



#### EAST-WEST PASSENGER RAIL STUDY

#### Public Meeting #1 – Springfield, MA March 12, 2019

## Meeting Agenda

- Presentation
  - Meeting Objectives
  - Study Overview
  - East-West Corridor Context
  - East-West Corridor Alternatives
  - Next Steps
- General Q/A
- Open House





# Meeting Objectives

#### Inform

Describe how market demand and physical constraints influence the potential approaches to providing rail service

Review the range of options available for providing rail service

#### Learn

What are your priorities for a rail service on the East-West corridor?

What would you like to see in the service alternatives?





## Study Overview

**Purpose**: To conduct an evaluation of the benefits, costs, and impacts of a range of alternatives for rail service between Boston and Pittsfield





## Study Corridor



# Background

- Northern New England Intercity Rail Initiative (NNEIRI)
  - Constrained by existing ROW
  - Preferred plan: 9 round trips BOS-SPG
  - 80 mph maximum speed
  - 1:50 minute travel time for preferred alternative
  - \$550 million Springfield to Worcester Section (2014)
- State Rail Plan recommendation
  - Understand benefits and requirements for high speed rail and how that compares to NNEIRI and other alternatives
  - Unconstrained by existing ROW
  - Examine Boston to Pittsfield corridor





# East-West Corridor Context

Market Demand

- **Existing Rail Conditions**
- Challenges and Opportunities

### Market Demand

#### Market demand informs the level of rail service to provide.



#### Service Parameters

- Travel time
- Frequency
- Cost of fare
- Amenities (both on- board and at stations)
- Span of service
- Connections

#### **Demand Factors**

- Demographics (population, density, income)
  - Travel patterns (employment, other)
- Competitiveness of other modes
- Major destinations





### Market Demand – Demographics

Projected Population Change





### Market Demand – Travel Patterns

Vehicle Use Along the Corridor







### Market Demand – Competitiveness

Existing Travel Options Along the Corridor

Travel Mode	Provider	Performance
Automobile	Mass Pike I-90	<ul> <li>Traffic volume increased an avg. of 2% per year from 2008 to 2017</li> <li>Annual growth rates are higher than forecast in 2012 (0.5%)</li> <li>Significant travel time ranges at different portions of the corridor</li> </ul>
Commuter Rail	MBTA Worcester/ Framingham Line	<ul> <li>Number of trains increased from 46 one-way trains in 2014 &amp; 2015 to 54 one-way trains in 2018 (26%)</li> </ul>
Intercity Rail	Amtrak Lake Shore Limited	<ul> <li>One round trip per day Boston to Chicago</li> <li>On time performance is poor – single track in western MA a constraint</li> </ul>
Intercity Bus	Greyhound and Peter Pan	<ul> <li>4 Greyhound weekday roundtrips and 6 Peter Pan weekday roundtrips between Boston and Springfield</li> <li>2 Peter Pan trips between Springfield and Pittsfield</li> <li>No change in weekday service frequency since 2012</li> </ul>

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## Existing Rail Conditions

# Physical and operating conditions inform capital investments needed for improved rail service.



Source: NNEIRI

#### Physical Constraints

- Curves
- Terrain (grades)
- Track maintenance standards (track class)
- Track condition
- Train control
- Station stops
- Vehicle type
- Number of tracks
- Terminal capacity

#### Operations

- MBTA service
- CSX freight service





### Existing Conditions – Physical Constraints

Existing Maximum Passenger Rail Speeds



## Existing Conditions – Operations

Freight Issues and Constraints

- Boston Albany rail line is owned by CSX from Worcester to New York
  - Accommodating both passenger rail and freight rail on a single corridor is challenging
  - While Amtrak has the right to provide passenger service on freight-owned lines, the host railroad has the right to set the terms for an operating agreement



Recent right-of-way upgrades and an expansion of the intermodal facility in Worcester has increased capacity and efficiency of this primary freight corridor in New England.



#### Capital Investments to Address Constraints

- Straightening curves
- Upgrading tracks
- Adding tracks
- Expanding right-of-way (ROW)
- Expanding station capacity
- Expanding terminal capacity
- Utilizing an alternate ROW







# East-West Corridor Alternatives

Service Goals

Alternative Analysis Process

Typology of Potential Service Alternatives

## Goals for Service Alternatives

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

#### KEY CONSIDERATIONS

- Impacts to freight
- Environmental and community impacts
- Cost





## Alternatives Analysis Process





#### Typology of Potential Alternatives Benefits and Drawbacks

#### Shared Corridor without ROW Changes

- Easiest to implement and most cost effective
- Longest travel time

#### • Shared Corridor with Selected ROW Changes

- Enables faster travel times
- Requires ROW purchases and significant investment/service interruptions during construction

#### Separated Corridor

- Enables fastest travel times and does not affect current usage
- Requires very significant ROW purchases and capital investments



# Typology of Potential Alternatives

#### Summary of Initial Approaches

Corridor Type	Alternative	Travel Time Range BOS – SPG (Hr:Mn)	Travel Time Range BOS – PIT (Hr:Mn)	Max Speed Range (mph)	Frequency Range (Round Trips)	Stations
Shared Rail Corridor (Existing Right-of-Way (ROW))	No Build (Existing Amtrak)	2:28	3:44	60	1	Pittsfield, Springfield, Worcester, Framingham, Back Bay, Boston
Shared Rail Corridor (Existing Right-of-Way (ROW))	Existing Track	2:10 - 2:30	3:20 – 3:45	60 – 80	2 – 10	Local or Express
Shared Rail Corridor (Existing Right-of-Way (ROW))	Upgraded Track	1:55 – 2:10	3:00 – 3:20	60 - 80	2 – 10	Local or Express
Shared Rail Corridor (Existing Right-of-Way (ROW))	Upgraded Track + Bus (Hybrid)	1:55 – 2:10	3:00 – 3:20	60 - 80	4 – 20	Local or Express
Shared with Improvements (Expanded ROW)	Expanded ROW and Upgraded Track	1:30 – 1:45	2:20 – 2:45	80 – 110	6 – 20	Local or Express
Separate Corridor (I-90)	Bus Rapid Transit	1:50 – 2:10	2:45 – 3:20	60 – 65	20 – 40	Express
Separate Corridor (I-90)	High Speed Rail	0:55 – 1:05	1:20 – 1:40	110 – 150	20 – 40	Express
Separate Corridor (I-90)	Maglev	0:50 - 1:00	1:15 – 1:30	125 – 175	20 – 40	Express



All Time, Speed, Frequency, and Station Stops are approximate, pending detailed analysis





### Separate Corridor

Difference in Curvatures between Existing Rail and Highway



 The I-90 corridor has significantly fewer curves than the existing rail corridor, though the grades are steeper

# Next Steps

**Initial Alternatives Analysis** 

Future Engagement

**Open House Stations** 

## Initial Alternatives Analysis

- Confirm characteristics for alternatives
  - Alignment for rail corridor (existing corridor, separate corridor)
  - Potential stations
  - Achievable travel times
- Solicit feedback from Study Advisory Committee
- Analyze six alternatives
  - Determine travel times
  - Project ridership
  - Identify necessary investments
  - Understand potential benefits/impacts (social, economic, environmental)





## Future Engagement







## **Open House Stations**

- About the study
- Demand for rail service
- Interactive activity:
  - How would you use rail service? What are your priorities?
- Existing physical and operational conditions
- Preliminary set of alternatives
- Case studies
- Comment box







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### **Existing Conditions – Travel Times**

Key Constraints Along the Corridor

**WEST** 



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