



TIER 1 FINAL ENVIRONMENTAL IMPACT STATEMENT
VOLUME 1 (PREFERRED ALTERNATIVE)

7.9 Cultural Resources and Historic Properties

7.9 CULTURAL RESOURCES AND HISTORIC PROPERTIES

7.9.1 Introduction

This chapter describes known cultural resources and historic properties in the Study Area and identifies the potential for the existing Northeast Corridor (NEC) and Preferred Alternative to affect these properties. The Federal Railroad Administration (FRA) also considered cultural resources and historic properties as part of the assessment of Visual and Aesthetic Resources (Chapter 7.10), Noise and Vibration (Chapter 7.12), and as part of the Section 4(f) evaluation (Chapter 7.16) of this Tier 1 Final Environmental Impact Statement (Tier 1 Final EIS). Volume 2, Chapter 7.9, and Appendix E.09 provide resource definitions and the effects-assessment methodology.

7.9.1.1 Definition of Resources

For this Tier 1 Final EIS, the FRA relied on the Advisory Council on Historic Preservation's (ACHP)¹ and the Council of Environmental Quality (CEQ)² definitions for historic properties and cultural resources. The ACHP defines historic properties as "any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria."³ The CEQ and ACHP define cultural resources to include historic properties "as well as additional resources such as sacred sites, archaeological sites not eligible for the NRHP, and archaeological collections."⁴

The National Register of Historic Places (NRHP) is the official list of the nation's historic places worthy of preservation; it is authorized by the National Historic Preservation Act (NHPA) and maintained by the National Park Service (NPS). The NPS or the ACHP may designate the properties on the NRHP as traditional cultural properties. Tribal resources identified in the NPS 2010 database and the Housing and Urban Development Tribal Directory Assessment Tool database have been used to identify

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- The NEC FUTURE program identified as an "undertaking" under Section 106 of the National Historic Preservation Act.
- The FRA—in consultation with Advisory Council on Historic Preservation, State Historic Preservation Offices, and tribes, and other consulting parties—has developed a Programmatic Agreement to comply with Section 106.
- Analysis of cultural resources informs Section 4(f) analysis.
- Types of effects include loss of or damage to the integrity of cultural resources and historic properties.

¹ The Advisory Council on Historic Preservation is an independent federal agency that promotes the preservation, enhancement, and productive use of our nation's historic resources, and advises the President and Congress on national historic preservation policy. <http://www.achp.gov/aboutachp.html>

² The Council on Environmental Quality coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives. <https://www.whitehouse.gov/administration/eop/ceq/>

³ *Federal Register*, Vol. 65, No. 239, 36 C.F.R. § 800.16(l)(1) (December 2000). Accessed at <https://www.gpo.gov/fdsys/pkg/FR-2000-12-12/pdf/00-31253.pdf#page=29>

⁴ Council on Environmental Quality and Advisory Council on Historic Preservation. (March 2013). *NEPA and NHPA, A Handbook for Integrating NEPA and Section 106*. Retrieved from http://www.achp.gov/docs/NEPA_NHPA_Section_106_Handbook_Mar2013.pdf

counties included as part of this assessment. Some NRHP-listed properties have obtained the highest federal designation of historic significance. The NPS designates them additionally as National Historic Landmarks (NHL) because of their national importance. As a result, they require the most stringent consultation under Section 106 of the NHPA to resolve adverse effects.

For purposes of this Tier 1 analysis, the FRA only evaluated cultural resources and historic properties that were listed in the NRHP. The FRA did not evaluate those resources deemed eligible for listing in the NRHP (National Register–eligible [NRE]) with the exception of rail-related resources along the NEC previously identified by other federal agencies through separate studies (for example, the Hell Gate Bridge and the Wilmington Shop and Yard were both identified as an NRE by the NPS). The FRA considered other cultural and historic resources deemed NRE (such as the Pennsylvania Railroad New York to Philadelphia Historic District) only if such resources were identified through coordination with a State Historic Preservation Officer (SHPO) or federally recognized tribe. This analysis does not include a complete list of State Register resources or those recognized at the local level.

7.9.1.2 Section 106

Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties through a consultation process that includes a SHPO and other parties. Regulations issued by the ACHP (36 CFR Part 800, Protection of Historic Properties) outline the requirements for Section 106 consultation. The regulations define an “undertaking” to include “a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval.”⁵

The FRA has determined that the NEC FUTURE proposed action—the development and adoption of an investment program to improve passenger rail service on the NEC—is an undertaking with the potential to affect historic properties.⁶ Therefore, the FRA is conducting a Section 106 consultation process for NEC FUTURE concurrently with the National Environmental Policy Act process.

The Section 106 consultation process during Tier 1 has included consultation with the Federal Transit Administration (FTA), SHPOs,⁷ the ACHP, federally recognized tribes, and other consulting parties. This process has focused on identification of historic properties listed by the NRHP (“known historic resources”) and identification of the types of potential effects on known historic resources that could occur as a result of Tier 2 undertakings. The FRA identified known historic resources within a preliminary area of potential effects (Preliminary APE), which is intended to include those resources that have the greatest potential to be affected by the Tier 1 EIS Alternatives. The FRA documented the results of this analysis in this chapter of the Tier 1 Final EIS. More-detailed identification of historic

⁵ 36 C.F.R. § 800.16(y)

⁶ This determination is based on FRA’s role in sponsoring and funding the development of the NEC FUTURE investment program and the likelihood that decisions made by the FRA as part of NEC FUTURE will be used to guide future federal funding decisions for projects on the NEC over a period of many years.

⁷ The consulting parties during Tier 1 included the SHPOs from the District of Columbia and Maryland, Delaware, New Jersey, Pennsylvania, New York, Connecticut, Rhode Island, and Massachusetts.

properties, assessments of effects, and resolution of adverse effects will occur as part of Tier 2 analyses for individual Tier 2 project studies.

As part of Section 106 compliance for NEC FUTURE, the FRA has worked with the FTA, SHPOs, ACHP, tribes, and others to develop a Programmatic Agreement; the Programmatic Agreement, establishes the process that will be followed for Section 106 compliance during the environmental review process for Tier 2 project studies. Volume 1, Appendix GG, provides the Programmatic Agreement.

During Tier 2 project studies, the FRA (or another federal agency with Section 106 responsibilities for the particular Tier 2 project study) will determine a project-specific APE and will complete the identification of historic properties, assessment of effects, and resolution of adverse effects for each Tier 2 project study. Consulting parties will be invited to participate in Section 106 consultation for individual Tier 2 project studies, as appropriate, in accordance with the Section 106 regulations and the Programmatic Agreement.

7.9.2 Resource Overview

Cultural resources and historic properties are the physical evidence or places of past human activity that are significant representations of our nation's history. Disturbances to cultural resources and historic properties by modification, destruction, or changes to visual or physical settings can diminish their integrity. Key findings for the analysis of the effects of the NEC FUTURE Preferred Alternative on cultural resources and historic properties are listed below.

► Benefits:

- Continued and increased use of the rail system serves to revitalize historic urban centers where most identified NHLs and NRHP-listed sites are identified
- Access to cultural resources and historic properties would be improved
- Efforts to interpret historical resources would be enhanced
- Multiple historically significant rail stations would remain operational

► Impacts:

- There are 5 NHLs, 108 NRHP properties, and 34 identified National Register-eligible (NRE) properties in the Representative Route for the Preferred Alternative. The following NHLs are located in the Representative Route:
 - Andalusia, The Woodlands, the John Bartram House, and the municipally significant Fairmount Water Works (Philadelphia, PA)
 - College Hill Historic District (Providence, RI)
- The list of NRHP properties includes individually designated properties, like the Green Mount Cemetery in Baltimore and the Rhode Island Statehouse, as well as larger historic districts such as Havre de Grace, MD, and Old Lyme, CT.
- Multiple NHL, NRHP-listed, and NRE stations would be modified, such as Princeton Junction Station, NJ.

NHLs are of particular concern because the NPS designates NHLs as nationally significant properties. As a result, the NPS requires the additional consultation under Section 106 of the NHPA to resolve adverse effects. Tier 2 project analysis will make determinations on effects on historic properties.

7.9.3 Affected Environment

Most counties within the Preliminary APE for the Existing NEC + Hartford/Springfield Line and the Preferred Alternative contain NRHP-listed cultural resources and historic properties; fewer counties contain NHLs. Table 7.9-1 summarizes the number of cultural resources and historic properties identified as occurring in the Affected Environment for both the Existing NEC + Hartford/Springfield Line⁸ and the Preferred Alternative. Cultural resources and historic properties are concentrated primarily in urban areas such as Washington, D.C.; Wilmington, DE; Baltimore, MD; Philadelphia, PA; Newark, NJ; New York City, NY; New Haven and Hartford, CT; Providence, RI; and Boston, MA.

There are 76 identified NHL properties in the Affected Environment for the Existing NEC + Hartford/Springfield Line and 81 in the Preferred Alternative, with the added NHL properties located in New York, Connecticut, and Rhode Island where the Preferred Alternative makes improvements to the Existing NEC + Hartford/Springfield Line and incorporates the Hartford/Springfield Line. All NHLs are significant at the national level, and many have particular importance within the regions where they are located. The following NHLs in the Affected Environment for the Existing NEC + Hartford/Springfield Line and the Preferred Alternative are examples of highly recognizable resources:

- ▶ Supreme Court, U.S. Capitol and Library of Congress (Washington, D.C.)
- ▶ Fort Christina and Howard High School (Wilmington, DE)
- ▶ Fairmount Water Works (Philadelphia, PA)
- ▶ William Trent House (Trenton, NJ)
- ▶ New York Public Library and the Empire State Building (New York City)
- ▶ Mark Twain House and the Old Statehouse (Hartford, CT)
- ▶ Florence Griswold House and Museum (Old Lyme, CT)
- ▶ Boston Common and Old South Church (Boston, MA)

Appendix EE.09, provides data for each state and county. Appendix AA, Mapping Atlas of the Preferred Alternative, depicts property counts (NHLs and NRHP-listed properties) by county.

The FRA also considered National Register-eligible (NRE) rail-related properties in the NEC as designated by the NPS in prior environmental studies.

In addition to these NHLs, there are 1,021 NRHP properties in the Affected Environment for the Existing NEC + Hartford/Springfield Line and 1,079 in the Preferred Alternative. The 58 additional NRHP properties in the Preferred Alternative are located where the Existing NEC + Hartford/Springfield Line footprint would be modified or where new segments would be included.

⁸ NHL and NRHP counts differ from the published Tier 1 Draft EIS. Volume 2, Table 7.9.2, includes revised tallies due to database corrections.

In addition, 34 NRE properties are identified in the Existing NEC + Hartford/Springfield Line and the Preferred Alternative. These are almost all rail-related resources such as stations and bridges. The exception is the Providence Cove Archaeological District, identified by Rhode Island SHPO as an NRE resource.

Table 7.9-1: Affected Environment: Cultural Resources and Historic Properties

Geography	Type	Existing NEC + Hartford/Springfield Line (Number of Properties)	Preferred Alternative (Number of Properties)
D.C.	NHL	10	10
	NRHP-Listed	21	21
	NRE	0	0
MD	NHL	3	3
	NRHP-Listed	66	72
	NRE	2	2
DE	NHL	3	3
	NRHP-Listed	64	67
	NRE	2	2
PA	NHL	12	14
	NRHP-Listed	97	100
	NRE	2	2
NJ	NHL	4	4
	NRHP-Listed	64	68
	NRE	7	7
NY	NHL	10	10
	NRHP-Listed	80	84
	NRE	8	8
CT	NHL	16	18
	NRHP-Listed	318	341
	NRE	8	8
RI	NHL	6	7
	NRHP-Listed	135	145
	NRE	3	3
MA	NHL	12	12
	NRHP-Listed	161	165
	NRE	2	2
TOTAL NHL		76	81
TOTAL NRHP-LISTED		1,006	1,063
TOTAL NRE		34	34

Source: NEC FUTURE team, 2016.

Note: The Preferred Alternative assumes improvements to the Existing NEC + Hartford/Springfield Line; therefore, the number of properties presented is inclusive of the Existing NEC + Hartford/Springfield Line as well as any new route option or off-corridor route associated with the Preferred Alternative. Counts of National Register of Historic Places-listed properties and National Historic Landmarks include both individual properties and districts with multiple structures that are counted as one individual property. The FRA did not round the numbers since they are discrete occurrences identified by the NPS.

7.9.4 Environmental Consequences

As outlined in the effects-assessment methodology (Volume 2, Chapter 7.9, and Appendix E.09) and the Programmatic Agreement, the FRA has determined that for purposes of Section 106 compliance, NEC FUTURE is an undertaking with the potential to affect cultural resources and historic properties. The FRA has taken the following steps during the Tier 1 process to identify historic properties and assess potential effects on historic properties:

- ▶ Determine a Preliminary APE (see Section 7.9.1.2).
- ▶ Identify known historic properties within the Preliminary APE (see Table 7.9-1).
- ▶ Identify historic properties located within the Representative Route of the Preferred Alternative.

This analysis does not include any findings regarding determination of effects for historic properties identified in the Preliminary APE. Tier 2 project analysis will determine effects on historic properties.

In this Tier 1 process, the FRA assessed potential effects on historic properties and traditional cultural properties, such as Native American traditional cultural landscapes, by using mapping overlays to identify historic properties locations within the Representative Route of the Preferred Alternative. The FRA noted the properties identified within the Representative Route as potential environmental “effects,” since these properties would be expected to have a higher likelihood of being directly affected by the implementation of the Preferred Alternative during construction or through operations. Indirect effects on cultural resources and historic properties, caused by implementation of the Preferred Alternative, could occur outside the Representative Route and could include increased noise levels, increased vibration, changes to the visual setting, or changes to access. While no determinations have been made on the specific effects of proposed construction types on specific properties identified, the general effects on cultural resources and historic properties could occur as a result of the various construction types and methods proposed for the Preferred Alternative:

- ▶ **At-grade:**
 - Direct physical disturbance to existing NHL, NRHP-listed, and NRE resources through the construction and introduction of new track bed, culverts, support structures, landscaping, and the installation of utilities and/or catenary poles, and increased vibrations. Contextual disturbance to resources through the introduction of out-of-character visual or atmospheric elements. New at-grade tracks can also bisect historic districts and/or isolate resources from their historic setting.
 - Direct physical disturbance to below-grade NHL, NRHP-listed, and NRE resources through excavation and/or compaction for track bed, utility installation, support structures, culverts, landscaping, and/or catenary poles. Indirect disturbance and deterioration of sites and/or settings through vibration and/or erosion.
- ▶ **Trench:**
 - Direct physical disturbance to NHL, NRHP-listed, and NRE resources through the construction and introduction of new trenches, landscaping, culverts, elevated road crossings, and the installation of utilities and/or catenary poles and increased vibrations. Contextual disturbance

to resources through the introduction of out-of-character visual or atmospheric elements. Trenches can also result in the bisecting of historic districts and/or the isolation of resources from their historic setting.

- Direct physical disturbance to below-grade NHL, NRHP-listed, and NRE resources through open pit excavation, earth moving, utility installation, support structures, culverts, landscaping, and/or compaction. Indirect disturbance and deterioration of sites and/or settings through vibration and/or erosion.

► **Embankment:**

- Direct physical disturbance to existing NHL, NRHP-listed, and NRE resources through excavations to create earthen berms and/or the construction of new retaining walls and increased vibrations. Contextual disturbance to resources through the introduction of embankments and retaining walls and other out-of-character visual or atmospheric elements. New embankments can also result in the bisecting of historic districts and/or the isolation of resources from their historic setting.
- Direct physical disturbance to below-grade NHL, NRHP-listed, and NRE resources through excavation, earth moving, utility installation, support structures, culverts, landscaping, and/or compaction. Indirect disturbance and deterioration of sites and/or settings through vibration and/or erosion.

► **Aerial Structure or Major Bridge:**

- Direct physical disturbance to existing NHL, NRHP-listed, and NRE resources through the construction and introduction of new abutments and/or pilings on land and/or in waterways, and increased vibrations. Contextual disturbance to resources through the introduction of new aerial structures or other out-of-character visual or atmospheric elements. The construction of new aerial structures or major bridges can also result in the bisecting of historic districts and/or the isolation of resources from their historic setting.
- Direct physical disturbance to below-grade NHL, NRHP-listed, and NRE resources through excavations for abutments and/or pilings on land and in waterways, and/or earthmoving and landscaping. Indirect disturbance and deterioration of sites and/or settings through vibration and/or erosion.

► **Tunnel:**

- Direct physical disturbance to existing NHL, NRHP-listed, and NRE resources at tunnel boring machine (TBM) launch sites, portals, ventilation shafts and egress points, and increased vibrations. Contextual disturbance to resources through the introduction of new out-of-character visual or atmospheric elements.
- Direct physical disturbance to below-grade NHL, NRHP-listed, and NRE resources at TBM launch sites, portals, ventilation shafts and egress points. Indirect disturbance and deterioration of sites and/or settings through vibration and/or erosion.

Temporary construction effects could occur with planned improvements under the No Action Alternative or Preferred Alternative where access roads are created or temporary utility lines are installed, and at staging and lay-down areas. Impacts could include temporary contextual disturbance to existing NHL, NRHP-listed, and NRE resources, and direct physical disturbance to below-grade NHL, NRHP-listed, and NRE resources through grading, earth moving, compaction, landscaping and/or by the introduction of construction-related vibrations.

Table 7.9-2 presents the number of NHL, NRHP-listed, and NRE properties identified in the Existing NEC + Hartford/Springfield Line and the Preferred Alternative. The FRA specifically called out NHLs in this analysis because of their national importance, and they require the most stringent consultation under Section 106 of the NHPA to resolve adverse effects. (Appendix EE E.09, contains relevant data for each county, including NRHP-listed resources and provides further qualitative highlights about those properties identified in this analysis as potentially affected.)

Table 7.9-2: Environmental Consequences: Representative Route – Cultural Resources and Historic Properties

Geography	Type	Existing NEC + Hartford/Springfield Line (Number of Properties)	Preferred Alternative (Number of Properties)
D.C.	NHL	0	0
	NRHP-Listed	3	4
	NRE	0	0
MD	NHL	0	0
	NRHP-Listed	1	11
	NRE	2	2
DE	NHL	0	0
	NRHP-Listed	2	5
	NRE	1	2
PA	NHL	0	4
	NRHP-Listed	3	5
	NRE	2	2
NJ	NHL	0	0
	NRHP-Listed	3	5
	NRE	7	7
NY	NHL	0	0
	NRHP-Listed	1	4
	NRE	8	8
CT	NHL	0	0
	NRHP-Listed	33	53
	NRE	8	8
RI	NHL	0	1
	NRHP-Listed	1	11
	NRE	3	3

Table 7.9-2: Environmental Consequences: Representative Route – Cultural Resources and Historic Properties (continued)

Geography	Type	Existing NEC + Hartford/Springfield Line (Number of Properties)	Preferred Alternative (Number of Properties)
MA	NHL	0	0
	NRHP-Listed	4	10
	NRE	1	2
TOTAL NHL		0	5
TOTAL NRHP-Listed		51	108
TOTAL NRE		32	34

Source: NEC FUTURE team, 2016.

Note: Existing NEC numbers revised from Tier 1 Draft EIS (Volume 2, Chapter 7.9, Table 7.9.4) to reflect the addition of NRE properties and the Hartford/Springfield Line.

* The Preferred Alternative assumes improvements to the Existing NEC + Hartford/Springfield Line; therefore, the data presented include the Environmental Consequences inclusive of improvements to the Existing NEC + Hartford/Springfield Line and any new off-corridor route associated with the Preferred Alternative.

Counts of NRHP-listed sites and NHLs include both individual sites and districts with multiple structures that are counted as one individual site.

NHL: National Historic Landmark; NRHP: National Register of Historic Places; NRE: National Register eligible

7.9.4.1 Existing NEC + Hartford/Springfield Line

The FRA did not identify any NHLs in the Representative Route of the Existing NEC + Hartford/Springfield Line because of its narrow corridor. The following NHLs were identified adjacent to the Existing NEC + Hartford/Springfield Line but not within the Representative Route:

- ▶ Fort Christina, designated a First State National Historical Park, (Newark, DE)
- ▶ Andalusia, The Woodlands, the John Bartram House, and the municipally significant Fairmount Water Works (Philadelphia, PA)
- ▶ College Hill Historic District (Providence, RI)

Multiple NRHP and NRE properties associated with the Existing NEC + Hartford/Springfield Line rail infrastructure were identified, including bridges, stations, viaducts, and signaling systems. There are 51 NRHP and 33 NRE properties in the Existing NEC + Hartford/Springfield Line. With the exception of the Providence Cove Lands Archaeological District in Rhode Island, all of the NRE properties identified in the Existing NEC + Hartford/Springfield Line are rail related. NRHP properties include the following:

- ▶ Union Station and the L'Enfant Plan (Washington, D.C.)
- ▶ Pennsylvania Station in Baltimore (Maryland)
- ▶ Wilmington Amtrak Station (Delaware)
- ▶ Fairmount Park (Philadelphia, PA)
- ▶ Dock Bridge (New Jersey)
- ▶ New Rochelle Railroad Station (New York)
- ▶ Multiple railroad bridges, including the Norwalk River Railroad Bridge (Connecticut)

- ▶ Rhode Island Statehouse (Rhode Island)
- ▶ Canton Viaduct (Massachusetts)

Some NRHP-listed properties are also situated above the Existing NEC + Hartford/Springfield Line where it is in a tunnel, such as Green Mount Cemetery in Baltimore, MD, and the Grand Hotel in New York City. The boundaries of each of identified property predominantly extend only slightly into the Existing NEC + Hartford/Springfield Line right-of-way, but there are many more historically significant properties that are immediately outside this narrowly defined Representative Route that are not included in the resource count. Tier 2 project analyses will identify a comprehensive list of Cultural Resources and Historic Properties. Examples of resources immediately outside the Representative Route include the following NRHP-listed properties:

- ▶ Woodward and Lothrop Service House (Washington, D.C.)
- ▶ Bowie Railroad Buildings and Rodgers Tavern (Maryland)
- ▶ 1724 Chester Courthouse and the John Coltrane House (Pennsylvania)
- ▶ William Trent House (New Jersey)
- ▶ Bartow-Pell Mansion and Carriage House (New York)
- ▶ New London Customhouse (Connecticut)
- ▶ Benjamin Green House (Rhode Island)
- ▶ Haffenreffer Brewery (Massachusetts)

Furthermore, many of the stations adjacent to the Existing NEC + Hartford/Springfield Line are either designated NRHP-listed properties or have been designated NREs, and most are not in the Existing NEC + Hartford/Springfield Line resource count since their footprints lie immediately outside of the narrowly defined corridor. Some stations, both in and immediately outside of the Existing NEC + Hartford/Springfield Line, have been modified and replaced so that they no longer retain their historical integrity. Others have little modification and appear much as they did when originally constructed, such as the NRHP-listed Elizabeth Station in Elizabeth, NJ, and the Sound Beach (Old Greenwich) Railroad Station in Connecticut.

7.9.4.2 Preferred Alternative

The Preferred Alternative improves the Existing NEC and incorporates new segments that, together, expand capacity to grow the role of rail and have the greatest potential for operational benefit. The Preferred Alternative brings the Existing NEC to a state of good repair and adds new tracks and segments at targeted locations.

The vast majority of historic properties are located in urban centers and in small coastal villages. There are 6 NHLs, 108 NRHP properties, and 34 identified NREs in the Preferred Alternative. Appendix EE.09 provides a complete listing of identified properties within the Representative Route. Additional NHL properties are near but not in the Preferred Alternative. The following NHLs are located in the Representative Route:

- ▶ Andalusia, (Philadelphia, PA)
- ▶ The Woodlands, (Philadelphia, PA)
- ▶ The John Bartram House, (Philadelphia, PA)

- ▶ The municipally significant Fairmount Water Works, (Philadelphia, PA)
- ▶ College Hill Historic District (Providence, RI)

The 108 identified NRHP properties include the following:

- ▶ Civil War fort sites and Union Station (Washington, D.C.)
- ▶ David Bacharach House and Bolton Hill Historic District (Baltimore, MD)
- ▶ Newark Passenger Station and Wilmington Amtrak Station (Delaware)
- ▶ University of Pennsylvania Campus Historic District and original Fairmount Park (Philadelphia, PA)
- ▶ New Brunswick Station and Elizabeth Station (New Jersey)
- ▶ Grand Hotel and Old Grolier Club (New York City, NY)

North of New York City, there are multiple NRHP properties and historic districts in the following coastal towns of Connecticut:

- ▶ Greenwich Avenue Historic District (Fairfield County)
- ▶ Guilford Historic Town Center and the Stony Creek—Thimble Islands Historic District (New Haven County)
- ▶ Clinton Village Historic District (Middlesex County)
- ▶ Old Lyme Historic District and Mystic River Historic District (New London County)

At most of these locations, upgrades to the Existing NEC entail track improvements, but at the NRHP-listed South End Historic District in Stamford, CT, construction type changes from embankment to aerial structure.

There are also multiple historic districts in Rhode Island, including the Bradford Village Historic District, Shannock Historic District, and Westerly Downtown Historic District in Washington County, and the Elmwood Historic District in Providence. The Rhode Island Statehouse is a highly visible NRHP-listed site in Providence, where the Preferred Alternative passes it in a tunnel and at grade, following the Existing NEC. NRHP-listed sites in Massachusetts are predominantly located in and around Boston and include the South End District and the South Station Headhouse, the termination point of the Existing NEC.

Improvements to the Existing NEC would generally enhance existing construction, with the exception of several new segments, and a new two-track section south of Center City, Philadelphia, shifting south of the Existing NEC and running adjacent to S.R. 291 through Essington. The segment shifts north on aerial structure and embankment and then at grade, reconnecting with the Existing NEC near the Schuylkill River. There are no NHL, NRHP-listed, or NRE properties identified in this section of the Preferred Alternative.

Elements South of New York City

- ▶ **Maryland/Delaware – Bayview to Newport (new segment)** – This segment veers west of the Existing NEC near Elkton, MD, via a combination of tunnels, aials, and embankments that follow, in part, an existing freight rail track. Much of the route crosses undeveloped land. No NHLs exist

in the Representative Route of this bypass, but there are 5 NRHP-listed properties (Delaware Boundary Markers, the Newark Passenger Station, and Woodstock in DE, and the Havre de Grace Historic District and Sophia's Dairy in Maryland). At the Havre de Grace Historic District, construction changes from embankment to aerial structure.

Where this new segment follows sections of an existing freight line, there are relatively few identified resources. However, during planning and construction of the undeveloped sections of this new segment, Tier 2 project teams could encounter undiscovered cultural resources and historic properties.

- ▶ **Delaware – Wilmington Segment (bypasses Wilmington Station)** – This segment bypasses east of the Wilmington Station. No NHL properties lie in this segment but there are 2 identified NRHP-listed properties: Woodstock and Delaware Boundary Markers. The Representative Route is immediately south of the Woodstock property and follows an existing rail line at grade. At the site of the Delaware Boundary Markers in New Castle County, a new structure immediately northwest and parallel to the Existing NEC changes in construction type from aerial and at grade to aerial and embankment, and at grade to aerial.
- ▶ **Pennsylvania – Philadelphia Segments (new segments)** – The Preferred Alternative adds new segments between Baldwin and Bridesburg. Four NHL and five NRHP-listed properties exist within the Representative Route of these new segments.
- ▶ **New Jersey – New Brunswick to Secaucus (new segment)** – Beginning in North Brunswick, this segment is generally at-grade or on embankment adjacent to the Existing NEC through central Middlesex County, then enters a tunnel under the Raritan River through New Brunswick and Highland Park. There are short tunnel segments near Metuchen in Middlesex County, Elizabeth in Union County, and Newark in Essex County. The new segment reconnects with the Existing NEC in Kearney, Hudson County west of the Passaic River. No NHL properties exist in the Representative Route of this new segment, but there is 1 NRHP-listed site—the Mid-Town Historic District in Union, NJ—where the new segment tunnels deep beneath the district.
- ▶ **New Jersey – Secaucus/Bergen loop (new segment)** – This new segment runs perpendicular and east of the Existing NEC and serves to connect NJ TRANSIT's Main Line/Bergen County Line and Pascack Valley Line and Metro-North Railroad's West of Hudson service to the NEC at Secaucus Junction. There are no identified NHLs or NRHP-listed properties in this new segment.

Elements North of New York City

- ▶ **New York/Connecticut – New Rochelle to Greens Farms (new segment)** – Between New York and New Haven, the Preferred Alternative enhances the Existing NEC with new segments close to the Existing NEC. The new segment is a two-track infrastructure, continuing from Westchester County, NY, through coastal Fairfield County, parallel to I-95 typically on embankment or aerial structures through Greenwich, Stamford, and Norwalk, CT; terminating in Westport west of Greens Farms Rail Station. There are no identified NHLs in this new segment, and 2 identified NRHP-listed properties, both in Westchester County: the Knickerbocker Press Building and the New Rochelle Railroad Station. The Existing NEC is an embankment at the Knickerbocker Press Building and at grade at the New Rochelle Railroad Station. The Preferred Alternative travels on a new aerial structure adjacent to each of these NRHP-listed properties.

- ▶ **Connecticut/Rhode Island – Old Saybrook-Kenyon (new segment)** – The Old Saybrook-Kenyon new segment is a new two-track segment north of the Existing NEC in Connecticut and Rhode Island. To avoid both direct and indirect impacts to historically sensitive Old Saybrook and Old Lyme in Connecticut, the new two-track segment shifts north of the Existing NEC beginning east of Old Saybrook Station. The route continues east paralleling I-95 and I-395 through a series of embankments, trenches, tunnels, and aerial segments, crossing the Thames River in New London between the eastbound and westbound bridge spans of I-95 and continuing to Westerly, RI.

The route diverts north of many historically important coastal villages in Connecticut, and avoids many, though not all, identified historic resources. The Representative Route of this new segment contains no NHLs. However, the Representative Route includes 3 NRHP-listed properties: the Old Lyme Historic District in Connecticut; the Bradford Village Historic District in Rhode Island; and the Shannock Historic District in Rhode Island.

- ▶ **Connecticut/Massachusetts – Hartford/Springfield Line (upgraded track/electrification)** – The upgrade track follows sections of the historic Hartford/Springfield Line roughly parallel to I-91 between New Haven, CT, and Springfield, MA. Construction types would remain virtually unchanged; upgrades to the existing track would occur, and bridges and embankments would be improved. Electrification of the Line has potential visual impacts on cultural resources and historic properties. The Representative Route for this Line contains no NHLs and 25 NRHP-listed properties. Of the 25 NRHP-listed sites, 18 are in Hartford County, with the majority in the city of Hartford. Included in these are Bushnell Park, Union Station, and the Clay Hill Historic District, where the route would be improved and remain at grade. Hartford has many additional historic districts and sites nearby, but not in the narrowly defined Representative Route. North of Hartford, there are 4 historic districts at Newington Junction where the improved route remains at grade. In Massachusetts, the FRA identified only the NRHP-listed Downtown Springfield Historic District, where the route remains at grade.

Tribal Lands

As noted in the Tier 1 Draft EIS (Volume 2, Chapter 7.9, Section 7.9.4), the FRA did not identify property-specific tribal resources, but did identify several counties within the Study Area as having tribal resources. The FRA has initiated government-to-government consultation, and through the Section 106 process for subsequent undertakings, consultation with identified tribes would continue regarding tribal resources. Table 7.9-3 identifies the tribes that, based on available data and government-to-government consultation, have interests in counties through which the Representative Route of the Preferred Alternative runs.

Table 7.9-3: Counties of Interest to Federally Recognized Tribes

State	County	Tribe(s)
MD	Prince George's	■ Delaware Tribe
	Anne Arundel	
	Baltimore County	
	Baltimore City	
	Howard	
	Harford	
	Cecil	
DE	New Castle	■ Delaware Tribe
PA	Delaware	■ Delaware Tribe
	Philadelphia	■ Delaware Tribe
	Bucks	■ Delaware Tribe ■ Stockbridge-Munsee Mohican Tribe
NJ	Mercer	■ Delaware Tribe ■ Stockbridge-Munsee Mohican Tribe
	Middlesex	■ Delaware Tribe
	Union	
	Essex	
	Hudson	
NY	New York	■ Delaware Tribe ■ Stockbridge-Munsee Mohican Tribe
	Queens	
	Kings	
	Bronx	
	Westchester	
CT	Fairfield	■ Delaware Tribe
	New Haven	■ Narragansett Indian Tribe
	Middlesex	■ Narragansett Indian Tribe
	New London	■ Mashantucket Pequot Indian Tribe*
		■ Mohegan Indian Tribe of Connecticut*
		■ Narragansett Indian Tribe
RI	Hartford	■ Narragansett Indian Tribe
	Washington	■ Narragansett Indian Tribe*
	Kent	■ Narragansett Indian Tribe
	Providence	■ Mashpee Wampanoag Tribe ■ Narragansett Indian Tribe ■ Wampanoag Tribe of Gay Head (Aquinnah)
MA	Hampden	■ Delaware Tribe ■ Narragansett Indian Tribe
	Middlesex	■ Mashpee Wampanoag Tribe
	Bristol	■ Narragansett Indian Tribe ■ Wampanoag Tribe of Gay Head (Aquinnah)
		■ Mashpee Wampanoag Tribe ■ Narragansett Indian Tribe ■ Stockbridge-Munsee Mohican Tribe
	Norfolk	■ Mashpee Wampanoag Tribe ■ Narragansett Indian Tribe ■ Stockbridge-Munsee Mohican Tribe
	Suffolk	■ Mashpee Wampanoag Tribe ■ Stockbridge-Munsee Mohican Tribe ■ Wampanoag Tribe of Gay Head (Aquinnah)

Source: NEC FUTURE team, 2016

* = Tribal reservation exists within county for specified tribe.

7.9.5 Stations

The Preferred Alternative includes continued service to existing stations along the NEC, modifications to existing stations, which may require an increase in the station footprint, and new stations. Many of the existing stations along the NEC are themselves either NRHP listed or NRHP eligible.

Adverse effects may occur to historic properties where physical modifications are proposed, or to adjacent historic properties if there are changes in the setting caused by increases in the station footprint (i.e., expansion of or improvements to stations and associated facilities and amenities); such adverse effects could occur as part of implementation of the Preferred Alternative and would be assessed through the Tier 2 project analysis and Section 106 consultation process. Proposed new stations could result in adverse effects if they are located near NRHP-listed, NRHP-eligible, or NHL properties. Table 7.9-4 identifies which modified or new stations may affect historic properties, by station ID. Appendix EE.09 provides detailed support data for Table 7.9-4.

Table 7.9-4: Environmental Consequences: Preferred Alternative – Modified or New Stations – Cultural Resources and Historic Properties

State	County	Station ID	Station Type	Station Name	Type
MD	Cecil	23	New	Elkton	National Register of Historic Places
NJ	Mercer	61	Modified	Princeton Junction	National Register eligible
	Middlesex	62	New	North Brunswick	National Register eligible
		64	Modified	New Brunswick	National Register of Historic Places
		68	New	Metropark H.S.	National Register eligible
	Hudson	76	Modified	Secaucus	National Register eligible
Existing Hartford/Springfield Line					
CT	New Haven	157	New	North Haven	National Register eligible
	Hartford	161	New	Newington	National Register of Historic Places
		163	Modified	Hartford	National Register of Historic Places
		186	New	West Hartford	National Register eligible
		187	New	Enfield	National Register of Historic Places

Source: NEC FUTURE team, 2016

Note: Presence of National Register of Historic Places-listed and/or National Register-eligible properties and potential effects within the station footprint; potential effects will be subject to Tier 2 project analysis.

Environmental Consequences for stations in the Preferred Alternative would occur primarily from proposed modifications to existing stations that could result in an adverse effect. The construction of new stations would affect far fewer historic properties since the new stations are proposed in locations where fewer historic properties have been identified.

7.9.6 Context Area

The Context Area allows for qualitative evaluation of potential shifts in the Representative Route. It contains numerous geographic areas where there are high densities of NRHP properties and NHLs; these areas are mainly in urban locations. The number of properties in the 5-mile-wide Context Area outside the Affected Environment is drastically greater than the number of properties identified in the narrower Affected Environment because of the much larger Context Area. Table 7.9-5 identifies

the total number of properties within the Preferred Alternative Context Area, with support data presented in Appendix EE.09.

Table 7.9-5: Context Area: National Historic Landmarks and National Register of Historic Places (Number of Properties)

Study Area	NHL	NRHP	TOTAL
Context Area	337	3,205	3,542
Context Area (excluding Affected Environment)	256	2,142	2,398

Source: NEC FUTURE team, 2016

Note: The Preferred Alternative includes improvements to the Existing NEC + Hartford/Springfield Line; therefore, the number of properties includes the Context Area inclusive of improvements to Existing NEC + Hartford/Springfield Line and any new segment. Numbers were not rounded since they are discrete occurrences identified by the National Park Service.

NHLs within the Context Area are of particular concern because the NPS designates NHLs as nationally significant properties. As a result, they require the additional consultation under Section 106 of the NHPA to resolve adverse effects. In addition to the NHLs otherwise highlighted in this chapter, prominent NHLs in the Context Area for the Preferred Alternative include the following:

- ▶ Washington, D.C.
 - American Federation of Labor Building
 - Constitution Hall
 - U.S. Department of the Treasury
- ▶ Baltimore, MD
 - First Unitarian Church
 - Mount Royal Station
 - U.S.S. Constellation
- ▶ Wilmington, DE
 - Holy Trinity (Old Swedes) Church
 - Howard High School
- ▶ Philadelphia, PA
 - Independence National Historical Park
 - Mother Bethel A.M.E. Church
 - Philadelphia School of Design for Women
- ▶ Union, NJ
 - Boxwood Hall
 - Old Queen's
- ▶ New York, NY
 - African Burying Ground
 - Central Synagogue
 - Chrysler Building
 - Grand Central Terminal
- ▶ New Haven, CT
 - New Haven Green Historic District
 - Yale Bowl
- ▶ Hartford, CT
 - Connecticut State Capitol
 - Oliver Ellsworth Homestead
 - Noah Webster Birthplace
- ▶ New London, CT
 - Charles W. Morgan
 - Monte Cristo Cottage
 - Capt. Nathaniel B. Palmer House
- ▶ Providence, RI
 - The Arcade
 - John Brown House
 - Old Slater Mill
- ▶ Springfield, MA
 - Springfield Armory
- ▶ Boston, MA
 - Bunker Hill Monument
 - Massachusetts Historical Society Building
 - Paul Revere House
 - Trinity Church

7.9.7 Comparison to the Action Alternatives

The Preferred Alternative improves the Existing NEC + Hartford/Springfield Line and incorporates new segments in several locations. It is similar to and improves upon Alternatives 1 and 2. Volume 2, Table 7.9-4, reports 4 NHLs and 142 NRHP-listed sites in Alternative 1, and 5 NHLs and 171 NRHP-listed properties in Alternative 2, and the Preferred Alternative reports 5 NHLs and 142 NRHP-listed and NRE properties in the Representative Route.

The FRA modified the construction type of the Representative Route of the Preferred Alternative from Alternatives 1 and 2 to avoid disturbance to several historically important locations, specifically historic districts in Old Saybrook and Old Lyme, CT. Based on public comments and correspondence with representatives from Old Lyme, the FRA modified the construction type for the Old Saybrook-Kenyon new segment to avoid the use of an aerial structure in the historic district of Old Lyme to minimize impacts. In other locations, the Preferred Alternative utilizes existing tracks that run parallel or split from the Existing NEC + Hartford/Springfield Line to minimize disturbance to identified resources relative to the Action Alternatives. Proposed enhancements to existing track maintain existing construction types where feasible.

In other locations, the Preferred Alternative uses existing tracks that run parallel or split from the Existing NEC + Hartford/Springfield Line to minimize disturbance to identified resources relative to the Action Alternatives. Proposed enhancements to existing track maintain existing construction types where feasible.

7.9.8 Potential Mitigation Strategies

Potential mitigation strategies, or treatment measures developed as part of resolution of adverse effects during the Section 106 consultation process, depend on the type of cultural resource or historic property affected and the type of impact(s). The Programmatic Agreement presented in Appendix GG lists standard treatments, stipulations, and methods to resolve adverse effects. With respect to Tier 2 project studies, the Programmatic Agreement lays out roles and responsibilities as well as guidance for Tier 2 project-level identification and evaluation of historic properties, and mitigation.

For the development of the Preferred Alternative, the FRA identified some examples of measures to avoid, minimize, or mitigate adverse effects to cultural resources and historic properties that were presented in Volume 2, Chapter 7.9, including modification of construction type and shifting location. Other recommended mitigation strategies include the following:

- ▶ Modify construction methods to minimize impacts.
- ▶ Incorporate the use of context-sensitive design.
- ▶ Undertake other design modifications in order to blend proposed infrastructure into the existing setting.
- ▶ Complete Historic American Building Survey/Historic American Engineering Record-level documentation as appropriate for properties that cannot be avoided.
- ▶ Complete archaeological data recovery for sites that cannot be avoided or preserved in place.

- ▶ Install interpretive signage in locations where above- or below-ground historic properties must be removed (or otherwise adversely affected) in order to accommodate new construction.
- ▶ Implement alternative mitigation measures such as the development of educational programs or interpretive booklets for resources that cannot be avoided.

7.9.9 Subsequent Tier 2 Analysis

The FRA prepared a Programmatic Agreement in coordination with the FTA, the ACHP, and involved SHPOs to ensure that the Section 106 process is carried out fully for undertakings evaluated in subsequent Tier 2 project studies. For each subsequent undertaking, the lead federal agency for the undertaking will be responsible for the following:

- ▶ Continuing Section 106 compliance as laid out in the Programmatic Agreement.
- ▶ Defining a project-specific APE.
- ▶ Analyzing cultural resources and historic properties identified as part of this Tier 1 Final EIS in greater detail.
- ▶ Identifying and evaluating additional properties within the defined Tier 2 project APE.
- ▶ Identifying National Heritage Areas and resources of state and local importance.
- ▶ Continuing tribal coordination and consultation for any future Tier 2 project studies that may occur within counties noted as having tribal interests.

Effects to the more thorough and complete listing of cultural resources and historic properties will be determined through field surveys as appropriate, and consultation with each relevant SHPO and/or tribe or Tribal Historic Preservation Officers, local government, and other consulting parties. Counties of interest to the federally recognized tribes identified in Section 7.9.1.3 exist within the Study Area; therefore, any subsequent undertakings involving these counties will require the lead federal agency to consult with those tribes regarding tribal resources that may be present and/or affected by the undertaking. Property-specific treatment measures and designs will be developed to avoid, minimize, or mitigate adverse effects on cultural resources and historic properties. The analyses will comply with federal and state regulations identified in the state-specific appendices of the Programmatic Agreement (see Appendix GG).