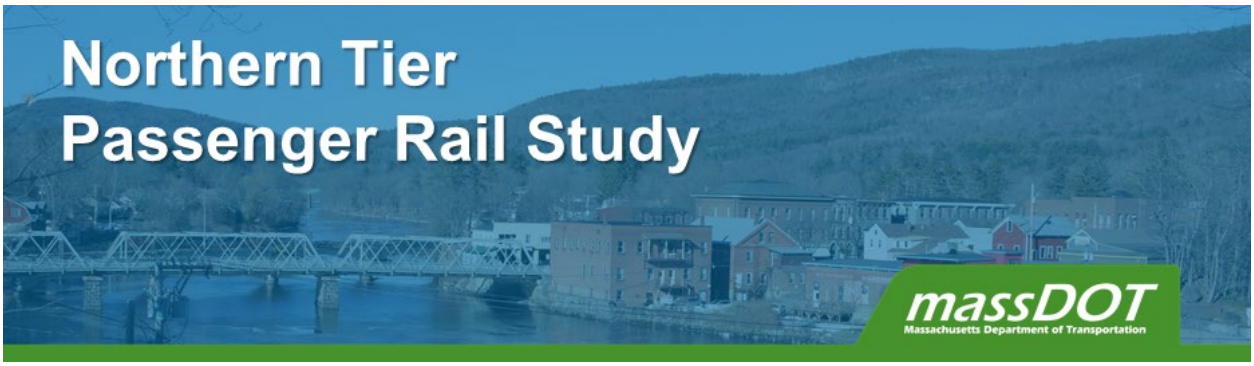

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Alternatives Development and Analysis Process

The next step in the Northern Tier Passenger Rail Study process involves the development of potential service plans (also known as "alternatives") for passenger rail service along the North Adams-Greenfield-Boston corridor.

The alternatives development process will take a two-phase approach. In Phase 1, the team will develop two alternatives to show the type of service schedules that could be achieved through a lower investment level and a higher investment level. A half-day public workshop will be held in early fall 2022 to review the two initial service plan alternatives and evaluation framework. Feedback received will be used to develop four additional service plan alternatives as part of Phase 2.

Workshop Preview

The workshop will involve three modules:

- Module 1 will walk participants through the development of two passenger service alternatives, providing insight into how rail conditions impact passenger operations and how these operations are modeled using software to determine travel times between stations.

- Module 2 will outline how the resulting rail operations are evaluated against the Study goals, objectives, and other evaluation criteria (e.g., ridership estimates and cost estimates for capital improvements, and operations and maintenance expenses).

- Module 3 will begin reviewing options for developing the four additional alternatives for the Study. This module will also include a discussion on trade-offs and how they should be prioritized for the service alternatives.

Please use this link to sign up for Study updates. Information about how to register for and attend the workshop will be made available on the Study website once the event has been scheduled.

Rail Modeling 101

Rail infrastructure has a long lifespan, so it is important to effectively plan these assets when making decisions about what to build. To do so, railroads and transportation agencies often use computer simulations. Computer simulations enable the quick and low-cost evaluation of multiple infrastructure and operational or service alternatives. For North America's major railroads and regulatory agencies, the Rail Traffic Controller (RTC) simulation tool is used for capital planning and to evaluate railroad operations and capacity.

A simulation uses a digital representation of an existing or proposed rail system. The modeler will create a model with detailed inputs about track designs, trains, and their schedules. These track inputs include the grade, curvature, speeds, signals, and junctions or interlockings. The train inputs include the physical characteristics of each train, such as length, weight and locomotive type along with their schedules.

Using these inputs, the RTC software will try to "dispatch" the trains through the network according to the schedules that the railroad is trying to test. A conflict results when two trains want to be at the same place at the same time. The dispatch logic in RTC will attempt to resolve a conflict by delaying or rerouting a train.

Once RTC has resolved all conflicts and the simulation has run to completion, the model produces detailed outputs on the systems performance. These include train performance (speed vs. distance) and trip times for each train. The outputs can be compared between alternatives to evaluate the benefit of the proposed infrastructure or operational change.

For the Northern Tier Passenger Rail Study, the RTC model will be used to evaluate the potential service alternatives between North Adams and Boston.

The Massachusetts Department of Transportation (MassDOT) is conducting a study to examine the benefits, costs, and investments necessary to implement passenger rail service from North Adams to Greenfield and Boston, with the speed, frequency, and reliability necessary to be a competitive option for travel along this corridor. Please visit the Study website for more information on the project: https://www.mass.gov/northern-tier-passenger-rail-study.

If information is needed in another language, please contact the MassDOT Title VI Specialist by phone at (857) 368-8580.
Caso esta informação seja necessária em outro idioma, favor contar o Especialista em Título VI do MassDOT pelo fone 857-368-8580.
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