

Getting Back on Track

Unlocking the Full Potential
of the New Haven Line

January 2014



Executive Summary

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America's busiest rail line is in trouble. The New Haven Line is a 60-mile stretch of track that carries commuters between New York City and Connecticut, and long-distance travelers throughout the Northeast. The line suffered two major outages in 2013, including a collision that injured 76 people and an electrical outage that shut down service on the line for more than two weeks. Delays and service disruptions due to aging infrastructure and critical repair work occur regularly, slowing travel for the line's 125,000 daily passengers.

At the root of these incidents is old age. The line's infrastructure has been allowed to deteriorate. The line's owners, the states of Connecticut and New York, have made commendable progress improving the rail infrastructure they inherited in poor physical condition and under major funding constraints. But the funding shortfalls have forced both owners to defer long overdue capital investment needed for repairs and upgrades that are vital to protecting the line's passengers. For example, the four movable bridges in Connecticut, all well beyond their replacement age, get stuck open several times a week, frequently delaying train traffic and causing ripple effects up and down the line.

At the current pace of investment of less than \$200 million per year, it will take 20 more years to rebuild the New Haven Line's aging structures and systems to achieve a state of good repair. In other words, for 20 more years passengers will be suffering through longer trip times and delays caused by the continuous track outages required to accommodate the reconstruction of critical components of the New Haven Line and by unexpected shutdowns in service. The nation's busiest rail line in the nation's most productive region cannot wait that long to return to full capacity.

At the current pace of investment of less than \$200 million per year, **it will take 20 more years** to rebuild aging structures on the New Haven Line.

The New Haven Line plays a vital role in supporting the nearly \$3 trillion economy of the Northeast Megaregion. For over 160 years the line has been an essential commuter rail link between Manhattan, America's predominant economic powerhouse; the northern suburbs of New York City; and the cities of southwestern and south central Connecticut. The New Haven Line is also a vital intercity connection on the Northeast Corridor linking Boston, New York, and Washington, D.C.

Getting Back on Track documents the key issues affecting the New Haven Line and outlines the critical capital investments needed for it to function once again as a reliable, four-track railroad. The State of Connecticut has budgeted nearly \$1 billion for the line in its current 2013-2017 five-year capital plan. An analysis by Regional Plan Association found that an additional \$3.6 billion is needed by 2020 to repair or replace aging and obsolete infrastructure. This will improve the long-term strength and reliability of the rail line, enabling it to continue fostering greater ridership, which generates other indirect benefits.

The New Haven Line needs an additional **\$3.6 billion through 2020** to rebuild its aging and obsolete infrastructure.

The emergency actions recommended in this report would help prevent future service disruptions and lay the groundwork for a long-term capital investment program that would improve the speed, frequency, reliability, connectivity and safety of New Haven Line rail service. The report also includes a set of policy recommendations that would speed the implementation of the projects and unlock federal funding to help pay for them, and identifies the line's top investment priorities beyond 2020.

RPA's New Haven Line Plan

Emergency Action Plan

This emergency action plan addresses the New Haven Line's most immediate, mission-critical infrastructure needs over the next seven years. It identifies a funding gap for these projects totaling \$3.6 billion beyond the amount that is already budgeted by the State of Connecticut, the majority owner of the New Haven Line's infrastructure. The plan's biggest engineering and funding challenge is the rehabilitation or wholesale replacement of the five movable bridges that are all more than 100 years old and together will cost over \$2.8 billion.

This emergency action plan will get the New Haven Line back on track toward achieving full, four-track operations and a state of good repair. It also builds the foundation for expanding the line's overall capacity to increase ridership through faster and more frequent rail service. The additional service would require more track outages in the short term than are currently planned, but will get the line back to its full capacity sooner and reduce the long-term impacts to passengers.

RPA's Emergency Action Plan Recommended Investments*	Funding Gap**
Power system replacement and repairs by 2015. Coordinate with track, fixed bridge, and signal replacement, and station repair work.	\$30 million
Fixed bridge replacement through 2020. Coordinate with track, power, and signal replacement, and station repair work.	\$35 million
Track and interlocking repairs through 2020. Coordinate with power, fixed bridge, and signal replacement, and station repair work.	\$40 million
Station and high-level platform repairs through 2020. Coordinate with track, power, fixed bridge, and signal replacement work.	\$85 million
Signal and communication systems replacement through 2020, and install PTC by 2015. Coordinate with track, power, and fixed bridge replacement, and station repair work.	\$300 million
New Haven Rail Yard expansion and modernization. Complete all three tiers of the Facilities Improvements Program by 2020.	\$330 million
Movable bridges —replace or rehabilitate the Walk and Saga Bridges by 2018, and the Devon, Cos Cob, and Pelham Bay Bridges by 2020.	\$2.8 billion
TOTAL	\$3.6 billion

*More detail on pages 29-30.

**Order of magnitude cost, beyond what is already budgeted.

The returns on this investment will be:

- ▶ Greater **capacity** for more and better rail service by expediting construction projects that take tracks out of service;
- ▶ Higher **reliability** on a day-to-day and long-term basis by replacing the signal system and unreliable infrastructure;
- ▶ Improved **safety** for rail passengers and train crews by replacing aging infrastructure that is at risk of failure;
- ▶ Stronger **ridership** due to the improved service, which generates financial, environmental, and public health benefits;
- ▶ Greater **economic development** through improved access to employment and housing options;
- ▶ More sustainable **transit-oriented development** around existing, where appropriate, new train station; and
- ▶ **Cost savings** due to reduced maintenance of deteriorating, unreliable structures and systems.

Longer-Term Investment Priorities

Achieve and maintain a state of good repair: The New Haven Line was built more than 160 years ago, yet some of the original infrastructure is still in use today. Restoring the line to prime physical condition within a decade will require a significant upfront investment by the public sector and a commitment to fully funding normal replacement and routine maintenance on a continuing basis. This will result in significant long-term reliability and safety benefits.

Metro-North Penn Station Access: Grand Central Terminal is quickly running out of capacity on its tracks and platform to accommodate increased service. Routing some Metro-North trains into New York's Pennsylvania Station would give it the ability to increase service to Manhattan and allow New Haven Line passengers to more quickly reach destinations on Manhattan's rapidly expanding West Side.

Reduce travel times: The fastest trip time on a Metro-North train between Grand Central Terminal and New Haven Union Station is currently one hour and 45 minutes. The emergency action plan in this report would lay the foundation for significant trip-time improvements. Other strategic investments that expand capacity for more and faster express service could allow Metro-North to reduce trip times to one hour and 15 minutes or less. Construction of a true high-speed rail line would reduce trip times to less than 45 minutes.

Support economic development: The New Haven Line serves many communities in Connecticut and New York that have a significant amount of potential for more transit-oriented development, as documented in the recent RPA study, *Halfway There: How to Create Land Use Policy That Makes the Most of Connecticut's Transit Network*. One goal of future investments should be to support sustainable economic development around existing stations and, where appropriate, build new stations.

Recommendations for Implementation

Expedite the project delivery process: At its current pace, Metro-North faces 20 more years of continuous track outages on the New Haven Line to replace its aging structures and systems. Expediting construction would require more track outages and service reductions in the short term, but would get the line back to its full, four-track capacity sooner, and result in fewer delays, track outages, and service reductions in the long run.

Create a Northeast Regional Rail Authority: The Northeast Corridor's current institutional framework is fractured and unbalanced. A new corridor-wide governance and project delivery entity with equal representation from Northeast states and Amtrak, and adequate staffing, resources, and authorities to deliver major, long-term rail projects would balance the needs of intercity and commuter rail and be able to attract more private investment in the long run.

Invest federal and regional funds: Given the New Haven Line's vital importance to the Northeast Megaregion, America's most powerful economic engine, the federal government has a national responsibility to fund a significant portion of its critical infrastructure projects. The emergency action projects will need to be paid for with federal grants and loans that leverage existing state and local funds, and new regional revenue generated and collected from the Northeast states.



Regional Plan Association

Regional Plan Association is America's oldest and most distinguished independent urban research and advocacy group. RPA works to improve the economic competitiveness, infrastructure, sustainability and quality of life of the New York-New Jersey-Connecticut metropolitan region. A cornerstone of our work is the development of long-range plans and policies to guide the growth of the region. Through our America 2050 program, RPA also provides leadership in the Northeast and across the U.S. on a broad range of transportation and economic-development issues. For more information visit, www.rpa.org.

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