



No Action Alternative Report

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1. Introduction

NEC FUTURE is a comprehensive planning study being led by the Federal Railroad Administration (FRA) to define, evaluate, and prioritize future investments in the Northeast Corridor (NEC). The NEC is defined as the existing rail transportation spine of the Northeast region, which is anchored by Washington Union Station in the south, Penn Station New York in the center, and Boston South Station in the north. As the rail transportation spine of the Northeast region, the NEC is a key component of the region's transportation system and is vital to its economy. As part of NEC FUTURE, the FRA is preparing a Tier 1 Environmental Impact Statement (EIS) to assess the potential effects of the Tier 1 EIS Action Alternatives (Action Alternatives) on the built and natural environment.

This report describes the No Action Alternative for the Tier 1 EIS. The National Environmental Policy Act (NEPA) requires that the lead federal agency define a No Action Alternative, or the conditions that will exist in an analysis year if a proposed action is not implemented. Under NEPA, the No Action Alternative is sometimes referred to as the No Build condition. For the Tier 1 EIS, the FRA has defined the No Action Alternative as the condition of the Northeast region's multi-modal transportation system in 2040. The FRA will use the No Action Alternative as a baseline against which the FRA will compare the effects of each of the Action Alternatives.

For this Tier 1 EIS, the No Action Alternative is not a "do nothing" alternative. Instead, it assumes that sufficient capital investment is available to keep the NEC's systems and infrastructure functioning properly to support existing services levels. However, if continued capital investments are not implemented the NEC's reliability, capacity, and services levels would decline. Forecasting the implications of insufficient funding on the performance of the eight commuter railroads and Amtrak would be difficult and would be somewhat subjective. This is due to the uncertainty of what improvements might or might not be funded and what their performance implications might be. Therefore, the FRA decided to evaluate a No Action Alternative separate from the discussion of historic or future funding trends and to qualitatively discuss the implications of insufficient funding (see Section 3.2, Disinvestment Scenario).

Transportation projects included in the No Action Alternative generally fall into one of the following three categories: 1) funded projects or projects with approved funding plans (e.g., federal or state committed funding); 2) funded or unfunded mandates; and 3) unfunded projects necessary to keep the railroad running. Although the No Action Alternative identifies the magnitude and type of work required to keep the NEC operating, it does not assign responsibility for specific projects with regard to funding or implementation.

The No Action Alternative in the Tier 1 EIS represents a "snapshot in time." The FRA developed it using current information regarding which projects are funded. This approach avoids being speculative since there is uncertainty in economic conditions, available funding, and political support for transportation projects. As the development of the Tier 1 EIS progresses, assumptions regarding which projects are included as part of the No Action Alternative could be revised based upon available funding, urgency of needs, and changes or updates to the region's transportation plans. The No Action Alternative generally does not achieve a state of good repair nor does it result in additional capacity or changes in functionality of the NEC. However, there are exceptions (e.g., small capacity improvements resulting from projects such as the "Raceway Project" in New Jersey, which is underway).

2. NEC FUTURE Background

First established 150 years ago, the existing NEC is inadequate to meet the region’s current and future needs. By 2040, continued population and employment growth in the Northeast is expected to create increasing demand for travel options across the passenger transportation system—rail, air, highway, transit, and intercity bus. Yet today, the aging infrastructure and capacity limitations of the NEC already result in congestion and delays for daily commuters and for regional and intercity travelers. The functional obsolescence of critical infrastructure also affects the performance of daily operations, resulting in service disruptions. For example, every time the Portal Bridge fails to close, thousands of New York metro travelers are inconvenienced; beyond the New York metro area, the ripple effect of the resulting delays on the NEC are felt by travelers from Washington, D.C., to Boston, MA.

Forecast growth in population and employment in the Study Area¹ will put increasing pressures on this already constrained NEC rail network. As such, reliance on this aging and obsolete infrastructure and its inadequate performance inhibit the Study Area’s opportunities for realizing its full potential for economic growth. These trends—along with changes in technology, business practices, and lifestyles—will continue to influence future travel needs and opportunities for new types of service on the NEC and its connecting corridors.²

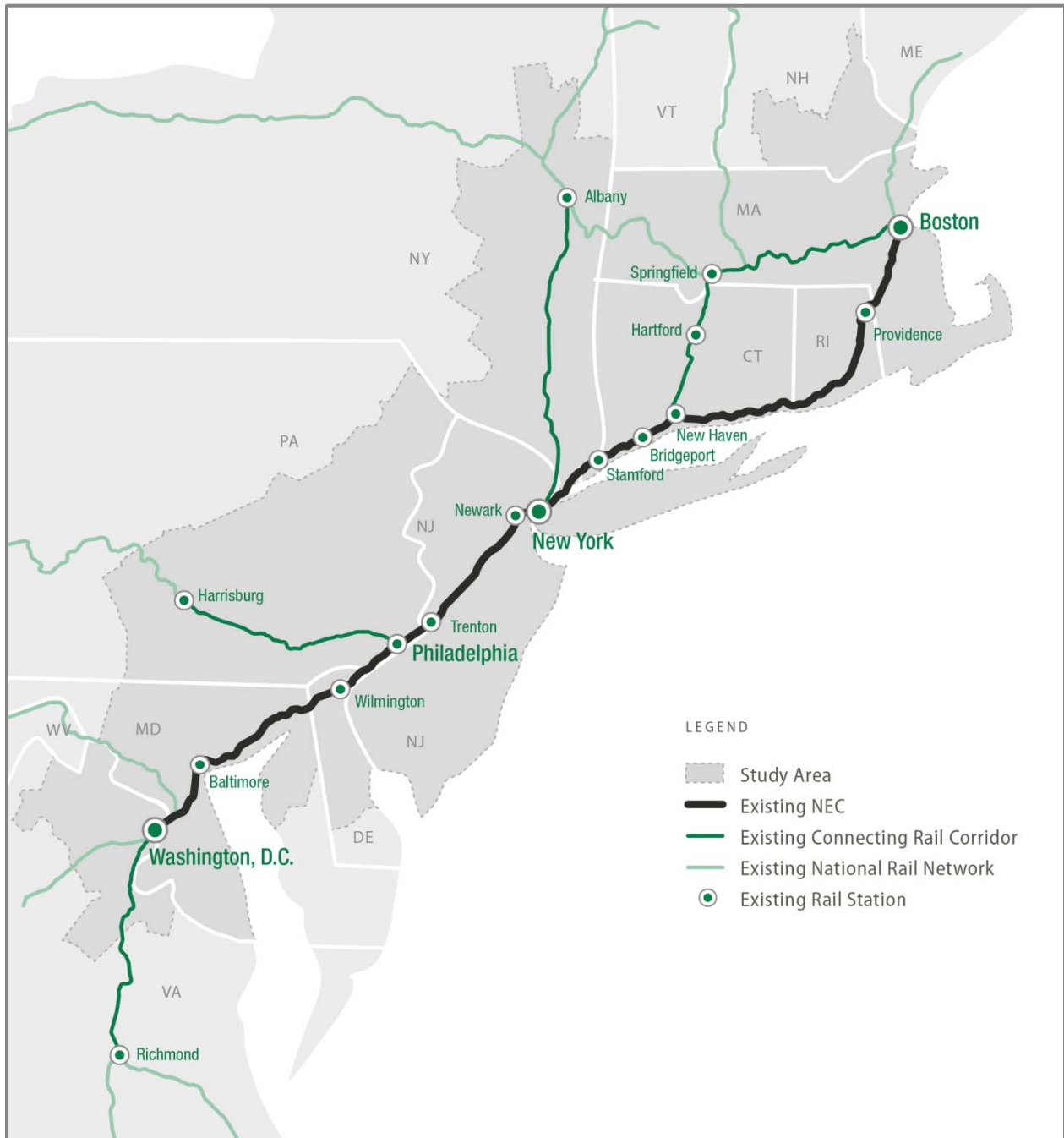
Capacity constraints at major hub stations along the NEC—from Washington Union Station to New York Penn Station to Boston South Station—further compromise the ability of the NEC to handle regional travel demands now and into the future. Additionally, these station capacity limitations, particularly in Washington, D.C., limit the opportunities to grow services on connecting corridors. With real capacity constraints, NEC service priorities will continue to focus on high volume services between Washington D.C. and Boston, MA, further limiting opportunities for service to markets to the north and south.

Through NEC FUTURE, the FRA is defining a long-term vision to improve passenger rail service on the NEC in a manner that will enhance mobility options and expand passenger rail service in support of future population and employment growth in the NEC FUTURE Study Area (Study Area). The Study Area extends from the Washington, D.C., metropolitan area to the Boston, MA, metropolitan area (Figure 1). The purpose of NEC FUTURE is to upgrade aging infrastructure and to improve the reliability, capacity, connectivity, performance, and resiliency of future passenger rail service on the NEC for both intercity and regional trips, while promoting environmental sustainability and economic growth.

¹ The Study Area includes a broad geographic area, stretching 457 miles from Washington, D.C., in the south to Boston, Massachusetts, in the north, and covering over 50,000 square miles.

² Connecting corridors are those travel corridors that connect directly to a station on the NEC. They include (1) corridor service south of Washington Union Station in Washington, D.C., to markets in Virginia and North Carolina, including Lynchburg, VA, Richmond, VA, Newport News, VA, Norfolk, VA, and Charlotte, NC; (2) Keystone corridor service, which connects to Philadelphia 30th Street Station; (3) Empire corridor service, which connects to Penn Station New York; and (4) New Haven-Hartford-Springfield service, which connects to New Haven Union Station.

Figure 1: NEC FUTURE Study Area



The FRA is preparing a Tier 1 EIS that will examine, at a broad programmatic level, environmental, socioeconomic, and transportation impacts of a range of Action Alternatives, each comprising a different long-term vision for the NEC. The Tier 1 EIS will compare the environmental impacts of the Action Alternatives against a No Action Alternative, assuming the full implementation and build out of each Action Alternative by 2040. Although the FRA selected 2040 as the analysis year for evaluating the alternatives in the Tier 1 EIS, the investments proposed in NEC FUTURE are likely to include infrastructure improvements

expected to last well beyond 2040 and into the next century. Therefore, the FRA is considering future needs of the NEC beyond 2040 in the alternatives development process.

The FRA will identify a Preferred Alternative in the Tier 1 Final EIS. Following the issuance of the Record of Decision (ROD), the FRA will prepare a Service Development Plan (SDP). The SDP will describe a phased implementation plan that details operational, network, and financial aspects of the Selected Alternative.

3. Approach to No Action Alternative

3.1 METHODOLOGY FOR SELECTING NO ACTION ALTERNATIVE PROJECTS

The No Action Alternative assumes completion of planned and programmed improvements to highway, freight rail, transit, air, and maritime modes by 2040. Interregional and regional travel demand is affected by the availability, price, and reliability of all transportation modes. Therefore, inclusion of improvements of these other modes is necessary to represent the reasonably foreseeable future transportation conditions in the Study Area. The No Action Alternative will serve as a baseline for the purpose of comparing the outcomes of the Action Alternatives on ridership, revenue, cost, and train operations.

The FRA selected the projects included as part of the No Action Alternative using current information compiled from federal, state, and regional transportation planning documents. As the development of the Tier 1 EIS progresses, the FRA may revise or revisit assumptions regarding the projects it includes in the No Action Alternative based upon levels of available funding, urgency of needs, and changes or updates to the region's transportation plans.

The FRA used the following categories in selecting projects to include for the No Action Alternative:

- ▶ Funded projects or projects with approved funding plans (e.g., federal or state committed funding)
- ▶ Funded or unfunded mandates
- ▶ Unfunded projects necessary to keep the railroad running

Beyond specific named projects, the No Action Alternative assumes that individual railroad operators will continue to maintain the NEC through their annual capital investment programs. It also assumes some additional level of investment, beyond currently expected funding levels, as required for normal replacement of track, signals and communications, structures, and electrical infrastructure as well as funded fleet replacement or expansion programs. This includes some—but only a modest proportion—of the significant backlog of work associated with bringing the NEC to a state of good repair.³

Appendix A contains the methodology for reviewing projects and developing the No Action Alternative.

³ State of good repair is a condition in which the existing physical assets, both individually and as a system, (a) are functioning as designed within their “useful lives,” and (b) are sustained through regular maintenance and replacement programs; state of good repair represents just one element of a comprehensive capital investment program that also addresses system capacity and performance. (U.S. Secretary of Transportation M.E. Peters, “State of Good Repair” on the Northeast Corridor [July 2008]).

3.2 DISINVESTMENT SCENARIO

The FRA assumes that funding through 2040 for No Action Alternative projects will be sufficient to maintain existing service levels along the NEC. However, the funding levels necessary to support this assumption exceed historical levels of capital funding from federal, state, and local sources made available to the owners/operators on the NEC. Historical funding levels have averaged approximately \$600 million per year over the last 10 years.⁴ It remains uncertain if sufficient funding will be provided to sustain the increasing level of investment necessary to support the No Action Alternative. If sufficient funding is not made available, the NEC's reliability, capacity, and service levels would continue to degrade with the possible following repercussions:

- ▶ Reliability would decline, resulting in more frequent and longer delays and reduced on-time performance of train service. This reduction in reliability would result from unscheduled delays, as well as “scheduled” delays required periodically (and randomly) to allow engineering crews to access the railroad to make remedial repairs.
- ▶ Scheduled trip times would increase as the deteriorating condition of NEC infrastructure—particularly rail, bridge, and subgrade—would require trains to operate slower on some portions of the railroad to ensure safety.
- ▶ Operating costs for infrastructure maintenance would rise in response to the need for more frequent maintenance and unscheduled and sometimes substantial repairs.
- ▶ Costs for train operations would increase as longer cycle times for equipment would require greater fleet sizes and more crew time and overtime.
- ▶ Ridership would decline in response to the reduced level and performance of passenger rail service, leading to declines in revenue and greater operating losses.

As mentioned in the introduction to this report, forecasting the implications of insufficient funding on the performance of the eight commuter railroads and Amtrak is subjective given the uncertainty of what improvements might be funded and what their performance implications might be. Therefore, the FRA has decided that to compare against the Action Alternatives, the No Action Alternative will assume sufficient funding to maintain current service levels. In this way, the FRA can separate the discussion of historic or future funding trends from the Action Alternatives' positive and negative impacts.

⁴ Northeast Corridor Infrastructure and Operations Advisory Commission. (2014). *Northeast Corridor Five-Year Capital Needs Assessment: Fiscal Years 2015 to 2019*.

4. No Action Alternative

The No Action Alternative, including transportation conditions and types of investment projects, is summarized below.

4.1 TRAIN SERVICE

The No Action Alternative represents an NEC that maintains today's service levels, which is defined as the number of trains per hour by operator⁵ and types of service. The No Action Alternative does not increase or significantly change capacity, speeds, or the markets served. Instead, it makes annual investments in the state-of-good-repair backlog that is necessary to maintain today's general service characteristics.

Given the growing population and economy of the Northeast region, operating the NEC at these current service levels in the year 2040 would mean more people riding the same number of trains, resulting in overcrowded trains and stations, a general worsening of train performance, and more people turning to other modes of transportation, thus reducing rail's share of total trips across the Study Area. In addition, maintaining the railroad to simply support today's level of service would require continued capital investments, such as those necessary to keep the NEC's structures and systems functioning properly; therefore, it is not a "do nothing" alternative, but rather what is necessary to maintain operations.

Within the Study Area, interregional travel includes trips that start and end in different metropolitan areas (e.g., New York City and Baltimore). Amtrak (the intercity rail operator) primarily serves these trips. Regional travel includes traditional commuter rail trips starting and ending in the same metropolitan areas, such as journey-to-work trips. One of the eight commuter rail operators on the NEC (e.g., NJ TRANSIT or Massachusetts Bay Transportation Authority [MBTA]) primarily serves these trips. Regional rail generally connects cities and towns within one state or on the border of two states (e.g., NJ TRANSIT service within New Jersey, which connects to New York City).

The FRA assumes the following for the No Action Alternative:

- ▶ Passenger rail service on the NEC would operate similarly to and at the same approximate level as today's service in the peak hours.
- ▶ Amtrak would provide the same types of intercity services, including Intercity Express (Acela), Intercity Corridor (regional),⁶ and connecting corridors (i.e., Springfield, Keystone, and Empire).
- ▶ The following eight commuter railroads operating on the NEC would continue to provide the same regional services: MBTA, ConnDOT, MTA-Metro-North Railroad, MTA-Long Island Rail Road (LIRR), NJ TRANSIT, SEPTA, MARC, and Virginia Railway Express (VRE).

As noted earlier, while the type of service would generally be operating with equipment similar to that used today, greater demand could affect overall performance.

⁵ Current operators on the NEC include interregional services operated by Amtrak and regional services operated by eight individual commuter railroads within the Study Area.

⁶ Amtrak's intercity corridor service is called "Regional Train Service" and should not be confused with the definition of regional rail or traditional commuter rail trips that start and end in the same metropolitan areas (e.g., SEPTA or MARC)

The No Action Alternative would serve the same stations and market areas along the NEC as are served today with one exception: East Side Access, a project currently under construction and thus part of the No Action Alternative, includes new MTA-LIRR service into Grand Central Terminal in New York City. No Action Alternative intercity service would be unchanged from existing intercity service. Table 1 identifies the existing NEC stations that would be served under the No Action Alternative.

Table 1: Existing NEC Stations (excluding Connecting Corridors) Served under the No Action Alternative

State	Total	NEC Stations (excluding connecting corridors)
Washington, D.C.	1	Washington Union Station
Maryland	12	New Carrollton, Seabrook, Bowie State, Odenton, BWI Airport, Halethorpe, West Baltimore, Baltimore Penn Station, Martin Airport, Edgewood, Aberdeen, Perryville
Delaware	4	Newark, DE, Churchman's Crossing, Wilmington Station, Claymont
Pennsylvania	25	Marcus Hook, Highland Ave, Chester, Eddystone, Crum Lynne, Ridley Park, Prospect Park, Norwood, Glenolden, Folcroft, Sharon Hill, Curtis Park, Darby, Philadelphia 30th St, North Philadelphia, Bridesburg, Wissinoming, Tacony, Holmesburg Junction, Torresdale, Cornwells Heights, Eddington, Croydon, Bristol, Levittown
New Jersey	15	Trenton, Hamilton, Princeton Junction, Jersey Avenue, New Brunswick, Edison, Metuchen, Metropark, Rahway, Linden, Elizabeth, North Elizabeth, Newark Airport, Newark Penn Station, Secaucus
New York	7	Penn Station New York, New Rochelle, Larchmont, Mamaroneck, Harrison, Rye, Port Chester
Connecticut	29	Greenwich, Cos Cob, Riverside, Old Greenwich, Stamford, Noroton Heights, Darien, Rowayton, South Norwalk, East Norwalk, Westport, Green's Farms, Southport, Fairfield, Fairfield Metro, Bridgeport, Stratford, Milford, West Haven, New Haven Union Station, New Haven State Street, Branford, Guilford, Madison, Clinton, Westbrook, Old Saybrook, New London, Mystic
Rhode Island	5	Westerly, Kingston, Wickford Junction, TF Green, Providence Station
Massachusetts	12	South Attleboro, Attleboro, Mansfield, Sharon, Canton Junction, Route 128, Readville, Hyde Park, Forest Hills, Ruggles, Back Bay, Boston South Station

Source: NEC FUTURE team, 2015

Table 2 describes the service under the No Action Alternative by type and levels of passenger rail service at selected screenlines along the NEC. Screenlines are lines across a particular geography along a rail right-of-way that serve as specific locations where the frequency and type of rail service are measured, evaluated, and compared as trains pass by the screenlines. They will be used to capture the volume of passenger rail traffic at key locations along the NEC, particularly where capacity or utilization might change. The volume of passenger rail traffic is expressed as trains per hour, by service type at the following points (i.e., screenlines) along the NEC: Washington, D.C., Philadelphia, PA, the Hudson River and East River in the New York metropolitan region, New Rochelle, NY, and Boston, MA. Each type of service is captured. The No Action Alternative service levels for the peak hour, in the peak direction⁷ are the same as existing (2012 for the purposes of this analysis) service levels as shown in Table 2.

⁷ "Peak hour refers to when demand for transportation services is greatest. Peak direction refers to the direction of travel within the peak hour. In the morning, the peak direction is often toward metropolitan centers. In the evening, the peak direction is often away from metropolitan centers. Transit Cooperative Research Program. (2003). *TCRP Report 100, Transit Capacity and Quality of Service Manual*. Washington, D.C.: Transportation Research Board.

Table 2: No Action Alternative – Peak-Hour Trains, Peak Direction (2040)

Screenline	Existing	No Action Alternative
Washington, D.C., Screenline <i>North of Washington at Anacostia River</i>		
Intercity Express	1	1
Intercity Corridor	1	1
Connecting Corridor*	Included above as part of Intercity Express and Intercity Corridor	Included above as part of Intercity Express and Intercity Corridor
Regional Rail	4	4
Philadelphia Screenline <i>Chester Pennsylvania</i>		
Intercity Express	1	1
Intercity Corridor	1	1
Connecting Corridor*	0	0
Regional Rail	3	3
Hudson River Screenline		
Intercity Express	1	1
Intercity Corridor	1	1
Connecting Corridor*	1	1
Regional Rail	21	21
East River Screenline		
Intercity Express	1	1
Intercity Corridor	1	1
Connecting Corridor*	2	2
Regional Rail**	36	36
New Rochelle Screenline <i>Between Shell Junction and New Rochelle Station</i>		
Intercity Express	1	1
Intercity Corridor	1	1
Connecting Corridor*	Included above as part of Intercity Express and Intercity Corridor	Included above as part of Intercity Express and Intercity Corridor
Regional Rail	21	21
Boston Screenline <i>South of Back Bay Station</i>		
Intercity Express	1	1
Intercity Corridor	1	1
Connecting Corridor*	0	0
Regional Rail	6	6

Source: NEC FUTURE team, 2015

* Connecting Corridors include Springfield, Empire, Keystone and Virginia Service south of Washington Union Station

** Only includes service to stations on the existing NEC; excludes new MTA-LIRR service to Grand Central Terminal with the East Side Access project.

4.2 NO ACTION ALTERNATIVE RAIL PROJECTS

As described in Section 3.1, the passenger rail projects included within the No Action Alternative fall generally within three categories: 1) funded projects or projects with approved funding plans (e.g., federal or state committed funding), 2) funded or unfunded mandates, and 3) unfunded projects necessary to keep the railroad running. Due to the geographic scale of the Study Area, only representative examples of types of No Action Alternative projects that fall under these categories are provided below. Appendix A contains the methodology for selecting projects that are included in the No Action Alternative. Appendix B includes a more detailed list of all No Action Alternative projects.

4.2.1 FUNDED PROJECTS OR PROJECTS WITH APPROVED FUNDING PLANS (CATEGORY 1)

These types of projects include normal replacement or routine maintenance at currently expected funding levels such as track, electrification, communications, and facility upgrades to keep the NEC operating. Also included in this category are projects that represent a one-time investment in new or replacement fleet or other projects to increase capacity, upgrade stations, and/or implement new technology.

Please see **Appendix B** for a complete list of projects.

4.2.2 FUNDED OR UNFUNDED MANDATES (CATEGORY 2)

Projects within this category typically include projects responsive to federal or state mandates such as Americans with Disabilities Act (ADA) station improvements and/or Positive Train Control (PTC).

Please see **Appendix B** for a complete list of projects.

4.2.3 UNFUNDED PROJECTS NECESSARY TO KEEP THE RAILROAD RUNNING (CATEGORY 3)

These projects typically include minor repairs as necessary to sustain operations, such as normal replacement of track, signals, communications, structures, stations, and electrical infrastructure through the capital programs of various railroads operating on the NEC. It assumes some additional level of investment, beyond currently expected funding levels. Also included in this category are fleet replacement projects and upgrades to existing infrastructure necessary to sustain existing service levels.

This category of projects includes the repairs of major bridges and tunnels to keep them maintained and in operating condition (e.g., Hudson River Tunnels and New Haven Line Bridges). The No Action Alternative does not include the full cost to replace or rehabilitate those structures if those larger efforts do not have project funding in place. These unfunded “Major Backlog” projects, while not included as part of the No Action Alternative, are included within the Tier 1 EIS as “Related Projects” since they may have received some funding for pre-construction activities (see Section 6 for more detail in how Related Projects will be considered). Examples of these include the Susquehanna River Bridge and Baltimore & Potomac Tunnel NEPA/PE projects (see Section 5).

It should be noted that continually repairing aging infrastructure would result in higher costs over time than actually rehabbing or replacing the structure. Repairs to the busy NEC are generally limited to weekends due to heavy train traffic during the week and therefore take longer and cost more than making repairs to an out-of-service railroad where service can be re-routed to a parallel or alternate route. In addition, continually repairing and maintaining the existing infrastructure without adding new capacity to support increased demand for additional service will result in reduced reliability.

Please see **Appendix B** for a complete list of projects.

4.3 COST OF THE NO ACTION ALTERNATIVE

The Tier 1 EIS will identify the capital cost of the No Action Alternative. The capital cost of the No Action Alternative is required to evaluate the incremental effects of the Action Alternatives. The capital cost estimate for the No Action Alternative assumes the estimated costs for projects in each of the three categories: funded projects, funded or unfunded mandates, and unfunded projects necessary to keep the railroad operating.

4.3.1 CATEGORY 1: FUNDED PROJECTS

Estimated capital costs for funded projects (see Appendix B) are based on estimates available from individual project sponsors. These capital costs reflect different assumptions—some are presented in current dollars, others are not. For the purpose of estimating an order-of-magnitude cost for the No Action Alternative, the FRA did not attempt to normalize these numbers.

4.3.2 CATEGORY 2: FUNDED AND UNFUNDED MANDATES

Estimated capital costs for funded and unfunded mandates are based on historic funding trends. The dominant contributing factor is the cost of implementing Positive Train Control (PTC) and compliance with the Americans with Disabilities Act.

4.3.3 CATEGORY 3: UNFUNDED PROJECTS NECESSARY TO KEEP THE RAILROAD OPERATING

Projects necessary to keep the railroad operating include regular ongoing capital maintenance and improvements to basic infrastructure, as well as critical repairs to major backlog projects that are currently unfunded. An estimate for critical repairs is included for those unfunded major backlog projects, such as Susquehanna River Bridge, B&P Tunnels, and the Connecticut River Movable Bridges (see Appendix B Category 3), to keep those assets operating in lieu of replacement or major rehabilitation.

The cost for unfunded annual, normal replacement is based on forecast needs as documented in the Northeast Corridor Commission’s Northeast Corridor Five-Year Capital Needs Assessment.⁸ Annualized expenditures to repair track, bridges and structures, systems (electric traction, communications, catenary, and signals), fleet replacement programs, and other investments necessary to maintain operations will be estimated to 2040. Similarly, the FRA will estimate the cost over the next 25 years for critical repairs to those major backlog projects currently unfunded, but in need of replacement.

5. Related Projects

There are several ongoing independent rail projects located within the Study Area that are not included in the No Action Alternative project list. Instead, these projects are referred to as “Related Projects” since they generally fall within one of the following three categories:

⁸ Northeast Corridor Infrastructure and Operations Advisory Commission, Northeast Corridor Five-Year Capital Plan, Fiscal Years 2016 – 2020, April 2015.

- ▶ Fully or partially funded projects located in a connecting corridor and not on the NEC
- ▶ Unfunded projects along the NEC with ongoing or completed NEPA/PE
- ▶ Fully or partially funded transit (e.g., NJ TRANSIT, MTA-LIRR) or freight projects located off of but connecting to the NEC

These Related Projects have independent utility and many are currently undergoing their own separate NEPA processes, such as the Southeast High Speed Rail Corridor – Washington, D.C., to Richmond, VA. Others are intended to address some of the NEC’s most pressing reliability, safety and capacity needs, such as Boston South Station expansion, Portal Bridge replacement, and the B&P Tunnel replacement. The full-scale rehabilitation and/or replacement of bridges and tunnels identified as Major Backlog assets (e.g., New Haven Line Bridges and Hudson River Tunnels), are also included in this category of Related Projects since their construction is currently unfunded.

Given the significance of some of these Related Projects, as well as their current stages of development, it is likely that the FRA may incorporate some of these projects or their components into an Action Alternative. However, because of the lengthy planning process associated with them, and the large scope of NEC FUTURE, the FRA is studying these Related Projects in separate but concurrent NEPA processes (e.g., B&P Tunnel Project). The FRA will continue to coordinate the technical analyses for each of these Related Projects with the NEC FUTURE analysis and will consider these reasonably foreseeable projects as part of the cumulative impact analysis in the NEC FUTURE Tier 1 EIS.

The FRA will continue to work with project sponsors to ensure that those projects remain compatible with and do not preclude the future design and construction of the NEC FUTURE No Action Alternative and Action Alternatives.

Similar to the development of the No Action Alternative, the FRA selected the projects included as part of the Related Projects through coordination with stakeholders and from current information compiled from federal, state, and regional transportation planning documents. As the development of the Tier 1 EIS progresses, the FRA will revise and update the projects it includes in the Related Projects list based upon levels of available funding, urgency of needs, and changes or updates to the region’s transportation plans.

Please see **Appendix C** for a complete list of Related Projects.

6. No Action Alternative Projects of Other Transportation Modes

In the No Action Alternative, the FRA assumes that the capacity of other transportation modes within the Study Area will grow as defined in federal, state and regional transportation planning documents that were reviewed to identify the list of No Action Alternative projects (**Appendix A**). A brief description of these other modes and examples of specific projects is provided below. Figure 2 identifies the existing transportation network in the Northeast.

6.1 TRANSIT PROJECTS

The No Action Alternative includes the existing transit systems such as bus or light rail that serve the Study Area as well as funded and programmed improvements based on financially constrained regional transportation plans (RTP) that were developed by regional transportation planning agencies. The improvements consist primarily of new transit services, rehabilitation of stations, and reconstruction of rail bridges. Specific examples of these types of projects include the Purple Line in Maryland and the Hartford-New Britain Busway. (See **Appendix B** for a complete list of projects.)

Figure 2: Transportation Network in the Northeast Region of the United States



6.2 HIGHWAY PROJECTS

The No Action Alternative includes the highway system that currently serves the Study Area. The No Action Alternative includes this existing highway system as well as funded and programmed improvements on the highway network based on financially constrained RTPs developed by regional transportation planning

agencies. Highway improvements included as part of the No Action Alternative include infrastructure projects, as well as intelligent transportation system and other potential system improvements programmed to be in operation by 2040. The No Action Alternative does not include major new highways. Improvements consist primarily of individual interchange improvements and roadway widening on limited segments of the highway network, as well as bridge rehabilitation or replacement projects. Specific examples of these types of projects include I-95 John F. Kennedy Memorial Highway – MD 24 Interchange Improvements, Scudder Falls Bridge (I-95) Reconstruction and Widening in Pennsylvania and New Jersey, and the Nassau County Incident Management System in New York. (See **Appendix B** for a complete list of projects.)

6.3 FREIGHT RAIL PROJECTS

The No Action Alternative includes the existing freight rail system that serves the Study Area as well as funded and programmed improvements based on financially constrained RTPs developed by regional transportation planning agencies. The improvements consist primarily of individual track improvements, rehabilitation of grade crossing and reconstruction of rail bridges. Specific examples of these types of projects include JD to Jones Hill Double Track Project in Maryland, Hunts Point Freight Rail Improvements Project in New York, and Fast Track New Bedford, Massachusetts. (See **Appendix B** for a complete list of projects.)

6.4 AVIATION PROJECTS

In the No Action Alternative, the FRA considered the 15 airports that provide commercial service in the Study Area. The No Action Alternative includes funded and programmed improvements identified in state aviation capital planning documents and airport authority capital programs. The No Action Alternative includes no new airports. The aviation-related improvements consist primarily of terminal modernization and expansion projects as well as new runway or existing runway extension projects. Specific examples of these types of projects include Dulles International Airport Terminal Expansion and Fifth Runway in Washington, D.C.; LaGuardia Airport Central Terminal B Modernization in New York City; and Bradley International Airport Terminal Expansion in Connecticut. (See **Appendix B** for a complete list of projects.)

6.5 MARITIME PROJECTS

In the No Action Alternative, the FRA evaluated maritime projects consisting of six major ports within the Study Area. The No Action Alternative includes funded and programmed improvements identified in port planning documents and port authority capital programs. The port-related improvements consist primarily of access improvements and terminal rehabilitation and construction projects. Specific examples of these types of projects include Dundalk Marine Terminal Rehabilitation in Baltimore, MD, South Philadelphia Port Relocation and Conley Terminal Access Road in Philadelphia, PA. (See **Appendix B** for a complete list of projects.)

7. Approach to Analyzing the No Action Alternative in the Tier 1 EIS

The No Action Alternative incorporates programmatic improvements such as track and signal upgrades within the existing NEC right-of-way. It also includes bridge and station rehabilitation or expansion projects that may extend beyond the existing right-of-way. Each of the Action Alternatives includes the improvements that would be undertaken as part of the No Action Alternative.

There are two aspects to the analysis of these improvements in the Tier 1 EIS: service related and “footprint” related.

For service-related analysis, such as ridership, the FRA will generate quantitative data for the No Action Alternative and use the data to compare and evaluate against the Action Alternatives. The No Action Alternative service data are based on existing and planned rail-related improvements between Washington, D.C., and Boston, MA, for the Tier 1 EIS analysis year 2040. It incorporates data collected from commuter railroads, Amtrak, state departments of transportation, and freight operators. The service data include quantifiable timetable-related data such as scheduled trains by time of day, stopping patterns and travel times as well as equipment types. These data establish a baseline of service for comparison with and evaluation of the Action Alternatives.

“Footprint” related analyses for resources such as land cover, parklands, and wetlands are based on a Representative Route, which is defined as the vertical and horizontal alignment for each of the alternatives. The Representative Routes of the Action Alternatives incorporate the footprint of the existing NEC. Many, but not all, of the projects included in the No Action Alternative would likely occur within the limits of the existing NEC right-of-way. However, given the uncertainty of scope or timing for projects included in the No Action Alternative, it is impractical to calculate footprint-related effects associated with those projects. Therefore, for purposes of this Tier 1 EIS, the No Action Alternative will not include the quantification of footprint effects.

The FRA will provide a qualitative discussion of potential footprint effects of the No Action Alternative for resources such as land cover, parklands, and wetlands. This approach is consistent with:

- ▶ The programmatic level of detail across both the No Action Alternative and Action Alternatives, and thus, avoiding the need to distinguish footprint-related effects of the No Action Alternative from those of the Action Alternatives.
- ▶ NEPA practice, particularly where the projects included as part of the No Action Alternative are an integral component of proposed Action Alternatives (for example, this approach was used on the Maryland MTA’s Purple Line project’s Final EIS, August 2013).

The FRA will evaluate the effects of changes in service proposed as part of the Action Alternatives and compare the effects of the proposed service levels in the Action Alternatives to the proposed service for the No Action Alternative. The Tier 1 EIS will quantify and provide these service-related effects assessments.

The FRA will use the qualitative assessment of the No Action Alternative to understand and assess the Action Alternatives' potential contributions to cumulative effects on resources identified. The cumulative effects analysis will also include effects of those separate but related major projects (listed in Appendix C and discussed in Section 5) that are currently underway and not included in the No Action Alternative.

APPENDIX A
NO ACTION ALTERNATIVE METHODOLOGY

1. Introduction

The No Action Alternative, as required under the National Environmental Policy Act (NEPA), provides a basis for comparing and contrasting the impacts of the Tier 1 Environmental Impact Statement (EIS) Action Alternatives (Action Alternatives) with those that would result if future investments were not made. For NEC FUTURE, the No Action Alternative defines the infrastructure and projected service levels that would result from expected investments in the NEC by 2040 in the absence of improvements resulting from implementation of the Action Alternatives being considered.

Developing a No Action Alternative for the NEC FUTURE presents several challenges. There is uncertainty in economic conditions, available funding, and political support for transportation projects among all modes, and this is exacerbated by the long planning horizon. In addition, Intercity rail initiatives are not included in state or regional fiscally constrained transportation plans, making it difficult to establish a basis for including projects in the passenger rail portion of the No Action Alternative. Therefore, this document proposes a methodology to identify and select projects for the No Action Alternative.

The No Action Alternative includes planned improvements and related service changes reasonably expected to be implemented by 2040 for which sufficient progress toward implementation and funding has been made or is expected. Where it is clear that a project is funded, it would be included in the No Action Alternative. Where clear information does not exist on funding status, projects would include planned infrastructure investments that are federally mandated, required for safety, and/or necessary to preserve existing passenger and freight rail, aviation, maritime, highway and other transportation services in the NEC FUTURE Study Area (Study Area).¹

Transportation service improvements resulting from both public and private investment are included in the No Action Alternative.

Since intercity travel demand is affected by other modes, the No Action Alternative is comprehensive in its structure so as to understand the comparative outcomes of ridership, revenue, cost, and operations modeling. However, the Action Alternatives will not include improvements to modes other than rail.

¹ The FRA anticipates that the cost of rail projects included in the No Action Alternative would fall within historic funding levels for general maintenance.

2. Potential Candidates for Inclusion in the No Action Alternative

Generating of a list of potential projects was the first step in developing the No Action Alternative. The list of candidate projects to include in the No Action Alternative came from available federal, state, and local capital planning documents and operating agency capital plans. The FRA reviewed these plans in consultation with representatives of those agencies and organizations as required to ensure that all applicable projects were included and that the NEC FUTURE team obtained all available studies and information on the nature, extent, timing, and likely impacts of these projects, as well as identifying challenges to their implementation. As the Tier 1 EIS progresses, the FRA may revise or revisit assumptions regarding which projects to include in the No Action Alternative based upon changes or updates to available funding, urgency of needs, and regional transportation plans.

The No Action Alternative includes identified projects and service improvements organized by project type (highway, commuter rail, intercity passenger rail, port, etc.). The FRA obtained information about passenger and freight rail, transit, highway, aviation, maritime/ports, and other transportation projects to potentially include in the 2040 No Action Alternative from available fiscally constrained state and regional capital planning documents, from fiscally unconstrained planning documents, and from the private sector where applicable (e.g., rail freight operators). Projects included in the No Action Alternative comprise infrastructure projects as well as planning for service changes.² Table 1 provides an initial list of potential sources of this information.

Table 1: No Action Alternative Sources of Information

Mode	Sources of Information*
Commuter and Intercity Passenger Rail	Amtrak <ul style="list-style-type: none"> ■ The Amtrak Vision for the Northeast Corridor: 2012 Update Report ■ Amtrak Capital Plan (including elements funded by States and/or commuter railroads) Federal and/or Multi-State <ul style="list-style-type: none"> ■ Federal-level grant agreements ■ Federal, state, and regional planning documents ■ Tier 1 and Project-level EISs ■ Northeast Corridor Infrastructure Master Plan Program Summary by Segment ■ Commuter Rail Agency Capital Plans State <ul style="list-style-type: none"> ■ State capital plans (STIPs) ■ State Rail Plans Regional/Metropolitan <ul style="list-style-type: none"> ■ Capital plans (TIPs) ■ Regional transportation plans

² For passenger rail, it is assumed that service types will remain the same as they are today. Service levels (that is, the quality and quantity of service) could be affected by the infrastructure improvements in the project lists.

Table 1: No Action Alternative Sources of Information (continued)

Mode	Sources of Information*
Highway	Federal and/or Multi-State <ul style="list-style-type: none"> ■ Federal-level grant agreements ■ Federal, state, and regional planning documents ■ Tier 1 and Project-level EISs ■ Agency plans State <ul style="list-style-type: none"> ■ State capital plans (STIPs) Regional/Metropolitan <ul style="list-style-type: none"> ■ Regional planning documents ■ Regional capital plans (TIPs) ■ Agency plans
Freight Rail	Federal and/or Multi-State <ul style="list-style-type: none"> ■ Federal-level grant agreements State <ul style="list-style-type: none"> ■ State rail plans Other <ul style="list-style-type: none"> ■ Discussions with freight rail operators and owners about planned private investment included in an approved planning document or identified as funded
Aviation	Federal and/or Multi-State <ul style="list-style-type: none"> ■ Tier 1 and Project-Level EISs State <ul style="list-style-type: none"> ■ State aviation capital planning documents Regional/Metropolitan <ul style="list-style-type: none"> ■ Federal-level grant agreements ■ Discussions with airport operators and planning authorities ■ Port authorities' capital programs
Maritime/Ports	Federal and/or Multi-State <ul style="list-style-type: none"> ■ Federal-level grant agreements ■ Tier 1 and Project-Level EISs Regional/Metropolitan <ul style="list-style-type: none"> ■ Regional/local port planning documents ■ Port authorities' capital programs Other <ul style="list-style-type: none"> ■ Discussions with operators about planned private investment included in an approved planning document or identified as funded
Other Transit	Federal and/or Multi-State <ul style="list-style-type: none"> ■ Federal-level grant agreements ■ Project-level EISs State <ul style="list-style-type: none"> ■ State capital plans (incl. STIPs, TIPs) Regional/Metropolitan <ul style="list-style-type: none"> ■ Metropolitan capital plans (incl. STIPs, TIPs) ■ Regional planning documents

*These sources of information will be reviewed simply to identify candidate projects and their status. The entirety of each source will not necessarily be reviewed.

After reviewing these plans and sources, the FRA compiled an initial long list of candidate projects for potential inclusion in the No Action Alternative, organized by mode, and geography (e.g., state).

3. Selecting Candidates for Inclusion in the No Action Alternative

3.1 METHODOLOGY FOR SELECTING NO ACTION ALTERNATIVE PROJECTS

Once the list of candidate projects was generated, the FRA evaluated each project for appropriateness to include it in the No Action Alternative. Many of the projects considered—particularly those funded from states and/or federal sources or likely planned for implementation in the long-term—were subject to uncertainty in terms of (1) the exact scope and resulting service level impact of those projects as eventually approved and (2) the availability of funding and financing. The final inclusion of projects in the No Action Alternative was therefore subject to reasonable planning judgment by the FRA in collaboration with NEC stakeholders.

The following proposed categories for selecting projects comprise the No Action Alternative:

- ▶ Funded projects or projects with approved funding plans (e.g., federal or state committed funding) – These types of projects include normalized replacement or routine maintenance at currently expected funding levels such as track, electrification, communications and facility upgrades to keep the NEC operating. Also included in this category are one-time investments or other projects to increase capacity, upgrade stations, and/or implement new technology that are currently funded.
- ▶ Funded or unfunded mandates – Projects within the category typically include Americans with Disabilities (ADA) station improvements and/or positive train control.
- ▶ Unfunded but necessary to keep the railroad running – These projects typically include “minor repair” as necessary to sustain operations, such as normalized maintenance and replacement of track, signal and communications, structures and maintenance facilities through the capital maintenance programs of various railroads within the NEC. The No Action Alternative for this category does not include the full-scale rehabilitation and/or replacement of major bridges or tunnels (a.k.a. the “Major Backlog” assets) since their construction is currently unfunded. The No Action Alternative includes only the “repairs” of major bridges and tunnels that are necessary to keep the railroad running.

3.2 REVIEW AND FINALIZE NO ACTION ALTERNATIVE PROJECT LISTS

The following actions resulted in a final definition of the No Action Alternative project lists for each mode:

- ▶ Conferred with the following regarding recommended projects for inclusion and the assumed nature, funding, and timing of those projects:

- U.S. Department of Transportation (U.S. DOT) modal agencies (Federal Transit Administration, Federal Highway Administration, Federal Aviation Administration, and Maritime Administration)
- Corridor-wide stakeholders (e.g., Northeast Corridor Commission [including the states and freight operators], I-95 Coalition)
- Implementing agencies (commuter railroads, Amtrak, freight railroads).
- ▶ Revised final No Action Alternative project list to reflect U.S. DOT and stakeholder feedback

This final list of infrastructure and service-related projects define the No Action Alternative. The last step before modeling evaluated the alternatives to summarize the characteristics of the No Action Alternative, as follows:

- ▶ Define and Summarize the Operations, Service, and Infrastructure Characteristics of the No Action Alternative – Once the FRA finalized and approved the project lists for the No Action Alternative, the FRA then determined the operating, service, and infrastructure conditions that resulted from the projects to define the No Action Alternative.
 - In order to establish the conditions of the No Action Alternative, the FRA applied these operating and service assumptions to its operations, travel demand/ridership and revenue, and capital costing models. The results of the modeling will then be compared to the Action Alternatives. (Note: assumptions on modes other than rail will only be included in travel demand/ridership and revenue modeling.)

**APPENDIX B
NO ACTION ALTERNATIVE PROJECTS LIST**

State	Name	Description
Category 1 Funded Projects/Projects with Approved Funding Plans		
MD	Fleet Acquisition/Overhaul	Purchasing 54 new MARC bi-level coaches and overhauling 63 MARC III coaches
DE	Third Track Expansion, Ragan to Brandy and Mill Creek Bridge Rehabilitation	Install 1.5 miles of a high-speed third track on the Northeast Corridor near Wilmington, DE, including Mill Creek Bridge rehabilitation and replacement to relieve a chokepoint, add capacity for intercity passenger rail service, and improve on-time performance while increasing flexibility for dispatching
DE	Newark Delaware Regional Transportation Center Phase 1	Construct new train station and transit center in conjunction with transit-oriented development of the adjacent property, the former Chrysler plant now owned by University of Delaware. Consists of two new high-level platforms, a new station building, realignment of nearby Norfolk Southern yard tracks, construction of a new rail track at the north end of the rail yard, and new turnouts accessing the rail yard track
PA	Levittown Intermodal Facility Improvements	This project provides for improvements to Levittown Station on the Trenton Regional Rail Line. Levittown Station improvements consist of new high level platforms with canopies, replacement of the station building, parking improvements, storm water management, ADA accessibility improvements, new signage, lighting and passenger amenities. There will also be a new pedestrian overpass to replace the old tunnel, bus shelters and bus loops to promote intermodal access, improved traffic flow and safety for motorists and pedestrians.
PA	Fleet Acquisition/Overhaul	Regional Rail Silverliner IV Replacement, Regional Rail Bi-Level Car & Locomotive Acquisition and Vehicle Overhaul Program which provides replacement or upgrade of rolling stock
NJ	Elizabeth Intermodal Station Reconstruction	The reconstruction of the passenger platforms and station building at Elizabeth Rail Station, including new elevators and stairs, ticket and operational office space, and retail space
NJ	County Yard and Delco Lead Safe Haven Storage and Re-Inspection Facility Project	Reconfiguration and expansion of the existing County Yard. The new facility will provide additional storage during extreme flooding events as well as additional service and a train inspection facility
NJ	Mid-Line Loop	Elimination of the at-grade crossing conflict that exists on the Northeast Corridor in the vicinity of Mile Post (MP) 32 at the Jersey Avenue Station/County Yard facility. Construction of a new station at North Brunswick, NJ.
NJ	Fleet Acquisition	Rail rolling stock acquisition
NJ	NJ TransitGrid	Creation of a natural gas/solar power generation and distribution system as backup to regional power network, allowing transit systems to function in the event of a blackout caused by a disaster. This project will directly benefit NJ TRANSIT and Amtrak.

State	Name	Description
NJ	NJ High-Speed Rail Improvement Project (NJ-HSRIP; aka Raceway project) Amtrak's High Speed Intercity Passenger Rail (HSIPR) Program; also known as "Raceway"	Upgrade or replace catenary, power, track, and signal systems between New Brunswick, NJ and Trenton, NJ to improve operations, speeds, and reliability along the Northeast Corridor
NJ	NEC Newark Intermodal	Includes structural rehabilitation and lighting improvements, customer facility improvements, pedestrian and traffic circulation improvements, and any related track and rail infrastructure work. Improvements to the Newark Light Rail are also included.
NJ/NY	New York Penn Station Improvements	Amtrak, NJ TRANSIT, MTA/LIRR ongoing station upgrades
NY	Fleet Acquisition	Acquisition of 164 M-9 electric cars to replace LIRR's aging M-3 fleet
NY	NHL NY - Ongoing normalized replacement programs (New Rochelle to NY/CT State Line)	C&S Program (CP 216 - NYS/CT State Line), Bridge Program, Track Program (CP 216 - NYS/CT State Line), Catenary Power Program, Miscellaneous Safety/Administration (CP 216 - NYS/CT State Line) (e.g., environmental abatement/remediation, security initiatives, program administration, insurance), Stations Program.
NY	River to River Resiliency for LIRR and Amtrak	Construction of flood protections at multiple tunnel portals used by the Long Island Rail Road and Amtrak.
NY	LIRR Fire & Life Safety - ERT and PSNY Complex	Long-term work to replace and/or restore various systems within the East River tunnels to address safety and prolong the life of the structures.
NY	LIRR - PSNY Improvements	Investments in support of LIRR's busiest station, and the busiest train station on the North American continent, focus on customer improvements, including the replacement of two-decade old elevators and escalators in the LIRR area of the station, along with rehabilitation of stairs, platform lighting and other station components. The Penn Station Complex Improvements project will advance early initiatives identified as part of the Penn Station Visioning effort. The Vision project recommended enhancements to corridors, access points, lighting, signage and wayfinding and a general improving of the space available for passenger circulation.
NY	Penn Station Access Improvements	Initial phase includes proposed improvements to link Metro-North commuter railroad directly to Penn Station and construction of four new stations in the Bronx. Project includes planning, design, construction, reconstruction, replacement, reconditioning, rehabilitation/preservation, and acquisition of real property interests required for commuter railroad facilities and related equipment.
NY	East Side Access	Construction of new tunnels, rail system elements and a new station on Manhattan's east side for Long Island Rail Road

State	Name	Description
NY	Penn-Moynihan Station Complex Train-shed Hardening Project	The Port Authority of New York and New Jersey will receive funding to make flood protections within the Penn-Moynihan Station Complex to protect existing transit facilities from damage during heavy rains.
NY	Harold Interlocking NEC Congestion Relief Project	Construct conflict-free, grade-separated route through the heavily-congested Harold Interlocking railroad junction in Queens, New York, streamlining passenger rail traffic into New York City from along the Northeast Corridor
NY	Moynihan Station Phase 1	Construct Phase 1 of the Moynihan Station project, which includes below-grade transportation improvements providing increased access points to the western portions of the Penn Station platforms, above and below grade, expanded concourses and a new emergency ventilation system
CT	Shoreline East Stations - High Level Platforms/Pedestrian Overpasses	Improve high level platforms and pedestrian overpass
CT	Stamford Intermodal Access	Construct two pedestrian bridges over the train tracks, pedestrian ramps, and train platform Weather shelters at the Stamford Transit Center (STC) Enclose an outdoor area on the north end of the station in order to increase the station's overall capacity Widen station's passenger drop-off area and sidewalks. Construct new bike lanes on approaching roads along with safety improvements.
CT	Shore Line East New London Track 6 Catenary Improvements	The installation of catenary and related improvements on Track 6 at New London Station, accommodating the electrification of Shore Line East service and reducing conflicts between Amtrak and commuter service at the station.
CT	Shore Line East Power Supply Upgrade	Improvements to NEC power supply system, as agreed upon by Amtrak and Connecticut DOT, to support the eventual introduction of electric train service on Shore Line East.
CT	New Haven Line Undergrade Bridges	Multi-year program to replace the existing undergrade bridges of the New Haven Line.
CT	CDOT/New Haven Line - Catenary Replacement - Segment C1A and C2	Replace the original "fixed termination" catenary with a state of the art constant tension system that better accommodates temperature extremes in project segments C1A (East Norwalk to Green's Farms) and C2 (Bridgeport to Milford) - the last two segments of project.
CT	Norwalk River Bridge Replacement	Full replacement of the existing bridge to improve reliability and decrease congestion on the New Haven Line. Proposed work includes rehabilitation of the tracks approaching the bridge, structural repairs to the bridge itself, and upgrades to the bridge's mechanical and electrical systems.
CT	NHL CT - Ongoing normal replacement programs (NY/CT State Line to New Haven)	C Program (Track Program), S Program (Bridge Steel & Timber Program), Interlocking & Drainage Program, Bridge Design, Annual communications & signals maintenance and repair program, Annual investments and New Haven Line stations

State	Name	Description
CT	New Haven Yard Master Complex - Phase 1	Expand and improve New Haven Rail facilities to support the maintenance, repair, and storage of CDOT's proposed expanded fleet. Add new series of self-propelled electric passenger cars, or M-8 cars
CT	NHL Signal System Replacement Phases 1-3	Resignal the CT portion the New Haven Line (CP233 west) with higher capacity five-aspect cab/no wayside signal system
CT	Shore Line East Guilford & Old Saybrook Sidings	Improve track and catenary to facilitate easier freight and commuter movements at Old Saybrook and Guilford stations
CT NY	Fleet Acquisition	Acquire M8 cars to replace existing EMU west of New Haven and existing diesel powered trains on Shore Line East
RI	Kingston Station Track and Capacity Improvements	Final design and construction of an additional 1.5 miles of third track at the Kingston Station, construction of a high-speed interlocking, and construction of two high-level platforms and increased connections to local transit services.
MA	Ruggles Street Station	The modernization of the Ruggles Station will include the construction of a new 797-foot long, 12-foot wide high-level passenger platform between the Ruggles Station headhouse and Northeastern University's Columbus Avenue parking garage.
MA	Fleet Acquisition/Overhaul	Acquisition/overhaul of locomotives and coaches
Multi	Amtrak NEC - Ongoing normal replacement programs (Washington to New Rochelle; New Haven to Boston)	Normal replacement programs related to four major disciplines: Track, Structures, C&S, ET
Multi	Amtrak - Fleet Acquisition	New equipment including the delivery of ACS-64 locomotives and Tier III Next Generation Trainsets for the Acela Express service

Category 2 Funded or Unfunded Mandates

NY	NHL NY - PTC Installation (New Rochelle to the NY/CT State Line)	Install positive train control safety system to meet 2008 federal rail safety law that requires installation by 2015 and avoid four specific events: train to train collisions, over speed derailments, incursions into established work zones, and the movement through a switch left in the wrong position
NY	New York Penn Station - Service Plant Upgrade and Tunnel Emergency	Ongoing north and east river tunnel life safely improvements
CT	NHL CT - PTC (NY/CT State Line to New Haven)	Upgrade signal system along the New Haven Line to meet 2008 federal rail safety law that requires installation of Positive Train Control by 2015
Multi	ADA STATION IMPROVEMENTS	Improve stations to meet ADA and SGR requirements to facilitate ease of travel, encourage intermodalism
Multi	Amtrak NEC - Positive Stop Train Control (Washington to New Rochelle; New Haven to Boston)	Install ACSES wayside transponders incorporating positive stop and civil speed control in areas of the corridor where ACSES is not currently installed as mandated by the Federal Rail Safety Improvement Act of 2008

State	Name	Description
Category 3 Unfunded Projects Necessary to Keep the Railroad Running		
MD	Susquehanna River Bridge Repairs	Critical repairs necessary to maintain bridge in operating condition
MD	Gunpowder River Bridge Repairs	Critical repairs necessary to maintain bridge in operating condition
MD	Bush River Bridge Repairs	Critical repairs necessary to maintain bridge in operating condition
MD	B&P Tunnels Repairs	Critical repairs necessary to maintain tunnels in operating condition
NJ	Portal Bridge Repairs	Critical repairs necessary to maintain bridge in operating condition
NJ	Dock Bridge	Mechanical and electrical improvements, shared use with NEC and PATH
NJ/NY	Hudson River Tunnels Repairs	Critical repairs necessary to maintain tunnels in operating condition
NY	Pelham Bay Bridge Repairs	Critical repairs necessary to maintain bridge in operating condition
NY	NHL NY - Additional investment in basic infrastructure (New Rochelle to NY/CT State Line)	Additional investment in basic infrastructure beyond current funding levels for ongoing normal replacement programs
CT	New Haven Yard Master Complex - Phase 2	Projects in Design (Funded): Central distribution warehouse, MoW facility, Yard Power Upgrade, Pedestrian Bridge Projects in Planning (Not funded): Transportation Building, New S&I facility, East End Yard, Car Washer, Diesel Shop Expansion
CT	Saugatuck Bridge Movable Bridge Repairs	Critical repairs necessary to maintain bridge in operating condition
CT	Devon Movable Bridge Repairs	Critical repairs necessary to maintain bridge in operating condition
CT	Cos Cob Movable Bridge Repairs	Critical repairs necessary to maintain bridge in operating condition
CT	Connecticut River Movable Bridge Repairs	Critical repairs necessary to maintain bridge in operating condition
CT	NHL CT - Additional investment in basic infrastructure (NY/CT State Line to New Haven)	Additional investment in basic infrastructure beyond current funding levels for ongoing normal replacement programs
Multi	Amtrak NEC - Additional investment in basic infrastructure (Washington to New Rochelle; New Haven to Boston)	Additional investment in basic infrastructure systems, beyond currently funded levels for ongoing normal replacement, in basic infrastructure systems, particularly systems in high need of replacement: overhead catenary system and undergrade bridges

State	Name	Description
DC VA	Metrorail Extension to Dulles	<p>Construct 23-mile extension of the existing Metrorail system, which will be operated by WMATA from East Falls Church to Washington Dulles International Airport west to Ashburn</p> <p>Serve Tysons Corner, Virginia's largest employment center and the Reston Herndon area, the state's second largest employment concentration</p> <p>Provide a one seat ride from Dulles International Airport to downtown Washington</p>
DC, MD, VA	Priority Bus Transit in the National Capital Region	<p>Provide more efficient bus service along 13 transit corridors in Maryland, Virginia, and Washington, D.C., by investing in a bus transitway, bus-only lanes, transit signal priority, traffic signal management, real-time arrival technology and other enhancements</p> <p>TIGER funds to construct a new transit center at the intersection of University Boulevard and New Hampshire Avenue on the border of Montgomery and Prince George's Counties in Maryland to consolidate scattered bus stops at a heavily used bus transfer point into one facility. TIGER funds will also provide station improvements (bus bays, real time bus information and other improvements) supporting bus priority on the I-95/395 corridor</p>
DC	DC Streetcar - Phase I	<p>Link neighborhoods with a modern and convenient transportation alternative with alignments from Bolling Air Force base to the Anacostia Metrorail Station in Phase 1, Union Station area to Benning Road Metrorail Station in Phase II</p>
MD	Baltimore Redline	<p>Improve transit mobility in an east-west corridor of the Baltimore region to address traffic congestion, provide better connectivity to existing transit service, support new and future transit-oriented economic development and revitalization efforts and address regional air quality issues</p> <p>Connect to MARC, Light Rail, Metro Subway, and MTA services</p>
MD	Corridor Cities Transitway	<p>The CCT is a 15 mile project in Montgomery County, Maryland from the COMSAT facility near Clarksburg, Maryland to the Shady Grove Metro Station. The project has two phases. Phase I is 9 miles from Metropolitan Grove to Shady Grove. This Phase is actively underway and is currently proceeding with engineering and environmental analysis and is funded for formal environmental documentation, final design, and right-of-way acquisition. Phase II would be a future extension from Metropolitan Grove to the COMSAT facility near Clarksburg, and would be developed as land use matures and additional transportation funding becomes available.</p>
MD	U.S. 301/MD 5 Corridor Mass Transitway	<p>Transitway along the 18-mile corridor from Waldorf-White Plains to the Branch Avenue Metrorail Station along Route MD 5/US 301 in Prince George's and Charles Counties</p> <p>Mode of either LRT or BRT has yet to be selected</p>
MD DC	Purple Line	<p>Light Rail project located in Montgomery and Prince Georges County MD to connect Metrorail stations on the Green Line at College Park, the Orange Line at New Carrollton, and the Red Line at Bethesda and Silver Spring.</p>

State	Name	Description
DE NJ PA	SEPTA PTC Installation	Superimpose PTC system atop the ATC on all Regional Rail lines to meet federal mandate
PA	SEPTA Fare Collection System/New Payment Technologies	Modernize and improve SEPTA's current fare payment and collection system by offering riders a variety of payment choices to suit their travel needs
PA	SEPTA - Multiple Resiliency Projects	SEPTA Ancillary Control Project Center; SEPTA Railroad Embankment & Slope Stabilization Project; SEPTA Sharon Hill ILine Flood Mitigation Project; SEPTA Railroad Signal Power Reinforcement Project; SEPTA Jenkintown Area Flood Mitigation Project; SEPTA Manayunk/Norristown Line Shoreline Stabilization Project.
NJ PA	Philadelphia Area Pedestrian & Bicycle Network	Repair, reconstruct, and improve 16.3 miles of pedestrian and bicycle facilities that will complete a 128-mile regional network in six counties around Philadelphia and Southern New Jersey
NJ NY	NJ TRANSIT Positive Train Control Installation	Install positive train control safety system to meet 2008 Federal rail safety law that requires installation by 2015 and avoid four specific events: train to train collisions, over speed derailments, incursions into established work zones, and the movement through a switch left in the wrong position
NY	Fordham Transit Plaza (Bronx) NY Reconstruction	Reconstruct Fordham Transit Plaza, a key intermodal facility serving 41,000 daily bus users and providing connections to 11,000 daily regional (Metro North) rail users Reconstruct street-level plaza and replace the existing plaza structures; reconfigure the circulation of buses through the plaza to create a more usable, contiguous public space; build a bus-only transit mall to maximize transit efficiency; and make design and safety improvements to the surrounding streets to alleviate traffic congestion and increase pedestrian safety
NY	Second Avenue Subway Phase I	Construct 2.3 miles of new subway on Manhattan's East Side from 96th Street to 63rd Street, connecting with the existing Broadway Line at the 63rd Street Station, including: Construction of three new stations at 96th, 86th, and 72nd Streets Modification of the existing 63rd Street station New tunnels from 92nd to 63rd Streets Station/ancillary facilities Track, signal, and power systems Procurement of 68 rail cars
NY	LIRR Positive Train Control Installation	Install a PTC system throughout LIRR territory in New York State (in coordination with MNR) to increase safety and comply with federal mandates Install Automatic Speed Control (ASC) signal system from Speonk to Montauk to facilitate compliance with PTC
CT	Hartford-New Britain Busway	Construct New Britain - Hartford Busway (Busway), a priority project designed to allow for connections to some rail stations Provide direct linkage shuttle bus to Bradley Airport and over the long term, the feasibility of creating a rail connection to the terminal will be assessed

State	Name	Description
MA	MBTA Green Line Extension (GLX) Phase 1	Extend MBTA Green Line from a relocated Lechmere Station in East Cambridge to Union Square in Somerville and College Avenue in Medford Phase 1 will rely on the traditional Design-Bid-Build approach to deliver a fully state-funded contract widening of the Harvard Street and Medford Street railroad bridges and demolition of 21 Water Street)
MA	MBTA Commuter Rail PTC	Install positive train control (PTC) safety system to meet 2008 Federal rail safety law that requires installation by 2015 and avoid four specific events: train to train collisions, over speed derailments, incursions into established work zones, and the movement through a switch left in the wrong position

State	Name	Description
MD	Freight Line Grade Crossing Rehabilitation	Rehabilitate grade crossing to enhance safety and maintain a smooth traffic flow at freight railroad crossings throughout the State
MD	National Gateway Freight Rail Corridor	Package of rail infrastructure and intermodal terminal projects that will enhance transportation service options along three major freight rail corridors owned and operated by CSX through the Midwest and along the Atlantic coast Improvements will allow trains to carry double-stacked containers, increase freight capacity and make the corridor more marketable to major East Coast ports and shippers TIGER funds will help complete the first corridor project, from Northwest Ohio to Chambersburg, Pennsylvania, through West Virginia and Maryland
DE	Rail Program Autoport	Address capacity improvements for handling railroad cars at Port of Wilmington Sidings will be constructed on Autoport, Inc. and NS Railway right-of-way to increase capacity from 60 to 90 railcars New connections to the NS main track will be provided to eliminate the conflict with highway traffic at Terminal Avenue Part of a public-private project with NS putting up 70% of the cost and FHWA 30%
PA	Central Pennsylvania Rail and Road Expansion	Numerous system-wide improvements to the safety and efficiency of freight movement for the 200 miles of track owned by the SEDA-Council of Governments Joint Rail Authority. Add 9.2 miles of track on existing roadbed, rehabilitate 7.5 miles of railway. Provide new installation of over 36,000 feet of sidings to increase capacity and points of distribution for well service companies Additional infrastructure improvements on five rail lines across the region, improvements to railway bridges, and the opening of a closed rail line to provide access to an existing industrial park that will support a major new tenant when rail access is restored Features new and innovative track occupancy warning system near the airport and will build a new airport access road
PA	CSX Trenton Line Clearance Project	Clearance project that covers the CSX Trenton line, from Park Junction to the Delaware River at Yardley, via West Falls, Newtown Junction, and Woodbourne
PA	Southern Chester County Rail Corridor Improvements (Q26)	Install additional track to facilitate the safe and efficient movement of freight cars to and from Wilmington, DE and points north and west and eliminate a rail switching operation over US 1 and reduce the conflict between vehicular and rail traffic
PA	Rutherford Intermodal Facility Expansion	Expand Rutherford Intermodal Facility to accommodate an additional 125,000 lifts per year and enable the facility to keep pace with growing freight traffic demand in the Harrisburg area and reduce highway truck traffic along the Crescent Corridor that moves freight from cities in 12 states, including Chicago, Memphis, and Atlanta Includes track work, expansion of parking access, and the construction of cranes to increase capacity
NJ	Control Point Trent Improvements	Replace Crossover Switch at CP Trent

State	Name	Description
NJ	Midway Interlocking Reconfiguration	Replace signal system replacement and interlocking upgrades to permit higher speeds while increasing capacity throughout the segment
NJ	South Jersey Port Rail Improvements	The Delaware River Rail/Port Improvement Project is divided into three components, starting with Conrail's Delair Bridge approach rehabilitation. The Salem County component is comprised of two projects: the Oldmans Trestle Rail Bridge replacement and the Salem Running Track rehabilitation. The SJPC component is the Paulsboro At-Grade Rail Infrastructure. This component leverages the ongoing construction of the new Paulsboro Marine Terminal, which will have on-dock rail capability to service ships with rail service directly.
NJ	Track Improvements - Hack to Kearny	Double track P&H Branch segment (1.8 miles) Extend 3 yard tracks. Add 1 yard track
NJ	Track Improvements - Manville to Phillipsburg	Improve track, bridge rehabilitation, crossovers, etc. on Lehigh Line
NJ/NY	Cross Harbor Freight Movement Program	Rehabilitation/Modernization of rail car float fixed and mobile assets to support scheduled service between Greenville, Jersey City and Brooklyn, NY
NY	Hunts Point Freight Rail Improvement Project	Freight rail improvements at the Hunts Point Terminal Produce Market to modernize current infrastructure and create new circulation areas, reduce truck traffic and congestion, and improve air quality in the community. Community will benefit from a reduction in traffic accidents and improved connectivity
MA	Fast Track New Bedford	Reconstruct deteriorated rail bridges, which were constructed in 1907

State	Name	Description
MD	I-95 Fort McHenry Tunnel - Moravia Road to the Tunnel Modifications	Provide a continuous southbound lane from the southern limits of the Express Toll Lanes to the tunnel
MD	I-95 John F. Kennedy Memorial Highway - Express Toll Lanes	Construct two Express Toll Lanes in each direction from I-895 North to north of MD 43 and improve the interchanges with I-895, I-695, and MD 43
MD	I-95 John F. Kennedy Memorial Highway - MD 24 Interchange Improvements (Phase I)	Provide improved capacity, operation, and safety for the I-95/MD 24 interchange and the MD 24/MD 924/Tollgate Road intersection, which is in close proximity and integral to the I-95/MD 24 interchange operation
MD	I-95 John F. Kennedy Memorial Highway - Underwater repairs at Tydings Bridge	Rehabilitate pier foundations and provide pier scour protection to extend useful life of foundations
MD	I-95 New Interchange at MD 198	Construct new interchange with collector-distributor roads at I-95 and Contee Road Relocated to relieve congestion on the mainline of I-95 and improve traffic flow at the I-95/MD 198 interchange
MD	MD 4, Pennsylvania Avenue Upgrade	Upgrade existing MD 4 to a multi-lane freeway from MD 223 to I-95/I-49 to relieve congestion during peak hours
MD	MD 5, Branch Avenue Upgrade	Study to upgrade existing MD 5 to multi-lane freeway from US 301 interchange at T.B. to north of I-95/I-495 Capital Beltway
MD	US 1, Baltimore Avenue Reconstruction	Reconstruct US 1 from College Avenue to I-95 to address major congestion experienced along this segment of US 1 and improve traffic operations, pedestrian circulation, and safety
MD	US 40, Pulaski Highway	Improvements along US 40 from Middle River Road to MD 43 consistent with local corridor plans that promote mixed-used development along US 40 within White Marsh/Nottingham area of Baltimore County
MD	Virginia Manor Road Relocated, Old Gunpowder Road to the Intercounty Connector	Construct critical roadway connection to the (No Suggestions) Connector and I-95/Contee Road Interchange to enhance the supporting roadway network east and west of I-95 in the area that is planned for significant growth and development
DE	Bridge 1-501 Rehabilitation	Rehabilitate bridge and viaduct along SR 141 from the I-95 /141 interchange to Burnside Boulevard Total length of the project is 6,000 feet including the 2,000 foot long Newport Viaduct over the Christina River, Amtrak, and SR4

State	Name	Description
DE	I-295 Improvements Third Lane	Add a third lane from SR 141 to SR 9 to address peak periods when the current two-lane configuration is not adequate Project extends from I-95/SR 141 interchange to 2,400 feet west of US 13
DE	I-295 Improvements Weave Elimination	Remove current ramps from SB US 13 to the EB bridge and construct a collector/distributor ramp and barrier to preclude the weave problem from southbound I-95 to eastbound I-295 to southbound US 13 and offer optional routes to replace the moves eliminated by the barrier New access will require motorist to travel further south on US 13, and then make a cross traffic turn to get onto the Delaware Memorial Bridge
DE	I-95 & US 202 Interchange in Wilmington, Delaware	Widen existing ramp from NB I-95 to NB US202 in the I-95/US202 interchange from one to two lanes Additional ramp improvements will address weaving problems and develop US 202 gateway into the City of Wilmington
DE	I-95 Turnpike Toll Plaza Rehab High Speed E-ZPass	Build two Highway Speed EZ Pass lanes through the I-95 Newark Toll Plaza
DE	SR 1 / I-95 / Christiana Mall Rd Bridge Interchange	Construct new multiple-lane interchange to reduce traffic weaving and separate out local traffic movements from high speed movements
DE	SR 141/I-95 Interchange	Improvements focused along SR141 and ramps leading to and from the interstate, with minor improvements taking place on northbound I-95
DE	US 301 New Toll Road	Construct limited access tolled US 301 with 4-lanes (2 lanes in each direction), from Maryland Line to SR1, south of the C&D Canal (14 miles)
PA	30th Street Bridges (6) Over Amtrak's Northeast Corridor Rail Lines	Rehabilitate 6 roadway structures and pedestrian improvements located around the Philadelphia 30th Street Station area and over Amtrak's Northeast Corridor rail lines
PA	41st Street Bridge Over Amtrak's Harrisburg Line	Reconstruct 3 span, concrete encased steel thru girder bridge over Amtrak's Harrisburg line and Norfolk Southern RR Utility, railroad electrification, approach paving, and miscellaneous work
PA	Allen's Lane Bridge Over SEPTA R8 Rail Line SR:4003	Replace existing Allens Lane bridge carrying two lanes of north/south traffic of S.R. 4003 over two tracks of SEPTA's Chestnut Hill West (R8) Regional Rail Line

State	Name	Description
PA	Baltimore Pike Signals	Upgrade and interconnection of 16 signalized intersections along a 3.2-mile multi-lane state route to enhance motor vehicle flow along the corridor Modernize intersection signalization equipment Remove existing equipment and replace with new equipment including signal supports, traffic controllers, signal heads, and all electrical equipment including wires and conduit
PA	Boot Road Extension Bridge Over Brandywine Creek	Construct new bridge over the Brandywine Creek with one travel lane in each direction and sidewalks to provide a more direct connection to the Downingtown Amtrak/SEPTA Train Station and regional bicycle and pedestrian facilities, including PA Bicycle Route L
PA	Bristol Road Intersection Improvements	Reconstruct and widen Bristol Road (SR 2025, Section 001) to accommodate a center left-turn lane from Segment 0332 Offset 0643 north of Old Lincoln Highway to Segment 0372 Offset 1015 at the Pasqualone Boulevard intersection Replace six (6) existing signals along Bristol Road Approximately 2.3 mile section of SR 2025 (Bristol Road) and typical section will include two 11 foot travel lanes an 11 foot center left-turn lane and 2 foot full depth installation shoulders
PA	Bristol Road/Butler Avenue SEPTA Railroad Crossing	Improve pedestrian arm railroad crossing gate for sidewalk at the SEPTA Railroad Crossing at Butler Avenue (Route 202) and Bristol Road
PA	Byberry Road Bridge Replacement	Replace the Bridge at Byberry Road over CSX Rail Line Breakout of MPMS# 88706 for Bridge Rehabilitation
PA	Chestnut Street Bridge Over Amtrak/SEPTA R5 Rail Line SR:7205	Replace 4-span steel girder bridge, with minimal shoulders and minor improvement to the vertical crest, which spans over active AMTRAK, CSX and Norfolk Southern rail lines in East Caln Twp. & the Borough of Downingtown, Chester County, PA
PA	Chestnut Street Bridges at 30th Street	Rehabilitate Chestnut Street (PA 3) bridges spanning the Northeast Corridor, I-76, Schuylkill River, CSX Railroad, and 24th Street to maintain mobility within the project area Bridges are structurally deficient: steel portions have severe rust and advanced section loss and brick and concrete components have mortar loss and spalling respectively
PA	Church Road Bridge Over Norristown High Speed Line (CB) SR:7220	Replace of the Church Road Bridge and approaches over the SEPTA Route 100 rail line (Norristown High Speed Line) in Upper Merion Township
PA	Concord Road Bridge Over SEPTA Chester Creek Branch Line SR:3004	Remove existing multi-span concrete bridge and replace with either a new bridge of similar type and size, earth fill, and a pedestrian box culvert to potentially accommodate a rail-trail or a prefabricated concrete arch

State	Name	Description
PA	Elm Street Bridge Over Plymouth Creek	Replace bridge running east-west on Elm Street over Plymouth Creek and the abandoned Reading Railroad Existing structure is 145 ft. long, and is a steel thru-girder with floorbeam system
PA	Folcroft Avenue Bridge Over Amtrak/SEPTA R2 Rail Line SR:7410	Replace existing one lane bridge with 5' sidewalks on both sides, which is currently closed to traffic, to a new bridge with two lanes, 5' sidewalks on both sides, and corrected vertical geometry to provide better sight distance Incorporate bicycle and pedestrian checklists
PA	French Creek Parkway - Phase 1	1st phase of the design and construction of French Creek Parkway to provide a roadway connection between Main St. and Taylor Alley in the Borough of Phoenixville, including a new traffic signal, new bridge over French Creek, and 0.4 miles of new collector roadway and sidewalk network to support the redevelopment of a 120-acre brownfield site into a mixed use development with office, retail, and residential uses New Functional Classification will need to be established for the roadway
PA	Grays Ferry Avenue Bridge Over Schuylkill River	Rehabilitate pier caps on the bridge that crosses the Schuylkill River and Amtrak railway tracks
PA	Greenwood Avenue Bridge Over SEPTA Mainline Commuter Rail	Replace existing bridge over SEPTA's R2, R3 & R5 mainlines, due to structural deficiencies Complete replacement of the Greenwood Ave. Bridge over SEPTA, three lane bridge with sidewalk on one side, and tie into adjacent intersection and SEPTA driveways
PA	Henry Ave. Bridge over SEPTA SR:4001	Rehabilitate bridge, which crosses an unnamed tributary of the Schuylkill River and active CSX and SEPTA rail lines
PA	Hulmeville Avenue Bridge Over Conrail	Replace existing Hulmeville Avenue bridge that carries two lanes of traffic over three tracks of the former Reading Railroad that is now operated by CSX Span arrangement may be revised during the detailed design phase based on discussions between CSX and SEPTA to provide four (4) tracks throughout the project area An understanding between the parties is that any overhead bridge replacement must accommodate an additional track
PA	I-476, MacDade Boulevard Ramp Improvements	Channelize & signalize shopping center entrance and reconfigure NB I-476 / EB MacDade Boulevard off ramp to improve traffic safety (Former uncontrolled median opening at the shopping center entrance was closed due to excessive accidents)

State	Name	Description
PA	I-476, PA Turnpike Northeast Extension/PA 309 Corridor Incident Traffic Management	Implement a Unified Traffic Management and Signal Coordination Plan within the Pennsylvania Turnpike Northeast Extension (I-476)/PA 309 Corridor, including video cameras, variable message signs, interconnected signal systems and trail blazer signage, to handle both routine traffic conditions and diversions from the Turnpike Part of the DVRPC FY06 Work Program
PA	I-95 Allegheny Ave Interchange	Remove NB off-ramp at Westmoreland Street Add NB off-ramp at Castor Avenue Widen and reconstruct I-95 between Ann Street and Tioga Street Reconstruct or redeck bridge over Allegheny Avenue and the Westmoreland Viaduct (Westmoreland Street to Tioga Street) Street to Tioga Street
PA	I-95, Ann Street to Wheatsheaf Lane (AFC)	Reconstruct 10 bridges and 0.9 miles of I-95 Consolidate existing disjointed interchanges at Allegheny Avenue, Westmoreland Street, and Castor Avenue into two half interchanges: half diamond interchange at Allegheny Avenue for Southbound I-95 and a partial clover interchange at Castor Avenue for Northbound I-95 Remove existing off-ramp at Westmoreland Street, leaving a half-diamond interchange at Allegheny Avenue for I-95 Southbound Add a new northbound on-ramp at Castor Avenue to create a partial-clover interchange for I-95 Northbound Split existing loop-ramp to provide both access to I-95 Northbound and the Betsy Ross Bridge
PA	I-95, Betsy Ross Bridge Ramps Construction (BR0) (IMP)	Reconstruct several Betsy Ross Bridge/Aramingo interchange ramps Construct Adams Avenue Connector

State	Name	Description
PA	I-95, Betsy Ross Interchange (BRI) - Design(IMP)	<p>Reconstruct 1.1 miles of the SR 0095 mainline roadway starting from south side of the Wheatsheaf Lane crossing, adjoining Section AFC, and ending north of Orthodox Street at the south side of the Margaret Street/Lefevre Street crossing, adjoining Section BSR (SR 0095 mainline will have four lanes in each direction from Wheatsheaf Lane to Orthodox Street/Pearce Street crossing)</p> <p>Eliminate lane drops (from 3 to 4) from the Betsy Ross Interchange crossing to the Margaret Street/Lefevre Street crossing</p> <p>Demolish and remove Ramp X SB on ramp and Ramp Y NB on ramp, within the NB and SB collector-distributor roads</p> <p>Reconstruct three dual structures (the dual structures over Frankford Creek; the dual viaduct structures over the Earth Fill area from the Betsy Ross Interchange to south of Orthodox Street crossing; and the dual structures over Orthodox and Pearce Streets)</p> <p>Rehabilitate (minor) Conrail Shared Assets railroad bridges crossing SR 0095 and Ramps A and C</p>
PA	I-95, Columbia Street to Ann Street (GR1)	<p>Relocate major utilities and a majority of the surface street reconstruction and relocation work between Berks Street and Ann Street</p>
PA	I-95, Cottman-Princeton Main Line and Ramps (CP2) (IMP)	<p>Reconstruct and widen I-95 between Levick Street and Bleigh Avenue, including upgrades to several ramps</p> <p>Demolish and replace of seven bridges</p> <p>Relocate Wissinoming Street between Princeton Avenue and Wellington Street</p> <p>Relocate approximately 1500 feet of Philadelphia Water Department trunk line water and sewer</p> <p>Construct six new storm drainage pipes from I-95 to the Delaware River</p> <p>Reconstruct I-95 from Levick Street to Bleigh Avenue to provide four lanes in each direction</p> <p>Improve short existing sections of three lanes in each direction between the off and on-ramps that create the existing bottleneck by adding a fourth lane</p> <p>Upgrade existing SB off-ramp at Bleigh Avenue (Ramp D) and NB off-ramp at Cottman Avenue (Ramp B)</p> <p>Construct new SB on-ramp at Cottman Avenue (Ramp F)</p>

State	Name	Description
PA	I-95, North of Bridge Street Interchange Construction	<p>Widen and reconstruct SR 0095 from the relocated Carver Street Bridge to Levick Street: Construct the new SB off-ramp to Tacony Street and Arsenal Business Center</p> <p>Remove the existing SB off-ramp to James Street</p> <p>Remove the existing Carver Street Bridge</p> <p>Reconstruct Tacony St. north of Bridge Street</p> <p>Replace Carver, Van Kirk & Comly Street bridges</p> <p>Install new traffic signal at the intersection of Carver Street and Tacony Street</p> <p>Utility impacts under I-95 are anticipated</p>
PA	I-95, Orthodox Street to Levick Street (BSR) - Design(IMP)	<p>Design of I-95 reconstruction SR 0095 Section BSR, also known as the Bridge Street Ramps Section, to eliminate the lane drop at the James St. Ramp in the SB direction and the add lane at the Bridge St Acceleration Ramp in the NB direction</p> <p>Four lanes in each direction from Orthodox St. to Levick St. with exclusive acceleration/ deceleration lanes at the interchanges, six dual structures, and the Bridge Street Acceleration Ramp Bridge</p> <p>Reconstruct retaining walls supporting SR 0095 to support new widened roadway and ramps</p> <p>Reconstruct and realign 1.7 miles along SR 0095, 0.7 miles along Tacony Street from Aramingo Ave. to the west to just prior to Van Kirk St. to the east, and 1.2 miles along Aramingo Ave. from Frankford Creek to the south to the Amtrak Railroad Bridge to the north</p> <p>Widen a portion of Aramingo Ave. from Frankford Creek to the south to the Amtrak Railroad Bridge to the north</p>
PA	I-95, PA Turnpike Interchange (TPK) - State 1	<p>Connect I-95 and I-276 in Pennsylvania, facilitate a revised routing of I-95 in PA and NJ, and make I-95 continuous along the east coast from Florida to Maine</p> <p>Construct I-95 mainline flyovers of the interchange between I-95 and the PA Turnpike, a new mainline toll plaza west of this interchange</p> <p>Replace existing River Bridge toll plaza with an all-electronic (AET) on road toll facility in the westbound direction</p> <p>Remove of existing US13 interchange toll facility</p> <p>Integral to the Delaware Valley Freight Corridors Initiative</p>
PA	I-95, Shackamaxon Street to Ann Street (GIR) - Design	<p>Widen and reconstruct I-95 to eliminate the lane drop (from 4 to 3) in both directions at the Girard Avenue Interchange by providing 4 continuous thru lanes in each direction (Construction Sections GR0 thru GR4)</p> <p>Provide an auxiliary lane in each direction to connect the ramps between adjacent interchanges at Vine St and Allegheny Ave</p>

State	Name	Description
PA	I-95, Shackamaxon Street to Columbia Avenue	Close and remove existing I-95 north bound off ramp (Ramp E) Reconstruct and widen I-95 between Shackamaxon St. and Columbia Ave. Reconstruct Delaware Ave. between Columbia and Montgomery Aves. Replace I-95 structures over Shackamaxon St. Marlborough St., and Columbia Ave. Associated retaining and sound barrier wall construction
PA	I-95: Allegheny Ave Interchange	Reconstruct I-95 from Tioga Street to the railroad bridge (south of Frankford Creek), including reconstruction of the NB off-ramp to the Betsy Ross Bridge over Castor Avenue Reconstruct the NB on-ramp from Castor Avenue I-95 traffic will be maintained on 3 lanes NB and 3 lanes SB during peak hours
PA	I-95: Race - Shackamaxon (GR5)	Reconstruct, rehabilitate, and widen I-95 between Race St. and Shackamaxon St. Reconstruct northern Vine St. interchange ramp connections with I-95 Rehabilitate, replace deck, demolish, and replace eight bridges
PA	I-95N: Betsy Ross Inter (BR2)	Reconstruct 1.1 miles of the NB SR 0095 mainline roadway starting from north side of Wheatsheaf Lane crossing, adjoining Section AFC, and ending north of Orthodox Street at the south side of the Margaret Street/Lefevre Street crossing, adjoining Section BSR
PA	I-95N: Columbia-Ann St N (GR3)	Reconstruct and widen I-95 NB from Columbia Ave. to north of Ann St. Reconstruct NB Girard Ave. interchange ramps Demolish and replace five bridges
PA	I-95S: Betsy Ross Inter (BR3)	Reconstruct 1.1 miles of the SB SR 0095 mainline roadway starting from north side of Wheatsheaf Lane crossing, adjoining Section AFC, and ending north of Orthodox Street at the south side of the Margaret Street/Lefevre Street crossing, adjoining Section BSR
PA	I-95S: Bridge Street Interchange	Eliminate the SB lane drop at the James Street Ramp Eliminate the NB add lane at Bridge Street Widen I-95 to four lanes in each direction from Orthodox Street to Levick Street Add exclusive acceleration/ deceleration lanes at the interchanges Replace six dual, mainline bridges and one ramp bridge Widen one mainline structure Line 1-(5 with long retaining walls through much of this section Construct two sound barriers
PA	I-95S: Columbia-Ann St N (GR4)	Reconstruct and widen I-95 SB from Columbia Ave. to north of Ann St. Reconstruct SB Girard Ave. interchange ramps Demolish and replace nine bridges

State	Name	Description
PA	Lafayette Street Extension (MG1)	Extend Lafayette Street past its current terminus at Ford Street to Conshohocken Road Build slip-ramps at to connect Lafayette Street with the Pennsylvania Turnpike Realign existing Schuylkill River bike/pedestrian trail as a multi-purpose trail for public access and recreational use as part of the project Long term goal: construct an interchange at the Dannehower Bridge/Lafayette Street intersection
PA	Lafayette Street Extension (MGL)	Improve roads around the new Lafayette Street/I-276 turnpike EZ Pass-only interchange Replace NS rail bridge
PA	Lafayette Street Extension (MGL)	Improve roadways around the new Lafayette Street/I-276 turnpike EZ Pass-only interchange Replace NS rail bridge
PA	Lafayette Street, Barbados Street to Ford Street Widening (MGN)	Reconstruct and widen existing Lafayette Street from 2 to 4 lanes between Barbados and Ford Streets, as well as provide turn lanes and upgrade signals
PA	Lafayette Street, Ford Street to Conshohocken Road Extension (MGP)	Extend Lafayette Street as a four lane roadway on a new alignment to tie into a new PA Turnpike interchange and provide turn lanes onto Conshohocken Road
PA	Lloyd Street Bridge Over Amtrak/SEPTA R2 Rail Line	Replace Lloyd Street bridge, which was constructed by the railroad in 1899, due to structural defects Pedestrian walkways have been closed due to holes in the decking
PA	Main St over SEPTA (Bridge)	Rehab /replace state bridge over the Over Septa rail line on Main Street between Cahill Road and 9th Street in Sellersville Borough Structurally Deficient bridge breakout project from MPMS #88706.
PA	Montgomery Avenue Bridge over Amtrak at 30th Street	Reconstruct 5 span, concrete encased steel thru girder bridge over Amtrak's Northeast Corridor along with historically sensitive approach paving restoration with a 3 span steel girder bridge founded atop new reinforced concrete piers and integral abutments Utility and railroad electrification work

State	Name	Description
PA	North Delaware Avenue Extension	<p>First of a multi-phased project to construct a "River Road" along the north Delaware Riverfront amidst planned residential and recreational facilities</p> <p>Construct new roadway and a new bridge across Frankford Creek</p> <p>Extend road between Lewis Street where it currently ends, further north approximately a mile and 1/2 to Buckius Street</p> <p>Roadway planned with wide shoulders for bike use, sidewalks, and will serve as an alternative to the North Delaware Greenway Trail while some portions are under construction, and as an alternate route for local truck traffic in order to get that traffic off of narrow Richmond Street</p>
PA	Oxford Valley Road/Lincoln Highway Intersection Improvements	<p>Add turn lanes from Oxford Valley Road onto Route 1</p> <p>Realign Levittown Parkway</p>
PA	PA 100, Shoen Road to Gordon Drive (02L)	<p>Reconfigure existing 2-12' lanes and 10' shoulders to 3- 11' lanes and 4' shoulders</p> <p>Remove inefficient jug handles and install dedicated left and right turn lanes</p> <p>Storm water collection and management system</p> <p>Add sidewalk from Ship Road to Sharp Lane to connect existing Uwchlan Trail System</p> <p>Upgrade traffic signals from Gordon Drive/Rutgers Drive to Shoen Road, including new supports, signal heads, actuation, emergency pre-emption, and all electrical components Retain the closed-loop system footprint between the intersections and the municipal building</p>
PA	PA 23/Valley Forge Road and North Gulph Road Relocation (2NG) - Part 1 of River Crossing Complex	<p>Relocate PA 23 and North Gulph Road in the vicinity of the PA 23/US 422 interchange to improve operations and reduce traffic impacts within Valley Forge National Historic Park with full mitigation buffer zone and provide the opportunity for a new "gateway" for the Valley Forge National Historic Park</p> <p>Move roadway approximately 300 feet to the east of the park entrance</p> <p>Part (1) of the "River Crossing Complex," which is a complex area of roadways, interchanges, intersections, and bridges in and around the Valley Forge National Historic Park</p>
PA	PA 252 Underpass/US 30 Intersection	<p>Component of the Paoli Transportation Center Road Improvements project (MPMS #47979) and implements some of the short term solutions recommended by the Feasibility Study for the PA 252 Underpass and US 30 Intersection undertaken using DEMO funds for that location</p> <p>Includes improvements that will help to reduce congestion and increase safety near the intersection of PA 252 and US 30 and include upgrades to the traffic signal to provide a left turn phase, signal timing, pedestrian improvements, lane reconfigurations, and striping</p>

State	Name	Description
PA	PA 29, Main Street Bridge Over Reading Railroad Tracks Removal	Remove narrow and unnecessary bridge to improve traffic and sight distance constraints on Route 29 Fill overpass and connect with wider road section
PA	PA 313/US 202, East State Street to Mechanics Road Intersection Improvements	Realign US 202 at E. State St. to a "T" intersection Extend the PA 313 left turn lanes at US 202 Widen US 202 from PA 313 to Mechanicsville Road to accommodate a center left turn lane at the US 202/PA 313 intersection Add pedestrian and bicycle access
PA	PA 41 Study	Preliminary engineering and environmental studies to identify transportation improvements for the PA 41 Corridor Current alternatives include widening and limited realignment Actual cost estimates for construction will be determined with the completion of the Environmental Impact Statement
PA	PA 452, Market Street Bridge Over Amtrak/SEPTA R-2 Rail Line SR:0452	Replace existing two lane bridge (built in 1925) with shoulders and 8' sidewalks for inclusion in the Delaware County Bicycle Plan
PA	PA 611, Old York Road Over SEPTA R3 SR:0611	Replace Old York Road bridge with a new three span, concrete-encased, I-beam structure supported by reinforced concrete abutments and column pier bents
PA	Paoli Transportation Center Road Improvements	Improvements to roadways around Paoli Intermodal Transportation Center, focused on roadways around the new transportation center including US 30 (Lancaster Avenue), North Valley Road, and Central Avenue (See MPMS #60574 for the transit components of the Intermodal Center. Study underway)
PA	Pennswood Road Bridge Over Amtrak/SEPTA R5 Rail Lines SR:7104	Replace existing structure carrying Pennswood Road over Amtrak.
PA	Ridge Pike / Two RR Bridges	Reconstruct and widen two bridges carrying Ridge Pike, a Montgomery County owned arterial, over Norfolk Southern railroad tracks in Plymouth Township between Manor Avenue and Carland Road Construct new pedestrian bridge over Norfolk Southern immediately adjacent to the highway bridges to provide a sidewalk on Ridge Pike Both existing bridges over the railroad are structurally deficient

State	Name	Description
PA	Rt. 322/Comm Barry Bridge/I-95 2nd St. Interchange	<p>Widen (partially) Commodore Barry associated with the construction of a new on ramp and a new off ramp from the Commodore Barry Bridge/US 322 to S.R. 0291, Second Street, in the City of Chester to improve access to and from the City of Chester and the waterfront area from I-95 and the Commodore Barry Bridge/US 322</p> <p>Add new westbound on ramp from the intersection of S.R. 0291 & Tilghman Street to the Commodore Barry Bridge/US 322 and new eastbound off ramp from the Commodore Barry Bridge/US 322 to S.R. 0291 & Jeffrey Street</p> <p>Construct full depth joint replacements and bearing replacements on the bridge through the limits of the bridge widening</p> <p>Safety and drainage improvements, ramp lighting, guide signing upgrades, and new traffic signals at the ramp termini with S.R. 0291</p> <p>Amtrak involvement in the project due to the partial widening of the Commodore Barry Bridge includes relocation of two catenary structures and the jacking of a new DRPA storm drain pipe under the railroad</p>
PA	Sellers Avenue Bridge Over Amtrak and SEPTA R2 Rail Line SR:2031	<p>Replace superstructure of the Sellers Avenue Bridge over Amtrak while reusing existing stone abutments</p>
PA	US 1, Baltimore Pike Interchange Improvements SR:0352	<p>Preliminary engineering for the reconstruction of this cloverleaf interchange, originally built in 1939</p> <p>Roadway is included in the Delaware County Bicycle Plan</p>
PA	US 1, Baltimore Pike Widening	<p>Widen from two lanes in each direction to three lanes in each direction</p> <p>Relocate the School House Rd. intersection</p> <p>Add left turn lanes on US 1 at School House Rd</p> <p>Install new traffic signals</p>
PA	US 1, Township Line Road Bridge Over SEPTA Route 100 Rail Line SR:0001	<p>Rehabilitate bridge carrying S.R. 0001 (Township Line Road) over the SEPTA Norristown High Speed Line</p>
PA	US 202 and US 1 Loops Roads	<p>Completes the loop roads on the southeast and southwest corners, connecting Applied Card Way to Hillman Drive at the existing Route 202/Hillman Drive signalized intersection in the southeast quadrant, and connecting Hillman Drive to Painters Crossing/Brandywine Drive in the southwest quadrant to divert traffic from the Route 202/US 1 intersection</p> <p>Northeast and northwest quadrants have the existing completed loop roads, State Farm Drive and Brandywine Drive, respectively</p> <p>Add turning movements at the intersections (i.e., no jug handles) for the proposed loop road connections</p>

State	Name	Description
PA	US 202, 5-Points Intersection Improvements (71A)	<p>Modify intersection of SR 0202 (Doylestown Road) with SR 0309 (Bethlehem Pike) and SR 0463 (Horsham/Cowpath Road) in Montgomery Township, Montgomery County, Pennsylvania, including the installation of additional thru lanes and minor widening on several legs, as well as the retiming of the existing traffic signal</p> <p>Modify existing drainage system</p> <p>Replace existing traffic signal support structures, adjusting several existing driveways to accommodate additional lanes, and upgrading the signing and pavement marking</p> <p>Replace both signal support structures</p>
PA	US 202, Exton Bypass to Route 29	<p>Reconstruct and widen approximately 2.5 miles of Limited Access Highway from the SR 0030 (Exton Bypass) to the Valley Creek Bridge</p> <p>Widen SR 401 between the ramp intersections, along with the installation of traffic signals at the ramps.</p> <p>Add additional lane and shoulder in each direction within the existing grass median along the mainline</p> <p>Widen SR 401 between ramps.</p> <p>Add left and right turn lanes along SR 401 to accommodate ramp turning movements</p>
PA	US 202, Johnson Highway to Township Line Road (61S)	<p>Widen US 202 approximately 1.8 miles from two lanes to five lanes including a center turn lane in this section of US 202 between Johnson Highway and Township Line Road in Norristown Borough, East Norriton & Whitpain Twps</p> <p>Replace one bridge and one culvert in this portion of Section 600</p> <p>Replace traffic signal equipment at the intersections with Johnson Highway, Germantown Pike and Township Line Road</p> <p>Includes ITS</p> <p>Designed under Section 610</p>
PA	US 202, Markley Street Improvements (Section 510)	<p>Reconstruct Route US 202, from Main Street from Harding Blvd. from existing four-lane cross-section</p> <p>Replace existing “Bailey Bridge” carrying the NB lanes over Stony Creek</p> <p>Rehabilitate box beam structure carrying the SB lanes over Stony Creek</p> <p>Rehabilitate Main Street arch bridge over Stony Creek</p> <p>Roadway reconstruction to take place within the existing roadway footprint or involve minor widening; more significant widening to provide two NB left turn lanes from Markley Street to Main Street</p> <p>Total pavement reconstruction anticipated</p> <p>Corridor-wide improvements include traffic signal upgrades at the six signalized intersections, highway lighting, and pedestrian accommodations (including pedestrian signals, sidewalks, crosswalks, and bump outs)</p>

State	Name	Description
PA	US 202, Markley Street Improvements (Section 520)	Reconstruct Route US 202, from Harding Blvd to Johnson Highway from a two-lane to three-lane roadway, with one northbound lane, one southbound lane, and one two-way left turn lane Improve signals Widen roadway following the existing alignment Pavement reconstruction is anticipated
PA	US 202, Markley Street Southbound (Section 500)	Pre-construction phases of the Markley Street rehabilitation project for Section 500 of US 202 (SR 3020 and Norristown Borough Street) from approximately 700 feet south of Main Street (local street) to Johnson Highway (SR 3017) for a total length of approximately 8,500 linear feet, and on Johnson Highway (SR 3017) from Markley Street to Powell Street (local street) for a total length of approximately 2,200 feet Incorporate all pre-construction phases (UTL and ROW) for MPMS# 80021 (Section 510) and 80022 (Section 520), which will be used for the respective construction contracts
PA	US 202, Morris Road to Swedesford Road (65S)	Widen US 202 from 2 lanes to 5 lanes in this 2.6 mile section Add a center turn lane where required and a new bridge over the Wissahickon Creek with a wider single-span structure and equestrian path beneath the roadway Improve intersections at Morris Rd., Sumneytown Pk., and Swedesford Rd Integrate a coordinated ITS and traffic signal operating system Designed under section 650 (section 600 was designed in two sections, 610 and 650, and will be built in four sections: Johnson Highway to Township Line Road; Township Line Road to Morris Road; Morris Rd. to Swedesford; Swedesford Road to PA 309
PA	US 202, Swedesford Road to PA 29	Reconstruct and widen US 202 on existing alignment for approximately 4.2 miles of limited access highway between Valley Creek Bridge (between Route 29 and Route 401 interchanges) and North Valley Road to add two additional travel lanes and provide a total of three 12' travel lanes in each direction and wider shoulders that improve safety Modify Route 29 interchange Improvements will help to accommodate pedestrians and bicyclists using the future Chester Valley Trail and other municipal trails Construct SWM basins and installation of sound barrier walls

State	Name	Description
PA	US 202, Township Line Road to Morris Road (61N)	<p>Widen US 202 approximately 2.3 miles from two lanes to five lanes including a center turn lane in this section of US 202 between Township Line Road and Morris Road In East Norriton & Whitpain Twps</p> <p>Improve intersections along the project by adding lanes where necessary on both the mainline and side roads to provide adequate intersection capacities</p> <p>Install new traffic signals</p> <p>Integrate coordinated ITS and traffic signal operating system</p> <p>Takes place at two offline intersections, North Wales Rd./Township Line Rd. and Arch Rd./Township Line Rd. to improve traffic flow through the area during construction</p> <p>Designed under Section 610</p>
PA	US 322 Final Design	<p>Serves as the final design phase for corridor improvements to Route 322/Conchester Road</p> <p>Options being considered would enable US 322 to meet future traffic needs and include widening the road to four lanes, the construction of jughandles, and the installation of median barriers</p>
PA	US 322, Featherbed Lane to I-95	<p>Widen and improve SR 322 to a four lane typical section with a median barrier from east of Mattson Road/Featherbed Lane near Clayton Park and the Concord Township/Bethel Township line, through Bethel Township, to just west of the CSX Bridge in Upper Chichester Township</p> <p>Widened existing two lane section of SR 322 to 4 or 5 lanes with jughandles or exclusive left turn lanes to accommodate left turns at intersections</p> <p>Add a fifth lane between Chelsea Parkway and Cherry Tree Road to accommodate left turns into and out of the adjacent commercial properties</p>
PA	US 322, US 1 to Featherbed Lane	<p>Widen SR 322 (currently two lanes) to a four lane typical section with a median barrier from US Route 1 in Concord Township to east of Mattson Road/Featherbed Lane near Clayton Park and the Bethel Township line</p>
PA	US 422 Expressway Reconstruction, Chester and Montgomery (M1A)	<p>Reconstruct approximately one mile of expressway on both existing and new alignment meeting current design standards for horizontal radii, shoulder widths, and vertical clearance with a 9 foot left shoulder, 2-12 foot lanes, and a 12 foot right shoulder in each direction of travel</p> <p>Reconstruct three (3) bridges carrying SR 0422 over the Schuylkill River, Norfolk Southern Railroad Spur, and Norfolk Southern Railroad Mainline (24.0 Sufficiency Rating), and one (1) bridge carrying Armand Hammer Blvd. over SR 0422 providing 16'-6" of vertical clearance</p>

State	Name	Description
PA	US 422, (New) Expressway Bridge Over Schuylkill River (SRB) - Part 3 of River Crossing Complex	Construct new US 422 bridge structure over the Schuylkill River for westbound traffic Replace existing US 422 structure over the Schuylkill River (sufficiency rating 44.1) for eastbound traffic Replace US 422 structure over Indian Lane (sufficiency rating 69.1) Replace US 422 structure over the Schuylkill River Trail (sufficiency rating 62.5) Replacement PA 23 structure over US 422 (sufficiency rating 24.8) Construct new flyover ramp from US 422 eastbound to PA 23 (See MPMS #16489 for the Old Betzwood Bridge)
PA	US 422, Schuylkill River Bridge Over Schuylkill River (M2A-Stowe)	Reconstruct bridge carrying SR 0422 over Schuylkill River to repair the fracture crack that was found in 2003 and required closure of the bridge followed by the emergency repair work New structure will have a multi-girder superstructure Structural improvements also include the replacement and extension of two (2) culverts
PA	US 422/PA 363 Interchange Reconstruction (4TR) - Part 2 of River Crossing Complex	Part (2) of the "River Crossing Complex," which is a complex area of roadways, interchanges, intersections, and bridges in and around the Valley Forge National Historic Park Environmental clearance for various components undertaken through MPMS #46954 PA 23/US 422 Interchange and North Gulph Road Improvements (MPMS #66952) US 422/PA 363 Interchange, including providing movements to/from the west (MPMS #64796) along with the Adams Ave west-bound off ramp and west-bound on-ramp from PA 363 Trooper Road and west-bound off-ramp to Adams Avenue US 422 Exwy Bridge over the Schuylkill River, replacement of the existing bridge (MPMS #70197), and new parallel four (4) lane bridge US 422 Widening for 1.8 miles from PA-363 interchange to the US-202 interchange Rebuild Old Betzwood Bridge Bike/Pedestrian Trail as a bike/pedestrian bridge only (MPMS# 16703) Early action interim project to provide timely and effective relief to WB afternoon congestion until the long range projects can fully advance (MPMS #74648)
PA	W Girard Ave O/CSX (Bridge)	Rehab/replace state bridge over the CSX rail line on US 30 (W Girard Avenue) between Parkside Avenue and the Schuylkill Expressway in Philadelphia Structurally Deficient bridge breakout project from MPMS #88706

State	Name	Description
PA	Woodbourne Road/Lincoln Highway Intersection Improvements	Add through lanes, right turn lanes, and left turn lanes along Woodbourne Road from Terrace Road to First Street Modify traffic signal for intersections of Old Lincoln Highway and Lincoln Highway with Woodbourne Road Add right turn lanes and lengthen existing left turn lanes
NJ	Atlantic City Expressway Widening	Widen from 5 lanes to 6 lanes from Route 73 to Atlantic County
NJ	Delancy Street, Avenue I to Avenue P	1.1 miles improvements to reduce flooding, raise level of service, for passenger and freight traffic near Routes 1&9
NJ	Garden State Parkway Interchange 91 improvements	Add complete set of on/off ramps to the GSP at exit 91 to increase access to highway, reduce detour driving
NJ	Garden State Parkway Interchange Improvements in Cape May	Improve intersections to address grade-separated interchanges at Shell Bay Ave, Stone Harbor Boulevard, and Crest Haven Road
NJ	Garden State Parkway Widening exits 63-80	Widen Garden State Parkway exits 63-80
NJ	I-295 / NJ 42 / I-76 Connection	Eliminate shared road portion of I-295 and NJ 42 to improve freight flow and relieve congestion
NJ	I-295 at NJ 38	Add missing movement to interchange at NJ 38
NJ	NJ 42 Freeways	Reconstruct NJ 42 from I-295 to AC Expressway
NJ	NJ Turnpike Widening from Exit 6 through Exit 9	Continue separated highway to Exit 6 for PA turnpike to add needed passenger and freight capacity on the highway and improve connection to PA Turnpike
NJ	NJ Turnpike Widening from the Delaware Memorial Bridge to Exit 4	Add one lane in each direction to complete a minimum of three lanes in each direction for the length of the NJ Turnpike
NJ	Garden State Parkway Interchange 125 (Phase 1)	Parkway Interchange 125 (Phase 1)
NJ	Garden State Parkway Interchange 142 Improvements	Parkway Interchange 142 Improvements
NJ	Portway, Passaic River Crossing - freight	Portway, Passaic River Crossing - freight

State	Name	Description
NJ	Route 295/42/I-76 Direct Connection	Construct direct connection between 295 and 42 and 76 Widen I-76
NJ	Route 295/42/I-76 Direct Connection ITS	Integrate ITS with 295/42/76 interchanges for congestion relief
NJ	Route 78 PA State Line to NJ Turnpike ITS Improvements	Route 78 PA State Line to NJ Turnpike ITS Improvements
NJ	Route 78, Pittstown Road (Exit 15) Interchange Improvements	Improve intersections to relieve on/off ramp congestion and queuing traffic
NJ	Route 80, route 46 to West of Change Bridge Road, ITS Improvements	Route 80, route 46 to West of Change Bridge Road, ITS Improvements
NJ	Route 80-Route 15 Interchange	Connect missing links to allow all movements
NJ	Scudder Falls Bridge (I-95) Reconstruction and Widening	Widen bridge to 3 lanes in each direction, make improvements to interchange with NJ 29
NJ/NY	Goethals Bridge Replacement Project	Replace functionally obsolete crossing; the bridge carries I-278 and connects directly with I-95/NJ Turnpike
NY	River Parkway at Gun Hill Road Realignment	Realign Bronx River Parkway Mainline to Gun Hill Rd exit Construct deceleration lane in NB direction Widen existing ramps to two lanes Install concrete median barrier to reduce accidents and improve safety
NY	Atlantic Avenue Extension	Design and construct Atlantic Ave extension to improve access to Jamaica Station Transit Hub at Sutphin Blvd, from VWE Extend Atlantic Ave through an existing mapped ROW
NY	Elm Street Bypass: Colonie	Construct new two-lane road from NY32 to Lansing Lane, Maplewood, Town of Colonie, Albany County
NY	I-87 Exit3-4 Improvement - Part 1	Reconstruct Exit 4 to improve access to Wolf RD/Airport and address operational issues
NY	I-90 Exist 8 Connector Phase 2 ITS Demonstration	Install ITS Currently estimated to cost \$750M Additional funding dependent on identifying another fund source

State	Name	Description
NY	Kew Gardens / VWE Interchange Improvements	Rehabilitate bridges Widen Van Wyck Expressway for operational and safety improvements in Queens County
NY	Nassau County Incident Management	Install incident management system to maximize efficiency of traffic flow along major arterials
NY	Route 17 Upgrade to I-86: Exit 130A to Exit 131	Add ramp from Route 32 SB to Route 17 EB
MA	Bridge Street in Salem	Widen Bridge Street (Route 1A) from Flint Street to Washington Street to two lanes in each direction
MA	I-93/I-95 Interchange in Reading, Stoneham, Wakefield, & Woburn	Improve safety at the junction of Interstate 93 and Interstate 95, through multiple highway and transit improvements that brings infrastructure renewal and adds local transit capacity
MA	I-93/I-95 Interchange in Canton	Replace and construct ramps Construction connection road between I-95 and I-93 Widen Dedham St. to 4 and 5 lanes
MA	I-93/Route 3 Interchange in Braintree	Addresses mobility and safety issues of the Braintree Split
MA	I-95 Northbound/ Dedham St. Ramp/ Dedham St. Corridor in Canton	Construct a new ramp from Interstate 95 northbound to Dedham Street in Canton
MA	Interchanges at I-495/I-90 and I-495/Route 9	Interchanges at Interstate 495/Interstate 90 and Interstate 495/Route 9 will be improved to address existing and future safety and capacity deficiencies.
MA	Lowell Junction Interchange	Construct a new highway interchange on Interstate 93 between Exit 42 (Dascomb Road) and Exit 41 (Route 125) to provide improved access from Interstate 93 to the industrial and office properties in the Lowell Junction area (at the Tewksbury-Wilmington border)
MA	Middlesex Turnpike Improvements, Phase III in Bedford, Burlington, & Billerica	Widen Middlesex Turnpike from 800 feet north of Plank Street to 900 feet north of Manning Road to provide two lanes in each direction, making it a four-lane highway with a median
MA	Montvale Avenue in Woburn	Arterial and intersection improvement project along Montvale Avenue from Central Street to east of Washington Street in the City of Woburn

State	Name	Description
MA	Needham St./ Highland Ave./ Winchester Steet Newton & Needham	Needham Street will remain a three-lane cross-section from the Needham Street/ Winchester Street/Dedham Street intersection in Newton to the bridge over the Charles River at the Needham town line
MA	Route 1 Improvements in Malden, Revere, Saugus	Widen Route 1 from four to six lanes between Copeland Circle (Route 60) and Route 99
MA	Route 126/Route 135 Grade Separation in Framingham	Construct a 700-foot, below-grade underpass (one travel lane in each direction) from Park Street to Irving Street, allowing through traffic on Route 126 (Concord Street) to pass underneath Route 135 (Waverly Street) and the railroad tracks
MA	Route 18 Capacity Improvements in Weymouth	Widen Route 18 to two continuous lanes in each direction (with four-foot shoulders) between Highland Place/Charmada Road (south of Middle/West Street) in Weymouth and Route 139 in Abington
MA	Route 53 Final Phase in Hanover	Widen Route 53 from two to four lanes in Hanover between Route 3 and Route 123, a distance of 0.26 mile
MA	Sullivan Sq./ Rutherford Avenue in Boston	Transform the corridor’s highway-like design into a multimodal urban boulevard Rutherford Avenue corridor in the Charlestown neighborhood of Boston extends about 1.5 miles from the North Washington Street Bridge to the Sullivan Square MBTA Orange Line station
MA	Trapelo Road in Belmont	Reconstruct Trapelo Road from the Cambridge city line to Waverly Oaks Road (Route 60), a length of 2.5 miles to provide traffic signal, sidewalk, bicycle, and streetscape improvements

State	Name	Description
PA	Philadelphia International Airport Capacity Enhancement Program Automated people mover	Construct new Automated People Mover for transport between terminals and parking facilities
PA	Philadelphia International Airport Capacity Enhancement Program Enlargement of existing parking garages A, C, and D	Enlarge existing parking garages A, C, and D Reconfigure economy parking lot Construct new centralized ground transportation center Consolidate rental car facilities
PA	Philadelphia International Airport Capacity Enhancement Program New Runway 9R-27L	Construct new Runway 9R-27L, 1,600 feet south of renamed Runway 9C-27C 9,103 feet long and 150 feet wide Engineered Materials Arresting System (EMAS) at west end to reduce impacts to the Delaware River Associated taxiway improvements Runway lighting
PA	Philadelphia International Airport Capacity Enhancement Program New Runway and Extensions to Existing Runway 8-26	Extend Runway 8-26 by 2,000 feet to the east, for a total length of 7,000 feet Engineered Materials Arresting System (EMAS) at east end Associated taxiway improvements Relocate approach lighting system on runway end
PA	Philadelphia International Airport Capacity Enhancement Program New Runway and Extensions to Existing Runway 9R-27L	Extend Runway 9R-27L (to be renamed Runway 9C-27C) to the east by 1,500 feet, to a total length of 12,000 feet Associated taxiway improvements Relocate approach lighting system on runway end
PA	Philadelphia International Airport Capacity Enhancement Program Upgrade and Reconfigure Existing Terminal Complex	Expand Terminal D-E Expand Terminal F Construct new Terminal G and Commuter Terminal
NJ	Newark Airport Terminal A Modernization, Expansion, & Structural Parking	Modernize and expand Terminal A Add structural parking
NJ	AirTrain/Newark Replacement	Replace existing on-airport automated people mover Enhance system capacity Coordinate w/ on-airport improvements and planning for PATH-EWR/RLS extension
NY	LaGuardia Airport Central Terminal B (CTB) Modernization	Modernize the Central Terminal Building at LGA
CT	Bradley International Airport CONRAC (Consolidated Rental Car facility)	35% Design of CONRAC/Garage at BDL
CT	Bradley International Airport Terminal Expansion	Construct 11 new gates at BDL

State	Name	Description
CT	Bradley International Closure of Cross-Runway	Close cross-runway 119 to eliminate crossing at BDL
RI	T.F. Green Airport	Extend Runway 5-23 Expand Runway 16-34 Runway Safety Area Relocate Taxiway C farther from Runway 16-34 Construct up to 7 new gates
VA	Dulles International Airport Fifth Runway (Runway 12R-30L)	Construct fifth runway parallel to existing runway 12-30 along the south side of Dulles Airport property roughly parallel to U.S. 50, west of Chantilly ~10,500 feet long and 150 feet wide named Runway 12R-30L (existing parallel runway will be renamed 12L-30R)

State	Name	Description
MD	Dundalk Marine Terminal, Phase 1 Rehabilitation	Rehabilitate berths 1-6, which are essential to the Port because they handle a variety of cargoes, i.e. automobiles, forest products, roll-on, roll-off and other break-bulk (van-packs)
MD	Masonville Berth Construction	Construct new structure to replace Fairfield Marine Terminal Pier 4, a deficient pier of World War II vintage that is currently at the end of its useful life and the sole MPA berth for two large auto terminals (146 acres) Baltimore is expected to finish calendar year 2011 as #1 in the nation for auto exports, and within 20 years of the Masonville Vessel Berth construction, auto movements over the Berth is predicted to grow from 120,000 to 230,000 units Convert Masonville DCMF into a marine terminal
PA	South Philadelphia Port Relocation	Assist in the relocation of the Packer Avenue Marine Terminal Gate in order to remove conflicting traffic movements on Delaware Avenue, enhance safety, enhance security, and reduce confusion PRPA is currently reviewing options such as the partial or full closure of the east-side service road, commonly called 'Old Delaware Avenue', south of Oregon Avenue, and the location of gatehouses/checkpoints on currently-unused roadways and/or parcels are being explored
NJ	Delaware River Deepening	Deepen river to allow larger ships to access Ports in PA and NJ
NJ	Port Jersey Intermodal (Rail) Access	This project continues the Port Authority's intermodal rail initiative by providing an intermodal container transfer facility in support of the terminal operations at the Port Jersey Marine Terminal.
MA	Conley Terminal Access Road	Construct new terminal access road that will remove container truck traffic from residential East First Street and portions of Summer Street in South Boston
MA	New Russia Wharf Ferry Terminal and Route in Boston	Implement new ferry route in Boston Inner Harbor, from the existing terminal at the Charlestown Navy Yard to a new terminal at Russia Wharf, which is located in Fort Point Channel at Congress Street

APPENDIX C
NO ACTION ALTERNATIVE RELATED PROJECTS LIST

State	Name	Description
Fully or Partially Funded Projects Located in a Connecting Corridor and Not on the NEC		

Connecting Corridor - Springfield Line

CT	New Haven-Hartford-Springfield Rail Program Phases 1, 2 and 3A	Construction of 10 miles of second track in between New Haven and Meriden, CT, to increase capacity and improve performance on the New Haven-Springfield corridor.
MA	Springfield MA Union Station Project	<p>Integrate multiple transit modes (bus, Amtrak, commuter rail, taxi, bicycle, and pedestrian)</p> <p>Restore Terminal Building and its central concourse. Remove Baggage Building and construct a 24-bay bus terminal and a 146-space parking garage, with 4 additional bus bays on adjacent site.</p> <p>Reopen and restore passenger tunnel linking the terminal building to rail boarding platforms and pedestrian access to the downtown</p> <p>Provide new stair and elevator access from re-opened passenger tunnel leading to passenger rail boarding platforms</p>

Connecting Corridor - Keystone

PA	Keystone Corridor - Grade Crossing Elimination	Final design and construction for the elimination of four public, at-grade crossings on the Philadelphia-Harrisburg Keystone Corridor to improve speed, reliability, and safety.
PA	Keystone Corridor- Interlocking Design	Engineering and environmental analysis for the replacement and reconfiguration of tracks and improvements to signal and train control along the Philadelphia-Harrisburg Keystone Corridor to improve speed, reliability, and on-time performance.
PA	Keystone Corridor - State Interlocking Improvements	The final design and construction of an upgraded "State" interlocking near Harrisburg, PA. New interlocking will further decrease trip time on the corridor, increase on-time performance, and improve service reliability.
PA	Keystone Corridor - Automatic Block Signaling/Central Control	Preliminary engineering and project-level NEPA (environmental) work for the installation of Automatic Block Signaling and Centralized Traffic Control on a segment of the Philadelphia-Harrisburg Keystone Corridor to improve speed, reliability, and on-time performance.
PA	Paoli Transportation Center	Develop, engineer, and construct new multi-modal transportation center in Paoli, Chester County, located on the Paoli/Thorndale Line serving SEPTA and Amtrak trains. Phase I will make the existing station ADA accessible and includes a pedestrian overpass, three elevators, and a new high level center platform. Phase II includes an intermodal station complex complete with an additional high-level platform on the outbound side, waiting area and passenger amenities; enhanced bus facilities; and a 600-plus space commuter parking garage.

State	Name	Description
PA	Ardmore Transportation Center	The Ardmore Station improvement project will be completed in two phases. Phase I (funded) includes construction of high level boarding platforms, tunnel ADA improvements, elevators, stairs, and ramps to access the platforms; canopies and shelters; passenger amenities; improved lighting; landscaping and site improvements; new signage and paving; and new underground stormwater system in the existing Township parking lot. Demolition of the existing Amtrak station building to facilitate the installation of high level platforms. Phase II (unfunded) will include the construction of an ADA accessible, multi-level parking garage with approximately 300-500 spaces and an enclosed space for ticketing and passenger waiting.
PA	Exton Station	Construction of high-level platforms, a station building, bus circulation loops, and a multi-level parking garage at Exton Station on the Paoli-Thorndale Regional Rail Line. Phase 1 (funded) will make the station ADA compliant and include the construction of high-level platforms with canopies and wind screens, a station building, and new lighting, signage, security features, and passenger amenities. Phase 2 (partially funded) includes a fully accessible, multi-level, parking garage with pathways to the station platforms and bus circulation loops with shelters.
PA	Villanova Intermodal Station	Modernization of Villanova station. Phase 1 (funded) includes the construction of pedestrian underpass, ramps, stairs, and storm water management. Phase 2 (partially funded) will make the station fully ADA accessible and includes the construction of high-level platforms with canopies, building exterior improvements, new signage, lighting, passenger amenities, and landscaping.
PA	Middletown Station	Construction of new Amtrak station at Middletown to replace the existing station on a site west of the current station. Project will include new straight, high-level platforms.
PA	Mt. Joy Station	Construction of a new Mount Joy Train Station located in Mount Joy, PA. This station will replace the existing station and include high-level platforms and ADA accessibility.
PA	Coatesville Train Station Rehabilitation	Rehabilitate existing Amtrak train station as part of the Transportation Enhancements program and \$1 million specially earmarked FTA funds

Connecting Corridor - Empire

NY	Empire Corridor Planning	Engineering and environmental analysis to support improved passenger rail service between Albany and Penn Station NY (Empire South), Albany and Niagara Falls, NY (Empire West), and from east of Buffalo-Exchange Street Station to Niagara Falls (Niagara Branch). The program of high speed rail improvements include increased speeds and reduced trip times.
NY	Albany-Rensselaer Station 4th Track and Related Improvements (NY-ESC-HP - Empire Corridor Capacity Improvement - Section 1)	This project will construct a 4th passenger loading track, extending both loading tracks to two platforms, and by realigning existing tracks, turnouts and the signal system along the 1 mile of the track network at the Station. This project will also remove the 30 mph speed restriction in the vicinity of the station.

State	Name	Description
NY	Hudson Subdivision Signal Reliability Improvements (All Phases)	The existing signal system is nearly 30 years old, and frequent outages occur during inclement weather affecting all trains between Albany and NYC. This project will increase reliability of signal system by replacing signals and burying the signal cable between Poughkeepsie and Red Hook. The project will be constructed in phases; Phase 1 replaces 19 miles in the Towns of Poughkeepsie, Hyde Park, Rhinebeck and Red Hook (Barrytown). The final phase will replace the final 44 miles of the Hudson Line signal system beginning in the town of Redhook (Barrytown), Dutchess County N.Y. and extends to the Village of Castleton-On-Hudson, Rensselaer County, N.Y.
NY	Highway/Rail Grade Crossing Improvements (ESC3)	This project will upgrade and/or install warning devices at thirteen highway-rail at grade crossings (defined in the Construction Information page), to include 12" LED flashers, gates and motors, and electronic bells. In some locations, new circuitry will be installed, and minor adjacent highway improvements will be made.
NY	Albany to Schenectady 2nd Main Track (ESC10)	This project will reduce delay and improve reliability for passenger rail on the Empire Corridor. The project consists of constructing a second main track between Schenectady and the west end of the Livingston Ave Bridge in Albany, upgrading existing grade crossings and warning device systems.
NY	Schenectady Station 2nd Track & Platform Improvements (NY-ESC-HP - Empire Corridor Capacity Improvement - Section 3)	The Schenectady Train station was built in 1970 by the New York State Department of Transportation. This project will replace the existing Schenectady station with a new station, station tracks and platform, including repairing structural and track deterioration, addressing state of good repair, and ensuring ADA compliance.
NY	Empire Corridor - Ongoing Normal Replacement	The normal replacement rate is the annual funding needed to keep existing assets maintained and replaced within their useful life. The normal replacement rate is a sufficient level of investment only if all assets start in a state of good repair.
NY	Livingston Avenue Bridge (ESC15)	Preliminary engineering for the eventual replacement of Livingston Avenue bridge, crossing the Hudson River between Rensselaer and Albany Built more than 100 years ago, the bridge does not meet current railroad bridge design standards. The deterioration of the bridge limits trains to crossing one at a time at 15 mph. The swing span mechanism, which allows taller ships to pass, is unpredictable and continues to deteriorate, leading to increased delays to both rail and marine traffic. (Funded through preliminary engineering only.)

Connecting Corridor - MTA - Metro-North Hudson Line

NY	Metro-North Railroad Power and Signals Resiliency	The New York Metropolitan Transportation Authority (MTA) will receive funding to make flood protections for the Metro-North Railroad Hudson River Line and other facilities.
NY	Metro-North Hudson Line - Ongoing Normal Replacement	C&S Program, Track Program, Stations Program, Tunnel Program, Yard Track Program, Bridge Program, Miscellaneous Safety/Administration (e.g., environmental batement/remediation, security initiatives, program administration, insurance).

State	Name	Description
NY	Metro-North Hudson Line High-Capacity Signal System Replacement (Harmon to Poughkeepsie)	Replace present signal system, from Croton-Harmon to Poughkeepsie, with new high-capacity and performance signal system providing additional signal aspects
NY	Hudson Line - Positive Train Control (Wayside) - CP 12-MP 75.76 (MTA Owned)	Upgrade signal system along the Metro-North Hudson Line to meet 2008 federal rail safety law that requires installation of Positive Train Control.
NY	Hudson Line - Harmon Shop & Yard Upgrade - Phase V, Stage 2	Construction of the new Running Repair and Support Shop facility (Phase V; Stage 2) will complete the replacement of the functionally and physically obsolete existing facility. This will modernize the 100+ year-old Harmon Electric shop and yard complex to support an expanded fleet of electric and diesel hauled rail cars.
NY	Hudson Line - Upper Hudson Line Stations Improvements	Component-based renewal work at multiple stations on the Metro-North Hudson Line.

Connecting Corridor - DC - Richmond VA

DC/VA	Long Bridge Preliminary Engineering-NEPA Study	Engineering and environmental analysis for the replacement and/or rehabilitation of the CSX-owned Long Bridge between Washington, DC and Arlington, VA, potentially incorporating multimodal uses. Rehab of existing 2-track bridge assumed in Alternative 1; replacement with 4-track corridor between CP Virginia and AF Interlocking assumed in Alternatives 2 and 3
VA	Southeast High-Speed Rail (SEHSR) Corridor	Engineering and environmental analysis for the development of the Southeast High-Speed Rail Corridor between Washington, D.C. and Richmond, VA
VA	Positive Train Control - Washington to Richmond	Install positive train control to meet federal mandate
VA	Arkendale to Powell's Creek Third Track	Final design and construction of 11.4 miles of third track from Arekndal to Powell's Creek on the Washington to Richmond segment of the Southeast HSR Corridor.
VA	CSX RF&P Rail Corridor Rail Corridor Third Track - Phase 2	Track, signal and switch work and second platforms at Leeland Road and Brooke Stations, which will support capacity expansion, operational flexibility and service expansion related to the construction of the new VRE Potomac Shores Station.
VA	VRE - Stations and Facilities	Involves the addition of second platforms, canopy and platform extensions, replacement of signage and other related improvements at various VRE stations in order to keep the stations in good repair. This work will be done at various stations including Fredericksburg, Leeland Road, Brooke, Manassas, Manassas Park, Woodbridge, Rippon, Rolling Road, Broad Run, Burke and other stations to be determined.

State	Name	Description
VA	VRE - Tracks & Storage Yards	As additional cars are added to accommodate ridership demand, storage yards and maintenance facilities must be obtained and/or upgraded. Improvements to the yards and maintenance facilities will allow additional maintenance to be performed by VRE contractors and additional vehicles to be stored.
VA	VRE - Track Lease Improvements	Provides capitalized access fees in the form of long term and related capital improvements on the railroad systems that VRE operates on railroad systems owned by Amtrak, CSX, and Norfolk Southern.
VA	VRE - Potomac Shores Station	Design and construction of a new station to support a new Transit Oriented Development at Potomac Shores, VA.

Unfunded Projects along the NEC with Ongoing or Completed NEPA/PE

DC	Washington Union Station Master Plan	The Union Station Master Plan sets out a framework for rebuilding and expanding the station over the next 20 years. It provides a long-term, multi-phased vision for increased capacity with additional tracks and wider all high-level platforms; new amenities for passengers including sweeping modern concourses and retail spaces; and large-scale real estate development above the station's tracks.
MD	Amtrak B&P Tunnel Rehabilitation/Replacement	Replacement and/or rehabilitation of the Baltimore & Potomac (B&P) Tunnel in Baltimore, MD, on the Northeast Corridor. (ARRA/HSIPR Program currently funding preliminary engineering and environmental analysis.)
MD	Susquehanna Bridge Rehabilitation/Replacement	Replacement and/or rehabilitation of the Susquehanna River Bridge in Maryland, a chokepoint that precludes capacity increases on the Northeast Corridor. Engineering and environmental analysis is currently funded.
MD	BWI Thurgood Marshall Airport Station - New Station Building and Fourth Track	Construct new station building to meet ADA/SGR requirements and engineering and environmental analysis to study the construction of an additional track to approximately nine miles of existing tracks surrounding the BWI station, and station expansion.
NJ	Hunter Flyover	Construction of a grade-separated crossing of the Raritan Valley Line trains that would allow RVL to cross NEC tracks without interfering with any trains on Tracks 4, 3 and 2. It would permit trains to operate at faster speeds and provide substantial additional capacity, which could be used to support increased train volumes when required. (Engineering and design is currently funded.)
NJ/NJ	Gateway Program - ROW Preservation	Construction of concrete casing beneath the Hudson Yards to preserve the right of way for future Gateway tunnels (trans-Hudson tunnels)

State	Name	Description
NJ/NY	Portal Bridge Replacement	Replacement of the existing swing-bridge over the Hackensack River with a fixed-span bridge, plus track reconfiguration on either end of the bridge where a choke point exists on the busiest portion (Newark, NJ to New York, NY) of the Northeast Corridor. ARRA/HSIPR program funded final design. NJT is funding early-action activities.
NY/NJ	Gateway Program - Tunnel Resiliency	Two new tunnels under the Hudson River connecting Allied Junction to A Yard at Penn Station New York (PSNY) to replace the existing North River Tunnels which are in need of repair.
NY/NJ	Gateway Program - Capacity Improvements	Restores service service to the original North River tunnels to create four tracks into PSNY; adds capacity at PSNY to accommodate additional trains; adds capacity from Allied Junction as far west as Elizabeth, NJ
NY	Pelham Bay Bridge Replacement	Replacement of existing, movable bridge with with a new high-level fixed bridge that will offer enough clearance for boats to pass below. A new fixed bridge will increase reliability and may offer opportunities to increase capacity for Amtrak and proposed Metro-North service
NY	Moynihan Phase 2	The Farley Post Office will be converted into a full-scale, intercity passenger rail terminal, including the construction of ticketing facilities, waiting areas, retail amenities, and access points to tracks and platforms.
NY	Sunnyside Yard Facility Upgrade	Upgrade Sunnyside Yard to improve the efficiency of this major shared use facility for NJT and Amtrak, while building space to accommodate a proposed lengthening of Acela trains
NY	Penn Station Access Improvements	The proposed Capital Program includes design and construction of new infrastructure and completion of specifications for rolling stock to operate Metro-North Railroad service on the New Haven Line into Penn Station NY via Amtrak’s Hell Gate Line
CT	New Haven Line Bridge Replacement Projects	Replacement of New Haven Line Bridges (Devon, Cos Cob, and Saugatuck)
RI	Providence Station Improvement Project PE/NEPA	Engineering and environmental analysis for rehabilitation of the intercity rail station to improve passenger accessibility on the Northeast Corridor
RI	Pawtucket/Central Falls Commuter Rail Station	The Rhode Island Department of Transportation (RIDOT), in cooperation with the City of Pawtucket, is considering alternatives to reintroduce commuter rail service into Pawtucket. The potential station would be located on Amtrak’s Northeast Corridor (NEC) and the Massachusetts Bay Transportation Authority’s (MBTA’s) Providence commuter rail line.
MA	Boston South Station Expansion and Layover Facility Project	Expansion of station and storage capacity in Boston, MA, to address anticipated capacity needs for intercity rail operations in a facility shared with commuter rail traffic. (ARRA/HSIPR program funding engineering and environmental analysis)

State	Name	Description
Fully or Partially Funded Transit/Freight Projects Located Off of or Connecting to the NEC		
PA	Levittown Intermodal Facility Improvements	Phase 1 of the project includes construction of intersection improvements at Levittown Parkway and Rt. 13 and relocation of utilities. Construction of the southern portion of the inbound parking lot and new entrance driveway and reconfiguration of the existing outbound parking lot
NJ	NJ Transit - Multiple Resiliency Projects in Response to Hurricane Sandy	Hoboken Long Slip Flood Protection; NJ TRANSIT Raritan River Drawbridge Replacement Project; and Train Controls - Wayside Signals, Power & Communication Resiliency Project.
NJ	Lackawanna Cutoff Minimal Operating Segment (MOS) Project	Reconstruct line including track and signal improvements to approximately 88 miles of right of way, new stations, parking facilities, a train storage yard, and additional rail rolling stock. The first phase of the project (also known as the Minimal Operating Segment, MOS) is a 7.3 mile segment from Port Morris Yard to a new passenger station at Andover, NJ.
NJ	PATH Extension to Newark Liberty International Airport Rail Link Station	Proposed extension of PATH from its present terminus at Newark Penn Station to Newark Liberty International Airport's Rail Link Station (RLS) to enhance airport access for communities served by PATH. The project concept includes construction of new platforms and associated station passenger infrastructure with potential multimodal transit connections adjacent to the existing RLS, relocation of a rail storage yard in the vicinity of the RLS, and modifications at Newark Penn Station to accommodate bidirectional passenger flow as well as limited vertical circulation improvements. The proposed alignment utilizes a portion of the NEC ROW, requires planning coordination with potential Amtrak fifth-track project.
NJ/NY	Cross Harbor Freight Program Tier 1 EIS	NEPA Analysis to evaluate alternatives to improve the movement of freight across New York harbor between the east-of-Hudson and west-of-Hudson regions, including No Action, Waterborne, and Rail Tunnel Alternatives
NY	Flood Resiliency for Long Island City Yard (LIRR)	Construction of flood protections for the Long Island Rail Road Long Island City yard, which is located within the 100-year flood hazard area. This yard serves diesel and electric trains, adding to resilience.
CT	New England Central Railroad Freight Rail Project	The project will complete state of good repair improvements and the upgrade of rail and track infrastructure to accommodate national standard 286,000-pound (286K) gross weight rail freight cars on the 55 miles of track running through the municipalities of New London, Waterford, Montville, Norwich, Franklin, Lebanon, Windham, Mansfield, Willington, and Stafford in eastern Connecticut.

State	Name	Description
MA	Merrimack River Bridge Rehabilitation	Rehabilitation of three bridges that provide an integral connection from Boston to Haverhill and other northern locations, carry two railroad tracks over the Merrimack River in the city of Haverhill, and serve as an important corridor for passenger service, including the MBTA Commuter Rail - Haverhill Line and Amtrak's "Downeaster" train and Pan Am freight service
MA	South Coast Rail	The plan provides resources for continued design, permitting as well as "early action" improvements to rail ties, existing signal systems, crossings and several bridges in the South Coast Region. These early action investments will improve the reliability of existing freight service in the South Coast while contributing to future passenger rail service.
MA	Fairmount Line Improvement Project	Rehabilitate existing Uphams Corner and Morton Street stations Construct four new stations—Newmarket, Four Corners, Talbot Avenue, and Blue Hill Avenue Reconstruct six existing railroad bridges (located over Columbia Road, Quincy Street, Massachusetts Avenue, Talbot Avenue, Woodrow Avenue, and the Neponset River) Construct new interlocking and an upgraded signal system (required to advance the bridge reconstruction work) Upgrades will enhance future service, allowing for increased frequency on the line
MA	MBTA Worcester Line Improvements/Service Expansion	Increase commuter rail service on the Framingham/Worcester line between Boston and Worcester with the addition of three new inbound and three new outbound trains between the two cities for a total of 31 stops arriving or departing Worcester station Agreement between CSX and the Commonwealth provides the Commonwealth ownership of the rail tracks and control of operations along the Framingham/Worcester line, allowing greater opportunities for MassDOT to not only improve service, but also increase service between Boston and Worcester