Rail Passenger Service Act of 1970 created Amtrak to provide nationwide passenger rail service. Amtrak receives Congressional funding for some capital and operating costs, but it is also responsible for covering costs through passenger fares. The Passenger Rail Investment and Improvement Act of 2008 (PRIIA) includes a provision that requires states to pay the costs assigned to their respective Regional Intercity Rail Service.⁵ Amtrak also assigns costs incurred for the common benefit of more than one route based on a proportionate share. Consistent with this provision, titled PRIIA Section 209, a cost allocation model has been developed by Amtrak and sponsor states that is used to determine how to allocate costs for state sponsor reimbursement.

In Western Massachusetts, as part of Amtrak's legislatively defined Long-Distance system, the Lake Shore Limited operating expenses are absorbed by Amtrak (and supported by the federal government through its National Network grant), whereas the Vermonter, the Amtrak-operated trains on the Hartford Line, and the Valley Flyer service are all classified as "state-supported" and receive financial assistance from Massachusetts and Connecticut. The Vermonter is supported by Vermont in addition to Connecticut and Massachusetts.

Summary

The East-West Passenger Rail Study Report identified three potentially viable alternatives for passenger rail service between Western Massachusetts and Boston. The service concepts are all defined as intercity passenger rail, and therefore it would be possible to engage Amtrak to provide the service.

⁵ Amtrak's Northeast Regional Services that operate along the same corridor as the Amtrak Acela service between Washington DC and Boston, MA were treated differently by PRIIA. The costs and revenues for those services are not allocated to the respective states.

The service alternatives would use segments of the existing rail line, known as the Boston-Albany Rail Mainline, owned by CSX, the Massachusetts Department of Transportation, and the MBTA. Engaging Amtrak to provide the service would allow them to exercise their unique access rights to provide the service along the CSX portion of the line (west of Worcester). Engaging a different rail operator would require negotiating with CSX for access without any guarantee of a resolution that would allow the service to advance.

The following sections describe a recommended approach for the service operations and the governance of the proposed service that would provide the best chance of success given the particular circumstances and conditions within Western Massachusetts. Following the recommended approaches to Intercity Passenger Rail Operations (Section 3) and Western Massachusetts Intercity Rail Governance (Section 4) is a section that includes additional detail on certain aspects of the recommended approach.

III. Intercity Passenger Rail Operations

Background

Passenger and freight shared-use rail operations create challenges for scheduling and dispatching and requires investing in suitable track infrastructure and signal equipment. Shared use operations that add passenger service to freight rail lines often require investment to install some combination of double-tracking, passing sidings, new track, and higher-capacity signal systems. Passenger trains operate at higher speeds, which requires that the track structure, signal system, and roadway crossing infrastructure be designed and maintained to support faster operations.

The Federal Railroad Administration (FRA) has established maintenance standards and other speed-related regulatory requirements that railroads must comply with, or the passenger service must be curtailed or reduced to operate at a much slower speed. The frequency and comprehensiveness of inspections of the infrastructure is also proportionate to the maximum speed in the territory. Both the additional maintenance efforts and more intensive inspections are intrinsic to operating the trains at higher speeds. The costs of these additional activities must be accounted for in the development of the passenger rail service plans.

A shared-use operation complicates line capacity utilization, particularly with intercity passenger trains involved. Typically, average intercity passenger train speeds exceed freight train average speeds, which causes conflicts and exacerbates the difficulty in prioritizing passenger operations without causing adverse impacts to freight service. In Massachusetts, current and approved shared use corridors provide enough capacity for near-term needs. It is important that any future shared use of these corridors also provides sufficient capacity. As the service implementation process advances, issues related to shared use operations and capacity needs would need to be addressed, managed, and mitigated.

Operations

Engaging Amtrak for the service operations does not mean that Amtrak can or should handle all aspects of the service as a "turnkey" operation. As noted above, operating within a shared-use environment adds complexity to the service. Many functions necessary to implement the service must be undertaken by an operating railroad, while others may be handled by other entities. The following are the various aspects of intercity passenger rail operations that must be considered and a recommendation on possible responsible parties to advance East-West intercity rail services.

Train Operations

To provide intercity rail service, qualified train operators and staff must be available. Train operations include train engineers and crews to staff trains. The train engineers must be fully FRA-qualified.

For East-West Passenger Service, Amtrak would be contracted to provide train operations. Engaging Amtrak to provide the train operations would include use of Amtrak labor for on-board conductors, engineers, and train maintenance staff. As noted in the following sections there are other aspects of the service that are assumed to be provided by Amtrak but could be contracted by others. These additional services include on-board food service; provision of on-board or station services, use of Amtrak's electronic ticketing system, use of Amtrak's reservation system and use and maintenance of rolling stock (passenger cars and locomotives).

One example of directly contracting other services is the approach the Northern New England Passenger Rail Authority (NNEPRA) took to purchasing food and beverage concessions. NNEPRA is the entity that manages the Amtrak Downeaster service that operates between Boston and Maine. When the service started, NNEPRA decided to directly contract food service purchases from an independent local provider, instead of using Amtrak. Using this approach they are able to provide Maine-based products for sale. Customer surveys indicate that most passengers appreciate the specialization and selection they provide. Although the savings compared to contracting directly with Amtrak are minimal, they are able to provide the locally-focused products at slightly lower retail prices to passengers and with improved customer satisfaction.

Another example is the Capitol Corridor Joint Powers Authority, the entity that oversees the Capitol Corridor service in Northern California, which decided to keep the call center services "in-house". They use the existing Bay Area Transit Authority (BART) call center to respond to customer questions for the Amtrak Capitol Corridor service. This approach works well in their situation since the Capitol Corridor service does not operate with reserved seats and therefore the call center does not also make reservations. This approach has led call center staff to have a more detailed understanding of local concerns and questions, and has also resulted in reduced call center costs.

Some agencies have decided to contract out part of the operational components of the service separately. The states of Washington and Oregon have entered into joint ownership of dedicated trainsets for service in the Pacific Northwest on the jointly sponsored *Cascades* service, separate from the agreement with Amtrak to operate the service. The states have a long-term agreement with Talgo, a railcar manufacturer to provide equipment and a preventive maintenance program for the equipment, while Amtrak operates all other aspects of the service.

Similarly, North Carolina Department of Transportation decided to provide its own rolling stock for the service it sponsors, the *Piedmont*, and purchased and rehabilitated a small, older fleet of dedicated coaches and locomotives. This allowed NCDOT to manage costs, establish a North Carolina specific branding scheme, and establish a unique food service approach that relies on specialized food and beverage vending machines.

As planning for East-West service advances, arrangements with other entities or contractors for some of these services may be considered more beneficial for the service than contracting with Amtrak to provide all services.

Train Dispatching

Passenger rail dispatch provides for safe train operation, orderly and efficient movement of trains, and the management of train operations consistent with the service's operating plan. Train dispatchers are responsible for the direction, supervision, and control over the safe movement of all trains over the tracks.

The line to be used by the East-West Passenger service is currently dispatched by two different railroads (CSX and MBTA). It is assumed that the existing dispatch territories along the line would be utilized at service initiation.

Maintenance

Right of Way

Maintaining the track used for an intercity rail service is required for safe and efficient service. Right of way maintenance comprises the systematic maintenance of the track, signals, bridges, and other structures, along the alignment.

Currently, each operating railroad (MBTA and CSX) conducts maintenance of way activities on the lines they own or control. With implementation of the East-West Rail Service, it is not anticipated that this arrangement would change. With the higher speeds necessary for viable intercity rail service, additional maintenance would be required along many segments of the line. The additional maintenance would be undertaken by the respective railroad (MBTA or CSX), even in cases where the track is a passenger-only track. However, the additional costs would be allocated to the intercity passenger rail service. In situations where new track is constructed outside of an existing railroad right of way, it is assumed that the railroad whose line it is connecting to would maintain that segment as well, although there may be a possibility to consider alternative approaches.

Station

Maintaining stations entails multiple functions and includes both daily maintenance and capital maintenance. Station maintenance can include platform maintenance (and snow clearing), station building maintenance, parking, and public information systems. Since there are so many different maintenance components to stations, there are many ways to approach station maintenance, and the approach may differ by station depending on the characteristics of each station.

Most of the stations under consideration already have arrangements for station maintenance. Existing stations include South Station, Back Bay Station, Lansdowne, Worcester, Springfield, and Pittsfield. Agreements would be necessary for cost-sharing of maintenance activities and arranging how to integrate long-term parking and Amtrak passenger information, as necessary. For the new stations—Palmer and

Chester—new arrangements for station maintenance would be required. Maintenance could include agreements with Amtrak, CSX, the host communities, the property owner, or third-party contractors.

Safety Compliance

All passenger rail operations on shared railroad corridors must comply with Federal Railroad Administration regulations related to track, signal systems, rolling stock, and operations as described in Section 20102 of Title 49 of USC.

Additionally, passenger railroads are required to develop a System Safety Program Plan (SSPP). An SSPP provides the basis for identifying all hazards that might interfere with the safety of customers, employees, or the general public. The plan identifies the various individuals responsible for the oversight of system and component safety within the operating railroad's organization. The plan establishes a framework for safety reviews of each component of the rail operating system as well as capital improvements, equipment and equipment changes, and changes to operating practices. Preferred methods for eliminating, minimizing, and mitigating hazards are identified.

Each passenger railroad operator and service sponsor is required to have a SSPP for a subject service. In many cases, Amtrak would incorporate a service that they operate into the company-wide Amtrak System Safety Program Plan, although there may be some conditions that require the service sponsor to accept responsibility for part or all the SSPP. As the development of the East-West Passenger Rail service and service components evolve, the service sponsor would need to determine if they want to accept responsibility for the System Safety Program Plan or request Amtrak to accept assignment of the responsibility.

Rolling Stock

Rolling stock (Locomotives and Coaches) is a significant capital expense necessary to provide passenger rail service. There are several different styles of passenger rail coaches. Commuter rail coaches typically include bench seating and significant space for bicycles, strollers, and wheelchairs. The coaches are often configured to allow for the maximum number of passengers. At the same time, customer amenities are usually less of a design focus since passengers are not typically onboard for extended durations. Meanwhile, intercity passenger rail coaches and trainsets typically include bucket seats and passenger amenities, such as tray tables, luggage space, reclining seats, as well as café cars and baggage cars.

For the East-West Service, it is assumed that the sponsor would procure rolling stock specific for the service or work with Amtrak to procure rolling stock that could be used as part of a pool of equipment with other Amtrak intercity rail services in the Northeast.

The specific approach to secure rolling stock for the service would need to be evaluated as the project advances. Most state sponsors of Amtrak service opt to use Amtrak's existing fleet, which provides access to the large pool of existing Amtrak equipment. However, much of Amtrak's equipment is nearing the end of its life with the average coach being 34 years old and the average locomotive over 20 years old. Amtrak is currently in the process of a

major trainset replacement program, which includes replacing the trainsets used for the Vermonter, the Valley Flyer and the Amtrak Hartford Line. However, procurement of new trainsets is a long process and even after the equipment has been selected it typically takes anywhere from five to seven years or more before trainsets can be put into service.

As noted previously, some agencies have decided to purchase their own equipment that they provide to Amtrak to maintain and operate on the service. California, Washington, Oregon, Illinois and North Carolina have all purchased at least a portion of the fleet that Amtrak operates on their services. The states of Washington and Oregon purchased Talgo equipment, which is unique tilting train equipment, for Amtrak to use on the Cascades service. Also, NCDOT purchased and rehabilitated previously used equipment for Amtrak to use on the Piedmont service to control costs.

Layover Facility

As described in the East-West Passenger Rail Study Final Report, train operations require facilities for train storage, safety inspections, restocking, and light maintenance, as well as facilities for train crews. A layover facility is an essential component in providing passenger rail service with the size and location of the facilities often influencing schedule flexibility and the service schedules that can be operated.

Each Alternative evaluated in the East-West Passenger Rail Study includes the requirement to construct a new layover and maintenance facility near Springfield and Pittsfield. It has been assumed that expanded facilities in Boston would meet East-West train servicing needs. The status of the South Station Expansion Project, a project assumed to be completed prior to implementation of East-West Service, would have a significant influence the location and capacity of train layover facilities in Boston⁶. The status of the South Station Expansion project and the assumed layover capacity for East-West service would need to be revisited as service planning progresses. Amtrak would base their maintenance and operations from the newly constructed facilities in Pittsfield and Springfield and the available capacity in Boston.

Service Plan Development

Passenger rail services funded by the Federal Railroad Administration require a Service Development Plan that outlines the planning, implementation, and operational characteristics of the planned service. The Plan must:

- Demonstrate the purpose and need for service
- Analyze alternatives for the proposed service and identify the Alternative that would best address the identified purpose and need
- Demonstrate the operational and financial feasibility of the proposed Alternative

⁶ In addition to the completion of the South Station Expansion project, the East - West Passenger Rail Study assumed completion of two other capital improvement projects that would influence capacity along the corridor. They were the Worcester Triple Tracking project, which includes construction of 10 miles of new triple track rail sections between Route 128 and Framingham, and the Worcester Union Station Improvements, which includes construction of a new center island platform as well as other station area improvements.

- Describe how the implementation of the service development program may be divided into discrete phases, if applicable.

The East-West Passenger Rail Study Report provided an overview of many of the required components of a Service Development Plan. It outlines a solid base for the development of the plan for the selected Alternative.

The service sponsor would need to oversee the development of a Service Plan for East-West service, but Amtrak would have a significant role in the effort. The service sponsor should be involved to ensure that the service plan meets the goals for the service. However, Amtrak as the service operator would need to determine many details of how the service would be operated. Developing a Service Development Plan would also require significant involvement with CSX and MBTA as the other operating railroads along the corridor.

Ticket Sales / Fare Collection

For decades, passenger rail ticket sales and fare collection did not change much with most rail operators continuing to rely upon station-based paper tickets sales with on-board engineers using paper punchers to validate tickets. However, over the past decade or two most rail operators have transitioned to electronic ticket sales that allow for purchases to occur at any time and at any location.

For East-West Service, Amtrak would be responsible for managing ticket sales and revenue collection. Amtrak has a robust ticket sales and fare collection system that it utilizes across the country. This system includes electronic tickets sales via the Internet or the Amtrak app and in-station ticket sales at kiosks. Most services that Amtrak operates use a seat reservation system that minimizes the possibility of train overcrowding and allows for passengers to select their own seats or change seats during the trip. There are some Amtrak operated services where certain coaches have seat assignments, similar to airlines. Often Amtrak couples the reservation approach with the fare policy. The fare policies can range from including a single fare class (no business class) and fixed fares for each station pair (similar to transit service fare policies) to multiple fare classes and variable fares based on train capacity, station pairs and time of purchase (similar to airlines). Amtrak can accommodate whatever fare approach is preferred. In cases where service includes use of a portion of the Northeast Corridor, like the Valley Flyer or Vermonter, Amtrak fare policies are less flexible. For the East-West Service, decisions related to fare box revenue and ticket sale policies would need to be made by the service sponsor.

Capital Renewal

The East-West Passenger Rail Study Report identified the initial capital costs necessary to implement the service. Although these costs ranged from \$2.4B to \$4.6B they do not include the ongoing capital renewal that is necessary to keep a passenger rail service operating. Regular maintenance of tracks and other system assets is incorporated into the operating and maintenance costs for the service. However, rail corridors often require additional infrastructure rehabilitation or replacement as assets reach the end of their useful lives, no longer can meet the needs of the rail service, or need emergency repair. Examples include

bridge replacements, washout/flooding repairs, or replacement of vandalized or damaged equipment.

The 151-mile long East-West corridor would inevitably require capital renewal of infrastructure that is not needed by the freight rail operator but is necessary to keep the passenger rail service operating reliably. It would be essential for the sponsor agency to have the technical and financial capacity to address those situations. There are many ways to minimize the impact of capital renewal on the daily operation of the service. However, many authorities have found that taking an active role in planning and managing the capital renewal activities that the freight railroads typically undertake, leads to minimizing operating issues.

III. Public Governance

To progress the East-West passenger rail service, an entity is required to develop, manage, and oversee the service. Currently, MassDOT, Amtrak, or the Northern New England Passenger Rail Authority (an Authority based in Portland, Maine that manages the Amtrak Downeaster) manage intercity passenger rail service operating within Massachusetts.

Management and oversight of a daily intercity passenger rail service requires a program management role distinct from MassDOT's current role in the management of the Commonwealth's transportation network. MassDOT's role in managing the transportation network typically includes managing capital improvements, infrastructure maintenance, or financial support to service operations. Though it is recommended that East-West passenger rail service be operated by Amtrak, management and oversight of the service would require functions that are not consistent with MassDOT's typical role or operating structure.

There are several benefits for passenger rail to be managed by a local authority; in this case, an entity focused on passenger rail service in Western Massachusetts. Benefits include:

- A more efficient allocation of resources and decision making related to service development, operating plans, transportation network connectivity, and service schedules. Developing operating plans that best fit with the local transportation network would be improved through detailed understanding of local conditions. Coordination of the service with local bus connections or responding to transportation demand surges could be implemented more quickly at the local/regional level.
- A unified Western Massachusetts voice at the state and federal level when advocating on Western Massachusetts intercity rail issues.
- Coordinated passenger services such as ticketing, marketing/advertising, and information systems and potential efficiencies to be gained from more localized efforts.
- Coordinated capital improvement priorities that benefit the entire corridor and the ability to focus resources on the projects that would generate the most benefit. A local authority that

includes the rail owners and operators along the corridor would be in a better position to coordinate these improvements.

- More focused oversight and management of on-time performance, schedule integration, mechanical issues, and customer service by local staff. Local authority board members and senior management who are also located along the corridor mean that customer-related issues could more easily be identified and addressed.

Western Massachusetts Intercity Rail Authority

The benefits of establishing a focused, mission-driven authority to govern intercity passenger rail services in Western Massachusetts are clear. The ability to match local governance of the service with local transportation needs would undoubtedly lead to a more effective service.

The governing structure of the authority should be developed in a way that meets the needs of the service and Western Massachusetts. It is assumed that the authority would be governed by a Board of Directors appointed by the Governor of Massachusetts, consistent with other state authorities such as the Massachusetts Water Resources Authority and Massport, and made up of qualified Western Massachusetts residents with a strong interest in providing intercity rail service to Western Massachusetts.

The initial role of the Authority should be to guide the development and implementation of the East-West intercity passenger rail service. Other responsibilities should be to provide management oversight of the existing “State-Supported” Amtrak services (Amtrak Vermonter, Amtrak Hartford Line, and Amtrak Valley Flyer), to coordinate with Amtrak on financial and operational policies, and to manage capital improvements and capital renewal activities on lines where Amtrak “State-Supported” services operate. In addition, the Authority should develop service policies, objectives and strategic initiatives to ensure intercity rail services are operated effectively and efficiently and meet the applicable traveling needs of Western Massachusetts.

In developing the structure of the Authority, it would be important to establish the level of operational independence for the authority while also allowing for feedback mechanisms from other governmental stakeholders and the public to guide the services provided by the authority. Although the structure for the Authority would require that it is ultimately responsible for, and in control of, the development of passenger rail in Western Massachusetts, there must also be a process for the public and stakeholders to influence the approach and standards for the services. This may take the form of establishing certain criteria that the authority is required to meet. The criteria could be both financial and performance based. Although establishing specific service performance criteria could only be done once details of the planned service are more refined, a framework could be established as part of the authority, that would include regular reporting to the legislature and the public.

In addition to a Board of Directors, the authority must be staffed with transportation professionals that can manage the day-to-day details of implementing and then operating the service. The following section highlights some of the capabilities that the authority would need to include.

Required Organization Capabilities

The following capabilities are required to operate an effective Western Massachusetts intercity rail authority.

Legal Capabilities

Ability to enter into agreements and contract for intercity service

Management and oversight of the East-West Passenger Rail Service would require the authority to enter into multiple contracts during both the start-up phase and for ongoing operations.

The authority would be required to enter into agreements with the rail line owners (CSX, MBTA, MassDOT) to determine the terms for the use of the line. A contract would be required between the authority and Amtrak for the operation of the service. Several other agreements/contracts would likely also be required to facilitate access, maintenance, marketing, and capital improvements.

Eligibility to receive and manage federal and other funds

It is anticipated that the authority would need to receive and manage federal funds in order to oversee the service. Federal grant programs have specific requirements for a grantee to receive and manage federal funds. For public authorities these requirements are typically related to accounting systems and the ability of the grantee to follow Generally Acceptable Accounting Procedures (GAAP). More specifically it would be important for the authority to have established procedures related to:

- Allowable Costs & Cost Principles – Managing direct and indirect costs for reasonableness for the performance of the award and conforming to any grant limitations or exclusions noted.
- Activities Allowed/Unallowed – Managing activities charged to a federal grant that they are reasonable for the performance of the award and conform to any limitations or exclusions noted in the award.
- Cash Management – Ability to manage funds since many federal grants are cost reimbursement only. Authority must have ability to manage cash flow of projects being managed.
- Matching, Level of Effort – Many grant awards would require contribution of a “local match,” contributing the authority’s own resources to the grant program. The authority would need to both have access to sufficient funds for the local match and procedures in place to account for and ensure the local match is being made.
- Equipment and Real Property Management – Equipment purchased with federal funds must be tracked and inventoried. The authority would need to establish a system to manage and track purchased equipment.
- Procurement, Suspension, and Debarment – The authority would need formalized procurement policies established (in writing) with an appropriate price analysis or bidding procedure that includes ensuring bidders have not been barred from federally funded projects.

All agencies that receive federal funds are subject to basic audit requirements, which are spelled out in the Code of Federal Regulations. The audits are intended only to examine the federally funded parts of an organization's operations, and are not designed to identify unrelated problems. The audits are necessary to make sure that federal dollars have been spent properly on legitimate costs. It is therefore extremely

important for the authority to keep accurate records of all transactions conducted with federal funds.

Liability limitations and risks

The Fixing America's Surface Transportation (FAST) Act adjusted for inflation the liability limitation for passenger rail operations from the \$200 million established in the Amtrak Reform and Accountability Act (ARAA) of 1997. Currently, this figure is \$322,864,228. This provision, codified under at 49 United States Code §28103, applies to all passenger rail operations regardless of operator and covers rail right-of-way or facilities owned, leased, or maintained by any high-speed railroad authority or operator, any commuter authority or operator, any rail carrier, or any State. The statute limits for all claims to all passengers against all defendants arising from a single accident or incident to capped amount. It is important to note that the limit does not apply to railroad employees or to third party losses resulting from the incident.

For Amtrak services, most of the liability and insurance arrangements with host railroads are configured so that Amtrak is only responsible for harm to its employees, contractors, and passengers and to property damage to its property. The host railroad is therefore responsible for harm its own employees, any trespassers and any property damage not assumed by Amtrak. Amtrak provides host railroads with compensation for some of the residual liability that exists related to operation of Amtrak trains.

As part of their nationwide policy Amtrak provides insurance for the services they operate, the cost of which is incorporated into the service cost and paid by the state supporter. The addition of each individual service does not dramatically change the total risk profile of Amtrak nationally and therefore does not significantly change insurance costs. The costs for insurance in support of Amtrak service is allocated to the states supporters consistent with the PRIIA 209 policy.

In Massachusetts, Chapter 161, Section 43 of the Code of Massachusetts Regulations establishes limits on liability for the provision of passenger rail services, or the operation or accommodation of passenger rail services provided by or on behalf of the [Massachusetts Bay Transportation Authority] or the Massachusetts Department of Transportation. The limit is \$75,000,000 for all claims for damage, whether compensatory or punitive, for property damage, personal injury, bodily injury and death arising out operation passenger rail services. This limitation reduces the cost of services for all parties involved, an important component to operating passenger rail service since securing insurance between the \$75 million and the \$322 million cap established under federal law has been known to be too burdensome for some rail providers to shoulder.

Presently insurance for Amtrak services sponsored by the Massachusetts Department of Transportation is integrated into the MBTA's liability policy and self-retention approach when operating on lines owned by the MBTA or MassDOT. It would be important to ensure that liability coverage for passenger rail service continue to be coordinated between the state transportation agencies/authorities,

and if the East-West service is not provided on behalf of MassDOT that the limit of liability provision under Chapter 161, Section 43 is extended to include the authority on whose behalf the service is being provided. Regardless, it would be important for the sponsoring authority to have the appropriate insurance (or self-insurance) for any service or property over which they take control.

Program Development Capabilities

The Authority would need to establish the resources and support staff to develop, manage and oversee the service. The Authority would need the ability to administer large capital investment programs. Familiarity with federal capital grant programs and procedures would be essential. Legal support, accounting, bills payable, receivables, payroll, and human resources support are all functions that would need to be established. Assuming the Authority is a new, stand-alone entity, the listed functional capabilities would be required internally.

Funding/Financing Strategy

There are four general cost areas that require the development of a funding strategy to establish an intercity passenger rail service. Funding is required for planning/design, capital investment, operating/maintenance, and capital renewal.

- Planning/Design funding is needed to support the development of planning studies and to conduct engineering and design for any infrastructure upgrades or construction that is needed during the design phase of a new or expanded service.
- Capital Investment funding is needed to support the construction of fixed infrastructure facilities that could include right-of-way, track and signal improvements, purchase of trainsets, and/or the construction or upgrade of new stations and maintenance facilities. Initial capital investments typically are the largest initial cost but are typically only required to initiate or improve service.
- Operations and Maintenance funding is required annually to support the operation of the trains by Amtrak as well as regularly scheduled track system inspection and maintenance. Operations and maintenance costs also include items such as property lease payments, marketing and advertising, service oversight, and insurance,
- Capital Renewal funding is necessary to ensure that all of the equipment and facilities needed for the service are in a state of good repair. Separate capital renewal funding is often needed in addition to the operations and maintenance funding to support long-term capital improvements, such as bridge rehabilitation and locomotive overhauls.

The Authority would need to identify financial resources to address each area of needed program funding. In the short period of time between the completion of the East-West Passenger Rail Study and the drafting of this white paper, there have been significant changes in the outlook for federal intercity passenger rail funding. At this point, it is not clear what the level of available funding would be or what the

requirements would be to access the available funding. However, it is likely that some level of funding would need to be secured by the authority in each of the categories listed above to successfully implement East-West Intercity Passenger Rail Service.

The East-West Passenger Rail Study Final Report identified the following costs for the program:

- **Planning/Design/Engineering/Contingency Costs:** the estimates for engineering and contingency costs for the alternatives under consideration range from \$611 million to \$1,191 billion.
- **Rolling Stock Costs:** the estimates for rolling stock (coaches and locomotives) for the alternatives under consideration range from \$132 million to \$156 million.
- **Right-of-Way Costs:** the estimates for land acquisition for the alternatives under consideration range from \$17 million to \$42 million.
- **Construction Costs:** the estimates construction for the alternatives under consideration range from \$1.65 billion to \$3.2 billion
- **Operating/Maintenance Costs:** the estimated annual operating costs for the alternatives under consideration range from \$27.9 million to about \$34 million.
- **Capital Renewal Costs:** the study did not identify a budget for capital renewal as the specific budget would need to be based on a more detailed definition of the assets the authority would be responsible for when capital improvements are necessary.

Most of the states that support Amtrak service rely on annual appropriations from the state legislatures to meet the state-support requirements for continued intercity rail service. However there a few states that have considered alternative or supplemental sources to provide dedicated revenue for their intercity rail program.

- The Commonwealth of Virginia increased the state sales tax by 0.3%, of which 0.125% is allocated to its Intercity Passenger Rail Operating and Capital Fund. This sales tax revenue increased rail funding by 86% over previous funding sources.
- Oregon dedicates revenue from an additional assessment to the personalized license plate fee. Oregon also provides funding for intercity passenger rail through gas tax revenues not dedicated to other uses.
- California dedicates revenues for intercity passenger rail operations from its Public Transportation Account. The Public Transportation Account is funded from taxes on diesel fuel, gasoline, and a sales tax on a portion of the gasoline excise tax.
- Pennsylvania allocates a portion of its Public Transportation Trust Fund to fund intercity rail service. The Public Transportation Trust Fund is sourced from a share of sales taxes and PA Turnpike revenues. The trust fund is

used to support local transit service and transportation programs of statewide significance, which includes intercity passenger rail.

Construction Procurement & Oversight

The authority would be responsible for managing construction contracts related to the intercity rail facilities. This would include managing engineering studies, procuring and managing construction contracts, identifying construction and contracting issues, and coordinating public stakeholder outreach during the construction period.

It would be necessary for the authority to have the capacity to oversee and manage multiple engineering and construction efforts at once. This would require a core of rail operations and engineering professionals to take the role of project manager on a range of efforts. For design/engineering efforts, Amtrak may provide the unique railroad operations expertise, but utilizing consulting engineers would likely also be necessary, especially when it comes to procurement and management of multimillion-dollar construction projects. Construction along active railroad rights of way requires significant cooperation with the operating railroad, and often the operating railroad requires that all work must be constructed by railroad labor instead of using independently procured contractors.

In any case, whether the work is done by Amtrak, the operating railroad (CSX), consulting engineer or independent contractor, it is important for the authority to have the in-house capabilities to procure, manage and oversee the necessary work.

Operational Responsibilities

Service Oversight

Contracting with Amtrak for service operation provides some significant advantages, but would still require active oversight to ensure the service meets the needs of Western Massachusetts. In addition to Amtrak's access rights, utilizing Amtrak as the service provider has other benefits. Amtrak brings national expertise in the planning and operation of intercity passenger rail service. It also has a nationwide information and reservation system and an online ticket purchasing system. However, some agencies have had issues with Amtrak's limited flexibility concerning certain operating procedures and cost allocations.

Although Amtrak would operate the service, it would be important for the authority to provide service oversight to ensure that cost allocations are appropriate and that service standards are being met. In addition, it may be more appropriate for local control to remain over specific aspects of the service, such as marketing and provisioning any onboard food service that may be offered with the service. Other attributes of the service often require regular and consistent coordination with Amtrak, such as service changes, service delay notifications, emergency services, fares discounts/sales, and service policy or cost allocation changes. Long-term service changes and policies related to fares/revenues and passenger amenities would also need to be managed. In addition, certain other services would likely be the direct responsibility of the authority, such as snow clearing, station maintenance, and parking,

It would be important that the authority has the staffing capabilities and capacity to provide the oversight of daily operating issues as well as long-term operating plans/policies.

Oversight of Maintenance and Capital Renewal

When there are service interruptions and delays, it is often driven by issues related to the right of way or equipment maintenance. Although daily maintenance activities themselves are rarely the responsibility of an intercity rail service sponsor, it is important for the service sponsor to be involved in the planning, scheduling, and scheduling of any maintenance activities that are more substantive. Major maintenance projects, such as tie replacement projects, often impact the passenger rail service and therefore should be planned accordingly. In addition, capital renewal projects, such as bridge rehabilitation, can also be the financial responsibility of the service sponsor.

It would be important that the authority have the staffing capabilities and capacity to monitor and oversee major maintenance activities and capital renewal projects.