

US Department of Transportation
Federal Railroad Administration
FINDING OF NO SIGNIFICANT IMPACT
Susquehanna River Rail Bridge Project
Cecil and Harford Counties, Maryland

A. INTRODUCTION

The Federal Railroad Administration (FRA) and the Maryland Department of Transportation (MDOT) prepared an Environmental Assessment (EA) and draft Section 4(f) Evaluation in April 2017 to evaluate the potential environmental impacts for the Susquehanna River Rail Bridge Project (Project). MDOT, the Project sponsor, proposes to improve rail connectivity along the Northeast Corridor (NEC) by replacing the Susquehanna River Rail Bridge between the City of Havre de Grace in Harford County, Maryland and the Town of Perryville in Cecil County, Maryland (see **Figure 1**). FRA is the lead federal agency and the National Railroad Passenger Corporation (Amtrak), the bridge owner and operator, is providing conceptual and preliminary engineering designs and acting in coordination with MDOT and FRA.

The existing two-track Susquehanna River Rail Bridge is located on Amtrak's NEC at Milepost (MP) 60. It is 111 years old, which is beyond the 100-year design lifespan typical for steel railroad bridges. This rail bridge is a critical link along the NEC, one of the U.S. Department of Transportation's (USDOT) designated high-speed rail corridors. The NEC is the most heavily used passenger rail line in North America, both in terms of ridership and service frequency, and one of the most heavily traveled rail corridors in the world.^{1,2} Amtrak, the Maryland Area Regional Commuter Train Service (MARC), and Norfolk Southern Railway (NS) use the bridge to carry intercity, commuter, and freight trains across the Susquehanna River. The existing two-track bridge creates a capacity and speed bottleneck along this segment of the NEC, resulting in conflicts between Amtrak's passenger service, MARC trains, and freight trains operated by NS.

FRA and MDOT, in collaboration with Amtrak, (the Project Team) prepared the EA to comply with the National Environmental Policy Act (NEPA) of 1969 (42 USC § 4321 et seq.). FRA makes this Finding of No Significant Impact (FONSI) based on the information in the EA in compliance with NEPA, FRA's Procedures for Considering Environmental Impacts (64 FR 28545, May 26, 1999), and other related laws and regulations.

FRA signed the EA on March 2, 2017, and made the document and associated technical reports available for public comment and review on March 6, 2017. The Project Team posted the EA to the Project website at www.susrailbridge.com, circulated electronic copies to a broad mailing list, and distributed hard copies to review agencies, local libraries, and other repositories. The

¹ <https://www.amtrak.com/ccurl/1006/987/National-Fact-Sheet-FY2016.pdf>, accessed May 5, 2017.

² Source: BGL Rail Associates, for the Amtrak Reform Council, "A Recommended Approach to Funding the Estimated Capital Investment Needs of the Northeast Corridor Rail Infrastructure," April 2002.

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public comment period for the EA closed on April 6, 2017. FRA and MDOT incorporated comments received on the EA into this FONSI, as applicable.

B. PURPOSE AND NEED FOR THE PROJECT

The age of the bridge, its structural condition, and its two tracks curtail speed and capacity on the NEC. This situation inhibits rail operators' goals to provide reliable service, MDOT's plans to increase MARC commuter rail service, and Amtrak's plans to increase high-speed passenger rail service on the NEC. The bridge's functionally obsolete design and age require increasingly frequent major rehabilitation and repairs, which result in increasing maintenance costs and conflicts with the need to maintain continuous rail operations on the corridor. The primary purpose of the Susquehanna River Rail Bridge Project is to provide continued rail connectivity along the NEC. The goals of the Susquehanna River Rail Bridge Project include:

- Improve rail service reliability and safety;
- Improve operational flexibility and accommodate reduced trip times;
- Optimize existing and planned infrastructure and accommodate future freight, commuter, intercity, and high-speed rail operations; and
- Maintain adequate navigation and improve safety along the Susquehanna River.

C. ALTERNATIVES

The Project Team identified the Build Alternatives studied in the EA through a rigorous alternatives development and screening process. Of 25 initial alternatives, the Project Team retained two for detailed study in the EA: Alternative 9A and Alternative 9B. Based on the EA, FRA identified Alternative 9A as the Preferred Alternative for detailed design and construction. The report entitled "Alternatives Screening Report and Bridge Types" (available on www.susrailbridge.com) describes the development of alternatives. The report includes input solicited from the public, agencies, and other stakeholders, and the methodology used to screen and select alternatives for detailed study. In addition to alignment alternatives, the Project Team evaluated bridge type alternatives and selected the girder approach/arch main span, based on environmental assessment and coordination with resource agencies, Section 106 consulting parties, and the public.

NO ACTION ALTERNATIVE

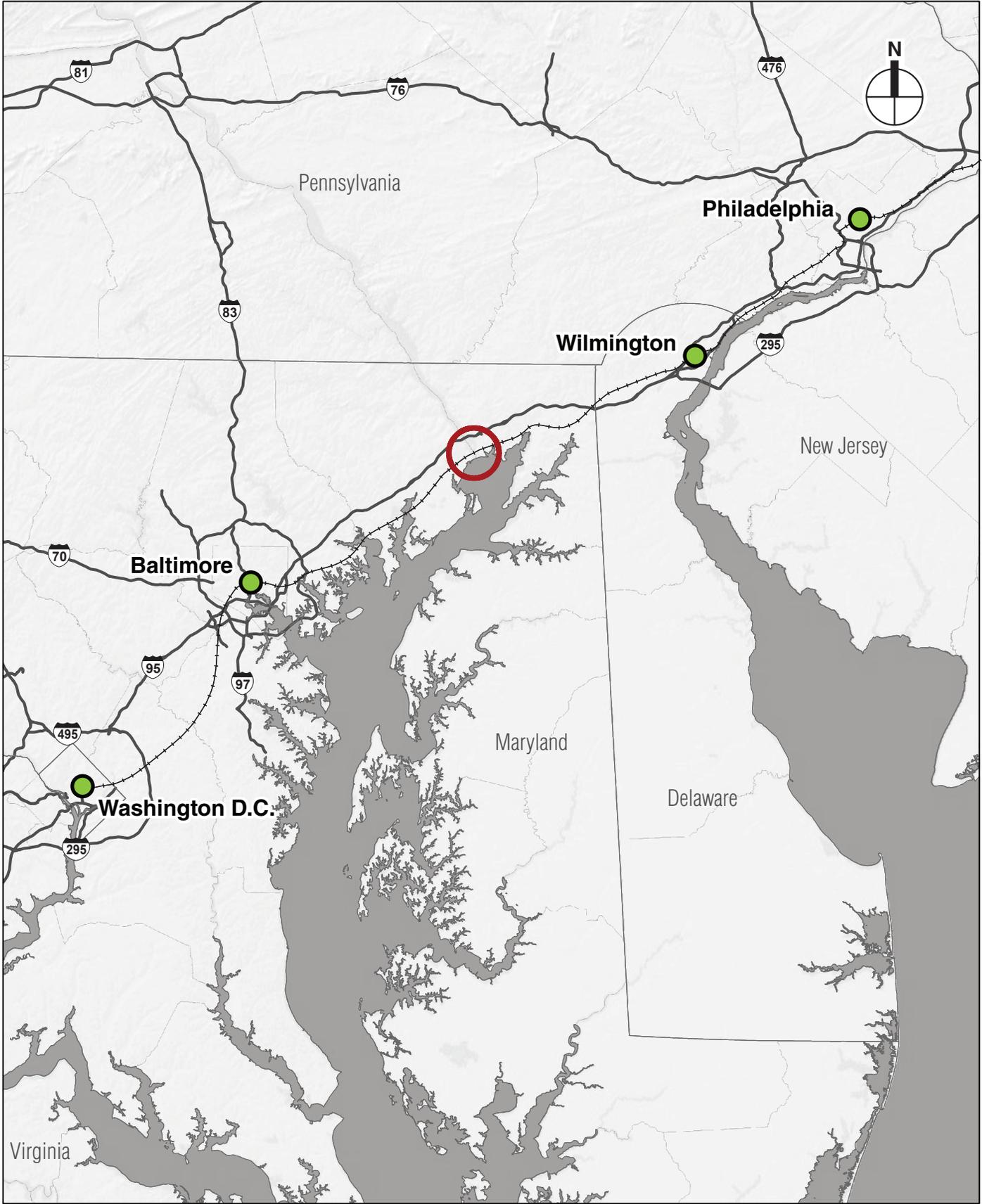
The No Action Alternative assumes the Susquehanna River Rail Bridge would remain in service as-is, with no intervention besides ongoing maintenance and any increase in as-needed repairs caused by the aging infrastructure. Service over the bridge would worsen in the future under the No Action Alternative. The bridge would continue to age, require more extensive and more frequent maintenance, and would continue to be a bottleneck on the NEC.

BUILD ALTERNATIVES

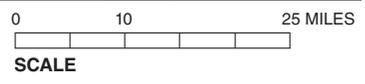
As discussed, based on the alternatives development and screening process, the Project Team retained Alternative 9A and Alternative 9B for detailed study in the EA. FRA identified Alternative 9A as the Preferred Alternative.

The Preferred Alternative consists of the following components:

1.17.17



-  *Susquehanna River Bridge*
-  *Northeast Corridor*



- Construct a new two-track 90 miles per hour (mph) bridge to the west of the existing bridge for use primarily by MARC commuter rail and NS freight service, but would also serve intercity passenger rail trains.
- Construct a new high-speed two-track passenger bridge (typically reserved for intercity passenger rail trains) in the center of the right-of-way of the existing bridge alignment to allow for speeds up to 160 mph.

The main distinguishing feature of Alternative 9A is its ability to achieve 160-mph speeds along this stretch of the NEC. Maximum speed proposed for Alternative 9B would limit trains to 150 mph. Alternative 9A, the Preferred Alternative, results in additional minor property impacts to resources such as recreational areas (Havre de Grace Middle/High School athletic fields), wetlands, and acquisitions.

D. ENVIRONMENTAL CONSEQUENCES

In the short term, the No Action Alternative would not adversely affect the existing social, economic, or environmental conditions in the Project study area. In the long term, if left unaddressed, safety concerns would require the bridge be taken out of service. This would sever connectivity along the NEC, which would threaten economic and social conditions. The No Action Alternative would not provide any transportation benefits or meet the purpose and need of this Project.

Based upon the EA, FRA has concluded that the Project is not likely to result in significant adverse environmental impacts. Consistent with CEQ Regulations and FRA NEPA guidance, FRA considered measures to mitigate and minimize adverse impacts, which will be incorporated to the extent possible and practicable or required. The potential for environmental impacts with the Preferred Alternative is summarized for each resource category and outlined in **Table 1**.

**Table 1
Preferred Alternative Summary**

Resource	Effects
Transportation	<ul style="list-style-type: none"> • Regional benefits (remove bottle neck and improve reliability, speed, navigation, and safety) • Minor street realignments
Land Use and Community Facilities	<ul style="list-style-type: none"> • Acquires 2.84 acres of property • Compatible and consistent with current policies
Socioeconomic Conditions and Environmental Justice	<ul style="list-style-type: none"> • Acquisition of one commercial property • No disproportionately high or adverse impacts to environmental justice populations
Parks, Trails, and Recreational	<ul style="list-style-type: none"> • Acquisition of 0.27 acre of Jean S. Roberts Memorial Park (including City of Havre de Grace-owned 0.01 acre) • Acquisition of 1.5 acres of Havre de Grace Middle/High School property

Table 1 (cont'd)
Preferred Alternative Summary

Resource	Effects
Visual	<ul style="list-style-type: none"> • Altered views of cultural and other resources • Measures in Programmatic Agreement to avoid/minimize/mitigate
Cultural	<ul style="list-style-type: none"> • Adverse effect on: <ul style="list-style-type: none"> - Susquehanna River Rail Bridge and undergrade bridges; - Havre de Grace Historic District; - Rogers Tavern; and - Perryville Railroad Station • Measures in Programmatic Agreement to avoid/minimize/mitigate
Section 4(f)	<ul style="list-style-type: none"> • No feasible and prudent alternatives that would avoid use of all Section 4(f) properties • Use of three Section 4(f) Properties: <ul style="list-style-type: none"> - Susquehanna River Rail Bridge - Perryville Rail Road Station/ Perry Interlocking Tower - Havre de Grace Historic District • <i>De minimis</i> use of Jean S. Roberts Memorial Park and Havre de Grace Middle School/High School
Section 6(f)	<ul style="list-style-type: none"> • Acquires a portion of Havre de Grace Middle School / High School Athletic Fields (approximately 0.55 acre within a LWCF-funded area) • Identifies replacement, continue agency coordination, implement measures to minimize and mitigate
Natural	<ul style="list-style-type: none"> • Construction within the floodplain (2.72 acres effective 100-year), tidal wetlands (0.06 acre), and nontidal wetlands (0.83 acre), and wetland buffers (0.27 acre tidal, 2.16 acre nontidal) • 2.92 acres forest resources • 6.4 acres Chesapeake Bay Critical Area • Aquatic biota (0.37 acre permanent, 0.23 acre during construction) • 0.61 acre submerged aquatic vegetation • Developed avoidance/minimization/mitigation measures with resource agencies
Air Quality	<ul style="list-style-type: none"> • Regional emissions below <i>de minimis</i> levels • Localized increases in exceedance of the National Ambient Air Quality Standard (NAAQS) for 1-hour average NO₂ concentration. • Long-term benefits to air quality in the region • Best practices during construction
Energy, Greenhouse Gas Emissions, and Climate Change	<ul style="list-style-type: none"> • Enhances energy efficiency and reduce pollutant emissions • Accommodates reasonably foreseeable future changes in climate and sea levels.

**Table 1 (cont'd)
Preferred Alternative Summary**

Resource	Effects
Noise and Vibration	<ul style="list-style-type: none"> • Moderate noise impacts close to the bridge, comparable to existing levels, acceptable for residential or open spaces use • Vibration levels below impact criteria • Ground-borne noise levels at one location would exceed impact criteria; increase considered barely perceptible • Vibration monitoring and protection plan during construction
Contaminated and Hazardous Materials	<ul style="list-style-type: none"> • Disturbance of existing structures and excavation, relocation and off-site disposal of soil (locations and extent to be determined in final engineering) • Includes health and safety and investigative/remedial measures
Public Health and Safety	<ul style="list-style-type: none"> • Improves reliability and safety along NEC • Improves structural and operational reliability; eliminate bridge malfunctions associated with movable span
Indirect and Cumulative Effects	<ul style="list-style-type: none"> • Transportation, energy, and air quality benefits cumulative with other planned projects along the corridor

TRANSPORTATION

The Project would eliminate bridge malfunctions resulting from the opening of the existing movable span, which opens approximately 10 times per year to accommodate marine traffic. The Project would improve the reliability of the Susquehanna River Rail Bridge and increase allowable train speed and capacity over the river. The Project would remove the bottleneck caused by the existing bridge and would reduce unscheduled train delays.

The Project will provide a 60-foot vertical clearance over mean high water and, at minimum, a 230-foot horizontal clearance. This will improve safety by reducing the potential for conflicts between the rail and marine traffic. The Project would eliminate the need for bridge openings and closings by replacing the movable span of the existing Susquehanna River Rail Bridge with two high-level fixed bridges. This would constitute an improvement to navigation along this segment of the Susquehanna River. The Project would also improve navigation by removing the remnant bridge piers.

The Project is envisioned as a means to reduce future vehicle miles traveled (VMT) regionally, compared with the No Action Alternative. In conjunction with other planned initiatives along the NEC, the selected alternative would constitute a benefit to regional highways by lowering congestion levels and resulting in less wear and tear on road surfaces.

A slight realignment of Warren Street between N. Adams Street and N. Stokes Street, in Havre de Grace, and a slight realignment of Avenue A, in Perryville, may be necessary to accommodate the enlarged bridge abutment. Separately, the City of Havre de Grace has developed plans to redesign the downtown gateway area at the intersection of Otsego Street and N. Union Avenue, adjacent to the existing bridge abutment. The Project Team worked with the

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City of Havre the Grace to design the Project to accommodate these City-sponsored improvements. In addition, seven local roadway crossings beneath the NEC would require modification. As discussed in Appendix B, “Environmental Commitments,” the Project would not preclude construction of the proposed Chesapeake Connector project.

FRA finds the Project would result in significant regional benefits to transportation, including railroads, roadways, and navigation and that the local roadway modifications would be minimal.

LAND USE AND COMMUNITY FACILITIES

The Project would require the full or partial acquisition of several properties located immediately adjacent to the existing right-of-way. The total anticipated property acquisition is 2.84 acres. Where full property acquisition is required, the property owners will be fairly compensated for the land acquired and the affected business will be provided with relocation assistance to facilitate reestablishment elsewhere, should this be necessary, in accordance with the Uniform Act (42 U.S.C. § 4601 et seq.) and all applicable Maryland State laws. Therefore, the Project will not substantially change current land uses within the study area, though it would require the acquisition of a narrow strip of the Havre de Grace Middle/High School athletic fields. The Project Team, in cooperation with the Harford County Public Schools (HCPS), has identified measures to minimize the impact to this community facility, as outlined in Appendix B, “Environmental Commitments.”

The Project would be compatible and consistent with current policies that govern the Project site and study area. Maryland Department of Planning, in their comments on the EA, stated that the Project is consistent with the Maryland Economic Growth, Resource Protection, and Planning Policy and that the Project complies with the Priority Funding Area (PFA) Law. In March 2016, the State’s Smart Growth Coordinating Committee approved the request for an exemption to the PFA requirements because the Project is a “growth-related project involving a commercial or industrial activity, which, due to its operational or physical characteristics, must be located away from other development. More specifically, the Committee found that the Project qualified for a PFA exemption as it supports and is related to a passenger transit and rail freight service, a commercial or industrial activity that is proximate to a railroad facility.”

Though the Project would result in some property acquisitions, compensation and relocation assistance will be provided in accordance with the Uniform Act and the character of and land uses in the study area will remain unchanged.

SOCIOECONOMIC CONDITIONS AND ENVIRONMENTAL JUSTICE

The Project would require the full acquisition of one commercial use property associated with the National Tire & Glass Sales Inc., in Havre de Grace. In accordance with the Uniform Act and all applicable Maryland State laws, property owners will be provided with fair compensation and relocation assistance at later stages in the Project, once construction funding is secured. Since the business would be relocated, it is not expected that any jobs will be lost as a result. The Project will not displace any other commercial or residential properties within the study area. The Project would not involve the demolition of any residential structures and would not affect the population or housing supply of the area.

The Project would not result in any disproportionately high and adverse effects on minority and low-income populations. According to the 2010 U.S. Census, the City of Havre de Grace is 75.7 percent White, and 24.4 percent minority. The Town of Perryville is 84.6 percent White, and 15.4 percent minority. The study area is 75.3 percent White, and 24.8 percent minority, of which

the largest portion is Black or African American (17.4 percent). According to 2011-2015 American Community Survey 5-Year Estimates, the City of Havre de Grace, the Town of Perryville, and the study area have a poverty rate of 11.1 percent, 7.3 percent, and 13.4 percent, respectively.

The Project Team encouraged environmental justice communities to attend and participate in public outreach information sessions. Throughout the alternatives evaluation and environmental review process, the Project Team encouraged environmental justice communities to attend and participate in public outreach information sessions. The Project Team made concerted efforts to engage potential minority and low-income populations, including performing targeted outreach and posting of information regarding public meetings in local businesses and community centers. To solicit participation from minority populations, the Project Team posted extra invitations to public meetings in community facilities within census blocks of concern (in addition to direct mailings and email blasts). Public meeting invitations were partially translated into Spanish and translation services were offered.

The Project would not impact community cohesion, employment, or other socioeconomic conditions in the study area, nor would it have a disproportionately high and adverse impact on minority or low-income populations.

PARKS, TRAILS, AND RECREATIONAL RESOURCES

The Project requires the permanent use of the entire 0.26-acre, Amtrak-owned portion of Jean S. Roberts Memorial Park as well as the acquisition of 0.01 acre of the City-owned portion of the park. The new bridge will cross above the park on an elevated structure that will require the modification of the existing lease agreement and the modification of the park infrastructure. This will prohibit public access within the Amtrak right-of-way and require the taking of the boat ramp area and a portion of the pier located at Jean S. Roberts Memorial Park. FRA and MDOT, in collaboration and through extensive coordination with the City of Havre de Grace, developed mitigation measures, including the relocation of the boat ramp, as discussed in more detail in Appendix B, “Environmental Commitments.”

In addition, the Project requires the acquisition of 1.5 acres of the Havre de Grace Middle/High School athletic fields immediately adjacent to the existing rail right-of-way. The Project will result in minor reconfigurations of the existing and proposed ballfields on the school property and permanent changes to the athletic track just behind the starting block. Proposed plans require the high jump facility and associated equipment shed to be relocated on the site. The Project includes provisions developed in collaboration with Harford County Public Schools for measures minimizing the effects on the Havre de Grace Middle/High School.

The Project has been designed so as not to preclude a future bicycle and pedestrian crossing over the river. The Project would not alter or adversely affect the existing trail routes.

Several trails highlighting sites of historic importance are also within the study area, including the Maryland Civil War Trail, the Mason Dixon Trail, the Captain John Smith Chesapeake National Historic Trail, Washington-Rochambeau Revolutionary Route National Historic Trail, and the Star-Spangled Banner National Historic Trail. Measures to avoid, minimize, or mitigate any adverse impacts to historic and archaeological resources important to the themes of these trails are discussed in more detail in the Programmatic Agreement (Appendix C). The Project

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Team has coordinated with the National Parks Service (NPS) trail Superintendents as part of the environmental assessment. As set forth in the Programmatic Agreement (Appendix C), prior to initiating construction, the future Project sponsor¹ will contact NPS to determine if there are any studies or evaluations that are underway or completed related to the following three National Historic Trails within the undertaking's area of potential effect: Captain John Smith Chesapeake National Historic Trail, Star-Spangled Banner National Historic Trail, and the Washington-Rochambeau Revolutionary Route National Historic Trail. If additional evaluation is warranted to determine if any segments of these trails are eligible for inclusion in the National Register of Historic Places (NRHP), the future Project sponsor will consult with the respective NPS trail Superintendent to complete such evaluations.

The Project would not result in a significant impact to parklands and recreational facilities.

VISUAL RESOURCES

The proposed design for the two new bridges will be traditional in character to allow greater views under the bridge and to minimize or avoid the adverse visual effect on resources. To further minimize visual adverse effects, the future Project sponsor will:

- Design any new physical structures that could adversely affect views in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (Standards).
- Use form liner emulating stone stained to be compatible with the color of the existing stone for the eight historic undergrade bridge (overpass) extensions (including those in the Havre de Grace Historic District).
- Work with the community to determine an appropriate, aesthetically-pleasing treatment to minimize visual adverse effects to the historic Rodgers Tavern from the widening of the bridge approach and the new retaining wall along the embankment.
- Develop plans in accordance with the Standards in order to relocate the Perryville Interlocking Tower to within the NEC right-of-way, in close proximity to the Perryville Railroad Station.

In addition, as agreed to in the Programmatic Agreement, Amtrak will consider utilizing a 220-foot span(s) in the City of Havre de Grace as part of ongoing efforts to minimize effects to historic properties. Amtrak will submit design documents, with an explanation of how the proposed design conforms to the Standards, to concurring parties to the Programmatic Agreement and Maryland State Historic Preservation Officer (MD SHPO) for review and comment.

FRA believes that the Project would result in minimal impacts on visual resources in the study area.

CULTURAL RESOURCES

The Project would result in an adverse effect on: the Susquehanna River Rail Bridge and undergrade bridges (overpasses); the Havre de Grace Historic District; Rogers Tavern; and the Perryville Railroad Station. A Phase IA Archaeological Study for the Project identified

¹ The likely future Project sponsor is Amtrak. However, depending on the source of future funding, there may be other project sponsors.

archaeologically sensitive areas in the Area of Potential Effects (APE). Prior to construction, Amtrak will conduct additional archaeological studies to identify and evaluate archaeological resources that may be affected by the Project.

Consistent with Section 106 of the National Historic Preservation Act (NHPA), FRA and MDOT consulted with the Maryland State Historic Preservation Officer (SHPO), interested tribes, and other Section 106 consulting parties, and executed a Programmatic Agreement (PA); see Appendix C, “Programmatic Agreement.” The Programmatic Agreement sets forth the mitigation measures and consultation that FRA and Amtrak will undertake to avoid, minimize, and mitigate adverse effects.

FRA expects that the resulting Project effects will not be significant.

SECTION 4(f) EVALUATION

The EA included a draft Section 4(f) Evaluation, pursuant to the requirements of Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966.¹ Based on the Evaluation, FRA determined that there are no feasible and prudent alternatives that would avoid use of all Section 4(f) properties. Therefore, the Evaluation included a determination of which of the alternatives using a Section 4(f) property will result in the least overall harm in light of the statute’s preservation purposes, and identified appropriate measures to minimize harm. The Project would result in the “use” of the following three Section 4(f) properties:

- Susquehanna River Rail Bridge – removal of existing NR-eligible structure and alteration of eight of nine associated rail undergrade bridges;
- Perryville Railroad Station / Perry Interlocking Tower – structure removal and alteration of the Access Road Undergrade Bridge 59.39 (also known as the Perryville Train Station Undergrade Bridge), which are contributing elements of the NR-eligible Perryville Railroad Station;
- Havre de Grace Historic District – a small amount of property acquisition within the NR-listed Havre de Grace Historic District and visual and aesthetic effects on the Historic District;

In addition, FRA determined that the Section 4(f) use of Jean S. Roberts Memorial Park (acquisition of a narrow strip of the park owned by City of Havre de Grace) and the Section 4(f) use of the Havre de Grace Middle/High School athletic fields are *de minimis* uses. FRA made the *de minimis* impact determination after having provided the opportunity for public review, through public notification, Environmental Assessment and Draft Section 4(f) Evaluation public review, and the Public Outreach Information Session on March 23, 2017. FRA received no comments regarding the *de minimis* determination.

The Department of the Interior (DOI) concurred on April 12, 2017 that there is no prudent and feasible avoidance alternative to the proposed Section 4(f) use and that the Programmatic Agreement details appropriate mitigation measures to address adverse effects.

¹ In 1983, Section 4(f) of the USDOT Act was codified as 49 USC §303(c), but this law is still commonly referred to as Section 4(f).

SECTION 6(f)

Havre de Grace Middle School and Havre de Grace High School received Land and Water Conservation Fund (LWCF) monies for development, thereby making them Section 6(f) resources. The LWCF Act, as amended, (54 U.S.C. §200305(f)(3)) prescribes the conditions for the use or transfer of parklands or open spaces that have been improved with funds received through the LWCF. The Project would require the permanent acquisition of a small portion of the school’s athletic fields— approximately 1.6 acres of fee simple right-of-way. Approximately 0.55 acre of the land is within an area for which LWCF monies were used. FRA will continue to coordinate with HCPS to submit an application for land conversion to the National Parks Service (NPS) Regional Administrator through the Maryland Department of Natural Resources (DNR). FRA will adhere to LWCF prerequisites for conversion, as well as the NPS Small Conversion Policy established in 1990 and recently amended (codified at 54 USC §2000305(f)(3), on January 3, 2017). The policy was amended to allow more conversions to qualify as “small” while still complying with the LWCF Act, NEPA, and National Historic Preservation Act (NHPA). The required property acquisition for the Project is less than 10 percent of the whole LWCF recreation area. Therefore, it would be considered a small conversion under the Small Conversion Policy, as amended, if the replacement property is contiguous with the current site or another existing park or recreation area. FRA, MDOT, and Amtrak have coordinated and will continue to coordinate with HCPS, DNR, and NPS regarding appropriate mitigation and replacement, and the property boundary to be considered within the Section 6(f) Evaluation.

A suitable replacement property will be identified, in consultation with NPS, DNR, and HCPS, as detailed design for the Project progresses and as construction funds become available. FRA and the MDOT have worked with HCPS to minimize and mitigate the impacts that would result from the Project. The future Project sponsor will also provide documentation per the LWCF Act and applicable DOI regulations for the conversion of parkland (36 CFR 59).

When funds for the construction of the Project become available and as design of the Project progresses, the future Project sponsor would continue to coordinate with HCPS to identify suitable replacement land for the Section 6(f) area that minimizes or mitigates any impacts to the school property, meets HCPS’s needs, and complies with all applicable federal and state laws and regulations.

NATURAL RESOURCES

TOPOGRAPHY, GEOLOGY, AND SOILS

The Project would affect Prime Farmland Soils and Soils of Statewide Importance, as defined in the National Soil Survey Handbook. However, on February 8, 2016, the Natural Resources Conservation Service (NRCS) within the U.S. Department of Agriculture, using the Farmland Conversion Impact Rating Form (NRCS-CPA-106) for corridor type projects pursuant to Farmland Protection Policy Act, determined that the Project is not subject to the provisions of the Act and therefore exempt.

FLOODPLAINS AND WETLANDS/WATERS OF THE U.S.

Portions of the Preferred Alternative occur within regulated 100- and 500-year floodplains. The majority of the 1,560-acre study area, however, falls outside the 100- and 500-year floodplains. The Project would result in some encroachments on the floodplains; most of encroachments would result from transverse (non-parallel) crossings (encroachments that cross the valley width

of the floodplain). The encroachments, however, would not be significant within the meaning of DOT Order 5650.2.

The Project will also require fill in two regulated floodways (Lily Run and an unnamed tributary to Lily Run) for the new bridge piers. Similar to the other crossings, these floodway encroachments would be transverse crossings of the valley width and would be designed such that the encroachment does not raise the base elevation of the designated floodway by more than one foot, or a smaller increment, as determined by the Maryland Department of the Environment. The new crossing of the Susquehanna River would occur in the same location as the existing crossing and on the upstream side of the existing crossing, with the bridge piers aligned with the stream (parallel to river flow) to minimize any change in flow characteristics. The closer spacing of the bridge piers would result in a very slight change in velocity and therefore would not produce a significant impact to the hydrologic properties of the river upstream or downstream.

This floodplain encroachment is the minimum practicable and conforms to applicable floodplain standards. As such, the future Project sponsor will undertake more detailed hydrologic and hydraulic studies to ensure that the Preferred Alternative does not result in increased flood-related risk due to encroachment within the floodplain, does not adversely impact the natural and beneficial values provided by the floodplains being encroached upon, would not result in incompatible development within the floodplain, and that the measures integrated into the Preferred Alternative (e.g., aligning piers parallel to river flow and orienting crossings transversely across stream valleys) minimize adverse effects to the floodplain.

The Project would have relatively minor effects on wetlands (0.89 acre) and streams (3,209 linear feet). The Project would primarily affect wetlands along or immediately adjacent to the Amtrak right-of-way (ROW). These wetlands have been historically altered to a considerable degree for the construction and maintenance of the existing rail alignment due to their proximity to the Amtrak ROW. As such, there is no practicable alternative to the Project location. Nonetheless, as more detailed design of the Project progresses, the future Project sponsor would work with the regulating agencies, including MDE, minimize harm to wetlands and to obtain the necessary permits for unavoidable impacts to wetlands and to identify and implement appropriate mitigation measures to replace the loss of wetlands, streams, or other aquatic resources.

The Project would not affect areas that are designated as a Wetland of Special State Concern.

TERRESTRIAL RESOURCES

The Project would not affect areas known to support terrestrial state-listed threatened or endangered species. FRA does not anticipate any construction-related, short-term impacts to terrestrial federally or state-listed species, including the northern long-eared bat (NLEB).

The Project would have minor permanent impacts to forest resources (2.92 acres within the 1,560-acre study area). Recommended mitigation would include reforestation and afforestation in accordance with a Forest Conservation Plan (FCP) that the future Project sponsor would prepare prior to construction.

The Project would be constructed immediately adjacent to the existing tracks, which are surrounded by low-quality habitat, and, therefore, only common resident birds, small mammals, and a few reptiles and amphibians would be displaced or minimally affected.

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The Project would cross a known historic waterfowl staging area within the Susquehanna River along the Cecil County side. Waterfowl would not be permanently affected, but may be temporarily displaced during construction of the Project.

The Project would not result in a significant impact to terrestrial resources.

AQUATIC RESOURCES

The Project would not affect groundwater and would only minimally change the hydrology through a shift in the arrangement of piers. The future Project sponsor could minimize potential short-term and long-term impacts to water quality from construction by strictly adhering to an effective Erosion and Sediment Control Plan and implementing stormwater best management practices (BMPs). Construction of the temporary piers (composed of a steel/ timber deck supported by piles) would provide river access during construction of the new bridge piers. These temporary piers would likely avoid the need for dredging by allowing construction access in areas too shallow for project vessels and thus the resulting disturbance to river sediments from the temporary piers would be relatively minor (0.37 acre of permanent impacts and 0.23 acre of temporary impacts). The temporary piers would be removed upon completion of construction.

Both bridges would have a large enough height-to-width ratio to preclude significant shading of the river bottom and specifically submerged aquatic vegetation (SAV). Shading from the relatively narrow temporary finger piers would also not have the potential to result in significant shading. The resultant shading would not adversely affect benthic organisms, but would adversely affect approximately 0.61 acres of SAV by limiting light to the plants. Mitigation for this temporal loss of SAV would include replanting the area at a 3:1 ratio, or as otherwise specified in project permits. The future Project sponsor will continue to monitor the mapped locations of SAVs as the Project design and permitting process progress, as recommended by the National Marine Fisheries Service (NMFS) at the March 24, 2017 Interagency Review Meeting (IRM).

Fish would likely avoid the area of activity during the drilling of the large-diameter piles for the replacement bridges piers. Should pile installation cause any fish to temporarily avoid the portion of the Susquehanna River in the vicinity of the activity, the extent of the area that would be affected at any one time would be negligible relative to the amount of suitable habitat that would remain available nearby. The future Project sponsor will consider the use of demolition materials or clean spoil as additional habitat.

Underwater noise levels produced during impact pile driving for the temporary piers would be attenuated using wooden cushion blocks such that potential noise impacts to fish would likely be discountable. Potential impacts of pier demolition activities on Atlantic and short nose sturgeon would be minimized by implementing protective measures, in coordination with NMFS prior to the start of demolition. Any blasting activities would be scheduled to occur within a work window that corresponds to the time period of the year when sturgeon are least likely to occur in the Project area. DNR Fisheries Service may make additional recommendations related to non-tidal and tidal species.

Threatened and endangered sea turtles are not expected to occur in the Project area. In the future, as the Project planning continues, DNR Wildlife and Heritage Service may require restrictions on construction projects in order to protect map turtles and Chesapeake logperch that may occur within the Project area, including nesting surveys, in-stream time-of-year restrictions, and/or removal and relocation of turtles from the work zone.

While there may be impacts to aquatic resources, the impacts would be largely temporary and could be minimized by such measures as scheduling construction at times when known species are least likely to occur in the Project area and implementing mitigation measures required by permitting agencies, as discussed above.

CHESAPEAKE BAY CRITICAL AREA AND COASTAL ZONE MANAGEMENT

The Project involves approximately 6.4 acres of the Chesapeake Bay Critical Area, defined by state statute as “all land within 1,000 feet of Maryland’s tidal waters and tidal wetlands.” Earth disturbance, removal of vegetation, placement of fill, and increased impervious area as a result of construction of the Project would result in permanent impacts to the Critical Area. The future Project sponsor will continue to coordinate with the Critical Area Commission (CAC) during the continued design of the Project.

The Susquehanna Rail Bridge is located in the state-designated Coastal Zone, but the Project will be designed in a manner consistent with the Maryland Coastal Zone Plan. MDE’s review for the Project’s consistency with the Maryland Coastal Zone Plan would commence after the agency’s receipt of the MDE Joint Permit Application (JPA). The MDE permit authorization, received at subsequent phases of the Project, would constitute the federal consistency decision.

AIR QUALITY

Overall, the Project would not substantially affect regional air quality. The total projected emissions in each Air Quality Control Region within the study area represent a small fraction of the *de minimis* levels defined in the regulations. This demonstrates that the operation of the Project would not require a conformity determination and would not interfere with State Implementation Plans (SIPs) for attainment of the ozone National Ambient Air Quality Standards (NAAQS) or maintenance of the particulate matter (PM_{2.5}) standard.

At the local level, the maximum projected PM_{2.5} (24-hour and annual average), PM₁₀ (24-hour average), and annual average nitrogen dioxide (NO₂) concentrations with both the No Action Alternative and with the Project would be lower than the applicable legal standards. With the Preferred Alternative, local exceedance of the 1-hour average NO₂ NAAQS could increase up to 8.6 percent near the proposed track realignment in Perryville; our analysis predicted that in this area the standard would also be exceeded under the No Action Alternative. The analysis, however, showed that the probability of this exceedance is low.

Overall, air quality with and without the Project is likely to be very similar. Considering the low probability of NAAQS exceedance, the small potential increment, and the limited area potentially affected, FRA finds the Project would not result in significant adverse impacts to air quality. FRA believes the Project would result in long-term benefits by promoting a more energy-efficient form of travel, with the goal of reducing pollutant emissions.

ENERGY, GREENHOUSE GAS EMISSIONS, AND CLIMATE CHANGE

Amtrak service is 33 percent more energy efficient per passenger-mile than average highway travel (nationwide). The energy efficiency of Amtrak is likely even higher than the national average along the NEC where ridership is high (resulting in less energy use per passenger mile). The Project is a component of the larger sustained effort to enhance passenger rail for the long term, benefitting air quality and reducing pollutant emissions overall.

The Project would improve energy efficiency, reduce emissions, and is consistent with public policy regarding climate change, including Maryland’s climate change plan.

NOISE AND VIBRATION

The Project would have the potential for a moderate noise impact at six of the sensitive receptors (representative locations within the Project study area) analyzed, according to Federal Transit Administration (FTA) and FRA guidance. The receptors where the analysis identified moderate noise impacts are: (1) the residential area along the east bank (Perryville side) of the Susquehanna River, immediately north of the existing Susquehanna River Rail Bridge, including the pier and park; (2) the residence on South Woodland Farms Lane, in Perryville; (3) residences in the area north of the railway, between Aiken Avenue and Coudon Boulevard, in Perryville; (4) David Craig Park and Jean S. Roberts Memorial Park, in Havre de Grace; (5) residences in the area south of the railway, immediately west of Lewis Lane, in Havre de Grace and (6) residences along Williams Drive, in Havre de Grace. Incremental noise level changes would range from imperceptible to readily noticeable. However, overall, the total noise levels with the Project would be comparable to existing levels in the area and are in the range typically acceptable for residential or open spaces use.

Based on our analysis following FTA and FRA guidance, ground-borne noise levels would exceed ground-borne noise impact criteria at the receptor nearest the railway, i.e., the residence at North Stokes Street and Otsego Street, but the predicted difference between the level of ground-borne noise in the existing condition and with the Project would be a barely perceptible increase. At receptors further from the railway, ground-borne noise would be lower and would not exceed ground-borne noise impact criteria.

Vibration from the Project would not exceed vibration impact criteria at any receptors within the area studied.

CONTAMINATED AND HAZARDOUS MATERIALS

Construction of the Project would involve disturbance of existing structures and excavation, relocation and potential off-site disposal of some existing soil. The exact extent of disturbance associated with the Project will not be determined until final engineering. The Project would include appropriate health and safety and investigative/remedial measures. The need for additional investigation/remediation will be determined, in consultation with MDE, once the exact extent of disturbance and potential need for dewatering is identified.

PUBLIC HEALTH, SAFETY, AND SECURITY

The Project would improve the reliability of traveling across the Susquehanna River and increase the safety of passengers and freight users traveling along the NEC. The Project would also improve the structural and operational reliability, increasing the safety of employees who work on and travel over the bridge. It would eliminate bridge malfunctions resulting from the opening of the existing movable span.

INDIRECT AND CUMULATIVE EFFECTS

The Project is anticipated to have an overall positive impact on the regional economy by improving railroad mobility and connectivity. Further positive cumulative effects include the promotion of energy-efficient transportation options, aimed at improving regional air quality and reducing highway and airport congestion with improved rail service.

FRA is currently leading a corridor-wide study of the NEC called NEC FUTURE, which will result in a program of investments to upgrade and improve passenger rail service on the NEC. FRA released the NEC FUTURE Tier I Final EIS in December 2016 and evaluated the

cumulative benefits of a package of rail improvement projects along the entire corridor, including the Susquehanna River Rail Bridge Project. In the Susquehanna River Rail Bridge Project EA, transportation, air quality, and noise and vibration assessments were based on NEC FUTURE train projections for the 2040 timeframe, and were therefore inherently cumulative. The Project is consistent with the service goals considered by NEC FUTURE.

With other planned projects along the corridor, the Project would contribute to improved transportation reliability, connectivity, performance, safety, and resiliency of passenger rail service and would promote energy-efficient transportation options.

E. PUBLIC INVOLVEMENT

The Project Team has undertaken public and community outreach efforts for the Project, along with federal, state, and local agency coordination. Numerous meetings informed the public, stakeholders and agencies about Project milestones and sought public and agency input. The Project Team created a website for the Project: www.susrailbridge.com. Postcards, email blasts, press releases, and public meeting announcements notified stakeholders prior to public outreach information sessions. All meetings included an open house format giving the public an opportunity to comment on the Project and ask questions of the Project Team. The following is a list of Public Outreach Information Sessions and topics discussed:

- April 28, 2014, Purpose and Need / Project Introduction
- August 13, 2014, Feasible Alternatives
- December 10, 2014, Alternatives Retained for Detailed Study
- November 10, 2015, Alternative Retained for Detailed Study and Bridge Types
- April 14, 2016, Preliminary Environmental Analyses Results / Conceptual Mitigation
- March 23, 2017, Environmental Assessment

In addition to notification to the public, the Project Team sent letters to elected officials with constituents within the Project study area at each of the above milestones.

The EA was available for public review and comment from March 6, 2017 through April 6, 2017. The Project Team posted the EA to the Project webpage (www.susrailbridge.com) and distributed to the following repositories:

- Cecil County, Department of Planning & Zoning
- City of Havre de Grace, Department of Planning & Zoning
- Harford County, Department of Planning & Zoning
- Havre de Grace Library
- Perryville Branch Library
- Town of Perryville, Department of Planning & Zoning

Approximately 60 members of the public attended the Public Outreach Information Session held on March 23, 2017. Themes and inquiries from the informal question-and-answer period included:

- Anticipated Project completion date;
- Appreciation for outreach process to date;
- Compatibility with Havre de Grace's "Gateway" entrance;

Susquehanna River Rail Bridge Project

- Location of bridge piers and street reconfigurations, and potential for design changes;
- Short-term vibration impacts to Rodgers Tavern during construction;
- Long-term noise and vibration impacts to Rodgers Tavern during operations, due to additional trains;
- Actions taken during construction to stop damage to historic buildings;
- Impacts to the Havre de Grace Middle/High School athletic fields;
- Construction truck routes, underpass height limitations, and anticipated use of Otsego Street as a construction truck route;
- Coordination with the maritime community;
- Estimated Project cost;
- Additional renderings and engineering drawings provided in the EA;
- Impacts to Perryville Interlocking Tower and Perryville Station;
- Alleviating the bottleneck from Perryville, MD to Newark, DE;
- Number of trains that can traverse the bridge simultaneously;
- Removal of the remnant bridge piers;
- Protection of non-historic structures during construction;
- Property acquisition.

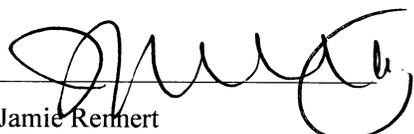
Responses to written comments on the EA received from the public are included in Appendix A, “Response to Comments.” See Appendix F, “Comments Received” for complete comment submittals.

F. AGENCY AND PUBLIC COMMENTS

See Appendix A, “Response to Comments” and Appendix F, “Comments Received.”

G. FINDINGS

FRA finds the Susquehanna River Rail Bridge Project Environmental Assessment satisfies the requirements of NEPA (42 USC § 4321 *et seq.*), the Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), FRA’s Procedures for Considering Environmental Impacts (64 FR 28545, May 26, 1999), and FRA’s Update to NEPA Implementing Procedures (78 FR 2713, January 14, 2013). The majority of impacts would be temporary, and the Project Team has identified appropriate mitigation measures, as detailed in Appendix B, “Environmental Commitments” and Appendix C, “Programmatic Agreement”, that would further reduce any impacts. The identified impacts are minor and the Project, if constructed, would provide substantial benefits to the environment and to transportation. The Project would also maintain connectivity along the busiest rail corridor. Without the Project, the existing bridge would continue to deteriorate and may eventually need to be taken out of service, causing a major disruption to transportation and the regional economy. Therefore, FRA finds that the Project would have benefits and no foreseeable significant adverse impact on the quality of the human or natural environment. This FONSI is based on the EA, which FRA determined adequately and accurately presents the Purpose and Need, areas of environmental consideration, potential environmental impacts, and mitigation measures.



Jamie Remert
Director, Office of Program Delivery
Federal Railroad Administration

5/31/2017

Date

This document has been prepared in accordance with FRA's Procedures for Considering Environmental Impacts and NEPA by the FRA's Office of Railroad Policy and Development, with assistance from FRA's Office of Chief Counsel. This document was prepared in May 2017. For further information regarding this document contact:

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The following organizations assisted the Program Office in the preparation of the April 2017 Environmental Assessment:

Maryland Department of Transportation
Amtrak
Federal Transit Administration
U.S. Army Corps of Engineers
U.S. Coast Guard

Appendices:

Appendix A: Response to Comments
Appendix B: Environmental Commitments
Appendix C: Programmatic Agreement
Appendix D: Errata
Appendix E: Comments Received
Appendix F: Additional Correspondence and Outreach