Baltimore and Potomac (B&P) Tunnel Project

National Environmental Policy Act (NEPA) Reevaluation

April 2022

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I. INTRODUCTION

Amtrak's Baltimore and Potomac (B&P) Tunnel Replacement Program includes the proposed replacement of the 1.4-mile long B&P Tunnel located along the Northeast Corridor (NEC) in Baltimore, Maryland. The B&P Tunnel is owned by Amtrak and used for Regional and Acela intercity passenger trains, Maryland Area Rail Commuter (MARC) passenger trains, and Norfolk Southern Railway (NS) freight trains.

The U.S. Department of Transportation's Federal Railroad Administration (FRA), as the lead Federal agency, and the Maryland Department of Transportation (MDOT) as recipient of a grant under the Fiscal Year 2009 High Speed Intercity Passenger Rail (HSIPR) Program, initiated an environmental review of the B&P Tunnel Project (Project) in 2014 with the publication of a Notice of Intent to initiate an Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act (NEPA). Amtrak, the Project Proponent and owner of the B&P Tunnel and associated rail infrastructure, coordinated with FRA and MDOT to provide technical input for the EIS. The Project was originally evaluated in the following documents (collectively referenced as the B&P Tunnel EIS):

- December 2015 *Draft Environment Impact Statement & Section 4(f) Evaluation Baltimore & Potomac Tunnel Project Baltimore, Maryland* (B&P Tunnel Draft EIS (DEIS))
- November 2016 *Final Environment Impact Statement & Section 4(f) Evaluation Baltimore & Potomac Tunnel Project Baltimore, Maryland* (B&P Tunnel Final EIS (FEIS))

On March 24, 2017, FRA issued the *B&P Tunnel Project Record of Decision* (B&P Tunnel ROD) approving the selected alternative for the Project.

In February 2021, Amtrak approached FRA with a proposal to construct the Project in two phases. No project phasing was described in the B&P Tunnel EIS or ROD prepared between 2015-2017; however, these NEPA documents estimated the Project would require approximately five to seven years of construction and acknowledged that there was currently no funding for final design or construction of the Project at that time.

In accordance with 23 CFR 771, Environmental Impact and Related Procedures, along with FRA's Procedures for Considering Environmental Impacts (64 Fed. Reg. 28545, May 26, 1999) (Environmental Procedures), this NEPA Reevaluation of the adequacy, accuracy, and validity of the FEIS is required to inform FRA's determination whether the FEIS remains applicable or if a new or supplemental NEPA evaluation is required to address the Project changes as described in Section III[1].

This Reevaluation is intended to specifically address the proposed Project changes described in Section III. In the event that Amtrak proposes additional changes to the Project and/or there are changes in environmental circumstances, FRA will conduct further NEPA reevaluations as appropriate.

This Reevaluation was also prepared to address the NEPA implementing regulations (40 CFR 1502.9) which require agencies to prepare a supplement to a Final EIS if:

- The agency makes substantial changes to the proposed action that are relevant to environmental concerns; or
- There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

[1] FRA has adopted Federal Highway Administration (FHWA) procedures at 23 CFR 771, and the approach to reevaluate is consistent with FRA's Procedures for Considering Environmental Impacts (64 Fed. Reg. 28545, May 26, 1999).

Section II of this Reevaluation provides Project background including a summary of the purpose and need for the Project and information about the selected alternative. Section III discusses the proposed Project changes that have occurred since the publication of the FEIS (2016) and ROD (2017) including Amtrak's proposed two-phase construction approach, changes to the anticipated duration of construction, reduced size of the first two tunnel bores and IVF plenum, and changes to MARC operations (separate from the Project). Section IV presents a summary of the environmental impacts reported in the FEIS, and a qualitative discussion of any differences in those impacts resulting from the Project changes included in this Reevaluation. Section V lists the required mitigation, and finally, Section VI presents FRA's conclusion of the Reevaluation.

On June 18, 2021, Amtrak announced that the new B&P tunnel will be named the Frederick Douglass Tunnel. Thus, for the remainder of this document, the existing B&P tunnel will be referred to as the B&P Tunnel, the new B&P Tunnel replacement will be referred to as the Frederick Douglass Tunnel and the project evaluated in the EIS will be referred to as the B&P Tunnel Project (Project).

II. PROJECT BACKGROUND

The B&P Tunnel, located along the NEC in Baltimore, Maryland, is owned by Amtrak and used for Amtrak Regional and Acela intercity passenger trains, MARC passenger trains, and NS freight trains. Built in 1873, the B&P Tunnel is one of the oldest structures on the NEC. It is a crucial link on the NEC, which runs through eight states and Washington, DC. The NEC is the nation's most congested rail corridor and one of the highest volume rail corridors in the world.

The **purpose** of the Project is to address the structural and operational deficiencies of the existing B&P Tunnel and to accommodate future high-performance intercity passenger rail service goals for the NEC, including:

- To reduce travel time through the B&P Tunnel and along the NEC,
- To accommodate existing and projected travel demand for intercity and commuter passenger services,
- To eliminate impediments to existing and projected operations along the NEC, and
- To provide operational reliability, while accounting for the value of the existing tunnel as an important element of Baltimore's rail infrastructure.

The **need** for the Project has been defined as follows:

- The existing B&P Tunnel is more than 140 years old and is approaching the end of its useful life with regard to its physical condition. While the tunnel currently remains safe for rail transportation, it requires substantial maintenance and repairs, and it does not meet current design standards. The tunnel is considered to be structurally deficient due to its age, the original design, and wear and tear. The tunnel is also functionally obsolete and unable to meet current and future rail demands due to the combination of its vertical and horizontal track alignment, i.e., its grades and curves. The low-speed tunnel creates a bottleneck at a critical point in the NEC.
- The existing B&P Tunnel does not provide enough capacity to support existing and projected demands for regional and commuter passenger service along the NEC.
- The existing B&P Tunnel is not suited for modern high-speed usage due to the current horizontal and vertical track alignment, which limits passenger train speeds through the tunnel to 30 miles per hour (mph).

- The existing B&P Tunnel is a valuable resource and the disposition of the existing tunnel needs to be considered in the Project.

FRA selected **Alternative 3B** for the Project, as documented in the 2017 ROD (**Figure 1**). This alternative is described below. The decision to select Alternative 3B was made following extensive public and agency input solicited throughout the NEPA process.

The Selected Alternative (Alternative 3B) would realign Amtrak's NEC between the West Baltimore MARC Station and Baltimore's Pennsylvania Station from its current route along Winchester and Wilson streets to a new, approximately semi-circular route north of the existing alignment. It would include replacement of the single arch two-track tunnel with four parallel single-track concrete cylindrical tubes. As stated in the ROD:

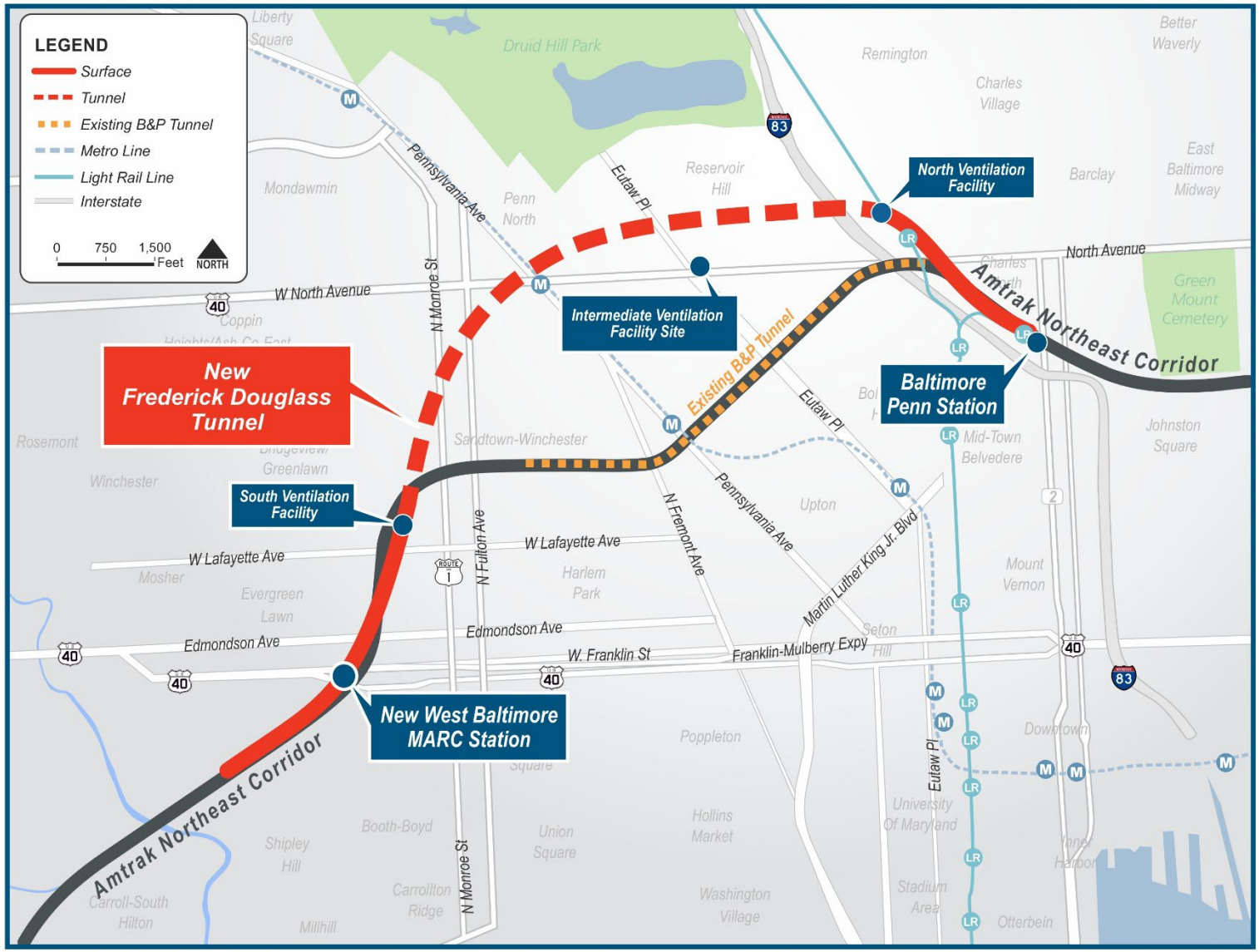
> *Alternative 3B best meets the Project's Purpose and Need while minimizing environmental impacts. Alternative 3B replaces the aging infrastructure of the existing B&P Tunnel, which is nearing the end of its useful life; improves travel time and reliability on the portion of the NEC between Penn Station, Baltimore, and the Gwynns Falls Bridge; and provides for an improved West Baltimore MARC Station that will be compliant with the Americans with Disabilities Act (ADA).*

The Selected Alternative (shown in **Figure 1**) would follow the existing railroad mainline track in the Jones Falls Valley under the Howard Street Bridge to just before North Avenue, where the alternative would leave the existing track alignment to begin its gradual arc. The alignment would continue above ground until it reaches its north portal located at the retaining wall next to the Maryland Transit Administration's (MTA) North Avenue Light Rail Transit (LRT) Station. The alignment would travel through an existing retaining wall adjacent to the LRT rail station to begin its descent below ground.

The Selected Alternative (Alternative 3B) would run below ground from approximately Mosher Street in a gradual arc for approximately two miles, running beneath primarily residential city blocks in the neighborhoods of Reservoir Hill, Penn North, Sandtown-Winchester, Bridgeview/Greenlawn, Midtown-Edmondson, and Penrose/Fayette. The Selected Alternative would include a south portal located south of the P. Flanigan & Sons asphalt plant, east of the existing NEC tracks, at approximately Mosher Street west of North Payson Street. From this portal 45 feet below grade, a cut-and-cover section would extend north to the mining portal near Riggs Avenue. Open-cut sections would continue along the alignment southward east of and eventually converging with the existing NEC, passing under the Lafayette Avenue bridge, and continuing to approximately Edmondson Avenue in an ascent to grade. The alignment then ascends to the existing NEC elevation on new aerial structures over Franklin and Mulberry Streets, west of the existing NEC. The new alignment would merge with the existing NEC right-of-way near Warwick Avenue. At-grade track work within Amtrak's right-of-way would occur from near Edmondson Avenue to just south of the Gwynns Falls Bridge. This realignment would ease the curve at the West Baltimore MARC station and permit passenger train speeds to increase from their current 55 mph maximum to 100 mph.

The West Baltimore MARC Station would be relocated west of its current location to align with the new tracks, and the reduced curvature would allow for replacement of the station's existing low-level boarding platforms with ADA-accessible high-level platforms.

Figure 1: Selected Alternative



The Selected Alternative would require three ventilation facilities to ensure proper ventilation of the proposed tunnels: a North Ventilation Facility located near the north portal; a South Ventilation Facility near the south portal; and an Intermediate Ventilation Facility (IVF) between the north and south portals located at street level, connected to the tunnel bores by a vertical shaft and connecting tunnel.

III. RELEVANT CHANGES SINCE PUBLICATION OF THE FINAL EIS AND ROD

This section presents Project changes since publication of the FEIS and ROD. Sections A, B and C describe changes to the Project that may affect the environment including changes related to the proposed phasing, duration of construction, and tunnel bore and plenum size. Section D describes a planned change in MARC train operations (separate from the Project) that would affect the Project.

A. Project Phasing

In February 2021, Amtrak reached out to FRA regarding a proposal (jointly developed by both Amtrak and MDOT) to implement the Selected Alternative in two phases to allow for greater financial feasibility and accelerated construction of what Amtrak defined as Phase 1, described below. Spreading out the costs of the Project into two phases would make each phase more financially feasible and would allow for construction and operation of Phase 1 more quickly, thus providing safety and operational benefits for passenger trains operating on the NEC. Phased implementation is more financially feasible because it allows Amtrak to finance smaller portions of the Project over time.

Amtrak proposes to initiate construction of Phase 1 in the near term; however, no timeframe has been established for initiation of Phase 2 construction. Prior to proceeding with Phase 2, approvals from the City of Baltimore and State of Maryland as well as financial commitments from Amtrak and the State of Maryland will be required and it is not certain when, or if, such approvals and commitments will be secured.

Under the phased approach, two “inner” tubes optimized for high-capacity intercity passenger rail service would be constructed first as Phase 1 for electric trains only, and the “outer” tubes optimized for commuter service would be constructed under Phase 2. The two “inner” tubes constructed under Phase 1 would have a reduced diameter relative to what was reported in the FEIS and ROD, as detailed in Section III.C below.

MARC commuter trains operating over this segment of the Baltimore regional rail system currently use diesel locomotives. At the time of the FEIS and ROD, it was anticipated that MARC would continue using diesel locomotives. In a written letter dated November 16, 2020, Maryland Department of Transportation Maryland Transit Administration (MDOT MTA) committed to electrifying its MARC operations through the Frederick Douglass Tunnel by the time the first two tunnels can be put into operation. Correspondence with MDOT MTA is included as **Attachment 1**. Refer to Section D for additional information.

Thus, after construction of Phase 1, intercity passenger trains and electrified MARC trains would use the two new inner tubes. Freight trains would continue to operate in the existing tunnel and Amtrak would be responsible for maintaining the existing tunnel until Phase 2 is completed and the final disposition of the B&P Tunnel is determined. Following the completion of Phase 2, intercity passenger trains would primarily use the inner tubes, and MARC and freight trains would primarily use one or both of the two outer tubes.

Phased implementation of the Project would result in minor design changes to accommodate the phasing and would change the short-term environmental impacts of Phase 1 that would occur prior to implementation of Phase 2. Upon completion of Phase 2, the combined environmental impacts of Phase 1 and Phase 2 would be substantially similar to those reported in the FEIS.

The following is a description of the components of each Phase:

1. Phase 1

Phase 1 consists of construction of two high-speed electrified passenger train tunnels. Phase 1 includes:

- Fulfilling all mitigation commitments identified in the 2017 ROD.
- Building south and north approach improvements on the NEC to allow the ultimate construction of a four-tube tunnel system between West Baltimore Station and Baltimore Penn Station. Modifications to the CSX Gwynns Falls Bridge Bridge and further expansion of Charles interlocking would not be performed until Phase 2.
- Adjusting the track geometry where the existing tunnel south approach would merge with the new NEC alignment to the new tunnel portal to permit continued use of the existing tunnel by freight trains over the new NEC track alignment.
- Completing all utility relocations for the full four-track tunnel system.
- Constructing all supporting structures (such as bridges and retaining walls) for the full four-tube tunnel system, so as to not preclude later construction of the Phase 2 "outer" tunnels.
- Constructing a south portal structure that transitions from the two Phase 1 mined tunnels to the four tracks in the south open approach and then traversing to the West Baltimore Station. This structure would be able to accommodate the Phase 2 tunnels without deconstructing and reconstructing its exterior walls and roof.
- Boring two new electric passenger train tunnels that satisfy National Fire Protection Association (NFPA) 130 criteria for fire resistance requirements for electric passenger operation.
- Constructing three ventilation facilities to satisfy NFPA 130 fire and life safety ventilation criteria for all-electric passenger train operations. The IVF would be modestly reduced in height compared to the IVF described in the FEIS because it would not be used to exhaust diesel emmissions and therefore would not need to be as tall as originally proposed. Similarly, the North and South Ventilation Facilities may be shorter than indicated in the FEIS because neither of the inner tunnels would be used by diesel trains.
- Constructing a new West Baltimore MARC Station that would be fully accessible in compliance with the Americans with Disabilities Act (1990).

Amtrak anticipates that Phase 1 would take approximately 10 years to complete based on its most recent engineering. As discussed in Section III.B below, this timeframe has increased from the estimate of five to seven years (for the full Project) identified in the ROD for reasons unrelated to the proposed phasing. The timeframe required for tunnel boring, cut and cover, and construction of the IVF would occur during an approximately five-to-seven-year time frame. Construction activities during the remaining time such as track work, systems, commissioning, and testing are expected to occur within Amtrak right-of-way and therefore would be substantially less impactful to communities and environmental resources.

2. Phase 2

Phase 2 includes construction of two additional "outer tube" tunnels adjacent to the two new tunnels constructed during Phase 1. At least one of the new "outer tube" tunnels would be designed to accommodate diesel freight trains.

Phase 2 includes modifications to the tunnel ventilation system including the three ventilation facilities constructed during Phase 1 to address the requirements associated with diesel freight train operations, as needed at that time. Depending on the advancement of freight train technology, the Phase 2 tunnels may

require minor modifications or addition of features within the tunnels (e.g., installation of jet fans) or operating procedures (e.g., closing the IVF dampers and limiting the number of trains in the tunnel at the same time) to accommodate the diesel emissions. However, the IVF would remain in the configuration, including height, it was constructed during Phase 1, because no diesel emissions would be exhausted through the IVF.

Following implementation of Phase 2, the existing B&P Tunnel would be closed and reserved for potential future rail transportation use, consistent with the EIS and ROD.

Amtrak anticipates that Phase 2 would take approximately four to five years to complete.

B. Construction Duration

Amtrak estimates the cumulative timeframe for active construction of the Project would be roughly 14-15 years, which has increased from the approximately five to seven years reported in the FEIS and ROD. Although the construction activities under the two-phase approach would be substantially similar to those described in the FEIS, the activities would be spread over two periods of time, possibly separated by a period of non-construction. Thus, the intensity and type of construction impacts at a given location may be less with the longer construction timeframe because some construction activities may not be conducted concurrently at that location.

The increase in construction duration is the result of more refined planning by Amtrak during final design for the construction staging and sequencing of the Project and is not caused by the recent proposed changes to the Project (such as phasing) or an increase in the amount of construction activities necessary to implement the Project. Rather, the increase is due to a number of factors identified through more refined engineering and more detailed understanding of the construction process for the Project. Several factors have contributed to the increased duration, summarized below.

- The construction sequencing to keep the NEC in service throughout the duration of construction would require spacing out construction activities more than previously anticipated. This is based on an improved understanding of how construction activities must be completed sequentially and in a manner that allows for NEC tracks to remain in operation for passenger and freight rail traffic. Some construction activities would need to be completed in small, incremental steps to maintain train operations while transitioning train traffic from the existing NEC tracks to the new alignment.
- Amtrak would not conduct open-cut excavation in residential areas during overnight hours. This measure to minimize construction impacts to surrounding neighborhoods was not factored into the timeframe developed at the time the FEIS and ROD were completed.

As noted above, the anticipated increase in construction duration is not related to or caused by the proposed phasing described in Section III.A and would be necessary regardless of whether the Project were to be constructed in one phase or two.

Overall, the greater duration of construction would not increase the amount of construction work required but would rather disperse the same amount of work over a longer period of time with no substantial change to cumulative construction activities. The timeframe for tunnel boring, excavation, and IVF construction would still be approximately five to seven years.

C. Tunnel Bore and Plenum Size

As part of the refined current design for the Project, Amtrak has proposed to reduce the sizes of the Phase 1 tunnel bores and the plenum connecting the tunnel bores to the IVF.

Amtrak has proposed the two tunnel bores constructed for Phase 1 would have an inside tunnel diameter of 26 feet instead of 30 feet as described in the Final EIS. Under this proposed change, the Phase 1 tunnels would no longer be constructed to Plate H ("double-stack") clearance. This reduced diameter would mean a smaller amount of excavation would be required for the Phase 1 tunnels, and less material would need to be removed and hauled away from the construction area.

Because of the elimination of diesel train ventilation requirements within the Phase 1 tunnels (as described in Section III.D.2), the Project would require a substantially smaller plenum to connect the tunnel bores to the IVF. The plenum would be roughly 65 percent smaller than previously anticipated, resulting in less excavating, blasting, and hauling of soil / rock.

D. Train Operations

MDOT MTA has committed to electrifying its MARC operations through the Frederick Douglass Tunnel, which was not under consideration at the time of the FEIS and ROD, and which would occur separately from the Project. MARC's decision to electrify its operations through the new tunnel would potentially reduce the Project's visual and community cohesion impacts by allowing for a smaller IVF due to a reduced amount of diesel train service operating through the new tunnel. The elimination of diesel train emissions from the Phase 1 tunnels would also allow for a smaller plenum as described in Section III.C above.

E. Community and Stakeholder Outreach

Since 2021, Amtrak has conducted outreach to inform communities and stakeholders of the proposed project phasing and associated changes. Amtrak has updated the Project website to provide updated information to the public and other interested parties. Amtrak has provided briefings or held meetings with the following community groups and stakeholders to coordinate and provide updates on the proposed project approach:

- Residents Against the Tunnels (RATT)
- Norfolk Southern
- MARC
- Baltimore City
- Elected Officials (City Council members, MD legislature members, MD Federal delegation).
- Various neighborhood associations and non-profits active in West Baltimore
- Educational institutions (Coppin State University, Baltimore City Community College)

Amtrak will continue targeted outreach efforts as the Project advances. As the Project design continues, Amtrak will conduct additional community meetings related to several specific components of the Project. Amtrak will also provide updates and answer questions regarding the overall Project status, and other relevant information for community residents and stakeholders. Outreach activities will be carried out in accordance with the related mitigation specified in the ROD and include:

- Public outreach in the vicinity of the IVF to discuss community mitigation investments and architectural treatments for the IVF.
- Public outreach in the vicinity of the West Baltimore MARC Station and proposed south tunnel portal, to identify community mitigation investments.
- Public outreach related to design of the West Baltimore MARC Station.
- Consultation with consulting parties as required under the Section 106 Programmatic Agreement.

IV. ENVIRONMENTAL IMPACTS

This section provides a brief summary of the environmental impacts reported in the FEIS, and a qualitative discussion of any difference in the impacts that would result from the phased implementation of the Project as well as changes to the duration of construction, and sizes of the tunnel bore and plenum. Refer to Chapter 6 of the FEIS for more detailed discussion of environmental impacts. Except where noted in this Reevaluation, all impacts are anticipated to remain unchanged from those described in the FEIS.

Table 1 provides a summary of the impacts described in the FEIS and any changes to those impacts. Generally, any anticipated changes to environmental impacts would be related to the following topics:

- Phased Implementation: As described above, Amtrak proposes to implement the Project in two phases. The construction impacts of the two phases combined would be substantially similar to the impacts described in the FEIS, but would be spread over two periods of time. Upon completion, the combined Phases 1 and 2 would ultimately provide four new tracks in four separate tubes, which is consistent with the rail infrastructure described under the Selected Alternative in the FEIS.
- Construction Duration: The total construction duration is now estimated to be 14-15 years. This longer estimated duration of construction is a result of further planning for construction staging and sequencing (as described in Section III.B above). This change would not increase the construction impacts, but would disperse them over a longer period of time with no substantial cumulative change. The timeframe for tunnel boring, excavation, and IVF construction would still be roughly five to seven years.
- Tunnel Bore and Plenum Size: The reduced size of tunnel bores in Phase 1 (as described in Section III.C) would result in a smaller amount of material to excavate. The size of the plenum connecting the tunnel bores to the IVF would also be reduced, requiring less blasting and excavation to construct.
- Electrified MARC Trains: Separate from the Project, MDOT MTA committed to electrifying its MARC operations through the Frederick Douglass Tunnel. All passenger trains would be moved to the new tunnels after construction of Phase 1. Because the Phase 1 tunnels would be utilized only by electric passenger trains, which require less powerful tunnel ventilation systems, the IVF would be modestly shorter in height than described in the FEIS. This would reduce the visual, noise, and emissions impacts of the IVF in the surrounding community. Following Phase 2 construction, MARC trains would predominately use one or both of the two “outer” tubes. Phase 2 would potentially require changes to the tunnel ventilation system to accommodate diesel freight trains; however, the IVF would be permanently reduced in height relative to the description in the FEIS, and no diesel emissions would be exhausted through the IVF. Removing diesel emissions from the IVF would also allow the IVF plenum to be reduced in size, as noted above.

Table 1: Summary of Changes to Environmental Impacts

Resource Type	Summary of Impacts – Final EIS	Change in Impacts
Socioeconomics	Displacement of 22 residential buildings, 13 businesses, four places of worship. Community and visual impacts from portals, ventilation facilities and trackway.	Reduced visual impact of the shorter IVF. Community effects from freight traffic in the existing tunnel remain the same as the No-Build condition until Phase 2 is completed. Of the 13 businesses identified as displacements in the FEIS, six are no longer in operation, resulting in a revised estimated total of seven business displacements.
Cultural	Adverse effect to nine historic properties.	Reduced visual impact of shorter IVF in Reservoir Hill Historic District.
Section 4(f)	Section 4(f) Use of nine historic properties, *de minimis* impact to three historic properties.	No change
Natural Resources	Impacts to soils, 3.4 acres of floodplain, 109,750 square feet of forest stands, 40,200 square feet of hedge rows, 101 street trees and landscaped trees.	No change
Hazardous Materials	112 sites of concern within one mile of the alignment, including 67 low-priority sites, 38 moderate priority locations and 7 high-priority sites.	No change
Solid Waste	47 million cubic feet of soil and rock excavated and disposed for boring and excavation.	Reduced tunnel bore diameters and smaller IVF plenum proposed for Phase 1 would require excavation and disposal of a lower volume of solid waste relative to the estimate included in the FEIS. Excavation would be divided between Phase 1 and Phase 2. No changes would occur relative to the Phase 2 tunnel excavation.
Air Quality	Increased diesel emissions from diesel MARC trains. The modeled net increase in emissions did not exceed the applicable de minimis thresholds.	Reduced emissions relative to the FEIS due to MDOT MTA implementation of electrified MARC operations through the Frederick Douglass Tunnel (separate from the Project).

Resource Type	Summary of Impacts – Final EIS	Change in Impacts
Noise	Residential and institutional land uses would be affected. For residential land uses, 437 persons were predicted to be impacted near the south portal, of which 141 were predicted to be severely impacted. One school (Mary Ann Winterling Elementary) would be moderately impacted.	Operational noise impacts would be unchanged. Freight trains would continue to use the existing B&P Tunnel until Phase 2 is completed.
Vibration	No ground-borne vibration impacts from operation exceeding Federal Transit Administration frequent impact criteria or high enough to damage buildings. Ground-borne noise impacts to 444 residences.	Operational vibration and ground-borne noise impacts would be unchanged. Freight trains would continue to use the existing B&P Tunnel until Phase 2 is completed.
Construction Impacts	Localized impacts at the mucking shaft and portal cut-and-cover locations, emissions, and dust from construction vehicles, blasting noise and vibration near tunnel portal and ventilation shaft locations, temporary interruptions to vehicular and pedestrian traffic, temporary loss of on-street parking, major utility relocations, urban rodent activity, and bat impacts.	Construction impacts would occur in two phases possibly separated by a period of no construction activity. The reduced diameter Phase 1 tunnels would result in less material to excavate and haul, resulting in reduced impacts from operation of vehicles and equipment during Phase 1. The overall construction time frame would be increased as described in Section III.B. Tunnel boring, excavation and construction of the IVF would still occur over an approximate 5–7-year time frame. The overall amount of construction work completed would not increase; however, the local community may experience some effects from construction, such as noise and traffic interruptions, for a longer period of time than anticipated in the ROD.
Indirect and Cumulative Effects	Minor indirect effects to land use, population density, or growth rate in Baltimore City. Potential indirect effects to community growth and cohesion from the IVF. Substantial indirect benefits to transportation. Potential cumulative effects to areas impacted by Project CORE demolitions and US 40 highway operation.	Potential reduced indirect effects (visual, community cohesion) from a shorter IVF.

Resource Type	Summary of Impacts – Final EIS	Change in Impacts
Public Health and Safety	No impacts to public health. New tunnels would conform to the comprehensive life safety approach included in the NFPA Standard for Fixed Guideway Transit and Passenger Rail Systems-NFPA 130, resulting in improved safety compared to existing conditions.	No change
Energy	Energy consumption would increase; however, the forecasted increase in daily passenger trips includes passengers diverted from other, less energy efficient modes of travel, such as single occupant automobiles.	Changes in types of energy consumption relative to the FEIS due to MDOT MTA implementation of electrified MARC operations through the Frederick Douglass Tunnel (separate from the Project).
Irreversible or Irretrievable Commitments of Resources	Construction requires the irreversible and irretrievable commitment of natural, human, and monetary resources. The Project benefits are anticipated to outweigh the commitment of these resources.	No change
Relationship between Local Short-Term Uses and the Maintenance and Enhancement of Long-Term Productivity	Short-term uses of human, physical, socioeconomic, cultural, and natural resources would contribute to the long-term benefits of improved travel times, operations, and reliability along the NEC corridor.	No change

The following sections (IV.A through IV.K) provide a brief summary of the impacts reported in the FEIS, and a discussion of any relevant changes from the project phasing or changes in the affected environment.

A. Socioeconomics

The Selected Alternative would be bored to an average depth of approximately 115 feet below the existing surface. As a result, surface land use and zoning impacts would be restricted to portal and ventilation facility locations. The Selected Alternative would impact approximately 0.5 acres of residential land use, 2.6 acres of industrial land use, 3.4 acres of commercial land use, and 6.7 acres of other land uses.

The FEIS reported that the Selected Alternative would require demolition of an estimated 22 residential buildings. Individuals relocated would experience temporary adverse effects from relocation. The FEIS reported that a total of 13 businesses, including six at the south portal and seven at the IVF, would be displaced under the Selected Alternative. These displacements would occur in the Bridgeview/Greenlawn, Midtown-Edmondson, and Reservoir Hill neighborhoods. Four places of worship, all located in the Midtown-Edmondson neighborhood, would be displaced as a result of south portal construction. The Project would result in visual and aesthetic quality changes to the surrounding environment from the tunnel portals, ventilation facilities, and the new tracks and railroad bed at each end of the portals (trackway).

As reported in the FEIS, the Selected Alternative would have disproportionately high and adverse effects to Environmental Justice (EJ) populations as a result of the property acquisitions and displacements described

above and impacts to housing, land use/zoning, community facilities, visual quality, and noise. Construction of smaller tunnel bores in Phase 1 and a smaller IVF plenum would reduce the intensity of construction impacts experienced in EJ communities during Phase 1 because a lower volume of material would be excavated and hauled away. Implementing the Project in phases would not increase the total impacts relative to those reported in the FEIS; but the impacts would be experienced in two separate periods of time, possibly with a passage of time between the phases with no construction activities taking place. Amtrak has conducted and will continue to conduct outreach efforts as described in Section III.E to address Project impacts to EJ communities in accordance with the commitments in the ROD.

The cumulative duration of construction would be increased as described in Section III.B. The total amount of construction activity would not increase; however, the effects would potentially be experienced for a longer period of time.

The IVF would be modestly reduced in height, resulting in less impact to visual quality in Reservoir Hill. No diesel fumes would be vented through the IVF in Phase 1 or Phase 2. Because freight rail traffic would remain in the existing B&P Tunnel after Phase 1 construction, any existing impacts to surrounding communities from freight rail traffic (such as noise or vibration) would remain unchanged from the No-Build until Phase 2 is constructed. The combined environmental impacts of Phase 1 and Phase 2 on socioeconomic resources would ultimately be substantially similar to those reported in the FEIS.

B. Cultural Resources

Through Section 106 consultation and as reported in the FEIS, FRA determined that the Selected Alternative would have an adverse effect on nine historic properties listed in or eligible for listing in the National Register of Historic Places (NRHP): the Baltimore and Ohio Belt Line Railroad, the Baltimore and Ohio Belt Line Bridge over Jones Falls Valley, the Baltimore and Potomac Railroad, the Reservoir Hill Historic District, the Midtown Edmondson Historic District, Bridge BC 2410 Lafayette Avenue over Amtrak, the Atlas Safe Deposit and Storage Company Warehouse Complex, the Greater Rosemont Historic District, and the Edmondson Avenue Historic District. On November 20, 2015, the Maryland State Historic Preservation Office (MD SHPO) concurred with FRA's adverse effect determination. The MD SHPO also concurred with FRA's supplemental historic property identification on October 11, 2016.

The results of the Phase IA Archaeological Study show that although large portions of the Study Area have been disturbed, the potential for both pre- and post-contact archaeological sites still exists. FRA, in consultation with MD SHPO, Amtrak, Preservation Maryland, and other consulting parties, elected to complete final identification, evaluation, and effects assessment on archeological resources in phases, pursuant to 36 C.F.R. § 800.4(b)(2) and 36 C.F.R. § 800.5(a)(3), as stipulated in the Section 106 Programmatic Agreement (PA) for the Project executed on March 2, 2017. The PA stipulates measures to resolve adverse Project effects to architectural and archaeological resources and established a process for identifying and evaluating additional historic properties as Project design advances.

Construction of a shorter IVF would lessen visual impacts in the Reservoir Hill Historic District. The Project changes described in this Reevaluation would not result in other changes to cultural resources impacts from the Selected Alternative as described in the FEIS. All mitigation commitments included in the ROD and Section 106 PA would be implemented with the exception of the vertical fans, primarily by Amtrak, during Phase 1.

C. Section 4(f)

The FEIS included a Final Section 4(f) Evaluation (Evaluation) that assessed the use of properties protected under Section 4(f) of the U.S. Department of Transportation Act of 1966 by the Project alternatives. Based on the Evaluation, FRA determined there are no feasible and prudent alternatives that would avoid use of all

Section 4(f) properties. FRA concluded the Selected Alternative would result in the least overall harm in light of the Section 4(f) statute's preservation purposes and identified appropriate measures to minimize harm. The Selected Alternative incorporates all possible planning to minimize harm to Section 4(f) properties, as documented in the Evaluation and FEIS.

The FEIS reported that the Selected Alternative would result in the use of nine Section 4(f) properties: the Baltimore and Ohio Belt Line Railroad, Baltimore and Ohio Belt Line Bridge over Jones Falls Valley, Baltimore and Potomac Railroad, Midtown Edmondson Historic District, Bridge 2410 / Lafayette Avenue over Amtrak, Greater Rosemont Historic District, Atlas Safe Deposit and Storage Company Warehouse, the Edmonson Avenue Historic District, and the Reservoir Hill Historic District. The Selected Alternative would have *de minimis* impacts on an additional three Section 4(f) properties: Fire Department Engine Company No. 36, the Ward Baking Company, and the Union Railroad.

No changes to Section 4(f) impacts would occur as a result of the Project changes described in this Reevaluation.

D. Natural Resources

Potential natural resource impacts from the Selected Alternative include impacts to soils, water resources, and wildlife habitat. The Selected Alternative would remove large quantities of soil through either tunnel boring or cut-and-cover construction. Construction areas would also expose the soil surface in portal and vent shaft locations, requiring stabilization to limit surface runoff and sediment pollution to surface waters. Minor impacts to water quality are possible from sediment and other construction-related runoff but would be limited by required erosion and sediment control measures. The Selected Alternative includes measures to ensure compliance with all applicable stormwater management regulations. The Selected Alternative would impact approximately 3.4 acres of the Jones Falls' 100-year and 500-year floodplains, including a permanent impact from new track construction and a temporary impact from construction staging areas. These impacts are not anticipated to involve a significant encroachment of the floodplains, and the combined effects would not raise the flood level one foot.

The Selected Alternative would have minor impacts on wildlife and their habitat since most of the Project would take place underground. Above-ground trackwork, portals, and ventilation facilities would primarily impact urban areas with little habitat value. The Selected Alternative would impact four forest stands totaling approximately 109,750 square feet (SF). Impacts to four hedgerows within the south portal area would total 40,200 SF. An estimated 101 street trees and landscaped trees would be affected due to construction impacts near the tunnel portals and ventilation facilities. Affected street trees, forest stands, and hedgerows would be replaced in accordance with Baltimore City and Maryland Department of Natural Resources (DNR) requirements. As noted in the FEIS, the existing tunnel would be closed and reserved for potential future rail transportation use. Disposition of the existing tunnel during Phase 2 could also impact any bat populations present.

No changes to natural resources impacts would occur as a result of the Project changes described in this Reevaluation.

E. Hazardous Materials

Construction of the Selected Alternative near contaminated sites is expected to involve encounters with contaminated soil and groundwater. A total of 112 sites of concern were identified within one mile of the Selected Alternative alignment, including 67 low-priority sites, 38 moderate priority locations and 7 high-priority sites. These existing hazardous material sites include residences, dry cleaners/laundromats, schools, automotive maintenance facilities, gas stations, fire stations, community resource centers, industrial

properties, and railway yards within the Study Area. Eight low-priority sites of concern were identified within 500 feet of the IVF. Refer to the FEIS for a list and description of the hazardous materials sites of concern. Mitigation measures would be needed where construction encounters contaminated soil and/or groundwater. Excavated soil would be sampled, treated, and/or disposed of in accordance with federal, state, and local regulations.

No changes to hazardous materials impacts would occur as a result of the Project changes described in this Reevaluation.

F. Solid Waste

Because the Selected Alternative would involve boring four new underground tunnels, it would generate solid waste. The primary source of solid waste during the construction phase would be excavated earthen material. The greatest amount of total solid waste generated would result from shaft and tunnel boring, while site preparation phases may also involve the removal of additional amounts of excavated material. The total amount of soil and rock to be excavated for the Project would be approximately 47 million cubic feet (1.8 million cubic yards) of material.

Phase 1 of the Selected Alternative would generate less solid waste from boring and excavation of two smaller diameter tunnels and a smaller IVF plenum, reducing trucking volumes on local streets and regional highways for necessary for the disposal of waste during construction.

G. Air Quality

The Project is located in Baltimore City, Maryland, which is designated by the U.S. Environmental Protection Agency as a moderate nonattainment area for eight-hour ozone, and a maintenance area for Particulate Matter 2.5. Although a portion of Baltimore City is designated as a maintenance area for Carbon Monoxide, the Project is located outside of the maintenance area.

The Selected Alternative would result in emissions from rail operations, ventilation facilities operations, and construction activities. The analysis of potential operational air quality effects from the Selected Alternative, documented in the l FEIS, determined that no adverse impacts to air quality would result from the Selected Alternative. Increased diesel emissions reported in the FEIS were anticipated to come only from MARC diesel locomotives. The modeled net increase in emissions did not exceed the applicable de minimis thresholds.

Because MDOT MTA committed on November 16, 2020, to implement electrified MARC service through the Frederick Douglass Tunnel, the two inner tunnels would be restricted to electric locomotives. While Phase 2 would allow diesel freight locomotives, no increase in diesel freight traffic is anticipated to occur, and diesel emissions would be potentially lower than those reported in the FEIS. Therefore, phased implementation of the Selected Alternative along with other changes described in this Reevaluation, would result in operational air quality impacts similar to those described in the FEIS, except for potentially lower diesel emissions.

H. Noise

FRA has not established noise and vibration guidelines for heavy rail operations, and therefore uses guidelines published by the Federal Transit Administration (FTA), another surface transportation mode with USDOT, to determine the noise impacts of heavy rail operations. The operational noise effects for the Project were evaluated using the guidelines set forth by the FTA *Transit Noise and Vibration Impact Assessment*. In accordance with these guidelines, a screening assessment was conducted to identify locations where the Project may cause noise impacts. Noise impacts were assessed for the Selected Alternative using the FTA Detailed Assessment methodology. Based on U.S. Census data, residential land uses with a total of 437 persons were predicted to be impacted near the south portal, of which 141 were predicted to be severely impacted. A

severe impact would occur at 66 dBA or higher for a residential context. Institutional land use would be affected, including one school, the Mary Ann Winterling Elementary School, that was predicted to be moderately impacted. The Selected Alternative includes the installation of noise barriers to mitigate these anticipated severe operational noise impacts to below severe levels. The FEIS includes more details regarding the noise analysis for the Project and proposed placement of barriers for noise mitigation.

Phased implementation of the Selected Alternative, along with other changes described in this Reevaluation, would result in operational noise impacts that are substantially similar to those described in the FEIS. Construction noise is discussed under Section IV.J below. Because freight trains would continue to use the existing B&P Tunnel after completion of Phase 1, any noise resulting from their use of the existing tunnel would be unchanged from the No-Build until completion of Phase 2. No increases in freight rail traffic are anticipated, so increased noise from new freight traffic is not anticipated.

I. Vibration

Impacts from the Selected Alternative due to ground-borne vibration from train passbys were not predicted to exceed the FTA frequent impact criteria at FTA Category 1, 2, or 3 land uses. No vibration levels high enough to damage buildings (including fragile historic buildings) were estimated from train operations through the tunnel. Vibration levels between 0 and 65 Vibration Decibels (VdB) were anticipated for areas within approximately 500 feet of the proposed track centerlines. Some locations directly adjacent to the surface tracks near the south portal would have estimated vibration levels between 65 and 72 VdB. Typical background vibration levels in residential areas are usually 50 VdB or lower.

Ground-borne noise levels under the Selected Alternative from train passbys were predicted to exceed the FTA frequent impact criteria at 444 residences and other FTA Category 2 land uses. Exceedances of the FTA ground-borne noise impact criteria were predicted at five Category 3 land uses (institutions) with the Selected Alternative. More detailed vibration analysis and monitoring would occur during the final design stage. The Selected Alternative would include vibration control measures to mitigate the ground-borne noise impacts in exceedance of FTA frequent impact criteria.

Drill and blast excavation would be used to construct cross-passages and ancillary underground structures. Controlled blasting, unlike Tunnel Boring Machine (TBM) vibration, is a transient vibration. No vibration levels would exceed 0.5 inches per second, the level at which damage is likely to occur to old residential buildings in poor condition. The park particle velocities (PPVs) would generally range between 0.07 to 0.4 inches per second. The threshold for human perception is approximately 0.02 inches per second, however, such vibrations are likely to be barely perceptible.

The blast-induced vibration for shaft construction is anticipated to have the most impact to the public. One shaft would be located at the IVF, and one at the North Ventilation Facility. Anticipated PPV vibration levels would be less than approximately 0.25 inches per second and thus below 0.5 inches per second, the typical threshold level of potential damage to historic structures. Residents and businesses near construction areas would be notified in advance of blasting activities during construction.

Phased implementation of the Selected Alternative, along with other changes described in this Reevaluation, would result in vibration impacts that are substantially similar to those identified in the FEIS. Because freight trains would continue to use the existing B&P Tunnel after completion of Phase 1, any vibration resulting from their use of the existing tunnel would be unchanged from the No-Build until completion of Phase 2. No increases in freight traffic are anticipated, so increased vibration from new freight traffic is not anticipated.

J. Construction Impacts

Construction impacts associated with the Selected Alternative would include localized impacts at the mucking shaft and portal cut-and-cover locations, emissions, and dust from construction vehicles, blasting noise and vibration near tunnel portal and ventilation shaft locations, temporary interruptions to vehicular and pedestrian traffic, temporary loss of on-street parking, and major utility relocations. Demolition of buildings, clearing land, and other construction activities could displace and increase activity from urban rodents, including rats.

Construction activities would result in temporary interruptions to both vehicular and pedestrian traffic patterns, including temporary closure of roads and sidewalks. During various stages of construction, additional traffic would be generated by hauling of construction debris, excavation spoils, and building materials. Movement of trucks and heavy equipment would be limited to major thoroughfares to the extent practicable. Increased traffic, noise, and vehicular emissions along waste-hauling routes would occur as the muck material is trucked to appropriate waste facilities.

Impacts from the two phases of construction for the Selected Alternative may be separated by a period of no construction activity. The proposed Project phasing would not substantially alter the construction activities or impacts but would divide the impacts from construction activity between the two phases.

The reduced size of the Phase 1 tunnel bores would require less material to excavate and haul construction, resulting in reduced impacts from the operation of vehicles and equipment during Phase 1.

The cumulative time frame for construction including Phase 1 and Phase 2 would be increased to a total of roughly 14-15 years as described in Section III.B. Tunnel boring, excavation, and IVF construction would still occur within the same approximate total duration as described in the FEIS (five to seven years). The total amount of construction work would not increase; however, the construction activities would be spread over a longer time frame. Some construction impacts, such as construction noise, vibration, disruptions to vehicle and pedestrian traffic, and community impacts from machinery movement and haul truck traffic may be experienced for a longer time than anticipated in the FEIS.

K. Indirect and Cumulative Effects

The Selected Alternative could indirectly result in changes in land use, population density, and/or growth rate in Baltimore City, but any effects would be relatively minor. Any growth-inducing effects of the improved passenger rail service would be beneficial towards Baltimore City's goals of fostering transit-oriented development and regaining population lost in previous decades. Direct visual impacts from the proposed IVF could indirectly affect future development by influencing the general character and cohesion of the surrounding blocks along the West North Avenue corridor, Reservoir Hill, and the adjacent Bolton Hill neighborhood. At the time of this Reevaluation, there are no indications from NS that existing freight levels through the tunnel would change from existing conditions. The Selected Alternative would result in a substantial and beneficial indirect effect to transportation. The alternative would result in downstream improvements to the efficiency of passenger rail service along sections of the NEC north and south of Baltimore as a result of the removed travel bottleneck currently created by the aging B&P Tunnel. The Selected Alternative would require demolition of 22 residential structures, resulting in a cumulative impact when added to the demolitions occurring under Project CORE. Direct community impacts such as displacements, noise, and visual impacts resulting from the Selected Alternative would be similar in nature to those resulting from construction and operation of the U.S. 40 highway. The Selected Alternative, as described in the FEIS, includes reserving the existing B&P Tunnel for potential future transportation use. The reservation of the existing B&P Tunnel would allow for potential re-use of the tunnel as a freight and/or passenger rail tunnel, possibly resulting in additional cumulative effects.

After completion of Phase 1, the existing B&P Tunnel would continue to be used by freight trains as it is currently, so any indirect and cumulative effects from freight trains would be unchanged from the No-Build described in the FEIS. The reduced height of the IVF could reduce potential indirect effects to the surrounding community from potential visual impact to community cohesion. No other changes to indirect and cumulative effects resulting from the phased implementation of the Selected Alternative, or other Project changes described in this Reevaluation, would occur relative to those described in the FEIS.

V. MITIGATION

The FEIS and ROD included commitments to mitigate environmental impacts resulting from the Project. All mitigation commitments would be completed by Amtrak as part of Phase 1, except measures associated with the disposition of the existing B&P Tunnel, which would be implemented by Amtrak in Phase 2. Additionally, the vertically-oriented fans proposed in the FEIS and ROD at the IVF would no longer be needed, because diesel train fumes would not be exhausted through the facility. The mitigation measures are listed in **Table 2**. The Project changes described in this Reevaluation would not necessitate any new mitigation measures.

Table 2: Mitigation Measures from the ROD

No.	Mitigation Measure/Project Commitment	Relevant Impacts Mitigated
Outcome Monitoring		
1	FRA, or another lead agency as determined by future project responsibility, will monitor the outcomes and effectiveness of mitigation efforts by implementing detailed tracking procedures and public reporting.	All
Community		
2	The Selected Alternative will include establishment of a fund to support community development within affected communities. Examples of community development activities include economic development projects, installation of public facilities, community centers, public services, small business assistance, homeowner assistance, community broadband Wi-Fi internet access, and others. The fund will provide funding to not-for-profit community development organizations that serve communities within the corridor for operating expenses and capital projects. Funds will be awarded, based on published criteria, to organizations that are active within 1/4 mile of the Project alignment. Projects that are explicitly included under other mitigation measures, such as park improvements, will not be eligible for mitigation under this measure.	Community facilities, community cohesion, neighborhoods, environmental justice, land use, residential, business, cultural/historic
3	The Selected Alternative will include the provision of relocation benefits to property owners and tenants pursuant to the Uniform Relocation Act.	Residential, business, environmental justice
4	The Selected Alternative will include establishment of a fund for maintenance of, and improvement to, publicly-owned parks and recreation facilities within affected communities. Parks and recreation facilities receiving funding should be located within 1/4 mile of the Project alignment.	Community facilities, environmental justice, community cohesion, neighborhoods
5	The Selected Alternative will include visual screening of ventilation facilities adjacent to schools and other community facilities.	Community facilities

No.	Mitigation Measure/Project Commitment	Relevant Impacts Mitigated
6	The Selected Alternative will include funding to support the improvement or establishment of community gardens, vacant lot greening, and/or the establishment or improvement of public open space within 1/4 mile of the Project alignment.	Community facilities, street trees, stormwater, visual, community cohesion, neighborhoods, land use
7	The Selected Alternative will include a mechanism for public comment in the design and landscaping of Project facilities such as portals, ventilation facilities, and other visible Project structures.	Visual, cultural/historic
Economy		
8	The Selected Alternative will provide coordination with local job training organizations to 1) facilitate targeted job training by providing estimates of the type, number, and timing of jobs expected to be created by project contractors, 2) include goals for nationally-targeted workers of social and economic disadvantage in construction contracts, and 3) require project contractors to report their progress in meeting contract goals on a regular basis. The Project will provide public reporting on job creation.	Environmental justice, business
Transportation		
9	The Selected Alternative will include funding for streetscape infrastructure, pedestrian, and bicycle access improvements within 1/2 mile of the Project alignment with emphasis on access to the West Baltimore MARC Station. Examples include landscaping and street trees, bus stop facilities, benches, trash receptacles, lighting, sidewalk repairs, bike lanes, cycle tracks, crosswalk striping and signaling, traffic calming measures, ADA accessibility, and/or public art.	Street trees, stormwater, visual, transportation, community cohesion, neighborhoods
10	The Selected Alternative will include development of a Traffic Plan that provides protection for safe pedestrian, bicycle, and vehicular movement around work sites during construction and maintains connectivity, where possible. The plan will account for truck haul routes, construction traffic concerns, and municipal solid waste pick-up, and should help minimize transportation impacts during construction. The plan should account for community resources such as schools and parks.	Transportation, community cohesion, neighborhoods, construction, traffic, community facilities, noise
11	The Selected Alternative will include stabilization and securement of the existing B&P Tunnel for potential future rail transportation use.[2]	Transportation
12	The Selected Alternative will include the replacement of all impacted station facilities at the West Baltimore MARC Station, and reconstruction of the facility in compliance with the ADA.	Transportation, visual, community facilities, cultural/historic

[2] Additionally, given the proposed phasing of the Project, Amtrak will continue to maintain the existing B&P Tunnel for safe operation of freight traffic until Phase 2 is completed.

No.	Mitigation Measure/Project Commitment	Relevant Impacts Mitigated
13	The Selected Alternative will include additional reasonable amenities at the West Baltimore MARC Station beyond those that currently exist, and beyond those that would need to be replaced in-kind as a result of direct impacts to the Station from the Project. Amenities such as security lighting, technological updates, full platform canopies, or public art may be considered in coordination with MARC and MTA.	Transportation, visual, community facilities
Natural Resources		
14	The Selected Alternative will include the development and implementation of a Stormwater Management Plan in accordance with Maryland Department of the Environment (MDE) guidelines. The planwill focus on stormwater runoff associated with construction activities and surface impacts, both temporary and permanent, throughout the Study Area.	Stormwater, construction
15	The Selected Alternative will include development and implementation of an Erosion and Sediment Control Plan for construction activities.	Stormwater, construction
16	The Selected Alternative will include implementation of vegetative buffers to screen right-of-way along the NEC in the Study Area, and develop a mechanism for maintenance of vegetative buffers.	Visual, stormwater
17	The Selected Alternative will include implementation of a Rodent Abatement Plan.	Construction
18	The Selected Alternative will include the development and implementation of a Street Tree Protection Plan and a Forest Conservation Plan.	Street trees
19	The Selected Alternative will include a plan for floodplain mitigation.	Floodplain
20	The Selected Alternative will include a Tunnel Sump Water Treatment and Disposal Plan.	Water resources
21	The Selected Alternative will include assessment of bat populations in the existing B&P Tunnel, and consideration of bat populations in the disposition of the tunnel as appropriate.	Habitat
Hazardous Materials / Emergency Management		
22	The Selected Alternative will include development and implementation of a Hazardous Spill Prevention Plan.	Hazmat
23	The Selected Alternative will include development of an Emergency Management Plan to be implemented in the event of a tunnel emergency.	Safety/hazmat, transportation
24	The Selected Alternative will include development of a Hazardous Materials Remediation Plan to remediate Hazardous Material sites impacted by the Project.	Hazmat
25	The Selected Alternative will include development and implementation of a Screening and Materials Handling Plan for the pumping, segregation, transportation, and disposal of groundwater. Evaluation of any screening and sampling results by an environmental professional will determine health and safety, handling, and off-site disposal requirements.	Hazmat
26	The Selected Alternative will include implementation of a program for the identification and segregation of impacted soils for additional testing and off- site disposal. Evaluation of any screening and sampling results by an environmental professional will determine health and safety, handling, and off-site disposal requirements.	Hazmat

No.	Mitigation Measure/Project Commitment	Relevant Impacts Mitigated
Construction		
27	The Selected Alternative will include development and implementation of a Construction Noise Mitigation Plan. The plan will include to the extent practicable: • Location of construction equipment and material staging areas away from sensitive receptors where possible; • Temporary noise barriers and advanced construction of permanent barriers to serve during construction where possible; and • Routing of construction traffic and haul routes along streets in non-noise sensitive areas where possible.	Noise, construction
28	The Selected Alternative will include development of a Construction Vibration Mitigation Plan to include the following measures: • Use of controlled blasting construction for vibration mitigation during drill and blast, and utilize blast covers when applicable. • Implementation of contractor control measures to ensure vibration from the TBM is kept low enough to avoid damaging buildings, including historic buildings, and remains below applicable FTA impact criteria. • Implementation of a vibration monitoring program and pre-survey of buildings in tunneling and blasting areas.	Vibration, construction, cultural/historic
29	The Selected Alternative will include development and implementation of a Construction Emissions Reduction Plan to include measures such as reducing equipment idling times, utilizing on-site storage to reduce truck haul trips, using low-emissions equipment, dust suppression measures, ensuring the contractor has knowledge of appropriate fugitive dust and equipment exhaust controls, and other measures.	
30	Construction activities undertaken as part of the Selected Alternative will be performed in accordance with Maryland's *Standard Specifications for Construction and Materials*, and Code of Maryland Regulations (COMAR) 26.11.06.03D – *Fugitive Particulate Matter from Materials Handling and Construction.* The Selected Alternative will include utilization of public information and feedback methods such as construction-alert publications and complaint hotlines to address issues and keep the public informed. Notifications will include information about construction schedules, road closures, transit service impacts, blasting, and contact information.	All construction related
Operational Air Quality		
31	The Selected Alternative will include vertically-oriented fans at ventilation facilities to facilitate dispersion of emissions from locomotives and avoid violation of air quality regulations.[3]	Air quality

[3] Vertically-oriented fans will no longer be implemented at the ventilation facilities because the vertical orientation was only necessary to disperse MARC diesel train emissions and MARC is converting its fleet to electrified operations through the new tunnel.

No.	Mitigation Measure/Project Commitment	Relevant Impacts Mitigated
Operational Noise		
32	The Selected Alternative will include noise barriers to mitigate anticipated operational noise impacts. Ventilation facilities will be designed with noise attenuation measures.	Noise
Operational Vibration		
33	The Selected Alternative will include implementation of operational vibration control measures to mitigate modeled vibration or ground-borne noise impacts exceeding FTA Frequent Impact criteria. Potential mitigation measures to consider during design include: • Resilient fasteners • Ballast mats • Resiliently supported ties • Floating slab track • Rail vibration absorbers/dampers	Vibration
Cultural Resources and Historic Properties		
34	The Selected Alternative will include the establishment of a preservation grant fund to address adverse effects to historic properties.	Cultural/historic
35	The Selected Alternative will include context-sensitive design treatments for new construction informed by the features of the affected historic properties.	Cultural/historic
36	The Selected Alternative will include sound barriers and/or vegetation to ensure that relevant historic properties are screened, including contributing elements of historic districts.	Cultural/historic
37	The Selected Alternative will include a Historic Properties Construction Protection Plan designed to protect above- and below-ground known historic properties from adverse effects during construction activities. Additional provisions of the PA will provide for identification, evaluation, and treatment of unknown cultural resources, unanticipated discoveries, and human remains. The Plan will also address vibration monitoring, stockpiling, and truck routes/hauling.	Cultural/historic
38	The Selected Alternative will include preparation of written and photographic documentation, consistent with Level II Historic American Buildings Survey (HABS) / Historic American Engineering Record (HAER) standards, for deposit with the MD SHPO for historic properties, including contributing elements of historic districts, directly and adversely affected.	Cultural/historic
39	The Selected Alternative will include preparation of interpretive material including signs and/or displays and brochures to be located in Baltimore's Pennsylvania Station. Possible themes may include the history of the B&P Tunnel, history of the North Avenue corridor, history of the Pennsylvania Railroad and Pennsylvania Station, influence of railroads on Baltimore City, and/or archaeological findings in the Project area as relevant.	Cultural/historic
40	The Selected Alternative will include an investigation of the history, development, use, and evolution of the station facilities and yards comprising present-day Pennsylvania Station in Baltimore City for the purposes of clarifying and delineating the official boundaries of railroad-related NRHP listed and eligible historic properties.	Cultural/historic

No.	Mitigation Measure/Project Commitment	Relevant Impacts Mitigated
41	The Selected Alternative will include measures for securing, salvaging, stockpiling, and reusing of building materials from the demolition of historic properties and contributing elements to historic districts.	Cultural/historic
42	The Selected Alternative will include the addition to the existing Project website of a new section on cultural resources that will provide a platform for the electronic storage and public dissemination of information on Project activities and findings related to historic architecture and archeology.	Cultural/historic
43	The Selected Alternative will include the completion of a Phase I Archaeological Survey sufficient to identify archaeological resources that may be affected by the Project. A Phase II archaeological survey will be conducted to evaluate the identified resources for NRHP eligibility. If an adverse effect cannot be alternatively mitigated, the Selected Alternative will include a Phase III Data Recovery for each adversely affected NRHP-listed or eligible archaeological historic property.	Cultural/historic

VI. CONCLUSION

This Reevaluation has been prepared in accordance with the NEPA procedures and regulations applicable to FRA to document changes to the Project and the environmental setting since the publication of the FEIS and ROD in 2016 and 2017, respectively. Constructing the Selected Alternative in two phases would result in minimal changes overall compared to the environmental impacts described in the FEIS. The reduced size of the Phase 1 tunnel bores and IVF plenum would lessen some community impacts by reducing the amount of excavation, blasting, and waste hauling during construction. The anticipated increase in total construction time required from 5-7 to 14-15 years would not increase the total amount of construction work completed but would disperse the construction activities over a longer period of time with no substantial cumulative change. The timeframe for tunnel boring, excavation, and IVF construction would still be roughly five to seven years. Some temporary construction impacts may be experienced for a longer period of time, such as noise and disruptions to pedestrian or vehicular traffic. Existing effects of freight trains traveling through the existing B&P Tunnel would be unchanged from the No-Build described in the FEIS until Phase 2 is completed. MDOT MTA's decision in 2020 to implement electric MARC service through the Frederick Douglass Tunnel would result in a modest reduction in height of the IVF compared to how it was proposed in the FEIS, and would not vent any diesel train exhaust due to electrification and other tunnel features (e.g., installation of jet fans) or operating procedures (e.g., closing the IVF dampers and limiting the number of trains in the tunnel at the same time) to accommodate the diesel emissions. Mitigation measures identified in the ROD would be implemented by Amtrak during Phase 1 of the Project, except:

- the vertical fans for the IVF which are no longer required; and
- disposition of the existing tunnel, which would be implemented during Phase 2.

Based on the information included in this Reevaluation, FRA concludes that the FEIS and ROD for the Project remain valid, and a supplemental EIS is not required. The Project changes described in this Reevaluation do not constitute substantial changes to the proposed action that are relevant to environmental concerns, and there are no significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

Approved by:

MARLYS A OSTERHUES

Digitally signed by MARLYS A OSTERHUES
Date: 2022.05.02 07:14:34 -04'00'

Date: May 2, 2022

Marlys Osterhues
Division Chief
Environment and Project Engineering, FRA

B&P Tunnel Project NEPA

Reevaluation Attachment 1:

MDOT MTA Correspondence

MARYLAND DEPARTMENT OF TRANSPORTATION

Office of the Secretary

Larry Hogan
Governor

Boyd K. Rutherford
Lt. Governor

Gregory Slater
Secretary

November 16, 2020

Mr. William J. Flynn
President and CEO
Amtrak
1 Massachusetts Avenue, NW
Washington DC 20001

Dear Mr. Flynn:

The Maryland Department of Transportation Maryland Transit Administration (MDOT MTA) and Amtrak have collaborated in a partnership to further improve the B&P Tunnel Replacement project. Both the MDOT MTA and Amtrak seek to be responsive to community concerns when possible, as well as do our part to enhance sustainability and the environment.

To that end, the MDOT MTA and Amtrak both support replacing the existing MARC diesel service that operates through the current B&P Tunnel with future MARC electric passenger equipment that will operate through the B&P Replacement Tunnels. Both parties believe that this approach will lessen the potential environmental impacts on the community.

The MDOT MTA concurs with implementing new B&P Replacement Tunnels for electric train operations, and it agrees that MDOT MTA will use electric (and no diesel) propulsion for MARC commuter rail trains in the new B&P Replacement Tunnels, provided that Amtrak concurs with the following conditions:

1. The MDOT MTA currently uses a mix of diesel and electric locomotives through the existing B&P Tunnel. The MDOT MTA may procure new locomotives before the new B&P Replacement Tunnels are completed. For the MDOT MTA to fulfill its commitment to changing to all-electric operations through the new tunnel, however, Amtrak agrees that it will sell or lease electric locomotives to the MDOT MTA at a reasonable rate, if needed.

2. In addition, Amtrak agrees that Amtrak will continue to provide maintenance services on a contractual basis for all electric locomotives owned or used by the MDOT MTA, including, but not limited to, those electric locomotives purchased or leased from Amtrak or another entity for Penn Line operation if requested by the MDOT MTA. Amtrak's agreement to perform maintenance on the MDOT MTA equipment is contingent on Amtrak's ability to reasonably perform such services. While Amtrak cannot control the availability of parts that are necessary to keep the current fleet maintainable, Amtrak will assist the MDOT MTA in its efforts.

3. Amtrak will continue to partner with the MDOT MTA to identify and collaborate on investments that will enable the MDOT MTA to transition to electric only operations through the new B&P Replacement Tunnels.

4. The MDOT MTA currently stores six trainsets at Baltimore Penn Station and is currently exploring alternate options for train storage. Amtrak agrees that upon request by MDOT MTA, however, Amtrak will continue to provide train storage at Baltimore Penn Station through the calendar year 2030 at reasonable cost to the MDOT MTA, as the MDOT MTA may require. Both parties recognize that flexibility regarding Baltimore Penn Station storage may be necessary to facilitate construction projects, and the parties agree to work cooperatively with each other in the event alternate storage is needed on a short-term basis.

5. Both the MDOT MTA and Amtrak acknowledge that this agreement does not constitute a funding commitment by either party.

6. This letter represents the parties' good faith intentions and understanding, and any definitive legal agreements or funding agreements between the parties will be consistent with this understanding and will be negotiated separately.

Sincerely,

Gregory Slater
Secretary

Attachment

cc: Ms. Holly Arnold, Deputy Administrator, MDOT MTA
Mr. Dean Del Peschio, Director, MARC Train Service, MDOT MTA
Mr. Jeffrey Ensor, Senior Director of Portfolio Management - NEC South End, Amtrak
Ms. Andrea Farmer, Deputy Chief Operating Officer, Contracted Services, MDOT MTA
Mr. Kevin B. Quinn, Jr., Administrator, MDOT MTA

Attachment

By signing below, both the MDOT MTA and Amtrak acknowledge their concurrence with this approach.

Kevin B. Quinn, Jr., Administrator
MDOT MTA

11/17/2020

Name, Title
Amtrak

MARYLAND DEPARTMENT OF TRANSPORTATION

Office of the Secretary

Larry Hogan
Governor

Boyd K. Rutherford
Lt. Governor

Gregory Slater
Secretary

February 10, 2020

Mr. Paul Nissenbaum
Associate Administrator
for Railroad Policy and Development
Federal Railroad Administration
1200 New Jersey Avenue, SE
Washington DC 20590

Dear Mr. Nissenbaum:

The Maryland Department of Transportation (MDOT) and Amtrak have collaborated in a partnership to further improve the B&P Tunnel Replacement project. Both MDOT and the National Railroad Passenger Corporation (Amtrak) seek to be responsive to the community concerns and to enhance sustainability and the environment.

In collaboration with Amtrak, MDOT supports a phased delivery approach to implement the selected alternative for the B&P Tunnel Replacement project. Considering the scale of the project and limited financial resources, phased delivery is necessary and appropriate to deliver this project, consistent with the Record of Decision.

The MDOT supports the delivery of two tunnels as the first phase and the remaining two tunnels as a second phase. We also support the design decision to have the first two tunnels serve electric passenger trains, with the understanding that the two tunnels covered by the second phase are intended to accommodate double-stack freight trains.

Thank you again for contacting me. I appreciate hearing from you. If you have any further questions please contact Ms. Holly Arnold, MDOT MTA Deputy Administrator, at 410-767-3027 or harnold@mdot.maryland.gov. Ms. Arnold will be happy to assist you. Of course, you can always reach out to me directly.

Sincerely,

Gregory Slater
Secretary

cc: Ms. Holly Arnold, Deputy Administrator, MDOT MTA
Mr. Jeffrey Ensor, Senior Director of Portfolio Management - NEC South End, Amtrak
Mr. Kevin B. Quinn, Jr., Administrator, MDOT MTA