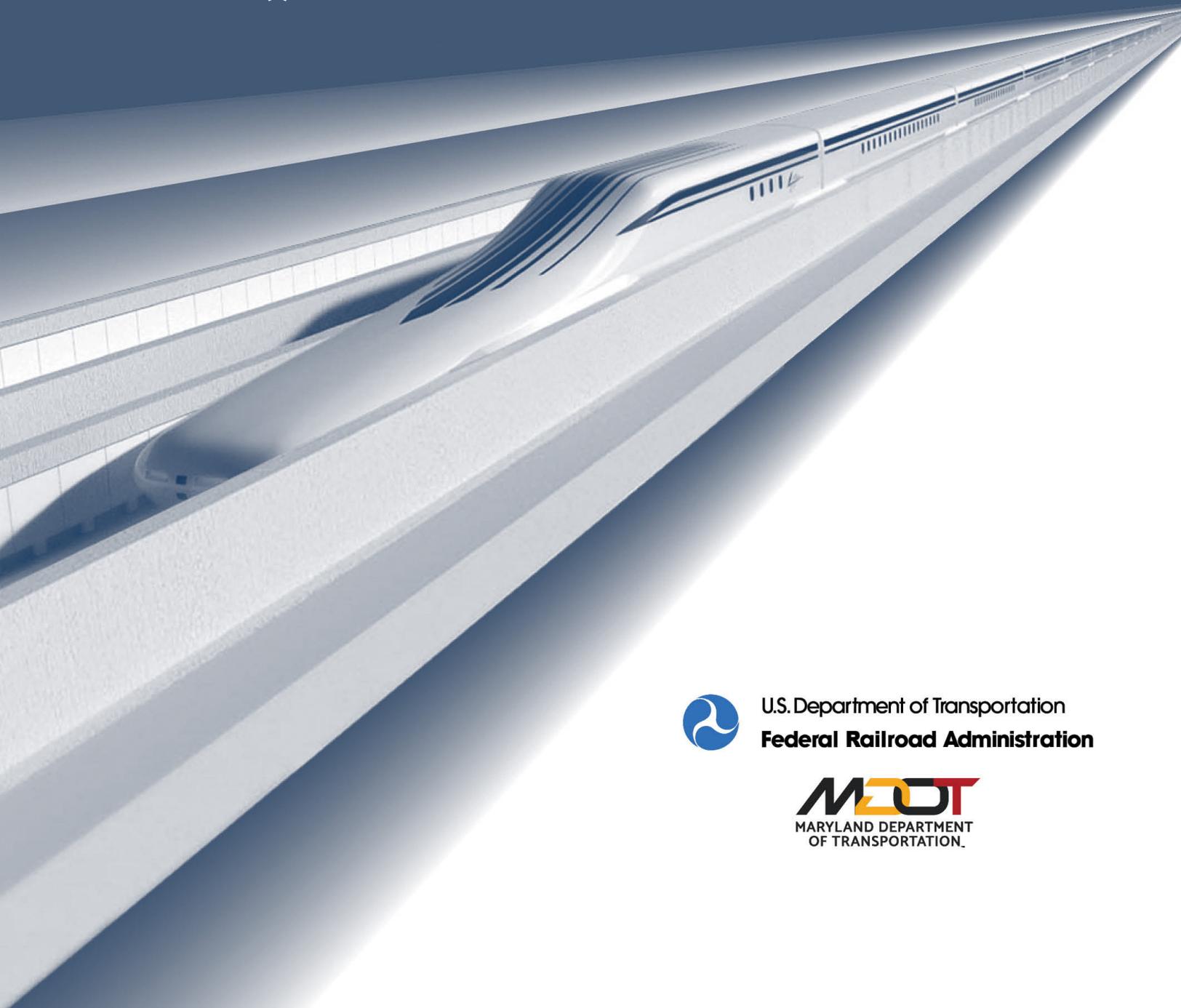


Section 4.8

Cultural Resources

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

DRAFT ENVIRONMENTAL IMPACT STATEMENT AND
SECTION 4(f) EVALUATION



U.S. Department of Transportation
Federal Railroad Administration



4.8 Cultural Resources

4.8.1 Introduction

This section describes cultural resources in the Superconducting Magnetic Levitation Project (SCMAGLEV Project) Project Affected Environment and identifies the potential impacts to these resources for the No Build and Build Alternatives. Chapter 3 Alternatives Considered, provides descriptions of the No Build and Build Alternatives.

“Cultural resources” includes any prehistoric or historic structures, buildings, objects, sites, districts (a collection of related structures, building, objects, and/or sites), landscapes, natural features, traditional cultural properties (TCPs) and cemeteries. This assessment organizes cultural resources into two categories: above-ground resources (such as historic structures, buildings, objects, districts, landscapes, natural features, TCPs, cemeteries, and local government-designated landmarks and historic districts) and archaeological resources (such as prehistoric or historic, sites, TCPs, cemeteries, and local government-designated sites).

Cultural resources that meet the National Register of Historic Places (NRHP) significance criteria qualify for consideration under the National Historic Preservation Act (NHPA) (54 U.S.C. § 300101 et seq.) and its implementing regulations (36 C.F.R. Part 800), including National Historic Landmarks (NHL). For cultural resources designated as a National Historic Landmark (NHL), Section 110(f) of the NHPA requires that prior to the approval of any Federal undertaking which may directly and adversely affect an NHL, the Federal agency shall, to the maximum extent possible, undertake such planning and actions necessary to minimize harm to the NHL, and afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment. Additionally, 36 CFR § 800.10(c) requires the Federal agency to notify the Secretary of the Interior (Secretary) and invite the Secretary to participate in consultation.

Both cultural resources, as defined above, and historic properties, as defined by NHPA, are addressed in this section.

4.8.2 Regulatory Context and Methodology

4.8.2.1 Regulatory Context

The Federal Railroad Administration (FRA) *Procedures for Considering Environmental Impacts* (64 FR 28545, May 26, 1999, as updated by 78 FR 2713, Jan. 14, 2013) require that Environmental Impact Statements (EIS) evaluate the impacts to cultural resources consistent with NHPA Section 106 (54 U.S.C. § 306108) (Section 106). The NHPA sets the Federal policy for preserving our nation’s heritage. Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties

by identifying and evaluating historic properties, assessing effects to those properties, and resolving any adverse effects. The process is initiated by the Federal agency and includes comment and input from stakeholders at the local, state, and Federal levels, Native American tribes, as well as the Advisory Council on Historic Preservation (ACHP). The ACHP published regulations (36 CFR Part 800) that guide Federal agencies and other participants in the Section 106 process. FRA is coordinating compliance with Section 106 with the NEPA process consistent with the general principles outlined in 36 CFR § 800.8(a).

Additionally, several other laws that are intended to protect cultural resources may be applicable to portions of the Project:

- The Archaeological and Historic Preservation Act of 1960 (54 USC 312501-312508) as amended provides for the preservation of significant scientific, prehistoric, historic and archaeological materials and data that might be lost or destroyed during construction.
- The Archaeological Resources Protection Act of 1974 (16 USC 470aa-mm) defines archaeological resources as any material remains of past human life or activities that are of archaeological interest and at least 100 years old, requires Federal permits for their excavation or removal.
- The Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001 et seq.) gives ownership and control of Native American human remains, funerary objects, sacred objects and objects of cultural patrimony that are excavated or discovered on Federal land to federally recognized Native American tribes or Native Hawaiian organizations.
- The Annotated Code of Maryland, including Criminal Law Title 10, Subtitle 4; Health-General Title 4, Subtitle 2, § 4-215; Land Use Division I, Title 5, Subtitle 1; Real Property Title 14, Subtitle 1, § 14-121; State Finance and Procurement Division I, Title 10, Subtitle 3, § 10-309; and Property Title 9, Subtitle 2, § 9-261 as well as Maryland Court Rules Title 14, Chapter 400, all of which pertain to the protection of cemeteries and human burials in Maryland.

4.8.2.2 Programmatic Agreement

A project Programmatic Agreement (PA) is typically executed when the effects on historic properties cannot be fully determined before a Federal agency approves an undertaking. For the SCMAGLEV Project, FRA is developing a project PA pursuant to 36 CFR § 800.14(b) to satisfy its Section 106 responsibilities. The Project PA outlines the on-going responsibilities of the Federal agencies with regards to Section 106 consultation after issuance of the Record of Decision (ROD), including:

- Area of Potential Effects revision,

- identification and evaluation of historic properties,
- assessment of adverse effects,
- resolution of adverse effects,
- reviews and expedited consultation processes, and
- dispute resolution.

The draft project PA is provided in Appendix D.5 Attachment A.

4.8.2.3 Methodology

The cultural resources methodology follows the steps of the NHPA Section 106 process as identified in 36 CFR § 800.

Consultation – Consultation, defined as the process of seeking, discussing, and considering the view of participants, is an important component of the Section 106 process. FRA has and will continue to conduct consultation throughout the Section 106 process with:

- **Section 106 Consulting Parties** - Beginning in 2017, FRA identified and initiated consultation with consulting parties, defined in 36 CFR § 800.2(c) as the SHPOs; Federally recognized Native American tribes; representatives of local governments; applicants for Federal assistance, permits, licenses, and other approvals; and certain individuals and organizations with a demonstrated interest in the SCMAGLEV Project (See Appendix D.5.1 for Table D.5-1 that lists FRA-invited consulting parties who accepted the invitation to participate as consulting parties and a summary of consulting party communications to date). Consistent with Section 106, consulting parties will have the opportunity to comment on historic properties, impacts to them, as well as resolution of those impacts through Section 106 consultation and opportunities afforded to the public.
- **ACHP** - FRA notified the ACHP of the Project and ACHP elected to participate in the Section 106 consulting process, pursuant to 36 CFR § 800.6(a)(1)(iii) (See Appendix D.5.1). Consistent with Section 106, the ACHP will have the opportunity to comment on historic properties, impacts to them, as well as resolution of those impacts through Section 106 consultation and opportunities afforded to the public.
- **Public** - FRA is coordinating public participation for Section 106 with NEPA. Consistent with Section 106, the public and all consulting parties will continue to have the opportunity to comment on historic properties, impacts to them, as well as resolution of those impacts through Section 106 via attendance at public

meetings where they can submit comments on the information presented, as well as review of NEPA documents on the Project website (See Appendix D.5.1 and Section 5.7.2, Public Involvement and Agency Coordination).

APE Delineation – The SCMAGLEV Project Affected Environment for this analysis is the Area of Potential Effects (APE), defined as “the geographic area within which an undertaking may directly or indirectly cause alteration in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking” (36 C.F.R. § 800.16(d)). There can be multiple APEs and the APE can have both vertical and horizontal dimensions. The FRA consulted with the SHPOs and coordinated with the ACHP and other consulting parties regarding delineation of the APE for both above-ground and archaeological resources.

APEs were defined for above-ground resources, including buildings, structures, districts, and objects (above-ground APE), and for archaeological resources (archaeological APE). Through consultation with the MD SHPO and DC SHPO, and coordination with the ACHP and other consulting parties, FRA delineated the APEs in July 2018 and updated them in January 2019 as more detailed engineering became available. The SHPOs concurred with the APEs in January 2019; however, additional changes to the engineering have required APE updates. FRA is currently consulting with the SHPOs regarding proposed updates to the APEs described below. Additionally, FRA will continue to consult with the SHPOs regarding any future engineering changes and associated changes in the APE. The SCMAGLEV Project PA will contain stipulations for revising the APE if designs continue to be refined after the ROD.

The above-ground APE takes into account impacts resulting from construction and operation of the Build Alternatives and is defined as follows:

- In Maryland, the above-ground APE includes the geographic area within 150 feet of the Limits of Disturbance (LOD), defined as the construction footprint of the Build Alternatives, including any permanent and temporary easements, access roads, all locations of ancillary facilities, and any other Project-specific locations.
- In the District of Columbia, the above-ground APE includes the geographic area within an irregular, multi-sided polygon that was drawn to account for Project effects (visual, noise, vibration, and traffic) from above-ground elements of the Mount Vernon Square East Station (cut/cover, station entrances, construction laydown, and parking garage) as well as additional construction laydown areas, cut/cover for underground electrical, and a substation, to contributing elements (reservations, streets/avenues, and vistas) of the NRHP-listed L’Enfant Plan of the City of Washington, as well as other known historic buildings and districts.

The potential for construction of the deep tunnel portions of the SCMAGLEV system to result in impacts on above-ground resources is low based on the extremely low probability of collapse of a deep tunnel to such an extent that the ground surface is

breached, or that vibration or noise from the deep tunnel reaches the surface, as addressed in Appendix D.10 Noise and Vibration and Appendix G.7. As such, the above-ground APE does not include the deep tunnel portions of the project.

The archaeological APE is defined as the LOD to focus on potential ground-disturbing activities associated with the construction of the Build Alternatives. The potential for construction of the deep tunnel portions of the SCMAGLEV system to result in adverse impacts on archaeological sites located near the surface (i.e., above 6 feet) was evaluated and determined to be low. This is based on the extremely low probability of collapse of a deep tunnel to such an extent that the ground surface is breached. As such, the archaeological APE does not include the deep tunnel portions of the Project, and no recommendations for archaeological field investigations are provided for areas above the deep tunnel portions that do not intersect with the archaeological APE.

Both APEs may include historic properties of religious and cultural significance to Native American tribes. FRA continues to consult with Federally recognized Native American tribes known by FRA to have an interest in the geographic region that encompasses the Project to identify such properties.

The APEs are depicted on maps in Appendix B.4.

Identification and Evaluation of Historic Properties – FRA is identifying historic properties through consultation as noted above and by conducting background research, preparing an archeological sensitivity model, performing field surveys, categorizing the identified historic properties and determining the eligibility of previously unevaluated resources.

- **Background Research** - FRA conducted background research to identify previously surveyed and evaluated cultural resources in the APEs (resources identified in past, unrelated projects). FRA's research sources included the National Register of Historic Places and SHPO records for previous documentation of NRHP-listed historic properties, NRHP-eligible historic properties, NHLs and eligibility determinations provided by Federal agencies for properties under their jurisdiction; the D.C. Inventory of Historic Sites for landmarks listed in D.C.; and the City of Baltimore Landmark List for landmarks and historic districts listed in Baltimore. This effort also included researching archival materials to develop historic contexts for evaluating the significance of newly identified resources and their eligibility for listing in the NRHP. The archival data contributed to a contextual understanding of the built environment and patterns of development, land use, spatial organization, and cultural landscapes within the APEs.
- **Archaeological Sensitivity Model and Phase Ia Assessments** – FRA prepared an archaeological sensitivity model and an archaeological Phase Ia assessment, through desktop research, to further refine this model. The model and the more detailed Phase Ia assessment use environmental data, historic

maps, and modern land use/land cover data to determine if a given location in the archaeological APE has a high, moderate, or low sensitivity to contain archaeological resources. Refer to Appendix D.5.2 for more information on the model and Phase 1a Assessments.

- **Field Survey** – FRA conducted field surveys to identify cultural resources in the APE that were not identified through past projects. Field survey for cultural resources in the above-ground APE occurred between November 2018 and August 2019 (2018-2019 survey), and June 2020 and September 2020 (2020 survey). Only above-ground resources more than forty-five (45) years old or older (pre-1974) located within the APE were documented, evaluated, and assessed as part of the above-ground field survey. The identification of properties is focused on those 45 years or older, rather than the standard 50 years or older, to account for the delay between identification and evaluation and the start of construction. The results of 2020 survey are being evaluated and will be updated in the Final Environmental Impact Statement (FEIS).

Archaeological field survey has not begun. Additional identification of undocumented archaeological sites, as well as, evaluation of archaeological resources not yet evaluated for NRHP significance, will commence with Phase I archaeological surveys. A Phase II archaeological evaluation will occur at any sites that are determined potentially eligible for inclusion in the NRHP. If avoidance is not possible, Phase III data recovery excavations may take place at these sites. Archaeological field investigations will follow the stipulations of the Project PA currently under development.

- **Categorize Historic Properties** – Based on the background research and field surveys, FRA categorized the identified historic properties within the APEs as follows:
 - National Historic Landmark (NHL) - a historic property that illustrates the heritage of the United States and holds national significance;
 - NRHP-listed - a historic property listed in the NRHP;
 - NRHP-eligible - a historic property determined eligible for listing in the NRHP;
 - Not evaluated - a resource not yet evaluated for the NRHP eligibility but that will be treated as NRHP-eligible until such time as FRA makes a formal NRHP eligibility determination in consultation with the appropriate SHPO. This includes resources such as locally designated landmarks and historic districts and archaeological sites that have been included in municipal databases, SHPO databases, and Federal agency-supplied information, but have not yet been evaluated for NRHP eligibility.

- **Determinations of Eligibility for Previously Unevaluated Resources** - FRA is evaluating the properties categorized as not evaluated according to the relevant criteria for NRHP eligibility and seeking SHPO concurrence with the resulting NRHP determinations. For a property (district, site, structure, building, or object) to be listed or eligible for listing in the NHRP, and thus subject to Section 106, it must be:
 - A) Associated with events that have made a significant contribution to the broad patterns of our history; or
 - B) Associated with the lives of significant persons in our past; or
 - C) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
 - D) Yielded or may be likely to yield, information important in history or prehistory.

The property must also possess sufficient integrity of location, design, setting, materials, workmanship, feeling, and association to be listed or eligible for listing in the NRHP.

Effects Assessment - FRA will assess effects on historic properties (both previously known and those identified in the studies underway for this project) in the APE according to the Criteria of Adverse Effect. The FRA will also identify the effects as temporary or permanent.

- **Criteria of Adverse Effect**

The Criteria of Adverse Effect are defined in 36 CFR § 800.5(a) as “An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.” Examples of adverse effects include:

- Physical destruction or damage;
- Alterations that are inconsistent with the Secretary's Standards for the Treatment of Historic Properties, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access;

- Removal of the property from its historic location;
 - Change of the character of the property's use or of contributing physical features within the property's setting;
 - Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;
 - Neglect or deterioration (except in certain religious or cultural cases); and
 - Transfer, lease, or sale of property out of Federal ownership or control without adequate preservation controls.
- **Temporary or Permanent Impacts**

Impacts can be temporary or permanent. Temporary impacts, for example, could be caused by construction cut-and-cover for stations and underground powerlines, and construction laydown after which the ground surface will be returned to its pre-construction state. They could also include noise, vibration, and lighting from construction activities, including street closures and traffic diversions, that will cease once construction is complete; and removal of character-defining vegetation or other features that are replanted or reinstalled that can be reasonably expected to be returned to their pre-construction state.

Permanent impacts, for example, could include demolition of a historic property for cut-and-cover construction or a station entrance. They could also include introduction of project components that could diminish any aspects of integrity that contribute to a property's historic significance, such as above-ground stations and above-ground entrances to below-ground stations; station parking garages; tunnel boring machine (TBM) launch-retrieval sites/fresh air/emergency egress (FA/EE) locations; tunnel portals and hoods; viaducts with piers, etc. Permanent effects could also include noise, vibration, and lighting changes.

If FRA determines the impacts would diminish any aspects of integrity that contribute to a historic property's significance, FRA would make a finding of adverse effect. This assessment will be informed by the analyses for construction impacts (Section 4.1), aesthetics and visual quality (Section 4.9), noise and vibration (Section 4.17), and traffic (Section 4.2) as well as a photographic simulations study that visualizes the appearance of the Build Alternatives compared to existing conditions (see Appendix D.6).

FRA is continuing to assess effects to historic properties in consultation with DC SHPO, MD SHPO, Native American tribes, and other consulting parties. Therefore, this EIS identifies the potential impacts the SCMAGLEV Project may have on historic properties by applying the Criterion of Adverse Effect but does not provide a conclusion regarding effect under Section 106. Additional information will be provided in the FEIS after the assessment of adverse effects consultation process is completed.

FRA will document the effects assessment results in reports submitted to the DC SHPO, MD SHPO, Native American tribes, and other consulting parties for review and comment. The reports will include the results of the literature reviews, background research, field survey, and effects assessment.

Resolution of Adverse Effects and Programmatic Agreement Development –

The final step of the Section 106 process is to resolve adverse effects. During this step, the FRA will consult with consulting parties to avoid, minimize, and mitigate adverse effects on historic properties. Once FRA, SHPOs, and ACHP agree, the measures to resolve adverse effects will be memorialized in the PA (prior to PA execution) or in accordance with the PA (after PA executed).

As explained above, FRA is developing a Project PA in consultation with the ACHP, SHPOs, Baltimore-Washington Rapid Rail (BWRR), federally recognized Native American tribes, and other consulting parties to govern phased identification, evaluation, and assessment of effects, and the resolution of adverse effects.

4.8.3 SCMAGLEV Project Affected Environment

Area of Potential Effects

FRA currently identified 42 above-ground resources considered historic properties per the NHPA in the above-ground APE and 21 archaeological resources considered historic properties per the NHPA in the archaeological APE. Only one of these archaeological resources (51NW121) has been formally determined NRHP-eligible; the other 20 archaeological resources are currently not evaluated for the NRHP. FRA will make determinations of eligibility for these resources and seek the appropriate SHPO's concurrence. FRA also identified the sensitivity of areas within the APE to potentially contain archaeological resources as high, moderate, or low.

Appendix D.5.3 provides descriptions of each of the above-ground historic properties. Maps showing the locations of the above-ground historic properties are in Appendix B.4. Archaeological site locations are confidential.

Table 4.8-1 summarizes the cultural resources within the above-ground APE by Build Alternative, and **Table 4.8-2** lists known resources in the archaeological APE by Build Alternative. **Table 4.8-3** shows the archeological sensitivity by Project element.

Table 4.8-1: Resources in the Above-ground APE by Build Alternative

Resource Name	Type	Location	NRHP Status	Build Alternatives (X indicates resource is within Above-ground APE for a Build Alternative)											
				J-01	J-02	J-03	J-04	J-05	J-06	J1-01	J1-02	J1-03	J1-04	J1-05	J1-06
L'Enfant Plan of the City of Washington	Public lands	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
Central Public Library (Carnegie Library)	Public building	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
Seventh St NW, E Side 1000 Block	Commercial buildings	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
Mount Vernon Square Historic District and Addition	Historic district	D.C.	NRHP-listed/ eligible (Addition)	X	X	X	X	X	X	X	X	X	X	X	X
Yale Steam Laundry (including Garage and Stable)	Commercial building	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
Fletcher Chapel (Church of God & Saints of Christ)	Religious building	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
(Former) Peoples Congregational Church	Religious building	D.C.	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
The New York Apartments	Multiple-family residential building	D.C.	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
M Street High School (Perry School)	Educational building	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
Augusta & Louisa Apartment Buildings	Multiple-family residential building	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
Holy Redeemer Catholic Church and School	Religious and Educational buildings	D.C.	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Southern Baptist Church	Religious building	D.C.	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X

Resource Name	Type	Location	NRHP Status	Build Alternatives (X indicates resource is within Above-ground APE for a Build Alternative)											
				J-01	J-02	J-03	J-04	J-05	J-06	J1-01	J1-02	J1-03	J1-04	J1-05	J1-06
Mount Vernon Triangle Historic District	Historic district	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
Downtown (Washington, D.C.) Historic District	Historic district	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
Downtown (Washington, D.C.) Historic District Addition	Historic district	D.C.	Not Evaluated (proposed D.C. Landmark)	X	X	X	X	X	X	X	X	X	X	X	X
Bible Way Church and Temple	Religious building	D.C.	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
John Fox Slater School	Educational building	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
John Mercer Langston School	Educational building	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
Margaret Murray Washington School	Educational building	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
Hecht Company Warehouse	Warehouse	D.C.	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
Baltimore & Ohio (B&O) Railroad Bridge over Montana Avenue NE	Transportation infrastructure	D.C.	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
F.P. May Hardware Company Warehouse and Office	Warehouse	D.C.	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Pennsylvania Railroad Bridge over Montana Avenue NE	Transportation infrastructure	D.C.	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Martins Woods (PG:72-68)	Residential district	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Greenbelt Historic District (PG: 67-4)	Historic district and cultural landscape	MD	NHRP listed/ NHL	X	X	X	X	X	X	X	X	X	X	X	X

Resource Name	Type	Location	NRHP Status	Build Alternatives (X indicates resource is within Above-ground APE for a Build Alternative)											
				J-01	J-02	J-03	J-04	J-05	J-06	J1-01	J1-02	J1-03	J1-04	J1-05	J1-06
Goddard Space Flight Center (PG:64-19)	Research campus	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Beltsville Agricultural Research Center (PG:62-14)	Research facility and cultural landscape	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Baltimore-Washington Parkway (AA-5, PG:69-26)	Transportation infrastructure, cultural landscape, and landscape architecture	MD	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
D.C. Children's Center-Forest Haven District (AA-2364)	Hospital campus with cemetery	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Westport Historic District (B-1342)	Historic district	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Cherry Hill Homes Historic District (B-5080)	Historic district	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Cherry Hill Homes Extension 1 (B-5321)	Historic district	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Mount Auburn Cemetery (B-5060)	Cemetery	MD	NRHP-listed	X	X	X	-	-	-	X	X	X	-	-	-
Spring Garden Bridge (B-3668)	Transportation infrastructure	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Howard St Tunnel & Power House (B-79)	Transportation infrastructure	MD	NRHP-listed	-	-	-	X	X	X	-	-	-	X	X	X
Baltimore and Ohio (B&O) Railroad Baltimore Belt Line (B-5287)	Transportation infrastructure	MD	NRHP-eligible	-	-	-	X	X	X	-	-	-	X	X	X

Resource Name	Type	Location	NRHP Status	Build Alternatives <i>(X indicates resource is within Above-ground APE for a Build Alternative)</i>											
				J-01	J-02	J-03	J-04	J-05	J-06	J1-01	J1-02	J1-03	J1-04	J1-05	J1-06
Pratt Furniture Company (B-2387)	Commercial building	MD	NRHP-eligible	-	-	-	X	X	X	-	-	-	X	X	X
George H. Fallon Federal Building (B-5286)	Government building	MD	NRHP-eligible	-	-	-	X	X	X	-	-	-	X	X	X
(Downtown Baltimore) Business and Government Historic District (B-3935)	Historic district	MD	NRHP-listed	-	-	-	X	X	X	-	-	-	X	X	X
Otterbein Church (B-11)	Religious building	MD	NRHP-listed	-	-	-	X	X	X	-	-	-	X	X	X
Otterbein Historic District (B-3934)	Historic district	MD	NRHP-eligible	-	-	-	X	X	X	-	-	-	X	X	X
U.S. Fidelity and Guaranty (USF&G) Building (B-5318)	Commercial building	MD	NRHP-eligible	-	-	-	X	X	X	-	-	-	X	X	X
Total Number of Resources in Above-ground APE				34	34	34	41	41	41	34	34	34	41	41	41

Table 4.8-2: Resources in the Archaeological APE by Build Alternative

Resource Name	Type	Location	NRHP Status	Build Alternatives (X indicates resource is within Archaeological APE for a Build Alternative)												
				J-01	J-02	J-03	J-04	J-05	J-06	J1-01	J1-02	J1-03	J1-04	J1-05	J1-06	
18AN0191	Prehistoric and Historic, Late Archaic lithic scatter and 18 th -19 th century iron furnace	MD	Not Evaluated	-	-	-	-	-	-	-	X	X	X	X	X	X
18AN0208	18 th -19 th century plantation house site	MD	Not Evaluated	X	X	X	X	X	X	X	X	-	-	X	-	-
18AN0557	Prehistoric, Late Archaic, Late Woodland short-term resource procurement camp	MD	Not Evaluated	X	X	X	X	X	X	X	X	X	X	X	X	X
18AN0558	Prehistoric, Late Archaic short-term resource procurement camp	MD	Not Evaluated	X	X	X	X	X	X	X	-	-	-	-	-	-
18AN0559	Prehistoric, Lithic scatter	MD	Not Evaluated	X	X	X	X	X	X	X	-	-	-	-	-	-
18AN0912	Historic, Early 20 th -century domestic	MD	Not Evaluated	X	X	X	X	X	X	X	-	-	-	-	-	-
18AN1231	Prehistoric, Lithic scatter	MD	Not Evaluated	X	X	X	X	X	X	X	X	X	X	X	X	X
18AN1408	Prehistoric, Lithic scatter	MD	Not Evaluated	X	-	-	X	-	-	-	X	-	-	X	-	-
18AN1647	Historic cemetery	MD	Not Evaluated	X	X	X	X	X	X	X	-	-	-	-	-	-
18BA0088	Prehistoric, Shell midden	MD	Not Evaluated	X	X	X	X	X	X	X	X	X	X	X	X	X
18BA0089	Prehistoric, Lithic scatter	MD	Not Evaluated	X	X	X	X	X	X	X	X	X	X	X	X	X
18BC0025	Historic, Early-late 19 th century privies and well	MD	Not Evaluated	-	-	-	X	X	X	X	-	-	-	X	X	X
18BC0027	Historic, Early 19 th -late 20 th century domestic and commercial	MD	Not Evaluated	-	-	-	X	X	X	X	-	-	-	X	X	X
18PR0083	Prehistoric, Archaic short-term resource procurement camp	MD	Not Evaluated	-	-	-	-	-	-	-	X	X	X	X	X	X
18PR0084	Prehistoric, Archaic short-term resource procurement camp	MD	Not Evaluated	X	X	X	X	X	X	X	-	-	-	-	-	-
18PR0209	Prehistoric, Lithic scatter	MD	Not Evaluated	-	-	-	-	-	-	-	X	-	-	X	-	-

Affected Environment and Environmental Consequences



18PR0440	Historic, 19th-early 20th century domestic site	MD	Not Evaluated	X	X	X	X	X	X	-	-	-	-	-	-
18PR1127	Prehistoric isolated find & 18-19th century domestic site	MD	Not Evaluated	X	X	X	X	X	X	-	-	-	-	-	-
18PR1128	Historic artifact scatter	MD	Not Evaluated	-	-	-	-	-	-	X	X	X	X	X	X
51NW121	Historic, 19th-20th century site	D.C.	Eligible	X	X	X	X	X	X	X	X	X	X	X	X
51NW244	Historic, No information	D.C.	Recommend Not Eligible*	X	X	X	X	X	X	X	X	X	X	X	X
Total Number of Resources in Archaeological APE				15	14	14	17	16	16	12	9	9	14	11	11

Table 4.8-3: Archaeological Sensitivity by Project Element

Project Element	High		Medium		Low	
	Acreage	Percent of Total	Acreage	Percent of Total	Acreage	Percent of Total
Alignment J	158.3	17.10%	358.57	38.72%	409.09	44.18%
Alignment J1	130.97	16.65%	284.01	36.11%	371.63	47.24%
Mount Vernon Square East Station	20.73	53.66%	16.40	42.46%	1.50	3.88%
BWI Marshall Airport Station	0.00	0.00%	0.00	0.00%	20.93	100.00%
Alignment J	9.5	21.3%	4.5	10.1%	30.7	68.7%
Alignment J1	9.5	21.5%	4.5	10.2%	30.1	68.3%
Camden Yards Station	52.31	71.39%	0.00	0.00%	20.97	28.61%
BARC Airstrip TMF						
Alignment J	44.61	19.38%	155.27	67.46%	30.30	13.16%
Alignment J1	43.64	18.82%	158.49	68.35%	29.76	12.83%
BARC West TMF						
Alignment J	44.29	15.83%	174.78	62.46%	60.76	21.71%
Alignment J1	45.86	14.72%	193.11	61.99%	72.53	23.28%
MD 198 TMF						
Alignment J	12.55	6.22%	87.44	43.31%	101.89	50.47%
Alignment J1	17.97	7.83%	99.25	43.25%	112.25	48.92%

4.8.4 Environmental Consequences

FRA identified the potential impacts of each Build Alternative on cultural resources.

4.8.4.1 No Build Alternative

Under the No Build Alternative, the SCMAGLEV Project will not be built and, therefore, no impacts related to the construction or operation of a SCMAGLEV system will occur to cultural resources. Consistent with 36 CFR Part 800.3(a), there would be no undertaking subject to Section 106. However, other planned and funded transportation projects will be implemented in the area and could result in effects to cultural resources. For instance, the planned widening of the Baltimore-Washington Parkway (BWP) will cause an impact to the NRHP-listed BWP.

4.8.4.2 Build Alternatives

The 12 Build Alternatives are based on the two alignments J and J1. Build Alternatives J include 25 percent viaduct and 75 percent tunnel whereas, Build Alternatives J1 include 14 percent viaduct and 86 percent tunnel.

Alignments

Both Build Alternatives J and J1 alignments would impact the following above-ground resources in similar ways: Martins Woods, Beltsville Agricultural Research Complex (BARC), and BWP. However, due to the different locations at which the alignments emerge from and descend to deep tunnel, the Build Alternatives J alignments would also impact the D.C. Children's Center-Forest Haven District, while the Build Alternatives J1 alignments would also impact the Greenbelt Historic District, an NHL. Since the Greenbelt Historic District is an NHL, FRA will consult with the ACHP and Department of the Interior to minimize harm to the maximum extent possible. **Tables 4.8-4 and 4.8-5** provide additional information on impacts to above-ground resources from the alignments.

The Build Alternatives J alignments would result in higher amounts of impacts to known archaeological resources as compared to the Build Alternatives J1 alignments as identified in **Tables 4.8-6 and 4.8-7**. The Build Alternatives J alignments would impact 516.87 acres of High-Moderate archaeological sensitivity (55.8 percent of the LOD), while the Build Alternatives J1 alignments would impact 414.98 acres of High-Moderate archaeological sensitivity (52.8 percent of the LOD). It is anticipated that the greater the acreage of High-Moderate archaeological sensitivity, the greater the potential for adverse effects to unknown NRHP-eligible archaeological resources.

Table 4.8-4: Alignment J – Potential Impacts to Above-ground Resources

Resource Name	Temporary or Permanent	Impact Description
L'Enfant Plan of the City of Washington	Temporary	Possible visual, noise, and vibration impacts on the setting, feeling, and materials of New York Avenue; setting and feeling of contributing reservations; and the integrity of the New York Avenue vista between Mount Vernon Square and Florida Avenue due to construction LOD for new powerlines and cut-and-cover for underground utilities along New York Avenue NW and NE.
	Permanent	Possible visual, noise, and vibration impacts on the setting and feeling of New York and Florida Avenues and North Capitol Street; setting and feeling of contributing reservations; and the integrity of the New York Avenue vista between Mount Vernon Square and Florida Avenue, NW due to long-term construction laydown area at North Capitol Street and New York Avenue NW and NE. ¹
Mount Vernon Square Historic District and Addition	Temporary	Possible visual, noise, and vibration impacts on the setting and feeling, and the materials and workmanship of character-defining architectural features of contributing buildings along New York Avenue and Seventh Street, NW due to construction LOD for new powerlines and cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	Possible visual impacts on the setting and feeling of contributing buildings along New York Avenue due to long-term construction laydown area at North Capitol Street and New York Avenue NE. ¹
Central Public Library (Carnegie Library)	Temporary	Possible visual, noise, and vibration impacts on the setting and feeling, and the materials and workmanship of character-defining architectural features of Central Public Library and its landscaping due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW
	Permanent	None
People's Congregational Church	Temporary	None
	Permanent	None
Downtown Historic District	Temporary	None
	Permanent	None
Downtown Historic District Addition	Temporary	None
	Permanent	None
Seventh Street NW, E Side 1000 Block	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None

Resource Name	Temporary or Permanent	Impact Description
Yale Steam Laundry	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
Fletcher Chapel	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
M Street High School	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
New York Apartments	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
Augusta and Louisa Apartments	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
Southern Baptist Church	Temporary	None
	Permanent	None
Bible Way Church and Temple	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
Holy Redeemer Catholic Church and School	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None

Resource Name	Temporary or Permanent	Impact Description
John Fox Slater School	Temporary	None
	Permanent	None
John Mercer Langston School	Temporary	None
	Permanent	None
Margaret Murray Washington School	Temporary	None
	Permanent	None
Hecht Company Warehouse	Temporary	Possible visual, noise, and vibration impacts on the surrounding industrial and warehouse setting due to construction LOD for new powerlines and cut-and-cover for underground utilities along New York Avenue NE.
	Permanent	None
Baltimore & Ohio (B&O) Railroad Bridge over Montana Avenue NE	Temporary	Possible visual, noise, and vibration impacts on the surrounding industrial and warehouse setting due to construction LOD for new powerlines and cut-and-cover for underground utilities along New York Avenue NE.
	Permanent	Possible visual, noise, and vibration impacts on the surrounding industrial and warehouse setting due to FA/EE and substation at Ivy City.
F.P. May Hardware Company Warehouse and Office	Temporary	Possible visual, noise, and vibration impacts on the surrounding industrial and warehouse setting due to construction LOD for new powerlines and cut-and-cover for underground utilities along New York Avenue NE.
	Permanent	Possible noise, and vibration impacts on the surrounding industrial setting, association, and feeling due to FA/EE and substation at Ivy City. Railroad berm and ROW to the north blocks visual sight lines to FA/EE and substation site.
Pennsylvania Railroad Bridge over Montana Avenue NE	Temporary	Possible visual, noise, and vibration impacts on the surrounding industrial and warehouse setting due to construction LOD for new powerlines and cut-and-cover for underground utilities along New York Avenue NE.
	Permanent	Possible visual, noise, and vibration impacts on the surrounding industrial and warehouse setting, association, and feeling due to FA/EE and substation at Ivy City.
Martins Woods (PG:72-68)	Temporary	Direct impacts on the tree cover and property and visual impacts on the character-defining landscape elements and setting; noise and vibration impacts due to tunnel laydown and cut-and-cover for tunnel and TBM launch-retrieval site.

Resource Name	Temporary or Permanent	Impact Description
	Permanent	Visual, noise, and vibration impacts on setting from permanent access road and FA/EE at Riverdale Road, as well as direct impacts on tree cover and property due to removal of portion of character-defining woods for FA/EE.
Greenbelt Historic District (PG:67-4)	Temporary	Only a sliver of the historic district is within APE. Possible visual impacts on the setting, noise, and vibration impacts due to tunnel laydown, cut-and-cover for tunnel and TBM launch-retrieval site, and construction LOD (miscellaneous).
	Permanent	Only a sliver of the historic district is within APE. Possible visual impacts on the setting; noise and vibration impacts due to stormwater management, portal and transition portal hood, viaduct, and SCMAGLEV systems.
Goddard Space Flight Center (PG:64-19)	Temporary	Possible visual impacts on the setting; noise and vibration impacts due to tunnel laydown, cut-and-cover for tunnel and TBM launch-retrieval site, and construction LOD (miscellaneous).
	Permanent	Possible visual impacts on the setting; noise, vibration, and physical impacts due to stormwater management, road relocation and reconstruction, and portal and transition portal hood.
Beltsville Agricultural Research Center (PG:62-14)	Temporary	Direct impact on setting, design, and materials of the contributing landscape and historic plan. Visual impacts on the setting; noise and vibration impacts due to tunnel laydown, cut-and-cover for tunnel and TBM launch-retrieval site, construction LOD (miscellaneous), viaduct laydown, viaduct work zone access road, and construction LOD for new powerlines.
	Permanent	Direct impact on setting, design, and materials of the contributing landscape and historic plan. Visual impacts on the setting; noise and vibration impacts due to portal and transition portal hood, road relocation and reconstruction, viaduct, SCMAGLEV systems, and stormwater management.
Baltimore-Washington Parkway (AA-5, PG:69-26)	Temporary	Visual impact on setting, feeling, design, and materials of contributing landscape design; noise and vibration impacts due to tunnel laydown, cut-and-cover for tunnel and TBM launch-retrieval site, construction LOD (miscellaneous), viaduct laydown, viaduct work zone access road, and LOD for relocation of existing powerlines.
	Permanent	Direct impact on contributing landscape elements from viaduct due to high visibility and limited screening options. Visual impact on setting, feeling, design, and materials of contributing landscape design, culverts and bridges; noise and vibration impacts due to portal and transition portal hood, road relocation and reconstruction, permanent access road, viaduct, SCMAGLEV systems, and stormwater management.
DC Children's Center-Forest Haven District (AA-2364)	Temporary	Visual impacts on contributing buildings and surrounding landscape; noise and vibration impacts due to construction LOD (miscellaneous), viaduct laydown, viaduct work zone access road, and LOD for relocation of existing powerlines adjacent and within property boundary.
	Permanent	Direct impacts on land within district boundaries. Visual impacts on contributing buildings and landscape; noise and vibration impacts due to bridge reconstruction, viaduct, and SCMAGLEV systems.

Resource Name	Temporary or Permanent	Impact Description
Westport Historic District (B-1342)	Temporary	Possible visual, noise, vibration, and physical impacts due to cut-and-cover for tunnel and TBM launch-retrieval site.
	Permanent	None.
Cherry Hill Homes District (B-5080)	Temporary	None
	Permanent	Only small fragment of district is within APE. Possible visual, noise, and vibration impacts due to long-term construction laydown area.
Cherry Hill Homes Extension 1 (B-5321)	Temporary	None
	Permanent	Only small fragment of district is within APE. Possible visual, noise, and vibration impacts due to long-term construction laydown area.
Mount Auburn Cemetery (B-5060)	Temporary	Possible minimal visual impact on the setting; noise and vibration impacts due to construction LOD (miscellaneous).
	Permanent	Possible minimal visual impact on the setting; noise and vibration impacts due to construction LOD.
Spring Garden Bridge (B-3668)	Temporary	Possible visual impact on the setting; noise and vibration impacts due to construction LOD.
	Permanent	Possible visual impact on the setting; noise and vibration impacts due to construction LOD.

¹ Due to length of time (approximately 7 years) the construction area would be used, the associated impacts are considered permanent as opposed to temporary.

Table 4.8-5: Alignment J1 – Potential Impacts to Above-ground Resources

Resource Name	Temporary or Permanent	Impact Description
L'Enfant Plan of the City of Washington	Temporary	Possible visual, noise, and vibration impacts on the setting, feeling, and materials of New York Avenue; setting and feeling of contributing reservations; and the integrity of the New York Avenue vista between Mount Vernon Square and Florida Avenue due to construction LOD for new powerlines and cut-and-cover for underground utilities along New York Avenue NW and NE.
	Permanent	Possible visual, noise, and vibration impacts on the setting and feeling of New York and Florida Avenues and North Capitol Street; setting and feeling of contributing reservations; and the integrity of the New York Avenue vista between Mount Vernon Square and Florida Avenue, NW due to long-term construction laydown area at North Capitol Street and New York Avenue NW and NE. ¹
Mount Vernon Square Historic District and Addition	Temporary	Possible visual, noise, and vibration impacts on the setting and feeling, and the materials and workmanship of character-defining architectural features of contributing buildings along New York Avenue and Seventh Street, NW due to construction LOD for new powerlines and cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	Possible visual impacts on the setting and feeling of contributing buildings along New York Avenue due to long-term construction laydown area at North Capitol Street and New York Avenue NE. ¹
Central Public Library (Carnegie Library)	Temporary	Possible visual, noise, and vibration impacts on the setting and feeling, and the materials and workmanship of character-defining architectural features of Central Public Library and its landscaping due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
People's Congregational Church	Temporary	None
	Permanent	None
Downtown Historic District	Temporary	None
	Permanent	None
Downtown Historic District Addition	Temporary	None
	Permanent	None
Seventh Street NW, 1000 Block	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None

Resource Name	Temporary or Permanent	Impact Description
Yale Steam Laundry	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
Fletcher Chapel	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
M Street High School	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
New York Apartments	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
Augusta and Louisa Apartments	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
Southern Baptist Church	Temporary	None
	Permanent	None
Bible Way Church and Temple	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None
Holy Redeemer Catholic Church and School	Temporary	Possible visual and noise impacts on the setting and feeling, and vibration impacts on the materials and workmanship of character-defining architectural features due to construction LOD for cut-and-cover for underground utilities along New York Avenue NW.
	Permanent	None

Resource Name	Temporary or Permanent	Impact Description
John Fox Slater School	Temporary	None
	Permanent	None
John Mercer Langston School	Temporary	None
	Permanent	None
Margaret Murray Washington School	Temporary	None
	Permanent	None ¹
Hecht Company Warehouse	Temporary	Possible visual, noise, and vibration impacts on the surrounding industrial and warehouse setting due to construction LOD for new powerlines and cut-and-cover for underground utilities along New York Avenue NE.
	Permanent	None
Baltimore & Ohio (B&O) Railroad Bridge over Montana Avenue NE	Temporary	Possible visual, noise, and vibration impacts on the surrounding industrial and warehouse setting due to construction LOD for new powerlines and cut-and-cover for underground utilities along New York Avenue NE.
	Permanent	Possible visual, noise, and vibration impacts on the surrounding industrial and warehouse setting due to FA/EE and substation at Ivy City.
F.P. May Hardware Company Warehouse and Office	Temporary	Possible visual, noise, and vibration impacts on the surrounding industrial and warehouse setting due to construction LOD for new powerlines and cut-and-cover for underground utilities along New York Avenue NE.
	Permanent	Possible noise, and vibration impacts on the surrounding industrial setting, association, and feeling due to FA/EE and substation at Ivy City. Railroad berm and ROW to the north blocks visual sight lines to FA/EE and substation site.
Pennsylvania Railroad Bridge over Montana Avenue NE	Temporary	Possible visual, noise, and vibration impacts on the surrounding industrial and warehouse setting due to construction LOD for new powerlines and cut-and-cover for underground utilities along New York Avenue NE.
	Permanent	Possible visual, noise, and vibration impacts on the surrounding industrial and warehouse setting, association, and feeling due to FA/EE and substation at Ivy City.
Martins Woods (PG:72-68)	Temporary	Direct impacts on the tree cover and property and visual impacts on the character-defining landscape elements and setting; noise and vibration impacts due to tunnel laydown and cut-and-cover for tunnel and TBM launch-retrieval site.

Resource Name	Temporary or Permanent	Impact Description
	Permanent	Visual, noise, and vibration impacts on setting from permanent access road and FA/EE at Riverdale Road, as well as direct impacts on tree cover and property due to removal of portion of character-defining woods for FA/EE.
Greenbelt Historic District	Temporary	Only a sliver of the historic district is within APE. Possible visual impacts on the setting, noise, and vibration impacts due to tunnel laydown, cut-and-cover for tunnel and TBM launch-retrieval site, and construction LOD (miscellaneous).
	Permanent	Only a sliver of the historic district is within APE. Possible visual impacts on the setting; noise and vibration impacts due to stormwater management, portal and transition portal hood, viaduct, and SCMAGLEV systems.
Goddard Space Flight Center (PG:64-19)	Temporary	Possible visual impacts on the setting; noise and vibration impacts due to tunnel laydown, cut-and-cover for tunnel and TBM launch-retrieval site, and construction LOD (miscellaneous).
	Permanent	Possible visual impacts on the setting; noise, vibration, and physical impacts due to stormwater management, road relocation and reconstruction, and portal and transition portal hood.
Beltsville Agricultural Research Center (PG:62-14)	Temporary	Direct impact on setting, design, and materials of the contributing landscape and historic plan. Visual impacts on the setting; noise and vibration impacts due to tunnel laydown, cut-and-cover for tunnel and TBM launch-retrieval site, construction LOD (miscellaneous), viaduct laydown, viaduct work zone access road, and construction LOD for new powerlines.
	Permanent	Direct impact on setting, design, and materials of the contributing landscape and historic plan. Visual impacts on the setting; noise and vibration impacts due to portal and transition portal hood, road relocation and reconstruction, viaduct, SCMAGLEV systems, and stormwater management.
Baltimore-Washington Parkway (AA-5, PG:69-26)	Temporary	Visual impact on setting, feeling, design, and materials of contributing landscape design; noise and vibration impacts due to tunnel laydown, cut-and-cover for tunnel and TBM launch-retrieval site, construction LOD (miscellaneous), viaduct laydown, viaduct work zone access road, and LOD for relocation of existing powerlines.
	Permanent	Direct impact on contributing landscape elements from viaduct due to high visibility and limited screening options. Visual impact on setting, feeling, design, and materials of contributing landscape design, culverts and bridges; noise and vibration impact due to portal and transition portal hood, road relocation and reconstruction, permanent access road, viaduct, SCMAGLEV systems, and stormwater management.
DC Children's Center-Forest Haven District (AA-2364)	Temporary	Visual impacts on contributing buildings and surrounding landscape; noise and vibration impacts due to construction LOD (miscellaneous), viaduct laydown, viaduct work zone access road, and LOD for relocation of existing powerlines adjacent and within property boundary.
	Permanent	Direct impacts on land within district boundaries. Visual impacts on contributing buildings and landscape; noise and vibration impacts due to bridge reconstruction, viaduct, and SCMAGLEV systems.

Resource Name	Temporary or Permanent	Impact Description
Westport Historic District (B-1342)	Temporary	Possible visual, noise, vibration, and physical impacts due to cut-and-cover for tunnel and TBM launch-retrieval site.
	Permanent	None
Cherry Hill Homes District (B-5080)	Temporary	None
	Permanent	Only small fragment of district is within APE. Possible visual, noise, and vibration impacts due to long-term construction laydown area.
Cherry Hill Homes Extension 1 (B-5321)	Temporary	None
	Permanent	Only small fragment of district is within APE. Possible visual, noise, and vibration impacts due to long-term construction laydown area.
Mount Auburn Cemetery (B-5060)	Temporary	Possible minimal visual impact on the setting; noise and vibration impacts due to construction LOD (miscellaneous).
	Permanent	Possible minimal visual impact on the setting; noise and vibration impacts due to construction LOD.
Spring Garden Bridge (B-3668)	Temporary	Possible visual impact on the setting; noise and vibration impacts due to construction LOD (miscellaneous).
	Permanent	Possible visual impact on the setting; noise and vibration impacts due to construction LOD.

¹ Due to length of time (approximately 7 years) the construction area would be used, the associated impacts are considered permanent as opposed to temporary.

Table 4.8-6: Alignment J – Potential Impacts to Archaeological Resources

Resource Name	Temporary or Permanent	Impact Description
18AN208	Temporary	None
	Permanent	Partially or fully destroyed by construction
18AN557	Temporary	None
	Permanent	Partially or fully destroyed by construction
18AN558	Temporary	None
	Permanent	Partially or fully destroyed by construction
18AN559	Temporary	None
	Permanent	Partially or fully destroyed by construction
18AN912	Temporary	None
	Permanent	Partially or fully destroyed by construction
18AN1231	Temporary	None
	Permanent	Partially or fully destroyed by construction
18AN1647	Temporary	None
	Permanent	Partially or fully destroyed by construction
18BA88	Temporary	None
	Permanent	Partially or fully destroyed by construction
18BA89	Temporary	None
	Permanent	Partially or fully destroyed by construction
18PR440	Temporary	None
	Permanent	Partially or fully destroyed by construction
18PR1127	Temporary	None
	Permanent	Partially or fully destroyed by construction

Table 4.8-7: Alignment J1 – Potential Impacts to Archaeological Resources

Resource Name	Temporary or Permanent	Impact Description
18AN191	Temporary	None
	Permanent	Partially or fully destroyed by construction
18AN557	Temporary	None
	Permanent	Partially or fully destroyed by construction
18AN1231	Temporary	None
	Permanent	Partially or fully destroyed by construction
18BA88	Temporary	None
	Permanent	Partially or fully destroyed by construction
18BA89	Temporary	None
	Permanent	Partially or fully destroyed by construction
18PR1128	Temporary	None
	Permanent	Partially or fully destroyed by construction

Stations

Tables 4.8-8 through 4.8-10 present the details of the possible impacts of the stations to each historic property within the above-ground and archaeological APEs. For archaeological resources, it is anticipated that the greater the acreage of High-Moderate archaeological sensitivity, the greater the potential for adverse impacts to unknown NRHP-eligible archaeological resources.

Construction of the Mount Vernon Square East Station would impact two above-ground resources: Mount Vernon Square Historic District and Addition and The New York Apartments in Washington, D.C. It would also permanently partially or fully destroy archaeological resources 51NW121 and 51NW244 and would impact 37.13 acres of High-Moderate archaeological sensitivity (96.12 percent of the LOD).

Construction of the Baltimore-Washington International Thurgood Marshall Airport (BWI Marshall Airport) Station would not impact any above-ground resources in the APE. It would not impact known archaeological historic properties and would not impact any acres of High-Moderate archaeological potential.

Construction of the Cherry Hill Station would impact the Westport Historic District by introducing new construction into the district; however, the district would remain largely intact. With the Build Alternatives J alignments, the Cherry Hill Station would potentially impact 14.0 acres of High-Moderate archaeological sensitivity (31.4 percent of the LOD), and with the Build Alternatives J1 alignments, it would impact 14.0 acres of High-Moderate archaeological sensitivity (31.7 percent of the LOD).

Construction of the Camden Yards Station would impact the Otterbein Church since it would be demolished to construct the station. The Camden Yards Station would permanently partially or fully destroy archaeological resources 18BC25 and 18BC27 and would potentially impact an additional 52.31 acres of High-Moderate archaeological sensitivity (71.39 percent of the LOD).

Table 4.8-8: Mount Vernon Square East Station – Potential Impacts to Above-ground Resources (District of Columbia)

Resource Name	Temporary or Permanent	Impact Description
L'Enfant Plan	Temporary	Possible visual, noise, and vibration impacts on the setting, feeling, and materials of New York Avenue; setting and feeling of contributing reservations; and integrity of the New York Avenue vista between Mount Vernon Square and Florida Avenue due to cut-and-cover for station cavern construction and construction LOD.
	Permanent	Possible visual, noise, and vibration impacts on the setting, feeling, and materials of New York Avenue and integrity of the New York Avenue vista between Mount Vernon Square and Florida Avenue due to three station entrances, parking garage and station headhouse.
Central Public Library (Carnegie Library)	Temporary	Possible visual impacts on the setting and feeling of surrounding Mount Vernon Square landscaping; noise and vibration impacts on the materials and workmanship of the building due to cut-and-cover for station cavern construction and construction LOD.
	Permanent	Possible visual impacts on the setting and feeling of surrounding Mount Vernon Square landscaping due to convention center station entrance and parking garage and station headhouse.
Seventh St NW, East Side of 1000 Block	Temporary	Possible visual impacts on the setting and feeling; noise and vibration impacts on the materials and workmanship of buildings due to cut-and-cover for station cavern construction and construction LOD.
	Permanent	Possible visual impacts on the setting and feeling due to convention center station entrance and parking garage and station headhouse.
Mount Vernon Square Historic District and Addition	Temporary	Possible visual impacts on the setting and feeling; noise and vibration impacts on the materials and workmanship of buildings due to cut-and-cover for station cavern construction and construction LOD (miscellaneous).
	Permanent	Possible visual impacts on the setting and feeling; noise and vibration impacts on the materials and workmanship of buildings due to three station entrances and parking garage and station headhouse. Direct physical impact due to the two station entrances within the boundaries of the district.
Yale Steam Laundry and Stable	Temporary	Possible visual impacts on the setting and feeling; noise and vibration impacts on the materials and workmanship of buildings due to cut-and-cover for station cavern construction.
	Permanent	Possible visual impacts on the setting and feeling due to parking garage and station headhouse.
Fletcher Chapel (Church of God & Saints of Christ)	Temporary	Possible visual impacts on the setting and feeling; noise and vibration impacts on the materials and workmanship of buildings due to cut-and-cover for station cavern construction and construction LOD (miscellaneous).
	Permanent	Possible visual impacts on the setting and feeling of the building due to parking garage and station headhouse and station entrance.
	Temporary	None

Resource Name	Temporary or Permanent	Impact Description
Peoples Congregational Church	Permanent	None
The New York Apartments	Temporary	Possible visual, noise, and vibration impacts due to cut-and-cover for station cavern construction.
	Permanent	Possible visual impacts on the setting and feeling of building due to station entrances.
M Street High School (Perry School)	Temporary	Due to distance, minimal visual, noise, and vibration impacts due to cut-and-cover for station cavern construction and construction LOD.
	Permanent	Possible visual impacts on the setting and feeling due to station entrances.
Augusta & Louisa Apartment Buildings	Temporary	Possible visual, noise, and vibration impacts due to cut-and-cover for station cavern construction and construction LOD.
	Permanent	Possible visual impacts on the setting and feeling due to two station entrances.
Holy Redeemer Catholic Church and School	Temporary	Possible visual, noise, and vibration impacts due to cut-and-cover for station cavern construction and construction LOD.
	Permanent	Possible visual impacts on the setting and feeling due to two station entrances.
Southern Baptist Church	Temporary	None
	Permanent	None
Mount Vernon Triangle Historic District	Temporary	Possible visual, noise, and vibration impacts due to cut-and-cover for station cavern construction and construction LOD.
	Permanent	Possible visual, noise, and vibration impacts due to parking garage and station headhouse.
Downtown (Washington, DC) Historic District	Temporary	None
	Permanent	None
Downtown (Washington, DC) Historic District Addition	Temporary	Possible visual, noise, and vibration impacts due to cut-and-cover for station cavern construction and construction LOD.
	Permanent	Possible visual, noise, and vibration impacts due to convention center station entrance and parking garage and station headhouse.

Resource Name	Temporary or Permanent	Impact Description
Bible Way Church and Temple	Temporary	Possible visual impacts on setting, noise, vibration, and physical impacts to materials of building due to cut-and-cover for station cavern construction and construction LOD (miscellaneous) (construction LOD is within the property boundary).
	Permanent	Possible visual impacts on the setting and feeling due to two station entrances.

Table 4.8-9: Cherry Hill Station – Potential Impacts to Above-ground Resources (Maryland)

Resource Name	Temporary or Permanent	Impact Description
Westport Historic District (B-1342)	Temporary	Possible visual impact on setting; noise, vibration impacts to buildings, and physical impacts due to construction LOD for new powerlines and construction LOD.
	Permanent	Possible visual impact on setting; noise, vibration impacts to buildings due to Cherry Hill station, viaduct, substation, long term construction laydown area, and overhead electric, SCMAGLEV Operations permanent LOD adjacent to and within district.
Cherry Hill Homes District (B-5080)	Temporary	Possible visual, noise, and vibration impacts due to construction LOD.
	Permanent	Possible visual, noise, and vibration impacts due to SCMAGLEV Operations permanent LOD and MOW facility.
Mount Auburn Cemetery	Temporary	Possible visual impact on setting; noise, and vibration impacts due to construction LOD (miscellaneous) and LOD for relocation of existing powerlines.
	Permanent	Possible visual impact on setting; noise, and vibration impacts due to SCMAGLEV Operations permanent LOD, Cherry Hill parking garages, overhead electric permanent LOD, and Cherry Hill Station.
Spring Garden Bridge (B-3668)	Temporary	Possible visual, noise, and vibration impacts due to construction LOW for new powerlines and construction LOD.
	Permanent	Possible visual, noise, and vibration impacts due to long-term construction laydown area, viaduct, substation, and overhead electric permanent LOD.

Table 4.8-10: Camden Yards Station – Potential Impacts to Above-ground Resources (Maryland)

Resource Name	Temporary or Permanent	Impact Description
Howard St Tunnel & Power House (B-79)	Temporary	Possible visual impact on setting; noise, vibration, and direct impacts on the power house due to cut-and-cover for Camden Station, cavern and laydown area and construction LOD.
	Permanent	Possible visual impact on setting; noise, vibration, and direct impacts on the power house due to station entrance.
Baltimore and Ohio (B&O) Railroad Baltimore Belt Line (B-5287)	Temporary	Possible vibration, and direct impacts on tunnels and below-grade section due to cut-and-cover for Camden Station cavern and laydown area and construction LOD.
	Permanent	None
Pratt Furniture Company (B-2387)	Temporary	Possible visual impact on setting; noise and vibration impacts due to cut-and-cover for Camden Station cavern and laydown area and construction LOD.
	Permanent	Possible visual impact on setting; noise and vibration due to station entrance.
George H. Fallon Federal Building	Temporary	Possible visual impact on setting; noise and vibration impacts due to cut-and-cover for Camden Station cavern and laydown area and construction LOD.
	Permanent	Possible visual impact on setting, noise, and vibration due to station entrance.
(Downtown Baltimore) Business and Government Historic District (B-3935)	Temporary	Possible visual impact on setting; noise and vibration impacts due to cut-and-cover for Camden Station cavern and laydown area and construction LOD.
	Permanent	Possible visual impact on setting, noise, and vibration due to station entrance.
Otterbein Church (B-11)	Temporary	Direct physical impact because of the demolition of a contributing building and cemetery on the property due to cut-and-cover for Camden Station cavern and laydown.
	Permanent	Direct physical impact because of the demolition of a contributing building and cemetery on the property due to cut-and-cover for Camden Station cavern and laydown.
Otterbein Historic District (B-3934)	Temporary	Possible visual impact on setting; noise and vibration impacts due to cut-and-cover for Camden Station cavern and laydown area and construction LOD.
	Permanent	None
U.S. Fidelity and Guaranty (USF&G) Building (B-5318)	Temporary	Possible visual impact on setting; noise and vibration impacts due to cut-and-cover for Camden Station cavern and construction LOD.
	Permanent	Possible visual impact on setting; noise and vibration due to station entrance.

TMFs

Tables 4.8-11 through 4.8-13 present the details of the possible impacts to each historic property within the above-ground and archaeological APEs of the TMFs. For archaeological resources, it is anticipated that the greater the acreage of High-Moderate archaeological sensitivity, the greater the potential for adverse effects to unknown NRHP-eligible archaeological resources.

The BARC Airstrip TMF would impact the following above-ground resources: Beltsville Agricultural Research Center, BWP, and GSFC. Under Build Alternatives J1, this BARC TMF (specifically, the viaduct ramps to the TMF) would also impact the Greenbelt Historic District, which is an NHL. The BARC Airstrip TMF with Build Alternatives J (Build Alternatives J-02 and J-05) would permanently partially or fully destroy archaeological resource 18PR84; there are no currently known archaeological historic properties with the Build Alternatives J1. Build Alternatives J would impact 199.88 acres of High-Moderate archaeological sensitivity (86.84 percent of the LOD) and Build Alternatives J1 would impact 202.13 acres of High-Moderate archaeological sensitivity (87.17 percent of the LOD).

The BARC West TMF would impact the following above-ground resources: Beltsville Agricultural Research Center and BWP. Under Build Alternatives J1, this BARC TMF (specifically, the viaduct ramps to the TMF) would also impact the Greenbelt Historic District, which is an NHL. The BARC West TMF with the Build Alternatives J would permanently partially or fully destroy archaeological resource 18PR84 and with the Build Alternatives J1 would permanently partially or fully destroy archaeological resource 18PR83. Build Alternatives J would impact 219.07 acres of High-Moderate archaeological sensitivity (78.29 percent of the LOD) and Build Alternatives J1 would impact 238.97 acres of High-Moderate archaeological potential (76.71 percent of the LOD).

The MD 198 TMF would impact two resources: the BWP and the D.C. Children's Center-Forest Haven District. The MD 198 TMF would permanently partially or fully destroy archaeological resource 18AN1408 with Build Alternatives J and J1. In addition, with Build Alternatives J, impacts to 18AN558 would also occur, and with Build Alternatives J1, impacts to 18AN208, 18PR83, and 18PR209 would also occur. Build Alternatives J would impact 99.99 acres of High—Moderate archaeological sensitivity (49.53 percent of the LOD), and Build Alternatives J1 would impact 117.22 acres of High-Moderate archaeological sensitivity (51.08 percent of the LOD).

Table 4.8-11: BARC Airfield TMF – Potential Impacts to Above-ground Resources (Maryland)

Resource Name	Temporary or Permanent	Impact Description
Greenbelt Historic District (PG:67-4)	Temporary	Possible visual impacts on setting; noise and vibration impacts due to cut-and-cover tunnel TBM launch-retrieval site and construction LOD. Direct physical impact on character-defining landscape elements with Alternatives J1.
	Permanent	Possible visual impacts on setting; noise and vibration due to TMF ramps (viaduct) to BARC Airfield TMF. Direct physical impacts on character-defining landscape elements with Alternatives J1.
Beltsville Agricultural Research Center (PG:62-14)	Temporary	Visual, noise, vibration, and physical impacts on character-defining elements and design due to the construction LOD for new powerlines and construction LOD (miscellaneous).
	Permanent	Visual, noise, vibration, and physical impacts on character-defining elements and design due to the TMF ramps (viaduct), MOW facility, overhead electric permanent, road relocation and reconstruction, TMF footprint, surface parking, two substations, and permanent access road.
Goddard Space Flight Center (PG:64-19)	Temporary	Visual, noise, vibration, and physical impacts due to the construction LOD for new powerlines and construction LOD (miscellaneous).
	Permanent	Visual, noise, vibration impacts due to the TMF ramps (viaduct), MOW facility, overhead electric permanent, road relocation and reconstruction, TMF footprint, surface parking, and two substations. Physical impacts within the district boundary due to the permanent access road in the property boundary.
Baltimore-Washington Parkway (AA-5, PG:69-26)	Temporary	Visual impacts on setting; noise, vibration, and physical impacts on character-defining landscape elements without screening due to construction LOD.
	Permanent	Visual impacts on setting; noise, vibration, and physical impacts on character-defining landscape elements without screening due to the TMF ramps.

Table 4.8-12: BARC West TMF – Potential Impacts to Above-ground Resources (Maryland)

Resource Name	Temporary or Permanent	Impact Description
Greenbelt Historic District (J1 only)	Temporary	Possible visual impacts on setting; noise and vibration impacts due to cut-and-cover tunnel TBM launch-retrieval site and construction LOD. Direct physical impact on character-defining landscape elements with Alternatives J1.
	Permanent	Possible visual impacts on setting; noise and vibration due to TMF ramps (viaduct) to BARC Airfield TMF. Direct physical impacts on character-defining landscape elements with Alternatives J1.
Beltsville Agricultural Research Center (PG:62-14)	Temporary	Visual impact on setting; noise, vibration, and physical impacts on character-defining building and landscape elements and design due to the construction LOD for new powerlines and construction LOD (miscellaneous).
	Permanent	Visual impact on setting; noise, vibration, and physical impacts on character-defining building and landscape elements and design due to the TMF ramps (viaduct), MOW facility, overhead electric permanent, road relocation and reconstruction, TMF footprint, surface parking, two substations, and permanent access road.
Baltimore-Washington Parkway (AA-5, PG:69-26)	Temporary	Visual impacts on setting; noise, vibration, and physical impacts on character-defining landscape elements without screening due to construction LOD.
	Permanent	Visual impacts on setting; noise, vibration, and physical impacts on character-defining landscape elements without screening due to the TMF ramps.

Table 4.8-13: MD 198 TMF – Potential Impacts to Above-ground Resources

Resource Name	Temporary or Permanent	Impact Description
Baltimore-Washington Parkway (AA-5, PG:69-26)	Temporary	Visual impacts on setting; noise, vibration, and physical impacts on character-defining landscape elements without screening due to construction LOD.
	Permanent	Visual impacts on setting; noise, vibration, and physical impacts on character-defining landscape elements without screening due to the TMF ramps.
DC Children's Center-Forest Haven District (AA-2364)	Temporary	Visual impacts on setting; noise, vibration, and physical impacts on character-defining buildings due to the construction LOD for new powerlines and construction LOD (miscellaneous).
	Permanent	Visual impacts on setting; noise, vibration, and physical impacts on character-defining buildings because of TMF ramps (viaduct), overhead electric permanent, road relocation and reconstruction, power interconnection switchyard, TMF footprint, surface parking, two substations, and permanent access road.

Summary

Table 4.8-14 includes a summary of impacts to cultural resources from the Build Alternatives. **Tables 4.8-15** and **4.8-16** summarize the above-ground and archaeological historic properties that FRA anticipates will be adversely affected pursuant to Section 106 by Build Alternative. A formal assessment of effects is currently underway.

Table 4.8-14: Summary of Impacts to Above-Ground and Archaeological Cultural Resources

Build Alternatives	Number of Resources Impacted	Archaeological Sensitivity
J-01	49	High: 240.76 ac. (17.5%) Moderate: 470.26 ac. (34.2%) Low: 662.57 ac. (48.2%)
J-02	48	High: 276.66 ac. (19.6%) Moderate: 544.72 ac. (38.6%) Low: 588.10 ac. (41.7%)
J-03	48	High: 264.39 ac. (19.0%) Moderate: 538.67 ac. (38.7%) Low: 589.24 ac. (42.3%)
J-04	58	High: 236.55 ac. (19.0%) Moderate: 452.93 ac. (37.1%) Low 532.46 ac. (43.6%)
J-05	57	High: 272.45 ac. (21.6%) Moderate: 528.50 ac. (41.9%) Low: 459.81 ac. (36.5%)
J-06	57	High: 260.18 ac. (20.9%) Moderate: 522.04 ac. (42.0%) Low 460.95 ac. (37.1%)
J1-01	46	High: 219.33 ac. (17.5%) Moderate: 407.84 ac. (32.6%) Low: 624.87 ac. (49.9%)
J1-02	43	High: 247.28 ac. (19.0%) Moderate: 465.91 ac. (36.6%) Low: 558.67 ac. (43.9%)
J1-03	43	High: 236.37 ac. (19.0%) Moderate: 459.77 ac. (36.9%) Low: 548.99 ac. (44.1%)
J1-04	55	High: 215.12 ac. (19.5%) Moderate: 391.23 ac. (35.5%) Low: 496.57 ac. (45.0%)
J1-05	52	High: 243.07 ac. (21.6%) Moderate: 449.29 ac. (40.0%) Low: 430.38 ac. (38.3%)
J1-06	52	High: 232.16 ac. (21.2%) Moderate: 443.16 ac. (40.4%) Low: 420.70 ac. (38.4%)

Table 4.8-15: Potential Adverse Effects on Above-Ground Historic Properties by Build Alternative

Resource Name	Type	Location	NRHP Status	Build Alternatives (X indicates resource has Potential Adverse Effect From the Build Alternative)											
				J-01	J-02	J-03	J-04	J-05	J-06	J1-01	J1-02	J1-03	J1-04	J1-05	J1-06
L'Enfant Plan of the City of Washington	Public lands	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Central Public Library (Carnegie Library)	Public building	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Seventh St NW, E Side 1000 Block	Commercial buildings	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Mount Vernon Square Historic District and Addition	Historic district	D.C.	NRHP-listed/ eligible (Addition)	X	X	X	X	X	X	X	X	X	X	X	X
Yale Steam Laundry (including Garage and Stable)	Commercial building	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Fletcher Chapel (Church of God & Saints of Christ)	Religious building	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
(Former) Peoples Congregational Church	Religious building	D.C.	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
The New York Apartments	Multiple-family residential building	D.C.	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
M Street High School (Perry School)	Educational building	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Augusta & Louisa Apartment Buildings	Multiple-family residential building	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Holy Redeemer Catholic Church and School)	Religious and Educational buildings	D.C.	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
Southern Baptist Church	Religious building	D.C.	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-

Resource Name	Type	Location	NRHP Status	Build Alternatives (X indicates resource has Potential Adverse Effect From the Build Alternative)											
				J-01	J-02	J-03	J-04	J-05	J-06	J1-01	J1-02	J1-03	J1-04	J1-05	J1-06
Mount Vernon Triangle Historic District	Historic district	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Downtown (Washington, D.C.) Historic District	Historic district	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Downtown (Washington, D.C.) Historic District Addition	Historic district	D.C.	Not Evaluated (proposed D.C. Landmark)	-	-	-	-	-	-	-	-	-	-	-	-
Bible Way Church and Temple	Religious building	D.C.	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
John Fox Slater School	Educational building	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
John Mercer Langston School	Educational building	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Margaret Murray Washington School	Educational building	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Hecht Company Warehouse	Warehouse	D.C.	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore & Ohio (B&O) Railroad Bridge over Montana Avenue NE	Transportation infrastructure	D.C.	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
F.P. May Hardware Company Warehouse and Office	Warehouse	D.C.	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania Railroad Bridge over Montana Avenue NE	Transportation infrastructure	D.C.	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
Martins Woods (PG:72-68)	Residential district	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Greenbelt Historic District	Historic district and cultural landscape	MD	NHRP listed/ NHL	-	-	-	-	-	-	X	X	X	X	X	X

Resource Name	Type	Location	NRHP Status	Build Alternatives (X indicates resource has Potential Adverse Effect From the Build Alternative)											
				J-01	J-02	J-03	J-04	J-05	J-06	J1-01	J1-02	J1-03	J1-04	J1-05	J1-06
Goddard Space Flight Center (PG:64-19)	Research campus	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Beltsville Agricultural Research Center (PG:62-14)	Research facility and cultural landscape	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Baltimore-Washington Parkway (AA-5, PG:69-26)	Transportation infrastructure, cultural landscape, and landscape architecture	MD	NRHP-listed	X	X	X	X	X	X	X	X	X	X	X	X
D.C. Children's Center-Forest Haven District (AA-2364)	Hospital campus with cemetery	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Westport Historic District (B-1342)	Historic district	MD	NRHP-eligible	X	X	X	X	X	X	X	X	X	X	X	X
Cherry Hill Homes Historic District (B-5080)	Historic district	MD	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
Cherry Hill Homes Extension 1 (B-5321)	Historic district	MD	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
Mount Auburn Cemetery	Cemetery	MD	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Spring Garden Bridge (B-3668)	Transportation infrastructure	MD	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
Howard St Tunnel & Power House (B 79)	Transportation infrastructure	MD	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Baltimore and Ohio (B&O) Railroad Baltimore Belt Line (B-5287)	Transportation infrastructure	MD	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
Pratt Furniture Company (B-2387)	Commercial building	MD	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-

Resource Name	Type	Location	NRHP Status	Build Alternatives (X indicates resource has Potential Adverse Effect From the Build Alternative)											
				J-01	J-02	J-03	J-04	J-05	J-06	J1-01	J1-02	J1-03	J1-04	J1-05	J1-06
George H. Fallon Federal Building	Government building	MD	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
(Downtown Baltimore) Business and Government Historic District (B-3935)	Historic district	MD	NRHP-listed	-	-	-	-	-	-	-	-	-	-	-	-
Otterbein Church (B-11)	Religious building	MD	NRHP-listed	-	-	-	X	X	X	-	-	-	X	X	X
Otterbein Historic District (B-3934)	Historic district	MD	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
U.S. Fidelity and Guaranty (USF&G) Building (B-5318)	Commercial building	MD	NRHP-eligible	-	-	-	-	-	-	-	-	-	-	-	-
Total Number of Above-Ground Historic Properties Potentially Adversely Affected				8	8	8	8	8	8	8	9	9	9	9	9

Table 4.8-16: Potential Adverse Effects to Archaeological Historic Properties by Build Alternative

Resource Name	Type	Location	NRHP Status	Build Alternatives (X indicates resource is within Archaeological APE for a Build Alternative)												
				J-01	J-02	J-03	J-04	J-05	J-06	J1-01	J1-02	J1-03	J1-04	J1-05	J1-06	
18AN0191	Prehistoric and Historic, Late Archaic lithic scatter and 18th-19th century iron furnace	MD	Not Evaluated	-	-	-	-	-	-	-	X	X	X	X	X	X
18AN0208	18th-19th century plantation house site	MD	Not Evaluated	X	X	X	X	X	X	X	X	-	-	X	-	-
18AN0557	Prehistoric, Late Archaic, Late Woodland short-term resource procurement camp	MD	Not Evaluated	X	X	X	X	X	X	X	X	X	X	X	X	X
18AN0558	Prehistoric, Late Archaic short-term resource procurement camp	MD	Not Evaluated	X	X	X	X	X	X	X	-	-	-	-	-	-
18AN0559	Prehistoric, Lithic scatter	MD	Not Evaluated	X	X	X	X	X	X	X	-	-	-	-	-	-
18AN0912	Historic, Early 20th-century domestic	MD	Not Evaluated	X	X	X	X	X	X	X	-	-	-	-	-	-
18AN1231	Prehistoric, Lithic scatter	MD	Not Evaluated	X	X	X	X	X	X	X	X	X	X	X	X	X
18AN1408	Prehistoric, Lithic scatter	MD	Not Evaluated	X	-	-	X	-	-	X	-	-	X	-	-	
18AN1647	Historic cemetery	MD	Not Evaluated	X	X	X	X	X	X	X	-	-	-	-	-	-
18BA0088	Prehistoric, Shell midden	MD	Not Evaluated	X	X	X	X	X	X	X	X	X	X	X	X	X
18BA0089	Prehistoric, Lithic scatter	MD	Not Evaluated	X	X	X	X	X	X	X	X	X	X	X	X	X
18BC0025	Historic, Early-late 19th century privies and well	MD	Not Evaluated	-	-	-	X	X	X	X	-	-	-	X	X	X
18BC0027	Historic, Early 19th-late 20th century domestic and commercial	MD	Not Evaluated	-	-	-	X	X	X	X	-	-	-	X	X	X

Resource Name	Type	Location	NRHP Status	Build Alternatives (X indicates resource is within Archaeological APE for a Build Alternative)												
				J-01	J-02	J-03	J-04	J-05	J-06	J1-01	J1-02	J1-03	J1-04	J1-05	J1-06	
18PR0083	Prehistoric, Archaic short-term resource procurement camp	MD	Not Evaluated	-	-	-	-	-	-	-	X	X	X	X	X	X
18PR0084	Prehistoric, Archaic short-term resource procurement camp	MD	Not Evaluated	X	X	X	X	X	X	X	-	-	-	-	-	-
18PR0209	Prehistoric, Lithic scatter	MD	Not Evaluated	-	-	-	-	-	-	-	X	-	-	X	-	-
18PR0440	Historic, 19th-early 20th century domestic site	MD	Not Evaluated	X	X	X	X	X	X	X	-	-	-	-	-	-
18PR1127	Prehistoric isolated find & 18-19th century domestic site	MD	Not Evaluated	X	X	X	X	X	X	X	-	-	-	-	-	-
18PR1128	Historic artifact scatter	MD	Not Evaluated	-	-	-	-	-	-	-	X	X	X	X	X	X
51NW121	Historic, 19th-20th century site	D.C.	Eligible	X	X	X	X	X	X	X	X	X	X	X	X	X
51NW244	Historic, No information	D.C.	Recommend Not Eligible	X	X	X	X	X	X	X	X	X	X	X	X	X
Total Number of Archaeological Historic Properties Potentially Adversely Affected				15	14	14	17	16	16	16	12	9	9	14	11	11

4.8.5 Potential minimization and mitigation strategies

Potential avoidance, minimization, and mitigation strategies (or treatment measures) to address adverse impacts are documented in the Project PA that is being developed through the Section 106 consultation process. The treatment measures applied to a particular resource will depend on the type of cultural resource impacted and the resulting effect(s). Implementation of the terms and conditions of the SCMAGLEV Project PA will occur after execution by all signatories and will guide the continuation of the Section 106 process after completion of the FEIS/ROD, including the resolution of adverse effects.

Currently, Signatories¹ to the Project PA are the FRA, MD SHPO, DC SHPO, and the ACHP and the Invited Signatories² are Baltimore-Washington Rapid Rail (BWRR), the National Park Service (NPS)-National Capital Region, the U.S. Fish and Wildlife Service, and the National Capital Planning Commission.

¹ Signatory: The lead federal agency (FRA), SHPO, and ACHP whose signature is required for the Project PA to go into effect. Signatories have the sole authority to execute, amend, and/or terminate the Project PA.

² Invited Signatory: A consulting party that has the authority to amend and/or terminate the Project PA. The refusal of an invited signatory to sign the agreement does not prevent the Project PA from being executed.