

Record of Decision

*Baltimore Red Line Project
Baltimore County and City, Maryland
By the Federal Transit Administration*

1. Decision

The Federal Transit Administration (FTA) has determined, pursuant to Title 23 of the Code of Federal Regulations (CFR), Part 771, and Title 40 CFR Parts 1500-1508, that the requirements of the National Environmental Policy Act of 1969 (NEPA) have been satisfied for the Red Line project. This Record of Decision (ROD) applies to the Preferred Alternative described in the Final Environmental Impact Statement (FEIS) issued on December 14, 2012. The FTA is the lead federal agency for this project, while the Maryland Transit Administration (MTA) is serving as the project sponsor. The Federal Highway Administration (FHWA) is a cooperating agency.

The Preferred Alternative consists of a 14.1-mile light rail transit line from the Centers for Medicare & Medicaid Services (CMS) in Baltimore County to the Johns Hopkins Bayview Medical Center campus in Baltimore City. The transitway includes a combination of surface, tunnel and aerial segments. Key elements include a new double-track alignment; two tunnels (Cooks Lane and Downtown Tunnels); an Operations and Maintenance Facility (OMF) for storage of up to 38 light rail vehicles; a traction power system including overhead catenary system; traction power substation; central instrument houses; 19 stations (14 surface and 5 underground); three new park-and-ride lots (Security Square, I-70, and Brewer's Hill/Canton Crossing); and ventilation system elements including ventilation buildings, fans, air plenums, and shafts for the underground sections; and other ancillary facilities.

This ROD summarizes FTA's decisions regarding compliance with relevant environmental requirements. Further details supporting this ROD are in the Red Line FEIS, the Section 106 Programmatic Agreement (PA), and Final Section 4(f) Evaluation. Any proposed changes by MTA must be evaluated in accordance with 23 CFR Sections 771.129 and 771.130, and must be approved by FTA in writing before the agency can proceed with the change.

2. Basis for Decision

The documents considered in making this decision include the September 2008 Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS), the August 2012 Reevaluation of the AA/DEIS, and the December 2012 FEIS, as well as technical memoranda, correspondence, and other documents in the project file. The FEIS presented the purpose and needs for the project; a chronology of the alternatives development and analysis for the project, including a description of the alternatives considered; probable construction methods and activities for the Preferred Alternative; transportation conditions in the project study corridor; environmental impacts; commitments and mitigation measures; a summary of public outreach and agency coordination since publication of the AA/DEIS; and a summary of comments received on the AA/DEIS and responses to those comments.

2.1 Background

This project arose from the 2002 Baltimore Regional Rail System Plan, which recommended a 109-mile Regional Rail System with 66 new miles added to the existing 43 miles of Metro and Light Rail lines in the Baltimore region. The Red Line, as proposed with 19 stations, was identified as one of the priority projects for the Plan's implementation.

In 2003, the FTA issued a Notice of Intent (NOI) to prepare an AA/DEIS for the Red Line, followed by scoping and alternatives development. Based on public and agency input, the FTA and MTA developed a range of alternatives for consideration as part of the alternatives screening process.

Between 2005 and 2007, FTA and MTA conducted an alternatives screening process which identified a range of alternatives for detailed study in the AA/DEIS including: No-Build, Transportation Systems Management (TSM), Bus Rapid Transit (BRT), and Light Rail Transit (LRT). The AA/DEIS was circulated for public and agency comment between October 3, 2008 and January 5, 2009. In addition to regular public outreach by the MTA, four public hearings were held in November 2008 (November 6th, 8th, 12th and 13th). In August 2009, after review of the public and agency comments on the AA/DEIS, the State of Maryland, with consensus from Baltimore City and Baltimore County, identified a Locally Preferred Alternative (LPA), as previously required by FTA's New Starts funding program, for an approximately 14-mile LRT alignment from CMS in Baltimore County to Johns Hopkins Bayview Medical Center campus in Baltimore City, with tunnel alignments under Cooks Lane and through downtown from Martin Luther King, Jr. (MLK Jr.) Boulevard to Boston Street.

After the announcement of the LPA, the MTA conducted additional technical studies, continued public involvement and agency coordination activities, including the Station Area Advisory Committees (SAACs). The SAACs are an interactive community-based design initiative formed to fulfill a commitment for community-centered station design, development, and stewardship as set forth in the *2008 Baltimore City Red Line Community Compact*. Seventeen SAACs were formed in Fall 2010 and began providing input into the planning and design of the 19 proposed light rail stations. In the Spring of 2011, four public meetings were held to highlight the work of the SAACs and receive additional public input.

MTA again held public meetings in the summer of 2012 to present the latest information on the project, including refinements to the LPA. In accordance with 23 CFR 771.129(a), the MTA prepared a reevaluation because more than 3 years had passed since publication of the AA/DEIS. The reevaluation compared the Preferred Alternative to the build alternatives considered in the AA/DEIS. On September 17, 2012, FTA concluded that there are no new significant environmental impacts beyond those evaluated in the AA/DEIS. The results of public input, additional studies and the definition of the Preferred Alternative are presented in the FEIS.

2.2 Project Purpose and Needs

The purpose of the Red Line is to provide the following improvements in the project study corridor, which extends from the CMS in Baltimore County to the Johns Hopkins Bayview Medical Center campus in Baltimore City:

- Improve transit efficiency by reducing travel times for transit trips in the corridor
- Increase transit accessibility in the corridor by providing improved transit access to major employment and activity centers
- Provide transportation choices for east-west commuters in the corridor by making transit a more attractive option
- Enhance connections among existing transit routes in the corridor
- Support community revitalization and economic development opportunities in the corridor
- Help the region improve air quality by increasing transit use and promoting environmental stewardship

The needs that exist in the project study corridor are:

- Roadway congestion contributes to slow travel times for automobiles and buses in the corridor
- Lack of convenient transit access to existing and future activity centers in the corridor, including downtown Baltimore, Fell's Point, and Canton, as well as employment areas in Baltimore County to the west of Baltimore
- Lack of viable transit options for east-west commuters in the corridor
- Lack of connections from existing transit routes (including Central Light Rail, Metro, MARC, and bus network) to the I-70 travel market on the west side of the corridor, and to the I-95 and East Baltimore travel markets on the east
- Need for economic development and community revitalization in communities along the corridor, both in Baltimore County and in Baltimore City
- Need to support the regional goal of improving air quality by providing alternatives to automobile usage

The FEIS evaluated the effectiveness of the Preferred Alternative and No-Build Alternative in meeting the purpose and needs for the project. It has been determined that the Preferred Alternative meets the purpose and needs of this project.

2.3 Alternatives Considered

Alternatives development and evaluation included initial development of alternatives, screening of alternatives, detailed study, selection of an LPA, and refinement of the LPA, resulting in identification of a Preferred Alternative in the FEIS. Throughout the development and evaluation processes, alternatives were reviewed based on a range of factors, including

their ability to meet the project's purpose and needs, their cost effectiveness, and their environmental impacts. This section summarizes the key steps in the alternatives development and evaluation process for the Red Line, which are described in greater detail in the FEIS, the *2008 Alternatives Technical Report* and the *Alternatives Technical Report – 2012 Update*.

2.3.1 Regional Transportation Planning

The planning and project development process for the Red Line began shortly after completion of the *2002 Baltimore Region Rail System Plan*. The plan recommended the expansion of the existing system into a complete regional rail system composed of six lines with the Red Line identified as a priority as the first east-west rail transit line in Baltimore.

After the 2002 Baltimore Region Rail System Plan was developed, the Baltimore Region Transportation Board (BRTB), the official Metropolitan Planning Organization (MPO) for the Baltimore region, placed the Red Line on the financially constrained Long-Range Transportation Plan for the region and has been maintained in its most recent version, *Plan It 2035*, dated November 11, 2011.

2.3.2 Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS)

a. Scoping and Alternatives Development

In April 2003, the FTA issued a NOI to prepare an AA/DEIS for the Red Line which would extend from the CMS in Baltimore County through the Baltimore City central business district (CBD) to Patterson Park in Baltimore.¹

Based on public and regulatory agency input during the scoping process, the FTA and MTA developed a range of alternatives for consideration in the alternatives screening process. These alternatives included a range of modes and alignments for providing improved transit service in the project study corridor. The alternatives advanced for consideration in the scoping process included various combinations of alignments for BRT and LRT service, as well as a TSM Alternative and a No-Build Alternative. Commuter rail and heavy rail were considered, but were eliminated, based on the following considerations:

Commuter rail is primarily applicable to longer distance travel from suburban or rural areas into higher density employment areas. The project study corridor does not incorporate the distances appropriate to commuter rail. Therefore, commuter rail is not a reasonable alternative for this project.

Heavy rail (a technology used in the Metro rail system in Baltimore) allows for higher operating speeds and greater capacities, but it requires total grade separation, meaning it must be located in tunnels and/or aerial structures at all roadway crossings. As a result, heavy rail is far more costly to construct than a bus or light rail system. Based on analysis of this alternative, MTA concluded that heavy rail would not meet FTA's cost-effectiveness requirements for

¹ During the alternatives screening process, the eastern terminus was extended to the Johns Hopkins Bayview Medical Center campus, as described in Section 2.3.2 b

funding under the New Starts funding program. Even if it had been able to meet those requirements, MTA would not have sufficient funding to cover its share of the cost of a heavy rail project. Because of these cost and cost-effectiveness concerns, heavy rail was not a reasonable alternative for this project.

b. Screening of Alternatives

Between 2005 and 2007, FTA and MTA conducted an alternatives screening process, which was intended to identify a range of alternatives for detailed study in the AA/DEIS. Analyses through the year 2005 were documented in the May 2005 report, Screening of Preliminary Alternatives, and presented at a series of public workshops in November 2005. After those workshops, further analysis was performed to address input received from the public. The eastern terminus of the project was extended from Patterson Park to the Johns Hopkins Bayview Medical Center campus, and a range of alignments for connecting to the campus were considered.

During the screening process, the goal was to identify potential modes and alignments, analyze each, and narrow them to a reasonable number of alternatives for study in the AA/DEIS. Throughout the screening process, alignments were evaluated based on:

- Ability to address project Purpose and Needs;
- FTA New Starts criteria;
- Engineering and cost - such as meets engineering design requirements and avoids higher capital cost;
- Extent of environmental impacts to parklands, air quality, noise, historic properties, and other resources;
- Mobility and operational factors such as travel time, traffic, transit connections;
- Accessibility for population and jobs; and
- Public input.

The results of the entire screening process are documented in the *2008 Alternatives Technical Report* and in the *Alternatives Technical Report – 2012 Update*.

2.3.3 Alternatives Evaluated in Detail in the AA/DEIS

The screening process resulted in identification of four overall alternatives for detailed study in the AA/DEIS which was published in September 2008:

1. Alternative 1: No-Build
2. Alternative 2: Transportation Systems Management (TSM)
3. Alternative 3: Bus Rapid Transit (BRT)
4. Alternative 4: Light Rail Transit (LRT)

a. Alternative 1 (No-Build)

The No-Build Alternative represents the future conditions of transportation facilities and services if the Red Line is not built. The No-Build Alternative did not meet the purpose and needs, but was advanced for detailed study, as required by NEPA. It provides a point of comparison for assessing the benefits and impacts of the other alternatives.

b. Alternative 2 (TSM)

The TSM Alternative represents transit improvements that can be implemented for mobility in the project study corridor without constructing a new transit guideway. This alternative emphasizes upgrades to existing transit service through operational and minor physical improvements. It could include selected street upgrades, such as intersection improvements, minor widenings, and other focused traffic engineering solutions. The TSM Alternative did not meet the purpose and needs, but was advanced for detailed study in the AA/DEIS because consideration of a TSM Alternative was required by FTA as part of an Alternatives Analysis under the New Starts funding program.

c. Alternative 3 (BRT)

The AA/DEIS considered six representative combinations of alignments for the BRT alternative:

- Alternative 3A – BRT, dedicated surface
- Alternative 3B – BRT, downtown tunnel + dedicated surface
- Alternative 3C – BRT, downtown tunnel + Cooks Lane tunnel + dedicated surface
- Alternative 3D – BRT, maximum tunnel + dedicated surface
- Alternative 3E – BRT, dedicated surface with Johnnycake Road alignment
- Alternative 3F – BRT, shared and dedicated surface + downtown tunnel

d. Alternative 4 (LRT)

The AA/DEIS considered four representative combinations of alignments for the LRT alternative:

- Alternative 4A – LRT, dedicated surface
- Alternative 4B – LRT, downtown tunnel + dedicated surface
- Alternative 4C – LRT, downtown tunnel + Cooks Lane tunnel + dedicated surface
- Alternative 4D – LRT, maximum tunnel + dedicated surface

The AA/DEIS analyzed these ten build alternatives in depth for transportation benefits, environmental effects, costs, and possible trade-offs. The AA/DEIS provided information about the trade-offs among the alternatives, but did not identify a Preferred Alternative. The AA/DEIS was circulated for public comment and a 90-day comment period between October 3, 2008 and January 5, 2009 was provided.

2.3.4 Identification of the Locally Preferred Alternative

The FTA New Starts Process required the local project sponsor to identify an LPA as part of the application to enter into Preliminary Engineering. Following the AA/DEIS phase, in August 2009, the State of Maryland, with consensus from Baltimore City and Baltimore County governments, announced an LPA that was similar to Alternative 4C as presented in the AA/DEIS document, but included several design refinements to address public comments, optimize cost effectiveness, and meet engineering and transit operation requirements.

In selecting the LPA, MTA made two important decisions: selecting LRT as the mode for the project; and selecting an alignment that includes surface-running transit for most of the length of the project, with the exception of a tunnel segment under Cooks Lane and a tunnel segment downtown (Downtown Tunnel).

2.3.5 NEPA Reevaluation

In accordance with 23 CFR 771.129(c), before preparing the FEIS, the MTA prepared a reevaluation because more than three years had passed since publication of the AA/DEIS for this project. On September 17, 2012, FTA concluded that there are no new significant environmental impacts beyond those evaluated in the AA/DEIS, but FTA directed MTA to describe in the FEIS the design refinements between the AA/DEIS and the FEIS so that the public could comment on the refinements.

2.3.6 FEIS Preferred Alternative

The Preferred Alternative is a 14.1-mile LRT line that would operate from the CMS in Baltimore County to the Johns Hopkins Bayview Medical Center campus in Baltimore City. Approximately 3 miles of the Preferred Alternative would be in Baltimore County following this general alignment: adjacent to the south side of Security Boulevard; on an aerial structure over I-695; adjacent to existing parking lots at the Social Security Administration (SSA) and along the north side of the I-70 ramp to I-695; on existing excess pavement of westbound I-70; and on a new alignment across the southwest quadrant of the existing interchange at the end of I-70.

The Preferred Alternative would enter into a tunnel through a portal on the northwest side of the intersection of Cooks Lane/Forest Park Avenue/Security Boulevard. The Cooks Lane Tunnel would be approximately 1.3 miles centered underneath Cooks Lane to Coleherne Avenue curving towards Edmondson Avenue to a tunnel portal in the median of Edmondson Avenue west of Swann Avenue. The Red Line would continue for approximately 3.3 miles in median of US 40 along Edmondson Avenue/Franklin Street/US 40 lower level roadway right-of-way.

The Red Line would enter the Downtown Tunnel within the median of US 40 immediately west of North Schroeder Street bridge and continue in a tunnel underneath Fremont Avenue, Lombard Street, President Street, Fleet Street and Boston Street for approximately 3.4 miles to a tunnel portal in the median of Boston Street east of the intersection with Montford Avenue/Hudson Street. The Red Line would continue the remainder of the 3.2 miles of the project along the median of Boston Street; transitioning on new right-of-way to the west side of Haven Street continuing north across Haven Street into Norfolk Southern (NS) railroad right-of-way; continuing north over Eastern Avenue ascending and turning east onto a new aerial

structure over the NS railroad, CSX railroad, and local city streets to the Johns Hopkins Bayview Medical Center campus; traversing the campus on a future Cassell Drive, Alpha Commons Boulevard, and Bayview Boulevard; the alignment continues north and east adjacent to I-895 terminating at the Bayview MARC Station.

The Preferred Alternative has 19 stations: 14 surface and five underground. There are five park-and-ride facilities proposed for the Preferred Alternative, all of which would be surface parking lots. Two of the five park-and-ride lots would be constructed by separate initiatives (West Baltimore MARC and Bayview MARC) but passengers would be able to park at these facilities and ride the Red Line or the MARC.

The Operation and Maintenance Facility (OMF) would be comprised of 11 parcels, consisting of a total of 20.8 acres, in Baltimore City along the south side of US 40/Franklin Street centered on Calverton Road between Franklintown Road and Warwick Avenue, and referred to as the Calverton Road site. The OMF is where light rail cars would be stored, maintained, and dispatched each day on their daily routes. The facility would accommodate administrative functions and light rail operation functions for the Preferred Alternative.

Traction power substations, signal central instrument houses, and an overhead catenary system would be placed along the alignment to provide electricity and operating signals for the Red Line light rail vehicles. For the underground portion of the Red Line, mechanical ventilation systems would be required, including a combination of fans, air plenums, and air shafts that connect the tunnels and station platform areas to outside air.

2.4 Environmental Impacts of the Build Alternative

The FEIS identifies both adverse impacts and benefits associated with the Preferred Alternative, both in the short-term during construction and over the long-term during operations. Long-term effects have been assessed for the year 2035, while short-term effects are those associated with construction activities, which have been assessed for a peak construction year of 2016. The primary impacts are summarized.

Table 1 summarizes the long-term effects to environmental and community resources that would result from the FEIS Preferred Alternative. Specific commitments and mitigation measures for the effects from the Preferred Alternative are in **Attachment A**.

Table 1: Summary of Preferred Alternative Long-Term Effects

Summary of Preferred Alternative Long-Term Effects
<i>Land Use</i>
<ul style="list-style-type: none"> Minimal because the land use plans and zoning for Baltimore County and Baltimore City have been developed to anticipate the Red Line, and to maximize the potential benefits from the project.
<i>Neighborhoods and Community Facilities</i>
<ul style="list-style-type: none"> No displacement of community facilities such as schools, libraries, places of worship, emergency services, or park and recreation areas. Neighborhood cohesion effects are not anticipated because the Red Line would operate almost entirely on existing roadways and thoroughfares. Greater pedestrian activity and would provide improved accessibility for pedestrians and bicyclists.
<i>Parking</i>
<ul style="list-style-type: none"> Permanent elimination of 741 parking spaces, of which 380 spaces could not be accommodated with replacement parking nearby. Would provide 1,134 new parking spaces at park-and-ride facilities.
<i>Environmental Justice</i>
<ul style="list-style-type: none"> No disproportionately high and adverse effects on environmental justice (EJ) populations.
<i>Property Acquisitions and Displacements</i>
<ul style="list-style-type: none"> No acquisition of real property that would result in an involuntary residential displacement An estimated 192 properties would require either a partial (169 of 192) or complete (23 of 192) acquisition totaling approximately 42 acres. The majority of the partial acquisitions are within the US 40 segment, where sliver takes from 97 residential properties would be required. The 23 complete acquisitions consist of 13 commercial, three industrial, one institutional, and six governmental properties, primarily at the OMF.
<i>Economic Activity</i>
<ul style="list-style-type: none"> Regional economic benefits by improving transit access and mobility for the work force and consumers within the project study corridor. Better access to existing jobs. Creation of approximately 200 permanent MTA jobs.
<i>Visual and Aesthetic Resources</i>
<ul style="list-style-type: none"> New visual features introduced; of 16 visual districts or sub-districts identified throughout the project study corridor, an overall adverse effect of "high" on one sub-district, and an overall visual effect of "medium to high" on five sub-districts.

Table 1: Summary of Preferred Alternative Long-Term Effects

Summary of Preferred Alternative Long-Term Effects
<i>Parks, Recreation and Open Space</i>
<ul style="list-style-type: none"> • Long-term effects to park, recreation and open space areas are limited and consist of: <ul style="list-style-type: none"> ○ Chadwick Elementary School – 0.7 acre of the property would be required for construction of and access to a proposed traction power substation; ○ Edmondson-Westside High School – approximately 150 square feet of school property near the Edmondson Avenue and Athol Avenue intersection would be purchased in fee simple to accommodate intersection improvements and stormwater management; ○ Boston Street Pier Park – a fee-simple area of less than 0.1 acre would be required from this park to accommodate stormwater management; ○ St. Casimir's Park – a fee-simple area of less than 0.1 acre would be required to accommodate stormwater management.
<i>Historic Properties</i>
<ul style="list-style-type: none"> • Proposed effects findings consist of: <ul style="list-style-type: none"> ○ no effect on 45 individual historic properties; ○ no adverse effect on 28 individual historic properties; and ○ an adverse effect on five individual historic properties, located in Baltimore City: Poppleton Fire Station (Engine House No. 38), Business and Government Historic District, South Central Avenue Historic District, Fell's Point Historic District, and Public School No. 25 (Captain Henry Fleete School). • There is an overall finding of adverse effect on historic properties.
<i>Archeological Resources</i>
<ul style="list-style-type: none"> • The archeological analysis has identified 22 areas of sensitivity. Potential archeological resources that would be affected would be documented prior to construction and once operational, no further effects to archeological resources are anticipated.
<i>Air Quality</i>
<ul style="list-style-type: none"> • Predicted to decrease regional pollutant burdens by approximately 1.5 to 1.9 percent. • No violations of the National Ambient Air Quality Standards (NAAQS) are predicted. • Not considered a project of air quality concern regarding PM_{2.5} emissions.
<i>Noise and Vibration</i>
<ul style="list-style-type: none"> • Corridor-wide project noise exposure levels are predicted to exceed the FTA moderate impact criteria at 96 residences and the FTA severe impact criteria at one residence (The Shipyard condominium building at the corner of Boston Street and Lakewood Avenue). • Vibration levels are predicted to exceed the FTA frequent criterion of 72 VdB at 45 residences. Ground-borne noise levels are predicted to exceed the FTA frequent criterion of 35 dBA at 49 residences. • Vibration levels are not predicted to exceed the FTA frequent impact criteria at non-residential land-uses (Category 1 or 3) except the proposed University of Maryland Proton Building.

Table 1: Summary of Preferred Alternative Long-Term Effects

Summary of Preferred Alternative Long-Term Effects
<i>Ecological Resources (terrestrial habitat, terrestrial wildlife, aquatic habitat/species, and rare, threatened and endangered species)</i>
<ul style="list-style-type: none"> • Impacts to 34.8 acres of forests with minimal effects to higher value terrestrial habitat. • Long-term effects to terrestrial wildlife resources are unlikely because existing roadway alignments, and wildlife corridors, such as along Gwynns Falls, would remain intact. • Forest interior dwelling species habitat would be affected by minor encroachment since only slight widening of existing roadways would be necessary. • Permanent or temporary loss of approximately 1,941 linear feet of aquatic stream habitat, largely as a result of proposed culvert extensions. • Greater impervious surfaces could affect water quality. However, overall net increases in impervious surfaces are expected to be minimal, amounting to an approximately 7-acre increase in impervious area. Incremental impervious effects that could be expected are unlikely to affect overall aquatic habitat or the makeup of biological communities to an appreciable degree. • Long-term effects to rare, threatened, and endangered species would not be anticipated since none are known to occur within the project study corridor.
<i>Forests</i>
<ul style="list-style-type: none"> • Impacts to 34.8 acres of forest and removal of 39 specimen trees. • The majority of the long-term forest effects would occur within the West and Cooks Lane Tunnel segments (28.5 acres) in the western reaches of the project study corridor, where most of the resources exist.
<i>Street Trees/ Individual Trees</i>
<ul style="list-style-type: none"> • Impacts to 315 street trees within Baltimore County and 948 in Baltimore City.
<i>Chesapeake Bay Critical Area</i>
<ul style="list-style-type: none"> • Conversion of 1.28 acres of unpaved area to impervious surfaces would occur in the East segment from the construction of the Canton Station and expansion of roadway to accommodate the track in the current median of Boston Street (including within the 100-foot buffer at Harris Creek). • The impervious area within the Critical Area would increase from 56 percent cover (existing conditions) to approximately 61 percent cover. • Long-term vegetation effects would occur to landscaping plants, street trees, and park trees within the Critical Area in both the Downtown Tunnel and East segments. The Downtown Tunnel segment tree effects would total 149. The East segment tree effects would total 232, with nine additional trees affected within the 100-foot buffer.
<i>Wetlands and Waters of the United States</i>
<ul style="list-style-type: none"> • Total effects to wetlands and waterways: <ul style="list-style-type: none"> ○ 0.23 acre of palustrine forested wetlands ○ 0.99 acre palustrine emergent wetlands ○ 1,941 linear feet of perennial and intermittent streams ○ 324 linear feet of ephemeral channel. • MTA intends to apply for a Section 404 Individual Permit from the United States Army Corps of Engineers (USACE) and an Individual Non-tidal Wetlands and Waterways Permit from the Maryland Department of the Environment (MDE).

Table 1: Summary of Preferred Alternative Long-Term Effects

Summary of Preferred Alternative Long-Term Effects
<i>Surface Waters: Water Quality, Scenic and Wild Rivers, Floodplains and Navigable Waterways</i>
<ul style="list-style-type: none"> • Net impervious increase of approximately 7 acres. • No designated scenic and wild rivers within the project study corridor; therefore, no long- or short-term effects would occur. • 0.7 acre of nontidal and 1.0 acre of tidal floodplain effects (combined long- and short-term). In general, the majority of the floodplain encroachments would be from traverse crossings of floodplains. • No long- or short-term effects to navigable waters are anticipated. While no effects to the Jones Falls are anticipated, construction of the tunnel would require authorization under Section 10 of the Rivers and Harbors Act. The Downtown Tunnel segment passes beneath this navigable water and is subject to USACE (and potentially USCG) navigable waters permitting requirements.
<i>Groundwater</i>
<ul style="list-style-type: none"> • Runoff would be directed to surface waters through stormwater management or treated as it is being infiltrated into the local groundwater through Environmental Site Design (ESD) stormwater facilities.
<i>Soils and Geology</i>
<ul style="list-style-type: none"> • Once operational, no long-term effects to the underlying soils and rock would be anticipated.
<i>Hazardous Materials</i>
<ul style="list-style-type: none"> • There is a potential for the presence of hazardous materials to be encountered.
<i>Utilities</i>
<ul style="list-style-type: none"> • Utility-related effects would be addressed in advance of, or in conjunction with construction.
<i>Section 4(f) Resources</i>
<ul style="list-style-type: none"> • The temporary occupancy of three parklands and one historic property during construction; • De minimis impacts to two parklands and nine historic properties; and • The permanent use of two contributing properties within the Business and Government Historic District under the proposed Inner Harbor Station.

Table 2 summarizes the short-term effects to environmental and community resources that would result from the FEIS Preferred Alternative. Specific commitments and mitigation measures for the effects from the Preferred Alternative are in **Attachment A**.

Table 2: Summary of Preferred Alternative Short-Term Effects

Summary of Preferred Alternative Short-Term Effects
<i>Public Transportation</i>
<ul style="list-style-type: none"> • Some lane closures and restrictions resulting in disruptions to: bus stop closures, provision of temporary bus stops, schedule delays, and bus route detours.
<i>Roadways and Traffic</i>
<ul style="list-style-type: none"> • Roadway closures, detours, and disruption of traffic during peak and non-peak times.

Table 2: Summary of Preferred Alternative Short-Term Effects

Summary of Preferred Alternative Short-Term Effects
<i>Parking</i>
<ul style="list-style-type: none"> On-street parking eliminated along Edmondson Avenue, Franklinton Road, Franklin Street, Mulberry Street, Boston Street, and Haven Street, as well as in the proposed station and tunnel portal construction areas within the downtown tunnel corridor, during various stages of construction. Other off-street parking spaces affected at various locations throughout the project study corridor.
<i>Pedestrian and Bicycle Facilities</i>
<ul style="list-style-type: none"> Construction would impact bicycle and pedestrian circulation along streets where construction activities would require temporary closure of sidewalks and crosswalks.
<i>Land Use</i>
<ul style="list-style-type: none"> While construction activities may affect vehicular or pedestrian access to individual parcels or businesses, these activities are not expected to affect or change land use.
<i>Neighborhood and Community Facilities</i>
<ul style="list-style-type: none"> No displacement of community facilities such as schools, libraries, places of worship, emergency services, or park and recreation areas. Temporary intrusion of through traffic into local neighborhoods because of congestion and/or detours. Disruption of access by motorized and non-motorized modes to local businesses. Temporary loss of on-street parking. Local businesses could be affected by temporary changes in vehicular and pedestrian access during construction. Local area transit service could be temporarily diverted or relocated.
<i>Property Acquisitions and Displacements</i>
<ul style="list-style-type: none"> A total of approximately 538,568 square feet (12 acres) of temporary easements would be needed for grading, building formwork for concrete, structural erection, vehicular/equipment access, and worker access. The temporary easement requirements would impact approximately 269 properties. Limits to vehicular and pedestrian access in certain areas to address public safety and to accommodate the variety of machinery, storage areas, and construction activities. It would be necessary to restrict access to buildings for periods ranging from several hours to up to four years. The MTA will coordinate with the occupants concerning the affected locations and relocation options.
<i>Economic Activity</i>
<ul style="list-style-type: none"> Construction of the Red Line would create or support approximately 9,800 direct construction and related jobs. The initial 3-year design phase of the Red Line project could generate approximately \$273.4 million in economic activity in Baltimore City and create or support approximately 2,050 jobs earning \$102.7 million in salaries and wages. The construction phase of Red Line project could generate \$1.8 billion in economic activity. Temporary effects from construction to adjacent businesses would include, but may not be limited to alterations to property access, loss of parking, especially short-term street parking, airborne dust, and noise and vibrations from construction equipment and vehicles.

Table 2: Summary of Preferred Alternative Short-Term Effects

Summary of Preferred Alternative Short-Term Effects
<i>Visual and Aesthetic Resources</i>
<ul style="list-style-type: none"> • Introduction of construction equipment, trucks, fencing, or walls surrounding proposed construction staging and laydown areas, as well as fugitive dust, would create a temporary aesthetic/visual effect to neighborhoods surrounding or adjacent to where these activities would occur.
<i>Parks, Recreation Land, and Open Space</i>
<ul style="list-style-type: none"> • Short-term effects to park, recreation, and open space areas are limited and include: <ul style="list-style-type: none"> ○ Uplands Park: temporary easement of 0.1 acre would be required to accommodate two eastbound lanes of traffic on the south side of Edmondson Avenue during construction, as well as a temporary sidewalk to maintain pedestrian access during construction. ○ Edmondson-Westside High School: temporary easement of 0.1 acre along Edmondson Avenue would be required for grading, and erosion and sediment control measures. ○ Boston Street Pier Park: temporary easement of less than 0.1 acre would be required for grading, sidewalk reconstruction and erosion and sediment control along Boston Street. ○ St. Casimir's Park: temporary easement of less than 0.1 acre would be required for curb and sidewalk reconstruction and mill and overlay work on Boston Street. ○ Canton Waterfront Park: temporary easement of 0.1 acre would be required for curb and sidewalk reconstruction and erosion and sediment control facilities along Boston Street. ○ Canton Park/Du Burns Arena: temporary easement of less than 0.1 acre would be needed for sidewalk repairs and modifications.
<i>Built Historic Properties</i>
<ul style="list-style-type: none"> • Short-term noise, vibration, visual, and traffic effects would occur during construction.
<i>Archeological Resources</i>
<ul style="list-style-type: none"> • The archeological analysis has identified 22 areas of sensitivity. Potential archeological resources that would be affected would be documented prior to construction and once operational, no further effects to archeological resources are anticipated.
<i>Air Quality</i>
<ul style="list-style-type: none"> • No violations of the NAAQS are predicted during construction activities.
<i>Noise and Vibration</i>
<ul style="list-style-type: none"> • Noise and vibration effects are expected during construction of the Red Line at residences and other sensitive receptors. • Construction activities are predicted to exceed both the MDE daytime and nighttime noise limits. MTA will provide noise and vibration control measures during construction whenever feasible and reasonable in accordance with applicable local and MDE noise ordinances. • During final design, when more detailed construction plans are available, this analysis, including mitigation, will be refined.

Table 2: Summary of Preferred Alternative Short-Term Effects

Summary of Preferred Alternative Short-Term Effects
<i>Ecological Resources</i>
<ul style="list-style-type: none"> • Short-term effects to terrestrial wildlife resources are unlikely because existing roadway alignments and wildlife corridors, such as along Gwynns Falls, would remain intact. • Short-term effects to rare, threatened, and endangered species would not be anticipated since none are known to occur within the project study corridor. • Short-term effects may occur to species of interest during construction including peregrine falcon and certain fishes. Further consultation with Maryland Department of Natural Resources would be required as design proceeds.
<i>Forests</i>
<ul style="list-style-type: none"> • Short-term forest/hedgerow effects would be limited since temporary staging and stockpile areas during construction would be sited primarily in non-forested areas, or within forests to be permanently affected.
<i>Street Trees/Individual Trees</i>
<ul style="list-style-type: none"> • Because tree removal would require mitigation, regardless of long-term or short-term effect, all tree effects have been quantified and considered under long-term effects (refer to Table 1). • Short-term effects would result from removal and replacement of trees to accommodate maintenance of traffic during construction, underground utility relocations, erosion and sediment control devices, and staging and stockpiling areas.
<i>Chesapeake Bay Critical Area</i>
<ul style="list-style-type: none"> • Effects resulting from short-term construction activities require the same mitigation, and therefore have been quantified together with long-term effects (refer to Table 1). • Short-term effects related to increase in impervious area would occur in the Downtown Tunnel and East segments from temporary construction activities such as staging areas, stockpiling and erosion/sediment controls. • Short-term effects within these segments would include street tree effects within the Critical Area during maintenance of traffic and for stockpile areas used temporarily during construction.
<i>Wetlands and Waters of the United States</i>
<ul style="list-style-type: none"> • Calculated effects are based on the anticipated limit of disturbance and include both long-term, permanent effects from project structures and facilities needed for operation of the transitway, and short-term, temporary effects from project construction. • Both short- and long-term combined effects were calculated together, and were not differentiated at this phase of study (refer to Table 1).
<i>Surface Waters: Water Quality, Scenic and Wild Rivers, Floodplains and Navigable Waterways</i>
<ul style="list-style-type: none"> • Potential short-term water quality effects during construction include physical disturbances or alterations and sediment releases that can affect aquatic life. • There are no designated scenic and wild rivers within the Red Line project study corridor; therefore, no long- or short-term effects would occur. • Refer to Table 1 for a summary of combined short- and long-term floodplain effects. • The Jones Falls, the only designated navigable waterway within the project study corridor, is not anticipated to be affected. Therefore, no short or long-term effects to navigable waters are anticipated from the Preferred Alternative.

Table 2: Summary of Preferred Alternative Short-Term Effects

Summary of Preferred Alternative Short-Term Effects
Groundwater
<ul style="list-style-type: none"> • Short-term construction effects to groundwater resources are not anticipated. • Runoff would be directed to surface waters through stormwater management or treated as it is being infiltrated into the local groundwater through ESD stormwater facilities. • Temporary changes in local water tables may result during construction activities; however, significant changes in the quantity or quality of groundwater discharged to receiving streams are not expected.
Soils and Geology
<ul style="list-style-type: none"> • Soil and rock will be excavated and disturbed during construction.
Hazardous Materials
<ul style="list-style-type: none"> • There is a potential for the presence of hazardous materials to be encountered.
Utilities
<ul style="list-style-type: none"> • Utility-related effects would be addressed in advance of, or in conjunction with construction.
Section 4(f) Resources
<ul style="list-style-type: none"> • The temporary occupancy of three parklands and one historic property during construction

2.5 Measures to Avoid, Minimize, and Mitigate Harm

Reasonable means to avoid, minimize, and mitigate environmental harm from the Preferred Alternative were presented in the FEIS and have been updated, in response to comments on the FEIS, and are set forth in **Attachment A** of this ROD. FTA will require implementation of the list of commitments and mitigation measures listed in **Attachment A** as a condition of any grant for the project; FTA will also require MTA to periodically submit written reports on its progress in implementing the commitments and mitigation measures. FTA will monitor this progress through quarterly reviews of the project's progress.

3. Public Outreach and Opportunities to Comment

The NOI to initiate the NEPA process was published in the Federal Register on April 11, 2003. Scoping meetings were held at various locations throughout the project study corridor in May and June of 2003. An agency scoping meeting was held on May 16, 2003 at the offices of the Baltimore Metropolitan Council (BMC). Five public scoping meetings were held between May 21 and June 18, 2003 to provide opportunities for the public to comment.

Between 2004 and 2007, the MTA held five sets of open houses and community workshops to involve the public in the development of alternatives and station locations: fall 2004 Open House, spring 2005 Open House, fall 2005 Community Workshop, Spring 2006 Community Workshop, and Fall 2007 Open Houses.

Four public hearings for the AA/DEIS were held at various locations throughout the study corridor on November 6, 8, 12, and 13, 2008. Over 500 citizens attended the four hearings, and over 650 comments were received from individuals and organizations on the AA/DEIS.

Since the AA/DEIS Public Hearings, approximately 350 outreach events have been held with stakeholders along the project study corridor. Red Line public involvement activities during this phase included: public hearings, open houses in May 2011 and June 2012, Citizens' Advisory Council and SAAC meetings, community events, small group meetings, and the distribution of various project publications. In addition, non-traditional targeted outreach efforts which included grocery store outreach, door-to-door canvassing, ministerial outreach, transit center outreach, and social media campaigns were employed to provide a comprehensive program to reach stakeholders and more specifically traditionally underserved populations such as minority, low-income, elderly, and disabled populations. Comments received on the AA/DEIS were addressed in the FEIS.

The Red Line FEIS was approved by FTA on December 4, 2012. Subsequently, the document was made available to the public and federal, state, and local agencies for review and comment (refer to the Distribution List in the Appendix C of the FEIS). The formal Notice of Availability was published in the Federal Register on December 14, 2012 initiating a 45-day public review and comment period (December 14, 2012 through January 28, 2013). During the FEIS 45-day review period following issuance of the FEIS, 243 written comments were received.

The majority of comments received were from individuals, organizations or businesses located in or representing the Canton area. Very few comments were specific to other areas along the corridor. Most of the comments received were related to effects to the Canton area, specifically along Boston Street. The main concerns raised regarding Boston Street and the Canton area included parking, traffic, access, business and economic hardship, community cohesion, and flooding. Many comments expressed disapproval of a surface alignment on Boston Street, while others questioned the validity of the ridership estimates. The comments received included many common themes or concerns raised repeatedly. These commonly raised comments are summarized in **Attachment C**.

A summary of comments and responses is included in **Attachment C** of this ROD. **Attachment C** includes responses to common themes in the comments received on the FEIS, as well as a matrix that responds to each individual comment. Due to its size, the matrix is provided only on the DVD version of this ROD. Responses to individual comments are provided in a table, which is part of **Attachment C** to the ROD. Because of its size, the table is produced only in electronic format (on the DVD that contains the ROD). The table identifies the commenter name or affiliation, the issues raised by each commenter, and an associated comment code. Each comment included in the table has been categorized based on the main point of the comment. A total of 45 different comment categories have been identified. The DVD also includes each original comment correspondence received, along with a corresponding comment code for cross referencing to the summary table.

4. Determinations and Findings

4.1 Conformity with Air Quality Plans

The Transportation Conformity Rule, which was promulgated by US Environmental Protection Agency (US EPA) under the Clean Air Act (CAA), provides criteria and procedures for determining conformity of transportation plans, programs and projects funded or approved under Title 23 U.S.C. or the Federal Transit Act to State Implementation Plans (SIPs). This project is located in Baltimore City and Baltimore County. The attainment status of this area is a follows:

- Baltimore City is classified as a maintenance area for Carbon Monoxide (CO);
- Baltimore County is classified as attainment for CO; and
- Both the City and County are classified as nonattainment areas for particulate matter 2.5 (PM_{2.5}) and as serious nonattainment areas for ozone.

As such, a conformity determination with the following requirements is required:

- The project must originate from a conforming transportation plan and program;
- The project must not cause or exacerbate a violation of the National Ambient Air Quality Standards (NAAQS) in any area; and
- The project must not delay timely attainment of any standard or any required interim emission reduction or other milestones in any area.

Transportation projects that originate from a conforming Transportation Improvement Plan (TIP) are considered to conform to the rule. The Red Line is listed as Project 40-0602-69 on the 2012-2015 TIP, which was approved by the Baltimore Regional Transportation Board on November 14, 2011. Impacts to air quality from EPA-designated criteria pollutants were assessed for compliance with EPA Transportation Conformity Rule (40 CFR Part 93), consistent with the NAAQS. No long-term air quality impacts would result from the Preferred Alternative. The Preferred Alternative is predicted to decrease regional pollutant burdens by approximately 1.5 to 1.9 percent. No violations of the NAAQS are anticipated, and the project is not considered a project of air quality concern regarding fine particulate matter (PM_{2.5}) emissions. These determinations have been confirmed through the interagency consultation process finalized in November 2012. Therefore, this project will comply with the conformity requirements established by the CAA. In addition, mobile source air toxic emissions will likely be lower than present levels in the design year as result of EPA's national control programs.

4.2 Section 4(f)

Section 4(f) of the US Department of Transportation Act of 1966, 49 USC § 303(c) requires that the proposed use of land from any significant publicly-owned public park, recreation area, wildlife and/or waterfowl refuge, or any significant historic site may not be approved as part of a federally-funded or approved transportation project unless:

- FTA determines that there is no feasible and prudent avoidance alternative to the use of land from the property, and the action includes all possible planning to minimize harm to the property resulting from such use (23 CFR 774.3(a)); or
- FTA determines that the use of the Section 4(f) properties, including any measures to minimize harm (such as avoidance, minimization, mitigation, or enhancements measures) committed to by the applicant, would have a de minimis impact on the property (23 CFR 774.3(b)).

Based upon the Preliminary Engineering undertaken for the Red Line, the Preferred Alternative would result in:

- Temporary occupancy (not a use) of three parklands and one historic property;
- De minimis impacts to two parklands and nine historic sites (individual properties and historic districts); and
- Section 4(f) use within the Business and Government Historic District because of the demolition of two contributing properties within that district. This use would occur under the Preferred Alternative Proposed as part of the construction of the Inner Harbor Station. Avoidance and least overall harm analyses were prepared for this use, as required by Section 4(f).

A Draft Section 4(f) Evaluation was prepared, and was included in the FEIS, which was made available for a 45-day review period which began on December 14, 2012. Having considered comments on the Section 4(f) evaluations presented in the FEIS and having consulted with the US Department of the Interior, FTA has concluded that: a) there are no feasible and prudent alternatives to the use of land from the Business and Government Historic District, and b) the project includes all possible planning and measures to minimize harm to that Section 4(f) resource resulting from such use. The Final Section 4(f) Evaluation is included in **Attachment D** of this ROD. The measures to minimize harm are included in the list of mitigation measures in **Attachment A** and in the PA (for historic sites) in **Attachment B**.

4.3 Section 106

The effects of the FEIS Build Alternative on historic and archaeological resources were assessed in accordance with the regulations (36 CFR Part 800) implementing Section 106 of the National Historic Preservation Act of 1966. The area of potential effects (APE) for the project was determined by FTA in consultation with the Maryland Historic Trust (MD SHPO).

There were 78 historic properties identified within the Red Line's APE. One historic property, the Franklinton Road over Dead Run Bridge (SHA #B0096), is located within Baltimore County. Other historic properties are located in Baltimore City. Two of the National Register (NR)-listed properties, Davidge Hall and the Star-Spangled Banner Flag House, are National Historic Landmarks (NHL). In accordance with Section 106, the FTA has determined that the Preferred Alternative would have:

- *no effect* on 45 individual historic properties;

- *no adverse effect* on 28 individual historic properties; and
- an *adverse effect* on five individual historic properties, located in Baltimore City:
 - Poppleton Fire Station (Engine House No. 38)
 - Business and Government Historic District
 - South Central Avenue Historic District
 - Fell's Point Historic District, and
 - Public School No. 25 (Captain Henry Fleete School).

Therefore, an overall finding of adverse effect on historic properties has been determined for the Preferred Alternative. The historic properties that have adverse effects by the Preferred Alternative are located within Baltimore City.

The attached Programmatic Agreement (PA) (**Attachment B**), executed by the FTA, MTA, and MD SHPO on February 26, 2013, stipulates cultural resources processes for the completion of the project and describes mitigation for the Red Line's adverse effect to historic properties that must be completed in accordance with Section 106 of the National Historic Preservation Act of 1966 (as amended). To mitigate this adverse effect determination, the PA includes the following requirements:

MTA shall establish a Cultural Resources Management Team for the Final Design and Construction Phases of the Red Line. This team shall assist MTA with implementing the PA's requirements and shall support monitoring activities to protect historic properties, as well as regularly train contractors to instill historic properties awareness.

MTA shall develop a Construction Protection Plan to educate contractors and protect historic properties during construction.

MTA shall execute Historic American Buildings Survey recordation for the Poppleton Fire Station and the two buildings within the Business and Government Historic District that are proposed for demolition.

MTA shall establish a \$200,000 historic preservation fund that shall be used for exterior historic preservation projects for historic properties that are individually listed in the National Register of Historic Places and within the Red Line's APE.

MTA shall develop and implement an interpretive plan that shall be executed for public education and historic interpretation of historic properties in the vicinity of the Red Line.

MTA shall continue consultation with the MD SHPO, with input from other consulting parties for identifying additional potential historic properties; identifying and minimizing and/or mitigating unanticipated adverse effects; and providing project plans and soliciting comments on design-related issues of built and landscape project components.

Finally, MTA shall hold (at a minimum) annual Section 106 consultation meetings and shall develop and distribute an annual report to FTA and MD SHPO describing progress implementing the PA requirements and any issues encountered while executing work.

Based on the conclusions of the Phase IA archeological assessment, a Phase IB Work Plan was developed and approved by the MD SHPO. This work plan identified 22 areas of sensitivity within six archeological study zones in the limit of disturbance of the Preferred Alternative with the potential to contain archeological resources. The Phase IB work plan structured the archeological survey work into two sequential stages: 1) Stage I – Phase IB field survey of the limits of disturbance of the surface rail alignment and ancillary features, and 2) Stage 2 – Phase IB field survey of the limits of disturbance of the subsurface stations and ancillary tunnel features. At the time of the execution of the ROD, the Stage I – Phase IB survey work is substantially complete, and the results have been included in a Stage I – Phase IB Archeological Technical Report, which has been provided to the MD SHPO for their review and comment. Based on the results of the completed survey, only one archeological resource, the multi-component Ward Farm Site (18BA582), has been recommended for Phase II investigation to determine eligibility for the NRHP.

After issuance of the ROD, it is anticipated that the Stage II – Phase IB identification survey of limits of disturbance of the subsurface alignment will be conducted, along with any additional Phase II archeological evaluation studies of archeological sites identified, and Phase III archeological data recovery efforts for National Register-eligible sites that cannot be avoided. The Section 106 PA outlines these work efforts (**Attachment B**).

4.4 Environmental Justice

The FEIS Preferred Alternative was evaluated with respect to its impacts on minority and low-income communities (known as environmental justice (EJ) populations). The MTA and FTA have concluded that the Preferred Alternative as a whole would not have “disproportionately high and adverse effects” on EJ populations. The Preferred Alternative has the potential to cause adverse effects on EJ populations, while also benefiting EJ populations. Potential adverse effects on EJ populations in the study corridor consist of:

- Business property acquisitions, including some business relocations.
- Partial residential property acquisitions (no residential displacements).
- Parking impacts.
- Noise and vibration impacts during construction and operation.

Where possible, the alignment options have been refined through the NEPA process to avoid sensitive areas and minimize impacts to both the human and natural environment. Environmental commitments and mitigation measures identified in **Attachment A**, will address impacts from LRT operations and construction activities that may affect EJ populations.

This improvement would benefit low-income and minority areas throughout the project corridor, including transit-dependent residents of those areas. Some of the EJ areas that would

be most directly affected, such as neighborhoods along Edmondson Avenue, would be among the principal beneficiaries of the project; the Preferred Alternative would greatly improve access to residences and businesses along Edmondson Avenue, helping to promote economic growth. While these adverse effects would occur where EJ populations are located, the EJ populations in the corridor would not be disproportionately adversely affected and will benefit from the project. The Preferred Alternative would provide a much-needed improvement in transit service in Baltimore, creating much faster and more direct transit access from residential neighborhoods in EJ areas to employment and commercial centers in Baltimore City and in Baltimore County.

FTA finds that the project complies with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," as implemented through the US Department of Transportation Order (US DOT Order) 5610.2(a) to Address Environmental Justice in Minority Populations and Low-Income Populations.

4.5 Floodplains and Wetlands

Combined long and short-term floodplain effects that would result from the Preferred Alternative consist of 0.7 acre of nontidal 100-year floodplain and 1.0 acre of tidal 100-year floodplain effects. Impacts to nontidal 100-year floodplain would occur within the West segment. Of the 1.0 acre tidal floodplain effects, 0.8 acre would occur within the Downtown Tunnel segment and 0.2 acre would occur within the East segment. Portal elevations have been designed to protect the system from both localized interior drainage as well as the 100-year and 500-year FEMA designated floodplains. Analysis of potential changes to hydraulic function and elevation of the 100-year floodplain would be determined using hydraulic and hydrologic floodplain modeling as part of the engineering process for each structure in later phases of design. In general, the majority of the floodplain encroachments would be from traverse crossings of floodplains.

Construction occurring within the FEMA designated 100-year floodplain must comply with FEMA approved local floodplain construction requirements. FTA finds that the Preferred Alternative is in accordance with the requirements of Executive Order 11988. If, after compliance with the requirements of Executive Order 11988 and US DOT Order 5650.2, new construction of structures or facilities are to be located in a floodplain, accepted floodproofing and other flood protection measures would be applied to new construction or rehabilitation. To achieve flood protection, wherever practicable, structures should be elevated above the base flood level rather than filling for culvert placement.


MTA will continue coordination with the USACE and MDE regarding mitigation of unavoidable impacts on waters of the US, including wetlands. The Preferred Alternative avoids and minimizes impacts to waters of the US, including wetlands, where practicable and to the greatest extent practicable. Where the discharge of fill material into waters of the US, including wetlands, are unavoidable, measures will be taken to mitigate these impacts in accordance with Section 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act of 1899. FTA

finds that the FEIS Preferred Alternative is in accordance with the requirements of Executive Order 11990.

Mitigation measures employed to compensate for unavoidable project effects to waters of the US, including wetlands, will follow federal and state regulations and guidelines, as well as other recommendations from federal and state resource agencies. The *Phase I Conceptual Mitigation Plan* has been completed as part of the FEIS phase of the Red Line. In a letter dated November 1, 2012, the USACE acknowledged their review of the *Phase I Conceptual Mitigation Plan*, and determined that it was acceptable for inclusion in and evaluation of the FEIS. Furthermore, the USACE acknowledged that the *Phase I Conceptual Mitigation Plan* documents acceptable sites and opportunities to adequately mitigate for anticipated Preferred Alternative impacts to waters of the US, including jurisdictional wetlands. Coordination with MDE will continue until concurrence on proposed mitigation is obtained. The *Phase II Final Mitigation Plan* will be initiated following the ROD, and is required to be complete prior to issuance of the federal wetlands and waterways permit.

4.6 I-70

The Preferred Alternative includes a reconfiguration of the I-70 roadway between I-695 and Security Boulevard/Cooks Lane. The reconfiguration of I-70 includes three connections: Parallel Drive, the proposed I-70 Park-and-Ride Station, and a new reconfigured signalized intersection at the end of I-70 with Security Boulevard, Cooks Lane, and Forest Park Avenue. The impacts and benefits of a reconfiguration of I-70 and the new connections are evaluated in the FEIS. Traffic flow would be altered but traffic movements that exist today would be able to be maintained. The existing partial interchange of I-70 and Security Boulevard would no longer operate. A Memorandum of Understanding was made and entered into on June 29, 2012, concerning the coordinated effort of FTA, MTA, the FHWA and SHA on final design and possible de-designation of a portion of this area. **(Attachment E)**.



Brigid Hynes-Cherin
Regional Administrator



Date of Approval

Attachments:

- Attachment A:** Commitments and Mitigation Measures
- Attachment B:** Section 106 Programmatic Agreement
- Attachment C:** Response to FEIS Comments
- Attachment D:** Final Section 4(f) Evaluation
- Attachment E:** I-70 Memorandum of Understanding