

A. INTRODUCTION

REGULATORY AUTHORITY

This chapter identifies cultural resources (including architectural and archaeological resources) in the area of potential effects (APE) for the Proposed Project, probable impacts on those resources, any avoidance and minimization measures, and coordination with appropriate agencies and stakeholders. Project alternatives are described in detail in Chapter 2, “Project Alternatives.” Potential in-ground disturbances of the Project site may result from construction of two bridges over the Susquehanna River to replace the existing Susquehanna River Rail Bridge. In addition, modifications and/or additions to existing railroad tracks and other railroad infrastructure could occur throughout the Project site.

The Federal Railroad Administration (FRA) and the Maryland Department of Transportation (MDOT) prepared this analysis in accordance with the National Environmental Policy Act (NEPA), Section 4(f) of the U.S. Department of Transportation (USDOT) Act, and Section 106 of the National Historic Preservation Act (NHPA), as amended, and associated implementing regulations in 36 C.F.R. 800. Per Subpart A, Sections 800.2(a)(3) and 800.2(c)(4) of 36 C.F.R., FRA authorized MDOT as the Project sponsor and applicant for federal approvals, to prepare information, analyses, and recommendations regarding Section 106 consultation for the Proposed Project.

METHODOLOGY

Section 106 of the NHPA mandates that federal agencies consider the effects of their actions on any properties listed on or determined eligible for listing on the National Register of Historic Places (NR). The lead federal agency, in consultation with the State Historic Preservation Office (SHPO) and consulting parties, must determine whether a proposed action would have any adverse effects on cultural resources within the APE. Section 106 requires consultation with the SHPO, federally recognized Indian tribes that might attach religious and cultural significance to historic properties affected by the Proposed Project, and additional consulting parties with a demonstrated interest in the Proposed Project based on a legal or economic relation to affected properties, or an interest in the Proposed Project’s effects on cultural resources.

Section 101(d)(6)(B) of the NHPA requires the lead federal agency to consult with any Indian tribe that attaches religious and cultural significance to historic properties that may be affected by the undertaking. The lead federal agency shall ensure that consultation in the Section 106 process provides the Indian tribe a reasonable opportunity to identify its concerns about historic properties; advise on the identification and evaluation of properties, including those of traditional religious and cultural importance, articulate its views on the undertaking’s effects on such properties; and participate in the resolution of adverse effects. In the event of adverse

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effect, the federal agency must afford the federal Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings.

APE DELINEATION

To assess the potential effects of the Susquehanna River Rail Bridge Project on cultural resources, FRA/MDOT identified an APE for the Proposed Project in consultation with the Maryland Historical Trust (MHT), Maryland's SHPO. On June 16, 2014, the MHT approved the APE as described below and illustrated on **Figure 8-1**.

The APE has been delineated to take into account the potential for direct and indirect effects of all of the Build Alternatives on significant cultural resources. To facilitate the analysis of effects, the APE has been subdivided into two components: the area in which the Proposed Project could cause potential direct effects, including ground disturbance; and an expanded area in which the Project could cause indirect effects. Unless otherwise specified, references to the APE refer to the entire APE, both the direct Project site as well as the area with the potential for indirect effects.

The APE for archaeological resources includes all areas that could experience direct impacts, including ground disturbance or any disturbance to an archaeological site, under the Build Alternatives. This area includes all property within and adjacent to the National Railroad Passenger Corporation (Amtrak) right-of-way, extending along the right-of-way for 5,200 feet west of the Susquehanna River shoreline in Havre de Grace, 3,400 feet of the Susquehanna River itself, and 5,700 feet east of the Susquehanna River shoreline in Perryville.

Potential effects to architectural resources can include both direct physical effects (e.g., demolition, alteration, or damage from construction on nearby sites) and indirect effects, such as the isolation of a property from its surrounding environment, or the introduction of visual, audible, or atmospheric elements that may alter the characteristics of the historic property that qualify it for inclusion on the NR in a manner that would diminish the property's historic integrity. To incorporate areas with the potential for indirect effects, the APE for historic architectural resources extends beyond the area for direct effects. First, for the majority of the length of the Proposed Project along the rail line, the APE boundary runs parallel to the tracks approximately 600 feet to the north and south. In close proximity to the river, the APE boundary proceeds on a diagonal line to intersect with the river approximately one-quarter of a mile north and south of the Project site. This widening is to account for more distant views of the Project site along the Harford and Cecil County waterfronts.

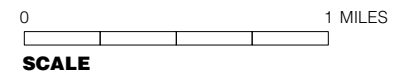
IDENTIFICATION OF CULTURAL RESOURCES IN THE APE

Once the APE was determined, FRA/MDOT identified historic architectural resources that had been previously evaluated as historically significant, including properties or districts listed on the NR and properties determined eligible for such listing as part of other cultural reviews, National Historic Landmarks (NHL), and archaeological sites on file at the MHT. In addition, FRA/MDOT compiled a list of potential architectural resources (i.e., properties that may be eligible for listing on the NR) within the architectural APE based on field surveys, documentary research, and review of the Maryland Inventory of Historic Properties (MIHP): https://mht.maryland.gov/research_mihp.shtml.

In consultation with the MHT, the Project Team determined which properties warranted evaluation for NR eligibility and then prepared "Determination of Eligibility" (DOE) forms for



-  Project Site Archaeological APE
-  Architectural APE



the properties that appeared to be potentially significant and short forms for properties that appeared to not be NR-eligible. Based on the fieldwork and research, FRA/MDOT submitted to MHT on February 12, 2015 a DOE Report for the Perryville Historic District, Perryville United Methodist Church, Perryville Presbyterian Church, a grouping of eight houses at 400-413 Webb Lane, and the Susquehanna River Rail Bridge Overpasses, and 71 short forms. On April 22, 2015, the MHT responded that the following resources are eligible for listing on the NR: Susquehanna River Rail Bridge and nine affiliated bridges (collectively known as the “Susquehanna River Rail Bridge Overpasses,”) the Perryville United Methodist Church, and the Perryville Presbyterian Church. In addition, the MHT indicated that the Perryville Historic District, 400-413 Webb Lane, and the 71 resources represented on the short forms are not eligible for listing on the NR. As part of the current assessment, the Susquehanna River Rail Bridge and the four undergrade bridges located within the Havre de Grace Historic District have been evaluated as contributing to the historic district, although the MHT has not issued a formal opinion on these evaluations.

In order to assess the sensitivity of the archaeological APE, the Project Team coordinated an archaeological documentary study (Phase IA Study) using documentary sources to identify areas with potential for archaeological deposits. For each area where prehistoric or historic-period activities may have yielded deposits, the Project Team evaluated construction activities and other recent ground disturbances to identify locations where any archaeological resources, if originally present, may have survived.

EVALUATION OF PROJECT EFFECTS

The Project Team assessed the effects of the Proposed Project on identified resources in the APE as compared to the No Action Alternative. Section 106 also requires consideration of reasonably foreseeable and cumulative effects that may occur later or further away from the project. As discussed in Chapter 2, “Project Alternatives,” this EA evaluates two Build Alternatives: Alternative 9A and Alternative 9B. Alternative 9A was selected as the Preferred Alternative.

B. AFFECTED ENVIRONMENT

ARCHAEOLOGICAL RESOURCES

As noted above, a Phase IA Study evaluated the overall level of disturbance within the archaeological APE and identified areas with potential for archaeological resources. The Project Team achieved this goal through a twofold process:

- Reviewing historical documentation and field observations to determine the potential integrity of soil deposits and:
- Evaluating whether conditions are sufficient for the potential preservation of cultural deposits.

BACKGROUND RESEARCH AND PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES

The review of historic maps revealed two distinct patterns of settlement and development for the Havre de Grace and Perryville sides of the Susquehanna River. By the eighteenth century, Havre de Grace had taken its place as an established point of trade and commerce within the upper Chesapeake Bay, containing a busy commercial and industrial waterfront. Despite this early settlement, however, historic maps revealed that the street grid pattern has remained relatively

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unchanged since the nineteenth century. This continuity of settlement typically suggests greater potential for preserved archaeological resources compared to other more densely settled and urbanized areas, which experience repeated disturbance through development. In contrast, the APE on the Perryville side of the river was initially more agrarian. The current village of Perryville does not appear to have developed until the advent of railroad service through the area during the mid-nineteenth century. During the first quarter of the twentieth century, Perry Point in particular was selected for industrial and residential development by the federal government as part of its WWI efforts.

Due to the location of the Proposed Project across a major river terrace overlooking the mouth of the Chesapeake Bay estuary, areas within the current APE would have been an extremely attractive place of settlement to Native Americans prior to contact with Europeans. However, due to the intensity of the railroad activities within the APE, the potential for intact precontact deposits is low. Particularly, within Havre de Grace, intact precontact contexts would most likely have to have been deeply buried in order to have avoided disturbance. Given the lower density of settlement during the historic period on the eastern shore of the river (Perryville), this portion of the APE has a higher probability for intact precontact period sites. Several known sites with precontact components have already been identified within the vicinity of Perryville.

With respect to archaeological resources located within or immediately adjacent to the current APE, the most significant previously identified resource located within the limits of the APE is the archaeological component of the extant Rodgers Tavern (18CE15). The tavern itself, listed on the NR in 1972, is a two-story stone structure located on the north side of Broad Street in Perryville. According to MHT files, the boundaries for the archaeological component of this resource are located across Broad Street from the standing tavern structure within a small lot located between the southern edge of Broad Street and the embankment for the railroad corridor. Archaeological investigations conducted in 2004 prior to the rehabilitation of the structure yielded a wide variety of eighteenth and early nineteenth century domestic refuse and architectural debris. However, the NR eligibility of the subsurface deposits has not been formally evaluated.

Another previously identified archaeological site, 18HE266, is located within the Susquehanna River within the vicinity of the APE. Located to the north of the existing bridge structure approximately 700 feet (213 meters) to the east of the Havre de Grace shoreline, 18HE266 has been identified as the wreckage from a twentieth century barge. This resource has not been formally evaluated regarding its eligibility for the NR.

ARCHAEOLOGICAL POTENTIAL OF APE

The APE for the Proposed Project encompasses all of the various Build Alternatives for the Proposed Project. The majority of each design alternative lies within the existing disturbed Amtrak right-of-way (ROW). For the purposes of this study, the portions of the APE outside of the current ROW were divided into six discrete Study Areas.

Study Area 1: Havre de Grace Athletic Field Complex

This area demonstrates heavily modified and disturbed soil profiles. Disturbance is associated with the reconfiguration of the natural landform as part of the construction of the school's ball fields. Because of this disturbance, the Phase IA Study concluded that there is little to no potential for this area to contain intact archaeological deposits.

Study Area 2: North Juniata Street to North Union Avenue, Havre de Grace

Although large portions of this area have been previously disturbed by construction activities associated with the Northeast Corridor (NEC), potentially undisturbed areas are present south of Warren Street and north of the existing rail line, including at the site of the former Havre de Grace Railroad Station and in the yard spaces of existing late nineteenth and early twentieth century houses.

Study Area 3: Havre de Grace Waterfront

Two city parks: Jean S. Roberts Memorial Park and David Craig Park appear to be human-constructed landforms, based on a review of historic mapping. Research indicates this fill was placed along the waterfront sometime during the mid- to late-nineteenth century. Though artificial, these landforms have the potential to contain cultural deposits associated with waterfront-related commercial or industrial enterprises, as well as structural remnants from the nineteenth century rail line that preceded the existing Northeast Corridor.

Study Area 4: Perryville Waterfront

While large portions of this area along the Susquehanna River have been subjected to previous archaeological survey or disturbed by various past construction efforts, sections of Study Area 4 have the potential to contain intact precontact or historic period archaeological deposits. Specifically, intact deposits may exist south of the railway corridor within the strip of land between the electrical substation and the Susquehanna River shoreline, in which a remnant of the earlier nineteenth century bridge abutment is present, and north of the railway corridor, within the vicinity of the extant Rodgers Tavern (18CE15).

Study Area 5: Perry Point VA Medical Center and MARC station area

This area encompasses the northern extremity of the Perry Point VA Medical Center and areas surrounding the MARC station, just north of the existing Amtrak rail corridor at its intersection with the Norfolk Southern Port Road spur line. As with the previous study area, large sections of Study Area 5 have been previously disturbed through various past construction efforts or subjected to archaeological survey. Outside of these sections, the yard areas associated with a group of single and multi-family residences that line the southern edge of Broad Street in Perryville may have the potential to contain intact archaeological resources.

Study Area 6: Susquehanna Submerged Cultural Resources

The Phase IA Study evaluated the potential for submerged cultural resources to exist in the Susquehanna River within the APE. Previous underwater remote sensing efforts in the lower Susquehanna River have identified multiple anomalies related to the original ferry and subsequent bridge across the Susquehanna River, coal wharves, and submerged wreckage within the current Proposed Project APE.

ARCHITECTURAL RESOURCES

KNOWN RESOURCES

Architectural resources located in the APE include properties listed on or determined eligible for the NR. Eleven previously designated (NR-listed or eligible) architectural resources were identified in the APE. As part of this Proposed Project, two additional resources were identified

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within the APE as potential architectural resources (the Perryville United Methodist Church and the Perryville Presbyterian Church).

A series of undergrade bridges historically associated with the Susquehanna River Rail Bridge were identified as NR-eligible components of the Susquehanna River Rail Bridge historic property. The undergrade bridges at MP 60.51, 60.56, 60.61, and 60.69 contribute to the Havre de Grace Historic District; the undergrade bridge at MP 59.39 contributes to the Perryville Railroad Station complex. MHT concurred that the two churches and the undergrade bridges are eligible for listing on the NR. The architectural resources in the APE are listed in **Table 8-1**, and mapped on **Figures 8-2 and 8-3**, and described in the following summary. More complete information on the historic architectural resources is included in the project's *Effects Assessment for Historic Architectural Resources* (see **Appendix D**, "Cultural Resources").

Table 8-1
Historic Architectural Resources within the APE

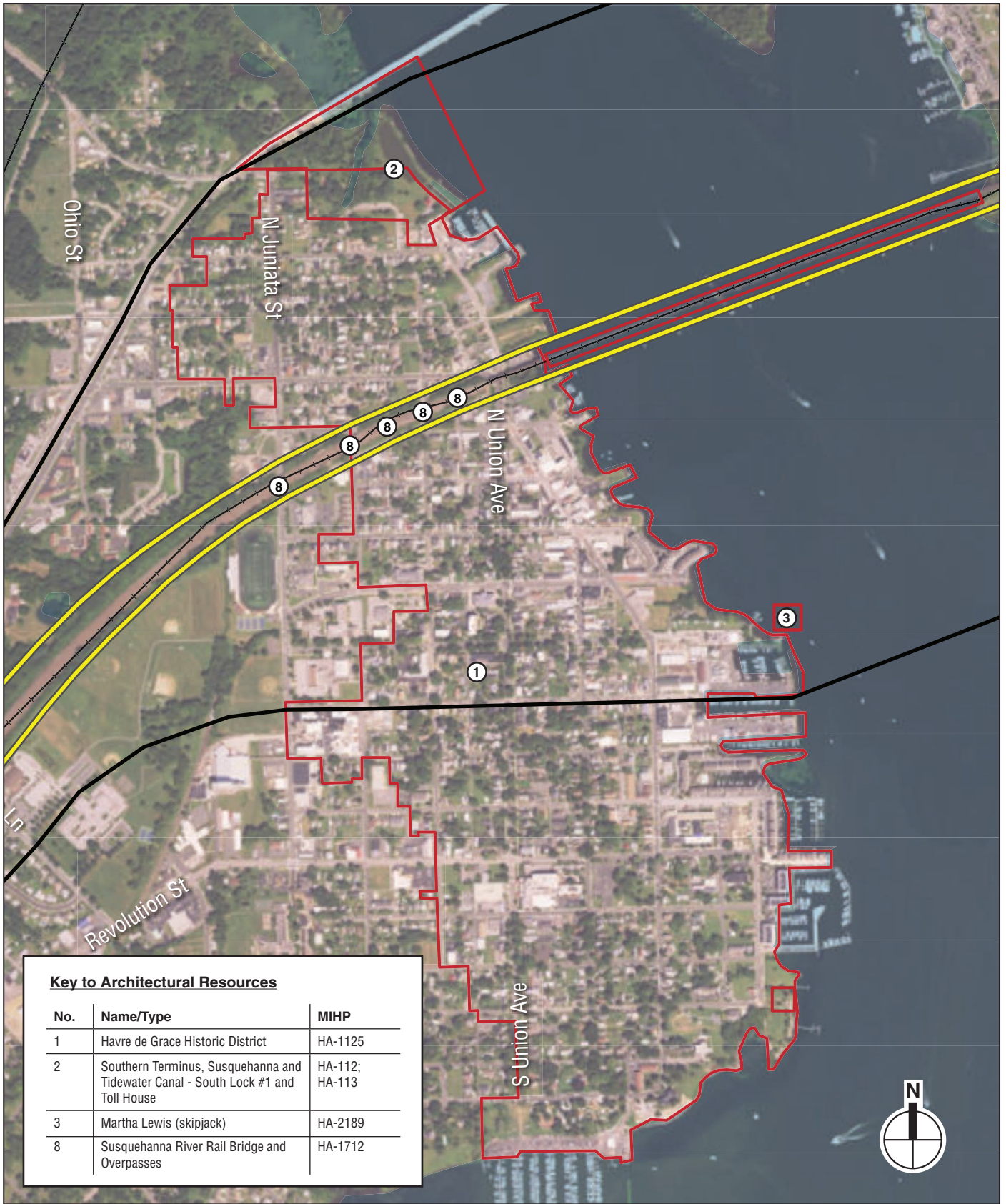
No.	Name/Type	Location	Eligibility Criteria	NR-Listed	NR-Eligible	MIHP
1	Havre de Grace Historic District	Havre de Grace	A & C	X		HA-1617
2	Southern Terminus, Susquehanna and Tidewater Canal – South lock #1 and Toll House ¹	Havre de Grace	A & C	X		HA-112; HA-113
3	Martha Lewis (skipjack)	Havre de Grace	A & C	X		HA-2189
4	Rodgers Tavern ¹	Perryville	A & C	X		CE-129
5	Principio Furnace (Principio Iron Works)	Cecil County	A & D	X		CE-112
6	Perry Point Mansion House and Mill ¹	Perryville	A & C	X		CE-146; CE-244
7	Perryville Railroad Station	Perryville	A & C		X	CE-1442
8	Susquehanna River Rail Bridge and Overpasses ²	Harford and Cecil Counties	A & C		X	HA-1712
9	Perry Point Veterans Administration (VA) Medical Center Historic District ¹	Cecil County	A & C		X	CE-1544
10	Crothers House (Furnace Bay Golf Course Clubhouse)	Cecil County	C		X	CE-1566
11	Woodlands Farm Historic District ³	Cecil County	A & C		X	CE-145
12	Perryville United Methodist Church	Perryville	A & C		X	CE-1573
13	Perryville Presbyterian Church	Perryville	A & C		X	CE-1574

Notes:

1. Notes resource is also a MHT easement property.
2. The undergrade bridges at mile post (MP) 60.51, 60.56, 60.61, and 60.69 contribute to the Havre de Grace Historic District; the undergrade bridge at MP 59.39 contributes to the Perryville Railroad Station complex. See Figure 3-1 in Chapter 3, "Transportation" for the location of all undergrade bridges discussed in this chapter.
3. This is an expansion of a boundary for the NR-listed Woodlands Farm.

MIHP: Maryland Inventory of Historic Properties.

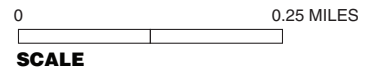
Sources: MHT Online Resources.



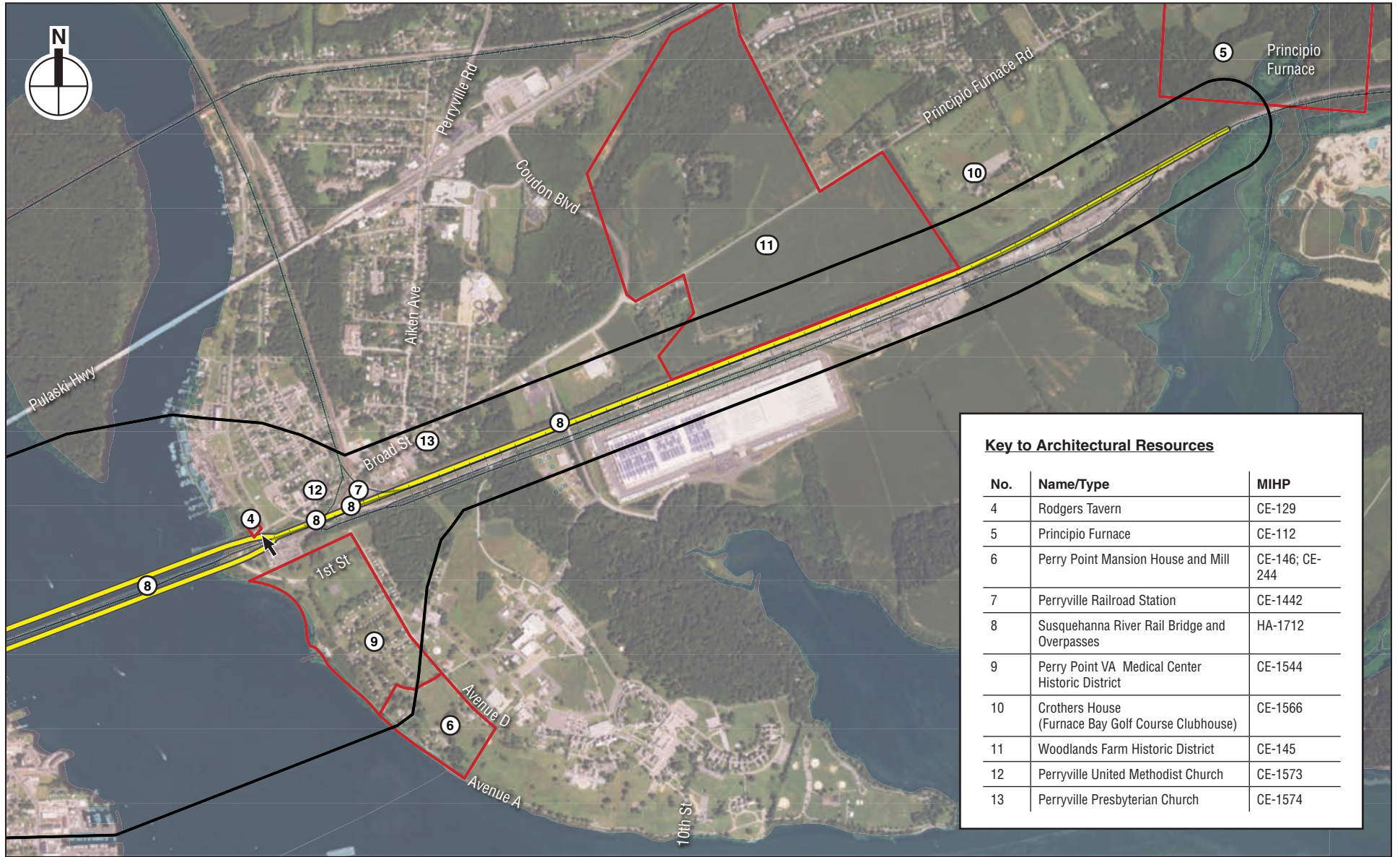
Key to Architectural Resources

No.	Name/Type	MIHP
1	Havre de Grace Historic District	HA-1125
2	Southern Terminus, Susquehanna and Tidewater Canal - South Lock #1 and Toll House	HA-112; HA-113
3	Martha Lewis (skipjack)	HA-2189
8	Susquehanna River Rail Bridge and Overpasses	HA-1712

- Project Site Boundary
- Architectural APE
- Architectural Resource



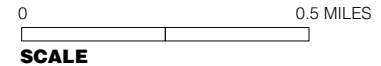
Havre de Grace Architectural Resources
 Photo Map and Key
Figure 8-2



Key to Architectural Resources

No.	Name/Type	MIHP
4	Rodgers Tavern	CE-129
5	Principio Furnace	CE-112
6	Perry Point Mansion House and Mill	CE-146; CE-244
7	Perryville Railroad Station	CE-1442
8	Susquehanna River Rail Bridge and Overpasses	HA-1712
9	Perry Point VA Medical Center Historic District	CE-1544
10	Crothers House (Furnace Bay Golf Course Clubhouse)	CE-1566
11	Woodlands Farm Historic District	CE-145
12	Perryville United Methodist Church	CE-1573
13	Perryville Presbyterian Church	CE-1574

- Project Site Boundary
- Architectural APE
- Architectural Resource



Perryville and Cecil County Architectural Resources
Photo Map and Key
Figure 8-3

Havre de Grace Historic District (HA-1617)

The Project site and APE pass through the northern portion of the Havre de Grace Historic District, which consists of a large part of the City of Havre de Grace. According to the NR nomination, the historic district is important under NR Criteria A and C for its architecture, transportation/commerce, and community planning. Each of these themes is examined below, with special focus on how the area of the historic district in close proximity to the Project site contributes to these themes.

Architecturally, the district contains a mix of nineteenth and early twentieth century residential, commercial, religious, and industrial buildings, representing a range of styles from Federal, Greek Revival, Gothic Revival, Italianate, Queen Anne, and Classical Revival, to variations of the Arts and Crafts movement, such as the Shingle and Bungalow styles.

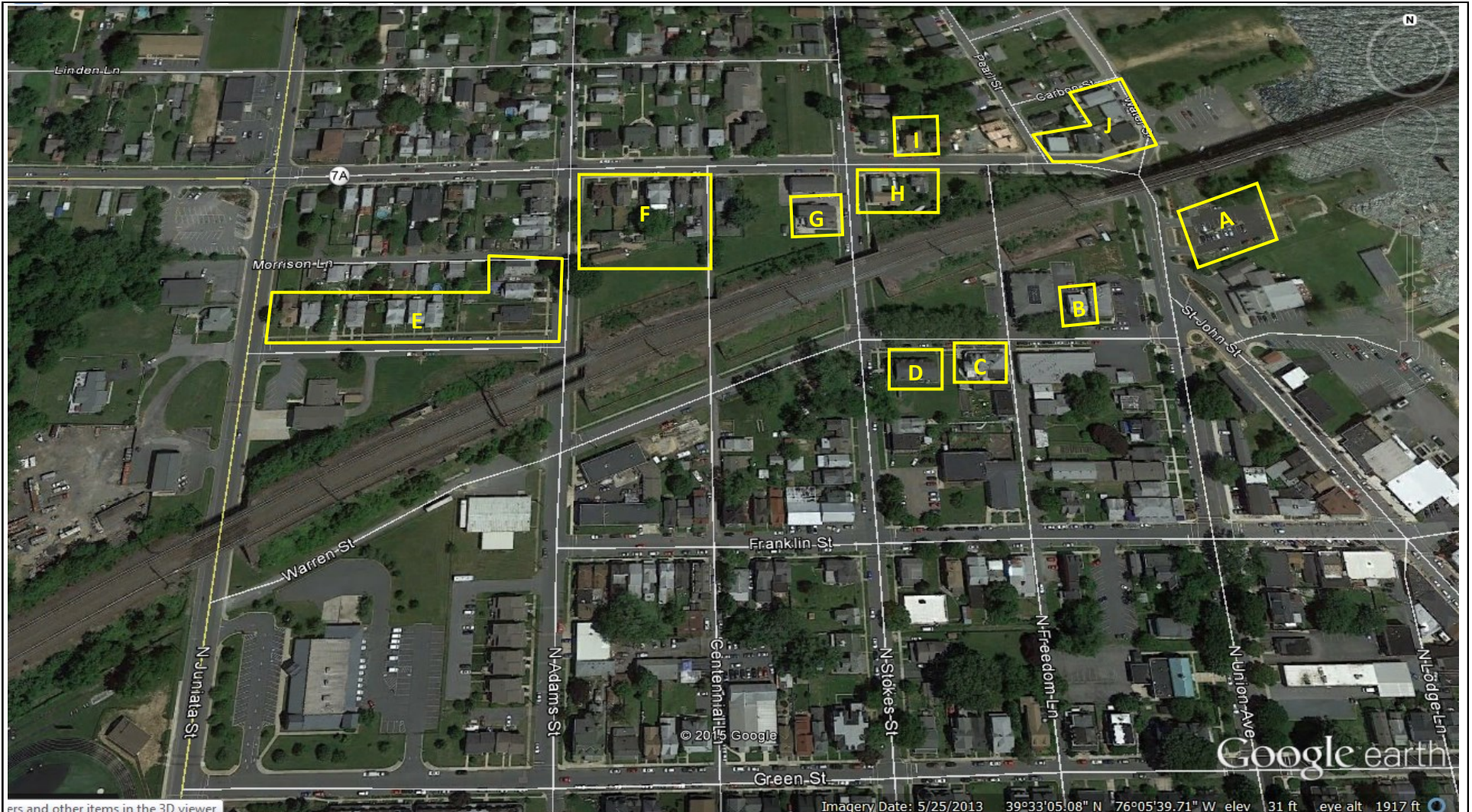
As part of the current study, the Project Team coordinated an evaluation for structures adjacent to the Project site, which have the greatest potential to be affected either physically or visually. The evaluation assessed whether structures contribute to the significance of the historic district, using an approximate 1930 end date for the district's period of significance. This date was used because the National Register nomination for the Havre de Grace Historic District was based on a cultural resources survey of all buildings within the district that pre-date the 1930s.

Based on the analysis, the Project Team evaluated that the following historic resources adjacent to the project site contribute to the Havre de Grace Historic District (see **Figures 8-4 through 8-9**):

- 501 St. John Street, American Legion Building (former Lafayette Hotel)
- 511 Warren Street, early nineteenth century house
- 552 Warren Street, multi-family residential structure
- 429 N. Stokes Street, Room at the Cross Mission Church (former St. Patrick's Catholic Church)
- Warren Street, cluster of early twentieth century bungalows
- Otsego Street, vernacular mid-nineteenth century houses
- 518 N. Stokes Street, mid-nineteenth century Gothic Revival house
- Otsego / N. Stokes Streets, vernacular mid-nineteenth century houses
- 571 Otsego Street, altered mid-nineteenth century French Second Empire house
- Otsego / Water Streets, late nineteenth / early twentieth century houses

Historically, the district is significant for two themes related to its physical location along the Susquehanna River: as a major commercial and transportation center in northern Maryland and for its community planning.

Transportation was important throughout Havre de Grace's history, starting as early as William Claibourne's trading post established on Garrett Island in 1637, continuing with John Rodgers' eighteenth century ferry with a tavern on each side of the river, and throughout the nineteenth century with the establishment of the rail line crossing through Havre de Grace. The Proposed Project's APE is integral to the historic theme of transportation because it contains the existing 1906 Pennsylvania Railroad bridge and the raised bridge approach as well as four of the undergrade bridges (see **Figures 8-10 and 8-11, Photos 11-14**) constructed at the same time as the bridge across the river (the North Freedom Lane Undergrade Bridge at MP 60.51; the North Stokes Street Undergrade Bridge at MP 60.56; the Centennial Lane Undergrade Bridge at MP



ers and other items in the 3D viewer

Imagery Date: 5/25/2013 39°33'05.08" N 76°05'39.71" W elev 31 ft eye alt 1917 ft

- | | | |
|---|---|---|
| A. 501 St. John Street: American Legion Building | E. Warren Street: cluster of early twentieth century bungalows | I. 571 Otsego Street: altered mid-nineteenth century French Second Empire house |
| B. 511 Warren Street: early nineteenth century house | F. Otsego Street: vernacular mid-nineteenth century houses | J. Otsego / Water Streets: late nineteenth / early twentieth century houses |
| C. 552 Warren Street: multi-family residential structure | G. 518 N. Stokes Street: mid-nineteenth century Gothic Revival house | |
| D. 429 N. Stokes Street: Room at the Cross Mission Church | H. Otsego / N. Stokes Streets: vernacular mid-nineteenth century houses | |

Resources Contributing to the Havre de Grace Historic District

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Perryville / Havre de Grace, Maryland

Figure 8-4



501 St. John Street: American Legion Building (former Lafayette Hotel); 1
looking east.



511 Warren Street: early nineteenth century house, possibly moved 2
from original location; looking northeast.



552 Warren Street: multi-family residential structure; looking southeast. **3**



429 N. Stokes Street: Room at the Cross Mission Church (former St. Patrick's Catholic Church); looking southeast. **4**



Warren Street: cluster of early twentieth century bungalows; looking northeast. 5



Otsego Street: vernacular mid-nineteenth century houses; looking southwest. 6



518 N. Stokes Street: mid-nineteenth century Gothic Revival house; looking southwest. 7



Otsego / N. Stokes Streets: vernacular mid-nineteenth century houses; looking southeast. 8



571 Otsego Street: altered mid-nineteenth century French Second Empire house; looking north. 9



Otsego / Water Streets: late nineteenth / early twentieth century houses; looking east. 10



North Freedom Lane Undergrade Bridge (MP 60.51): view of the railroad east side, 11
which will be altered via removing the existing stone-arch culvert and replacing
it with a precast concrete culvert; looking north.



North Stokes Street Undergrade Bridge (MP 60.56): view of the railroad west side, 12
which will be altered via removing a portion of the existing stone masonry
abutment and building a new concrete abutment; looking south.



Centennial Lane Undergrade Bridge (MP 60.61): view of the railroad east side, 13
which will be altered via construction of a through plate girder bridge on a
concrete abutment; looking north.



North Adams Street Undergrade Bridge (MP 60.69): view of the railroad east 14
side, which will be altered via construction of a new concrete abutment;
looking north.

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60.61; and the North Adams Street Undergrade Bridge at MP 60.69). These rail structures relate to Havre de Grace's history as a major commercial and transportation center and are therefore considered contributing features of the historic district. In addition, the current Proposed Project's APE includes the extant piers of the 1866 railroad bridge, the canal and locktender's house, and the site of the eighteenth century ferry crossing.

In terms of community planning, the historic district nomination discusses the importance of the views to/from the water, as well as the town's system of alternating streets and alleys. Within the APE, the properties in close proximity to the river have a direct view of the water, although there some large facilities, including marinas and large housing complexes, that block some of the views. Immediately adjacent to the rail line, the main view towards the river is dominated by the bridge and its approaches. The city's layout of streets and alleys is in close proximity to the tracks, with both Freedom Lane and Centennial Lane crossing under the rail line via small stone arch bridges.

Southern Terminus, Susquehanna and Tidewater Canal - South Lock #1 and Toll House (HA-112; HA-113)

The Southern Terminus, Susquehanna and Tidewater Canal - South Lock #1 and Toll House (see **Figure 8-12, Photos 15-16**) is located north of Erie Street and east of Park Drive on the western bank of the Susquehanna River (approximately one quarter-mile north of the Project site) in Havre de Grace. The canal was part of a waterway system for shipping goods up the Chesapeake Bay to New York, Pennsylvania, New Jersey, Delaware, and Maryland. Thus, Havre de Grace, at the southernmost terminus of the canal, became an important shipping point for goods traveling north by the early 19th century. The site contains the Lock Master's house, the foundation of a bulkhead wharf along the river, and the outlet lock of the canal.

The Canal and Toll House are listed on the NR under Criterion A based on their association with a larger canal system that served five states and facilitated the development of Havre de Grace as a major transportation and economic center in the nineteenth century and Criterion C for its engineering significance. The MHT holds a preservation easement on this property, which requires that the MHT be provided an opportunity to review any proposed alterations.

Martha Lewis (Skipjack [HA-2189])

The Skipjack *Martha Lewis* (NR-listed) is one of the 35 surviving traditional Chesapeake Bay skipjacks, which were sailboats built specifically for the purposes of oyster dredging.¹ The boat is currently undergoing restoration at Frank J. Hutchins Memorial Park, located approximately one half-mile south of the Project site, but has a permanent docking place at Millard Tydings Memorial Park, which is located over a mile south of the Project site. The Skipjack *Martha Lewis* is listed on the NR under Criterion A for its association with historic events and under Criterion C for embodying a method of construction that represents the work of a master.

Rodgers Tavern (CE-129)

Rodgers Tavern (see **Figure 8-13, Photo 17**) is located on the north side of Broad Street in Perryville, approximately 100 feet north of the Project site. It was a popular stop for travelers waiting for the ferry service to Havre de Grace.

¹ No photo was available at the time of writing as the ship was not on public display in Hutchins Park during the field visit in February 2014.



South Lock #1 and Toll House: Susquehanna Terminus, Susquehanna and Tidewater Canal; looking southeast. 15



Toll House: View of the northeast and northwest elevations; looking south. 16



Rodgers Tavern: View of the front façade; looking north. 17



Principio Furnace Office Building; looking south. 18

Rodgers Tavern, constructed circa 1771, is listed on the NR under Criterion A based on its association with prominent national figures such as George and Martha Washington, Marquis de Lafayette, and Lieutenant General Rochambeau. The tavern is also listed under NR Criterion C as an example of eighteenth century building construction and materials.

The MHT holds a preservation easement on this property, which requires that the MHT be provided an opportunity to review any proposed alterations to the tavern interior, exterior, and associated land.

Principio Furnace (Principio Iron Works [CE-112])

The Principio Iron Works (see **Figure 8-13, Photo 18**) is located at 1723 Principio Furnace Road. Although the buildings associated with the historic resource are located approximately one-half mile north of the Project site, the southwest corner of the property (containing only a wooded area) is located in the study area. The Principio Furnace was the first iron furnace in Maryland and one of the first in the United States.

The Principio Iron Works is listed on the NR under Criterion A based on its association with the country's early industrial development and under Criterion D for its archaeological potential.

Perry Point Mansion House and Mill (CE-146; CE-244)

The Perry Point Mansion House and Mill are located south of the Perry Point Veterans Administration Medical Center on the Susquehanna River at the mouth of the Chesapeake Bay, approximately one-half mile south of the Project site. This mid- to late-eighteenth century, two-and-a-half-story Georgian mansion (see **Figure 8-14, Photo 19**) was home to the Stump family until 1918 when the house and approximately 516-acre farm were sold to the federal government for \$150,000. During the Civil War, John Stump turned his farm over to the Union Army for the training of army mules and quartered soldiers in his house. A stone gristmill (see **Figure 8-14, Photo 20**) is located approximately 450 feet south of the mansion on the Susquehanna River.

The Perry Point Mansion House and Mill is listed on the NR under Criterion A because of its significance as a large nineteenth century farm owned and operated by a prominent local family and because of its association with housing Union Army soldiers during the Civil War, and under Criterion C for architectural significance.

Perryville Railroad Station (CE-1442)

The Perryville Station (see **Figure 8-15, Photo 21**), located at 650 Broad Street within and adjacent to the Project site, was determined eligible for listing on the NR under Criteria A and C due to its association with the larger pattern of system-wide upgrades during the railroad industry's golden age and as an example of an early twentieth century Colonial Revival style train station. The Philadelphia, Baltimore, and Washington (PB&W) Railroad Company constructed the station circa 1905.

Two railroad-related structures are in close proximity to the Perryville Station and contribute to its historic significance: Perry Interlocking Tower (see **Figure 8-15, Photo 22**), and the ashlar



Perry Point Mansion House: view of the north façade; 19
looking south.



Perry Point Mill: view of the east façade; looking west. 20



Perryville Railroad Station: view of the south elevation; looking north. 21



Perry Interlocking Tower: view of the north and east elevations; looking southwest. 22

Susquehanna River Rail Bridge Project

stone-arch Perryville Railroad Station Undergrade Bridge at MP 59.39² (see **Figure 8-16, Photo 23**).

Amtrak Railroad or Perryville Road Bridge over the Susquehanna River and Overpasses (HA-1712)

The Pennsylvania Railroad constructed the Amtrak Railroad or Perryville Road Bridge (also known as the Susquehanna River Rail Bridge) in 1906. The bridge, set on stone piers, is a swing bridge with a movable span that rotates horizontally to open (using a center pivot mounted on a pier in the river) and allow boats to pass (see **Figure 8-16, Photo 24**).

The Amtrak Railroad or Perryville Road Bridge (the Susquehanna River Rail Bridge) was determined eligible for listing on the NR under Criteria A and C as an example of an early twentieth century railroad bridge built by an important American railroad company and as an example of engineering that acknowledges two different modes of transportation.

The Project Team determined nine bridges (see **Figures 8-17 and 8-18, Photo 25-27**) historically associated with the Susquehanna River Rail Bridge eligible for the NR (also under NR Criteria A and C), and modified the existing NR eligibility determination for the Susquehanna River Rail Bridge to include these bridges. These nine bridges were constructed as part of the 1904-1906 building campaign that included the Susquehanna River Rail Bridge. The nine bridges include:

- Mill Creek, MP 59.00
- Perryville RR Station, MP 59.39 (also contributes to the Perryville Railroad Station complex)
- Station Access Road, MP 59.52
- North Freedom Lane, MP 60.51
- North Stokes Street, MP 60.56
- Centennial Lane, MP 60.61
- North Adams Street, MP 60.69
- North Juniata Street, MP 60.77
- Lily Run, MP 60.85

In addition, due to the importance of transportation to the history of the Havre de Grace Historic District, the Susquehanna River Rail Bridge and the four bridges within Havre de Grace Historic District (at MP 60.51, 60.56, 60.61, and 60.69) contribute to the historic district's significance.

Perry Point Veterans Administration Medical Center Historic District (CE-1544)

The Veterans Administration (VA) developed the Medical Center at Perry Point (see **Figure 8-18, Photo 28**) primarily in the 1920s through the 1940s as a neuro-psychiatric treatment facility for military veterans. The Colonial Revival architectural style and site layout reflect design principles developed by the VA during this period, which focused on siting buildings to maximize views of the existing landscape.

² A passenger shelter identified in the eligibility determination as contributing to the resource's significance was recently demolished. It was located south of the tracks across from the train station.



Perryville Railroad Station Undergrade Bridge (MP 59.39): View of the ashlar stone tunnel located east of the Perryville Railroad Station; looking south.

23



Susquehanna River Rail Bridge: View from the Perryville waterfront; looking southwest.

24



Mill Creek Undergrade Bridge (MP 59.00): View of the east side, which will be extended with a precast concrete culvert; looking northwest. 25



Perryville Railroad Station Undergrade Bridge (MP 59.39): view of the east side, which will be extended with a precast concrete culvert. 26



Access Road Undergrade Bridge (MP 59.52): View of the east side, which will be altered via replacing the existing concrete encased stringer and superstructure and will be extended with a concrete abutment; looking northwest. 27



Perry Point Veterans Administration Medical Center: view of residences along Avenue D from 2nd Street; looking southeast. 28

The VA Medical Center at Perry Point is eligible for listing on the NR under Criterion A for its association with the growth of the federal government’s provision of neuro-psychiatric treatment for military veterans and under Criterion C as a cohesive collection of buildings.

Crothers House (Furnace Bay Golf Clubhouse [CE-1566])

The Crothers House (see **Figure 8-19, Photo 29**), which is currently used as the clubhouse for the Furnace Bay Golf Course, was built in 1936 as a residence for Omar and Margaret Crothers, both of whom would serve in the Maryland State Senate in the 1950s.

The Crothers House was determined eligible for listing on the NR under Criterion C for its architectural significance as an example of a Colonial Revival house associated with early twentieth century estates for the wealthy and for its notable architectural features.

Woodlands Farm Historic District (CE-145)

The Woodlands Farm Historic District is an extension of the boundary of the NR-listed Woodlands property north of Maryland Route 7 to include the Woodlands Farm South Complex. The NR-listed Woodlands property consists of a main house and several outbuildings set on 69 acres.

The Woodlands Farm South Complex is eligible for listing on the NR under Criteria A and C due to its association with the evolution of the agricultural industry in Cecil County from the early nineteenth to late twentieth centuries, and as representing a cohesive collection of mostly intact agricultural buildings dating to the nineteenth century.

Perryville United Methodist Church (CE-1573)

As part of the Proposed Project, the Project Team – in concert with SHPO – determined the Perryville United Methodist Church eligible for the NR. The congregation of the Perryville United Methodist Church (see **Figure 8-19, Photo 30**) constructed the structure in 1896, 30 years after the church formed. The church added an addition to the south façade between 1923 and 1943; a Queen Anne-style Parsonage north of the Church circa 1905; and a Church House immediately south and west of the Church in 1928.

The Church, Parsonage, and Church House are eligible for the NR under Criterion A for their role in the history of the local development of the Methodist Church and under Criterion C as examples of Gothic Revival-style ecclesiastical architecture.

Perryville Presbyterian Church (CE-1574)

As part of the Proposed Project, the Perryville Presbyterian Church was determined to be NR eligible. The Perryville Presbyterian Church (see **Figure 8-20, Photo 31**) was constructed circa 1892, four years after the founding of the congregation.

The church is eligible for the NR under Criterion A for its role in the local history of the Presbyterian Church and under Criterion C as a fine example of a Gothic board-and-batten church.

C. NO ACTION ALTERNATIVE

As described in Chapter 2, “Project Alternatives,” under the No Action Alternative, the existing Susquehanna River Rail Bridge will remain in service, with continued increased maintenance and minimal repairs. The planned development projects discussed in Chapter 4, “Land Use and



Crothers House (Furnace Bay Golf Clubhouse): View of the west (front) and south elevations; looking northeast. 29



Perryville United Methodist Church: view of the east elevation; looking west. 30



Perryville Presbyterian Church: view of the side (east) and front (north) elevations of the church at 710 Broad Street in Perryville; looking southwest. **31**

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Community Facilities,” consist primarily of residential and mixed-use infill projects in Havre de Grace and Perryville. Other proposed projects include a Waterfront Heritage Park in Havre de Grace along Water Street, the Lower Ferry Park and Pier in Perryville at Broad Street and Roundhouse Drive, as well as a 115-acre MARC maintenance facility adjacent to the NEC.

Architectural resources that are listed on the NR or that have been found eligible for listing are given a measure of protection from the effects of federally sponsored or assisted projects under Section 106 of the NHPA. Although the Act does not mandate preservation, federal agencies must attempt to avoid adverse impacts on such resources through a notice, review, and construction process.

The residential infill projects in the Havre de Grace Historic District require review and approval from the Havre de Grace Historic Preservation Commission; therefore, it is anticipated that these projects would be in keeping with the overall character of the Historic District.

D. POTENTIAL IMPACTS OF THE BUILD ALTERNATIVES

ARCHAEOLOGICAL RESOURCES

Since Alternative 9A and Alternative 9B overlap, their potential effects on archaeological resources will be jointly discussed for each of the five study areas identified in the *Phase IA Archaeological Assessment*, moving from west to east.

STUDY AREA 1: HAVRE DE GRACE ATHLETIC FIELD COMPLEX

Within Study Area 1 there is little to no archaeological sensitivity within the APE for Alternative 9A and Alternative 9B; therefore, no additional archaeological investigation is recommended for this section of the Project area.

STUDY AREA 2: NORTH JUNIATA STREET TO NORTH UNION AVENUE

Within Study Area 2, the area of archaeological sensitivity is located within the northwest corner of the intersection of Warren Street and N. Adams Street between the existing railroad and Warren Street. Approximately 100 feet (30 meters) west of Adams Street, a building was observed to extend under the railroad tracks. This appears to be the location of the former Havre de Grace Train Station with the extant remains of the building observed on both the west and east sides of the tracks. It is possible that intact cultural deposits associated with this structure are present within the APE. Both Alternative 9A and Alternative 9B propose ground disturbance within this portion of the APE with Alternative 9A having a negligible, but slightly larger area of ground disturbance. Within this portion of the APE, a Phase IB/II Archaeological Survey is recommended to confirm the presence of and determine the extent and significance of archaeological resources.

STUDY AREA 3: HAVRE DE GRACE WATERFRONT

Within Study Area 3, the area of archaeological sensitivity is located east of N. Union Street and Water Street along the Havre de Grace Waterfront. Although this portion of the APE is largely man-made as a result of filling activities along the waterfront, the area does have archaeological potential for information pertaining to the development of the waterfront, including the original Philadelphia, Baltimore, and Washington (PW&B) rail alignment, warehouses, wharves, or other

industrial activities. The MHT's records identify the entire waterfront as a potential resource as well as the approximate location of a coal wharf.

Along the waterfront, two parks straddle the railroad tracks: the David Craig Park to the south and Jean S. Roberts Park to the north. Both parks were identified as having archaeological potential, with a larger area of sensitivity identified within David Craig Park.

Alternative 9A and Alternative 9B both propose small-scale ground disturbance adjacent to the David Craig Park and a larger area of ground disturbance in the Jean S. Roberts Park, with Alternative 9B having a slightly larger disturbance area where the MHT Quad File #10 is located. While Alternative 9A and Alternative 9B would disturb a larger area within Jean S. Roberts Park, the area of archaeological sensitivity in this location is smaller. For either Alternative 9A or Alternative 9B, a Phase IB Archaeological Survey is recommended to confirm the presence or absence of potentially significant archaeological deposits.

STUDY AREA 4: PERRYVILLE WATERFRONT

Within Study Area 4, the area of archaeological sensitivity is located at the northern bridge approach over the Susquehanna River known as Perry Point between the river and Avenue A on both sides of the existing railroad corridor. Portions of this area are Amtrak property, but are leased to the federal government for the VA facility. There have been previous archaeological investigations in the immediate vicinity of the Proposed Project APE; however, these investigations did not include all areas that may be impacted by the Proposed Project. The previously recorded and potentially eligible Rodgers's Tavern site (18CE15) is located on the north side of the existing railroad and north of Broad Street. The archaeological component of Rodgers Tavern is depicted on MHT mapping as being located on the south side of Broad Street directly adjacent to one of the stone abutments supporting the current Susquehanna River Rail Bridge. Given the significance of this resource and the lack of systematic archaeological survey in this area, Phase IB/II investigations are recommended for all areas of ground disturbance associated with the Proposed Project west of Broad Street/Avenue A. These investigations would seek to verify the current extent of 18CE15 as well as to identify additional unrecorded cultural deposits associated with Rodgers Tavern in the vicinity.

Portions of the APE within the construction, staging, and access areas on the east side of the railroad should be considered archaeologically sensitive for both precontact and historic resources and may require Phase IB archaeological survey. This side of the river may contain the Perryville side of a ferry crossing.

Alternative 9A and Alternative 9B (which are identical in this section of the APE) would result in ground disturbance within the archaeologically sensitive areas west of the railroad and adjacent to the Rodgers Tavern site, which has a high potential for significant archaeological resources. Phase IB/II archaeological testing is recommended regardless of alternative selected, given what is known of the archaeological potential on both sides of the railroad and the location of the Rodgers Tavern site.

STUDY AREA 5: PERRY POINT VA MEDICAL CENTER AND MARC STATION AREA

The majority of Study Area 5 has been previously disturbed by the construction of the intersection of the Northeast Corridor with the Norfolk Southern Port Road spur line and its associated parking lots, supply yards, and other support facilities. However, west of this railroad intersection, a group of nineteenth and early twentieth century single and multifamily residences

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line the southern edge of Broad Street. Each of these properties includes a small yard directly adjacent to the rail corridor. These areas have the potential to contain intact yard features such as wells, privies, trash middens or other cultural deposits.

Both Alternative 9A and Alternative 9B (which are identical in this section of the APE) change the alignment of the Wye Track and encroach into the archaeologically sensitive areas. Phase IB archaeological testing is recommended for archaeologically sensitive areas that would be disturbed under either alternative.

STUDY AREA 6: SUSQUEHANNA SUBMERGED CULTURAL RESOURCES

Past archival research efforts and remote sensing surveys have indicated the potential for submerged historic shipwrecks or other vessels as well as potential structural remains associated with the evolution of the Havre de Grace Waterfront. These surveys have resulted in the identification of several targets that are located within the archaeological APE for the Proposed Project.

According to MHT's records for Havre de Grace, six resources have been identified within the archaeological APE.

- Location of the first railroad bridge across the Susquehanna, identified by the existing PW&B railroad bridge pilings.
- Location of a nineteenth century ferry across the Susquehanna River as identified on historic mapping.
- Location of the historic Havre de Grace Waterfront.
- Location of a coal wharf.
- Location, just south of the existing Susquehanna River Rail Bridge, of a submerged anomaly recorded during the 2002 Lower Susquehanna River survey by Maryland Maritime Archeology Program (MMAP). This anomaly is approximately 400 feet (122 meters) west of the Perryville shoreline.
- Location of another submerged anomaly recorded during the 2002 Lower Susquehanna River, marked on MHT mapping as running the entire length of the existing Amtrak railroad bridge structure.

No additional information is given for these resources.

In addition to the MHT Quad Files, one previously identified archaeological site, 18HE266, is located within the Susquehanna River within the vicinity of the APE. Located to the north of the existing bridge structure approximately 700 feet (213 meters) to the east of the Havre de Grace shoreline, 18HE266 has been identified as the wreckage from a twentieth century barge. This resource has never been formally evaluated for eligibility to the NR.

Due to the imprecise nature of the information available, additional information on the submerged archaeological features would be necessary to determine the potential impacts of the Build Alternatives. Resources identified within the vicinity of the APE should be surveyed and precisely located, to reconfirm their boundaries and verify whether they lie outside of the APE. Submerged cultural resources are subject to the natural effects of the environment. In particular, natural river phenomenon is known to have pushed sites out of the main channels and closer to shore. It appears that Alternative 9A and Alternative 9B may impact the location of the nineteenth century ferry and may be close to the location of the coal wharf. Given the lack of

certainty regarding the location and integrity of underwater archaeological resources within the river portion of the APE, additional Phase I underwater archaeological studies are recommended for areas that may be impacted by the Proposed Project.

SUMMARY

Both Alternative 9A and Alternative 9B have the potential to impact archaeologically sensitive areas within Study Areas 2 to 5 and within the Susquehanna River. Both Alternative 9A and Alternative 9B would have the potential to impact the area surrounding the former Havre de Grace Train Station (Study Area 2). Although the proposed areas of ground disturbance in Study Area 2 are not identical under Alternative 9A and Alternative 9B, the differences are slight. Within the Havre de Grace Waterfront (Study Area 3), both Alternative 9A and Alternative 9B would disturb archaeologically sensitive areas. At Perryville Waterfront (Study Area 4), both Alternative 9A and Alternative 9B would cause disturbance within archaeologically sensitive areas with high potential for archaeological resources pertaining to Rodgers Tavern as well as precontact resources. Adjacent to the South Wye Track (Study Area 5), the archaeologically sensitive backyards of the houses to the west of the track may be impacted by both Alternative 9A and Alternative 9B. As discussed above, additional information regarding the potential underwater archaeological resources within the Susquehanna River is required to determine potential impacts to these historic resources.

Phase IB testing is recommended for all identified archaeologically sensitive areas that would be impacted by the Proposed Project. Additionally, a Phase I underwater archaeological survey is recommended for the portion of the APE within the Susquehanna River to confirm the location of potential submerged archaeological resources that could be affected by the undertaking. If Phase IB testing in any of the Study Areas identifies potentially significant (NR-eligible) archaeological resources that could be affected by the Proposed Project, Phase II archaeological testing would be undertaken in these areas to determine the significance and the boundaries of the archaeological deposits. If significant archaeological resources are identified in the APE that would be unavoidably adversely affected by the Proposed Project, appropriate measures to minimize and/or mitigate any such effects would be devised and implemented. A draft Programmatic Agreement (PA) was developed with all appropriate agencies and consulting parties, which includes stipulations for any necessary additional archaeological investigations, as recommended above (see **Appendix D**, “Cultural Resources”).

ARCHITECTURAL RESOURCES

The Project Team assessed Alternative 9A and Alternative 9B for their potential to adversely affect the 13 historic architectural resources within the APE that are either listed on or eligible for listing on the NR. Based on the assessment, the Proposed Project would adversely affect the Susquehanna River Rail Bridge, eight of the nine undergrade rail bridges, the Havre de Grace Historic District, the Perryville Railroad Station complex, and Rodgers Tavern.

A draft Programmatic Agreement includes measures to minimize and mitigate adverse effects to architectural resources (see **Appendix D**, “Cultural Resources”). This document will be implemented in coordination with ACHP, MHT, and involved consulting parties.

SUSQUEHANNA RIVER RAILROAD BRIDGE AND OVERPASSES

The Susquehanna River Rail Bridge and nine undergrade bridges, which were all constructed during the same 1904-1906 building campaign by the Pennsylvania Railroad, are eligible for

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listing on the NR under Criteria A and C. Because all ten bridges will be impacted by the Build Alternatives, the effect of the Proposed Project on the bridges was evaluated in accordance with the criteria for adverse effect.

Section 106 regulations define “Physical destruction, damage, or alteration of all or part of the property” as an adverse effect; therefore, demolition of the NR-eligible Susquehanna River Rail Bridge would constitute an adverse effect. FRA/MDOT considered whether rehabilitating the existing Susquehanna River Rail Bridge could meet project Purpose and Need and program goals. Based on studies conducted in 2013-2014 (see Chapter 2, “Project Alternatives” for further discussion), FRA/MDOT determined that the rehabilitation alternative is not suitable for either continued freight and/or passenger rail or non-rail use. This conclusion stems from the bridge’s current condition and the infeasibility of reconstructing it to a state of good repair without significant rail disruptions and prohibitive costs.

Although the adverse effect of demolishing the bridge cannot be avoided, FRA/MDOT considered minimizing the adverse effect by designing the two new bridges and their piers to be compatible with the character defining features of the historic bridge. The character defining features of the existing bridge include its traditional railroad architecture, especially its metal trusses, its central projecting section, and its use of Alleghany Mountain sandstone and Port Deposit granite. Amtrak is considering four alternative bridge designs and four pier designs for the proposed new bridges. The bridge designs, and the extent to which they would minimize the adverse effects, are listed below (in descending order of the degree to which the new design helps to minimize the adverse effect of the removal of the historic bridge):

The bridge alternative in **Figure 8-21, Photo 32** combines deck truss approach spans with a through truss main span and is therefore closest to the original bridge in design. Overall, this design rates high in terms of its ability to minimize the adverse effect of demolishing the historic bridge.

The bridge alternative in **Figure 8-21, Photo 33** maintains a through truss center span, yet replaces the deck truss construction with a girder deck. Although this is a change from the existing bridge, a girder is a traditional rail design and therefore appropriate for the replacement of a historic bridge. Overall, this design rates medium in terms of its ability to minimize the adverse effect of demolishing the historic bridge.

The bridge alternative in **Figure 8-22, Photo 34** replaces the through truss of the center span with an arch and the deck truss construction with a girder deck. Although this is a change from the existing bridge, both arch construction and deck girders are traditional rail design and therefore appropriate for the replacement of a historic bridge. Overall, this design rates medium in terms of its ability to minimize the adverse effect of demolishing the historic bridge.

The bridge alternative in **Figure 8-22, Photo 35** replaces the through truss of the center span with an arch and the deck truss construction with a girder deck. The use of arch construction is traditional rail design; however, the remaining design elements, especially the delta piers (see **Figure 8-23, Photo 36**) are not compatible with a historic bridge. Overall, this design rates low in terms of its ability to minimize the adverse effect.

Three of the proposed pier designs, arched “keyhole” (see **Figure 8-23, Photo 37**), fluted (see **Figure 8-24, Photo 38**), or wall (see **Figure 8-21, Photos 32-33**) are traditional designs and would therefore help to minimize the adverse effect of demolishing the bridge. These piers could be constructed with any of the three truss or girder bridge alternatives shown in **Figures 8-21 and 8-22, Photos 32-34**. The delta piers (shown in **Figures 8-22 and 8-23, Photos 35-36**) have



Rendering of a proposed replacement bridge with a truss approach and a truss main span; **32**
looking northeast from Havre de Grace.



Rendering of a proposed replacement bridge with a girder approach and a truss main span; **33**
looking northeast from Havre de Grace.



Rendering of a proposed replacement bridge with a girder approach and arch main span; **34**
looking northeast from Havre de Grace.



Rendering of a proposed replacement bridge with a Delta frame approach and arch main span; **35**
looking northeast from Havre de Grace.



Rendering of the piers for the Delta frame approach; looking east from Havre de Grace. 36



Rendering of possible arched piers to be used with the girder approach; looking east from Havre de Grace. 37



Rendering of possible fluted piers to be used with the girder approach; **38**
looking east from Havre de Grace.

a modern appearance and would not help to minimize the adverse effect of demolishing the historic bridge.

The four bridge design options have been shown to consulting parties and the general public at several meetings, including on December 10, 2014, November 10, 2015, and April 14, 2016. The design alternative that received the strongest support was the one with a deck girder and central arch (shown in **Figure 8-22, Photo 34**), primarily due to the more open look of this design.

The Susquehanna River Rail Bridge's stone is an important character-defining feature, especially because of the use of Port Deposit granite from a local quarry. The adverse effect of the bridge's demolition could be minimized by incorporating stone into the two new bridges. However, the Project Team has determined that using stone in the new bridge is not feasible as it would not meet current engineering design standards. In addition, as indicated above, public comment favors a more open pier design (see further discussion on the importance of viewsheds in conjunction with the Havre de Grace Historic District.)

In addition to affecting the Susquehanna River Rail Bridge itself, the Proposed Project would result in a permanent impact to the nine associated masonry rail undergrade bridges that carry the NEC, listed from north to south:

- Mill Creek Undergrade Bridge, milepost (MP) 59.00: a stone-arch bridge with stone abutments resting on spread footings. The bridge appears to remain largely intact, although an I-beam that runs along the edge of the deck is anchored on either end with concrete that appears to be a later repair. The Proposed Project calls for the construction of a precast concrete culvert extension on the east side of the tracks.
- Perryville Railroad Station Undergrade Bridge, MP 59.39: a stone-arch masonry structure with stone abutments on spread footings. The Proposed Project calls for the construction of a precast concrete culvert extension on the east side of the tracks.
- Access Road Undergrade Bridge, MP 59.52: a two-span concrete-encased steel-stringer bridge that sits on stone abutments and a central steel pier, both founded on spread footings. The bridge's masonry abutments, steel pier, and steel deck do not appear to have been substantially altered. The Proposed Project calls for the current structure to be replaced with a precast concrete culvert and the existing abutments to be partially demolished and buried in fill. In addition, the new bridge will extend beyond the limits of the current structure to the east and the west.
- North Freedom Lane Undergrade Bridge, MP 60.51: a stone-arch bridge that consists of a masonry arch and abutments (or wing walls) on spread footings that retain the embankment on which the Northeast Corridor runs in the area. The bridge appears to be in good condition and does not appear to have been visibly altered since its construction as part of the 1904-1906 building campaign. The Proposed Project calls for the construction of a precast concrete culvert extension on the east and west sides of the tracks.
- North Stokes Street Undergrade Bridge, MP 60.56: a bridge comprised of stone abutments (or wing walls) on spread footings supporting steel plate girders. The deck appears to be constructed of reinforced concrete. The masonry abutments and steel plate girders appear to date to the original 1906 construction of the bridge. The Proposed Project calls for removal of a portion of the existing stone masonry abutment on the west side of the tracks and construction of new concrete abutments on both sides of the tracks.
- Centennial Lane Undergrade Bridge, MP 60.61: a stone-arch bridge that consists of a masonry arch and abutments on spread footings. The bridge appears to be in good condition

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and does not appear to have been visibly altered since it was built as part of the 1906 construction of the Susquehanna River Railroad Bridge. The Proposed Project calls for the construction of a through plate girder bridge on a concrete abutment on the east side of the tracks for Alternative 9A and a precast concrete culvert extension on both sides of the tracks for Alternative 9B.

- North Adams Street Undergrade Bridge, MP 60.69: The bridge consists of two single-track steel plate girder decks atop stone masonry abutments on spread footings. The masonry abutments and steel plate girders appear to date to the original construction of the 1904-1906 bridge. Some repairs to the upper portions of the masonry abutments are evident. The concrete deck appears to have been replaced and the deck platform appears to have been extended with a metal plate supported by metal brackets affixed to outer sides of the concrete decking. The Proposed Project calls for construction of a new concrete abutment on the east side of the tracks and a concrete abutment extension on the west side.
- North Juniata Street Undergrade Bridge, MP 60.77: The bridge consists of four single-track plate-girder decks atop stone abutments with spread footings. The masonry abutments and steel plate girders appear to date to the original construction of the 1906 Susquehanna River Railroad Bridge. The concrete deck appears to have been replaced and the deck platform appears to have been extended with a metal plate supported by metal brackets affixed to outer sides of the concrete decking. The Proposed Project calls for construction of a new concrete abutment on the east side of the tracks.
- Lily Run Undergrade Bridge, MP 60.85: The bridge is a stone-arch culvert comprised of stone abutments on a spread footing. The Proposed Project calls for spanning over the flood plain with a multi-girder bridge, thereby avoiding the need to extend the culvert.

Project plans to span over and therefore avoid altering the Lily Run Undergrade Bridge (MP 60.85) would result in no adverse effect on that bridge. However, the Proposed Project will have an adverse effect on the other eight historic bridges due to the proposed extension of the bridges with concrete abutments. The adverse effect could be minimized or avoided by using stone in the construction of the new bridge extensions; however, FRA/MDOT have determined that using stone is not feasible as it would not meet current engineering design standards. Therefore, the adverse effect could be minimized by using a form liner that emulates stone and is stained to be compatible with the color of the existing stone. In addition, to ensure that the new retaining walls in close proximity to the bridges do not adversely affect the historic resources, the design of the new walls should be in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, so that the walls are compatible with the bridges' historic materials, features, size, scale and proportion, and massing.

The Susquehanna River Rail Bridge Project Advisory Board and the Town of Perryville have recommended that the north face and wing walls of the underpass at MP 59.52 “should be restored to its original architectural appearance,” and that “the entire north entrance of this underpass should be thoroughly cleaned and well landscaped along the adjacent embankments and out to Broad Street.” In addition, the Susquehanna River Rail Bridge Project Advisory Board and the Town of Perryville have also recommended that the “low tunnel-like underpass [at MP 59.39] that divides the two MARC Station parking lots should be abandoned by sealing it off from the north side. The south side may be left open for historical purposes, provided it is made secure from trespassers.” The abandonment and sealing off of the underpass are not part of the Proposed Project and, if added, would constitute an adverse effect under Section 106.

The following components of the Proposed Project will have no direct physical effects and only limited visual effects on the nine historic undergrade bridges: the new communications, overhead contact, and signal systems; minor modifications to the Perry Electrical Substation; the modification or relocation of the transmission tower on the west side of the track; and modifications to the interlockings. Therefore, because these components will not alter a characteristic that makes the undergrade bridges eligible for inclusion in the NR, they will have no effect as defined in 36 CFR Part 800.16.

HAVRE DE GRACE HISTORIC DISTRICT

To assess the Proposed Project's effects on the Havre de Grace Historic District, the following were reviewed:

- Demolition of the existing Susquehanna River Rail Bridge. As the bridge is a contributing feature IN the Havre de Grace Historic District, the proposed demolition of the bridge will have an adverse effect on the historic district.
- Visual effects associated with the proposed replacement of the Susquehanna River Rail Bridge, including the change from one to two bridges, the massing and height of the new bridges and their piers and approaches, and the construction of new retaining walls.
- Alterations to the undergrade bridges within the historic district.
- Physical taking of property within the historic district.
- Damage to historic buildings.
- The proposed installation of new communications, overhead contact, and signal systems.

Demolition of the Susquehanna River Rail Bridge

Because the bridge is a contributing feature of the Havre de Grace Historic District, the proposed demolition of the bridge will have an adverse effect on the district due to the "physical destruction, damage, or alteration of all or part of the property." This adverse effect can be minimized by ensuring that the two new bridges over the river use a traditional design for the bridges and piers as discussed earlier in this section.

Visual Effects

The Proposed Project's potential visual effects on the Havre de Grace Historic District were evaluated according to three considerations: the extent to which the Proposed Project would either block or open up views to/from the historic district; the extent to which the view looking at the Susquehanna River Rail Bridge from the historic district would be altered; and the extent to which the views from structures within the historic district would be altered due to the Proposed Project coming in closer proximity to the structures.

The NR nomination for the Havre de Grace Historic District states that views or "vistas" to and from the water are important: "Another aspect of Havre de Grace's vistas that should not be forgotten relates not only to how the water is seen from in town but to the image which the town projects to the river and Bay. Considering that it has a history of three centuries as a river settlement, it is only in very recent times that the waterway has ceased to be the principal transportation route to Havre de Grace." The fact that the Proposed Project calls for the replacement of one bridge with two will result in greater mass that would potentially block views to/from the historic district. However, this effect on views will to a great extent be counterbalanced by the fact that the bridges will be 14 feet higher in elevation at the navigation

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channel of the river, thereby opening up views under the bridges. In addition, a girder bridge, versus the existing heavy construction truss bridge, will be shallower and therefore result in more open views.

In terms of vistas from the historic district to the bridge, the most important character defining feature, whether in close proximity to the bridge or further removed is the bridge’s long linear nature with a traditional central feature, currently a truss. All four proposed bridge designs will retain this characteristic.

In summary, the Proposed Project will have an effect, but not an adverse effect, on the Havre de Grace Historic District’s character-defining feature of views to/from the water and to the bridge.

The extent to which the Proposed Project would have a visual effect on individual structures within the Havre de Grace Historic District was also assessed. In order to accommodate the new tracks, the elevated tracks going through the historic district will need to be expanded in width and height, with new retaining walls added. In terms of height, the approach to the bridge in Havre de Grace will be six feet higher at the south abutment, three feet higher at Stokes Street, and two feet higher at Adams Street near the southern end of the historic district. In terms of width, Alternative 9A and Alternative 9B will result in placing the tracks closer to contributing structures within the historic district as shown in **Table 8-2**.

Table 8-2
Distance to Contributing Structures

Building/Cluster	Alternative 9A	Alternative 9B
511 Warren Street	Shifted 30 feet east	Shifted 13 feet east
Cross Mission Church, 429 N. Stokes Street	Shifted 44 feet east	Shifted 19 feet east
Bungalows at the intersection of Adams and Warren Streets (west side)	Shifted 4 to 5 feet west	
518 N. Stokes Street	Shifted 26 to 28 feet west	
Mid-nineteenth century houses on southeast corner of N. Stokes Street and 560-566 Otsego Street	Shifted 30 to 37 feet west	
513 Otsego Street	Shifted 46 feet west	
509 Otsego Street	Shifted 47 feet west	
600 Water Street	Shifted 48 feet west	

The proposed changes, especially the widening that will bring the tracks in much closer proximity to some of the contributing structures within the historic district, will result in “the isolation of the property from or alteration of the character of the property’s setting when that character contributes to the property’s qualification for the NR,” constituting an adverse effect. The areas where the greatest changes would occur would be:

- West side of the tracks:
 - Structures at the intersection of Otsego and Water Streets
 - Vernacular Victorian-period residence at 518 N. Stokes Street

These structures would be impacted by the effect of the widening and the new retaining walls for both Alternative 9A and Alternative 9B. The tracks would be 46 to 48 feet closer to the

structures at the intersection of Otsego and Water Streets and 26 to 28 feet closer to 518 N. Stokes Street.

- East side of the tracks:
 - Nineteenth century structure at 511 Warren Street

The tracks would be 40 feet closer in Alternative A, and only 13 feet closer in Alternative B.

Several factors were taken into consideration in assessing the adverse effect on the structures on the west side of the tracks. First, the visual effects of the widening of the bridge approach near the intersection of Otsego and Water Streets will be minimized by the fact that the stone bridge abutment and wingwall across from the houses on Otsego Street will be removed and the new abutment will be placed further south near Freedom Lane. In addition, the retaining wall proposed to be built south of Freedom Lane will help to separate the tracks from the adjoining structures, with the tracks placed 16 feet within the retaining walls. The adverse effect from the widening of the bridge approach can be further minimized by ensuring that the retaining wall is designed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, in order to ensure compatibility with the historic district. The Advisory Board has recommended that the bridge abutments, underpasses, and retaining walls have a consistent architectural design and appearance.

Physical Taking of Property within the Historic District

For Alternative 9A and Alternative 9B, most of the required taking of property beyond the existing Amtrak right-of-way is south of North Adams Street and therefore outside of the boundaries of the historic district. Within the historic district, there are two areas of takings:

- Alternative 9A requires a taking of a small amount of property outside of the existing Amtrak right-of-way including a 0.1-acre tapered area between Adams Street and Stokes Street and a 0.05-acre area between Stokes Street and Freedom Alley. The affected property is undeveloped open space. Due to the small size of the affected land as well as the undeveloped nature, the effect of this taking is minor and therefore not adverse.
- Both Alternatives require the taking of a 0.01-acre area from the Jean S. Roberts Memorial Park on the west side of the bridge. Due to the small size of the affected land, the effect of this taking is minor and therefore not adverse.

Alterations to Overpass Bridges within the Historic District

The four undergrade bridges that contribute to the historic significance of the Susquehanna River Rail Bridge and the Havre de Grace Historic District will need to be modified as part of the Proposed Project. FRA/MDOT evaluated that the Proposed Project will have an adverse effect on these four historic bridges due to the proposed extensions to the bridges, which will alter the bridges' design and materials. This adverse effect could be avoided by using stone in the construction of the new bridge extensions; however, FRA/MDOT have determined that using stone is not feasible as it would not meet current engineering design standards. Therefore, it is recommended that the adverse effect be minimized by using a form liner that emulates stone and is stained to be compatible with the color of the existing stone. In addition, to ensure that the new retaining walls in close proximity to the bridges do not adversely affect the historic resources, the design of the new walls should be in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, so that the walls are compatible with the bridges' historic materials, features, size, scale and proportion, and massing.

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Two of the undergrade bridges (at Freedom Lane and Centennial Lane) carry the NEC over alleys, which are described in the Havre de Grace Historic District NR nomination as important features within the historic district. Because the Proposed Project proposes to keep the alleys open for passage, the Proposed Project will not have an adverse effect on the alleys. Closing up either alley would constitute an additional adverse effect under Section 106.

Damage to Historic Buildings

Because the Proposed Project will come in close proximity to some of the contributing resources within the Havre de Grace Historic District, the potential for inadvertent construction-period impacts to adjacent structures has been assessed. Construction would occur in close proximity to several resources including 511 Warren Street on the east side of the tracks if Alternative 9A is selected, and the effects on the structures at 509, 513, 560, and 566 Otsego Street and 518 N. Stokes Street, on the west side of the tracks related to either Alternative 9A or Alternative 9B.

To ensure that there is no construction-related damage, the Proposed Project PA will include development of a Construction Protection Plan (CPP). The CPP, which will be prepared in consultation with the MHT, ACHP (as appropriate), consulting parties, and the property owners, will identify all architectural resources to be included in the plan and will set forth the specific measures to be used and specifications that will be applied to protect these architectural resources from damage during the construction period.

FRA/MDOT assessed the potential for the Proposed Project to cause long-term operational damage to adjacent structures and determined that the Proposed Project in its operational condition would not have the potential to result in vibration at a level that could cause damage to nearby historic structures. As described in Chapter 14, "Noise and Vibration," vibration produced by the Proposed Project would not exceed the significant impact thresholds specified in the FTA guidance document's general assessment methodology. These impact thresholds are designed to avoid human annoyance and disruptions to human activity, and as such are substantially lower than those that could potentially result in building damage, even for historic structures. Because the impact thresholds are based on the more stringent criterion of human annoyance, damage to adjacent buildings is not specifically addressed in the FTA's general assessment methodology. However, since operational vibration resulting from the Proposed Project would not result in exceedances of the vibration impact criteria, it would not have the potential to result in vibration levels that could damage historic resources.

New communications, overhead contact, and signal systems

The following components of the Proposed Project will have only limited visual effects on the Havre de Grace Historic District: the new communications overhead contact, and signal systems. Therefore, because these components will not alter a characteristic that makes the Historic District eligible for inclusion in the NR, they will have no adverse effect as defined in 36 CFR Part 800.16.

Summary

The proposed demolition of the Susquehanna River Rail Bridge and the alterations to the four related undergrade bridges will adversely affect the Havre de Grace Historic District. In addition, the widening that will bring the tracks in much closer proximity to some of the contributing structures within the historic district will constitute an adverse effect.

SOUTHERN TERMINUS, SUSQUEHANNA AND TIDEWATER CANAL - SOUTH LOCK #1 AND TOLL HOUSE

The Southern Terminus, Susquehanna and Tidewater Canal - South Lock #1 and Toll House (NR-listed) is located north of Erie Street and east of Park Drive at the north end of Havre de Grace on the western bank of the Susquehanna River (approximately one quarter-mile north of the Project site). The existing Susquehanna River Rail Bridge is distantly visible from this property. The replacement of the bridge would not substantially change the setting of the structure nor would it diminish the integrity of its historic features. The existing bridge does not relate to or contribute to the characteristics that qualify the resource for inclusion in the NR. The Proposed Project would have no adverse effect on this historic resource.

MARTHA LEWIS (SKIPJACK)

The Skipjack *Martha Lewis* (NR-listed), built in 1955 in Wingate, Maryland, is one of the 35 surviving traditional Chesapeake Bay skipjacks built specifically for the purposes of oyster harvesting. It was moved to Havre de Grace in 1993 and continues to carry passengers and dredge for oysters under sail power. It is permanently docked at Millard Tydings Memorial Park, located south of the APE in Havre de Grace; however, it is currently undergoing restoration at Frank J. Hutchins Memorial Park, located approximately one half mile south of the Project site within the APE. When operating, the vessel typically dredges for oysters south of its docking place in the Chesapeake Bay, but occasionally sails north up the Susquehanna River, navigating through the open swing span of the existing Susquehanna River Bridge. In the future with the Proposed Project, under both Alternative 9A and Alternative 9B, the vertical clearance of the proposed bridges would be 60 feet as compared to the 52-foot vertical clearance of the existing Susquehanna River Rail Bridge when in closed position; however, the proposed bridges would be fixed rather than moveable-span structures. The mast of the *Martha Lewis* is currently being replaced and it is anticipated that it will have a height of 65 feet when complete. Therefore, the *Martha Lewis* may be unable to navigate the Susquehanna River north of new bridges in the future with the Proposed Project. Although this could restrict the movement of the *Martha Lewis* to some extent, it would not prevent the vessel from accessing its traditional oyster dredging grounds in the Chesapeake Bay. Therefore, the Build Alternatives would not isolate the resource from important aspects of its setting nor alter the characteristics of the resource that qualify it for inclusion in the NR. Furthermore, the removal of the existing Susquehanna Bridge and its replacement with new bridges would somewhat alter the current setting of the *Martha Lewis*. However, the *Martha Lewis* permanently docks south of the APE in a location relatively far removed from the existing and proposed bridges. The bridges would not be visible from the *Martha Lewis* in its permanent docking location in Millard Tydings Memorial Park. Furthermore, the Skipjack was originally constructed in Wingate, Maryland; therefore, the presence of the Susquehanna River Bridge goes not relate or contribute to its historic setting. Therefore, the Proposed Project would result in no adverse effect on the *Martha Lewis*.

RODGERS TAVERN

Rodgers Tavern (NR-listed) is located on the north side of West Main Street in Perryville, approximately 300 feet east of the Susquehanna River Rail Bridge. Under both Alternative 9A and Alternative 9B, there would be no direct effect on the tavern; however, there would be an indirect visual effect due to the need to expand and elevate the bridge approach in front of the tavern.

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Across Broad Street from the tavern there is currently a 30-foot-high railroad embankment, catenary support structures and lines, and a transmission tower. Both Alternative 9A and Alternative 9B would require widening the bridge approach and bringing it approximately 44 feet closer to the tavern. As a result, the distance between the tavern and the tracks would be significantly reduced, from about 102 feet to 57 feet. The proposed difference in elevation would be minor; the current embankment is 30 feet high and the new embankment would be 33 feet high. However, there will be a visual effect due to the need to construct a retaining wall to run along the embankment.

The proposed changes in front of the tavern, especially the need to bring the tracks closer to the tavern and the need to construct a retaining wall, will result in “the isolation of the property from or alteration of the character of the property’s setting when that character contributes to the property’s qualification for the NR,” thus constituting an adverse effect. In order to minimize the adverse effect, MDOT is working with MHT, FRA, Amtrak, and the consulting parties to identify an aesthetic treatment that will allow the wall to better complement the historic tavern. The Proposed Project’s PA will include selecting an appropriate treatment, e.g., use of a form liner for so that the wall imitates the look of stone and better blends with the tavern’s architecture, use of landscaping to screen the wall if there is adequate space, and/or development of an appropriate mural.

As described above in conjunction with the Havre de Grace Historic District, the PA sets forth a process for identifying potential Project construction-related damage to adjacent historic resources. To ensure that there is no damage to the Rodgers Tavern, the Proposed Project’s CPP will include measures to protect the Rodgers Tavern during the construction period. As discussed for the Havre de Grace Historic District, the Proposed Project would not have the potential to result in vibration at a level that could cause damage to nearby historic structures during operation.

In terms of views from the tavern to the bridge, the view from the front of the structure is primarily blocked by vegetation. There is a much more extensive view from the walkway at the rear of the tavern. Similar to some of the views from the base of the bridge in Havre de Grace, the view consists mainly of a long linear view of the bridge, punctuated by the projecting central section of the bridge. As described in the Havre de Grace Historic District analysis, these features will be retained, with all of the bridge designs considered incorporating a traditional central span of either an arch or a truss.

The following components of the Proposed Project will have no direct physical effects and only limited visual effects on the Rodgers Tavern: the new communications, overhead contact, and signal systems; minor modifications to the Perry Electrical Substation; and the modification or relocation of the transmission tower just railroad north of the Tavern. Therefore, because these components will not alter characteristics that make the Rodgers Tavern eligible for inclusion in the NR, they will have no adverse effect as defined in 36 CFR Part 800.16.

PRINCIPIO FURNACE (PRINCIPIO IRON WORKS)

The Principio Iron Works (NR-listed) is located at 1723 Principio Furnace Road. Although the buildings associated with the historic resource are located approximately one-half mile north of the Project site, the southwest corner of the property (containing only a wooded area) is located in the APE. The existing Susquehanna River Rail Bridge is not visible from this property. The replacement of the bridge would not change the setting of the structure nor would it diminish the integrity of its historic features. The existing bridge does not relate to or contribute to the

characteristics that qualify the Principio Iron Works for inclusion in the NR. The Proposed Project would have no adverse effects on this historic resource.

PERRY POINT MANSION HOUSE AND MILL

The Perry Point Mansion House and Mill (NR-listed) is located south of the Perry Point Veterans Administration Medical Center on the Susquehanna River at the mouth of the Chesapeake Bay, approximately one-half mile south of the Project site. The existing Susquehanna River Rail Bridge is distantly visible from this property. The replacement of the bridge would not substantially change the setting of the structure nor would it diminish the integrity of its historic features. The existing bridge does not relate to or contribute to the characteristics that qualify the Perry Point Mansion House and Mill for inclusion in the NR. The Proposed Project would have no adverse effect on this historic resource.

PERRYVILLE RAILROAD STATION

The Perryville Railroad Station (NR-eligible), 650 Broad Street, is within the Project site. In addition to the two-story brick Colonial Revival-style station building, two ancillary structures were identified as contributing resources to the historic Station complex: the Perry Interlocking Tower (a two-story circa 1905 brick control tower southwest of the of the station) and an ashlar stone-arch undergrade bridge constructed in the late nineteenth to early twentieth centuries under the platform for Amtrak vehicular use.

The Proposed Project initially planned to demolish the interlocking tower to accommodate both Alternative 9A and Alternative 9B. The Town of Perryville, a consulting party, recommended that, if possible, the tower be left in place. Therefore, the Project Team proposes to shift the tower in order to avoid the adverse effect of demolishing it. The change in location is minor and will not adversely affect the relationship between the interlocking tower and the Perryville Station, thus resulting in a no adverse effect.

The undergrade bridge (MP 59.39) that is considered contributing to the NR-eligible station complex will be altered with the construction of a precast concrete culvert extension on the east side of the tracks. As previously discussed, this action will result in an adverse effect. The adverse effect could be avoided or minimized by using stone in the design of the new bridge extensions; however, FRA/MDOT have determined that using stone is not feasible as it would not meet current engineering design standards. Therefore, as set forth in the PA, measures to minimize the adverse effect by identifying a contextually appropriate design treatment (such as the use of a form liner that emulates stone and is stained to match the color of the existing stone) will be identified and implemented in consultation with SHPO and consulting parties. To ensure that the new retaining walls in close proximity to the bridge and station do not adversely affect the historic resources, the design of the new walls should be in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, so that the walls are compatible with the station's and bridge's historic materials, features, size, scale and proportion, and massing. The Susquehanna River Rail Bridge Project Advisory Board and the Town of Perryville have recommended that this underpass "should be abandoned by sealing it off from the north side. The south side may be left open for historical purposes, provided it is made secure from trespassers." The abandonment and sealing off of the underpass are not part of the Proposed Project and, if added, would constitute an adverse effect under Section 106.

The bridge carrying the south leg of the wye track over Broad Street, although not formally identified as contributing to the Perryville Station complex, is within the viewshed of the station

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complex. Therefore, changes to that bridge could have a visual effect on the NR-eligible Perryville Station. As currently planned, this bridge will not need to be altered, therefore not constituting an effect. However, if the plans change and the bridge needs to be altered, Amtrak will ensure that plans are developed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, so that the bridge continues to be compatible with the station complex's historic materials, features, size, scale and proportion, and massing.

The following components of the Proposed Project will have only limited visual effects on the NR-eligible station complex: the new communications, overhead contact, and signal systems; minor modifications to the Perry Electrical Substation; the modification or relocation of the transmission tower on the west side of the tracks; and modifications to Perry Interlocking at MP 59.4. Therefore, because these components will not alter a characteristic that makes the station complex eligible for inclusion in the NR, they will have no adverse effect as defined in 36 CFR Part 800.16.

The station building itself would not be physically altered. However, the alteration of contributing components of the complex would constitute an adverse effect on the Perryville Station complex.

Perry Point Veterans Administration Medical Center Historic District

The VA Medical Center at Perry Point (NR-eligible) was developed primarily in the 1920s through the 1940s as a neuro-psychiatric treatment facility for military veterans. It is located approximately 400 feet south of the Project site. The existing Susquehanna River Rail Bridge, bridge abutments, and tracks are visible from portions of this large property. Even in locations where the tracks pass the historic district, the distance to the historic buildings and the intervening landscaping minimize the view of the tracks. There is an open vista to the Perry Electrical Substation; however, minor modifications to the Substation will not constitute an effect on the NR-eligible Medical Center Historic District. In parts of the property closer to the bridge, there are close views of the abutments; in parts of the property further south and east, views of the bridge and abutments are distant. Although the replacement of the Susquehanna River Rail Bridge with new bridges under both Build Alternatives would somewhat alter the setting of the Perry Point Veterans Administration Center Historic District, this change would not constitute an adverse effect on the Historic District. The existing bridge does not relate to or contribute to the characteristics that qualify the Historic District for inclusion in the NR. The removal of the existing bridge and construction of two new bridges would not change the significant aspects of the setting of the Historic District nor would it diminish the integrity of its historic features. The Proposed Project would have no adverse effect on the Perry Point Veterans Administration Center Historic District.

Crothers House (Furnace Bay Golf Clubhouse)

The Crothers House (NR-eligible) is a two-and-a-half story Colonial Revival residence built in 1936 and now used as the clubhouse for the Furnace Bay Golf Course. It is located approximately 1,000 feet north of the Project site. The existing Susquehanna River Rail Bridge is not visible from this property. The replacement of the bridge would not change the setting of the structure nor would it diminish the integrity of its historic features. The existing bridge does not relate to or contribute to the characteristics that qualify the Crothers House for inclusion in the NR. The Proposed Project would have no adverse effects on this historic resource.

Woodlands Farm Historic District

The Woodlands Farm Historic District (NR-eligible) is an extension of the boundary of the NR-listed Woodlands property north of Maryland Route 7 to include the Woodlands Farm South Complex. The NR-listed Woodlands property consists of a circa 1810-1820 main house and several outbuildings set on 69 acres. The Woodlands Farm South Complex is located to the south across Maryland Route 7 and consists of a 347-acre farm containing numerous 19th century buildings. The Susquehanna River Rail Bridge is not visible from this property. The replacement of the bridge would not change the setting of the Historic District nor would it diminish the integrity of its historic features. The existing bridge does not relate to or contribute to the characteristics that qualify the Woodlands Farm Historic District for inclusion in the NR. The Proposed Project would have no adverse effects on this resource.

Perryville United Methodist Church

The Perryville United Methodist Church, constructed in 1896 in the Gothic Revival style, was identified as an NR-eligible resource as part of the Proposed Project. The property is located across Broad Street from the Northeast Corridor in Perryville. From the church, the rail line can only be partially seen; the bridge cannot be seen at all. Due to the distance and the limited view, the Proposed Project would have no adverse effect on this resource.

Perryville Presbyterian Church

The Perryville Presbyterian Church, constructed in 1892 in the Gothic Revival style, was identified as an NR-eligible resource as part of the Proposed Project. The property is located on the track side of Broad Street, but is screened from the tracks by extensive landscaping. Neither the rail line nor the bridge can be seen at all. Due to the distance and the obstructed views, the Proposed Project would have no adverse effect on this resource.

E. MITIGATION MEASURES

ARCHAEOLOGICAL RESOURCES

Both Alternative 9A and Alternative 9B have the potential to impact archaeologically sensitive areas within Study Areas 2 to 5 and within the Susquehanna River. Phase IB archaeological investigations will be undertaken to determine the presence or absence of archaeological resources in these areas. If Phase IB testing identifies potentially significant (NR-eligible) archaeological resources in any of the Study Areas that could be affected by the Proposed Project, Phase II archaeological testing would be undertaken to determine the significance and the boundaries of the archaeological deposits. If significant archaeological resources are identified in the archaeological APE that would be unavoidably adversely affected by the Proposed Project, appropriate measures to minimize and/or mitigate any such effects would be devised and implemented. As described in the draft PA, ongoing consultation with MHT and consulting parties would be undertaken to identify and implement specific measures to avoid, minimize or mitigate any effects to NR-eligible resources that may occur as a result of the Proposed Project.

ARCHITECTURAL RESOURCES

FRA/MDOT assessed the Proposed Project's effects on historic architectural resources in accordance with Section 106 of the NHPA, as amended, and determined that Alternative 9A and Alternative 9B would not adversely affect the following significant historic architectural

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resources: Southern Terminus, Susquehanna and Tidewater Canal – South Lock #1 and Toll House, Martha Lewis (Skipjack), Principio Furnace (Principio Iron Works), Perry Point Mansion House and Mill, Perry Point Veterans Administration Medical Center Historic District, Crothers House (Furnace Bay Golf Clubhouse), Woodlands Farm Historic District, Perryville United Methodist Church, Perryville Presbyterian Church; and the Lily Run Undergrade Bridge (MP 60.85). There would be, however, an adverse effect on the following significant historic architectural resources: the Susquehanna River Rail Bridge (including eight of the nine related undergrade rail bridges), the Havre de Grace Historic District, Rodgers Tavern, and the Perryville Railroad Station, as shown in **Table 8-3**.

Table 8-3
Adverse Effects on Historic Architectural Resources

Known Architectural Resources in the APE	Adverse Effect?	Action	Actions Under Consideration to avoid or minimize adverse effects
Susquehanna River Rail Bridge	Yes	Demolition	Avoidance of demolition not feasible
			Minimize through use of traditional design features in the two new bridges
Nine overpass rail bridges	Yes (all except MP 60.85)	Bridge replacement or concrete extensions	Minimize or avoid through use of stone not feasible
			Minimize by using a form liner that emulates stone and is stained to be compatible with the color of the existing stone
	Possible	Construction of adjacent retaining walls	Avoid additional adverse effect by ensuring design of the new walls is in accordance with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i>
Havre de Grace Historic District	Yes	Demolition of Susquehanna River Rail Bridge, a contributing feature to the historic district	Avoidance of demolition not feasible (see above for steps to partially mitigate)
	Yes	Visual adverse effects from widening of bridge approaches	Minimize visual adverse effects by locating bridge abutment further south, constructing retaining walls, and ensuring retaining walls are developed in accordance with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i>
	Yes	Extensions to four undergrade bridges, contributing features to the historic district	Avoidance by using stone not feasible due to engineering concerns. Minimize by using a form liner that emulates stone and is stained to be compatible with the color of the existing stone
Possible	Construction-related damage to contributing structures	Avoid adverse effect via a Construction Protection Plan (CPP)	

Table 8-3 (cont'd)
Adverse Effects on Historic Architectural Resources

Known Architectural Resources in the APE	Adverse Effect?	Action	Actions Under Consideration to avoid or minimize adverse effects
Rodgers Tavern	Yes	Visual adverse effect from the widening of the bridge approach	Minimize visual adverse effect through development of an aesthetic treatment for the retaining wall and landscaping in front of wall, if possible
	Possible	Construction-related damage	Avoid adverse effect via a CPP
Perryville Railroad Station	Possible	Demolition of Perry Interlocking Tower	Avoid adverse effect by shifting the Interlocking Tower slightly within Amtrak ROW
	Yes	Extension to undergrade bridge at MP 59.39, a contributing feature to the station complex	Avoidance by using stone not feasible due to engineering concerns
			Minimize by using a form liner that emulates stone and is stained to be compatible with the color of the existing stone
	Yes	Construction of retaining walls adjacent to station complex	Avoid additional adverse effect by ensuring design of the new walls should be in accordance with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i>

Because certain adverse effects cannot be totally avoided, FRA/MDOT has sought suggestions from the consulting parties and the public on potential ways to mitigate the adverse effects. Based on a review of the Proposed Project plans and comments received from the public and the Section 106 consulting parties, FRA/MDOT propose the following mitigation measures be considered in development of the Project's PA, which will be finalized in conjunction with the consulting parties:

- Continued review by MHT of design plans to ensure that to the extent possible the plans are compatible with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Of particular concern is the design of the new bridge, the alterations to eight of nine undergrade bridges associated with the Susquehanna River Rail Bridge, and the new retaining walls.
- Preparation of Historic American Engineering Record (HAER) documentation of the Susquehanna River Rail Bridge and the nine associated undergrade bridges on the NEC.
 - HAER documentation would include narratives that (1) interpret its history, focusing on its construction by the Pennsylvania Railroad; and (2) describe in detail the physical characteristics of the bridge (including its engineering and functional aspects). Primary and secondary resources would be used in the research effort, including historic engineering literature, railroad company archives, newspapers and periodicals, and the collections of libraries, historical societies, and other repositories. The compiled information, which could include historic plans, photographs, and other documents, will be duplicated to appropriate archival standards as part of the recordation document.

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- The HAER recordation would also include photographic documentation of the Susquehanna River Rail Bridge that would meet appropriate HAER archival standards.
- In addition, it may be appropriate to produce detailed measured drawings of the existing conditions of Susquehanna River Rail Bridge. Typically, detailed measured drawings of large engineered structures such as the Susquehanna River Rail Bridge are achieved through the use of three-dimensional laser scanning technology.
- Preparation of HAER documentation of the Perry Interlocking Tower, including any interior features.
- Development of an interpretive exhibit in a park, greenway, or public space that would present the history of the Susquehanna River Rail Bridge with a focus on the history of the bridge as an early twentieth century product of the Pennsylvania Railroad and the engineering aspects of the bridge, such as its swing span mechanism. To the extent possible and practical, key features of the 1906 Pennsylvania Railroad bridge should be incorporated into the display, with the overall goal of conveying the advancement of this type of bridge engineering by the beginning of the twentieth century and to explain how certain rail bridge components functioned in that era. The location, format, and specific content of the exhibit would be identified by the Project sponsor in consultation with MHT and consulting parties.
- Development of an educational document such as a lesson plan that could be incorporated into an engineering course curriculum. This lesson plan could focus on the specific engineering aspects of the Susquehanna River Rail Bridge and/or movable bridge types constructed in the early twentieth century by the Pennsylvania Railroad. In addition, it should utilize research knowledge obtained from the archaeological investigations and incorporate the history of all of the area's transportation related historic resources, including the Susquehanna River Rail Bridge and the affiliated nine undergrade bridges; the piers from the 1866 railroad bridge; the eighteenth century ferry crossing; the Southern Terminus, Susquehanna and Tidewater Canal - South Lock #1 and Toll House; the Havre de Grace Historic District; Rodgers Tavern; and Perryville Railroad Station.
- Production of a short film that documents the character-defining historical and engineering aspects of the Susquehanna River Rail Bridge. The film could include footage of the bridge in operation and address the engineering and design of the swing-span bridge, and its historical context as a twentieth century Pennsylvania Railroad bridge. The film could be made available online and/or be provided to railroad organizations and local libraries and historical societies.
- Salvage of elements of the Susquehanna River Rail Bridge, such as truss components, pier materials, tracks, etc. The Project sponsor would develop a list of potentially salvageable items for review and comment by MHT. The Project sponsor would also develop a marketing plan for review by MHT and consulting parties.
- Completion of all archaeological investigations as recommended in the Phase IA Archaeological Assessment.
- Preservation of the abutments from the original (1866) bridge, with consideration given to restoring them to their original appearance and function.
- Development of an interpretative exhibit to be incorporated into the town of Perryville's Railroad Museum located at the Perryville Station. *