

# Appendix D.3

## Socioeconomic Environment Technical Report

### BALTIMORE-WASHINGTON, D.C. SUPERCONDUCTING MAGLEV PROJECT

DRAFT ENVIRONMENTAL IMPACT STATEMENT AND  
SECTION 4(f) EVALUATION



U.S. Department of Transportation  
**Federal Railroad Administration**



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## Appendix D.3A

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### D.3A.1 Background

In 2001, Federal Railroad Administration (FRA) published a Record of Decision (ROD) following completion of a Programmatic Environmental Impact Statement (PEIS) for the Maglev Deployment Program (MDP). The purpose of this action was to demonstrate high-speed magnetic levitation train (MAGLEV) technology by identifying a viable project in the United States and assisting a public/private partnership with the planning, financing, construction, and operation of the project. As published in the ROD, FRA concluded that MAGLEV was an appropriate technology for use in new transportation options in Maryland and Pennsylvania and should be further studied at the project level.

In 2003, FRA prepared and circulated a Draft Environmental Impact Statement (DEIS) for a MAGLEV project linking downtown Baltimore, BWI Marshall Airport, and Union Station in Washington, DC. The DEIS documented project needs, including transportation demand, regional economic growth, and strategies for reducing corridor congestion. The DEIS also documented feasible mitigation measures for the environmental impacts as well as the benefits of the Build Alternatives. FRA is now preparing an updated DEIS in accordance with the National Environmental Policy Act (NEPA) that evaluates the environmental impacts of Build Alternatives using the Superconducting Magnetic Levitation Project (SCMAGLEV Project) technology.

### D.3A.2 Purpose and Need

FRA selected the Baltimore-Washington corridor as the location of the first SCMAGLEV project due to the area's high level of congestion, economic importance, increased development, and the need for connectivity between the two cities. Demand on the existing roadway, transit and rail networks continues to increase, and the levels of service of systems that operate near, or above capacity also continue to worsen. To improve the level of transportation service, additional infrastructure capacity is needed.

All four of the main roadway corridors (US 29, I-95, US 1 and Baltimore-Washington Parkway) between Baltimore and Washington, DC area experience heavy and/or severe congestion during peak hours. Travel time between Baltimore and Washington, DC continues to increase on the roadways within the study area, adding to commute and travel times to and from transit stations and BWI Marshall Airport. In addition, there are no dedicated busways along major corridors in Maryland. This increase in travel time directly correlates to the degradation in level of service on the transportation network. These declining transportation conditions translate into the need to evaluate and implement an improved mobility option of travel between the Baltimore and Washington, DC metropolitan areas. The purpose of the SCMAGLEV Project is to evaluate, and ultimately construct and operate, a safe, revenue-producing, high-speed ground transportation system that achieves the optimum operating speed of the

SCMAGLEV. This type of technology/transportation system would significantly reduce travel time in order to meet the capacity and ridership needs of the Baltimore-Washington region.

### D.3A.3 No Build

FRA considers the No Build Alternative to include the existing transportation network within the Study Area and additional network changes/improvements between current conditions and the 2045 horizon year. Network changes include modifications identified in the Constrained Long Range Plans (CLRP) of the Baltimore Metropolitan Council (BMC) (covering the Baltimore region) and the Metropolitan Washington Council of Governments (MWCOG, covering the Washington, D.C. region), as well as other major projects not yet in the regional CLRPs but identified as important changes to the network by key stakeholders and elected officials.

The No Build Alternative considers relevant transportation capacity improvements, maintenance, and expansion to existing modes between Washington, D.C., and Baltimore, MD.

### D.3A.4 Proposed Action

#### D.3A.4.1 Build Alternatives

The SCMAGLEV high-speed rail runs on a grade-separated, fixed viaduct powered by magnetic forces. It would operate at speeds over 300 miles per hour. The SCMAGLEV system does not operate on standard steel wheel railroad tracks and therefore requires a separate operating environment. The operating system includes maintenance of way (MOW) facilities, one trainset maintenance facility (TMF), and other ancillary facilities such as fresh air and emergency egress facilities, substations, and stormwater management facilities. The SCMAGLEV system would operate on both underground (deep tunnel) and aboveground elevated guideway (viaduct). The Project would also include two terminal stations (Washington, D.C., and Baltimore, MD) and one intermediate station at the Baltimore-Washington International Thurgood Marshall Airport (BWI Marshall Airport Station). Design and construction of the SCMAGLEV train and system requires consideration of environmental, economic, and community impacts on the project area. Two Build Alternatives have been selected for detailed study, each with six different route alignments, resulting in a total of twelve alignments for consideration. **See Figures D.3-1, D.3-2, D.3-3, and D.3-4.**

##### D.3A.4.1.1 Build Alternatives J; Alignments J-01 – J-06

Build Alternatives J (BWP East) would include a newly constructed independent station in Washington, DC, Mount Vernon Square East Station. The proposed alignment would tunnel under Washington, DC from the southern terminus. It would continue in deep tunnel (typically 80 feet to 260 feet deep) until crossing under the Capital Beltway (I-95/I-495). It would transition to the viaduct, on the east side of the Baltimore-Washington Parkway between the National Aeronautical Space Administration (NASA)

Goddard Space Flight Center overpass and Beaver Dam Road. A portal structure would be required for each location where the alignment transitions between tunnel and viaduct. It would then follow the eastside of the Baltimore-Washington Parkway on a viaduct through federal lands, including the National Park Service (NPS) and Fort George G. Meade. It would run adjacent to federal facilities such as the U.S. Secret Service (USSS) and National Security Agency (NSA) before returning to a tunnel towards an underground BWI Marshall Airport Station. It would then continue in a tunnel to Baltimore, Maryland. The northern terminus station would be a newly constructed independent station with two options, either Cherry Hill Station or Camden Yards Station.

Build Alternatives J would consist of approximately nine miles of aboveground viaduct and have two options for the TMF. The first TMF option would be near the southern transition portal on Beltsville Agricultural Research Center (BARC) property. The second TMF option would be near the northern transition portal on the north side on MD 198, adjacent to Fort George G. Meade. This build alternative would range in length from approximately 33 to 35 miles, depending on the northern terminal station options.

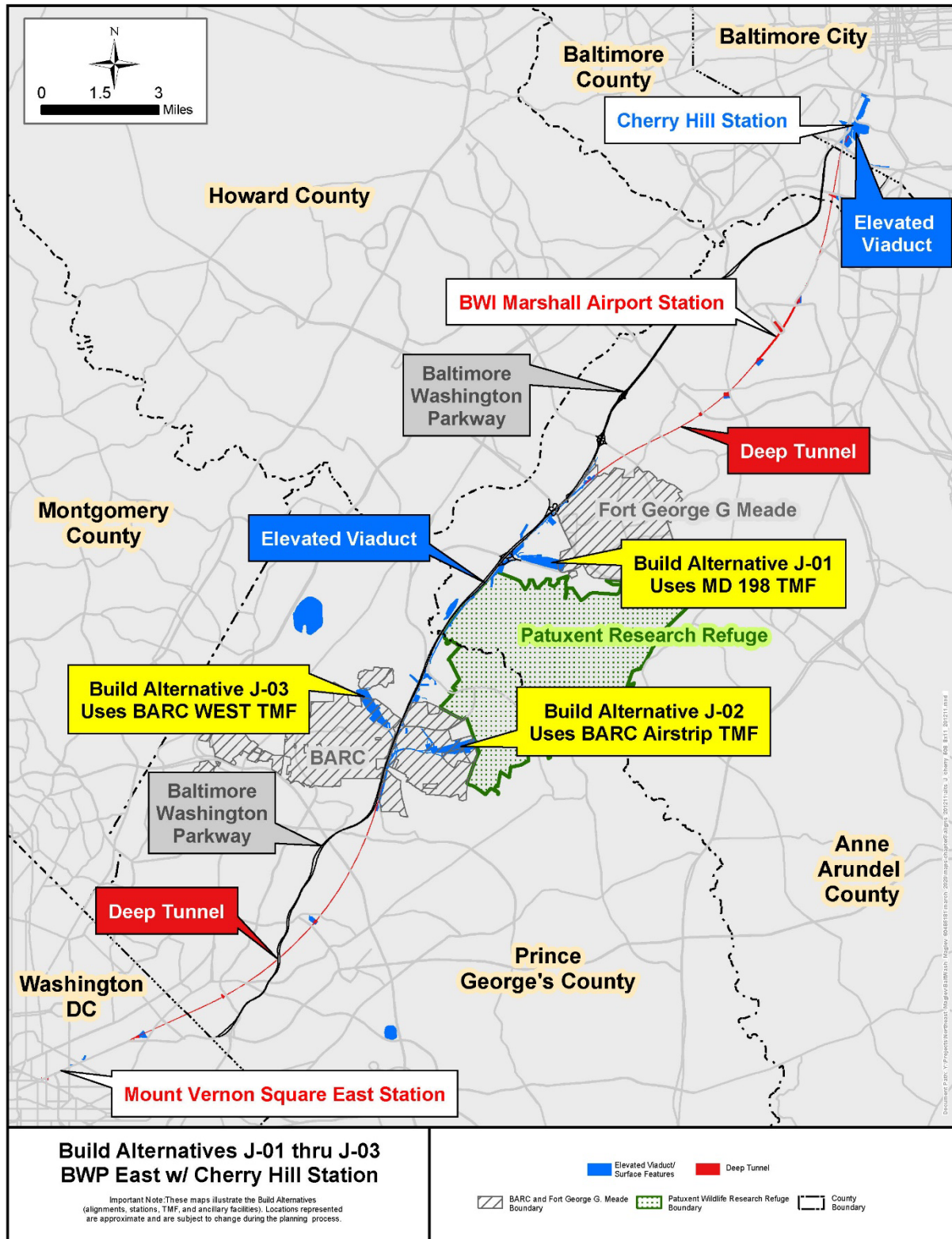
There are six varying alignments that accompany Build Alternatives J, each with a unique combination of northern terminus station and TMF.

#### **D.3A.4.1.2 Build Alternatives J1; Alignments J1-01 – J1-06**

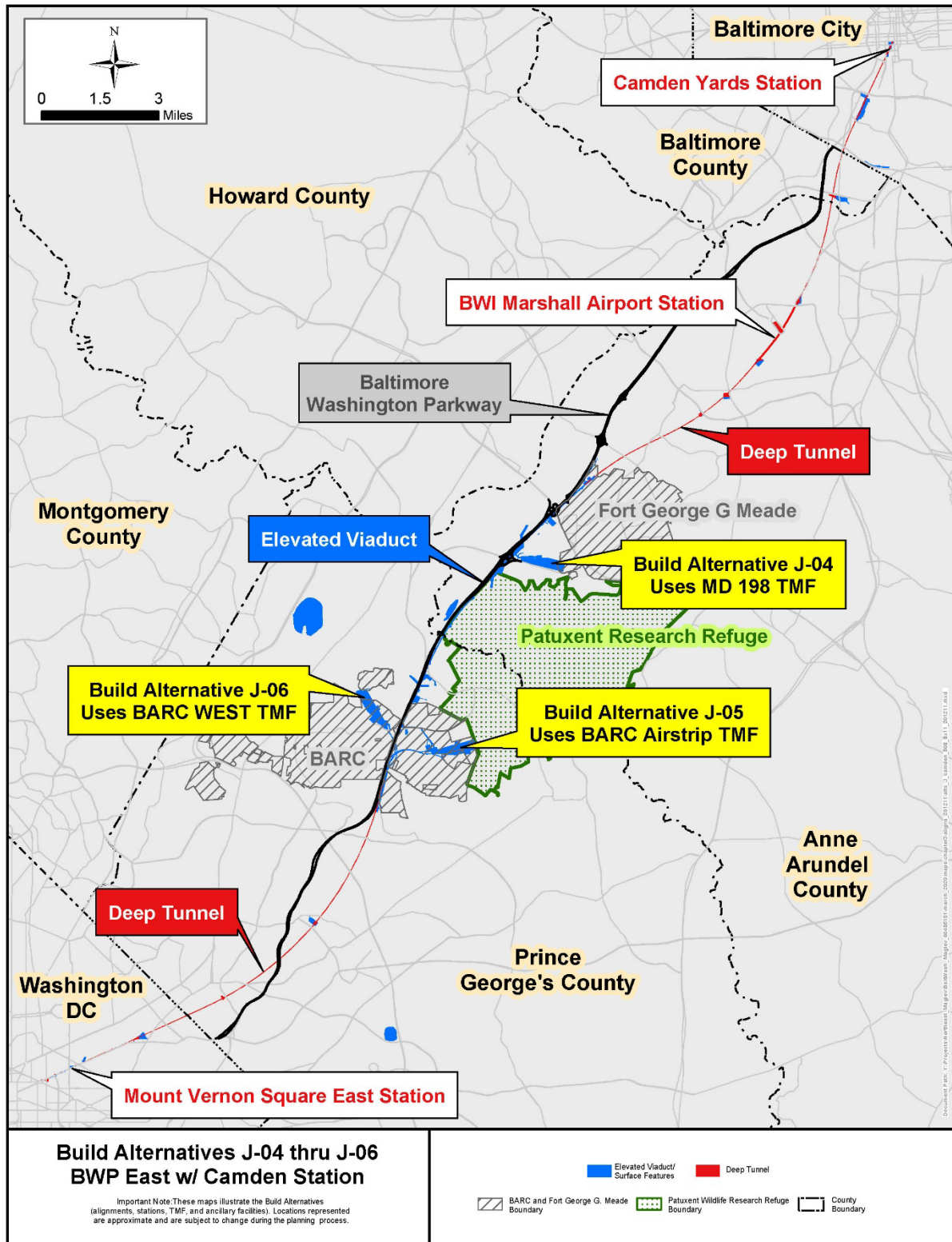
Build Alternatives J1 (BWP West) would also include a newly constructed independent station in Washington, DC, Mount Vernon Square East Station. Similar to Build Alternatives J, Build Alternatives J1 would tunnel under Washington, DC from the southern terminus. It would continue in deep tunnel (typically 80 feet to 260 feet deep) until crossing under I-95/I-495. It would transition to the viaduct, but unlike Build Alternatives J, Build Alternatives J1 would align on the west side of the Baltimore-Washington Parkway between the NASA overpass and Beaver Dam Road. Then, Build Alternatives J1 would generally follow the west side of the Baltimore-Washington Parkway on a viaduct through BARC and NPS properties. It would continue on the viaduct adjacent to residential developments in South Laurel, before transitioning into a tunnel south of Maryland City to turn eastward towards an underground BWI Marshall Airport station. The alignment would continue in tunnel to Baltimore, Maryland. The northern terminus station would be either the Cherry Hill Station or Camden Yards option.

Build Alternatives J1 would range in length approximately 33 to 36 miles and tunnel under Fort George G. Meade. It would avoid the PRR, USSS and NSA facilities. It includes the same TMF options as Build Alternatives J; however, Build Alternatives J1 would have flyovers (connecting ramp tracks) crossing over the Baltimore-Washington Parkway to reach either TMF location. There are six varying alignments that accompany Build Alternatives J1.

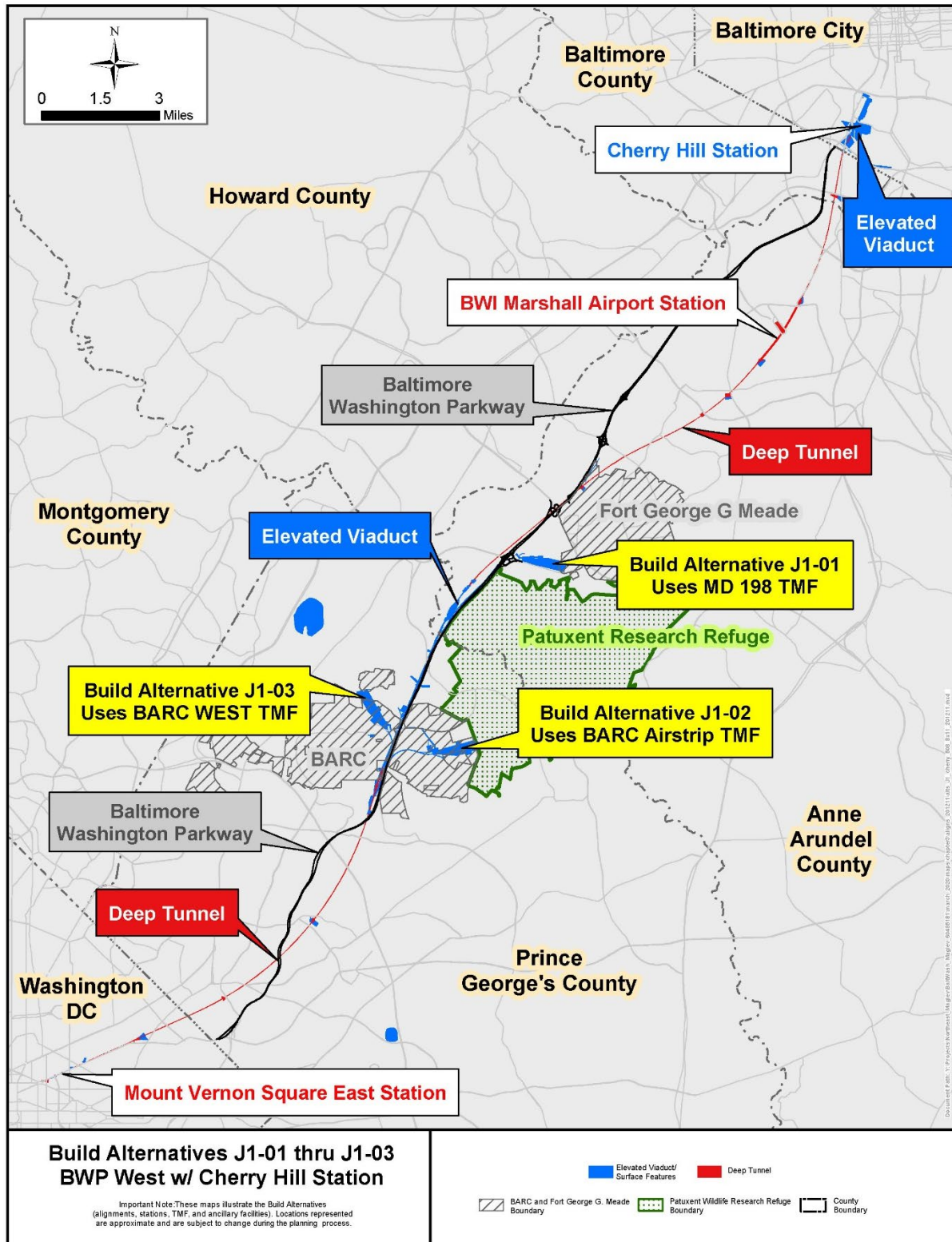
**Figure D.3-1: Build Alternatives J-01 through J-03 – BWP East with Cherry Hill Station**



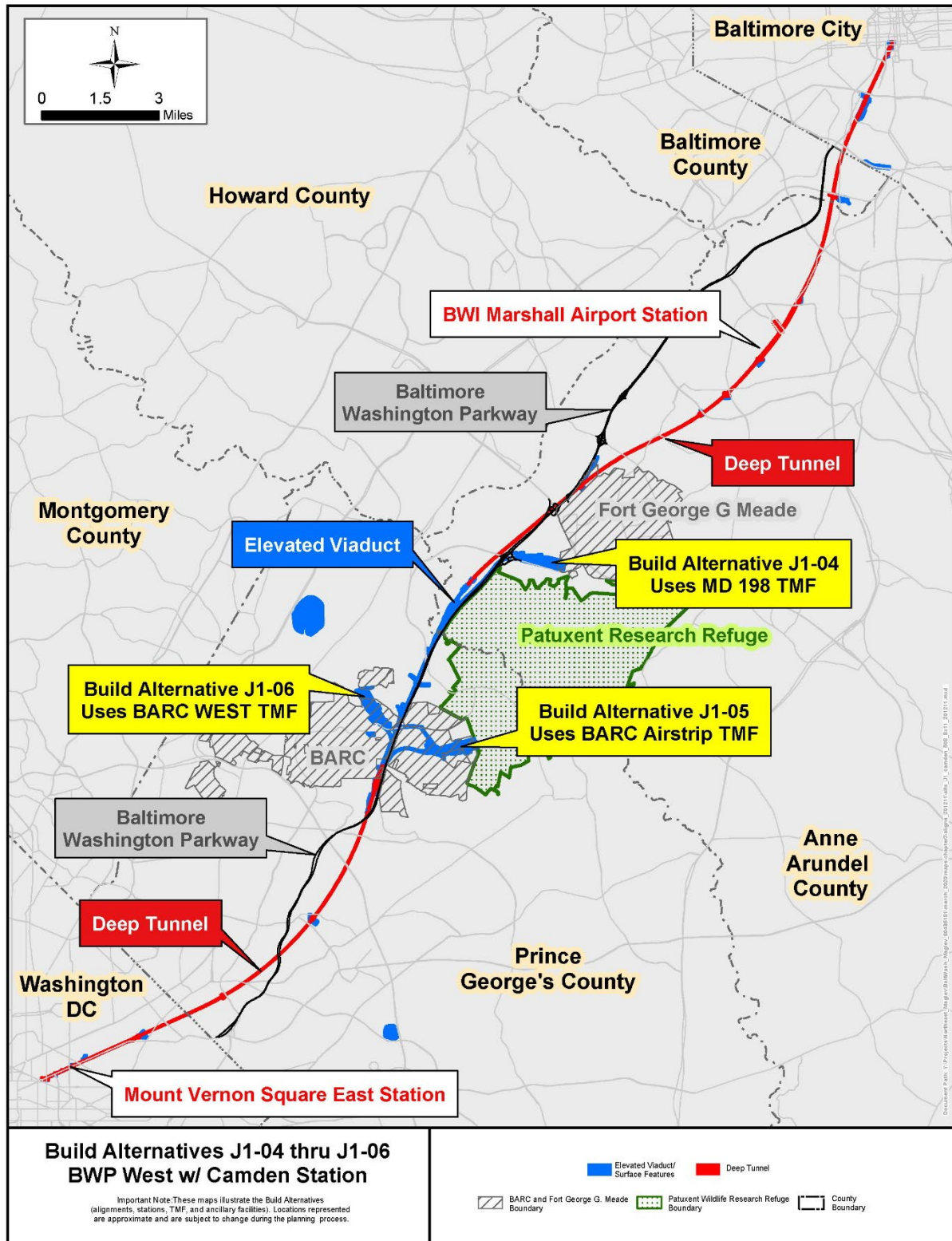
**Figure D.3-2: Build Alternatives J1-01 through J-03 – BWP East with Camden Station**



**Figure D.3-3: Build Alternatives J1-01 through J1-03 – BWP West with Cherry Hill Station**



**Figure D.3-4: Build Alternatives J1-04 through J1-06 – BWP West with Camden Station**



## Appendix D.3B Land Use

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### D.3B.1 Regulatory Context and Methodology

This section evaluates the effects of the No Build and Build Alternatives on land use and zoning along the SCMAGLEV Project corridor. Land use characterizes what can be built on the land and what the land can be used for. It considers the intended use of the land and the general development criteria that exists. This differs from zoning, which specifies design and development guidelines for those intended land uses. This section also considers if the SCMAGLEV Project is consistent with approved comprehensive planning documents (i.e., master plans, transportation plans, etc.) and identifies temporary and permanent property impacts associated with the construction and long-term operation of the SCMAGLEV Project Build Alternatives.

In accordance with the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 et seq., the Council on Environmental Quality (CEQ) regulations, 40 C.F.R. Parts 1500 - 1508, and the Federal Rail Administration's (FRA) Procedures for Considering Environmental Impacts, 64 Fed. Reg. 28545 (May 26, 1999), the Federal Railroad Administration (FRA) assessed the impacts on land use both existing and planned.

The SCMAGLEV Project will be subject to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. 4601-4655) (Uniform Relocation Act), which establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms.

This analysis identifies temporary and permanent changes of land uses to transportation land uses associated with SCMAGLEV Project. The SCMAGLEV Project impact area includes the limits of operational/physical disturbance, as well as the construction related impact area, which includes additional areas of temporary disturbance required for construction activities. These impact areas comprise the overall limit of disturbance (LOD) of the SCMAGLEV Project Build Alternatives. The LOD includes all surface and subsurface elements.

The SCMAGLEV Project Affected Environment for land use is defined as the area within a 500-foot buffer around the proposed alignments and ancillary facilities of the Build Alternatives and within a 1/4-mile buffer around stations and Trainset Maintenance Facility (TMF) locations, as shown on the land use mapping (see **Figure D.3-1**). These buffers were considered to capture potential impacts (i.e., visual/aesthetics, noise/vibration, and changes in access and mobility) that could extend beyond the LOD.

FRA considered changes to land use due to the construction and operation of above ground elements of the Project. Using Geographic Information System (GIS) data, FRA quantified these land use changes. FRA then considered if the proposed transportation land use is consistent with surrounding land uses, existing zoning designations, and locally and regionally adopted comprehensive planning documents. The land use and

zoning data were obtained from various state and local jurisdictions, each with their unique zoning codes and land use category descriptions. In order to normalize this analysis, the Maryland Department of Planning (MDP) Land Use/Land Cover 2010 designations were used to reclassify all land uses within the SCMAGLEV Project Affected Environment into the following categories: Agriculture, Residential, Commercial, Forest, Institutional, Industrial, Open Space, Open Urban Space, Transportation, Mixed Use, and Water. Likewise, all zoning codes were reclassified and reasonably combined into the following zoning categories: Residential, Commercial, Mixed Use, Industrial, Open Space and Other. For example, residential zoning codes allow for dwellings that range from single-family homes to high-rise apartment complexes.

Comprehensive planning documents were reviewed as part of the analysis to determine if the Project is compatible with local plans. Comprehensive planning documents are prepared, reviewed, and approved by the governments that have authority over them and provide guidance for future actions in the subject communities. These documents express community goals and priorities as they pertain to issues such as land use, transportation, development, and recreation. The plans range from smaller neighborhood plans that focuses on individual blocks up to larger geographies with plans that focus on the metropolitan areas. Some plans have a narrow focus and provide more detail on a single planning concept (i.e. parks or transportation), while others are more comprehensive and speak to the interrelated planning goals and objectives.

FRA conducted a quantitative impact analysis of individual parcels within the LOD. For this parcel analysis, FRA adjusted the land use designation of parcels within the LOD that are currently inconsistent with the MDP Land Use/Land Cover 2010 designation. The adjusted land uses more accurately represent the 2020 conditions. For purposes of this analysis, the quantified impact to individual parcels is equivalent to the quantified changes in land use. FRA categorizes parcel impacts as temporary acquisitions, partial permanent acquisitions, and permanent full acquisition, as further explained below:

- Temporary acquisition (short-term construction) – the parcel will be impacted by the SCMAGLEV Project construction, require construction easements, and be restored to its original use and ownership post construction.
- Partial permanent acquisition – less than 1/3 of a parcel's total area will be impacted by the perpetual operation of the SCMAGLEV Project and will require either perpetual easements or partial property acquisition.
- Full permanent acquisition – greater than 1/3 of a parcel's total area will be impacted by the perpetual operation of the SCMAGLEV Project and will require full property acquisition, which will change the ownership or right to use the parcel indefinitely. Also, some parcels with less than 1/3 of its total area being impacted were determined to be full permanent acquisitions if the property impact will result in any of the following:
  - parcel fragmentation;

- overlapping of an existing structure on the parcel such that the structure is no longer usable (e.g., residence or business); or
- restricted access to the property where no alternate access route can be established.

## D.3B.2 Affected Environment

### D.3B.2.1 Local Comprehensive Planning Documents

**Table D.3-1** represents the list of planning documents that guided land use decisions within the Project Area.

**Table D.3-1: Comprehensive Planning Document Summaries**

| Municipality                | Planning Document                                                                                                                                                                                                   | Guidance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Washington, D.C.,<br>Ward 2 | Chinatown Cultural<br>Development Small Area Plan<br>Chinatown Design Review<br>Procedures<br>Logan Circle Investment Plan<br>Mount Vernon Square District<br>Project (partially in Ward 6)<br>Shaw Investment Plan | Washington, D.C.'s neighborhood plans supplement the Comprehensive Plan by providing detailed direction for the development of city blocks, corridors, and neighborhoods. The neighborhood planning process allows citizens to develop strategic priorities that will shape future development in their neighborhoods. The process identifies gaps and opportunities in city services and resources deployed at the neighborhood level. Approved plans help shape critical capital budget decisions and agency investment priorities. |
| Washington, D.C.,<br>Ward 5 | Brookland/CUA Metro Station<br>Small Area Plan<br>Brookland/Edgewood<br>Investment Plan<br>Mid City East Small Area Plan                                                                                            | Washington, D.C.'s neighborhood plans supplement the Comprehensive Plan by providing detailed direction for the development of city blocks, corridors, and neighborhoods. The neighborhood planning process allows citizens to develop strategic priorities that will shape future development in their neighborhoods. The process identifies gaps and opportunities in city services and resources deployed at the neighborhood level. Approved plans help shape critical capital budget decisions and agency investment priorities. |

| Municipality                | Planning Document                                                                                                                                                                                                                                                                     | Guidance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Washington, D.C.,<br>Ward 6 | The Mount Vernon Triangle<br>Action Agenda<br>Redevelopment Plan for the<br>Northwest One Neighborhood                                                                                                                                                                                | Washington, D.C.'s neighborhood plans supplement the Comprehensive Plan by providing detailed direction for the development of city blocks, corridors, and neighborhoods. The neighborhood planning process allows citizens to develop strategic priorities that will shape future development in their neighborhoods. The process identifies gaps and opportunities in city services and resources deployed at the neighborhood level. Approved plans help shape critical capital budget decisions and agency investment priorities.                                                                                        |
| Prince George's<br>County   | Approved Subregion 1 Master<br>Plan and Sectional Map<br>Amendment 2010<br>Langley Park-College Park-<br>Greenbelt Approved Master<br>Plan<br>Approved Master Plan for<br>Planning Area 68<br>Bladensburg-New Carrollton<br>and Vicinity Approved Master<br>Plan for Planning Area 69 | Prince George's County subregion plans focus on developing a comprehensive list of needs and improvement strategies within community sectors. The plans emphasize defining and facilitating neighborhood conservation, pedestrian safety and access, and commercial revitalization strategies and programs.                                                                                                                                                                                                                                                                                                                  |
| Anne Arundel<br>County      | BWI/Linthicum Small Area Plan<br>2003<br>Jessup/Maryland City Small<br>Area Plan 2004<br>Odenton Small Area Plan 2003<br>Severn Small Area Plan 2002                                                                                                                                  | Anne Arundel County Small Area Plans (SAP) address recommendations for future land use and development, including facility and infrastructure needs and targeted revitalization areas for mixed-use development and/or land preservation. Comprehensive zoning legislation followed each SAP. The County's 2009 General Development Plan is more recent than the SAPs, however, the Office of Planning and Zoning and other County agencies continue to implement many of the SAP recommendations through design studies, corridor studies, legislation and code revisions, capital project programming, and grant programs. |

| Municipality     | Planning Document                                                                                                                                                                                                                                                                                                                                                                        | Guidance                                                                                                                                                                                                       |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Baltimore County | Western Baltimore County Pedestrian and Bicycle Access Plan 2012                                                                                                                                                                                                                                                                                                                         | Baltimore County emphasizes improved accessibility through safe and efficient walking and bicycling.                                                                                                           |
| Baltimore City   | Westport Mount Winans Lakeland Master Plan<br>Cherry Hill Community Master Plan<br>Middle Branch Master Plan<br>Sharp-Leadenhall Master Plan<br>Brooklyn and Curtis Bay Strategic Neighborhood Action Plan (SNAP)                                                                                                                                                                        | Baltimore City's approved master plans set local guidelines and strategies to target city resources. These achieve a range of desired social, economic, and land use goals to promote responsible development. |
| Baltimore City   | Annapolis Road Urban Renewal Plan (URP)<br>Brooklyn-Curtis Bay Business Area URP<br>Camden Station Area URP<br>Carroll Camden URP<br>Central Business District URP<br>Inner Harbor Project 1 URP<br>Inner Harbor Project 1-A URP<br>Market Center URP<br>Middle Branch URP<br>Montgomery URP<br>Ridgely's Delight URP<br>Sharp-Leadenhall URP<br>Washington Village URP<br>Waterview URP | Baltimore City's URPs outline an overlay zoning that is more restrictive than the City's zoning code. These URPs regulate specific geographies ranging from small business districts to entire communities.    |

Sources: District Office of Planning, The Maryland-National Capital Park and Planning Commission – Prince George's County Department of Planning, Anne Arundel Office of Planning and Zoning, Baltimore County Department of Planning, Baltimore City Department of Planning.

In addition to the local plans included above in **Table D.3-1**, comprehensive plans developed by MPOs, cities, counties, Washington, D.C., and the State of Maryland also consider land use policies and other guidelines around transportation and mobility that are relevant to this project. Synopses of four regional plans are below, followed by countywide plans.

### 2035 Maryland Transportation Plan (2014)

*The 2035 Maryland Transportation Plan (MTP)* provides a framework to address Maryland's most critical transportation needs and challenges via Statewide goals, objectives, and strategies, with specific guidance on appropriate strategies per region. Relevant plan goals include maintaining and enhancing the quality of services by users, providing options for the movement of people and goods that supports communities and quality of life, and supporting a healthy and competitive economy.

### **Regional Transportation Priorities Plan for the National Capital Region (2014)**

The National Capital Region Transportation Planning Board (TPB) is the MPO for metropolitan Washington that includes Washington, D.C., Prince George's County, and additional municipalities within Maryland and Virginia located outside of the socioeconomic study area. Goals in the *Regional Transportation Priorities Plan for the National Capital Region* include providing a comprehensive range of transportation options, promoting a strong regional economy, and supporting efficient inter-regional and intermodal travel and commerce. The plan calls for maintaining the existing system of roadways and transit, strengthening public confidence, and ensuring fairness.

### **Comprehensive Plan for the National Capital (2006, 2016)**

The primary guidance document for comprehensive land use planning for the District of Columbia is the *Comprehensive Plan for the National Capital*. The *Plan* includes both Federal and District Elements. Federal Elements were updated in 2016. Six Federal Elements apply to proposed development: Urban Design, Transportation, Federal Environment, Historic Preservation, Visitors and Commemoration, and Parks and Open Space. The Elements apply to all federal development activity in the District of Columbia and private development in areas over which the National Capital Planning Commission (NCPC) has jurisdiction.

### **Maximize 2040: A Performance-Based Transportation Plan (2016)**

The Baltimore Regional Transportation Board (BRTB) is an MPO that covers Baltimore City, Baltimore County, Anne Arundel County, and a few other counties outside of the socioeconomic study area. Related goals in BRTB's long-range plan, *Maximize2040: A Performance-Based Transportation Plan*, include improving accessibility and mobility and promoting economic opportunity. The plan indicates that potential Federal Rail Administration (FRA) projects are outside of the scope; however, the plan notes it is good policy to notify BRTB of FRA projects to understand their potential effects on regional travel demands and travel patterns.

### **District of Columbia Comprehensive Plan (2011)**

The *District of Columbia Comprehensive Plan*, last amended in 2011, encompasses the District Elements of *The Comprehensive Plan for the National Capital*. The plan emphasizes reducing inequality of access to jobs, transit, services, affordable housing, and amenities where possible. The District's economic, social, and environmental sustainability concerns echo throughout the 2011 *Comprehensive Plan*, with the desire to see the District become a role model city for sustainability. The *Plan* also focuses on the importance of creating connections between District neighborhoods and business areas through infill development, better transit connections and enhanced gateways, and improving sense of place through the preservation and enhancement of community character and uniqueness. Central Washington, Near Northwest, and Upper Northeast Area elements of the 2011 *Comprehensive Plan* also direct land use planning and policy within the socioeconomic study area. The plan is undergoing formal amendment due to anticipated population growth occurring at a quicker pace than expected in earlier plan projections.

### **Sustainability D.C. (2012)**

The District's sustainability plan, *Sustainability D.C.*, guides development in the District in a socially, environmentally, and economically sustainable manner.

### **MoveD.C. Multimodal Long-Range Transportation Plan (2014)**

The District of Columbia Department of Transportation (DDOT) also publishes plans and policies specific to transportation planning in the District. DDOT's 2014 *MoveD.C. Multimodal Long-Range Transportation Plan* has goals and objectives to improve existing transportation infrastructure and create more multi-modal transit options. The District aims to increase the mode share split to 75-percent non-auto modes for commuters; maximize the transportation system's reliability and capacity for moving people and goods; and support neighborhood vitality, connectivity, and economic development.

### **Plan Prince George's 2035 Approved General Plan (2014)**

The Maryland-National Capital Park and Planning Commission's (M-NCPPC) *Plan Prince George's 2035 Approved General Plan (Plan 2035)* is a blueprint to make Prince George's County a competitive force in the regional economy, leader in sustainable growth, community of strong neighborhoods and municipalities, and a place where residents are healthy and engaged. Related to transportation and mobility, *Plan 2035's* goal is to provide and maintain a safe, affordable, accessible, and energy-efficient multimodal transportation network that supports the desired land use pattern and *Plan 2035* goals. Prince George's County intends to direct future growth toward transit-oriented, mixed-use centers to expand their commercial tax base, capitalize on existing and planned infrastructure investments, and preserve agricultural and environmental resources. The County's proposed Purple Line light rail is an initiative that supports enhanced mobility and reduced travel time for thousands of area residents. The Purple Line will drive the economy through linkage of existing employment centers to emerging development areas.

### **Anne Arundel County's General Development Plan 2009 (2009)**

The County Office of Planning and Zoning's county-wide master plan, *Anne Arundel County's General Development Plan 2009*, is a comprehensive land use plan with overarching priorities and themes to balance growth and sustainability, community preservation and enhancement, and quality public services, including a reliable transportation network. The County's transportation planning approach focuses on seven key elements:

1. Maintain existing transportation facilities' inventory, protecting public investment, and support redevelopment and revitalization of neighborhoods and commercial areas.
2. Expand transportation facilities' inventory to meet increasing travel demand.
3. Emphasize improvement of safety for motorists, pedestrians, and bicyclists.
4. Provide alternative means of mobility through increased transit service.
5. Implement travel demand management strategies.

6. Include emergency management principles in transportation plans.
7. Expand pedestrian and bicycle facilities.

The Plan references the Federal Base Realignment and Closure (BRAC) Initiative because BRAC is expected to significantly affect the economy. The Plan anticipates large-scale relocation at the Fort Meade military base, with an estimated increase of 10,000 jobs and 4,400 housing units in Anne Arundel County.

#### **Anne Arundel County Background Report on Land Use (2008)**

The *Anne Arundel County Background Report on Land Use* supplements the 2009 *General Plan*, updating and analyzing prior land use plans as they relate to the growth of the County. This report identifies targeted growth areas, including the vicinities of the BWI Marshall Airport, Fort Meade, and the Baltimore-Washington Parkway Corridor. The County aims to increase interest in Commercial Revitalization Districts, such as Maryland City/Russett - MD 198 and Brooklyn Park - Ritchie Highway, which are within proximity to the SCMAGLEV project.

#### **Anne Arundel County Pedestrian and Bicycle Master Plan (2013)**

The county-wide bicycle master plan prepared by the Office of Planning and Zoning, *2013 Pedestrian and Bicycle Master Plan*, identifies improvement opportunities to increase safety and diminish the use of single occupant vehicles.

#### **Anne Arundel County Greenways Master Plan 2012 (2012)**

The *Anne Arundel County Greenways Master Plan 2012* creates an interconnected network of greenways that protects ecologically valuable lands for present and future generations. The Plan identifies the Patuxent Wildlife Refuge as a green infrastructure resource.

#### **Baltimore County, Maryland, Master Plan 2020 (2010)**

The Baltimore County Council adopted a county-wide master plan, *Baltimore County, Maryland, Master Plan 2020*, with initiatives for protecting the environment, preserving agriculture, and ensuring safe and attractive places to live and work. The County aims to create and maintain safe and sustainable communities to achieve a sensible balance of economy, equity, and environment. Plan goals include the continuation of the success of growth management, improvement of the built environment, and strengthening of resource conservation and protection. The County envisions a well-maintained, multimodal transportation system which facilitates the safe, convenient, affordable, and efficient movement of people, goods, and services within and between population and business centers. County transportation infrastructure and services intend to support diverse travel needs within the region, foster responsible land use decisions, enhance economic development strategies, and promote environmental stewardship.

## **LIVE-EARN-PLAY-LEARN: The City of Baltimore Comprehensive Master Plan (2012)**

In 2006, Baltimore City adopted its city-wide master plan, *LIVE-EARN-PLAY-LEARN: The City of Baltimore Comprehensive Master Plan*, which outlines goals, visions, and achievement measures for a range of social, economic, and land use goals. Visions of this plan include concentration of development, protection of sensitive and nearby rural resource areas, economic growth, and streamlining regulatory mechanisms. Plan goals focus on strengthening neighborhoods and improving the design and quality of the built environment. The plan promotes Transit Oriented Development to reinforce neighborhoods and locate all residents within 1.5 miles of quality grocery stores and other neighborhood services. Another plan goal encourages improvement of transportation access, accessibility, and choice through the creation of a Comprehensive Transportation Plan to facilitate movement among public transportation services. Baltimore City also plans to improve access to jobs and transportation linkages between businesses to offer better commuting options and mitigate traffic congestion.

### **D.3B.2.2 Land Use**

The SCMAGLEV Project spans two major metropolitan areas, Baltimore, MD and Washington, D.C., both with distinct metropolitan planning organizations. Smaller, defined neighborhoods, towns, and cities comprise each of these urbanized areas. Clusters of residential and commercial land uses are also located throughout the SCMAGLEV Project Affected Environment.

The SCMAGLEV Project Affected Environment includes large areas of Federal property including National Park Service (NPS) property associated with the Baltimore-Washington Parkway (BWP), the Patuxent Research Refuge (PRR), and Beltsville Agricultural Research Center (BARC). Additionally, the SCMAGLEV Project Affected Environment includes areas of Federal property associated with Fort George G. Meade, National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC), National Security Agency (NSA), and the US Secret Service (USSS).

**Table-D.3-2** shows property ownership classification within the SCMAGLEV Affected Environment and **Table-D.3-3** presents a breakdown of property under the jurisdiction of federal agencies.

**Table D.3-2: Property Ownership Classification within the SCMAGLEV Affected Environment**

| Ownership                                                                                                                                                                                                                                                                                            | Acreage      | Percentage of Study Area |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------|
| Federal                                                                                                                                                                                                                                                                                              | 3,628        | 36.7%                    |
| Public*                                                                                                                                                                                                                                                                                              | 3,320        | 33.6%                    |
| Private                                                                                                                                                                                                                                                                                              | 2,926        | 29.6%                    |
| <b>Total</b>                                                                                                                                                                                                                                                                                         | <b>9,874</b> |                          |
| <p>*Note: Includes Baltimore-Washington Parkway which is considered public ROW under the jurisdiction of National Park Service<br/>Source: Maryland Land Use Land Cover-County Use Land Cover 2010, IMAP, Maryland Department of Planning; Washington, DC Existing Land Use, Open Data DC, DCGIS</p> |              |                          |

**Table D.3-3: Federally Owned/Managed Land by Federal Agency within the SCMAGLEV Affected Environment**

| Ownership                                                                 | Acreage       |
|---------------------------------------------------------------------------|---------------|
| Beltsville Agricultural Research Center<br>(US Department of Agriculture) | 2,260         |
| Fort George G. Meade                                                      | 671           |
| NASA Goddard Space Flight Center                                          | 54            |
| National Park Service                                                     | 831           |
| National Security Agency                                                  | 55            |
| Patuxent Research Refuge<br>(US Fish and Wildlife Service)                | 508           |
| US Secret Service                                                         | 213.5         |
| United States of America*                                                 | 29.6          |
| <b>Total</b>                                                              | <b>4621.9</b> |

\*Note: Includes multiple properties occupied by various federal agencies. The majority are located in Washington, DC and Baltimore City, Maryland.

Source: Maryland Land Use Land Cover-County Use Land Cover 2010, IMAP, Maryland Department of Planning; Washington, DC Existing Land Use, Open Data DC, DCGIS

Land uses identified in **Table D.3-4**, shown on **Figure D.3-5** and further described below are present within the SCMAGLEV Project Affected Environment.

**Table D.3-4: Existing Land Use Categories and Distribution within the Affected Environment**

| Land Use Category          | Land Use Definition                                                                                                                                   | Area (acres) | Percent of Study Area |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------|
| Low-Density Residential    | Detached single-family dwelling units with less than 0.2 dwelling units per acre to 2 dwelling units per acre                                         | 18.1         | 0.2%                  |
| Medium-Density Residential | Detached or attached single-family dwelling units with 2 dwelling units per acre to 8 dwelling units per acre                                         | 464.3        | 4.6%                  |
| High-Density Residential   | Attached single-unit row housing, garden apartments, or high-rise dwelling units with more than 8 dwelling units per acre                             | 449.9        | 4.4%                  |
| Forest                     | Area dominated by trees and other woody or herbaceous plants                                                                                          | 4382.9       | 43.3%                 |
| Industrial                 | Manufacturing and industrial parks                                                                                                                    | 695.4        | 6.9%                  |
| Institutional              | Schools, colleges, universities, military installations, churches, medical facilities, correctional facilities, and government offices and facilities | 803.2        | 7.9%                  |
| Commercial                 | Retail and wholesale services                                                                                                                         | 966.9        | 9.6%                  |
| Open Urban Space           | Urban areas whose use does not require structures, or urban areas where                                                                               | 317.5        | 3.1%                  |

| Land Use Category | Land Use Definition                                                                              | Area (acres)    | Percent of Study Area |
|-------------------|--------------------------------------------------------------------------------------------------|-----------------|-----------------------|
|                   | non-conforming uses characterized by open land have become isolated                              |                 |                       |
| Transportation    | Major highways, light rail, metro, large Park 'N Ride lots, generally over 10 acres in size      | 798.1           | 7.9%                  |
| Agricultural      | Cropland, pasture, orchards, feeding operations, breeding and training facilities                | 978.9           | 9.7%                  |
| Water             | Rivers, waterways, reservoirs, ponds, bays, estuaries, and ocean                                 | 216.8           | 2.1%                  |
| Open Space        | Undeveloped open land, may include areas of forest and water                                     | 21.0            | 0.2%                  |
| Mining            | An area in which mining operations are performed                                                 | 0.0             | 0.0%                  |
| Mixed Use         | An area containing multiple types of land use such as residential, commercial, and/or industrial | 2.4             | <0.1%                 |
| <b>Total</b>      |                                                                                                  | <b>10,115.3</b> | <b>100.0%</b>         |

Source: Maryland Department of Planning (2010).  
<https://planning.maryland.gov/Pages/OurProducts/DownloadFiles.aspx>

**Forest** – There is forested land scattered throughout the SCMAGLEV Project Affected Environment, most notably along the BWP within Prince George’s County and south of MD 32 in Anne Arundel County, in the PRR, and surrounding the MD 198 TMF site (see Section 4.12 Ecological Resources).

**Agriculture** – Agriculture land uses within the SCMAGLEV Project Affected Environment are identified within Prince George’s County, predominately within BARC and east of I-95 at MD 200 and Konterra Drive. Although the Konterra site is classified as an agricultural land use on the Maryland Department of Planning’s (MDP) current land use/land cover mapping, it is an open grass field with roadways and stormwater management facilities and is not currently used for agricultural purposes. Future plans for the area include the development of the Konterra Town Center and do not include agricultural use.

**Residential, Commercial & Mixed Use** – Clusters of residential and commercial land uses are located throughout the SCMAGLEV Project Affected Environment. Concentrated (or dense) residential land uses are primarily located in and around Washington, D.C. and Baltimore City. Residential land use is also present along the BWP near the MD 197 and MD 198 interchanges. Commercial uses are dispersed throughout the SCMAGLEV Project Affected Environment including within the Washington D.C. and Baltimore central business districts, the Baltimore-Washington International Thurgood Marshall Airport Station (BWI Marshall Airport Station) and surrounding area in Anne Arundel County, and in areas such as Laurel, Maryland City, and Greenbelt in Prince George’s County. Mixed uses are present to a lesser extent than designated residential and commercial uses. Mixed uses are located in Washington, D.C. and include a combination of residential and commercial uses.

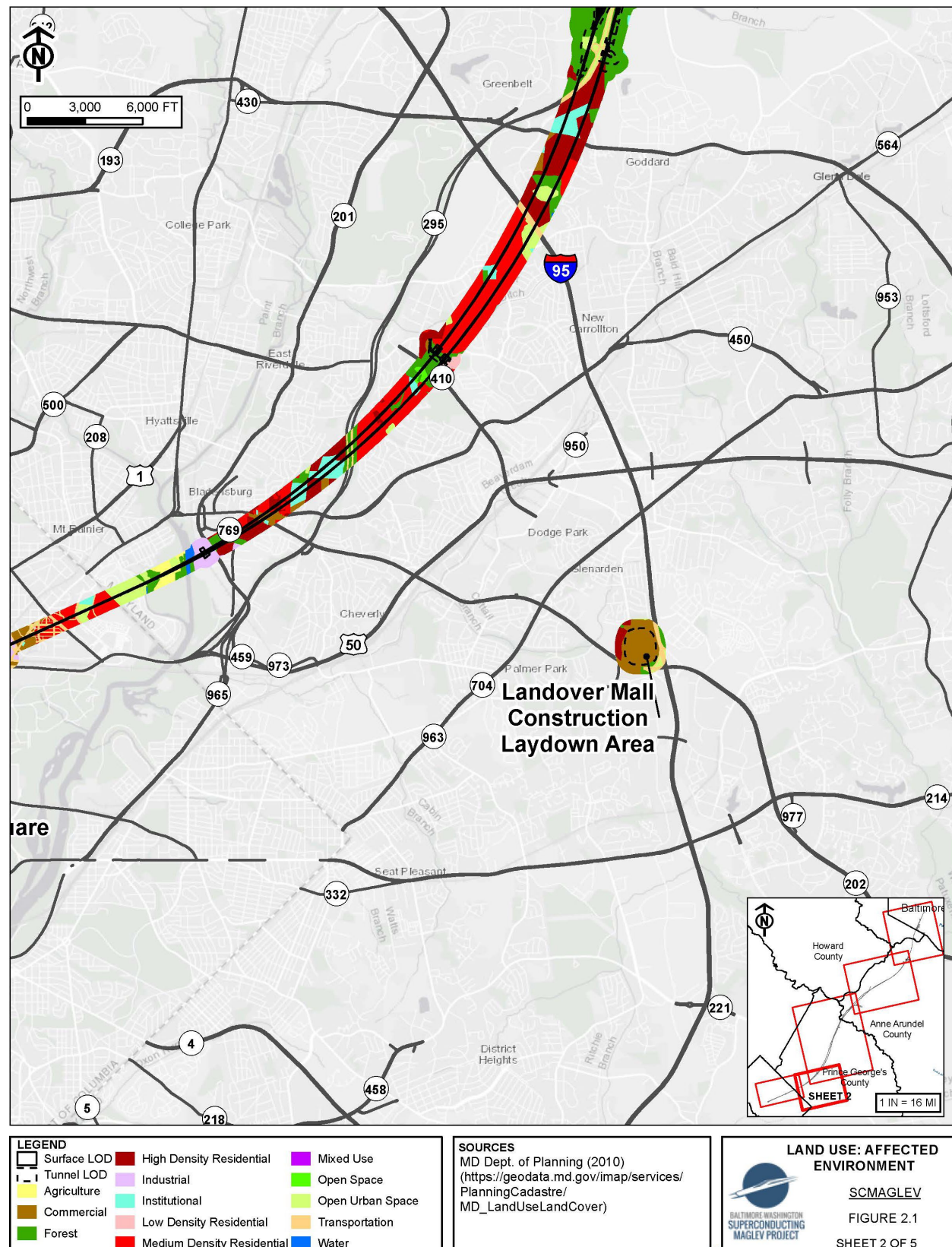
**LEGEND**

|             |                            |                  |
|-------------|----------------------------|------------------|
| Surface LOD | High Density Residential   | Mixed Use        |
| Tunnel LOD  | Industrial                 | Open Space       |
| Agriculture | Institutional              | Open Urban Space |
| Commercial  | Low Density Residential    | Transportation   |
| Forest      | Medium Density Residential | Water            |

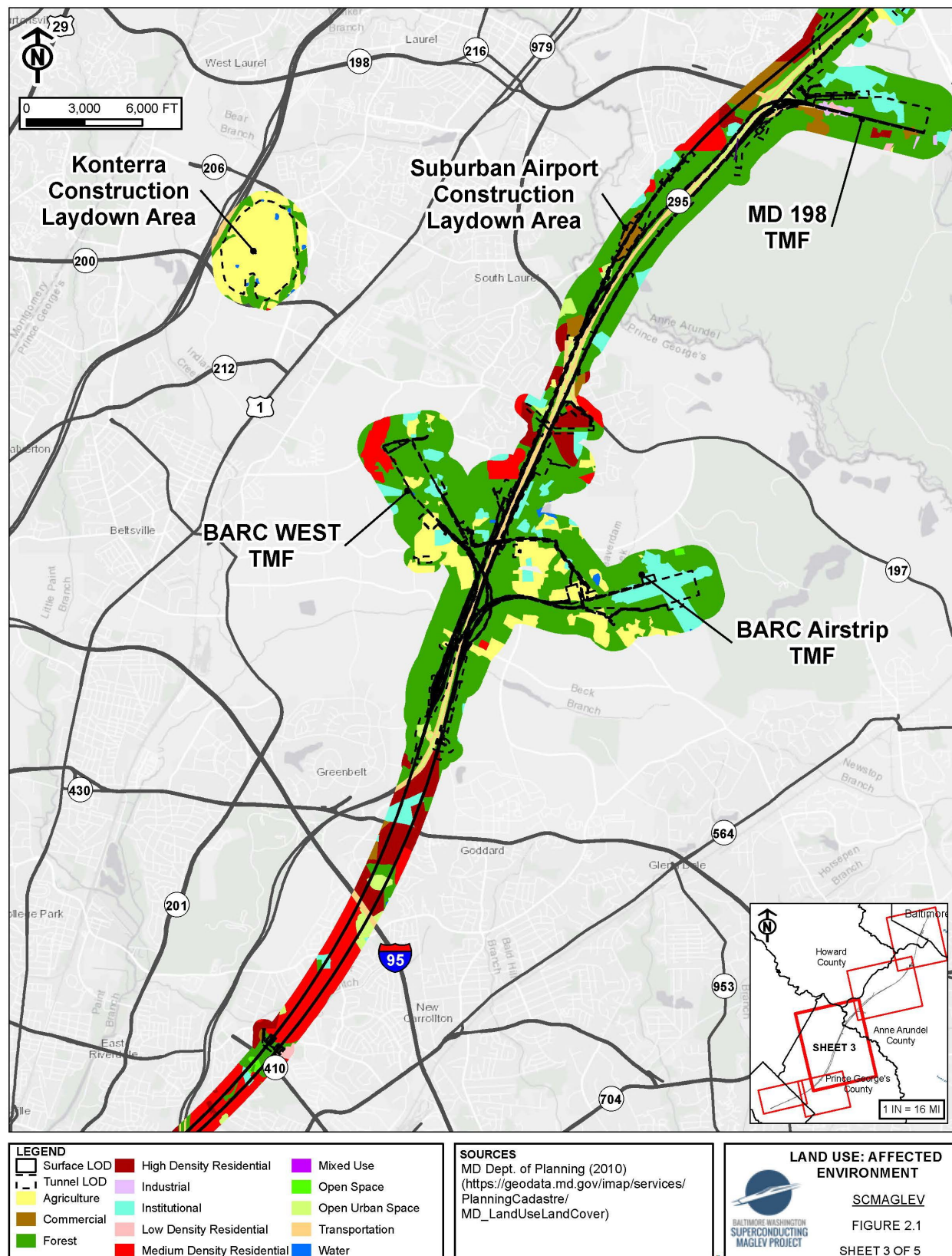
**SOURCES**  
MD Dept. of Planning (2010)  
([https://geodata.md.gov/imap/services/PlanningCadastre/MD\\_LandUseLandCover](https://geodata.md.gov/imap/services/PlanningCadastre/MD_LandUseLandCover))

**LAND USE: AFFECTED ENVIRONMENT**  
**SCMAGLEV**  
**FIGURE 2.1**  
**SHEET 1 OF 5**

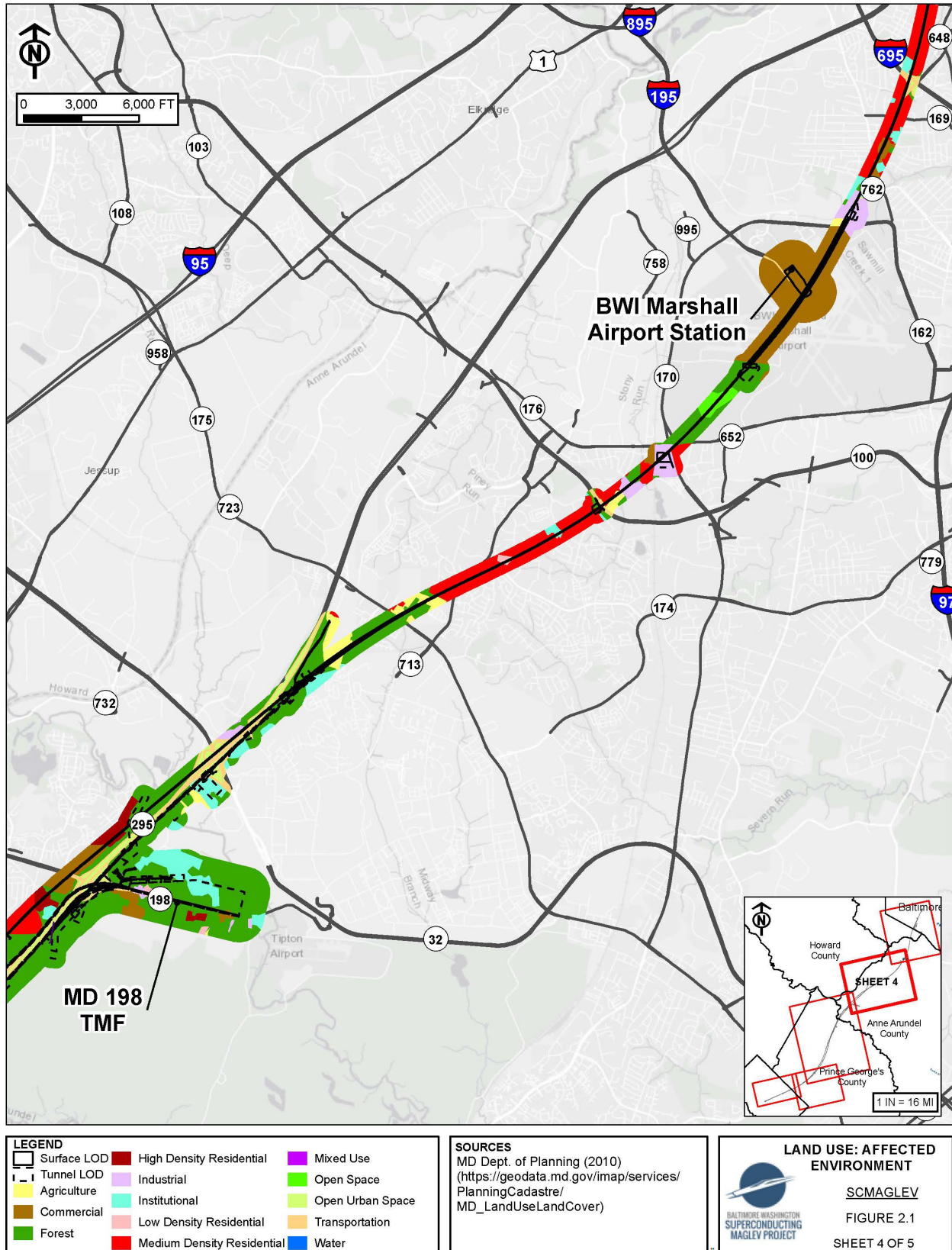
**Figure D.3-5: Land Use: Affected Environment (Sheet 2 of 5)**



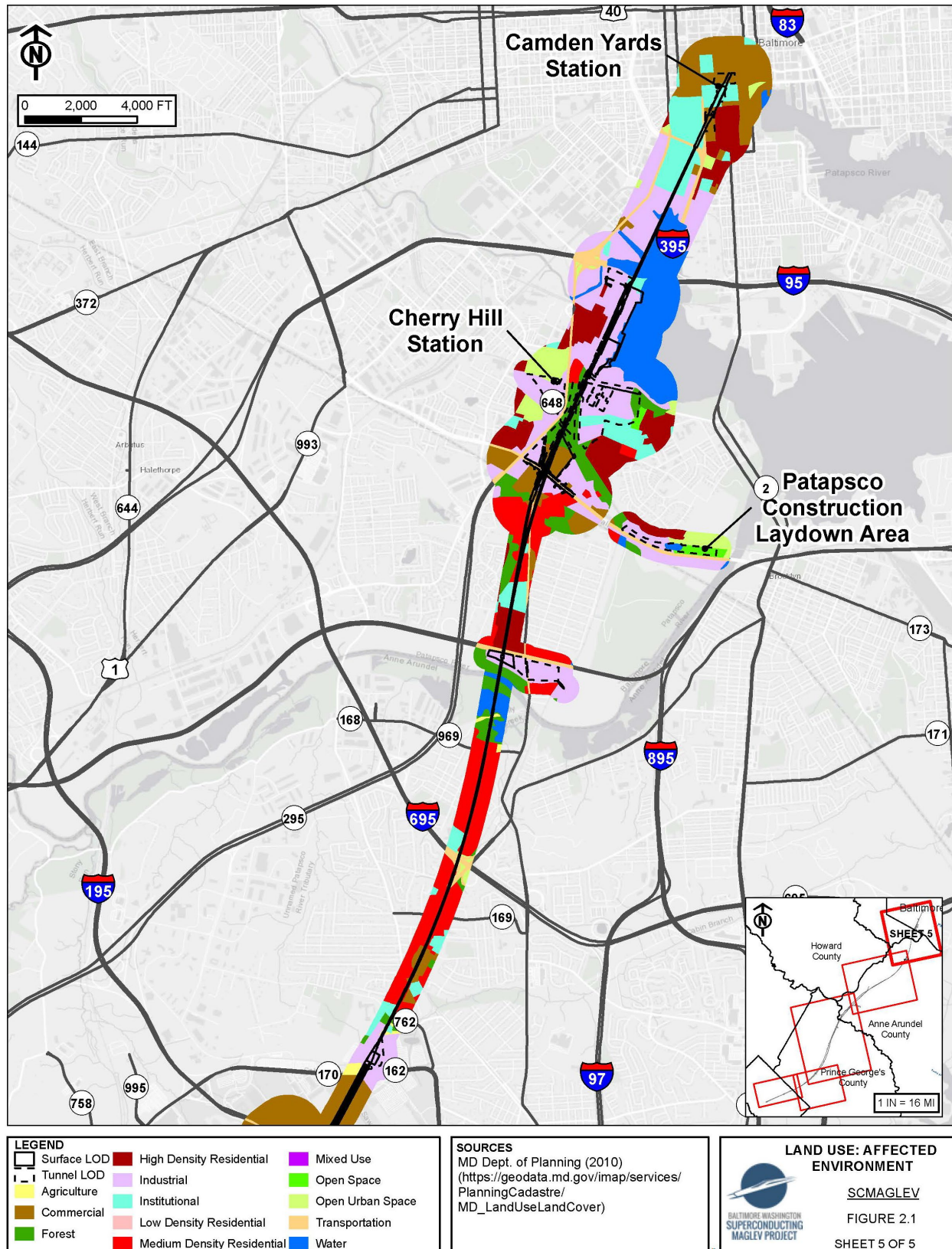
**Figure D.3-5: Land Use: Affected Environment (Sheet 3 of 5)**



**Figure D.3-5: Land Use: Affected Environment (Sheet 4 of 5)**



**Figure D.3-5: Land Use: Affected Environment (Sheet 5 of 5)**



**Industrial & Institutional** – There are concentrations of industrial land uses in the Ivy City neighborhood of Washington, D.C. and around Patapsco Avenue and Annapolis Road in Baltimore City. Scattered industrial land uses also occur within the vicinity of major roadways such as MD 201 in Prince George’s County and MD 162, MD 170, MD 176, and MD 198 in Anne Arundel County. Institutional land use includes Federal, state, and local government-owned property. Institutional land uses are present at BARC, the NASA GSFC, and the Secret Service properties in Prince George’s County; in dense pockets in Anne Arundel County, including the Fort George G. Meade area; the Mount Vernon Square area of Washington, D.C.; and Camden Yards in Baltimore City. Churches and schools also qualify as institutional land uses and are dispersed throughout the SCMAGLEV Project Affected Environment, generally in proximity to residential and commercial areas that they serve.

**Transportation** – Transportation land uses exist throughout the SCMAGLEV Project Affected Environment and include interstates, highways, parkways, state roadways, railways, and local roads. The BWP (MD 295) stretches north-south throughout most of the SCMAGLEV Project Affected Environment and is a major roadway that spans from Washington, D.C. to Baltimore City. A major segment of I-495 (Capital Beltway) in Prince George’s County and I-695 (Baltimore Beltway) in Anne Arundel and Baltimore Counties interconnect north-south corridors of the SCMAGLEV Project Affected Environment. The Northeast Corridor (NEC) railway runs north-south between Washington, D.C. and Baltimore, MD with passenger rail provided by the Maryland Area Regional Commuter (MARC) Train Camden line and MARC Train Penn line, as well as Amtrak service. Other transportation land uses include portions of the Washington Metro Area Transit Authority (WMATA) Metrorail system, located throughout Washington, D.C. and Prince George’s County, and portions of the Maryland Department of Transportation, Maryland Transit Administration (MDOT MTA) Light RailLink system located in Baltimore City, Baltimore County, and Anne Arundel County.

**Open Space, Open Urban Space & Water** – Open space and open urban space includes golf courses, parks, recreation areas (except areas associated with schools or other institutions), cemeteries, and undeveloped land. These land uses are dispersed throughout the SCMAGLEV Project Affected Environment. Water is present to a lesser extent than the other land uses within the SCMAGLEV Project Affected Environment. Water includes Anacostia, Patuxent, Little Patuxent, and Patapsco Rivers.

### D.3B.2.3 Zoning

The SCMAGLEV Project Affected Environment is primarily zoned as residential, open space, and industrial. For purposes of this analysis, areas not specifically zoned by a county were classified as ‘other’ which often, but not always, pertains to Federal lands. Zoning is used to dictate which uses can and cannot take place within a designated area. Zoning codes sometimes include provisions that regulate the form of the built environment within designated areas. Typically, when a property owner wants to use their land for a purpose outside of the designated zoning for the area, they would have to apply for a special exception. As stated previously, zoning is established and controlled within the Affected Environment by multiple jurisdictions and rules for

designating or changing zoning vary. Certain transportation uses (i.e., underground utilities, roads, rail roads, and transit stations) are supported within most zoning designations. Other above-ground public utility uses, or structures would require a special exception. Zoning designations present within the SCMAGLEV Project Affected Environment are summarized below and identified on zoning mapping in **Figure D.3-6, Sheets 1-5. Table D.3-5** displays the zoning classifications and acreage within the Affected Environment.

**Table D.3-5: Zoning Classifications within the Affected Environment**

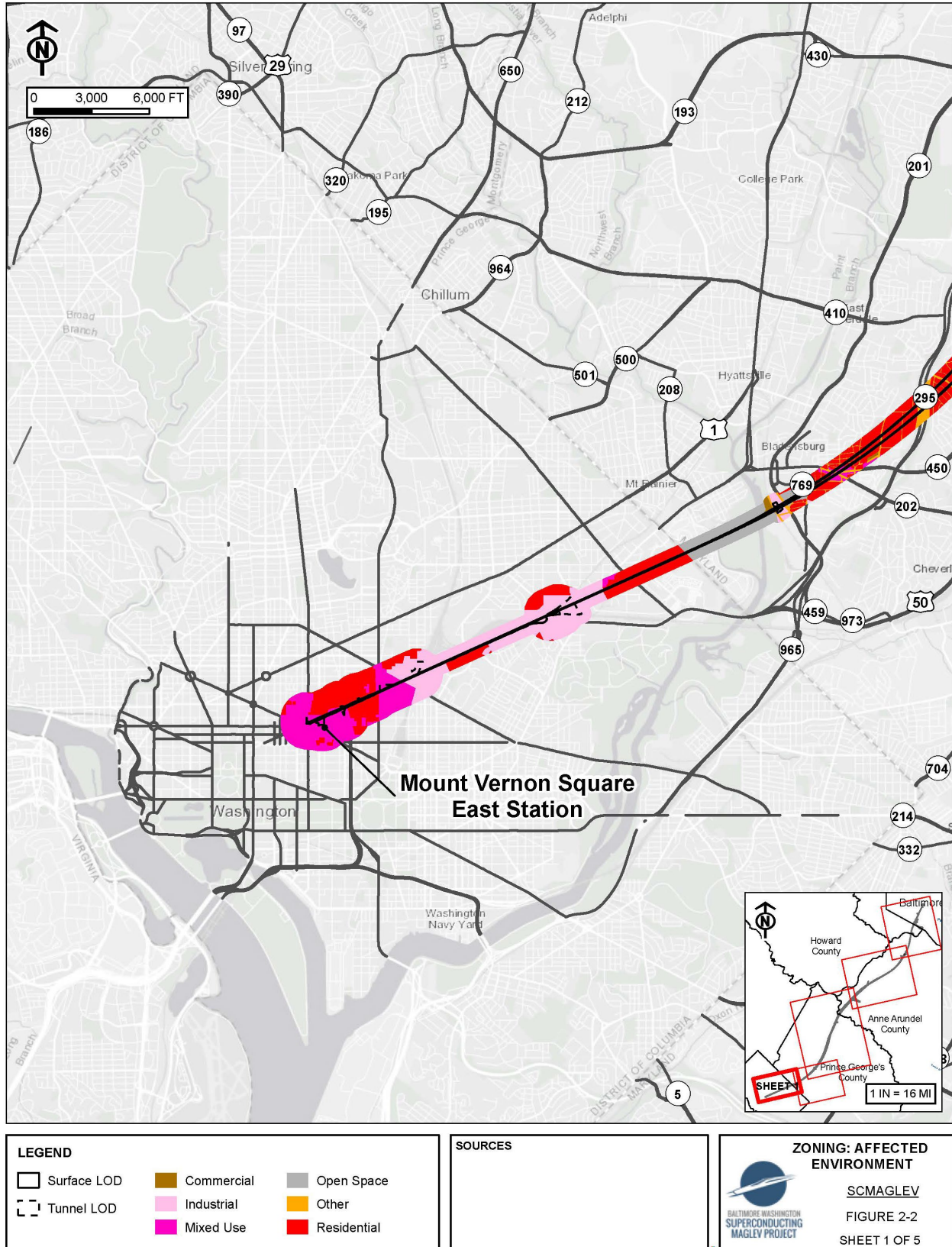
| Zoning       | Acreage         | Percentage of Study Area |
|--------------|-----------------|--------------------------|
| Commercial   | 688.8           | 6.8%                     |
| Industrial   | 1,241.8         | 12.3%                    |
| Mixed Use    | 1,023.0         | 10.1%                    |
| Open Space   | 3,782.1         | 37.4%                    |
| Other        | 696.8           | 6.9%                     |
| Residential  | 2,679.9         | 26.5%                    |
| <b>Total</b> | <b>10,112.4</b> | <b>100%</b>              |

Source: Zoning codes were reclassified into the above designations from the following sources: District of Columbia Zoning Map 2016, DC Office of Zoning; Prince George's County Zoning Map, The Maryland-National Capital Park and Planning Commission-Prince George's County Planning Department; Anne Arundel County Adopted Zoning Map, Anne Arundel County Office of Planning and Zoning; Baltimore County Zoning, Baltimore County Department of Planning; Baltimore City Existing Zoning Districts Map, Baltimore City Department of Planning.

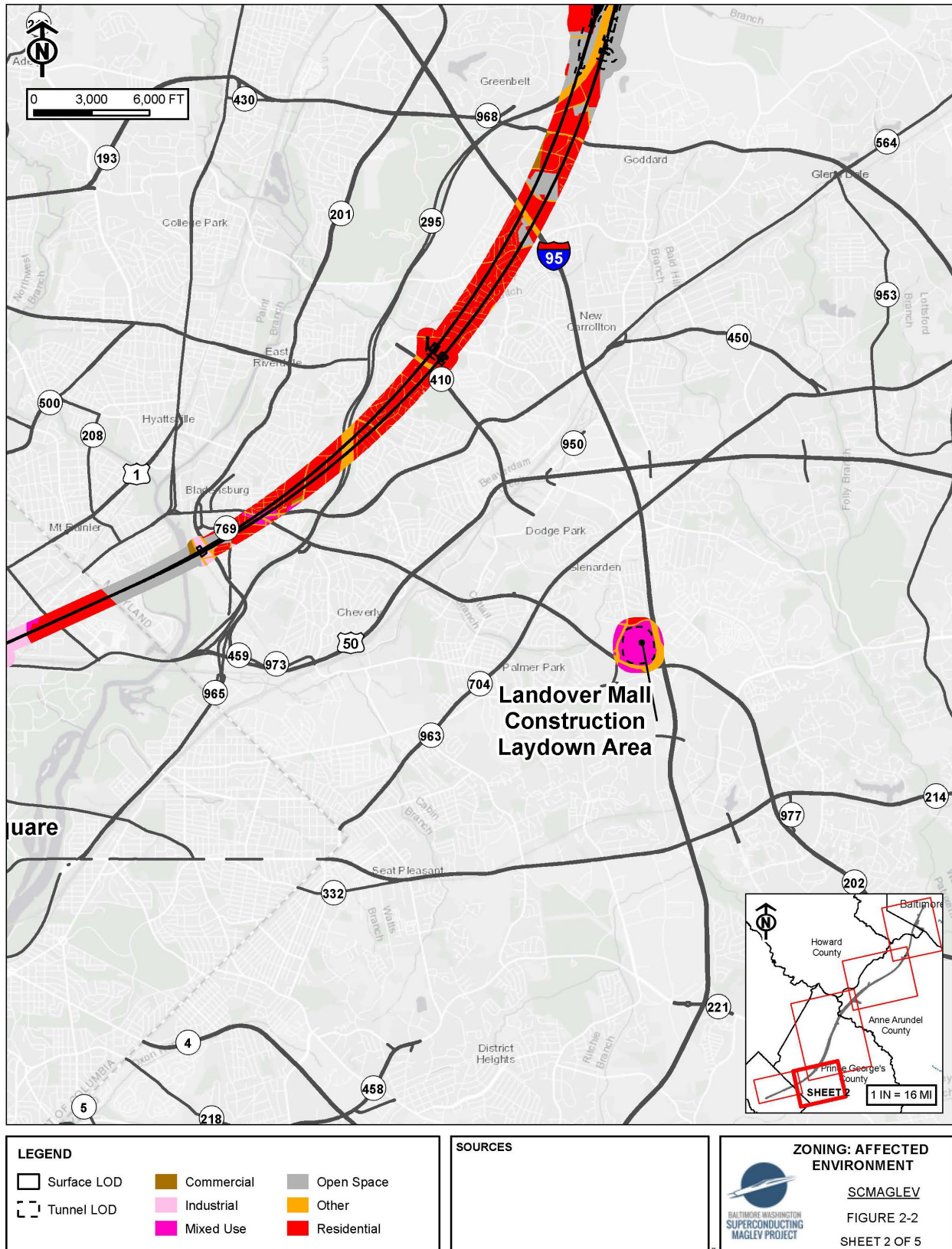
Within the SCMAGLEV Project Affected Environment, Anne Arundel County has the highest acreage of residential zoning, which is the most prevalent zoning in the SCMAGLEV Project Affected Environment. Open space zoning, including parks and other undeveloped parcels, is the second most prevalent zoning designation throughout the SCMAGLEV Project Affected Environment. Prince George's County has the highest concentration of open space zoning. Industrial is the third largest zoning designation in the SCMAGLEV Project Affected Environment, primarily concentrated within Baltimore City and the Ivy City neighborhood of Washington, D.C.

Federal lands are not provided a zoning category by the local jurisdictions and are designated as Other on zoning maps. These Federal lands, which are prevalent in Prince George's County and Anne Arundel County, include portions of NPS BWP, NASA GSFC, BARC, USSS, PRR, Fort George G. Meade, and NSA properties.

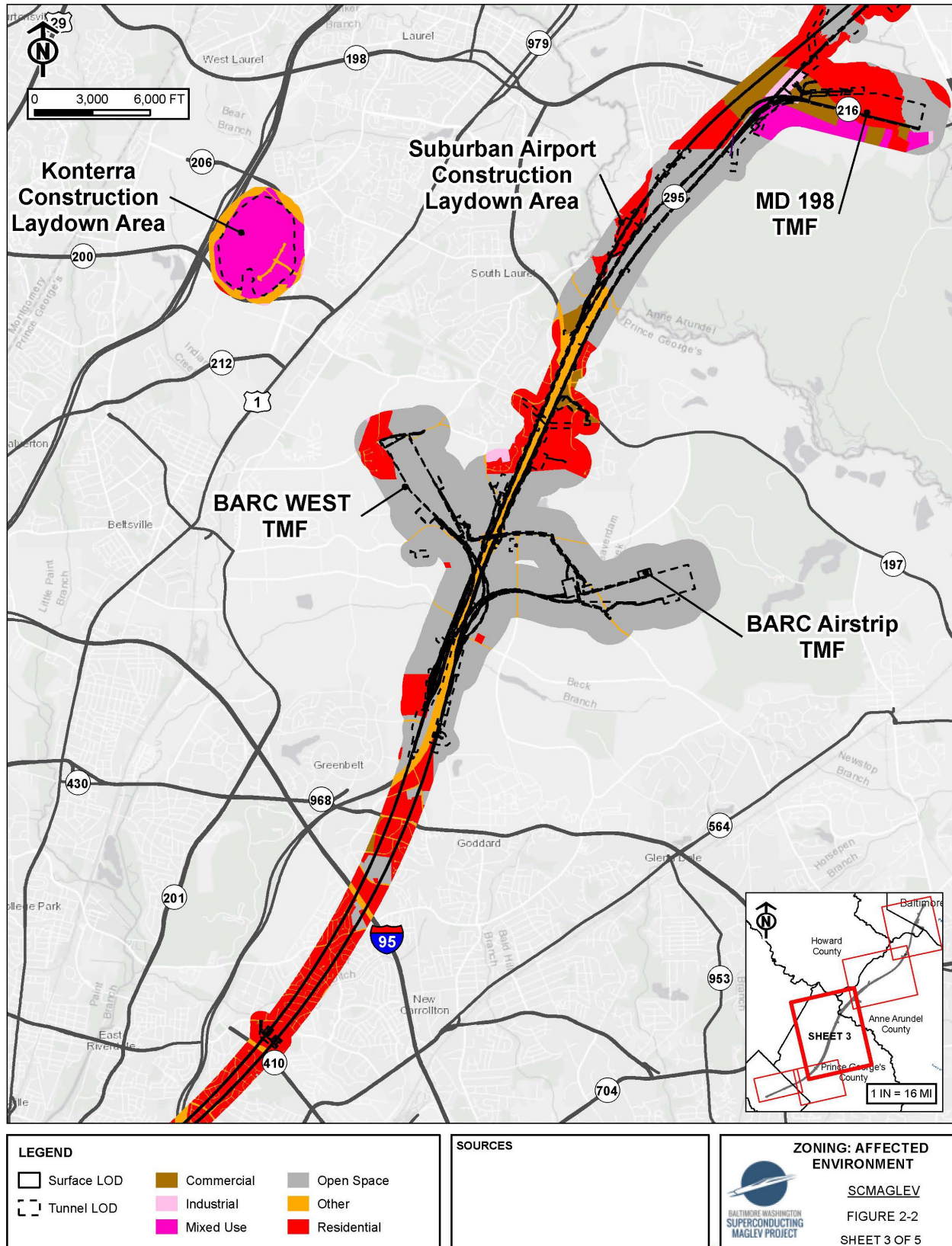
**Figure D.3-6: Zoning: Affected Environment (Sheet 1 of 5)**



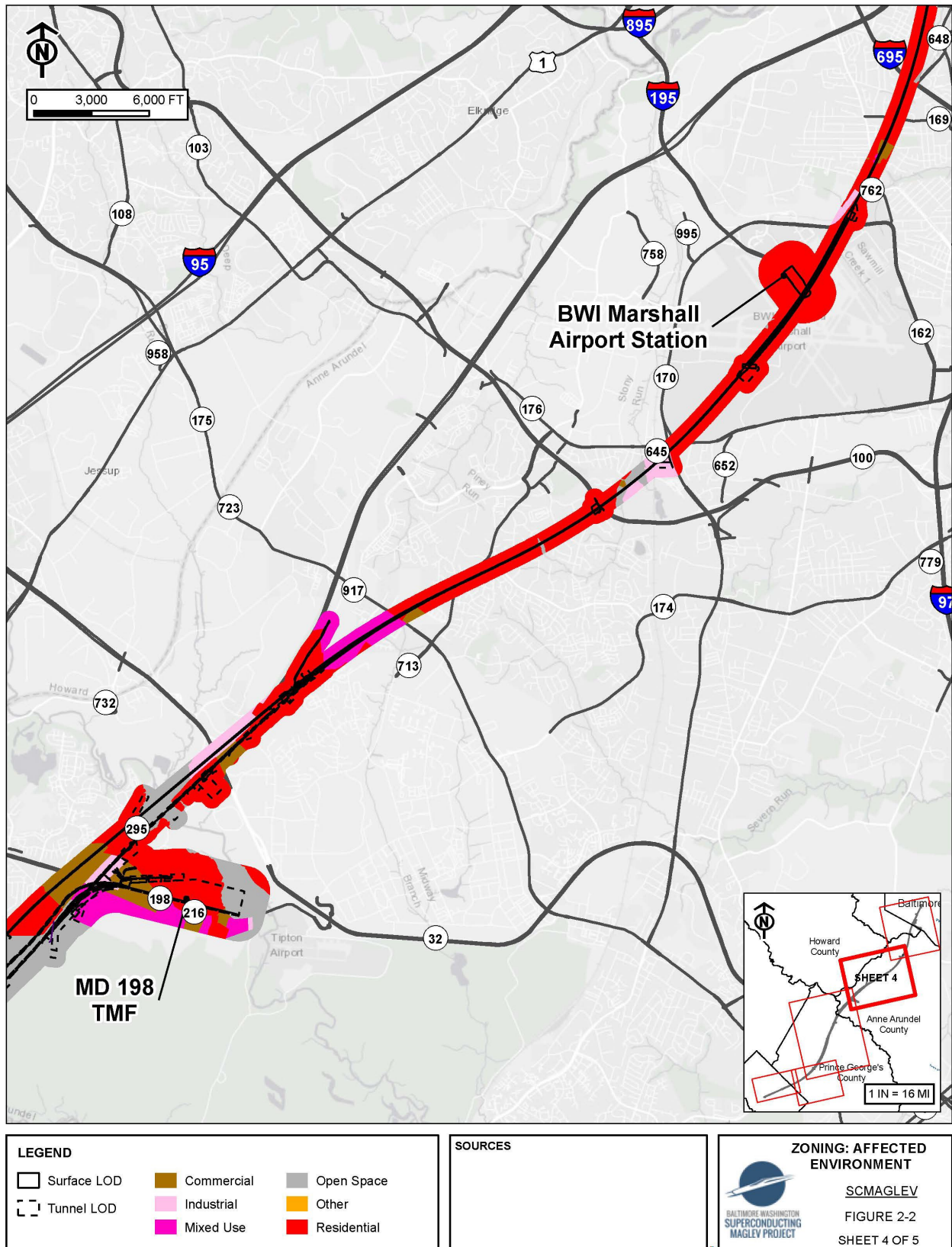
**Figure D.3-6: Zoning: Affected Environment (Sheet 2 of 5)**



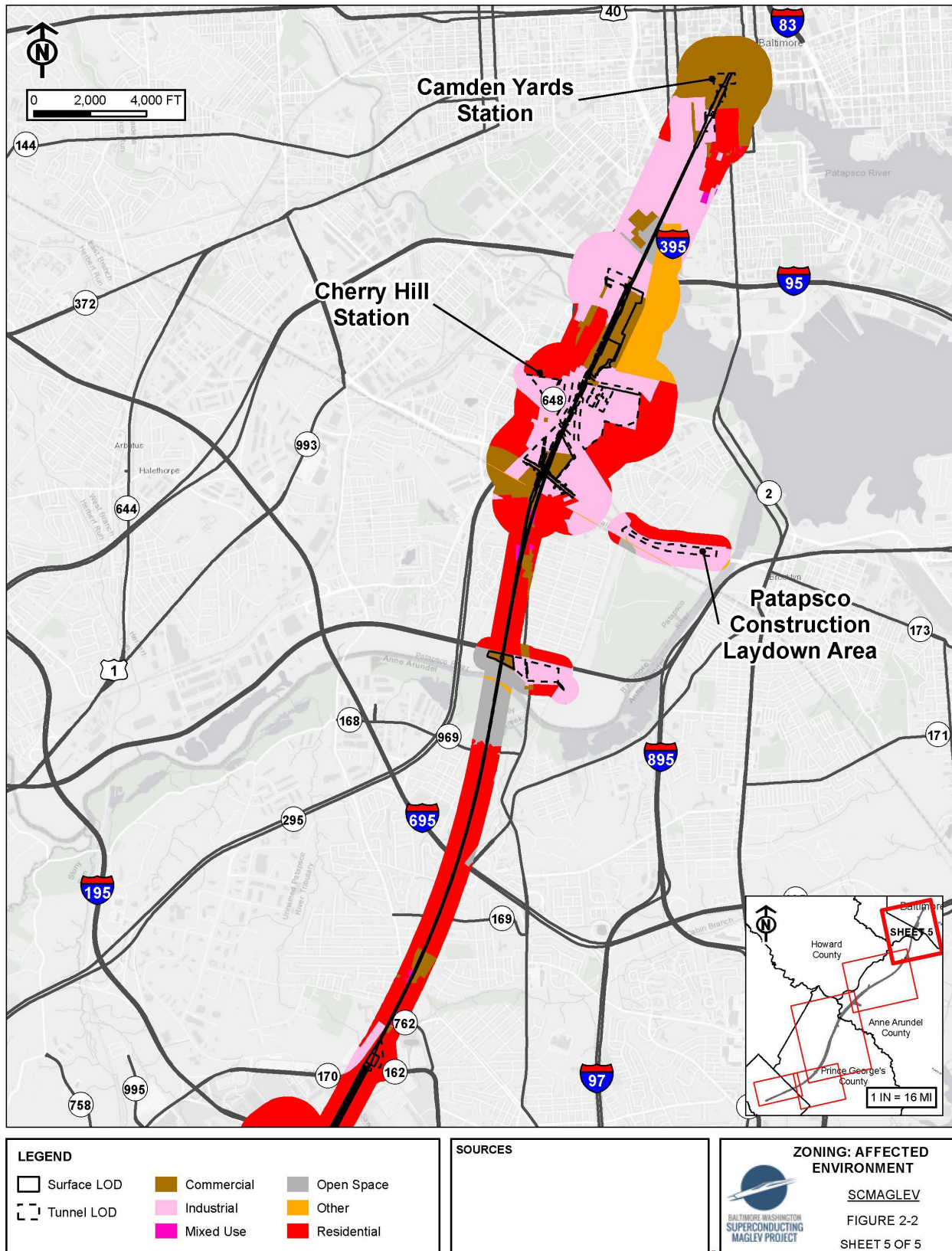
**Figure D.3-6: Zoning: Affected Environment (Sheet 3 of 5)**



**Figure D.3-6: Zoning: Affected Environment (Sheet 4 of 5)**



**Figure D.3-6: Zoning: Affected Environment (Sheet 5 of 5)**



## **D.3B.3 Environmental Consequences**

### **D.3B.3.1 No Build Alternative**

Under the No Build Alternative, the SCMAGLEV Project would not be built and therefore no impacts related to the construction or operation of a SCMAGLEV system will occur. However, other planned and funded transportation projects will continue to be implemented in the area and could result in change to land uses and property impacts.

### **D.3B.3.2 Build Alternatives**

The Build Alternatives support statewide and regional transportation goals as identified in various approved comprehensive planning documents, including improvements to multi-modal mobility and improved access to commercial and transportation hubs. Additionally, the SCMAGLEV Project would indirectly support many local planning goals in Washington D.C., Anne Arundel County, Baltimore County, and Baltimore City.

The impacts associated with land use and zoning changes would require coordination with local or Federal agencies, and the approval process would vary per agency. Land use and zoning changes occur frequently within developed areas, and changing residential, commercial, and industrial land uses to transportation uses are generally allowed and approved given that the relevant procedures are followed. Project elements would be considered transportation and/or public utility use. In general, zoning codes within the jurisdictions where the project is located either currently permit transportation and/or public utility use or would require a special exception prior to construction.

Additionally, all changes to land use and property impacts on Federal property would require agency-specific coordination. During interagency scoping, multiple agencies expressed concerns about land use changes and the proximity of the SCMAGLEV facilities and its associated direct and indirect impacts to their property. Locating SCMAGLEV viaduct and/or supporting facilities on or within close proximity to their properties may impact the agency's ability to fulfill their current mission and limit the scope of future missions and development. Likewise, some agencies have noted that the property transfer is unprecedented, infrequent, unfavorable, and/or potentially unattainable. Land acquisition from federal agencies could require agency-specific permitting, transfer agreements, or in some cases, congressional approval.

This land use analysis is based on the LOD of above ground elements of the Build Alternatives. Coordination with property owners during later design phases would be required for impacts to utilities and water wells (discussed in greater detail in the Baltimore-Washington SCMAGLEV DEIS Section 4.13 Geology and Section 4.20 Utilities), and any rights to below ground resources. Impacts to land use, zoning, and property would vary between the 12 Build Alternatives.

Linear impacts to land use would be due to the viaduct, its support piers, and new roadways built to supplement access for construction and ongoing maintenance. Large area impacts to land use would be associated with project related buildings such as

substations, FA/EEs, TMFs, and systems support buildings; construction laydown areas; and areas for stormwater management.

Property impacts are displayed by parcel in Attachment A on Table A.1 and on Figures A.1. Permanent and temporary impacts to land use are displayed by acreage on **Table D.3-6**, number of parcels **Table D.3-7**, acreage by adjusted land use type on **Table D.3-8**, and acreage by ownership on **Table 2.3-9** for each project Build Alternative. Permanent and temporary impacts to property are displayed by total acreage and number of parcels within the LOD for above ground elements, and changes in land use and parcel impacts are highlighted on summary **Table D.3-10**. The Build Alternatives that would require the lowest and highest numbers of residential parcel property impacts are also identified. Additional land use and zoning impact tables are available in **Attachment B**.

### **D.3B.3.2.1 Build Alternatives**

#### **Alignment and Ancillary Facilities**

The aboveground structures associated with the alignment include the viaduct substations, FA/EE facilities, and systems buildings (ancillary facilities). The viaduct would run only along the central portion of the Project corridor and generally parallels BWP and would impact the land that abuts it. The ancillary facilities would be dispersed throughout the Project corridor and would include larger footprints in comparison to the viaduct. Some ancillary facilities are located within and in close proximity to residential, commercial, open space, and forested land uses. The aboveground structures associated with Build Alternatives J-01 through J-06 would result in permanent changes to land use of between 629 acres and 643 acres. Land use characterized as open space and institutional land uses count for the largest total acreage of land changes to transportation use. The alignment and ancillary facilities associated with the Build Alternatives J-01 through J-06 would require full permanent acquisitions from a range of 114 to 120 parcels. The deep tunnel features of the Build Alternatives J-01 through J-06 is not anticipated to result in any land use conversion. Some land use conversions would require rezoning.

Comparatively, the alignment and ancillary facilities for Build Alternatives with the Build Alternatives J1, would result in land use changes of between 620 acres and 636 acres from mostly open space and commercial land uses to transportation use. The alignment and ancillary facilities of Build Alternatives J1-02 and J1-03 would require the highest number of full permanent acquisitions with 120 parcels.

Build Alternatives J1-01 through J1-06 would require a full permanent acquisition of one residential property located off of Harmans Road due to a FA/EE facility as required for Build Alternatives J-01 through J-06. The standard spacing between the FA/EE facilities is approximately every 5km (3.1 mi), but they may be spaced up to 6km (3.7 mi) apart. Build Alternatives J1-01 through J1-06 would require an additional full permanent acquisition of a residential parcel located between Hermosa Drive and BWP. This parcel is currently forested. Changes to residential land use would also be required to areas along BWP in the vicinity of the MD 197 interchange for all Build Alternatives and would

result in multiple partial permanent acquisitions. However, the LOD in these areas are in close proximity to residential structures and may eliminate parking and egress in some areas. Therefore, additional properties may warrant a full permanent acquisition.

Federal lands would also be impacted by the SCMAGLEV Project alignments and ancillary facilities. Build Alternatives J-01 through J-06 would permanently impact up to 328 acres and temporarily impact up to 120 acres of Federal lands. Viaduct and ancillary facilities of Build Alternatives J-01 through J-06 would be located east of the BWP and within properties operated by federal agencies including NPS, NASA Goddard, BARC, US Secret Service, PRR, NSA, and Fort Meade. The viaduct and ancillary facilities would be within the perimeter fence line at the USSS, Fort Meade, and NSA properties and could limit access to portions of these sites.

Build Alternatives J1-01 through J1-06 would permanently impact up to 245 acres and temporarily impact up to 60 acres of Federal lands. Viaduct and ancillary facilities of Build Alternatives J1-01 through J1-06 would be located along the BWP and western boarder of properties operated by federal agencies including NPS, BARC, and Fort Meade.

### **Stations**

The Project would include the construction and operation of three stations. One in Washington, DC, one at BWI Marshall Airport, and one in Baltimore City. Two stations, Cherry Hill Station and Camden Yards Station, are under consideration in Baltimore City. Only one would be constructed as part of the project.

Each proposed station would result in land use changes and property acquisition. The Cherry Hill Station (Build Alternatives J-01, J-02, J-03, J1-01, J1-02, and J1-03) would result in the greatest land use change, with approximately 179 acres and 73 full permanent parcel acquisitions. The Cherry Hill Station is the only station under consideration that would be above ground. The Cherry Hill Station would be built above an existing Light Rail Station. Most of the land use changes will occur to industrial uses (115 acres), followed by commercial uses (20 acres) and forest uses (19 acres). The majority of the commercial land use changes would be associated with the businesses in the northeast quadrant of the intersection of Annapolis and Patapsco Roads and would include the Patapsco Flea Market and Patapsco Arena. There would be multiple full permanent acquisitions in this area, in addition to properties acquired east and west of the proposed station along Annapolis Road, Waterview Road, and Cherry Hill Road. Baltimore City planning documents, such as the South Baltimore Gateway Master Plan, acknowledge that consideration should be given to redeveloping this area.

The Camden Yards Station (Build Alternatives J-04, J-05, J-06, J1-04, J1-05, and J1-06) would be located in Downtown Baltimore City and would result in approximately 27 acres of permanent land use changes and four full permanent parcel acquisitions and would include the demolition of the Baltimore Convention Center, the Garmatz US District Court House, Old Otterbein Church, and the Federal Reserve Bank. Camden Yards access points would be along W Conway and Pratt Streets between Howard and Charles Streets.

BWI Marshall Airport Station (all Build Alternatives) would be located under the existing airport and garage facilities and would result in 21 acres of permanent commercial land use changes.

The Mount Vernon Square East Station (all Build Alternatives) would result in approximately 3 acres of permanent commercial, institutional, open urban space, and transportation land use changes; this station would have the least permanent changes in land use. Mount Vernon Square East Station access points would be southeast of the 6<sup>th</sup> Street NW and New York Avenue NW intersection, northeast of the 4<sup>th</sup> Street NW and New York Avenue NW intersection, and northwest of the 1<sup>st</sup> Street NW and New York Avenue NW intersection within the New York Avenue Playground and Park.

The current zoning designation at each station location supports the required land use conversion to transportation.

### **TMF**

Build Alternatives J and MD 198 TMF (J-01 and J-04) would require permanent changes to land use of nearly 194 acres and 11 full permanent parcel acquisitions. Land use converted to transportation use would include the following: approximately 140 acres of forest, 30 acres of institutional, 10 acres of industrial, 5 acres of residential, 4 acres of open urban space, and 3 acres of commercial land uses. The MD 198 TMF would alter the character and development intensity in the area. This location is currently identified within the Anne Arundel County General Development Plan 2009 as part of the Managed Growth Area, which allows for development, and is within the County's Priority Funding Area. The MD 198 TMF would result in the full acquisition of 11 parcels under J-01 and J-04 including the Woodlands Job Corps facility. The US Department of Labor (DOL), which manages and oversees the Woodlands Job Corps facility and program, expressed opposition to any Build Alternatives that would remove the facility. According to DOL, the Woodlands Job Corps facility is only one of two of the kind in the DC area and that relocating the center would be extremely costly.

Build Alternatives J1 and MD 198 TMF (J1-01 and J1-04) would require permanent changes to land use of nearly 216 acres and 12 full permanent parcel acquisitions. Land use changes to transportation use would include the following: approximately 161 acres of forested land use, 31 acres of institutional, 10 acres of industrial, 5 acres of residential, 2 acres of open urban spaces, 3 acres of commercial and 1 acre of agricultural land uses. The MD 198 TMF would alter the character and development intensity in the area. The MD 198 TMF would result in the full acquisition of 12 parcels under Build Alternatives J1-01 and J1-04 including the Woodlands Job Corps facility.

Build Alternatives J and BARC Airstrip TMF (J-02 and J-05) would require permanent changes to land use of nearly 200 acres. Land use changes to transportation use would include the following: approximately 91 acres of institutional, 87 acres of forest, and 22 acres of agricultural land uses. Build Alternatives J1 and BARC Airstrip TMF (J1-02 and J1-05) would require permanent changes to land use of nearly 193 acres. Land use changes to transportation use would include the following: approximately 90 acres of institutional, 82 acres of forested, and 21 acres of agricultural land uses.

The BARC Airstrip TMF would be located in the Prince George's County Rural and Agricultural area. The TMF is not consistent with Prince George's County Master Plan as the county intends to limit and discourage growth in the BARC area to maintain it as a natural area. Permanent partial property acquisition would be required from BARC and PRR. Additionally, portions of a parcel owned by BARC and currently occupied by NASA would be required. The BARC Airstrip TMF would occupy or be in close proximity to land that serves multiple research functions for both BARC and NASA. According to both BARC and NASA, the unique setting of the area cannot be replicated in another location on BARC property, and therefore, if the BARC Airstrip TMF is constructed, the research functions would no longer be available.

Build Alternatives J and BARC West TMF (J-03 and J-06) would require the permanent change in land use of nearly 193 acres. Land use changes to transportation use would include the following: approximately 152 acres of forest, 27 acres of agricultural, 13 acres of institutional uses, and under one acre of residential land uses. Build Alternatives J1 and BARC West TMF (J1-03 and J1-06) would require similar permanent change in land use of nearly 194 acres. Land use changes to transportation use would include the following: approximately 151 acres of forested, 29 acres of agricultural, 13 acres of institutional, and under one acre of residential land uses. The BARC West TMF would require a small amount (less than 1/10th of an acre) of long-term permanent property from residential parcels on Gross Lane. The BARC West TMF would be located in the Prince George's County Rural and Agricultural area. The TMF would not be consistent with Prince George's County Master Plan. Permanent partial property acquisition would be required from BARC. BARC has expressed that the development of either the BARC Airstrip TMF or the BARC West TMF would have a significant impact on BARC research activities and that the changes in land use would affect long-term research that would be permanently lost.

Table D.3-6: Acres of Permanent (P) and Temporary (T) Parcel Impacts by Alignment, Station, and TMF

| Build<br>Alternative | Alignment |        | Stations                    |     |                         |   |             |       |                |       | TMF       |       |               |       |        |      | Build<br>Alternatives<br>Total<br>Permanent<br>Acres of<br>Impact | Build<br>Alternatives<br>Total<br>Temporary<br>Acres of<br>Impact |
|----------------------|-----------|--------|-----------------------------|-----|-------------------------|---|-------------|-------|----------------|-------|-----------|-------|---------------|-------|--------|------|-------------------------------------------------------------------|-------------------------------------------------------------------|
|                      |           |        | Mount Vernon<br>Square East |     | BWI<br>Marshall Airport |   | Cherry Hill |       | Camden Station |       | BARC West |       | BARC Airstrip |       | MD 198 |      |                                                                   |                                                                   |
|                      | P         | T      | P                           | T   | P                       | T | P           | T     | P              | T     | P         | T     | P             | T     | P      | T    |                                                                   |                                                                   |
| J-01                 | 640.14    | 169.06 | 1.78                        | 1.1 | 20.92                   | 0 | 163.52      | 28.26 | -              | -     | -         | -     | -             | -     | 173.87 | 4.29 | 1,000.23                                                          | 202.71                                                            |
| J-02                 | 642.2     | 175.58 | 1.78                        | 1.1 | 20.92                   | 0 | 163.52      | 28.26 | -              | -     | -         | -     | 237.41        | 33.65 | -      | -    | 1,065.83                                                          | 238.59                                                            |
| J-03                 | 643.15    | 175.58 | 1.78                        | 1.1 | 20.92                   | 0 | 163.52      | 28.26 | -              | -     | 189.32    | 9.25  | -             | -     | -      | -    | 1,018.69                                                          | 214.19                                                            |
| J-04                 | 628.58    | 168.8  | 1.78                        | 1.1 | 20.92                   | 0 | -           | -     | 26.68          | 41.65 | -         | -     | -             | -     | 173.84 | 4.29 | 851.80                                                            | 215.84                                                            |
| J-05                 | 630.91    | 175.82 | 1.78                        | 1.1 | 20.92                   | 0 | -           | -     | 26.68          | 41.65 | -         | -     | 237.41        | 33.65 | -      | -    | 917.70                                                            | 252.22                                                            |
| J-06                 | 631.86    | 175.8  | 1.78                        | 1.1 | 20.92                   | 0 | -           | -     | 26.68          | 41.65 | 189.32    | 9.25  | -             | -     | -      | -    | 870.56                                                            | 227.8                                                             |
| J1-01                | 631.97    | 84.63  | 1.78                        | 1.1 | 20.92                   | 0 | 163.52      | 28.26 | -              | -     | -         | -     | -             | -     | 190.64 | 6.36 | 1,008.83                                                          | 120.35                                                            |
| J1-02                | 636.23    | 95.49  | 1.78                        | 1.1 | 20.92                   | 0 | 163.52      | 28.26 | -              | -     | -         | -     | 230.82        | 35.93 | -      | -    | 1,053.27                                                          | 160.78                                                            |
| J1-03                | 631.39    | 91.23  | 1.78                        | 1.1 | 20.92                   | 0 | 163.52      | 28.26 | -              | -     | 191.41    | 12.32 | -             | -     | -      | -    | 1,009.02                                                          | 132.91                                                            |
| J1-04                | 620.68    | 84.87  | 1.78                        | 1.1 | 20.92                   | 0 | -           | -     | 26.68          | 41.65 | -         | -     | -             | -     | 190.64 | 6.36 | 860.70                                                            | 133.98                                                            |
| J1-05                | 624.94    | 95.73  | 1.78                        | 1.1 | 20.92                   | 0 | -           | -     | 26.68          | 41.65 | -         | -     | 230.82        | 35.93 | -      | -    | 905.14                                                            | 174.41                                                            |
| J1-06                | 620.1     | 91.46  | 1.78                        | 1.1 | 20.92                   | 0 | -           | -     | 26.68          | 41.65 | 191.41    | 12.32 | -             | -     | -      | -    | 860.89                                                            | 146.53                                                            |

Source: Maryland Parcel Boundaries, iMAP, Maryland Department of Planning; Common Ownership Lots, OpenData DC, DCGIS  
P - includes Full and Partial Permanent property impacts  
T - Temporary property impacts that would occur during construction

Table D.3-7: Number of Permanent (P) and Temporary (T) Parcel Impacts by Alignment, Station, and TMF

| Build Alternative | Alignment |    | Stations                 |    |                      |   |             |    |              |    | TMF       |   |               |    |        |    | Build Alternatives - Total Number of Parcels Permanently Impacted | Build Alternatives - Total Number of Parcels Temporarily Impacted |
|-------------------|-----------|----|--------------------------|----|----------------------|---|-------------|----|--------------|----|-----------|---|---------------|----|--------|----|-------------------------------------------------------------------|-------------------------------------------------------------------|
|                   |           |    | Mount Vernon Square East |    | BWI Marshall Airport |   | Cherry Hill |    | Camden Yards |    | BARC West |   | BARC Airstrip |    | MD 198 |    |                                                                   |                                                                   |
|                   | P         | T  | P                        | T  | P                    | T | P           | T  | P            | T  | P         | T | P             | T  | P      | T  |                                                                   |                                                                   |
| J-01              | 161       | 62 | 16                       | 26 | 1                    | 0 | 109         | 70 | -            | -  | -         | - | -             | -  | 25     | 4  | 312                                                               | 162                                                               |
| J-02              | 161       | 66 | 16                       | 26 | 1                    | 0 | 109         | 70 | -            | -  | -         | - | 7             | 8  | -      | -  | 294                                                               | 170                                                               |
| J-03              | 161       | 66 | 16                       | 26 | 1                    | 0 | 109         | 70 | -            | -  | 10        | 5 | -             | -  | -      | -  | 297                                                               | 167                                                               |
| J-04              | 158       | 63 | 16                       | 26 | 1                    | 0 | -           | -  | 7            | 20 | -         | - | -             | -  | 25     | 4  | 207                                                               | 113                                                               |
| J-05              | 158       | 69 | 16                       | 26 | 1                    | 0 | -           | -  | 7            | 20 | -         | - | 7             | 8  | -      | -  | 189                                                               | 123                                                               |
| J-06              | 158       | 69 | 16                       | 26 | 1                    | 0 | -           | -  | 7            | 20 | 10        | 5 | -             | -  | -      | -  | 192                                                               | 120                                                               |
| J1-01             | 174       | 58 | 16                       | 26 | 1                    | 0 | 109         | 70 | -            | -  | -         | - | -             | -  | 34     | 13 | 334                                                               | 167                                                               |
| J1-02             | 177       | 75 | 16                       | 26 | 1                    | 0 | 109         | 70 | -            | -  | -         | - | 10            | 12 | -      | -  | 313                                                               | 183                                                               |
| J1-03             | 175       | 75 | 16                       | 26 | 1                    | 0 | 109         | 70 | -            | -  | 13        | 7 | -             | -  | -      | -  | 314                                                               | 178                                                               |
| J1-04             | 171       | 62 | 16                       | 26 | 1                    | 0 | -           | -  | 7            | 20 | -         | - | -             | -  | 34     | 13 | 229                                                               | 121                                                               |
| J1-05             | 174       | 76 | 16                       | 26 | 1                    | 0 | -           | -  | 7            | 20 | -         | - | 10            | 12 | -      | -  | 208                                                               | 134                                                               |
| J1-06             | 173       | 79 | 16                       | 26 | 1                    | 0 | -           | -  | 7            | 20 | 13        | 7 | -             | -  | -      | -  | 210                                                               | 132                                                               |

Source: Maryland Parcel Boundaries, iMAP, Maryland Department of Planning ; Common Ownership Lots, OpenData DC, DCGIS  
P - includes Full and Partial Permanent property impacts  
T - Temporary property impacts that would occur during construction

Table D.3-8: Impacted Land Use by Adjusted Land Use

| Build<br>Alternative/Option | Residential |      | Open Space |     | Open Urban<br>Space |      | Commercial |      | Industrial |      | Institutional |       | Forest |      | Transportation |      | Other** |     | TOTAL  |       |
|-----------------------------|-------------|------|------------|-----|---------------------|------|------------|------|------------|------|---------------|-------|--------|------|----------------|------|---------|-----|--------|-------|
|                             | P           | T    | P          | T   | P                   | T    | P          | T    | P          | T    | P             | T     | P      | T    | P              | T    | P       | T   | P      | T     |
| J-01                        | 4.6         | 12.3 | 354.5      | 3.8 | 38.1                | 3.1  | 202.9      | 11.7 | 53.8       | 13.7 | 227.6         | 125.1 | 30.7   | 11.8 | 46.0           | 21.2 | 42.0    | 0.0 | 1000.2 | 202.7 |
| J-02                        | 4.6         | 12.9 | 354.5      | 3.8 | 38.1                | 3.1  | 195.2      | 11.7 | 53.8       | 13.7 | 325.4         | 159.9 | 6.0    | 11.2 | 46.2           | 22.3 | 42.0    | 0.0 | 1065.8 | 238.6 |
| J-03                        | 4.6         | 12.9 | 354.5      | 3.8 | 38.1                | 3.1  | 195.2      | 11.7 | 53.8       | 13.7 | 278.2         | 135.5 | 6.0    | 11.2 | 46.2           | 22.3 | 42.0    | 0.0 | 1018.7 | 214.2 |
| J-04                        | 4.6         | 12.3 | 354.5      | 3.8 | 10.6                | 31.8 | 120.9      | 11.1 | 27.2       | 0.0  | 223.0         | 127.2 | 30.2   | 9.0  | 38.9           | 20.7 | 42.0    | 0.0 | 851.8  | 215.8 |
| J-05                        | 4.6         | 12.8 | 354.5      | 3.8 | 10.8                | 32.0 | 113.3      | 11.4 | 27.2       | 0.0  | 320.8         | 162.0 | 5.5    | 8.4  | 39.1           | 21.8 | 42.0    | 0.0 | 917.7  | 252.2 |
| J-06                        | 4.6         | 12.8 | 354.5      | 3.8 | 10.8                | 32.0 | 113.3      | 11.4 | 27.2       | 0.0  | 273.7         | 137.6 | 5.5    | 8.4  | 39.1           | 21.8 | 42.0    | 0.0 | 870.6  | 227.8 |
| J1-01                       | 5.2         | 14.1 | 364.0      | 3.4 | 38.0                | 2.1  | 201.0      | 14.5 | 53.8       | 13.7 | 176.0         | 40.3  | 90.6   | 11.6 | 37.5           | 20.6 | 42.8    | 0.1 | 1008.8 | 120.4 |
| J1-02                       | 5.5         | 15.4 | 364.0      | 5.7 | 38.0                | 2.1  | 191.4      | 15.4 | 53.8       | 13.7 | 259.5         | 73.1  | 60.7   | 14.6 | 37.5           | 20.6 | 42.9    | 0.3 | 1053.3 | 160.8 |
| J1-03                       | 5.5         | 15.4 | 364.0      | 5.7 | 38.0                | 2.1  | 191.4      | 15.4 | 53.8       | 13.7 | 212.7         | 48.3  | 63.3   | 11.5 | 37.5           | 20.6 | 42.9    | 0.3 | 1009.0 | 132.9 |
| J1-04                       | 5.2         | 14.0 | 364.0      | 3.4 | 10.6                | 31.0 | 119.1      | 14.2 | 27.2       | 0.0  | 171.4         | 42.4  | 90.0   | 8.8  | 30.4           | 20.0 | 42.8    | 0.1 | 860.7  | 134.0 |
| J1-05                       | 5.5         | 15.3 | 364.0      | 5.7 | 10.6                | 31.0 | 109.5      | 15.1 | 27.2       | 0.0  | 254.9         | 75.2  | 60.2   | 11.7 | 30.4           | 20.0 | 42.9    | 0.3 | 905.1  | 174.4 |
| J1-06                       | 5.5         | 15.3 | 364.0      | 5.7 | 10.6                | 31.0 | 109.5      | 15.1 | 27.2       | 0.0  | 208.1         | 50.4  | 62.8   | 8.7  | 30.4           | 20.0 | 42.9    | 0.3 | 860.9  | 146.5 |

\* in Acres \*Adjusted Land Use - Comprised predominantly of the Maryland Department of Planning (MDP) Land Use/Land Cover 2010 and DCGIS Existing Land Use designations. The land use of some parcels were adjusted, based on field observations, if the current land uses was inconsistent with the MDP 2010 designation. These adjusted land use classifications were used to quantify impacts to parcels within the LOD. Therefore, these numbers do not reflect the Land Use impact totals (Table D.3-4), which were calculated with the non-adjusted MDP Land Use/Land Cover 2010 designations.

\*\*Other - Former Suburban Airport Property  
P - includes Full and Partial Permanent property impacts  
T - Temporary property impacts that would occur during construction

**Table D.3-9: Federal Property Acres of Permanent (P) and Temporary (T) Impacts by Alignment**

| Build Alternative | BARC  |      | Fort George G. Meade |     | NASA Goddard Space Flight Center |     | NSA |     | Patuxent Wildlife Research Refuge |      | Secret Service |     | BW Parkway/NPS |      | Build Alternatives - Total Permanent Acres of Impact | Build Alternatives - Total Temporary Acres of Impact |
|-------------------|-------|------|----------------------|-----|----------------------------------|-----|-----|-----|-----------------------------------|------|----------------|-----|----------------|------|------------------------------------------------------|------------------------------------------------------|
|                   | P     | T    | P                    | T   | P                                | T   | P   | T   | P                                 | T    | P              | T   | P              | T    |                                                      |                                                      |
| J-01              | 16.5  | 18.4 | 43.3                 | 8.5 | 6.7                              | 5.6 | 5.2 | 0.9 | 24.0                              | 22.9 | 0.9            | 0.5 | 88.9           | 27.2 | 185.5                                                | 84.0                                                 |
| J-02              | 187.4 | 38.5 | 18.5                 | 8.5 | 24.5                             | 9.2 | 5.2 | 0.9 | 23.7                              | 23.1 | 2.0            | 7.0 | 66.3           | 33.0 | 327.6                                                | 120.2                                                |
| J-03              | 164.9 | 26.9 | 18.5                 | 8.5 | 6.7                              | 5.6 | 5.2 | 0.9 | 23.7                              | 23.1 | 1.0            | 3.4 | 67.2           | 36.1 | 287.2                                                | 104.5                                                |
| J-04              | 16.5  | 18.4 | 43.3                 | 8.5 | 6.7                              | 5.6 | 5.2 | 0.9 | 24.0                              | 22.9 | 0.9            | 0.5 | 88.9           | 27.2 | 185.5                                                | 84.0                                                 |
| J-05              | 187.4 | 38.5 | 18.5                 | 8.5 | 24.5                             | 9.2 | 5.2 | 0.9 | 23.7                              | 23.1 | 2.0            | 7.0 | 66.7           | 33.0 | 328.0                                                | 120.2                                                |
| J-06              | 164.9 | 26.9 | 18.5                 | 8.5 | 6.7                              | 5.6 | 5.2 | 0.9 | 23.7                              | 23.1 | 1.0            | 3.4 | 67.2           | 36.1 | 287.2                                                | 104.5                                                |
| J1-01             | 18.7  | 10.0 | 29.8                 | 5.4 | 0.0                              | 0.0 | 0.0 | 0.0 | 0.0                               | 0.0  | 0.0            | 0.0 | 53.4           | 13.6 | 101.9                                                | 29.0                                                 |
| J1-02             | 180.6 | 32.6 | 5.0                  | 5.4 | 17.7                             | 3.5 | 0.0 | 0.0 | 0.0                               | 0.0  | 0.9            | 3.5 | 40.3           | 14.8 | 244.5                                                | 59.8                                                 |
| J1-03             | 155.0 | 20.0 | 5.0                  | 5.4 | 0.0                              | 0.0 | 0.0 | 0.0 | 0.0                               | 0.0  | 0.0            | 0.0 | 42.1           | 14.1 | 202.1                                                | 39.5                                                 |
| J1-04             | 18.7  | 10.0 | 29.8                 | 5.4 | 0.0                              | 0.0 | 0.0 | 0.0 | 0.0                               | 0.0  | 0.0            | 0.0 | 53.4           | 13.6 | 101.9                                                | 29.0                                                 |
| J1-05             | 180.6 | 32.6 | 5.0                  | 5.4 | 17.7                             | 3.5 | 0.0 | 0.0 | 0.0                               | 0.0  | 0.9            | 3.5 | 40.3           | 14.8 | 244.5                                                | 59.8                                                 |
| J1-06             | 155.0 | 20.0 | 5.0                  | 5.4 | 0.0                              | 0.0 | 0.0 | 0.0 | 0.0                               | 0.0  | 0.0            | 0.0 | 42.1           | 14.1 | 202.1                                                | 39.5                                                 |

Source: Maryland Parcel Boundaries, iMAP, Maryland Department of Planning; Common Ownership Lots, OpenData DC, DCGIS

P - includes Full and Partial Permanent property impacts

T - Temporary property impacts that would occur during construction

**Table D.3-10: Changes in Land Use and Parcel Impacts: Summary of Environmental Consequences by Build Alternative**

| Build Alternative | Acres of Impact |       | Number of Parcels |     | Key Impacts and Highlights                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-----------------|-------|-------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | P               | T     | P                 | T   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| J-01              | 1,000           | 203   | 312               | 162 | <ul style="list-style-type: none"> <li>Property impacts to industrial and commercial land uses higher due to Cherry Hill Station in comparison to Alternatives that would use Camden Yards Station</li> <li>One of the largest acreage of permanent property impacts to Fort Meade and BWP due to MD 198 TMF</li> <li>Impacts to NASA, NSA, PRR, and USSS anticipated</li> </ul>                                                                                           |
| J-02              | 1,066           | 239   | 294               | 170 | <ul style="list-style-type: none"> <li>Largest acreage of impacts to forested land use</li> <li>One of the largest acreage of permanent property impacts to Federal property</li> <li>Largest acreage of permanent property impacts to BARC, NASA*, and Secret Service due to BARC Airstrip TMF</li> <li>Impacts to NASA, NSA, PRR, and USSS anticipated</li> </ul>                                                                                                        |
| J-03              | 1,019           | 214   | 297               | 167 | <ul style="list-style-type: none"> <li>Largest total acreage of impacted acres</li> <li>Impacts to NASA, NSA, PRR, and USSS anticipated</li> </ul>                                                                                                                                                                                                                                                                                                                         |
| J-04              | 852             | 216   | 207               | 113 | <ul style="list-style-type: none"> <li>One of the largest acreages of permanent property impacts to Fort Meade and BWP due to MD 198 TMF</li> <li>One residential parcel would be displaced.</li> <li>Requires the lowest number of residential parcel property acquisitions (8 permanent, 4 temporary). Eight of the 13 total impacted residential parcels currently include a residential structure.</li> <li>Impacts to NASA, NSA, PRR, and USSS anticipated</li> </ul> |
| J-05              | 918             | 252   | 189               | 123 | <ul style="list-style-type: none"> <li>One of the smallest acreages of permanent property impacts</li> <li>Least number of total parcels permanently impacted</li> <li>One of the largest acreages of permanent property impacts to Federal property</li> <li>Largest acreage of permanent property impacts to BARC, NASA*, and Secret Service due to BARC Airstrip TMF</li> <li>Impacts to NASA, NSA, PRR, and USSS anticipated</li> </ul>                                |
| J-06              | 871             | 227.8 | 192               | 120 | <ul style="list-style-type: none"> <li>Impacts would fall within the range of impacts across Build Alternatives</li> <li>Impacts to NASA, NSA, PRR, and USSS anticipated</li> </ul>                                                                                                                                                                                                                                                                                        |

| Build Alternative | Acres of Impact |     | Number of Parcels |     | Key Impacts and Highlights                                                                                                                                                                                                                                                                                                                                          |
|-------------------|-----------------|-----|-------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | P               | T   | P                 | T   |                                                                                                                                                                                                                                                                                                                                                                     |
| J1-01             | 1009            | 120 | 334               | 167 | <ul style="list-style-type: none"> <li>• Largest number of total parcels permanently impacted</li> <li>• One of the lowest acreages of permanent property impacts to Federal property</li> <li>• No impacts to NASA, NSA, PRR, or USSS anticipated</li> </ul>                                                                                                       |
| J1-02             | 1,053           | 161 | 313               | 183 | <ul style="list-style-type: none"> <li>• Impacts would fall within the range of impacts across Build Alternatives</li> </ul>                                                                                                                                                                                                                                        |
| J1-03             | 1,009           | 133 | 314               | 178 | <ul style="list-style-type: none"> <li>• No impacts to NASA, NSA, PRR, or USSS anticipated</li> <li>• Two residential parcels would be displaced. Requires the highest number of residential parcel property acquisitions (11 permanent, 16 temporary). Nineteen of the 29 total impacted residential parcels currently include a residential structure.</li> </ul> |
| J1-04             | 861             | 134 | 229               | 121 | <ul style="list-style-type: none"> <li>• Least acreage of permanent property impacts to Federal property</li> <li>• No impacts to NASA, NSA, PRR, or USSS anticipated</li> </ul>                                                                                                                                                                                    |
| J1-05             | 905             | 174 | 208               | 134 | <ul style="list-style-type: none"> <li>• One of the smallest acreages of permanent property impacts</li> </ul>                                                                                                                                                                                                                                                      |
| J1-06             | 861             | 147 | 210               | 132 | <ul style="list-style-type: none"> <li>• No impacts to NASA, NSA, PRR, or USSS anticipated</li> </ul>                                                                                                                                                                                                                                                               |

Acreage totals reflect impacted parcel acreage. Land use descriptions reflect the Adjusted Land Use designations.

\* NASA GSFC occupied parcels on BARC land are counted as NASA property for this analysis.

### **D.3B.3.3 Short-term Construction Effects**

Construction of the SCMAGLEV Project would include activities such as digging and tunneling using multiple tunnel boring machines, ground clearing, pile driving, excavating, grading, and the stockpiling of soil, muck, and materials. During construction, areas used to stage equipment, stockpile soil, create access roads, and provide access to underground stations construction would be temporarily impacted. Build Alternatives J-01 through J-06 would require between 203 and 239 acres of temporary acquisition affecting up to 170 parcels. Build Alternatives J1-01 through J1-06 would require between 120 and 174 acres of temporary acquisition and would affect up to 183 parcels. These lands would be restored to their original use after construction is complete. However, although some impacts would not be permanent in nature, removal of mature forest cover could take 75-100 years to regenerate to current levels.

### **D.3B.3.4 Potential Mitigation Strategies**

#### **D.3B.3.4.1 Short-term Construction Strategies**

The construction of the SCMAGLEV Project could cause potential short-term impacts to air quality (fugitive dust and construction equipment exhaust), noise and vibration (construction equipment and activities), and transportation (work vehicles, increased congestion, detours, and road closures). These impacts could affect the access and functions of land uses. The Project Sponsor would include the following minimization and mitigation strategies for impacts related to construction.

- Develop a construction mitigation plan with community and property owner input to address construction impacts. Public outreach at Public Meetings with impacted neighborhoods and stakeholders would be included as a part of the programmatic mitigation approach. The Project Sponsor would continue to incorporate stakeholder input into design throughout the SCMAGLEV Project to inform their decision-making process;
- Develop a community outreach plan to notify local communities of construction schedules, road and sidewalk closures, and detours. The Project Sponsor would develop the community outreach plan which would ultimately outline how and when communities would be informed of these potential disruptions;
- Determine truck hauling routes and schedules that would minimize impacts on residential and commercial areas;
- Notify property owners, businesses, and residences of upcoming major construction activities (e.g., utility relocation/disruption and milestones; re-routing of delivery trucks);
- Coordinate business outreach programs and implement promotions for businesses most affected by the construction;

- Develop detours for any road or sidewalks to be closed during construction. Develop Worksite Traffic Control Plans in conjunction with the county and municipal departments of transportation to accommodate automobile and pedestrian traffic;
- Maintain access to residences, businesses, and community facilities including community parks affected by construction activities;
- Provide early notification to emergency service providers of any road closures or detours; and
- During construction, provide temporary replacement or shared parking as needed to absorb the loss of parking due to acquisitions. Temporary parking could be added by constructing surface lots on nearby vacant parcel or restriping nearby streets to allow diagonal curb parking.

#### **D.3B.3.4.2 Long-term Operational Strategies**

The Build Alternatives would result in changes in land use, permanent full and partial property acquisition, and temporary property acquisition. The Project Sponsor incorporated design considerations to avoid and minimize impacts in areas along the corridor. Some examples include:

- The Washington, D.C. Station and the Camden Yards Station in Baltimore City are underground to avoid significant permanent land use changes in urban, highly developed areas.
- The Cherry Hill Station is located above an existing transportation facility (i.e., a Light RailLink Station) with light rail and bus service.
- Tunnel Boring Machine (TBM) launch sites, storage, and staging areas are consolidated to sites that would ultimately be FA/EE facilities, or substations post construction will minimize land use impacts during construction.

In addition, FRA has identified the following measures to mitigate and minimize these impacts.

The Project Sponsor would consider comprehensive master and local land use plans, existing land use and zoning, and property ownership in the preliminary design of the SCMAGLEV Project. In an effort to minimize impacts to surface properties, the Project Sponsor has incorporated tunneling into design of the Build Alternatives.

The Project Sponsor would continue to coordinate with state and local governments, federal agencies, and private landowners regarding the location and positioning of Build Alternatives including the stations, selected TMF site, and ancillary facilities like the FA/EE facilities and substations. At this stage of design, the viaducts, access ramps, and TMF sites are currently being evaluated as large, contiguous tracts of land. However, as design progresses, detailed layouts of the selected TMF site would be developed to reduce land use and parcel impacts and the Project Sponsor would

coordinate with state, local, and federal agencies to continue to evaluate the projects consistency with future land use plans. In addition, the viaducts and access ramps would be further refined to minimize land use impacts under the structures.

As part of the design process, the Project Sponsor would examine ways to reduce or eliminate property acquisitions where feasible. The Project Sponsor and FRA will coordinate with potentially impacted property owners on an individual basis to identify and discuss appropriate mitigation measures. Mitigation measures would follow applicable regulations and procedures and would be in place prior to the start of construction.

To mitigate impacts from forest land use changes, the Project Sponsor would provide reforestation for impacts to forested lands in consultation with Maryland Department of Natural Resources (MDNR), local governments, and federal agencies (USFWS, NPS, BARC) as warranted, and in compliance with applicable regulations. To minimize the impacts to aesthetics and visual character, the Project Sponsor would ensure the architecture and design of the surface elements conforms to surrounding uses, by considering the form, scale, and materials of the surface elements. The design and placement of above-ground elements would encourage compatibility with adjacent land uses to the extent feasible, such as placing entry areas away from incompatible adjacent land uses. The Project Sponsor would consult with state and local planning approval agencies and federal agencies during the development of the architecture and design of the surface elements.

The Project Sponsor would comply with the Uniform Relocation Act as part of the property acquisition process. The Project Sponsor would negotiate with property owners for parcel acquisitions on an individual basis, and agreements would be in place prior to the start of construction. Some parcels identified as a full parcel acquisition in this analysis may ultimately qualify as partial parcel acquisitions depending on final design and property owner negotiations. Likewise, some parcels identified as partial parcel or temporary acquisition may ultimately qualify as full parcel acquisitions.

The Project Sponsor would implement a surface settlement monitoring program during construction and tunneling operations. A pre-construction survey of sensitive structures for existing cracks and damages would be conducted. Tolerance levels are established based on thresholds for buildings, roads, and other sensitive structures to ensure no damage. This includes an Alert Notification System that notifies the responsible personnel when tolerances are exceeded.

## Appendix D.3C Parks

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### D.3C.1 Regulatory Context and Methodology

#### D.3C.1.1 Regulatory Context

*FRA Procedures for Considering Environmental Impacts*, (64 Fed. Reg 28545, May 26, 1999) states that the potential environmental impacts of proposed rail projects on recreational uses and parklands, both existing and planned, should be considered in the Environmental Impact Statement (EIS). In addition to FRA's NEPA compliance procedures, two Federal laws and a state law address the treatment of recreational facilities and parklands:

- **Section 4(f) of the United States Department of Transportation Act of 1966, as amended:** Protects publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historical sites from conversion to transportation use by the Department of Transportation. Section 4(f) requires transportation projects to avoid use of protected properties unless there is no feasible and prudent alternative to the use of such land, and the program or project includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use.
- **Section 6(f) of the Land and Water Conservation Fund (LWCF) of 1965:** The LWCF establishes a funding source for Federal and state acquisition of recreational lands, wildlife and waterfowl refuges, and other similar resources, and development of public recreational facilities. Section 6(f) of the LWCF Act (54 USC 2003-) addresses LWCF assistance to the states and requires that all properties "acquired or developed, either partially or wholly, with the LWCF funds" by states must be maintained as such in perpetuity. If a project requires the conversion of land within a property funded by the LWCF Act to non-recreation use, the National Park Service (NPS) must approve a land conversion process. NPS will approve a land conversion only if FRA meets the following requirements:
  - FRA must evaluate all practical alternatives to the proposed land conversion.
  - FRA must establish the fair market value of the property.
  - FRA must confirm that the proposed substitute property is at least equal value, and that the proposed replacement property is of reasonably equivalent usefulness and location.
  - FRA must have completed all other agency coordination, including compliance with Section 4(f).
  - The proposed conversion and replacement must comply with Maryland's Statewide Comprehensive Outdoor Recreation Plan (SCORP).

- In addition, requirements for public review of and comment on proposed Section 6(f) property impacts will be provided as part of the NEPA process. During a request for conversion of Section 6(f) land, if warranted, public review and comment requirements and procedures under NEPA will be followed.

In 2019, the John D. Dingell, Jr. Conservation, Management, and Recreation Act reauthorized the LWCF (Public Law 116-9).

- **NPS Federal Lands to Parks Program (FLP; 40 USC 550 (b) and (e)):** The NPS FLP Program deeds former surplus Federal land to local government entities solely for public parks and recreation use in perpetuity. If transferred lands are not used accordingly or they are needed for another purpose, the lands are subject to reversion back to federal ownership. NPS would determine mitigation measures for impacts to FLP-transferred parks in collaboration with the current owners of the properties and other agencies involved in the project.
- **Program Open Space, Natural Resources Article, Title 5, Subtitle 9, Annotated Code of Maryland:** Maryland MDNR's Program Open Space (POS) provides funding for the State and its subdivisions to acquire land for open space and for outdoor public recreation. Prior approval from the Secretaries of the Departments of Natural Resources, Budget and Management, and State Planning is required before any acquisition or development sites may be converted to any other use.

### D.3C.1.2 Methodology

FRA identified public recreational facilities and parklands within 800 feet of the centerline of the merged alignments and ancillary facilities of the twelve Build Alternatives. This area represents the noise-screening distance based on FRA guidelines for Maglev technology and is based on project setting, proposed technology, and study area characteristics. The noise-screening distance represents the outer limits of potential visual, noise, and other effects from the SCMAGLEV Project on parks and recreational facilities and is the geographic limits of the SCMAGLEV Project Affected Environment used to qualitatively evaluate permanent and temporary effects as well as direct and indirect effects.

FRA obtained map data and information on characteristics of recreational facilities and parkland resources from the District of Columbia Department of Recreation and Parks (DC-DPR), the National Park Service (NPS), the Maryland-National Capital Park and Planning Commission (M-NCPPC), the MDNR, the Anne Arundel County Department of Recreation and Parks, the Baltimore County Department of Recreation and Parks, the United States Fish and Wildlife Service (USFWS), and the Baltimore City Department of Recreation and Parks. Geographic Information Systems (GIS) data was not readily available from the City of Greenbelt Parks, and parks data was obtained from the Greenbelt Department of Recreation and Parks website and parcel data. In addition,

information on recreational facilities and parklands were obtained from Google Earth TM, and various area comprehensive and parks plans. Sources of data were supplemented by field reconnaissance within the SCMAGLEV Project Affected Environment. Information on planned and proposed recreational facilities and parklands was provided by correspondence with parks agencies and by review of planning documents.

FRA obtained information on park acquisitions partially or fully funded by Federal and state programs, such as Program Open Space (MDNR) and LWCF Act (NPS). FRA identified parklands funded by the LWCF Act by consulting a list of Section 6(f) acquisitions in Maryland maintained and provided by MMDNR and has corresponded with parks agencies to obtain information on parks acquired or improved in part or fully with Federal and state park acquisition funds.

Using GIS, FRA mapped the recreational facilities and parklands within the Project Study Area. Then, FRA quantified the potential impacts of the Build Alternatives (in acres) to recreational facilities and parklands; FRA also identified other direct effects of the Build Alternatives, including physical disturbance and permanent incorporation of a property, as well as noise and visual changes in proximity to recreational facilities and parklands.

In addition to assessing potential permanent impacts to recreational facilities and parklands, FRA's analysis identified the potential for short-term construction impacts.

### D.3C.2 Affected Environment

This section identifies public recreational facilities and parklands within the SCMAGLEV Project Affected Environment. Nearly 2,000 acres of Federal, state, and local recreational facilities and parklands occur in the SCMAGLEV Project Affected Environment. Parklands include local parks administered by municipalities and county parks agencies, one state park (Patapsco Valley State Park), and federal parks and parkways. Within the urbanized areas at either end of the Affected Environment, parks are generally small and meet local recreational needs. Parks within the central portion of the Affected Environment tend to be larger, more regional in focus, and are generally significant for both active and passive recreation, in addition to natural resource conservation. Recreational facilities and parklands within the SCMAGLEV Project Affected Environment are summarized in **Table D.3-11** and presented in Attachment C. Description of the parklands within the SCMAGLEV Project Affected Environment are summarized in **Table D.3-12**.

**Table D.3-11: Recreational Facilities and Parklands in the Affected Environment**

| Park Name                                                 | Location                                | Funding or transfer in ownership under LWCF 6(f), POS, or FLP | Governing Body/Owner                          |
|-----------------------------------------------------------|-----------------------------------------|---------------------------------------------------------------|-----------------------------------------------|
| Small Park Reservations – L'Enfant Plan (SPR)             | Washington, D.C.                        | No                                                            | NPS                                           |
| New York Avenue Recreation Center (NYARC)                 | Washington, D.C.                        | No                                                            | D.C. DPR                                      |
| Dunbar Aquatic Center                                     | Washington, D.C.                        | No                                                            | D.C. DPR                                      |
| R.H. Terrell Recreation Center                            | Washington, D.C.                        | No                                                            | No                                            |
| Butler-Wyatt Clubhouse #2 Boys & Girls Club               | Washington, D.C.                        | No                                                            | D.C. DPR                                      |
| Loomis Park                                               | Washington, D.C.                        | No                                                            | D.C. DPR                                      |
| Bladensburg Waterfront Park                               | Prince George's Co.                     | No                                                            | M-NCPPC                                       |
| Anacostia River Trail                                     | Prince George's Co.                     | No                                                            | M-NCPPC                                       |
| Bladensburg South Community Park                          | Prince George's Co.                     | No                                                            | M-NCPPC                                       |
| Greenbelt Forest Preserve (GFP)                           | Greenbelt, MD                           | Yes - FLP                                                     | City of Greenbelt<br>DRP                      |
| Patuxent River Park I (PRP)                               | Prince George's Co.                     | No                                                            | M-NCPPC                                       |
| Baltimore-Washington Parkway (BWP)                        | Prince George's Co.<br>Anne Arundel Co. | No                                                            | NPS                                           |
| Patuxent Research Refuge (PRR)                            | Prince George's Co.<br>Anne Arundel Co. | No                                                            | USFWS                                         |
| South Laurel Park                                         | Prince George's Co.                     | No                                                            | M-NCPPC                                       |
| Springfield Road Park                                     | Prince George's Co.                     | Yes - FLP                                                     | M-NCPPC                                       |
| Muirkirk Park                                             | Prince George's Co.                     | No                                                            | M-NCPPC                                       |
| Montpelier Hills Park (MHP)                               | Prince George's Co.                     | No                                                            | Montpelier Hills<br>Homeowners<br>Association |
| Montpelier Park                                           | Prince George's Co.                     | No                                                            | M-NCPPC                                       |
| Brock Bridge Elementary School/<br>Brockbridge Park (BRP) | Anne Arundel Co.                        | No                                                            | Anne Arundel<br>County BOE                    |
| Maryland City Park (MCP)                                  | Anne Arundel Co.                        | Yes – POS, FLP                                                | Anne Arundel<br>County DRP                    |
| Patapsco Valley State Park                                | Anne Arundel Co. and<br>Baltimore Co.   | Yes – LWCF 6(f)                                               | Maryland Park<br>Service, MMDNR               |

| Park Name           | Location  | Funding or transfer in ownership under LWCF 6(f), POS, or FLP | Governing Body/Owner |
|---------------------|-----------|---------------------------------------------------------------|----------------------|
| Lakeland Park       | Baltimore | Yes - POS                                                     | Baltimore DPR        |
| Middle Branch Park  | Baltimore | No                                                            | Baltimore DPR        |
| Indiana Avenue Park | Baltimore | No                                                            | Baltimore DPR        |

Notes. <sup>1</sup>Reflects the size of the portion of properties within the LOD.

Within the urbanized areas at either end of the study area, parks are generally small and meet local recreational needs. Parks within the central portion of the study area tend to be larger, more regional in focus, and are generally significant for both active and passive recreation in addition to natural resource conservation. Some of the larger parks within the study area include:

**Greenbelt Forest Preserve:** The Greenbelt Forest Preserve consists of 200 acres of woodland owned and administered by the City of Greenbelt within four tracts – the Boxwood, North Woods, Hamilton Woods, and Belle Point Tracts. The Project Study Area is located within two of these tracts – North Woods and Hamilton Woods. The tracts are bordered to the east by the Baltimore-Washington Parkway, to the south by the Baltimore Washington Parkway interchange with MD 193, and to the west by development in the City of Greenbelt, MD. A 13.9-acre parcel that makes up a portion of the North Woods Tract was transferred to the City of Greenbelt under the Federal Lands to Parks Program. Hiking trails are the primary amenity in the Preserve. Other amenities include the Northway Fields, which consist of two softball fields, and the City of Greenbelt Observatory. Greenbelt Forest Preserve was formally designated as a forest preserve district by City of Greenbelt in 2003 by an act of legislation, with the primary purposes of preserving land and accommodating public recreation (Ordinance 1243). The City’s adopted Management and Maintenance Guidelines provide for public use of Greenbelt Forest Preserve for passive recreation, such as hiking trails and viewing nature.

**Patuxent River Park I:** The Patuxent River Park I is undeveloped parkland in Prince George’s County. It is within the larger, multi-parcel Patuxent River Park (over 2,000 acres) centered on Jug Bay in southern Prince George’s County. Patuxent River Park I occupies 226.6 acres and is managed by the M-NCPPC/Prince George’s County Department of Parks and Recreation. Patuxent River Park I functions as a conservation area with undeveloped marshes, swamps, and woodlands. The park is not designated as an area open for public recreation although its conservation supports recreational uses downstream.

**Baltimore-Washington Parkway:** The BWP is one of several scenic parkways in the National Capital Region and travels through mature forests in a parkland setting. The

BWP extends northeast from the Anacostia River at the eastern border of Washington, D.C., through Prince George's County and Anne Arundel County. The BWP encompasses 1,472 acres, crossing the Patuxent and Little Patuxent Rivers and four railroads, and operates as MD 295 north of MD 175. The BWP property has an irregular shape, ranging from 400 to 800 feet wide. This property includes a dual-lane roadway separated by a median, varying in width from fifteen to 200 feet, and vegetated with ground cover varying from mown grass to mature woodland. The roadway is flanked by a buffer of natural forest and native vegetation.

**Patuxent Research Refuge (PRR):** The PRR is managed by the United States Fish and Wildlife Service (USFWS) and is the nation's only national wildlife refuge established to support wildlife research. The PRR was established in 1936 by an Executive Order of Franklin D. Roosevelt and contains 13,178 acres within Prince George's County and Anne Arundel County. The property is generally bound by the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center to the south, Fort George G. Meade and Tipton Airport to the north, BWP to the west, and Amtrak's Northeast Corridor (NEC) to the east. PRR consists of three areas, each offering different amenities and levels of public access. Recreational activities offered at the park include hunting, fishing, wildlife observation, nature photography, trails, and interpretive programming (e.g., events, public programs, and tram tours). Visitors can access the National Wildlife Visitor Center and North Tract areas of the park; other areas of the PRR are inaccessible to the public.

According to USFWS, a portion of PRR located adjacent to the Amtrak right-of-way (ROW) in Anne Arundel County was purchased with LWCF funds on January 28, 1999 (MTA 2003). Although the portion of PRR purchased with the LWCF funds is not within the SCMAGLEV Project's Affected Environment, the conversion of park uses to transportation use would still require coordination with NPS under Section 6(f) of the LWCF Act of 1965.

**Table D.3-12: Description of Parklands within the Affected Environment**

| Park Name                               | Location         | Size                      | Governing Body/Owner | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------|------------------|---------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Small Park Reservations – L’Enfant Plan | Washington, D.C. | Each <1 acre <sup>1</sup> | NPS                  | <p>The L’Enfant Plan boundary within Washington, D.C. contains small park reservations. Parks within the L’Enfant boundary and LOD include:</p> <ul style="list-style-type: none"> <li>• <b>Triangle Park - Reservation 71:</b> This triangle park is on New York Avenue NW between 7th Street NW and K Street NW and is one of four parks that surround Mount Vernon Square. The size of this triangle park is approximately 0.15 acre. The park contains landscaped beds with trees and an area of lawn.</li> <li>• <b>Triangle Park - Reservations 72, 73, and 74:</b> Three small triangle parks (0.31 acres, 0.01 acres, and 0.24 acres, respectively) at the intersection of Massachusetts Avenue, 5<sup>th</sup> Street NW, and I Street NW. Reservations 72 and 74 include lawn, trees, and wide internal walkways with benches and tables. Reservation 73 includes a bikeshare station.</li> <li>• <b>Triangle Park - Reservation 176:</b> This triangle park is on New York Avenue NW between 7th Street NW and K Street NW and is one of four parks that surround Mount Vernon Square. The park contains landscaped beds and small internal plaza accessed from four internal sidewalks.</li> <li>• <b>Triangle Park - Reservation 177A:</b> This 0.1-acre triangle park in on New York Avenue between 5th and L Streets, NW. It consists of lawn.</li> <li>• <b>Rigo Walled Park - Reservation 178:</b> This triangle park is on the south side of New York Avenue by the intersection of 5th Street NW and L Street NW. This triangle park contains trees and other small-scale plantings protected by a fence, and a paved sidewalk.)</li> <li>• <b>Center Parking - Reservation 179:</b> This 0.06-acre park contains a brick walkway, manicured lawn and an oak tree.</li> <li>• <b>Triangle Park - Reservation 180:</b> This 0.02-acre park features lawn and is surrounded by a brick walkway.</li> <li>• <b>Triangle Park - Reservation 181:</b> This 0.47-acre park includes lawn and several trees. A curb and sidewalk surround the entirety of two park segments separated by M Street.</li> <li>• <b>Triangle Park - Reservation 182:</b> This 0.04-acre triangle park is on New York Avenue at N Street, west of North Capitol Street, NW. The park contains lawn and trees.</li> <li>• <b>Triangle Park - Reservation 183:</b> This 0.04-acre triangle park is on New York</li> </ul> |

| Park Name                                   | Location         | Size       | Governing Body/Owner | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------|------------------|------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                             |                  |            |                      | <p>Avenue at N Street, east of North Capitol Street, NW. The park contains lawn and trees.</p> <ul style="list-style-type: none"> <li>• <b>Triangle Park - Reservation 184:</b> This 0.06-acre triangle park is on New York Avenue between Florida Avenue, NW and O Street, NE. The park contains lawn and trees.</li> <li>• <b>Triangle Park - Reservation 185:</b> This triangle park is on New York Avenue between 1<sup>st</sup> Street, NW and O Street, NE. The park contains lawn and trees.</li> </ul>  |
| New York Avenue Recreation Center           | Washington, D.C. | 2.59 acres | DC DPR               | The New York Avenue Recreation Center is a recreation facility located at 100 N Street NW. The recreation center building contains a multi-purpose room. Outdoor facilities include a playground, two basketball courts, and a baseball diamond.                                                                                                                                                                                                                                                                |
| Dunbar Aquatic Center                       | Washington, D.C. | 27,000 SF  | DC DPR               | The Dunbar Aquatic Center is an eight lane, 25-yard indoor pool offered within Dunbar High School at 101 N Street, NW. The pool is open to the public for lap swimming on Mondays, Wednesdays, Fridays, Saturday and Sunday. It is owned by DC Public Schools and operated by DC DPR.                                                                                                                                                                                                                           |
| R.H. Terrell Recreation Center              | Washington, D.C. | 3.07 acres | DC DPR               | The R.H. Terrell Recreation Center is a recreation center with indoor and outdoor uses in a building that it shares with Walker Jones Middle School and Northwest One Public Library. The recreation center is open to the public on weekdays, with extended summer hours. Indoor amenities include a basketball court, computer lab, gymnasium, multi-purpose room, and fitness center. Outdoor amenities include a football/soccer field. DPR provides programming primarily targeted to school-age children. |
| Butler-Wyatt Clubhouse #2 Boys & Girls Club | Washington, D.C. | 0.03 acres | DC DPR               | The Butler-Wyatt Clubhouse #2 Boys & Girls Club is a recreation and community center located within the Perry School Community Services Center at 128 M Street, NW. DC DPR owns the buildings that make up the Perry School Community Services Center, and licenses the non-profit Bill Butler and Julius Wyatt #2 Clubhouse, Inc. to operate recreational and arts-based programs both at the Perry Center and at the New York Avenue Recreation Center. The clubhouse includes a gymnasium.                   |
| Loomis Park                                 | Washington, D.C. | 0.22 acres | DC DPR               | Loomis Park is an undeveloped park consisting of lawn and trees at Bryant Street, NE and Lawrence Avenue, NE.                                                                                                                                                                                                                                                                                                                                                                                                   |

| Park Name                        | Location               | Size         | Governing Body/Owner     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------|------------------------|--------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bladensburg Waterfront Park      | Prince George's County | 26.9 acres   | M-NCPPC                  | Bladensburg Waterfront Park is owned and administered by M-NCPPC along the Anacostia River. Available amenities include boat, bicycle, and fishing rod rentals; interpretive riverboat tours; riverside walking path; picnic pavilion; hiking/biking trails; fishing pier; boat ramp; playground; and a B&O Railroad caboose.                                                                                                                                                                              |
| Anacostia River Trail            | Prince George's County | n/a          | M-NCPPC                  | The Anacostia River Trail is a 2.6-mile asphalt trail owned and administered by M-NCPPC. The trail stretches from Baltimore Avenue/U.S. Route 1 and Charles Armentrout Drive intersection in Hyattsville to a point north of New York Avenue at the Anacostia River crossing, where it joins the District of Columbia Department of Transportation's Anacostia Riverwalk Trail. Within the study area, the trail is located in Bladensburg Waterfront Park.                                                |
| Bladensburg South Community Park | Prince George's County | 21.3 acres   | M-NCPPC                  | Bladensburg South Community Park is a 21.3-acre undeveloped park owned by M-NCPPC on Kenilworth Avenue in Bladensburg. The 2007 <i>Approved Bladensburg Town Center Sector Plan and Sectional Map Amendment</i> documents M-NCPPC documents plans to incorporate recreational resources and facilities into the park property.                                                                                                                                                                             |
| Greenbelt Forest Preserve        | Greenbelt, MD          | 240.86 acres | City of Greenbelt<br>DRP | The Greenbelt Forest Preserve consists of 240.86 acres of woodland owned and administered by the City of Greenbelt within four tracts – the Boxwood, North Woods, Hamilton Woods, and Belle Point Tracts. The study area is located within two of these tracts – North Woods and Hamilton Woods. Hiking trails are the primary amenity in the Preserve. The Northway Fields, which consist of two softball fields, and the City of Greenbelt Observatory are located within the Greenbelt Forest Preserve. |
| Patuxent River Park I            | Prince George's County | 226.6 acres  | M-NCPPC                  | Conservation Area described above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Park Name                          | Location                                    | Size         | Governing Body/Owner                    | Description                                                                                                                                                                       |
|------------------------------------|---------------------------------------------|--------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Baltimore-Washington Parkway (BWP) | Prince George's County, Anne Arundel County | 1,472 acres  | NPS                                     | Historic Parkway, described above.                                                                                                                                                |
| Patuxent Research Refuge (PRR)     | Prince George's County, Anne Arundel County | 13,178 acres | USFWS                                   | National Wildlife Refuge described above.                                                                                                                                         |
| South Laurel Park                  | Prince George's County                      | 7.73 acres   | M-NCPPC                                 | South Laurel Park is a neighborhood park on Laurel Bowie Road. The park is largely wooded and undeveloped for recreation, but features a playground, trail, and basketball court. |
| Springfield Road Park              | Prince George's County                      | 26.4 acres   | M-NCPPC                                 | Springfield Park is an undeveloped, wooded park property at 11300 Springfield Road.                                                                                               |
| Muirkirk Park                      | Prince George's County                      | 4.89 acres   | M-NCPPC                                 | Muirkirk Park is an undeveloped park property, primarily a field bounded by woodland.                                                                                             |
| Montpelier Hills Park              | Prince George's County                      | 5.22 acres   | Montpelier Hills Recreation Association | Montpelier Hills Park contains two tennis courts and a picnic pavilion.                                                                                                           |
| Montpelier Park                    | Prince George's County                      |              | M-NCPPC                                 | Montpelier Park is located at 12741 Laurel Bowie Road in Laurel, MD. It includes two ball fields, two tennis courts, and a playground.                                            |

| Park Name                      | Location                                 | Size         | Governing Body/Owner           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------|------------------------------------------|--------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brock Bridge Elementary School | Anne Arundel County                      |              | Anne Arundel County BOE        | Brock Bridge Elementary School shares ground to the south of the school building as public parkland known as Brockbridge Park. Three ballfields and a multi-purpose field are open to the public. The Chuck Rounds Trail, which follows the south side of Brock Bridge Road, links the school property to Maryland City Park.                                                                                                                                                                                                                                                                                                                   |
| Maryland City Park             | Anne Arundel County                      | 181.74 acres | Anne Arundel County DRP        | Maryland City Park is located west of the BWP at 565 Brock Bridge Road and is split into two triangular-shaped parcels. Amenities include baseball fields, two multipurpose fields, a dog park, a playground, picnic area, and the Chuck Rounds Trail. The park has been funded in part with Maryland Program Open Space funds.                                                                                                                                                                                                                                                                                                                 |
| Patapsco Valley State Park     | Anne Arundel County and Baltimore County | 16,043 acres | Maryland Park Service, MD MDNR | Patapsco Valley State Park serves as a primary source of state park land for recreational use in Maryland. The park was established in 1906 as Maryland's first state park and parallels 32 miles of the Patapsco River, occupying land to the west and southwest of Baltimore City. Patapsco Valley State Park includes eight developed recreation areas in Anne Arundel and Baltimore Counties. Amenities include hiking, fishing, camping, canoeing, horseback riding, mountain biking, and picnicking. Adjacent to the study area, Patapsco Valley State Park is not developed for recreation but contains protected natural resource land. |
| Lakeland Park                  | Baltimore                                | 10.69 acres  | Baltimore DPR                  | Lakeland Park is located at 2767 Wegworth Lane and includes two ballfields, two basketball courts, fitness equipment, swings, and a walking path. The park has been funded in part with Maryland Program Open Space funds.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Middle Branch Park             | Baltimore                                | 150 acres    | Baltimore DPR                  | The Middle Branch Park is located on the south side of the Middle Branch of the Patapsco River. This waterfront park was established in 1977 and contains the Baltimore Rowing and Water Resource Center where patrons can canoe or kayak. Other amenities include a view of the city skyline, crabbing, fishing, trails, and picnicking.                                                                                                                                                                                                                                                                                                       |
| Indiana Avenue Park            | Baltimore                                | 0.9 acres    | Baltimore DPR                  | Indiana Avenue Park is located in Baltimore's Westport community and includes a playground.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Source: AECOM/Straughan, August 2020.

### D.3C.3 Environmental Consequences

Section 3.3 describes the effects of the SCMAGLEV Project Build Alternatives and the No Build Alternative on the public recreational facilities and parklands. Table 3.3-1 at the end of this section provides a summary of the total temporary and permanent impacts of the Build Alternatives to public recreational facilities and parklands. FRA considers some impacts to public recreational facilities and parklands would be difficult to mitigate due to extensiveness of impact and/or uniqueness of park features. Parks with impacts that are considered difficult to mitigate include Baltimore-Washington Parkway, Patuxent Research Refuge, The Greenbelt Forest Preserve, and Patuxent River Park 1:

- The visual prominence of SCMAGLEV System elements would alter the scenic character along and above the BWP. Under all Build Alternatives, the portals, areas of open cut tunnels, and viaduct would generally be screened, from BWP by a 50 to 250-foot width strip of trees and vegetation between travel lanes and SCMAGLEV elements. At the Powder Mill Road and Laurel-Bowie Road (MD 197) interchanges, the viaduct proposed under all Build Alternatives would be visually prominent as they would cross open areas with minimal screening. Under Build Alternatives J, the viaduct would also be visually prominent as it crosses the MD 198 and MD 32 interchanges. Viaduct elements would be located up to 144 feet higher than the elevation of the travel lanes of the parkway and would cross over the parkway to access Trainset Maintenance Facilities (TMFs), and options for visual screening at crossing locations or where the viaduct is high above the trees are limited. Screening would also be less effective during winter months when much of the vegetation is leafless.
- The viaduct would cross recreational facilities at Patuxent Research Refuge, including trails, hunting areas, and research and conservation sites in mature woodlands and wetlands. These unique features would be difficult to replicate elsewhere.
- The Greenbelt Forest Preserve is a recreational area associated with the Greenbelt Historic District. It is historically significant as the “greenbelt” that surrounds the district, and therefore recreational opportunities offered within the greenbelt cannot be moved elsewhere. While it may be possible to move the ballfields elsewhere within the forest preserve, the cut/cover tunnel would remove access to a large portion of the Greenbelt Forest Preserve to trail users, and lighting associated with the SCMAGLEV System would impede operation of the astronomical observatory.
- Patuxent River Park 1 is undeveloped but supports conservation goals along the Patuxent River and recreation uses within Patuxent River Park to the south.

### D.3C.3.1 No Build Alternative

Under the No Build Alternative, the SCMAGLEV Project would not be built and therefore, no impacts related to the construction or operation of a SCMAGLEV Project would occur. However, other planned and funded transportation projects would continue to be implemented and could result in effects to public recreational facilities and parklands within the SCMAGLEV Project Affected Environment.

### D.3C.3.2 Build Alternatives

SCMAGLEV Project impacts to public recreational facilities and parklands would primarily result from above ground Project elements, such as the viaduct, stations, and TMF options. Among the Build Alternatives, SCMAGLEV Project impacts would differ because the combination of alignment, station, and TMF elements would differ with each Build Alternative. The following discussion summarizes the potential physical, noise, and visual impacts of each Build Alternative on the public recreational facilities and parklands listed in **Table D.3-13**. **Tables D.3-13** and **D.3-14** summarize the impacts of the Build Alternatives on public recreational facilities and parklands in the SCMAGLEV Project Affected Environment. **Tables D.3-15 to D.3-16**, at the end of this section, quantify temporary and permanent impacts associated with alignment, station, and TMF features at individual parks. Additional detail, including maps and descriptions of public recreational facilities and parklands may be found in Attachment C.

#### D.3C.3.2.1 Summary of Build Alternatives

- Among the Build Alternatives with the same station and TMF option combinations, those associated with Build Alternatives J1 would have more permanent acreage impacts to public recreational facilities and parklands, generally 10 to 20 acres greater than those options associated with Build Alternatives J.
- Of the three TMF options, the MD 198 TMF would impact more than three times as much parkland as the BARC West and BARC Airstrip TMFs.
- Of the four stations, only the Mount Vernon Square East Station elements would result in parkland impacts. All Build Alternatives include Mount Vernon Square East Station.
- Build Alternatives J would permanently impact three parks (approximately 80 acres, varying by alternative); Build Alternatives J1 would permanently impact seven parks (approximately 95 acres, varying by alternative).
- The alignment associated with Build Alternatives J would have impacts to two parks (BWP and PRR) that would be difficult to mitigate. The alignment associated with Build Alternatives J1 would have impacts to three parks (BWP, Greenbelt Forest Preserve, Patuxent River Park 1) that would be difficult to mitigate.

**Table D.3-13: Summary of Permanent (P) and Temporary (T) Property Impacts to Recreational Facilities and Parklands by Build Alternatives [in Acres]**

| Build<br>Altern<br>ative | Acres of Permanent (P) and Temporary (T) Construction Impacts on Parklands by Alignment, Station, and TMF |      |                                   |     |                            |    |             |    |                 |    |           |     |           |     |        |     | Total<br>Permanent<br>Impact |
|--------------------------|-----------------------------------------------------------------------------------------------------------|------|-----------------------------------|-----|----------------------------|----|-------------|----|-----------------|----|-----------|-----|-----------|-----|--------|-----|------------------------------|
|                          | Alignment                                                                                                 |      | Stations                          |     |                            |    |             |    |                 |    | TMF       |     |           |     |        |     |                              |
|                          |                                                                                                           |      | Mount<br>Vernon<br>Square<br>East |     | BWI<br>Marshall<br>Airport |    | Cherry Hill |    | Camden<br>Yards |    | BARC East |     | BARC West |     | MD 198 |     |                              |
|                          |                                                                                                           |      |                                   |     |                            |    |             |    |                 |    |           |     |           |     |        |     |                              |
| P                        | T                                                                                                         | P    | T                                 | P   | T                          | P  | T           | P  | T               | P  | T         | P   | T         | P   | T      |     |                              |
| J-01                     | 92.9                                                                                                      | 48.3 | 0.2                               | 0.2 | --                         | -- | --          | -- | --              |    | 28.7      | 0.3 | --        | --  | --     | --  | 108.6                        |
| J-02                     | 99.1                                                                                                      | 59.3 | 0.2                               | 0.2 | --                         | -- | --          | -- | --              | -- | --        | --  | 23.3      | 0.7 | --     | --  | 96.2                         |
| J-03                     | 97.9                                                                                                      | 53.8 | 0.2                               | 0.2 | --                         | -- | --          | -- | --              | -- | --        | --  | --        | --  | 3.1    | 3.6 | 88.0                         |
| J-04                     | 92.9                                                                                                      | 48.3 | 0.2                               | 0.2 | --                         | -- | --          | -- | --              | -- | 28.7      | 0.3 | --        | --  | --     | --  | 108.6                        |
| J-05                     | 99.1                                                                                                      | 59.3 | 0.2                               | 0.2 | --                         | -- | --          | -- | --              | -- | --        | --  | 23.3      | 0.7 | --     | --  | 96.2                         |
| J-06                     | 97.9                                                                                                      | 53.8 | 0.2                               | 0.2 | --                         | -- | --          | -- | --              | -- | --        | --  | --        | --  | 3.1    | 3.6 | 88.0                         |
| J1-01                    | 102.4                                                                                                     | 16.1 | 0.2                               | 0.2 | --                         | -- | --          | -- | --              | -- | 38.0      | 7.8 | --        | --  | --     | --  | 140.5                        |
| J1-02                    | 94.2                                                                                                      | 25.1 | 0.2                               | 0.2 | --                         | -- | --          | -- | --              | -- | --        | --  | 7.2       | 3.1 | --     | --  | 101.6                        |
| J1-03                    | 95.6                                                                                                      | 22.0 | 0.2                               | 0.2 | --                         | -- | --          | -- | --              | -- | --        | --  | --        | --  | 9.1    | 3.6 | 104.5                        |
| J1-04                    | 102.4                                                                                                     | 16.1 | 0.2                               | 0.2 | --                         | -- | --          | -- | --              | -- | 38.0      | 7.8 | --        | --  | --     | --  | 140.6                        |
| J1-05                    | 94.2                                                                                                      | 22.0 | 0.2                               | 0.2 | --                         | -- | --          | -- | --              | -- | --        | --  | 7.2       | 3.1 | --     | --  | 101.6                        |
| J1-06                    | 95.6                                                                                                      | 22.0 | 0.2                               | 0.2 | --                         | -- | --          | -- | --              | -- | --        | --  | --        | --  | 9.1    | 3.6 | 104.8                        |

Source: AECOM/Straughan, August 2020

**Table D.3-14: Summary of Permanent (P) and Temporary (T) Property Impacts to Recreational Facilities and Parklands [in Acres]**

| Recreational Facility/Park | Impact* | 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 |
| Small Park Reservations    | P       | 0                 | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0     | 0     | 0     | 0     |
|                            | T       | 0.1               | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   |
| NYARC                      | P       | 0.2               | 0.2  | 0.2  | 0.2  | 0.2  | 0.2  | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
|                            | T       | <0.1              | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1  | <0.1  | <0.1  | <0.1  | <0.1  | <0.1  |
| Greenbelt Forest Preserve  | P       | 0                 | 0    | 0    | 0    | 0    | 0    | 39.7  | 40.5  | 41.0  | 39.7  | 40.5  | 42.0  |
|                            | T       | 0                 | 0    | 0    | 0    | 0    | 0    | 5.8   | 7.6   | 5.8   | 5.8   | 7.6   | 5.8   |
| BWP                        | P       | 88.9              | 68.8 | 67.4 | 88.9 | 68.8 | 67.4 | 52.7  | 39.6  | 41.4  | 52.7  | 39.6  | 41.4  |
|                            | T       | 27.6              | 36.6 | 36.0 | 27.6 | 36.6 | 36.0 | 13.6  | 14.8  | 14.1  | 13.6  | 14.8  | 14.1  |
| Springfield Road Park      | P       | 0                 | 0    | 0    | 0    | 0    | 0    | 0.8   | 1.7   | 1.7   | 0.8   | 1.7   | 1.7   |
|                            | T       | 0                 | 0    | 0    | 0    | 0    | 0    | 0     | 0.7   | 0.7   | 0     | 0.7   | 0.7   |
| Patuxent River Park        | P       | <0.1              | 0    | 0    | <0.1 | 0    | 0    | 1.8   | 1.4   | 1.4   | 1.8   | 1.4   | 1.4   |
|                            | T       | <0.1              | 0    | 0    | <0.1 | 0    | 0    | 0.6   | 0.8   | 0.8   | 0.6   | 0.8   | 0.8   |
| Brockbridge Park           | P       | 0                 | 0    | 0    | 0    | 0    | 0    | <0.1  | <0.1  | <0.1  | <0.1  | <0.1  | <0.1  |
|                            | T       | 0                 | 0    | 0    | 0    | 0    | 0    | <0.1  | <0.1  | <0.1  | <0.1  | <0.1  | <0.1  |
| Maryland City Park         | P       | 0                 | 0    | 0    | 0    | 0    | 0    | 24.4  | 18.3  | 18.3  | 24.4  | 18.3  | 18.3  |
|                            | T       | 0                 | 0    | 0    | 0    | 0    | 0    | 3.8   | 4.3   | 4.3   | 3.8   | 4.3   | 4.3   |
| PRR                        | P       | 23.8              | 23.5 | 23.5 | 23.8 | 23.5 | 23.5 | 0     | 0     | 0     | 0     | 0     | 0     |
|                            | T       | 25.9              | 25.5 | 25.5 | 25.9 | 25.5 | 25.5 | 0     | 0     | 0     | 0     | 0     | 0     |
| Montpelier Hills Park      | P       | 0                 | 0    | 0    | 0    | 0    | 0    | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   |
|                            | T       | 0                 | 0    | 0    | 0    | 0    | 0    | 0.3   | 0.3   | 0.3   | 0.3   | 0.3   | 0.3   |

Note: <sup>1</sup> Includes 20.4 acres of impact from alignment LOD, and 178.2 acres of estimated impact to 300-foot buffer area within refuge conservation programs that would impact recreational use of PRR.

Source: AECOM/Straughan, August 2020

- Build Alternatives J-03 and J-06 would have the least quantity of permanent parkland impacts (87.95 acres, three parks). Two of these parks/parkways (BWP and PRR) would have impacts considered to be difficult to mitigate. Impacts are considered difficult to mitigate due to the extensiveness of impact and/or uniqueness of park features.
- Build Alternatives J1-01 and J1-04 would have the greatest permanent parkland impacts (132.38 acres, seven parks). Three of these parks/parkways (Greenbelt Forest Preserve, BWP, Patuxent River Park 1) would have impacts considered difficult to mitigate. Impacts are considered difficult to mitigate due to the extensiveness of impact and/or uniqueness of park features.

### **D.3C.3.2.2 Build Alternatives J – Long Term Operational Effects**

#### **Alignment and Ancillary Facilities**

Build Alternatives with J alignments impacts are identical regardless of the TMF and station option chosen.

Build Alternatives J would permanently impact two park resources, BWP and PRR. Build Alternatives J impacts to BWP with construction of the portals, viaduct, roadway realignments, and substation facilities. Impacts would occur within the scenic viewshed of the Baltimore-Washington Parkway.

#### ***Baltimore-Washington Parkway***

Build Alternatives J would impact BWP with construction of the portals, viaduct, roadway realignments, and substation facilities. Impacts would occur within the scenic viewshed of the BWP. The viaduct and ancillary facilities would be close and highly visible from users of the parkway in many areas. In these areas, SCMAGLEV System elements would intrude on the naturalized scenery that enhances the recreational use of the parkway. Build Alternatives J would result in 67.4 to 88.9 acres of permanent impact to the BWP. From one to five acres of impacts are associated with roadway realignments and substation facilities.

#### ***Patuxent Research Refuge***

Build Alternatives J impacts to PRR would result from the viaduct and ancillary facilities. The viaduct would cross over the westernmost bend of Wild Turkey Way, part of the trail system of PRR's North Tract, and would cross lands used for hunting and conservation. Presence of the SCMAGLEV piers, viaduct, and operation of the SCMAGLEV system would intrude on the areas of wildlife research and conservation, limiting the use of the refuge as an area to view and enjoy wildlife, and limiting the amount of land available for hunting. Relocation of the electric transmission lines by means of burial will require safety measures such as fencing, and the protrusion of fencing into the refuge will restrict the areas of the refuge available for hunting and other visitor use, and will break habitat connectivity.

In addition to the 23.5 acres of permanent physical impact to PRR and 25.5 to 29.9 acres of temporary physical construction impact, a strip of PRR generally northwest of Build Alternatives J, between the viaduct infrastructure and the parkway would become unavailable for recreation activities. A buffer area extending 300 feet southwest of the alignment and ancillary facilities in PRR would also result in impacts to wildlife and conservation programs that would adversely affect recreation at PRR. The area of impact is approximately 165 acres but may change as design refinements are made. Because PRR is funded partially with LWCF Act funds, the permanent impacts to PRR would require the Project Sponsor to receive approval for the conversion of parkland to transportation use from USFWS.

Build Alternatives J would be less than 800 feet from the following seven parks and would have the potential to impact these parks in terms of noise and visual changes during SCMAGLEV Project operations. The parks include Loomis Park, Bladensburg Waterfront Park, Bladensburg South Park, Anacostia River Trail, South Laurel Park, Muirkirk Park, Montpelier Hills Park, and the Patapsco Valley State Park. However, FRA does not anticipate adverse noise or visual effects to the following parks:

**Loomis Park, Bladensburg South Park, Muirkirk Park and Patapsco Valley State Park** are not developed for recreation within 800 feet of proposed SCMAGLEV elements. Therefore, there are no recreational uses sensitive to noise or visual effects.

The **Anacostia River Trail, Bladensburg Waterfront Park, South Laurel Park, and Montpelier Hills Park** have recreational uses that are not noise sensitive. An FA-EE facility would be visible from the Anacostia River Trail and Bladensburg Waterfront Park, but the facility would be in an already developed industrial area; as a result, the facility would not be visually intrusive to the recreational uses in the parks. The Project Sponsor would relocate existing powerlines within an existing transmission line corridor adjacent to South Laurel Park; however, the noise and visual environment of South Laurel Park would not change. Existing powerlines would be relocated within their existing corridor and would not affect the noise or visual environment at Montpelier Hills Park.

### **D.3C.3.2.3 Build Alternatives J1 – Long Term Operational Effects**

#### **Alignments and Ancillary Facilities**

Build Alternatives J1 alignments impacts are identical regardless of the TMF and station option chosen. Build Alternatives J1 would permanently impact six park resources: BWP, Brock Bridge Elementary School/Brockbridge Park, Greenbelt Forest Preserve, Maryland City Park, Patuxent River Park 1, and Springfield Road Park.

#### ***Baltimore-Washington Parkway***

Build Alternatives J1 impacts to Baltimore-Washington Parkway would result from construction of the portals, viaduct, roadway realignments, and substation facilities. Impacts would occur within the scenic viewshed of the BWP. The viaduct and ancillary

facilities would be close and highly visible from users of the parkway in many areas. In these areas, SC MAGLEV System elements would intrude on the naturalized scenery that enhances the recreational use of the parkway.

J1 Alignment and ancillary facilities would result 39.6 to 52.7 acres of permanent impact to the Baltimore Washington Parkway. Impacts result from construction of the portal and the viaduct associated with the mainline, maintenance of way facilities, and TMFs. From one to five acres of impacts are associated with roadway realignments and substation facilities.

### ***Brock Bridge Elementary School/Brockbridge Park***

Build Alternatives J1 impacts to Brock Bridge Elementary School/Brockbridge Park would be due to portal construction immediately south of the property. Sliver takes of the school/park property would occur in an undeveloped, wooded area and would not affect the ballfields or other recreational activities at the school.

J1 Alignment and ancillary facilities would result in sliver impacts to the southeast corner of the Brock Bridge Elementary School property. The sliver takes would occur in an undeveloped, wooded area and would not affect the ballfields or other recreational activities at the school.

### ***Greenbelt Forest Preserve***

Build Alternatives J1 impacts to Greenbelt Forest Preserve would result from construction of a tunnel portal, SCMAGLEV systems, and stormwater management facilities. Impacts to the Preserve would include construction of open cut tunnel, which would directly impact trails within the SCMAGLEV Project Affected Environment, remove access to the eastern half of the Preserve's trail system, and require removal of two softball fields and the Observatory. Greenbelt Forest Preserve is part of the Greenbelt Historic District's historically significant greenbelt. Some recreational opportunities at Greenbelt Forest Preserve such as hiking and viewing wildlife are replicated nearby at PRR, but the Observatory and location of the Preserve are unique elements of the historically significant greenbelt. In addition, a 13.9-acre parcel within the Preserve was transferred to City of Greenbelt from NPS under the Federal Lands to Parks Program, and NPS would require mitigation measures for impacts to FLP-transferred lands.

J1 Alignment and ancillary facilities would result in 39.7 to 42.0 acres of impacts at the Greenbelt Forest Preserve, depending on which TMF is chosen. Build Alternatives J1-01 and J1-04, which include the MD 198 TMF, result in 39.7 acres of permanent impact. Alternatives J1-02 and J1-05, which include the BARC Airstrip TMF, result in 40.5 acres of impact. Alternatives J1-03 and J1-06, which include the BARC West TMF result in 41.0 acres of impact to the Forest Preserve. Impacts to the Preserve include construction of open tunnel which would directly impact forest cover and trails within the LOD and remove access to the eastern half of the Preserve's trail system. It would also require removal of two softball fields and the Observatory. Although other ballfields are

available in Greenbelt, including Braden Field at the Greenbelt Recreation Center, the Greenbelt Forest Preserve is unique and impossible to replicate elsewhere. The Observatory requires low light levels that would be difficult to replicate within other areas of Greenbelt.

### ***Maryland City Park***

Build Alternatives J1 impacts to Maryland City Park would result from construction of the tunnel portal, overhead electric lines, viaduct, SCMAGLEV systems, and stormwater management. Build Alternatives J1 would impact two baseball fields, two multi-purpose fields, and a paved trail that joins the two parcels that comprise the park.

J1 Alignment and ancillary facilities would result in 17.7 to 18.30 acres of impacts at Maryland City Park, depending on which TMF is chosen. Alternatives J1-01 and J1-04 which include the MD 198 TMF results in 17.70 acres of permanent impact. Alternatives J1-02, J1-03, J1-05 and J1-06, which include the BARC Airstrip and BARC West TMFs, result in 18.30 acres of impact to Maryland City Park. All alignment alternatives result in impacts to two baseball fields, two multi-purpose fields, and a paved trail that joins the two parcels that comprise the park. Anne Arundel County DPR representatives noted that Maryland City Park serves an area of the County less well served than others by ball fields and courts due to the presence of large federal land areas such as Fort Meade and PRR (Anne Arundel County 2019). Other ballfields are located at Montpelier Park, but Montpelier Park does not include a multipurpose field that would require removal at Maryland City Park.

### ***Patuxent River Park 1***

Build Alternatives J1 and ancillary facility impacts to Patuxent River Park 1 would result from construction of overhead electric lines and viaduct. Impacts would occur within an undeveloped wooded area of the park and the Patuxent River.

J1 Alignment and ancillary facilities would result in 1.13 to 1.35 acres of impacts at Patuxent River Park 1. Alternatives J1-01 and J1-04 include 1.13 acres of impact to Patuxent River Park 1. Alternatives J1-02, J1-03, J1-05, and J1-06, each result in 1.35 acres of permanent impact to Patuxent River Park 1. Impacts are associated with the viaduct which crosses undeveloped wooded parkland and the Patuxent River. The Patuxent River Park 1 supports Patuxent River conservation efforts and recreational use of the river downstream. Because Patuxent River Park 1 does not support recreational use on site, the effects on the user experience of the placement of viaduct within the park would be minimal.

### ***Montpelier Hills Park***

Build Alternatives J1 impacts to Montpelier Hills Park would result from viaduct construction on the east side of the park. Minor, linear acquisition of the park property would occur in an undeveloped, wooded area of the park and would not affect use of the tennis courts or picnic pavilion.

### ***Springfield Road Park***

Build Alternatives J1 impacts to Springfield Road Park would result from construction of SCMAGLEV systems within a wooded, undeveloped portion of the park. Because Springfield Road Park does not support recreational use on site, the effects on the user experience of the placement of alignment and ancillary within the park would be minimal.

J1 Alignment and ancillary facilities would result in 0.80 to 1.69 acres of impacts to Springfield Road Park. Alternatives J1-01 and J1-04 (MD 198 TMF) include 0.80 acres of impact to Springfield Road Park. Alternatives J1-02, J1-03, J1-05, and J1-06, each result in 1.69 acres of permanent impact to Springfield Road Park. Impacts are associated with the mainline viaduct. The park is undeveloped, but impacts associated with MD 198 TMF in addition to the J1 Alignment impacts associated with Alternatives J1-01 and J1-04 would preclude the development of any facilities at Springfield Road Park, while Alternatives J1-02, J1-03, J1-05, and J1-06 would only require minor sliver impacts to the southeast side of the park that abuts Baltimore-Washington Parkway.

Build Alternatives J1 and ancillary facilities would be less than 800 feet from the following seven parks and would have the potential to impact these parks in terms of noise and visual changes during SCMAGLEV Project operations. The parks include Loomis Park, Bladensburg Waterfront Park, Bladensburg South Park, Anacostia River Trail, South Laurel Park, Muirkirk Park, and the Patapsco Valley State Park. However, FRA does not anticipate adverse noise or visual effects to the following parks:

- **Loomis Park, Bladensburg South Park, Muirkirk Park and Patapsco Valley State Park** are not developed for recreation within 800 feet of proposed SCMAGLEV elements. Therefore, there are no recreational uses sensitive to noise or visual effects.
- The **Anacostia River Trail, Bladensburg Waterfront Park, South Laurel Park, and Montpelier Park** have recreational uses that are not noise sensitive. An FA/EE facility would be visible from the Anacostia River Trail and Bladensburg Waterfront Park, but the facility would be in an already developed industrial area; as a result, the facility would not be visually intrusive to the recreational uses in the parks. The Project Sponsor would relocate existing powerlines within an existing transmission line corridor adjacent to South Laurel Park; however, the noise and visual environment of South Laurel Park would not change. Portions of the viaduct may be visible from Montpelier Park, but the ballfields at the park are not visually sensitive uses.

#### **D.3C.3.2.4 Stations**

##### **Mount Vernon Square East**

###### ***New York Avenue Recreation Center***

A station entrance to Mount Vernon Square East Station would impact New York Avenue Recreation Center. The entrance would be located in an area of lawn and trees and prevent use of that area as a gathering place for social and passive recreational activities adjacent to the south side of the baseball field.

A station entrance would occupy 0.16 acres within the New York Avenue Recreation Center property. The entrance would be located in an area of lawn and trees adjacent to the south side of outfield the baseball field. The Kennedy Recreation Center, approximately 2,200 feet northwest at 6<sup>th</sup> and O Streets NW, offers similar space of lawn and trees adjacent to a baseball diamond and other ballfields/courts.

###### ***Small Park Reservations***

The Mount Vernon Square East Station and station entrances would be located within 800 feet of Small Park Reservations – L'Enfant Plan (SPR) owned and administered by the NPS. These small park reservations include Reservations 71, 72, 73, 74, 183, and 185. These parks, which provide open space, and some of which provide benches and other spaces for rest are adjacent to New York Avenue NW, a major urban arterial roadway. They would not be impacted by nearby station entrances as they do not have noise-sensitive recreational uses and the station entrances would be generally compatible with the urban nature of the surrounding area.

##### **BWI Marshall Airport**

No public recreational facilities or parklands would be permanently impacted by the BWI Marshall Airport Station.

##### **Cherry Hill**

No public recreational facilities or parklands would be permanently impacted by the Cherry Hill Station.

The Cherry Hill Station would be located within 800 feet of three parks owned and administered by the Baltimore City Department of Recreation and Parks – **Lakeland Park, Indiana Avenue Park, and Middle Branch Park**. The station, construction laydown areas, parking garages, and SCMAGLEV systems associated with the station would be visible from the parks. Recreational uses at these parks are not noise-sensitive and the visibility of SCMAGLEV Project elements would not be intrusive to park uses.

##### **Camden Yards**

No public recreational facilities or parklands would be permanently impacted by the Camden Yards Station.

### **D.3C.3.2.5 TMFs**

#### **MD 198**

The MD 198 TMF would impact five park resources: BWP, PRR, Maryland City Park, Patuxent River Park 1, and Springfield Road Park. Potential impacts to BWP would result from the MD 198 TMF and access ramps to be located in an existing wooded area on the east side of the parkway. The ramp access would be a visually prominent element that would cross over the BWP on the south side of the MD 198 interchange and intrude on the naturalized parkway scenery that enhances the recreational use of the parkway.

#### ***Baltimore-Washington Parkway***

The MD 198 TMF impacts to BWP would result from vegetative clearing associated with the MD 198 TMF and access ramps located in an existing wooded area on the east side of the parkway. The ramp access would be a visually prominent element that would cross over the parkway on the south side of the MD 198 interchange.

The viaduct and MOW facility associated with the MD 198 TMF for Build Alternatives J-01 and J-04 would result in 28.7 acres of permanent impact at the Baltimore Washington Parkway. The maintenance of way facility would be located in a wooded area on the east side of Baltimore Washington Parkway, and would be somewhat shielded visually from the parkway by trees. The viaduct and MOW ramp associated with the MD 198 TMF under Build Alternatives J1-01 and J1-04 would result in 17.85 acres of permanent impact at the parkway. The viaduct would be a visually prominent element that would cross over the parkway on the south side of the MD 198 interchange.

#### ***Patuxent Research Refuge***

The MD 198 TMF impacts to PRR would result from the vegetative clearing associated with the MD 198 TMF viaduct ramp within the BG&E utility corridor, habitat fragmentation and interruption of conservation programs, and restriction of access to portions of the facility by hunters and other refuge visitors.

#### ***Maryland City Park***

The MD 198 TMF impacts to Maryland City Park would result from vegetative clearing associated with the ramp access in an area of undeveloped wooded parkland and would have minimal effects on park activities.

The viaduct associated with the MD 198 TMF for Build Alternatives J1-01 and J1-04 would result in 6.74 acres of permanent impact at Maryland City Park.

#### ***Patuxent River Park 1***

The MD 198 TMF impacts to Patuxent River Park 1 would result from vegetative clearing associated with the ramp access within undeveloped wooded parkland and the

Patuxent River. The Patuxent River Park 1 supports Patuxent River conservation efforts and recreational use of the river downstream. Because Patuxent River Park 1 doesn't support recreational use on site, the effects on the user experience of the placement of TMF ramps within the park would be minimal.

The viaduct associated with the MD 198 TMF for Build Alternatives J1-01 and J1-04 would result in 0.69 acres of permanent impact at Patuxent River Park 1.

### ***Springfield Road Park***

The MD 198 TMF impacts to Springfield Road Park would result from vegetative clearing associated with the maintenance of way facility, as well as vegetative clearing associated with the TMF's access ramps and permanent access road within an area of undeveloped woodland. The construction of the MOW facility would require 12.3 acres within the 26.8-acre park, an impact that would likely prevent future development of the park for recreational uses. The park was transferred to M-NCPPC from NPS under the Federal Lands to Parks Program, and NPS would require mitigation measures for impacts to FLP-transferred lands.

The viaduct associated with the MD 198 TMF for Build Alternatives J1-01 and J1-04 would result in 12.74 acres of permanent impact at Springfield Road Park. The impact is associated with the MD198 TMF's MOW facility, its ramps, permanent access road, reconstructed roadway, viaduct, and SCMAGLEV systems. The impact would occur in areas of undeveloped woodland. The construction of the MOW facility would require 12.3 acres within the 26.8-acre park, an impact that would likely prevent future development of the park for recreational uses.

### **BARC Airstrip**

#### ***Baltimore-Washington Parkway***

The BARC Airstrip TMF impacts to Baltimore-Washington Parkway would result from the ramp access to the TMF, which would cross over the parkway in the vicinity of the parkway overpass of Beaver Dam Road. The access ramps would be a visually prominent element in this location. The ramps above the BWP would be highly visible to users of the Parkway and difficult to screen. In these areas, BARC Airstrip TMF elements would intrude on the naturalized scenery that enhances the recreational use of the parkway.

The viaduct associated with the BARC Airstrip TMF ramps for Build Alternatives J-02 and J-05 would result in 3.29 acres of permanent impact at the Baltimore-Washington Parkway. The viaduct would be located adjacent to the east side of the parkway, approximately 10-15 feet in elevation, and thinly shielded by a 70-foot row of trees and vegetation. The viaduct and MOW facility associated with the BARC Airstrip TMF for Build Alternatives J1-02 and J1-05 would result in 2.62 acres of impact at the Baltimore-Washington Parkway. The viaduct would cross over the parkway in the vicinity of the

Beaver Dam Road underpass of the parkway. The viaduct would be a visually prominent element in this location.

### ***Greenbelt Forest Preserve***

The BARC Airstrip TMF impacts to the Greenbelt Forest Preserve would result from the ramp access and cut/cover tunnel associated with the TMF ramps. Impacts would occur in the wooded area of the preserve north of the Observatory and would require removal of trails within this area of the Preserve, which is part of the Greenbelt Historic District.

The viaduct and cut and cover tunnel associated the BARC Airstrip TMF ramps for Build Alternatives J1-02 and J1-05 would result in 4.60 acres of impact to the Greenbelt Forest Preserve.

### ***Patuxent Research Refuge***

The BARC Airstrip TMF would have no physical impacts to PRR, but because it is adjacent to the PRR boundary, FRA applied a 300-foot buffer requested by USFWS to estimate impacts to wildlife and conservation programs, which directly affect PRR's recreational use. The area of PRR impact to the buffer would be approximately 13 acres.

### **BARC West**

#### ***Baltimore-Washington Parkway***

The BARC West TMF impacts to the Baltimore-Washington Parkway would result from the vegetative clearing associated with the ramp access. In addition, the ramps would cross the Parkway in the vicinity of the overpass of Beaver Dam Road. The viaduct would be a visually prominent element in this location. The BARC West TMF elements would intrude on the naturalized scenery that enhances the recreational use of the Parkway.

The viaduct associated with the BARC West TMF for Build Alternatives J-03 and J-06 would result in 3.14 acres of permanent impact at the Baltimore-Washington Parkway. The viaduct would be located adjacent to the east side of the parkway, generally 15-25 feet in elevation, and thinly shielded by a row of trees of varying width. The viaduct would cross over the parkway in the vicinity of the Beaver Dam Road underpass of the parkway. The viaduct would be a visually prominent element in this location. The viaduct associated with the BARC Airstrip TMF for Build Alternatives J1-03 and J1-06 would result in 4.57 acres of impact at the BWP. The viaduct would be located adjacent to the west side of the parkway, generally 15-25 feet in elevation, and thinly shielded by a row of trees of varying width. For a 600-foot stretch south of Powder Mill Road, the viaduct would be located directly adjacent to the southbound lanes of the parkway.

**Table D.3-15: Permanent (P) and Temporary (T) Property Impacts to Recreational Facilities and Parklands, Build Alternatives J [in Acres]**

| Build Alternative                                                                                                                                                                                                                                                                                                                                         | Impact | Alignment                | Stations                 |                      |             |              | TMF        |                        |                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------|--------------------------|----------------------|-------------|--------------|------------|------------------------|------------------------|
|                                                                                                                                                                                                                                                                                                                                                           |        | BWP                      | Mount Vernon Square East | BWI Marshall Airport | Cherry Hill | Camden Yards | MD 198     | BARC East              | BARC West              |
| J-01                                                                                                                                                                                                                                                                                                                                                      | P      | BWP: 60.18<br>PRR: 23.53 | SPR: 0<br>NYARC: 0.16    | --                   | --          | --           | BWP: 28.70 | --                     | --                     |
|                                                                                                                                                                                                                                                                                                                                                           | T      | BWP: 26.87<br>PRR: 25.87 | SPR: 0.14<br>NYARC: 0.06 | --                   | --          | --           | BWP: 0.29  | --                     | --                     |
| J-02                                                                                                                                                                                                                                                                                                                                                      | P      | BWP: 65.47<br>PRR: 23.53 | SPR: 0<br>NYARC: 0.16    | --                   | --          | --           | --         | BWP: 3.29<br>GFP: 4.60 | --                     |
|                                                                                                                                                                                                                                                                                                                                                           | T      | BWP: 35.90<br>PRR: 25.46 | SPR: 0.14<br>NYARC: 0.06 | --                   | --          | --           | --         | BWP: 0.72<br>GFP: 1.04 | --                     |
| J-03                                                                                                                                                                                                                                                                                                                                                      | P      | BWP: 64.24<br>PRR: 23.53 | SPR: 0<br>NYARC: 0.16    | --                   | --          | --           | --         | --                     | BWP: 3.14<br>GFP: 4.51 |
|                                                                                                                                                                                                                                                                                                                                                           | T      | BWP: 32.35<br>PRR: 25.46 | SPR: 0.14<br>NYARC: 0.06 | --                   | --          | --           | --         | --                     | BWP: 3.63<br>GFP: 1.26 |
| J-04                                                                                                                                                                                                                                                                                                                                                      | P      | BWP: 60.18<br>PRR: 23.53 | SPR: 0<br>NYARC: 0.16    | --                   | --          | --           | BWP: 28.70 | --                     | --                     |
|                                                                                                                                                                                                                                                                                                                                                           | T      | BWP: 26.87<br>PRR: 25.87 | SPR: 0.14<br>NYARC: 0.06 | --                   | --          | --           | BWP: 0.29  | --                     | --                     |
| J-05                                                                                                                                                                                                                                                                                                                                                      | P      | BWP: 65.47<br>PRR: 23.53 | SPR: 0<br>NYARC: 0.16    | --                   | --          | --           | --         | BWP: 3.29<br>GFP: 4.60 | --                     |
|                                                                                                                                                                                                                                                                                                                                                           | T      | BWP: 35.90<br>PRR: 25.46 | SPR: 0.14<br>NYARC: 0.06 | --                   | --          | --           | --         | BWP: 0.72<br>GFP: 1.04 | --                     |
| J-06                                                                                                                                                                                                                                                                                                                                                      | P      | BWP: 64.24<br>PRR: 23.53 | SPR: 0<br>NYARC: 0.16    | --                   | --          | --           | --         | --                     | BWP: 3.14<br>GFP: 4.51 |
|                                                                                                                                                                                                                                                                                                                                                           | T      | BWP: 32.35<br>PRR: 25.46 | SPR: 0.14<br>NYARC: 0.06 | --                   | --          | --           | --         | --                     | BWP: 3.63<br>GFP: 1.26 |
| SPR: Small Park Reservations      BWP: Baltimore-Washington Parkway      MCP: Maryland City Park<br>NYARC: New York Avenue Recreation Center      SRP: Springfield Road Park      PRR: Patuxent Research Refuge<br>GFP: Greenbelt Forest Preserve      PRP: Patuxent River Park 1      MHP: Montpelier Hills Park<br>Source: AECOM/Straughan, August 2020 |        |                          |                          |                      |             |              |            |                        |                        |

**Table D.3-16: Permanent (P) and Temporary (T) Property Impacts to Recreational Facilities and Parklands, Build Alternatives J1 [in Acres]**

| Build Alternative | Impact | Alignment                                                                                    | Stations                 |                      |             |              | TMF                                  |                        |           |
|-------------------|--------|----------------------------------------------------------------------------------------------|--------------------------|----------------------|-------------|--------------|--------------------------------------|------------------------|-----------|
|                   |        | BWP                                                                                          | Mount Vernon Square East | BWI Marshall Airport | Cherry Hill | Camden Yards | MD 198                               | BARC East              | BARC West |
| J1-01             | P      | BWP: 34.86<br>BRP: 0.0008<br>GFP: 39.68<br>MCP: 17.7<br>PRP: 1.13<br>SRP: 0.80<br>MHP: 0.57  | SPR: 0<br>NYARC: 0.16    | --                   | --          | --           | BWP: 17.85<br>MCP: 6.74<br>PRP: 0.69 | --                     | --        |
|                   | T      | BWP: 7.42<br>BRP: 0.005<br>GFP: 5.83<br>MCP: 2.55<br>PRP: 0.26<br>SRP: 0<br>MHP: 0.3         | SPR: 0.14<br>NYARC: 0.06 | --                   | --          | --           | BWP: 6.15<br>MCP: 1.23<br>PRP: 0.26  | --                     | --        |
| J1-02             | P      | BWP: 36.96<br>BRP: 0.0008<br>GFP: 35.94<br>MCP: 18.30<br>PRP: 1.35<br>SRP: 1.69<br>MHP: 0.57 | SPR: 0<br>NYARC: 0.16    | --                   | --          | --           | --                                   | BWP: 2.62<br>GFP: 4.60 | --        |
|                   | T      | BWP: 12.71<br>BRP: 0.005<br>GFP: 6.58<br>MCP: 4.30<br>PRP: 0.80<br>SRP: 0.70<br>MHP: 0.3     | SPR: 0.14<br>NYARC: 0.06 | --                   | --          | --           | --                                   | BWP: 2.09<br>GFP: 1.04 | --        |

| Build Alternative | Impact | Alignment                                                                                                | Stations                 |                      |             |              | TMF                                  |           |                        |
|-------------------|--------|----------------------------------------------------------------------------------------------------------|--------------------------|----------------------|-------------|--------------|--------------------------------------|-----------|------------------------|
|                   |        | BWP                                                                                                      | Mount Vernon Square East | BWI Marshall Airport | Cherry Hill | Camden Yards | MD 198                               | BARC East | BARC West              |
| J1-03             | P      | BWP: 36.80<br>BRP: 0.0008<br>GFP: 37.46<br>MCP: 18.30<br>PRP: 1.35<br>SRP: 1.69<br>MHP: 0.57             | SPR: 0<br>NYARC: 0.16    | --                   | --          | --           | --                                   | --        | BWP: 4.57<br>GFP: 4.51 |
|                   | T      | BWP: 11.70<br>BRP: 0.005<br>GFP: 4.48<br>MCP: 4.30<br>PRP: 0.80<br>SRP: 0.70<br>MHP: 0.3                 | SPR: 0.14<br>NYARC: 0.06 | --                   | --          | --           | --                                   | --        | BWP: 2.36<br>GFP: 1.26 |
| J1-04             | P      | BWP: 34.86<br>BRP: 0.0008<br>PRP: 1.13<br>GFP: 39.68<br>MCP: 17.7<br>PRP: 1.13<br>SRP: 0.80<br>MHP: 0.57 | SPR: 0<br>NYARC: 0.16    | --                   | --          | --           | BWP: 17.85<br>MCP: 6.74<br>PRP: 0.69 | --        | --                     |
|                   | T      | BWP: 7.42<br>BRP: 0.005<br>PRP: 0.26<br>GFP: 5.83<br>MCP: 2.55<br>PRP: 0.26<br>SRP: 0<br>MHP: 0.3        | SPR: 0.14<br>NYARC: 0.06 | --                   | --          | --           | BWP: 6.15<br>MCP: 1.23<br>PRP: 0.26  | --        | --                     |

| Build<br>Alternative                                                                                       | Impact | Alignment                                                                                    | Stations                                                                                      |                            |             |                                                                                        | TMF    |                        |                        |
|------------------------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------|-------------|----------------------------------------------------------------------------------------|--------|------------------------|------------------------|
|                                                                                                            |        | BWP                                                                                          | Mount<br>Vernon<br>Square East                                                                | BWI<br>Marshall<br>Airport | Cherry Hill | Camden<br>Yards                                                                        | MD 198 | BARC<br>East           | BARC<br>West           |
| J1-05                                                                                                      | P      | BWP: 36.96<br>BRP: 0.0008<br>GFP: 35.94<br>MCP: 18.30<br>PRP: 1.35<br>SRP: 1.69<br>MHP: 0.57 | SPR: 0<br>NYARC: 0.16                                                                         | --                         | --          | --                                                                                     | --     | BWP: 2.62<br>GFP: 4.60 | --                     |
|                                                                                                            | T      | BWP: 12.71<br>BRP: 0.005<br>GFP: 6.58<br>MCP: 4.30<br>PRP: 0.80<br>SRP: 0.70<br>MHP: 00.3    | SPR: 0.14<br>NYARC: 0.06                                                                      | --                         | --          | --                                                                                     | --     | BWP: 2.09<br>GFP: 1.04 | --                     |
| J1-06                                                                                                      | P      | BWP: 36.80<br>BRP: 0.0008<br>GFP: 37.46<br>MCP: 18.30<br>PRP: 1.35<br>SRP: 1.69<br>MHP: 0.57 | SPR: 0<br>NYARC: 0.16                                                                         | --                         | --          | --                                                                                     | --     | --                     | BWP: 4.57<br>GFP: 4.51 |
|                                                                                                            | T      | BWP: 11.7<br>BRP: 0.005<br>GFP: 4.48<br>MCP: 4.30<br>PRP: 0.80<br>SRP: 0.70<br>MHP: 0.3      | SPR: 0.14<br>NYARC: 0.06                                                                      | --                         | --          | --                                                                                     | --     | --                     | BWP: 2.36<br>GFP: 1.26 |
| SPR: Small Park Reservations<br>NYARC: New York Avenue Recreation Center<br>GFP: Greenbelt Forest Preserve |        |                                                                                              | BWP: Baltimore-Washington Parkway<br>SRP: Springfield Road Park<br>PRP: Patuxent River Park 1 |                            |             | MCP: Maryland City Park<br>PRR: Patuxent Research Refuge<br>MHP: Montpelier Hills Park |        |                        |                        |
| Source: AECOM/Straughan, August 2020                                                                       |        |                                                                                              |                                                                                               |                            |             |                                                                                        |        |                        |                        |

### ***Greenbelt Forest Preserve***

The BARC West TMF impacts to the Greenbelt Forest Preserve would result from the ramp access and cut/cover tunnel. Impacts would occur in the wooded area of the preserve north of the Observatory and would require removal of trails within this area of the Preserve.

The viaduct and cut and cover tunnel associated the BARC Airstrip TMF ramps for Build Alternatives J1-03 and J1-06 would result in 4.51 acres of impact to the Greenbelt Forest Preserve. Impacts would occur in the wooded area of the preserve north of the Observatory

## **D.3C.4 Short-term Construction Effects**

Construction of the Build Alternatives results in the following public recreational facilities and parklands construction impacts:

### **D.3C.4.1 Alignment and Ancillary Facilities**

#### **D.3C.4.1.1 Build Alternatives J**

Build Alternatives J alignments short-term construction effects are identical regardless of the TMF and station option chosen.

Build Alternatives J alignments would result in short-term construction impacts at eight NPS Small Park Reservations due to the construction LOD associated with cut and cover tunnel construction. All small park reservations would be returned to their existing condition following construction. Rigo Walled Park (Reservation 178) would incur 0.03 acres of impact, Center Parking (Reservation 179) would incur .001 acres of impact, Triangle Parks at Reservations 176, 180, 181, and 182 would incur 0.01, 0.01, 0.02, and 0.005 acres of impact, respectively.

Build Alternatives J alignments would result in 0.06 acres of short-term construction impacts at the New York Avenue Recreation Center due to the construction LOD associated with cut and cover tunnel and station construction.

Build Alternatives J alignments would result in 26.87 to 35.90 acres of short-term construction impacts at the BWP. Impacts would include clearing and grubbing of vegetation, and excavation that would result from the construction LOD associated with relocation and construction of powerlines, tunnel laydown areas, operation of a TBM Launch-Retrieval site, and construction of the viaduct and ancillary facilities. Construction effects may result temporary visual impacts, and in lane shifts and temporary lane closures, but the BWP would remain open during construction. Areas of cleared vegetation would occur in areas of mature forest and habitat, with impacts lasting 75-100 years.

Build Alternatives J short-term construction effects to the PRR would include clearing and grubbing of vegetation, and excavation that would result from constructing the viaduct and relocating the powerlines within the BGE transmission corridor at the northwest boundary of the refuge. Short-term construction effects would also include temporary noise and visual impacts. Alternatives J alignments would result in 23.44 acres of short-term construction impacts at the PRR. Temporary impacts are due to efforts to relocate the powerlines within the transmission corridor at the northwest boundary of the facility near the Baltimore-Washington Parkway/MD 198 interchange. Short-term construction effects would include temporary noise and visual impacts at PRR. Although considered a short-term effect, clearing and vegetation removal would occur in areas of mature forest and habitat, with impacts lasting 75-100 years.

#### **D.3C.4.1.2 Build Alternatives J1**

Build Alternatives J1 alignments short-term construction effects are identical regardless of the TMF and station option chosen. Construction of Build Alternatives J1 alignments would result in short-term effects to six park resources: BWP, Greenbelt Forest Preserve, Maryland City Park, Patuxent River Park 1, Springfield Road Park, and Brock Bridge Elementary School/Brockbridge Park.

Build Alternatives J1 would have identical short-term construction impacts at Small Park Reservations and the New York Avenue Recreation Center as the Alignment J alternatives.

Build Alternatives J1 would result in 7.42 to 12.71 acres of short-term construction impact to the BWP. Impacts would include clearing and grubbing of vegetation, and excavation associated with the relocation and construction of powerlines, underground electric lines, and construction of the viaduct, viaduct work zone access road, and ancillary facilities. Construction would result in temporary visual impacts, and in lane shifts and temporary lane closures, but the BWP would remain open during construction. Although considered a short-term effect, clearing and vegetation removal would occur in areas of mature forest and habitat, with impacts lasting 75-100 years.

Build Alternatives J1 would result in 4.48 to 6.58 acres of short-term construction impact to the Greenbelt Forest Preserve. Alternatives J1-01 and J1-04 result in 5.83 acres of short-term construction impact. Alternatives J1-02 and J1-05 result in 6.58 acres of short-term construction impact. Alternatives J1-03 and J1-06 result in 4.48 acres of short-term construction impact. Impacts under all alternatives are due to the construction laydown areas requiring tree removal. Access to the park would be restricted due to construction activity in the eastern portion of the Greenbelt Forest Preserve, and construction would result in noise and visual impacts. The Project Sponsor will consult with the City of Greenbelt to develop mitigation plans to address temporary construction impacts. Areas of cleared vegetation would occur in areas of mature forest and habitat, with impacts lasting 75-100 years.

Build Alternatives J1 would result in 2.55 to 4.30 acres of short-term construction impact to Maryland City Park. Alternatives J1-01 and J1-04 result in 2.55 acres of short-term construction impact. Alternatives J1-02, J1-03, J1-05, and J1-06 result in 4.30 acres of short-term construction impact. Impacts under all alternatives are due to the construction LOD for the viaduct and would be located within both ballfields and other areas of active recreational use, and in wooded undeveloped areas. Access to the park would be restricted due to construction activity and the park would be temporarily impacted by construction noise. The Project Sponsor will consult with the Anne Arundel County to develop mitigation plans to address temporary construction impacts.

Build Alternatives J1 would result in 0.026 to 0.80 acres of short-term construction impact to Patuxent River Park 1 and would include clearing and grubbing of vegetation, and excavation associated with construction of the viaduct. Alternatives J1-01 and J1-04 result in 0.26 acres of short-term construction impact. Alternatives J1-02, J1-03, J1-05, and J1-06 result in 0.80 acres of short-term construction impact. Impacts under all alternatives are due to the construction LOD for the viaduct and tunnel laydown areas within areas of undeveloped woodland. Access to the park would be restricted due to construction activity in the southern portion of Patuxent River Park 1, and construction activity would result in temporary visual and noise impacts. Areas of cleared vegetation would occur in areas of mature forest and habitat, with impacts lasting 75-100 years. The Project Sponsor will consult with the M-NCPPC to develop mitigation plans to address temporary construction impacts.

Build Alternatives J1 would result in 0.005 acres of short-term construction impact to the Brock Bridge Elementary School. Impacts are associated with construction of the portal and would occur in a wooded, undeveloped area of the property. Access to the school and recreational fields would not be restricted during construction, although the park would be temporarily impacted by construction noise. The Project Sponsor will consult with the Anne Arundel County BOE to develop mitigation plans to address temporary construction impacts.

Build Alternatives J1 would result in 0.11 to 0.70 acres of short-term construction impact to the Springfield Road Park. Short-term construction impacts would include clearing and grubbing of vegetation, and excavation associated with construction of the viaduct for Alternatives J1-01 and J1-04, and due to the construction of new powerlines for Alternatives J1-02, J1-03, J1-05, and J1-06. Short-term construction impacts for all alternatives take place within undeveloped park woodlands. Access to the park would be restricted during construction due to activity in the southern portion of Springfield Road Park. The Project Sponsor will consult with the M-NCPPC to develop mitigation plans to address temporary construction impacts.

#### **D.3C.4.2 Stations**

Construction impacts to public recreational facilities and parklands would not occur at the BWI Marshall Airport, Cherry Hill, or Camden Yards Stations.

#### **D.3C.4.2.1 Mount Vernon Square**

Construction of the underground station cavern for the Mount Vernon Square Station would result in temporary impacts during construction at three of the small park reservations and construction would require removal of sidewalks, curbs, landscaped beds and lawn resulting from the cut/cover tunnel construction. This includes .002 acres at Rigo Walled Park (Reservation 178). .01 acres at Triangle Park, Reservation 176 and .001 acres at Triangle Park Reservation 182. The Project Sponsor would restore all small park reservations to their existing condition following construction

Mount Vernon Square short-term construction effects to the New York Avenue Recreation Center would include clearing and grubbing of vegetation, and excavation that would result from the construction associated with a station entrance. The temporary impacts would occur in an area of trees and lawn south of the ballfield, surrounding the proposed station entrance and would result in temporary noise impacts. The Project Sponsor would restore areas of temporary impact in the station area to its existing condition following construction.

#### **D.3C.4.3 TMFs**

The MD 198 TMF short-term construction effects to BWP, Maryland City Park, Patuxent River Park 1, and Springfield Road Park would result from the construction associated with the TMF viaduct. At each park, construction would occur within undeveloped woodlands.

##### **D.3C.4.3.1 MD 198**

Construction impacts with the MD 198 TMF for Build Alternatives J-01 and J-04 would include clearing and grubbing of vegetation, and excavation that would result in 0.29 acres of short-term construction impact at the BWP. The construction LOD associated with the MD 198 TMF for Alternatives J1-01 and J1-04, would result in 6.15 acres of impact at the BWP. Construction would require removal of trees and vegetation.

Construction impacts with the MD 198 TMF for Build Alternatives J1-01 and J1-04 would include clearing and grubbing of vegetation, and excavation that would result in 1.23 acres of short-term construction impact to Maryland City Park. Impacts are associated with construction s and would occur within undeveloped woodland surrounding the Patuxent River.

Construction impacts with the MD 198 TMF for Build Alternatives J1-01 and J1-04 would include clearing and grubbing of vegetation, and excavation that would result in 0.26 acres of short-term construction impact to Patuxent River Park 1. Impacts are associated with the construction and would occur within undeveloped woodland.

Construction impacts with the MD 198 TMF for Build Alternatives J1-01 and J1-04 would include clearing and grubbing of vegetation, and excavation that would result in

0.11 acres of short-term construction impact to Springfield Road Park. Impacts would occur within undeveloped woodland.

#### **D.3C.4.3.2 BARC Airstrip**

The construction LOD associated with the BARC Airstrip TMF for Build Alternatives J-02 and J-05 would include clearing and grubbing of vegetation, and excavation that would result in 0.69 acres of short-term construction impact at the BWP. Construction impacts with the MD 198 TMF for Build Alternatives J1-01 and J1-04, would result in 2.09 acres of impact at the BWP. Construction would require removal of trees and vegetation. Construction effects may also result in lane shifts and temporary lane closures, but the BWP would remain open during construction.

The viaduct and cut and cover tunnel associated the BARC Airstrip TMF ramps for Build Alternatives J1-02 and J1-05 would include clearing and grubbing of vegetation, and excavation that would result in 1.04 acres of short-term construction impact to the Greenbelt Forest Preserve. Impacts would occur in the wooded area of the preserve north of the Observatory. Construction would require removal of trees and vegetation. The Project Sponsor will consult with the City of Greenbelt to develop mitigation plans to address temporary construction effects.

#### **D.3C.4.3.3 BARC West**

The construction LOD associated with the BARC West TMF for Build Alternatives J-03 and J-06 would include clearing and grubbing of vegetation, and excavation that would result in 3.63 acres of impact at the Baltimore Washington Parkway. The construction LOD associated with the BARC West TMF for Build Alternatives J1-01 and J1-04, would result in 2.36 acres of impact at the Baltimore Washington Parkway. Construction would require removal of trees and vegetation. In addition, construction may result in lane shifts and temporary lane closures, but the BWP would remain open during construction.

The viaduct and cut and cover tunnel associated the BARC West TMF ramps for Build Alternatives J1-03 and J1-06 would include clearing and grubbing of vegetation, and excavation that would result in 1.26 acres of short-term construction impact to the Greenbelt Forest Preserve. Impacts would occur in the wooded area of the preserve north of the Observatory. Construction would require tree removal and access to the park would be restricted due to construction activity in the eastern portion of the Greenbelt Forest Preserve. The Project Sponsor will consult with the City of Greenbelt to develop mitigation plans to address temporary construction effects.

### **D.3C.5 Potential Minimization and Mitigation Strategies**

The Project Sponsor seeks input from stakeholders and the public regarding the effects of the Build Alternatives on public recreational facilities and parklands and steps that can be taken to minimize impacts. Mitigation for each park and refuge will be

determined based on the unique characteristics of each resource and the nature of the impacts. The Project Sponsor anticipates applying the following strategies to avoid, minimize or mitigate impacts to public recreational facilities and parklands:

- Use existing transportation and utility corridors as reasonably feasible to minimize additional right-of-way needs
- Coordinate construction planning with parks agencies to address short-term noise and vibration impacts, property access, fencing, safety and security, and restoration of disturbed land.
- Complying with applicable local laws for construction activity including noise producing activities.
- Use tunnels or viaduct to avoid or minimize the physical impact of the project on public recreational facilities and parklands, to the extent feasible
- Avoid or reduce impacts to public recreational facilities and parklands using design refinements
- Place above-ground facilities such as substations, FA/EE facilities, and MOW facilities in industrially or commercially zoned areas to the extent feasible
- Provide advanced public notice of planned activities and temporary changes in access to public recreational facilities and parklands
- Avoid the need to remove existing vegetation on public recreational facilities and parklands where reasonably feasible
- Provide screening of system elements from public recreational facilities and parklands, where feasible
- Identify suitable replacement property for public recreational facilities and parklands that cannot be avoided

## Appendix D.3D Neighborhoods and Community Facilities

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NEPA requires the assessment and documentation of potential Project impacts to existing social and economic conditions. This section analyzes demographics, neighborhood settings, and community facilities for portions of Baltimore City, Baltimore County, Anne Arundel County, Prince George's County, and Washington, D.C. This section evaluates the effects of the No Build and Build Alternatives on the residents, neighborhoods, and community facilities along the proposed Project corridor.

### D.3D.1 Regulatory Context and Methodology

Federal regulations require the evaluation of impacts to socioeconomic resources for all transportation projects that use federal funds. Per FRA Procedures for Considering Environmental Impacts, outlined in 64 Federal Register 28550, proposed major FRA actions should consider potential impacts to the socioeconomic environment, including the potential for community disruption and demographic shifts. Additionally, the following regulations and policies assisted in the assessment of demographic and community impacts:

- The Uniform Relocation and Real Property Acquisition Policies Act of 1970, as amended, ensures people displaced because of a federal action or undertaking involving federal funds are treated fairly, consistently, and equitably.

This section considers the potential direct impacts, including permanent effects and short-term construction effects to neighborhoods and community facilities as a result of the SCMAGLEV Project Build Alternatives. Direct impacts include:

- **Property impact(s)** – full (displacement – permanent use of more than 1/3 of the property or removal of structures), partial property acquisition (permanent use of less than 1/3 of the property), or temporary use of property (property only used during construction).
- **Community cohesion effects** – disruption or enhancement of interactions between people and groups within a community
- **Community facility utilization** – displacement of or changes in the utilization of community facilities
- **Aesthetics and visual appearance** – changes in the visual landscape
- **Noise and vibration** – changes in noise and vibration
- **Air quality** – changes to air quality including increases or decreases in pollutants and increases in fugitive dust during construction
- **Health and safety** – threats to public health and safety
- **Changes to access and mobility** – disruption in the ingress and egress to a community or community facility

The SGMAGLEV Project impact area includes the limits of operational/physical disturbance, as well as the construction related impact area, which includes additional areas of temporary disturbance required for construction activities. These impact areas comprise the overall limit of disturbance (LOD) of the SCMAGLEV Project Build Alternatives. The LOD includes all surface and subsurface elements.

The SCMAGLEV Project Affected Environment for neighborhood and community facilities is defined as the area within a 500-foot buffer around the proposed Build

Alternatives alignments and within a ¼-mile buffer around stations and trainset maintenance facilities (TMF) locations. These buffers were considered to capture potential impacts (i.e., visual/aesthetics, noise/vibration, and changes in access and mobility) that could extend beyond the limit of disturbance (LOD). After delineating the SCMAGLEV Project Affected Environment, FRA determined that 124 U.S. Census block groups were located within or intersected by the SCMAGLEV Project Affected Environment. The neighborhoods that coincide with the 124 block groups were determined to comprise the SCMAGLEV Project Affected Environment.

FRA defined neighborhoods and communities using data from the U.S. Census Bureau, county and city government websites, and various approved planning documents. For Baltimore City and Washington, D.C., FRA used locally designated names and delineations for neighborhoods. Washington, D.C., identifies Neighborhood Clusters for community planning and related purposes. Baltimore City delineates its neighborhoods as Neighborhood Statistical Areas (NSAs). For other areas in Maryland, FRA used borders and names of incorporated municipalities, when applicable, and for unincorporated areas, FRA used Census Designated Places (CDP) boundaries and names from the 2010 Census, in the absence of locally designated names and delineations. Areas outside of unincorporated CDPs and incorporated municipalities include BWI Marshall Airport, the Patuxent Wildlife Research Refuge, the Beltsville Agricultural Research Center (BARC), and smaller unnamed areas with predominantly industrial and/or open space uses. Generally, these areas do not include residential uses, and are therefore not considered neighborhoods. Community facilities contained within the unnamed areas were allocated to the closest CDP or municipality. Neighborhood delineation descriptions are displayed in **Table D.3-17**.

FRA identified community facilities within the SCMAGLEV Project Affected Environment using various Geographic Information System (GIS) spatial databases and communications with stakeholders, including attendees at public meetings. Community facilities within the LOD for each Build Alternative were field verified. Community facilities include cemeteries, community and recreational centers, correction facilities, day care facilities, educational facilities, emergency shelters, fire stations, health centers/hospitals, public libraries, places of worship, police stations, and post offices.

**Table D.3-17: SCMAGLEV Neighborhood Delineations**

| County/Jurisdiction    | Neighborhood Basis                                |
|------------------------|---------------------------------------------------|
| Baltimore City         | Neighborhood Statistical Areas (NSA) <sup>1</sup> |
| Baltimore County       | Census Designated Places <sup>2</sup>             |
| Anne Arundel County    | Census Designated Places                          |
| Prince George's County | Census Designated Places and Municipalities       |
| Washington, D.C.       | Neighborhood Clusters <sup>3</sup>                |

<sup>1</sup>Baltimore City Planning Department designated neighborhood areas.

<sup>2</sup>2010 Census statistical counterparts of incorporated places are delineated to provide data for settled concentrations of populations identifiable by name but not legally incorporated under the laws of the state in which they are located. CDP boundaries may change from one decennial census to the next with changes in the settlement pattern.

<sup>3</sup>Washington, D.C. Planning Department designated areas are comprised of three to five smaller neighborhoods.

While the entire study area is considered in the impact analysis for Neighborhoods and Community Facilities, FRA used the Project LOD to determine impacts attributed to property acquisitions and displacements. Indirect impacts to areas within the study area are discussed in the Indirect and Cumulative Effects Technical Report.

## D.3D.2 Affected Environment

### D.3D.2.1 Demographics

This section describes selected demographic and household characteristics of the counties, Baltimore City, and Washington, D.C., and identifies neighborhoods and community facilities within the Affected Environment.

The demographics of the 124 census block groups come from US Census Bureau's 2010 Decennial Census and 2018 American Community Survey 5-year estimate data, and State- and Washington, D.C.-derived population statistics. **Table D.3-18** displays 2018 ACS 5-year demographic data for the populations within the Affected Environment. The demographic categories include total population, percent minority population, percent Hispanic origin, and median household income.

**Table D.3-18: Selected Individual Characteristics**

| Jurisdiction         | Population within Study Area | Under 18 years old (%) | Over 65 years old (%) | White only Population (%) | Minority Population * (%) | Below Poverty (%) | Median Household Income (\$) |
|----------------------|------------------------------|------------------------|-----------------------|---------------------------|---------------------------|-------------------|------------------------------|
| District of Columbia | 57,203                       | 12.43%                 | 10.12%                | 35.76%                    | 64.24%                    | 17.87%            | \$90,132.00                  |
| Prince George's      | 81,068                       | 24.63%                 | 12.65%                | 10.47%                    | 89.53%                    | 8.47%             | \$71,983.50                  |

| Jurisdiction        | Population within Study Area | Under 18 years old (%) | Over 65 years old (%) | White only Population (%) | Minority Population * (%) | Below Poverty (%) | Median Household Income (\$) |
|---------------------|------------------------------|------------------------|-----------------------|---------------------------|---------------------------|-------------------|------------------------------|
| County              |                              |                        |                       |                           |                           |                   |                              |
| Anne Arundel County | 53,189                       | 22.12%                 | 10.56%                | 51.32%                    | 48.68%                    | 4.83%             | \$104,071.00                 |
| Baltimore County    | 8,692                        | 26.52%                 | 8.42%                 | 49.97%                    | 50.03%                    | 20.85%            | \$55,170.00                  |
| Baltimore City      | 25,483                       | 23.25%                 | 8.81%                 | 31.92%                    | 68.08%                    | 27.97%            | \$52,775.00                  |
| Study Area          | 225,635                      | 20.86%                 | 10.92%                | 30.45%                    | 69.55%                    | 12.69%            | \$76,324.00                  |

\*Minority Population includes individuals of Hispanic or Latino heritage  
Source: U.S. Census Bureau, 2014-2018 American Community Survey

Study area population in comprising jurisdictions range from 81,068 in Prince George's County, MD, to 8,692 in Baltimore County, MD. The minority population comprises over 48 percent in each jurisdiction, with a minority population as high as nearly 90 percent in Prince George's County. The Affected Environment contains a population of nearly 70 percent minority. The percentage of the Affected Environment population under 18 years old ranges from 12 in Washington, D.C., to 27 in Baltimore County. The percentage of individuals below the poverty level varies by jurisdictions and is highest in Baltimore City (28%). Anne Arundel County has the highest median income and the lowest minority study area population. The percentage of study area population over 65 years old is relatively similar across all jurisdictions.

**Table D.3-19** describes selected household characteristics of the Affected Environment by jurisdiction. The percentage of housing units without vehicles ranges greatly from less than 1 percent in Anne Arundel County to nearly 38 percent in Washington, D.C. The percentage of housing units without vehicles within the overall Affected Environment is 18.

**Table D.3-19: Selected Household Characteristics**

| Jurisdiction             | Occupied Housing Units (#) | Average Household Size (persons) | Housing Units Without Vehicles (%) |
|--------------------------|----------------------------|----------------------------------|------------------------------------|
| District of Columbia     | 27,774                     | 2.06                             | 37.64%                             |
| Prince George's County   | 28,574                     | 2.84                             | 7.41%                              |
| Anne Arundel County      | 19,625                     | 2.71                             | 0.60%                              |
| Baltimore County         | 2,729                      | 3.19                             | 8.32%                              |
| Baltimore City           | 11,022                     | 2.31                             | 30.83%                             |
| Socioeconomic Study Area | 89,724                     | 2.51                             | 18.18%                             |

Source: U.S. Census Bureau, 2014-2018 American Community Survey.

Each jurisdiction of which the Affected Environment is comprised, is predicted to grow in population by 2040. Washington, D.C., has the highest predicted increase of over 56 percent. **Table D.3-20** displays the countywide and citywide population projections for the jurisdictions which make up the Affected Environment.

**Table D.3-20: Population Projection for Study Area Jurisdictions**

| Jurisdiction           | 2010 Population | 2040 Population Projection | 2010 – 2040 Population Change | Percent Change |
|------------------------|-----------------|----------------------------|-------------------------------|----------------|
| District of Columbia   | 601,723         | 940,700                    | 338,977                       | 56.33%         |
| Prince George's County | 863,420         | 982,800                    | 119,380                       | 13.83%         |
| Anne Arundel County    | 537,656         | 628,047                    | 90,391                        | 16.81%         |
| Baltimore County       | 805,029         | 885,783                    | 80,754                        | 10.03%         |
| Baltimore City         | 620,961         | 667,677                    | 46,716                        | 7.52%          |

Source: Metropolitan Washington Council of Governments, 9.1 Cooperative Forecast, 2018; Baltimore Metropolitan Council, Round 8B 2017; U.S. Census Bureau, 2014-2018 American Community Survey

## D.3D.2.2 Neighborhoods

### D.3D.2.2.1 Washington, D.C.

The following fourteen neighborhoods are part of the Affected Environment in Washington, D.C.:

- Cluster 3 – Howard University, Le Droit Park, Cardozo/Shaw
- Cluster 5 – West End, Foggy Bottom, George Washington University (GW)
- Cluster 6 – Dupont Circle, Connecticut Avenue/K Street
- Cluster 7 – Shaw, Logan Circle
- Cluster 8 – Downtown, Chinatown, Penn Quarters, Mount Vernon Square, North Capitol Street
- Cluster 9 – Southwest Employment Area, Southwest/Waterfront, Fort McNair, Buzzard Point
- Cluster 21 – Edgewood, Bloomingdale, Truxton Circle, Eckington
- Cluster 22 – Brookland, Brentwood, Langdon
- Cluster 23 – Ivy City, Arboretum, Trinidad, Carver Langston
- Cluster 24 – Woodridge, Fort Lincoln, and Gateway
- Cluster 25 – Union Station, Stanton Park, Kingman Park

- Cluster 26 – Capitol Hill, Lincoln Park
- Cluster 45 – National Mall, Potomac River
- Cluster 46 – Arboretum, Anacostia River

The SCMAGLEV Project Affected Environment in Washington, D.C., includes a large area of the downtown/central business district, residential areas, and a zone with industrial uses and railyards. The alignment guideway would be underground for all options within Washington, D.C. Above ground elements of the project include access points for the Mount Vernon Square East Station along New York Avenue in Cluster 8 (Downtown, Chinatown, Penn Quarter, Mount Vernon Square, North Capitol Street) and Cluster 21 (Edgewood, Bloomingdale, Truxton Circle, Eckington) neighborhoods. A fresh air and emergency egress facility and a substation would be located in the Cluster 22 (Brookland, Brentwood, and Langdon) neighborhood in an industrial area.

#### **D.3D.2.2.2 Prince George's County, Maryland**

The following 14 neighborhoods partially intersect the Affected Environment in Prince George's County:

- |                  |                  |
|------------------|------------------|
| • Bladensburg    | • Landover       |
| • Colmar Manor   | • Laurel         |
| • East Riverdale | • New Carrollton |
| • Glen Dale      | • Seabrook       |
| • Glenardern     | • South Laurel   |
| • Greenbelt      | • Summerfield    |
| • Konterra       | • Woodlawn       |

The SCMAGLEV Project Affected Environment in Prince George's County contains residential areas, major roadways, commercial and industrial areas, and portions of several Federal properties. Residential areas are located near interchanges with Baltimore-Washington Parkway (BWP) at MD 197. Federal properties include the United States Department of Agriculture (USDA) Beltsville Agricultural Research Center (BARC) property, the Patuxent Research Refuge (PRR), National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC), and the United States Secret Service (USSS).

Aboveground elements would include a viaduct, east of the BWP for Build Alternatives with J alignments and west of the BWP for Build Alternatives with J1 alignments. For both Build Alternatives, the elevated viaduct would operate within BARC and the South Laurel neighborhood within Prince George's County to beyond the Anne Arundel County border. BARC, in this area, consists of agricultural fields, streams, wetlands,

open space, and forested area. Residential areas, including single-family homes and townhomes, are within the Affected Environment in the South Laurel neighborhood.

Both Build Alternatives include FA/EE facility near the Bladensburg neighborhood and another near the Woodlawn neighborhood. Near the Bladensburg neighborhood, a FA/EE would be located within the current parking area of WSSC's Anacostia Service Center on Kenilworth Avenue. Near the Woodlawn neighborhood, a fresh air and emergency egress facility would be located north of MD 410 on residential properties. Residential uses, including single-family homes and an apartment complex, are within the Affected Environment at this location.

Both Build Alternatives include a substation in the South Laurel neighborhood, east of the BWP for Build Alternatives with J alignments and west of the BWP for Build Alternatives with J1 alignments. The substation under Build Alternatives J would be located southeast of the MD 295 and MD 197 interchange near the Village at Montpelier Apartments. The substation under Build Alternatives J1 would be located near a residential area off Hermosa Drive in the South Laurel neighborhood. The location is currently forested and borders an electrical powerline right of way.

#### **D.3D.2.2.3 Anne Arundel County**

The following six neighborhoods are part of the Affected Environment in Anne Arundel County:

- Brooklyn Park
- Fort Meade
- Jessup
- Linthicum
- Maryland City
- Severn

The SCMAGLEV Project Affected Environment in Anne Arundel County includes residential, commercial, industrial uses, major roadways, the Baltimore-Washington International Thurgood Marshall Airport (BWI Marshall Airport) and Federal properties (Fort George G. Meade and PRR).

Aboveground elements of the project would include an elevated viaduct, east of the BWP for Build Alternatives with J alignments and west of the BWP Build Alternatives with J1 alignment. The Build Alignment J elevated viaduct would operate in the Maryland City, Jessup, and Fort Meade neighborhoods, and the PRR. These neighborhoods contain a mix of institutional, military, transportation, and residential uses. The elevated viaduct would be above ground at the Anne Arundel County/Prince George's County border in the Patuxent Wildlife Refuge and would stay elevated for approximately 5.5 miles until going below ground within Fort Meade. Two community facilities, the Snowden Cemetery in the PRR and the Training School Cemetery in Maryland City neighborhood, would be located within the Affected Environment along the Alignment J elevated viaduct. The Build Alternatives with J1 alignment would operate along an elevated viaduct for approximately 1.5 miles at the Anne Arundel

County/Prince George's County border in the Maryland City neighborhood until going below ground. This 1.5-mile stretch of Alignment J1 includes portions of Maryland City Park, the former Suburban Airport, and forested areas.

Build Alternatives J would include two FA/EE facilities in the Severn neighborhood, on in a residential area and one in an industrial area between Railroad Avenue and Telegraph Road. Build Alternatives J1 would include a FA/EE facility in the Fort Meade in addition to the two in the Severn neighborhoods. The FA/EE facility would be in a forested area within Fort Meade property, east of MD 295 and south of MD 175. On-base residential areas would be located within the Affected Environment at this location.

A construction laydown area would be located at the site of the former Suburban Airport along Brock Bridge Road in the Maryland City neighborhood. This area consists of flat, grass fields, a runway and airport related structures.

Under Build Alternatives J and J1 a substation would be in what is currently BWI Marshall Airport's Long-Term Parking, Lot A near the intersection of South Camp Meade Road and Aviation Boulevard.

One proposed station, the BWI Marshall Airport Station is located within Anne Arundel County. Access to the station would be solely from within the airport. There is one community facility, the BWI Marshall Airport post office, located within the Affected Environment in the vicinity of the BWI Marshall Airport Station.

The MD 198 TMF would be located north of MD 198 and east of MD 295 in the Maryland City neighborhood. The area is mostly forested, though also includes industrial, commercial, educational, and institutional (i.e., correctional facility) uses. Access to the MD 198 TMF from Build Alternatives J would be from the elevated viaduct within the PRR. Access from Build Alternatives J1 would be from the elevated viaduct in the Maryland City neighborhood, crossing over MD 295 from the west to the east and descending to the MD 198 TMF site.

### **Baltimore County, Maryland**

The following two neighborhoods are part of the Affected Environment in Baltimore County:

- Baltimore Highlands
- Lansdowne

The SCMAGLEV Project Affected Environment in Baltimore County includes industrial, commercial, and single-family residential uses. The area contains railroads and major roads including the BWP, I-895, and Annapolis Road. The Baltimore Highlands and Lansdowne neighborhoods are within the SCMAGLEV Project Environment for Baltimore County.

There would be no surface portions of the elevated viaduct within Baltimore County under any of the Build Alternatives. A FA/EE facility and two substations would be in the Baltimore Highlands neighborhood, south of I-895 and east of MD 295 in a forested area with nearby industrial uses. There are no community facilities within the Affected Environment in this area.

### **Baltimore City, Maryland**

The following sixteen neighborhoods are included as part of the socioeconomic study area in Baltimore City:

- Brooklyn
- Carroll – Camden Industrial Area
- Cherry Hill
- Downtown
- Downtown West
- Federal Hill
- Inner Harbor
- Lakeland
- Middle Branch/Reedbirds Park
- Otterbein
- Ridgely's Delight
- Sharp-Leadenhall
- Stadium Area
- University of Maryland
- Washington Village/Pigtown
- Westport

The SCMAGLEV Project Affected Environment in Baltimore City includes a commercial and industrial corridor with residential land uses along Patapsco Avenue and Annapolis Road, as well as a portion of the downtown/central business district with commercial office, retail, industrial, multiple residential uses, and sports stadiums. Aboveground elements of the project would include sections of elevated viaduct south and north of the proposed Cherry Hill Station. A tunnel portal would be located north of Patapsco Avenue in the Cherry Hill neighborhood. An elevated viaduct would connect to the south of the elevated Cherry Hill Station. North of the Cherry Hill Station, above ground viaduct would run east of and parallel to Kloman Street in the Westport neighborhood and terminate south of I-95 overpass. A substation would be located in the Westport neighborhood as part of either build alternative.

The Cherry Hill Station would be an aboveground station in Baltimore City, located in the Cherry Hill neighborhood in Baltimore City. The area includes mostly industrial and commercial uses. The Affected Environment includes portions of Westport, Lakeland, Lansdowne, and Baltimore Highlands in addition to Cherry Hill. There are ten community facilities located within the Affected Environment of the Cherry Hill Station. A parking structures and operation facilities would be located east and west of the Cherry Hill Station and southeast of the Waterview Avenue and Cherry Hill Road intersection.

The Camden Yards Station would be an underground station in Baltimore City. Access to the station from the surface would be provided from within the Downtown West and Otterbein neighborhoods of Baltimore City, which includes commercial uses, such as offices buildings, hotels, restaurants, residential uses, and stadiums for area professional sports teams. Parking

structures would be located north of Pratt Street on both sides of Hanover Street in the Downtown West neighborhood as part of the Camden Station.

### **D.3D.2.3 Community Facilities**

A total of 81 community facilities are within the 500 feet buffer around the proposed Build Alternative alignments, FA/EE facilities, and substations, and the 1/4-mile buffer around the stations and TMFs. **Table D.3-21** lists community facilities within these buffers by jurisdiction, type, and proximity to project elements.

## **D.3D.3 Environmental Consequences**

### **D.3D.3.1 No Build Alternative**

Under the No Build Alternative, the Project would not be built and therefore no impacts related to the construction or operation of a SCMAGLEV system would occur. However, other planned and funded transportation projects would continue to be implemented in the area and could result in impacts to neighborhoods and community facilities.

### **D.3D.3.2 Build Alternatives**

This section describes and compares the long-term permanent impacts of the Build Alternatives by jurisdiction, with specific subsections that identify impacts by alignment and ancillary facilities, stations, and TMFs. Construction and operation of the SCMAGLEV would result in permanent adverse impacts to some neighborhoods and community facilities. Impacts would include one or more of the following: property acquisition (ranging from partial to full acquisitions), disruption to community cohesion or use of community facilities, aesthetics and visual appearance, noise and vibration, air quality, health and safety, and/or changes to access and mobility. Permanent impacts to neighborhoods and communities would occur in the vicinity of above-ground SCMAGLEV Project elements, including the alignment, ancillary facilities, stations, and TMFs, as well as above some underground elements. The above-ground viaduct would not bisect communities; however, it would be in close proximity to communities and homes along the BWP in Prince George's and Anne Arundel Counties. Likewise, above-ground ancillary facilities, TMFs, and stations would not be located within communities but would be placed in close proximity to homes and community facilities in some areas. Where the tunnels are proposed for the Build Alternatives, above-ground uses would remain as they are currently. Attachment D displays the location of the potential twelve Build Alternatives (alignments and ancillary facilities, stations, TMFs) and their relation neighborhoods and community facilities.

**Table D.3-21: Community Facilities within the Affected Environment by Project Element**

| Facility Name                                                       | Facility Type    | Jurisdiction | Neighborhood | Alignment |    | Stations  |             |              |      | TMFs   |    |               |    |           |    |
|---------------------------------------------------------------------|------------------|--------------|--------------|-----------|----|-----------|-------------|--------------|------|--------|----|---------------|----|-----------|----|
|                                                                     |                  |              |              | J         | J1 | MVS East* | Cherry Hill | Camden Yards | BWI# | MD 198 |    | BARC Airstrip |    | BARC West |    |
|                                                                     |                  |              |              |           |    |           |             |              |      | J      | J1 | J             | J1 | J         | J1 |
| Engine 6 Station                                                    | Fire Station     | DC           | Cluster 7    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Salvation Army Harbor Light Center                                  | Health Center    | DC           | Cluster 22   | ✓         | ✓  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Northwest One Neighborhood Library                                  | Library          | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| JB Johnson Nursing Center                                           | Nursing Home     | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| First Christ Apostolic Church                                       | Place of Worship | DC           | Cluster 22   | ✓         | ✓  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Bible Way Temple                                                    | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Chinese Community Church                                            | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| First Tabernacle Beth El                                            | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Greater New Hope Baptist Church                                     | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Holy Redeemer Catholic Church                                       | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Mount Airy Baptist Church                                           | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Mount Carmel Baptist Church                                         | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Mt Vernon Place United Methodist                                    | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Saint Mary Mother of God Shrine of Our Lady of the Miraculous Medal | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Second Baptist Church                                               | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Sixth and I Synagogue                                               | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Southern Baptist Church                                             | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| St Mathew's Lutheran Church                                         | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Temple of Cun Yum                                                   | Place of Worship | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |

| Facility Name                                              | Facility Type    | Jurisdiction | Neighborhood | Alignment |    | Stations  |             |              |      | TMFs   |    |               |    |           |    |
|------------------------------------------------------------|------------------|--------------|--------------|-----------|----|-----------|-------------|--------------|------|--------|----|---------------|----|-----------|----|
|                                                            |                  |              |              | J         | J1 | MVS East* | Cherry Hill | Camden Yards | BWI# | MD 198 |    | BARC Airstrip |    | BARC West |    |
|                                                            |                  |              |              |           |    |           |             |              |      | J      | J1 | J             | J1 | J         | J1 |
| Faith & Hope Full Gospel Church                            | Place of Worship | DC           | Cluster 21   | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| James Memorial Baptist Church                              | Place of Worship | DC           | Cluster 21   | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Mt Lebanon Baptist Church                                  | Place of Worship | DC           | Cluster 21   | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| New Birth Baptist Church Washington                        | Place of Worship | DC           | Cluster 21   | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| The Glorious Church                                        | Place of Worship | DC           | Cluster 21   | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Mount Carmel Miracle Temple of God                         | Place of Worship | DC           | Cluster 23   | ✓         | ✓  | -         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| 3rd St Church of God                                       | Place of Worship | DC           | Cluster 7    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Church of The Living God Pillar Ground of The Truth        | Place of Worship | DC           | Cluster 7    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| First Rising Mount Zion Baptist Church                     | Place of Worship | DC           | Cluster 7    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Kingdom Hall of Jehovah Witness                            | Place of Worship | DC           | Cluster 7    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Metropolitan Community Church of Washington                | Place of Worship | DC           | Cluster 7    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Miles Memorial Christian Methodist Episcopal Church        | Place of Worship | DC           | Cluster 7    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Metropolitan Police Department - Internal Affairs Division | Police Station   | DC           | Cluster 21   | ✓         | ✓  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Techworld Post Office                                      | Post Office      | DC           | Cluster 8    | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| New York Avenue Recreational Center                        | Rec Center       | DC           | Cluster 21   | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Eritrean Cultural & Civic Center                           | Rec Center       | DC           | Cluster 22   | ✓         | ✓  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Academy of Hope Adult PCS                                  | School           | DC           | Cluster 22   | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |

| Facility Name                                  | Facility Type    | Jurisdiction    | Neighborhood             | Alignment |    | Stations  |             |              |      | TMFs   |    |               |    |           |    |
|------------------------------------------------|------------------|-----------------|--------------------------|-----------|----|-----------|-------------|--------------|------|--------|----|---------------|----|-----------|----|
|                                                |                  |                 |                          | J         | J1 | MVS East* | Cherry Hill | Camden Yards | BWI# | MD 198 |    | BARC Airstrip |    | BARC West |    |
|                                                |                  |                 |                          |           |    |           |             |              |      | J      | J1 | J             | J1 | J         | J1 |
| The Children's Guild DC Public Charter School  | School           | DC              | Cluster 22               | ✓         | ✓  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Holy Redeemer School                           | School           | DC              | Cluster 8                | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Walker-Jones Education Campus                  | School           | DC              | Cluster 8                | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Dunbar High School                             | School           | DC              | Cluster 21               | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Friendship PCS Armstrong Elementary            | School           | DC              | Cluster 21               | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Mundo Verde Bilingual PCS                      | School           | DC              | Cluster 21               | ✓         | ✓  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Washington Mathematics Science Technology PCHS | School           | DC              | Cluster 23               | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Two Rivers PCS at 4th Street                   | School           | DC              | Cluster 25               | -         | -  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Adams Place Emergency Shelter                  | Shelter          | DC              | Cluster 22               | ✓         | ✓  | ✓         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Rockstar Prep 4 Kids Inc                       | Day Care         | Prince George's | Summerfield              | ✓         | ✓  | -         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Tabernacle Learning Center                     | Daycare          | Prince George's | South Laurel             | ✓         | ✓  | -         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Giac Son Buddhist Temple                       | Place of Worship | Prince George's | South Laurel             | ✓         | ✓  | -         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Iglesia Pentecostes El Refugio                 | Place of Worship | Prince George's | South Laurel             | ✓         | ✓  | -         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Tabernacle Church of Laurel                    | Place of Worship | Prince George's | South Laurel             | -         | ✓  | -         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Montpelier Post Office                         | Post Office      | Prince George's | South Laurel             | -         | ✓  | -         | -           | -            | -    | -      | ✓  | -             | -  | -         | -  |
| Montpelier Elementary School                   | School           | Prince George's | South Laurel             | ✓         | ✓  | -         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Snowden Cemetery                               | Cemetery         | Anne Arundel    | Patuxent Research Refuge | ✓         | -  | -         | -           | -            | -    | -      | ✓  | -             | -  | -         | -  |

| Facility Name                                                                  | Facility Type         | Jurisdiction     | Neighborhood        | Alignment |    | Stations  |             |              |      | TMFs   |    |               |    |           |    |
|--------------------------------------------------------------------------------|-----------------------|------------------|---------------------|-----------|----|-----------|-------------|--------------|------|--------|----|---------------|----|-----------|----|
|                                                                                |                       |                  |                     | J         | J1 | MVS East* | Cherry Hill | Camden Yards | BWI# | MD 198 |    | BARC Airstrip |    | BARC West |    |
|                                                                                |                       |                  |                     |           |    |           |             |              |      | J      | J1 | J             | J1 | J         | J1 |
| Training School Cemetery                                                       | Cemetery              | Anne Arundel     | Maryland City       | ✓         | -  | -         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| New Beginnings Youth Development Center/Maya Angelou Academy at New Beginnings | Correctional Facility | Anne Arundel     | Maryland City       | -         | -  | -         | -           | -            | -    | ✓      | ✓  | -             | -  | -         | -  |
| Thomas J.S. Waxters Children's Center                                          | Correctional Facility | Anne Arundel     | Maryland City       | -         | -  | -         | -           | -            | -    | ✓      | ✓  | -             | -  | -         | -  |
| BWI Thurgood Marshall Airport Post Office                                      | Post Office           | Anne Arundel     | BWI Marshall Area   | -         | -  | -         | -           | -            | ✓    | -      | -  | -             | -  | -         | -  |
| Brock Bridge Elementary School                                                 | School                | Anne Arundel     | Maryland City       | -         | -  | -         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Monarch Global Academy                                                         | School                | Anne Arundel     | Maryland City       | -         | ✓  | -         | -           | -            | -    | -      | -  | -             | -  | -         | -  |
| Woodland Job Corps                                                             | School                | Anne Arundel     | Maryland City       | -         | -  | -         | -           | -            | -    | ✓      | ✓  | -             | -  | -         | -  |
| English Consul Christian Church                                                | Place of Worship      | Baltimore County | Baltimore Highlands | -         | -  | -         | ✓           | -            | -    | -      | -  | -             | -  | -         | -  |
| Mount Auburn Cemetery                                                          | Cemetery              | Baltimore City   | Westport            | ✓         | ✓  | -         | ✓           | -            | -    | -      | -  | -             | -  | -         | -  |
| Engine Company 58; Sixth Battalion                                             | Fire Station          | Baltimore City   | Westport            | -         | -  | -         | ✓           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Medmark Treatment Centers Cherry Hill                                          | Health Center         | Baltimore City   | Cherry Hill         | -         | -  | -         | ✓           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Concentra Urgent Care - Baltimore Downtown                                     | Health Center         | Baltimore City   | Downtown West       | -         | -  | -         | -           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Attorney General's Office Law Library                                          | Library               | Baltimore City   | Downtown            | -         | -  | -         | -           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| University of Maryland, Baltimore Library                                      | Library               | Baltimore City   | Downtown West       | -         | -  | -         | -           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Kingdom Hall of Jehovah's Witnesses                                            | Place of Worship      | Baltimore City   | Cherry Hill         | -         | -  | -         | ✓           | -            | -    | -      | -  | -             | -  | -         | -  |

| Facility Name                                                         | Facility Type     | Jurisdiction   | Neighborhood     | Alignment |    | Stations  |             |              |      | TMFs   |    |               |    |           |    |
|-----------------------------------------------------------------------|-------------------|----------------|------------------|-----------|----|-----------|-------------|--------------|------|--------|----|---------------|----|-----------|----|
|                                                                       |                   |                |                  | J         | J1 | MVS East* | Cherry Hill | Camden Yards | BWI# | MD 198 |    | BARC Airstrip |    | BARC West |    |
|                                                                       |                   |                |                  |           |    |           |             |              |      | J      | J1 | J             | J1 | J         | J1 |
| Word-Life Assembly-God Church                                         | Place of Worship  | Baltimore City | Downtown         | -         | -  | -         | -           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Old Otterbein United                                                  | Place of Worship  | Baltimore City | Downtown West    | -         | -  | -         | -           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Ebenezer African Methodist Episcopal Church                           | Place of Worship  | Baltimore City | Federal Hill     | -         | -  | -         | -           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Christ Lutheran Church                                                | Place of Worship  | Baltimore City | Otterbein        | -         | -  | -         | -           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Christ Spiritual Temple                                               | Place of Worship  | Baltimore City | Otterbein        | -         | -  | -         | -           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Delaware-Maryland Synod of the Evangelical Lutheran Church in America | Place of Worship  | Baltimore City | Otterbein        | -         | -  | -         | -           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Martini Lutheran Church                                               | Place of Worship  | Baltimore City | Otterbein        | -         | -  | -         | -           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Unity Tabernacle of God                                               | Place of Worship  | Baltimore City | Westport         | -         | -  | -         | ✓           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Lakeland Recreation Center                                            | Recreation Center | Baltimore City | Lakeland         | -         | -  | -         | ✓           | -            | -    | -      | -  | -             | -  | -         | -  |
| Solo Gibbs Recreation Center                                          | Recreation Center | Baltimore City | Sharp-Leadenhall | -         | -  | -         | -           | ✓            | -    | -      | -  | -             | -  | -         | -  |
| Arundel Elementary/Middle School                                      | School            | Baltimore City | Cherry Hill      | -         | -  | -         | ✓           | -            | -    | -      | -  | -             | -  | -         | -  |
| Lakeland Elementary/Middle School                                     | School            | Baltimore City | Lakeland         | -         | -  | -         | ✓           | -            | -    | -      | -  | -             | -  | -         | -  |

\* MVS East – Mount Vernon Square East Station

# BWI – Baltimore-Washington International Thurgood Marshall Airport Station

The Build Alternatives could have an adverse impact on community cohesion by displacing residents, businesses, and community facilities; introducing large transportation structures into residential and forested areas; changing residents' ability to navigate around their community; and disrupting interaction between people and groups within a community. The Build Alternatives could cause community disruption in the following areas due to adverse permanent impacts further described in this section:

- Riverdale Road, Woodlawn neighborhood in Prince George's County, north of MD 410 (All Build Alternatives): land located behind homes and currently forested would be used for a fresh air and emergency egress (FA/EE) facility. Prior to construction, the area would be used as a construction laydown area and a launch site for tunnel boring machines (TBM). Temporary use of property would be required from five properties. Permanent property acquisition would be required from four properties for Build Alternatives J-01 thru J-06 and two properties for Build Alternatives J1-01 thru J1-06.
- Elmshorn Way, Hermosa Drive, and Frensham Court in the Montpelier Hills community, as well as Ivory Fashion Court, Blue Moon Court, Sea Pearl Court, and Sumner Grove Drive, South Laurel neighborhood in Prince George's County, (Build Alternatives J1-01 thru J1-06).
- The Villages at Montpelier Apartments, Evergreens at Laurel Apartments, the Applegrove Condominiums, and Laurelwood Condominiums, South Laurel neighborhood in Prince George's County, (Build Alternatives J-01 thru J-06).
- Areas abutting and above project alignments, Maryland City neighborhood in Anne Arundel County (All Build Alternatives).
- Cherry Hill and Westport neighborhoods in Baltimore City (All Build Alternatives).

In addition to the above, the following corridor and regionwide effects could result due to the construction and implementation of the Project:

- The Project would produce electromagnetic fields (EMFs) and has the potential to cause electromagnetic interference (EMI). Impacts to neighborhoods and community facilities due to EMFs and EMI are not anticipated. However, FRA and the Project Sponsor will coordinate with self-identified receptors to conduct appropriate analysis at site specific locations, as necessary.
- The SCMAGLEV Project has incorporated safety in the planning and design, core systems, facilities, and maintenance practices. The Project includes a systemwide state-of-the-art signaling system to avoid collisions and implements intrusion detection to avoid unsafe conditions. Multiple stations along the ROW would give access for emergency egress and access for emergency services to enter. Proper signage and lighting will be used to guide passengers in case of emergency. In the tunnels, there would be fresh air/emergency egress facilities located approximately every 5 km (3.1 miles) and an emergency evacuation walkway that is independent from the guideway tunnel.

- Access to stations and facilities would be strictly controlled to prevent unauthorized entry. This would be accomplished with fencing, security cameras and security lighting. The same goals for the viaducts would be implemented for the tunnels and open-cut sections of the tunnel transition portals: protecting the ROW from vandalism, launching of object onto the ROW and trespassers. Fencing would be installed no less than 3 m (10 feet) tall to prevent intrusion at tunnel transition portals.
- The SCMAGLEV Project would likely result in an increase to corridor wide criteria pollutant and greenhouse gas mobile source air emissions, particularly in areas around station locations due to increased traffic but would reduce overall mobile source air emissions regionally. Build Alternatives with the Cherry Hill Station location are predicted to have higher emission increases compared to the No-Build (between 1.5% and 1.9% increase) than Build Alternatives with the Camden Yards Station location (between 0.6% and 0.7%) in year 2045. No significant operational air quality impacts would result from the implementation of a Build Alternative. In addition, the reduction of overall regional vehicle miles traveled (VMT) as compared to the No Build Alternative, FRA concluded that the SCMAGLEV Project would likely result in GHG emissions reduction on a regional scale with no negative effects on climate change. No significant operational air quality impacts would result from the implementation of a Build Alternative.
- The SCMAGLEV Project could spur development and commercial investment in neighborhoods near station locations. This could impact the long-term character of neighborhoods' economic and demographic makeup due to increased property values, changes to commercial and retail offerings, increased employment opportunities, higher wages, and changes to available community facilities.

#### **D.3D.3.2.1 Build Alternatives J**

##### **Long-term Operational Effects**

Neighborhood and community facility impacts are organized by jurisdiction and the Build Alternatives elements.

##### ***Washington, DC***

**Alignment and Ancillary Facilities:** The alignment guideway would be underground for all options within Washington, D.C. A fresh air and emergency egress facility and a substation would be located in the Cluster 22 (Brookland, Brentwood, and Langdon) neighborhood in an industrial area. The construction and operation of the FA/EE facility and substation here would require the displacement of the Adam's Place Emergency Shelter and multiple commercial parcels. The Adam's Place Emergency Shelter is operated by the Catholic Charities and is a men's emergency shelter open 7pm to 7am that offers a hot dinner, access to case management staff, showers, and a bed on a nightly basis. The New York Avenue Shelter is located approximately a mile away and is the closest men's shelter.

A parking lot along New York Avenue, NE and North Capitol Street, NE would require full property acquisition in Cluster 21 (Edgewood, Bloomingdale, Truxton Circle, Eckington).

**Stations:** The Mount Vernon Square Station (all Build Alternatives) would be located underground beneath New York Avenue NE, east of the Washington, DC Convention Center and the Mount Vernon Square. Access points for the Mount Vernon Square East Station would be along New York Avenue in Cluster 8 (Downtown, Chinatown, Penn Quarter, Mount Vernon Square, North Capitol Street) neighborhood southwest and northeast of the 6<sup>th</sup> Street NW and New York Avenue NW intersection, northeast of the 4<sup>th</sup> Street NW and New York Avenue NW intersection and in Cluster 21 (Edgewood, Bloomingdale, Truxton Circle, Eckington) neighborhood northwest of the 1<sup>st</sup> Street NW and New York Avenue NW intersection in the New York Avenue Playground and Park. . A portion of the park (0.16 acres) along New York Avenue would be acquired. The Mount Vernon Square East Station would result in property acquisition, including a portion of the New York Avenue Playground and Park, a parking lot between 6<sup>th</sup> and 5<sup>th</sup> Streets NW, and parking lot west of 6<sup>th</sup> Street. The SCMAGLEV Project would increase vehicular traffic at intersections and pedestrian traffic on sidewalks in proximity to the Mount Vernon Square East Station access locations.

**TMFs:** None.

### ***Prince George's County, Maryland***

**Alignment and Ancillary Facilities:** The Project alignment would be underground immediately north of Washington, DC. Continuing north, a FA/EE would be located within the current parking area of WSSC's Anacostia Service Center on Kenilworth Avenue near the Bladensburg neighborhood. The alignment would continue underground heading north. Multiple properties above the tunnel portions of the alignment within and near the Woodlawn, New Carrollton, Greenbelt, and South Laurel neighborhoods would experience vibration impacts along this section of the alignment.

A FA/EE facility would be located north of MD 410, behind homes along Riverdale Road near the Woodlawn neighborhood. During construction of the Project and prior to construction of the FA/EE, the area would be used as a construction laydown area and a launch site for tunnel boring machines (TBM). Temporary use of property would be required from five properties. Permanent property acquisition would be required from four properties. The construction and operation of the FA/EE would introduce a new building and require the removal of trees in a forested area of these properties. This would result in increased noise, changes to aesthetics, and potentially changes to community cohesion for homes on this section of Riverdale Road. Impacts due to increased noise and changes to aesthetics would occur at Martins Terrace and impacts due to changes to aesthetics would also occur at Auburn Manor, Lilly Garden, and Chestnut Ridge apartments between Woodlawn and New Carrollton due to construction and operation of the FA/EE facility.

A tunnel portal (transition from tunnel to viaduct) would be located approximately 75 feet from the northern most condominium buildings in the Greenbriar Condominiums in the

Greenbelt neighborhood. The tunnel would be as close as 14 feet underground beneath buildings, and residents would experience impacts due to vibration, as well as changes in visual quality with views of the portal and viaduct. In addition, portions of property that are currently a community garden and open space, would be required from the Greenbriar Condominium community to construct the tunnel portal.

The elevated viaduct would operate within BARC and the South Laurel neighborhood within Prince George's County to beyond the Anne Arundel County border. In the South Laurel neighborhood, the elevated viaduct would be located between the BWP and the residential communities of the Villages at Montpelier Apartments, Evergreens at Laurel Apartments, the Applewalk Condominiums, and Laurelwood Condominiums, all located east of the BWP, southeast of the MD 197/BWP interchange. The viaduct would run just west of these communities and as close as 90 feet to apartment buildings in the Villages at Montpelier. The viaduct would require the removal of a forested buffer between these communities and the BWP and would present a stark change from current views. The viaduct would impact residents due to increased noise and vibration, and changes to views and visual quality.

Ancillary facilities would be constructed in the South Laurel neighborhood south of the Villages at Montpelier Apartments, Applewalk Condominiums and Laurelwood Condominiums (systems building) and northwest and adjacent to the Villages at Montpelier Apartment (a substation and systems building). The construction of these buildings would require the use of full permanent acquisition of two commercial parcels and forested areas along BWP. In addition, high tension powerlines would be relocated to accommodate new utilities required for the project. These ancillary facilities and utilities would impact residents of these complexes, as well as the Tabernacle Church and Learning Center, due to acquisition of parking, increased noise and vibration, and changes to visual quality. These impacts, in combination with the impacts associated with the viaduct, could change the community feel and atmosphere.

Residences west of the BWP on Elmshorn Way, Hermosa Drive, Fairlane Place, and Frensham Court in the Montpelier Hills community in South Laurel would experience impacts due to increased noise, as would residences on Ivory Fashion Court, Blue Moon Court, Sea Pearl Court, and Sumner Grove Drive northwest of the BWP/MD 197 interchange.

Northeast of the BWP/MD 197 interchange, the viaduct would be located between the BWP and the Pheasant Run community in South Laurel. Residences on Pheasant Run Court and Pheasant Run Drive, as well as the New Life Christian Center, would experience impacts due to increased noise and changes to aesthetics due to the presence of the viaduct.

**Stations:** None

**TMFs:** Two of the potential three TMFs under consideration are located in Prince George's County. The BARC West TMF (Build Alternatives J-03 and J-06) would be located on BARC property. The BARC West TMF would be located in close proximity to

residents along Gross Lane and Odell Road. The BARC West TMF would require partial property acquisition from a residential yard on Gross Lane, as well as result in noise and visual impacts for residents on Gross Lane and Odell Road. Residents along Ellington Land would experience impacts due to changes in aesthetics.

Residential areas and community facilities are not present in the general vicinity of the BARC Airstrip TMF. Therefore, impacts associated with the BARC Airstrip TMF are not anticipated to have an effect on neighborhoods and community facilities.

### ***Anne Arundel County, Maryland***

**Alignment and Ancillary Facilities:** Neighborhood impacts associated with the Build Alternatives J-01 through J-06 in Anne Arundel County include: The elevated viaduct associated with Build Alignment J-01 – J-06 would operate in the Maryland City, Jessup, and Fort Meade neighborhoods, and the Patuxent Research Refuge (PRR). The elevated viaduct would be above ground at the Anne Arundel County/Prince George's County border in the PRR and would stay elevated for approximately 5.5 miles until going below ground within the Fort Meade neighborhood.

Two cemeteries would be impacted by the elevated viaduct. The Snowden Cemetery, within the PRR, would be acquired and displaced. The cemetery and the remains of those buried there would be relocated outside of the LOD. All state and local laws and applicable US Fish and Wildlife regulations regarding burial transfer would need to be followed. The Training School Cemetery, within the Maryland City neighborhood, is immediately adjacent to the viaduct. The viaduct would impact cemetery visitors due to increased noise and changes to aesthetics.

The viaduct would impact multiple residences west of the BWP in the Maryland City neighborhood, as well as community facilities including Resurrection Church, Monarch Academy, and Brock Bridge Elementary School, due to increased noise. The New Beginnings Youth Development Center/Maya Angelou Academy would experience increased noise and changes to views and visual quality east of the BWP.

The elevated viaduct would return underground in the Fort Meade neighborhood. A tunnel portal would be located within 250 feet of residences within the Fort Meade neighborhood on Costin Loop. Residents would experience impacts due to changes in visual quality. Residences located on Laurel Hill Road, Potters Hill Road, and Baldy Avenue would experience vibration impacts.

A FA/EE would be located along Harmans Road in the Severn neighborhood. The construction and operation of the FA/EE facility at this location would result in a residential displacement. Residents along Harmans Road, Post Road, Mill Crossing Court, and Harmons Farm Court would experience increased noise and changes in visual quality. Residences on Matthewstown Road, David Victoria Lane, and Hekla Lane would also experience changes in views and visual quality.

A FA/EE would be located in an industrial area between Railroad Avenue and Telegraph Road in the Severn neighborhood. The FA/EE would require the full

permanent acquisition of an industrial parcel. The facility would result in noise impacts for residences along Old Coaling Road and to the east of Telegraph Road.

**Stations:** One proposed station, the BWI Marshall Airport Station (all Build Alternatives) is located within Anne Arundel County. Access to the station would be solely from within the airport. The BWI Marshall Airport Station would be located on BWI Marshall Airport property and would not directly impact neighborhoods; however, it could result in increased traffic in the BWI Marshall Airport vicinity, specifically at the MD 170 and I-195 WB ramps which would affect the Linthicum neighborhood located adjacent to BWI.

**TMFs:** Build Alternatives J-01, J-04, J1-01, and J1-04 include the MD 198 TMF, located in the Maryland City neighborhood in Anne Arundel County. The MD 198 TMF would require the acquisition and displacement of the Woodlands Job Corps. This community facility provides a residential career training program and job placement program for low-income individuals. During ongoing outreach with impacted agencies, the US Department of Labor (DOL), which manages and oversees the Woodlands Job Corps facility and program, expressed opposition to any Build Alternatives that would remove the facility. According to DOL, the Woodlands Job Corps facility is only one of two of the kind in the DC area. The DOL also stated that relocating the center would be extremely costly. The Potomac Job Corps Center, located in Washington, DC and the Woodstock Job Corps Center located in Woodstock, MD in Baltimore County are the next closest facilities.

Partial property acquisition would also be required from the New Beginnings Youth Development Center/Maya Angelou Academy; however, the property acquisition is not anticipated to impact the function of the New Beginnings Youth Development Center/Maya Angelou Academy. Additionally, there would be increased noise and changes to visual quality in the vicinity of the New Beginnings Youth Development Center/Maya Angelou Academy.

Build Alternatives J1-01 and J1-04 include elevated ramps to access the MD 198 TMF within the Maryland City neighborhood. The ramps would be located just west of the BWP within 150 feet of the Thomas J.S. Waxter Children's Center, residences on Sudlersville Street, and apartments on Andrew Court within the Ashley Apartments complex. The viaduct would require the removal of a forested buffer that currently exists between the BWP and these communities, including the Thomas J.S. Waxter Children's Center, and would present a stark change from current views. These residents and the Thomas J.S. Waxter Children's Center would experience impacts due to increased noise and changes to visual quality. Residents on Bushy Ridge Road, Carriage Walk Court, Carriage Walk Lane, and Sagewood Road would also experience noise impacts.

### ***Baltimore County, Maryland***

**Alignment and Ancillary Facilities:** Neighborhood impacts associated with all Build Alternatives in Baltimore County include:

There would be no surface portions of the elevated viaduct within Baltimore County under any of the Build Alternatives. A FA/EE facility and two substations would be in the

Baltimore Highlands neighborhood, south of I-895 and east of MD 295 in an industrial area and forested land area. The FA/EE and two substations would have noise impacts to residences on Walnut Road, Yarnall Road, and Norton Road. The FA/EE and two substation would require the full permanent property acquisition of four industrial parcels.

There would also be noise impacts resulting from the presence of a tunnel portal to multiple residential properties along Annapolis Road, and Alderwood, Glenrose, Daisy, and Rose Avenues in the Baltimore Highlands neighborhood under Build Alternatives J-01, J-02, and J-03.

**Station:** None

**TMFs:** None

### ***Baltimore City, MD***

**Alignment and Ancillary Facilities:** Aboveground elements of the project would include sections of elevated viaduct south and north of the proposed Cherry Hill Station. An elevated viaduct would connect to the south of the elevated Cherry Hill Station. North of the Cherry Hill Station, above ground viaduct would run east of and parallel to Kloman Street in the Westport neighborhood and terminate south of I-95 overpass. A substation would be located in the Westport neighborhood as part of either build alternative.

A substation would be located along Annapolis Road in the Westport neighborhood within 400 feet of homes. Residents along Annapolis Road south of the substation would have increased noise and changes to views and visual quality. The substation would require the full permanent acquisition of an industrial parcel. Residents along Annapolis Road south of the substation would have increased noise and changes

A MOW facility would be located in the Westport neighborhood as part of Build Alternatives J-04, J-05, J-06. The MOW facility would require the full permanent property acquisition of two industrial parcels and be located in an open space area north of Middle Branch Park, east of the Westport Light Rail station and west of the Patapsco River. Residents along Cedley, Sidney, Maisel, and Annapolis Roads would experience increased noise and changes in views and visual quality.

**Stations:** The Cherry Hill Station (Build Alternatives J-01, J-02, J-03) would be an aboveground station in Baltimore City, located in the Cherry Hill neighborhood. The area includes mostly industrial and commercial uses and is in close proximity to portions of the Westport, Lakeland, Lansdowne, and Baltimore Highlands neighborhoods.

The SCMAGLEV would transition from underground tunnel to elevated viaduct via a tunnel portal that would be located near the intersection of Annapolis Road and Patapsco Avenue in the Cherry Hill neighborhood. The elevated viaduct would continue from the tunnel portal to the Cherry Hill Station which would be located above the current Cherry Hill Light Rail Station. The elevated viaduct would continue north beyond

the Cherry Hill Station and terminate south of I-95. Areas east and west of the Cherry Hill Station would be acquired and used for parking structures and SCMAGLEV Operations.

The construction and operation of the Cherry Hill Station would cause noise and visual impacts for residents in the Westport and Cherry Hill neighborhoods. There would also be visual impacts to residents in the Lakeland neighborhood, Arundel Elementary School, and the Kingdom Hall of Jehovah Witnesses in Cherry Hill and to Westport Elementary School and Auburn Cemetery in the Westport neighborhood. The Cherry Hill Station parking structures would be located southeast of the Waterview Avenue and Cherry Hill Road intersection and in the area between MD 295 and Annapolis Road. The MedMark Treatment Center would be displaced. The MedMark Treatment Center is an addiction treatment facility that helps people overcome opioid addiction with comprehensive medication-assisted treatment (MAT) programs. The University of Maryland Addiction Treatment Center and the Kolmac Outpatient Recovery are the next closest addiction treatment facilities and are located approximately 3 miles away.

The Cherry Hill Station would require the acquisitions of multiple commercial and industrial properties along Annapolis Road, Patapsco Avenue, Waterview Avenue, and Cherry Hill Road resulting in the displacement of multiple businesses including commercial properties offering groceries and other retail services along Patapsco Avenue. This could impact community cohesion and would reduce the services available to community residents as well as disrupt local businesses. Residents close to this area in the Cherry Hill, Lakeland, Westport, and Baltimore Highlands neighborhoods would have to find alternative shopping locations. Traffic would increase in the Cherry Hill Station vicinity.

The Camden Yards Station (Build Alternatives J-04, J-05 and J-06) would be an underground station in Baltimore City. Access to the station from the surface would be provided from within the Downtown West neighborhood. Parking structures would be located north of Pratt Street on both sides of Hanover Street in the Downtown West neighborhood as part of the Camden Yards Station.

Build Alternatives J Options 3 and 4 includes the Camden Yards Station and would require the acquisition and demolition of multiple buildings in the Downtown West and Otterbein neighborhoods. One community facility, the Old Otterbein United Methodist Church, would be acquired and demolished. Additionally, portions of the Baltimore Convention Center and the Federal Reserve Bank building on Sharpe Street would also be acquired and demolished. Access points to the underground station would be on Howard Street near the intersections at Conway Street, and from Conway Street and Pratt Street, Sharpe Street and west of the Sheraton Inner Harbor Hotel in the Downtown West neighborhood. The Camden Yards Station and access points would require property acquisitions of up to 22 parcels in the Downtown West and Otterbein neighborhoods and in the Stadium Area. Parking structures for the station would require the removal of two buildings, one a Federal courthouse and the other an office building, north of Pratt Street on both sides of Hanover in the Downtown West neighborhood. One community facility, Concentra Urgent Care, is located in the

office building and would be displaced, reducing the community services available to local residents. These property displacements would disrupt businesses in the area. Traffic would increase in the Camden Yards Station vicinity.

The Camden Yards Station (Build Alternatives J-04, J-05, J-06, J1-04, J1-05, and J1-06) would require the temporary use of property and demolition of multiple buildings in the Downtown West and Otterbein neighborhoods. The Old Otterbein United Methodist Church would require acquisition and demolition which would impact community cohesion. Additionally, the Baltimore Convention Center and the Federal Reserve Bank building on Sharpe Street would also require the use of property and demolition and would disrupt businesses located within these buildings. Access points to the underground station would be on Howard Street near the intersections at Conway Street, and from Conway Street and Pratt Street, Sharpe Street and west of the Sheraton Inner Harbor Hotel in the Downtown West neighborhood. The Camden Yards Station and access points would require property acquisitions of up to 22 parcels and would result in 4 full permanent property acquisitions. Parking structures for the station would require the removal of two buildings, one a Federal courthouse and the other an office building, north of Pratt Street on both sides of Hanover in the Downtown West neighborhood. One community facility, Concentra Urgent Care, is located in the office building and would be displaced, reducing the community services available to local residents. These property displacements would disrupt businesses in the area. Traffic would increase in the Camden Yards Station vicinity.

**TMFs:** None

### **D.3D.3.2.2 Build Alternatives J1**

#### **Long-term Operational Effects**

Similar to Build Alternatives J-01 – J-06, Build Alternatives J1-01 – J1-06 would result in permanent impacts to neighborhoods and community facilities related to property acquisition, community cohesion, aesthetics and visual appearance, noise, changes to access and mobility, and use of the community facilities. Impacts associated with the stations and TMFs would be similar to Build Alternatives J-01 – J-06 impacts. However, impacts would differ along the viaduct in Prince George's County and Anne Arundel County due to the Build Alternatives J1 viaduct being west of the Baltimore-Washington Parkway.

The potential effects of Build Alternatives J1 on neighborhoods and community facilities would be as follows:

#### ***Prince George's County, Maryland***

**Alignment and Ancillary Facilities:** Build Alternatives J1-01 – J1-06 would cause vibration impacts to multiple properties located above tunnel portions of the alignment within and near the Bladensburg, Woodlawn, New Carrollton, Greenbelt, and South Laurel neighborhoods.

As discussed above, a FA/EE facility would be located north of MD 410, behind homes along Riverdale Road near the Woodlawn neighborhood. The FA/EE for Build Alternatives J1-01 – J1-06 would require the temporary use of property from four properties (as opposed to five properties required under J-01 – J-06 Build Alternatives) and would require two permanent partial property acquisitions. The construction and operation of the FA/EE would introduce a new building and require the removal of trees in a forested area of these properties. This would result in increased noise, changes to aesthetics and potentially changes to community cohesion for homes on this section of Riverdale Road. Impacts due to changes to aesthetics resulting from the construction and operation of the FA/EE would also occur at Auburn Manor, Lilly Garden, Chestnut Ridge apartments and along Martins Terrace between Woodlawn and New Carrollton.

Build Alternatives J1-01 – J1-06 viaduct would be located between the BWP and residences west of the BWP on Elmshorn Way, Hermosa Drive, and Frensham Court in the Montpelier Hills community, as well as Ivory Fashion Court, Blue Moon Court, Sea Pearl Court, and Sumner Grove Drive, all located southwest of the BWP/MD 197 interchange in South Laurel. The viaduct would require the removal of a forested buffer between these communities and the BWP and would present a stark change from current views. The viaduct would be as close as 65 feet to residences and would impact residents due to increased noise, vibration, and changes to aesthetics. For Build Alternatives J1-02, J1-03, J1-05, and J1-06, the LOD extends into residential property on Elmshorn Way, Frensham Court, and Ivory Fashion Court and would eliminate parking; alter access to residences from Hermosa Drive and Muirkirk Road; and eliminate open space and picnic tables. Residents in these areas would experience property acquisition, changes to access, and impacts to community cohesion. The Villages at Montpelier Apartments and Evergreens at Laurel Apartments east of the BWP would also experience impacts due to increased noise.

Under Build Alternatives J1-01 and J1-04, a maintenance of way (MOW) facility would be constructed within 100 feet of residences south of Sumner Grove Drive in South Laurel. The MOW would require the full property acquisition of an area that's currently forested and identified as Springfield Road Park and would result in noise and visual impacts to residents.

Three systems buildings would be located off Hermosa Drive in an area currently forested and bordering an electrical powerline right of way. High tension powerlines would be relocated to accommodate new utilities required for the Project. Residents along Frensham, Dortmund, and Vanfleet Courts would be within 500 feet of the buildings and would experience increased noise and changes to aesthetics. Montpelier Elementary School would experience changes to views and visual quality due to the presence of the systems buildings. These impacts, in combination with the impacts associated with the viaduct and MOW facility under Build Alternatives J1-01 and J1-04, could change the community feel and atmosphere.

The viaduct and a system building would be located between the BWP and the Crystal Plaza Shopping Center (north of the BWP/MD 197 interchange). The systems building and viaduct are as close as 100 feet to a hotel and shopping center stores. The

Montpelier Post Office and the businesses within the shopping center would experience increased noise and changes in visual quality.

### ***Anne Arundel County, Maryland***

**Alignment and Ancillary Facilities:** Neighborhood impacts associated with the Build Alternatives J1-01 through J1-06 in Anne Arundel County include:

A viaduct and portal would impact multiple residences in the Maryland City neighborhood, as well as community facilities including Resurrection Church, Monarch Academy, and Brock Bridge Elementary School, due to increased noise and changes in visual quality. The tunnel portal would be located adjacent to Brock Bridge Elementary School's baseball fields. The viaduct and portal would require property acquisition from forested areas and portions of Maryland City Park.

Vibration impacts would occur at multiple properties above tunnel portions of the alignment within the Maryland City neighborhood and at one property in the Fort Meade neighborhood.

A FA/EE would be located within 500 feet of residences within the Fort Meade neighborhood on Allsworth Court. Residents would experience impacts due to changes to visual quality.

A FA/EE would be located along Harmans Road in the Severn neighborhood and would result in a residential displacement. In addition, residences to the south along Harmans Road, Post Road, Mill Crossing Court, and Harmons Farm Court would experience noise impacts and changes in visual quality. Residences on Matthewstown Road, David Victoria Lane, and Hekla Lane would also experience changes in views and visual quality.

A FA/EE would be sited in an industrial area between Railroad Avenue and Telegraph Road in the Severn neighborhood and would impact residences along Old Coaling Road and to the east of Telegraph Road due to increased noise. The FA/EE would require the full permanent acquisition of an industrial parcel.

**Table D.3-22** displays the potentially impacted neighborhoods and community facilities by each Build Alternative and notes the type of permanent or temporary impact(s) for each.

**Table D.3-22: Neighborhood and Community Facilities Impact**

| Build Alt. | Neighborhoods Impacted                                                                                                                                                                              | Community Facilities Impacted                                                                                                                                                                                                                          |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| J-01       | <ul style="list-style-type: none"> <li>Cluster 8 (PA, AM)</li> <li>Cluster 21 (PA, AM)</li> <li>Cluster 22 (D)</li> <li>Bladensburg (N, VQ, AM)</li> <li>Woodlawn (PA, N, V, CC, VQ, AM)</li> </ul> | <ul style="list-style-type: none"> <li>Adams Place Emergency Shelter (D)</li> <li>New York Avenue Playground and Park (PA)</li> <li>Snowden Cemetery (D)</li> <li>Medmark Treatment Center (D)</li> <li>Woodland Jobs Corps (D [J-01 only])</li> </ul> |

| Build Alt. | Neighborhoods Impacted                                                                                                                                                                                                                                                                                                           | Community Facilities Impacted                                                                                                                                                                                                                                                                                                                                                            |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| J-02       | <ul style="list-style-type: none"> <li>Landover (N, V, VQ, AM)</li> <li>Glenarden (N, V, VQ, AM)</li> <li>Summerfield (PA, N, V, VQ, AM)</li> <li>New Carrollton (V, VQ)</li> <li>Greenbelt (PA, V, VQ)</li> <li>South Laurel (PA, N, V, VQ)</li> </ul>                                                                          | <ul style="list-style-type: none"> <li>New Beginnings Youth Development Center/Maya Angelou Academy (PA [J-01 only], N, VQ)</li> <li>Training School Cemetery (N, VQ)</li> <li>Tabernacle Church and Learning Center (, VQ)</li> </ul>                                                                                                                                                   |
| J-03       | <ul style="list-style-type: none"> <li>Konterra (PA, N, V, VQ, AM)</li> <li>Maryland City (PA, D, N, VQ)</li> <li>Fort Meade (V, VQ)</li> <li>Severn (PA, D, N, V, VQ)</li> <li>Linthicum (AM)</li> <li>Baltimore Highlands (N)</li> <li>Cherry Hill (PA, N, VQ, AM)</li> <li>Westport (N, VQ)</li> <li>Lakeland (VQ)</li> </ul> | <ul style="list-style-type: none"> <li>New Life Christian Center (N, VQ)</li> <li>Westport Elementary School (VQ)</li> <li>Auburn Cemetery (VQ)</li> <li>Arundel Elementary School (VQ)</li> <li>Kingdom Hall of Jehovah's Witnesses (VQ)</li> <li>Monarch Global Academy (N)</li> <li>Resurrection Church (N)</li> <li>Brock Bridge Elementary School (N)</li> </ul>                    |
| J-04       | <ul style="list-style-type: none"> <li>Cluster 8 (PA, AM)</li> <li>Cluster 21 (PA, AM)</li> <li>Cluster 22 (D)</li> <li>Bladensburg (N, VQ, AM)</li> <li>Woodlawn (PA, N, V, CC, VQ, AM)</li> <li>Landover (N, V, VQ, AM)</li> </ul>                                                                                             | <ul style="list-style-type: none"> <li>Adams Place Emergency Shelter (D)</li> <li>New York Avenue Playground and Park (PA)</li> <li>Snowden Cemetery (D)</li> <li>Woodland Jobs Corps (D [J-04 only])</li> <li>New Beginnings Youth Development Center/Maya Angelou Academy (PA [J-04 only], N, VQ)</li> </ul>                                                                           |
| J-05       | <ul style="list-style-type: none"> <li>Glenarden (N, V, VQ, AM)</li> <li>Summerfield (PA, N, V, VQ, AM)</li> <li>New Carrollton (V, VQ)</li> <li>Greenbelt (PA, V, VQ)</li> <li>South Laurel (PA, N, V, VQ)</li> <li>Konterra (PA, N, V, VQ, AM)</li> <li>Maryland City (PA, D, N, VQ)</li> <li>Fort Meade (V, VQ)</li> </ul>    | <ul style="list-style-type: none"> <li>Training School Cemetery (N, VQ)</li> <li>Tabernacle Church and Learning Center (VQ)</li> <li>New Life Christian Center (N, VQ)</li> <li>Monarch Global Academy (N)</li> <li>Resurrection Church (N)</li> <li>Brock Bridge Elementary School (N)</li> <li>Old Otterbein United Methodist Church (D)</li> <li>Concentra Urgent Care (D)</li> </ul> |
| J-06       | <ul style="list-style-type: none"> <li>Severn (D, N, V, VQ, AM)</li> <li>Linthicum (AM)</li> <li>Baltimore Highlands (N)</li> <li>Cherry Hill (PA, N, V, VQ)</li> <li>Westport (N, VQ)</li> <li>Downtown West (PA, D, AM)</li> <li>Otterbein (PA, D, AM)</li> <li>Stadium Area (PA, N, VQ, AM)</li> </ul>                        |                                                                                                                                                                                                                                                                                                                                                                                          |
| J1-01      | <ul style="list-style-type: none"> <li>Cluster 8 (PA, AM)</li> <li>Cluster 21 (PA, AM)</li> <li>Cluster 22 (D)</li> <li>Bladensburg (V, N, AM)</li> <li>Woodlawn (PA, N, V, CC, VQ, AM)</li> <li>Landover (N, V, VQ, AM)</li> <li>Glenarden (N, V, VQ, AM)</li> </ul>                                                            | <ul style="list-style-type: none"> <li>Adams Place Emergency Shelter (D)</li> <li>New York Avenue Playground and Park (PA)</li> <li>Medmark Treatment Center (D)</li> <li>Woodland Jobs Corps (D [J1-01 only])</li> <li>Montpelier Elementary School (VQ)</li> <li>Montpelier Post Office (N, VQ)</li> <li>Brock Bridge Elementary School (N, VQ)</li> </ul>                             |

| Build Alt. | Neighborhoods Impacted                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Community Facilities Impacted                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| J1-02      | <ul style="list-style-type: none"> <li>Summerfield (<b>PA</b>, N, V, VQ, AM)</li> <li>New Carrollton (<b>V</b>, <b>VQ</b>)</li> <li>Greenbelt (<b>V</b>)</li> <li>South Laurel (<b>PA</b>, <b>N</b>, <b>V</b>, <b>VQ</b>, <b>AM</b>, <b>CC</b>)</li> <li>Konterra (<b>PA</b>, N, V, VQ, AM)</li> <li>Maryland City (<b>PA</b>, <b>D</b>, <b>N</b>, <b>V</b>, <b>VQ</b>)</li> <li>Fort Meade (<b>V</b>, <b>VQ</b>)</li> <li>Severn (<b>PA</b>, <b>D</b>, <b>N</b>, <b>VQ</b>)</li> </ul> | <ul style="list-style-type: none"> <li>Monarch Global Academy (<b>N</b>, <b>VQ</b>)</li> <li>Resurrection Church (<b>N</b>, <b>VQ</b>)</li> <li>Thomas J.S. Waxter Children's Center (<b>N</b>, <b>VQ</b>) (<i>J1-01 only</i>)</li> <li>New Beginnings Youth Development Center/Maya Angelou Academy (<b>PA</b> [<i>J1-01 only</i>], <b>N</b>, <b>VQ</b>)</li> <li>Training School Cemetery (<b>N</b>, <b>VQ</b> [<i>J1-01 only</i>])</li> <li>Tabernacle Church and Learning Center (<b>VQ</b>)</li> <li>Westport Elementary School (<b>VQ</b>)</li> <li>Auburn Cemetery (<b>VQ</b>)</li> <li>Arundel Elementary School (<b>VQ</b>)</li> <li>Kingdom Hall of Jehovah's Witnesses (<b>VQ</b>)</li> </ul>                                                                                                                                                                                                                               |
| J1-03      | <ul style="list-style-type: none"> <li>Linthicum (<b>AM</b>)</li> <li>Baltimore Highlands (<b>N</b>)</li> <li>Cherry Hill (<b>PA</b>, <b>N</b>, <b>VQ</b>, <b>AM</b>)</li> <li>Westport (<b>N</b>, <b>VQ</b>)</li> <li>Lakeland (<b>VQ</b>)</li> </ul>                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| J1-04      | <ul style="list-style-type: none"> <li>Cluster 8 (<b>PA</b>, <b>AM</b>)</li> <li>Cluster 21 (<b>PA</b>, <b>AM</b>)</li> <li>Cluster 22 (<b>PA</b>, <b>D</b>)</li> <li>Bladensburg (<b>V</b>, N, AM)</li> <li>Woodlawn (<b>PA</b>, <b>N</b>, <b>V</b>, <b>CC</b>, <b>VQ</b>, <b>AM</b>)</li> <li>Landover (N, V, VQ, AM)</li> <li>Glenarden (N, V, VQ, AM)</li> <li>Summerfield (<b>PA</b>, N, V, VQ, AM)</li> </ul>                                                                     | <ul style="list-style-type: none"> <li>Adams Place Emergency Shelter (<b>D</b>)</li> <li>New York Avenue Playground and Park (<b>PA</b>)</li> <li>Woodland Jobs Corps (<b>D</b> [<i>J1-04 only</i>])</li> <li>Montpelier Elementary School (<b>VQ</b>)</li> <li>Montpelier Post Office (<b>N</b>, <b>VQ</b>)</li> <li>Brock Bridge Elementary School (<b>N</b>, <b>VQ</b>)</li> <li>Monarch Global Academy (<b>V</b>)</li> <li>Resurrection Church (<b>V</b>)</li> <li>Thomas J.S. Waxter Children's Center (<b>N</b>, <b>VQ</b>) (<i>J1-04 only</i>)</li> <li>New Beginnings Youth Development Center/Maya Angelou Academy (<b>PA</b> [<i>J1-04 only</i>], <b>N</b>, <b>VQ</b>)</li> <li>Training School Cemetery (<b>N</b>, <b>VQ</b> [<i>J1-04 only</i>])</li> <li>Tabernacle Church and Learning Center (<b>VQ</b>)</li> <li>Old Otterbein United Methodist Church (<b>D</b>)</li> <li>Concentra Urgent Care (<b>D</b>)</li> </ul> |
| J1-05      | <ul style="list-style-type: none"> <li>New Carrollton (<b>V</b>, <b>VQ</b>)</li> <li>Greenbelt (<b>V</b>)</li> <li>South Laurel (<b>PA</b>, <b>N</b>, <b>V</b>, <b>VQ</b>, <b>AM</b>, <b>CC</b>)</li> <li>Konterra (<b>PA</b>, N, V, VQ, AM)</li> <li>Maryland City (<b>PA</b>, <b>D</b>, <b>N</b>, <b>V</b>, <b>VQ</b>)</li> <li>Fort Meade (<b>V</b>, <b>VQ</b>)</li> </ul>                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| J1-06      | <ul style="list-style-type: none"> <li>Severn (<b>PA</b>, <b>D</b>, <b>N</b>, <b>VQ</b>, <b>AM</b>)</li> <li>Linthicum (<b>AM</b>)</li> <li>Baltimore Highlands (<b>N</b>)</li> <li>Cherry Hill (<b>PA</b>, N, V, VQ)</li> <li>Westport (<b>N</b>, <b>VQ</b>)</li> <li>Downtown West (<b>PA</b>, <b>D</b>, <b>AM</b>)</li> <li>Otterbein (<b>PA</b>, <b>D</b>, <b>AM</b>)</li> <li>Stadium Area (<b>PA</b>, N, VQ, AM)</li> </ul>                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

Impacts: PA = Property Acquisition; D = Displacement; N = Noise; V = Vibration; VQ = Aesthetics/Visual Quality; AM = Access and Mobility; CC = Community Cohesion

**Bolded Text** = Permanent impacts; Non-bolded Text = Temporary impacts

Source: AECOM 2020

### D.3D.3.3 Short-term Construction Effects

Construction of the SCMAGLEV Project would include activities such as digging and tunneling using multiple tunnel boring machines, ground clearing, pile driving, excavating, grading, and the stockpiling of soil, muck, and materials. The SCMAGLEV Project could cause potential short-term impacts to air quality (fugitive dust and construction equipment exhaust), noise and vibration (construction equipment and activities), and transportation (work vehicles, increased congestion, detours, and road closures). Powder Mill Road, MD 197, MD 198, and MD 32 are potential construction

access points during viaduct construction. In some cases, local roads may serve as access points to construction areas. Where possible, haul routes would use public roads in non-residential areas to minimize potential for traffic, noise, and vibration impacts from construction vehicles.

The tunnel portions of the Project would be achieved using tunnel boring machine (TBM) technology. The Project Sponsor would require the construction contractor to conduct existing foundation evaluations and implement tunnel vibration and settlement monitoring during construction. The exact TBM type and tunneling plan and construction sequence would be developed during final design.

Construction of the SCMAGLEV Project would result in short-term adverse impacts to neighborhoods due to temporary use of property, increased noise and vibration, air quality/emissions, changes in aesthetics and visual quality, changes to access and mobility, and the use of community facilities. Neighborhoods subject to these impacts may also experience community disruption, a population's ability to navigate their way around their community, and adverse effects to community cohesion, the disruption of interaction between people and groups within a community. Community disruption would be due to temporary impacts to traffic, pedestrian access, and neighborhood access during construction. These impacts would disrupt community cohesion and wayfinding by creating longer travel times and rerouting travel pattern. These effects, however, would be temporary and would cease upon project completion.

Temporary adverse direct impacts would occur at varying locations and for varying durations during the construction period. Temporary construction impacts that would occur in neighborhoods in close proximity to SCMAGLEV Project alignments, ancillary facilities, TMF, and stations. Construction would occur simultaneously at different locations. FRA anticipates construction impacts to be short-term in duration and to cease upon completion of construction. Construction activity would occur up to 24 hours a day at some locations and could last up to three years.

Construction laydown areas would be required in multiple locations throughout the SCMAGLEV Project corridor. Four long-term laydown areas include:

- Landover Mall Site – in the Summerfield neighborhood in Prince George's County and adjacent to the Landover and Glenarden neighborhoods. The Maple Ridge Apartment Community is across Brightseat Road from and within 225 feet of the Landover Mall Site. Residents would be temporarily impacted due to increased noise, vibration, and changes to aesthetics.
- Konterra Site – in the Konterra neighborhood in Prince George's County and adjacent to the Laurel neighborhood. The Avalon Laurel Apartment community is within 450 feet of the Konterra Site. Residents would be temporarily impacted by to noise, vibration, and changes to aesthetics during construction.
- Suburban Airport Site – in the Maryland City neighborhood in Anne Arundel County. No impacts to neighborhoods or community facilities are anticipated

because residential areas and community facilities are not present in the general vicinity.

- Patapsco Avenue Site – in the Cherry Hill neighborhood in Baltimore City. Residences along Round Road, Spelman Road, and Bethune Road north of Patapsco Avenue and existing railroad tracks are as close as 150 feet from the Patapsco Avenue site and would be temporarily impacted due to increased noise and changes to aesthetics.

### **D.3D.3.4 Potential Mitigation Strategies**

#### **D.3D.3.4.1 Short-term Construction Strategies**

Mitigation during construction would include the development and implementation of a construction plan. The plan would consist of an environmental plan for the protection of the natural and human environment that would include a combination of the following measures, the details of which would be determined during construction planning later in design:

- Developing a construction mitigation and public outreach plan with community input to address construction impacts on neighborhoods and community facilities. The plan would detail public construction schedules, road and sidewalk closures, detours, and public notification procedures. Coordinating with local communities during preparation of traffic management plans to minimize potential construction impacts to community resources and special events. Considering limiting construction activities during special events.
- Develop truck hauling routes and schedules that would minimize impacts on sensitive uses in all parts of the SCMAGLEV Project area.
- Develop, fund, and maintain a telephone hotline during construction and one or more SCMAGLEV Field Offices with staff to address community issues and concerns as they arise. Offices could be open from 9am-5pm weekdays and any weekends when work occurs. The full schedule would be developed prior to construction. The office would provide a physical location where information pertaining to construction can be exchanged. As part of this effort, the Project Sponsor would ensure that all potentially affected persons know the name and telephone number(s) of public affairs staff that they can contact if needed.
- Whenever possible, develop detours for any road or sidewalks to be closed during construction. Posting signs (in appropriate languages) alerting pedestrians, bicycles, and vehicles of road and sidewalk closures and detours. Ensuring pedestrian detours are accessible to seniors and disabled persons. Develop Worksite Traffic Control Plans in conjunction with the county and municipal departments of transportation to accommodate automobile and pedestrian traffic.
- Maintain access to residences, businesses, and community facilities including community parks affected by construction activities.

- Provide early notification to emergency service providers of any road closures or detours.
- During construction, provide temporary replacement or shared parking as needed to absorb the loss of parking due to acquisitions. Temporary parking could be added by constructing surface lots on nearby vacant parcel or restriping nearby streets to allow diagonal curb parking.
- Remove construction equipment, excess materials, and debris from construction staging and work areas prior to the end of construction.
- Restore temporarily disturbed areas prior to the end of the construction period.

#### **D.3D.3.4.2 Long-term Operational Strategies**

The Build Alternatives are being designed to avoid or minimize impacts to neighborhoods and community facilities by maximizing the use of underground tunnels where practicable and elevating the above-ground alignment above existing transportation corridors to maintain access and mobility.

Examples of design minimization techniques are consolidating temporary TBM launch sites, storage, and staging areas with permanent fresh air and emergency egress facilities or substations. Noise and vibration impacts would be minimized or eliminated through design changes and mitigation features such as canopies, noise barriers, and vibration remediation measures. The Project Sponsor, in coordination with FRA, will determine the feasibility and reasonableness of such measures where noise and vibration thresholds would be exceeded.

As part of the design process, the Project Sponsor will continue to coordinate with local governments and residents regarding the location, positioning, and exterior design of Build Alternatives including the stations, selected TMF site, and ancillary facilities like the fresh air and emergency egress facilities and substations.

As part of the design process, the Project Sponsor will examine ways to reduce or eliminate property acquisitions where feasible. The Project Sponsor will coordinate with the affected property owners. As previously stated, if the construction of the SCMAGLEV Project receives Federal funding, all activities related to acquisitions and displacements would be conducted in conformance with the Uniform Act. If the SCMAGLEV Project is fully privately funded, the Project Sponsor will be responsible for compensating property owners impacted by property acquisitions. It is anticipated that at least one residential displacement would occur under all the Build Alternatives. The Washington, DC and Baltimore, MD areas single family (detached, attached and condo) housing markets are robust; the historical performance of the housing market suggests that the mix of new and existing homes on the market would allow homeowners to find a replacement dwelling in the same MSA. Additionally, the overall rental vacancy rate, which includes single-family homes and apartments, in Washington, D.C. and Baltimore City were 7.5 percent and 13.5 percent respectively. Therefore, relocation housing should be available within the project area. See 4.06 Economics for more details on the housing market.

The Project Sponsor will coordinate with federal (PRR/US Fish and Wildlife), state (Maryland Historical Trust) and local (Anne Arundel County) agencies if impacts to Snowden Cemetery cannot be avoided and graves would need to be relocated. All applicable laws and regulations, including Maryland Burial Law, would be followed.

The Project Sponsor will continue to coordinate with local jurisdictions on forecasted vehicular and pedestrian traffic volumes, predicted level of service at intersections, and mitigation of traffic increases near station locations.

## Appendix D.3E Environmental Justice

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### D.3E.1 Regulatory Context and Methodology

In accordance with the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 et seq., the Council on Environmental Quality (CEQ) regulations, 40 C.F.R. Parts 1500 - 1508, and the Federal Railroad Administration's (FRA) Procedures for Considering Environmental Impacts, 64 Fed. Reg. 28545 (May 26, 1999), FRA considered the potential impacts to EJ populations. The United States Environmental Protection Agency (USEPA) defines EJ as the equitable treatment and meaningful involvement of all people, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies<sup>1</sup>. This section describes the most pertinent regulatory context for evaluating impacts to EJ populations:

- Title VI of the Civil Rights Act (Title VI) (1964): Title VI prohibits discrimination in programs and activities receiving Federal financial assistance. Title VI specifically states, "no person in the US shall on the ground of race, color, or national origin be excluded from participation in, denied benefits of, or subjected to discrimination under any program or activity receiving Federal financial assistance."
- Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (1994): Directs Federal agencies to take appropriate and necessary steps to identify and address disproportionately high and adverse environmental effects of Federal agency actions (including transportation projects) on minority and low-income populations.
- United States Department of Transportation (USDOT) Order 5610.2(a), *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (2012): Sets forth the USDOT policy to consider EJ principles in all USDOT programs, policies, and activities. It describes how the objectives of EJ are integrated into planning and programming, rulemaking, and policy formulation. This Order also requires that any activities that will have a

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<sup>1</sup> USEPA. <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice>.

disproportionately high and adverse effect on populations protected by Title VI (“protected populations”) will only be carried out if:

- A substantial need for the activity exists, based on the overall public interest; and
- Build Alternatives that would have less adverse effects on protected populations (and that still satisfy the need identified in item 1 above), either:

Would have other adverse social, economic, environmental, or human health impacts that are severe; or

Would involve increased costs of extraordinary magnitude.

- USDOT Order 5610.2(a) draws from the framework established by Title VI and the National Environmental Policy Act (NEPA) of 1969 and establishes three principles to ensure nondiscrimination in federally funded activities:
  - Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects—including social and economic effects—on minority populations and low-income populations.
  - Ensure full and fair participation by all potentially affected communities in transportation decision-making processes.
  - Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

In addition, the following guidance materials are applicable to the EJ analysis:

- Council on Environmental Quality (CEQ) Environmental Justice Guidance under the National Environmental Policy Act (1997): CEQ oversees Federal agency implementation of NEPA. This guidance is a response to EO 12898, developed by CEQ and other affected agencies to assist agencies with NEPA procedures and effective identification of and response to EJ concerns.
- Federal Highway Administration (FHWA) Technical Advisory 6640.8A, *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (1987) and Federal Transit Administration (FTA) Circular 4703.1, *Environmental Justice Policy Guidance for FTA Recipients* (2012): FHWA Technical Advisory 6640.8A and FTA Circular C 4703.1 are USDOT agency guidance documents that call for NEPA documentation to include identification of the EJ social groups that maybe benefitted or harmed by the proposed project and an assessment of whether any social group is disproportionately impacted with potentially adverse impacts to populations. These guidance documents provide direction on ways to fully engage EJ populations in the transportation decision-making process; to determine whether EJ populations will be subjected to disproportionately high and adverse human health or environmental effects of a public transportation project, policy, or activity; and how to avoid, minimize, or mitigate these effects.

### D.3E.1.1 Methodology

EJ definitions for terms used throughout this section and assessment, are found in the updated USDOT EJ Order 5610.2(a):

- *Disproportionately high and adverse effect.* An adverse effect that (1) is predominantly borne by a minority population and/or a low-income population, or (2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.
- *Low-income.* A person with low income has a “median household income is at or below the United States Department of Health and Human Services poverty guidelines.”
- *Low-income population.* A low-income population is any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons who will be similarly affected by a proposed program, policy, or activity.
- *Minority.* A minority individual identifies as Black, Hispanic or Latino, Asian, American Indian and Alaskan Native, and Native Hawaiian and other Pacific Islander.
- *Minority population.* A minority population is any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons who will be similarly affected by a proposed program, policy, or activity.

Initially, FRA used EJSCREEN as a preliminary step to consider environmental justice concerns, as it is an environmental justice mapping and screening tool that provides a nationally consistent dataset and approach for combining environmental and demographic indicators. The EJSCREEN Reports, for multiple project buffers, are located in **Attachment E**.

Then FRA initiated a more detailed environmental justice analysis. FRA used the United States Census Bureau (USCB) 2010 Decennial Census and the American Community Survey (ACS) five-year 2018 estimates (2014-2018) to identify minority and low-income populations. The USCB divides land into various sub-boundaries for statistical analysis, including census tracts, block groups, and blocks. Census tracts divide a county or similar area to offer a stable set of geographic units for the presentation of statistical data. Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people; a census tract is made up of block groups that typically contain 600 to 3,000 people in a contiguous geographic location. Blocks are the smallest unit for which basic census data is available. This analysis utilized data at the block group level for consistency with the ACS five-year estimates, which present data at the block group level. Consistent with the SCMAGLEV Project Affected Environment identified in Section 4.4 Neighborhoods/Community Facilities, the SCMAGLEV Project Affected Environment for EJ assessment is the synthesis of the

block groups that are fully or partially within the 500 feet buffer of the proposed Build Alternatives alignments and the 1/4-mile buffer of the stations and TMF locations.

FRA used EJ guidance from the CEQ2 to establish thresholds for minority and low-income populations within the SCMAGLEV Project Affected Environment. CEQ defines minority populations as those with a population percentage (a) greater than 50 percent or (b) meaningfully greater than the minority population percentage in the general population. For this assessment, a minority population is present if a block group contains at least 50 percent minority individuals or a minority percentage that is 10 percentage points above the respective jurisdiction's minority percentage. Also, in alignment with CEQ guidance, a low-income population is present in a block group where percentage of the population below the Federal poverty level is 10 percentage points or more in comparison to the respective jurisdiction's population living below poverty. Block groups that meet one or both criteria are referred to throughout this document as EJ population areas. Block groups that do not meet the criteria or fall outside of defined EJ area boundaries are referred to as non-environmental justice (non-EJ) population areas. See **Table D.3-23** for demographics and EJ thresholds by jurisdiction.

**Table D.3-23: Regional Environmental Justice Demographics**

| Jurisdiction           | Minority Population | Minority Population Threshold | Low-Income Population | Low-Income Population Threshold |
|------------------------|---------------------|-------------------------------|-----------------------|---------------------------------|
| Washington, D.C.       | 63.8%               | 50%                           | 16.8%                 | 26.8%                           |
| Prince George's County | 87%                 | 50%                           | 8.9%                  | 18.9%                           |
| Anne Arundel County    | 31%                 | 41%                           | 6%                    | 16%                             |
| Baltimore County       | 41.9%               | 50%                           | 9.2%                  | 19.2%                           |
| Baltimore City         | 72.5%               | 50%                           | 19.5%                 | 29.5%                           |

Source: American Community Survey Sample Data (ACS 2018)

The USDOT EJ Order defines disproportionately high and adverse effect on minority and low-income populations means an adverse effect that is: A) predominantly borne by a minority population and/or a low-income population; or B) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population. Determinations of whether a project will have disproportionately high and adverse effects must consider "mitigation and enhancement measures that will be taken and all offsetting benefits to the affected minority and low-income populations..." (USDOT Order 5610.2[a], Section 8[b]). FRA will continue to analyze and consider adverse effects, related mitigation, benefits, and public input to inform FRA's determination in its final decision document about whether the SCMAGLEV Project would result in disproportionately high and adverse effects to EJ populations.

<sup>2</sup> [https://www.epa.gov/sites/production/files/2015-02/documents/ej\\_guidance\\_nepa\\_ceq1297.pdf](https://www.epa.gov/sites/production/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf)

FRA considered the location of block groups with EJ and non-EJ populations in relation to impacts of the Build Alternatives, as identified throughout Chapter 4 of the Baltimore-Washington SCMAGLEV DEIS to identify potentially adverse and beneficial effects of the Build Alternatives. FRA identified impacts associated with multiple environmental resources in relation to the Build Alternatives and population areas. The vast majority of the SCMAGLEV Project impacts would occur in EJ population areas due to the fact that most of the SCMAGLEV Project Affected Environment qualifies as EJ. In order to determine the potential for disproportionately high and adverse impacts to EJ populations, FRA will consider the location of the residential populations within EJ block groups relative to the SCMAGLEV Project direct and indirect impacts; proposed mitigation; SCMAGLEV Project benefits; and community feedback received during the DEIS phase of the SCMAGLEV Project. Prior to the FEIS, FRA will continue public outreach, stakeholder coordination, and mitigation identification efforts needed to refine the EJ analysis. FRA will document the outcome of the disproportionality analysis in the FEIS. In the FEIS, if FRA makes a finding of a disproportionately high and adverse impact, the document will include the appropriate analysis as required by DOT Order 5610.2(a) and Title VI.

## D.3E.2 Affected Environment

**Table D.3-24** shows population totals for racial and low-income demographics within the Affected Environment. Minority populations comprise 69.6 percent of the total population and low-income populations make up 12.7 percent of the SCMAGLEV Project Affected Environment.

**Table D.3-24: EJ Demographics in the SCMAGLEV Project Affected Environment**

| Environmental Justice Identifier     | Total Population | Percent of Total Population |
|--------------------------------------|------------------|-----------------------------|
| Black or African American            | 105,072          | 46.6%                       |
| American Indian and Alaska Native    | 620              | 0.3%                        |
| Asian                                | 15,205           | 6.7%                        |
| Native Hawaiian and Pacific Islander | 308              | 0.1%                        |
| Some other race                      | 822              | 0.4%                        |
| Two or more races                    | 5,3877           | 2.4%                        |
| Hispanic or Latino                   | 29,505           | 13.1%                       |
| Non-White Hispanic or Latino         | 15,376           | 6.8%                        |
| Total Population (EJ and non-EJ)     | <b>225,635</b>   | <b>100%</b>                 |
| <b>Total Minority Population</b>     | <b>156,919</b>   | <b>69.6%</b>                |
| <b>Low-income population</b>         | <b>28,165</b>    | <b>12.7%</b>                |

Source: American Community Survey Sample Data (ACS 2018)

Of the 124 block groups within the SCMAGLEV Project Affected Environment, 105 block groups exceed one or more of the EJ thresholds. Of the 105 block groups with EJ

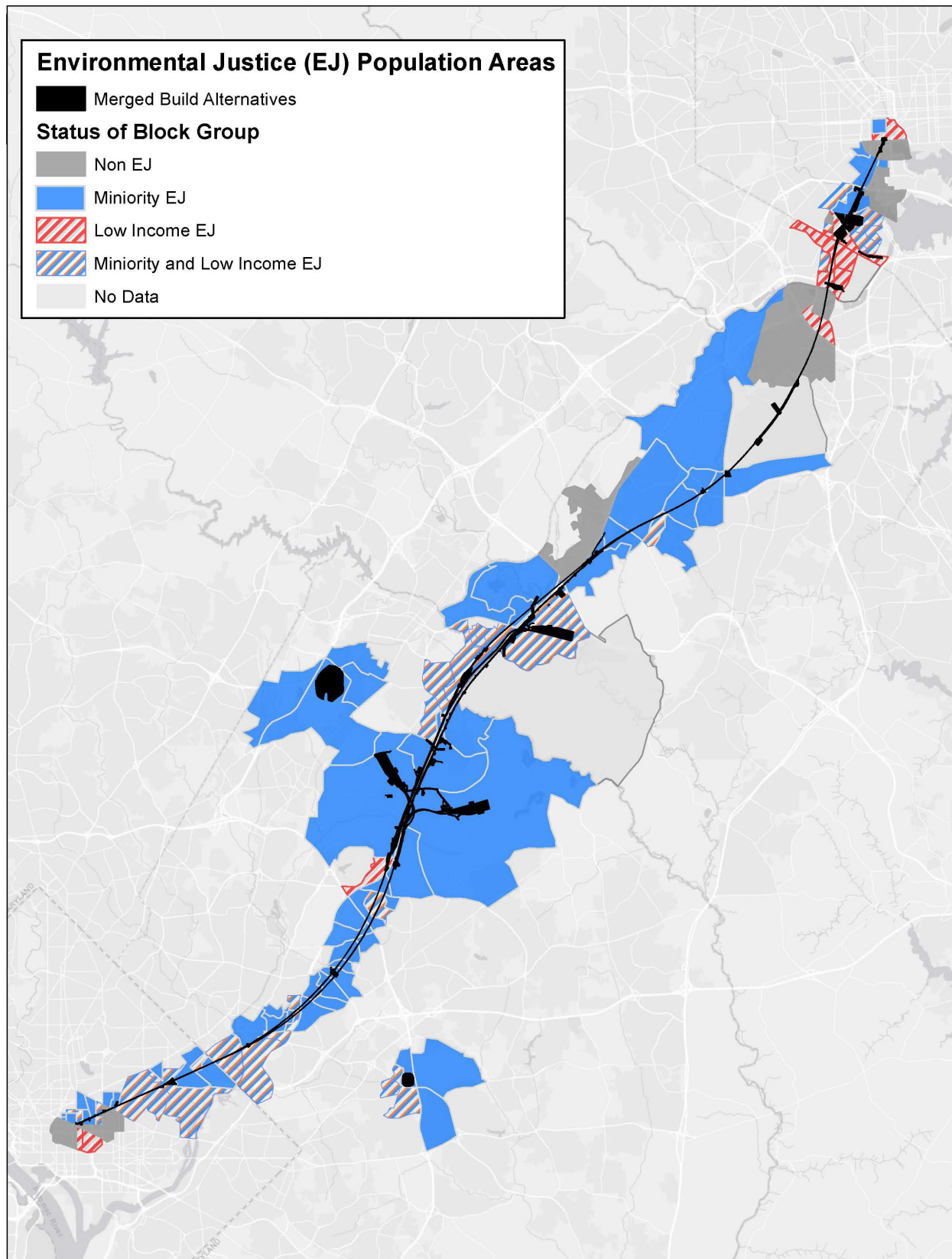
populations, 59 contain minority groups, ten have low-income residents, and 33 include both minority and low-income groups. EJ block groups identified account for 85 percent of all the block groups potentially affected by the SCMAGLEV Project. See **Figure D.3-7** for locations of EJ and non-EJ block groups.

Block groups closer to Washington, D.C., Baltimore County, and Baltimore City are geographically smaller and more densely populated, whereas block groups in northern Prince George's County and Anne Arundel County are comparatively larger in size and less densely populated. Some block groups, particularly the larger block groups within the counties, extend far beyond the SCMAGLEV Project limits. In these larger geographic block group areas, the Build Alternatives cross a number of relatively large, publicly owned properties (such as Beltsville Agricultural Research Center [BARC], Patuxent Research Refuge [PRR], and the Baltimore-Washington Parkway [BWP]) that either do not contain residential and/or commercial land uses or have residential and/or commercial land uses farther removed from the alignments.

### D.3E.3 Environmental Consequences

This section discusses the permanent or long-term effects of the No Build Alternative and Build Alternatives on EJ populations within the SCMAGLEV Project Affected Environment. To identify potential adverse and beneficial effects that would affect EJ population areas, FRA considered the location of block groups with EJ and non-EJ populations in relation to effects of the Build Alternatives by environmental resource. **Table D.3-25** identifies the environmental resource areas considered for the EJ disproportionality analysis and summarizes potential adverse impact thresholds considerations by resource. The impacts will be summarized in this section to highlight whether or not impacts are located within EJ population areas or specifically impacts EJ populations. The general location for each of the direct environmental impacts in relation to the EJ populations areas are shown in Attachment F. Due to the prevalence of EJ population areas, impacts to resources along the corridor will predominately be located in EJ population areas. And these individual impacts collectively have the potential to cumulatively, disproportionately impact population EJ populations. Therefore, the disproportionality analysis will consider the concentration of impacts within EJ populations areas, as well as the context and intensity of the impacts, the associated mitigation and/or benefits.

**Figure D.3-7: Environmental Justice Population Areas**



**Table D.3-25: Impacts Considered in Disproportionality Analysis**

| Environmental Resource Areas  | Type of Impacts Consideration                                                                                                                       |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Transportation                | Impacts that would decrease the Level of Service (LOS) in residential areas; impacts that would change local access or mobility                     |
| Community Facilities          | Includes directly impacted community facilities                                                                                                     |
| Parkland                      | Includes directly impacted parklands                                                                                                                |
| Economic                      | Includes areas with the potential for gentrification and changes to local economies                                                                 |
| Aesthetics and Visual Quality | Includes Moderate (M) and Higher (H) Levels of visual changes in residential neighborhoods                                                          |
| Hazardous Materials           | Includes directly affected areas with an existing Risk Ranking of 4 or more (Medium to High)                                                        |
| Noise                         | Includes areas that will result in a severe noise impact                                                                                            |
| Vibration                     | Includes areas that will result in frequent vibration impact                                                                                        |
| Land Use                      | Includes properties that would have permanent full parcel acquisitions, permanent partial parcel acquisition, and temporary full parcel acquisition |

Source: Baltimore-Washington SCMAGLEV DEIS (2020)

FRA also considered the regional impacts associated with Air Quality, Economics, and Safety and Security in the disproportionality analysis. Those impacts, as they relate to EJ populations are also discussed below.

### D.3E.3.1 No Build Alternative

Under the No Build Alternative, the SCMAGLEV Project will not be built; therefore, disproportionately high or adverse impacts to minority and low-income populations related to the construction or operation of a SCMAGLEV system will not occur. Other planned and funded transportation projects will continue to be implemented in the area and could result in effects to EJ populations.

### D.3E.3.2 Build Alternatives

Impacts would occur along the length of the SCMAGLEV Project corridor particularly in proximity to the portions of the SCMAGLEV Project that would be constructed aboveground, including stations, viaduct, tunnel portals, TMF sites, and ancillary facilities. Generally, the majority of the SCMAGLEV Project impacts for each Build Alternative, as identified throughout Chapter 4 of the SCMAGLEV DEIS, would occur within EJ population areas, given that the large majority of the Affected Environment consist of EJ populations. The *Environmental Justice Impact Analysis* mapping provided in Attachment F shows the combined limits of disturbance, the block groups that exceeded the Environmental Justice threshold, and symbology that represents the impacts of the SCMAGLEV Project. **Table D.3-26** identifies the percentage of each type of impact that occurs within environmental justice population areas, and notable impacts are summarized below.

**Table D.3-26: Impacts within Environmental Justice Population Areas**

|              | Transportation |     | Aesthetic |      | Community |      | Hazmat |     | Vibration |      | Noise |      | Parks |      | Parcel |      |
|--------------|----------------|-----|-----------|------|-----------|------|--------|-----|-----------|------|-------|------|-------|------|--------|------|
|              | No.            | %   | No.       | %    | No.       | %    | No.    | %   | No.       | %    | No.   | %    | No.   | %    | No.*   | %    |
| <b>J-01</b>  |                |     |           |      |           |      |        |     |           |      |       |      |       |      |        |      |
| Non-EJ       | 1              | 33% | 2         | 5%   | 1         | 6%   | 2      | 18% | 0         | 0%   | 0     | 0%   | 2     | 18%  | 72     | 19%  |
| EJ           | 2              | 67% | 36        | 95%  | 15        | 94%  | 9      | 82% | 359       | 100% | 6940  | 100% | 9     | 82%  | 316    | 81%  |
| <b>J-02</b>  |                |     |           |      |           |      |        |     |           |      |       |      |       |      |        |      |
| Non-EJ       | 1              | 33% | 2         | 5%   | 1         | 6%   | 2      | 18% | 0         | 0%   | 0     | 0%   | 2     | 18%  | 72     | 19%  |
| EJ           | 2              | 67% | 36        | 95%  | 15        | 94%  | 9      | 82% | 359       | 100% | 6940  | 100% | 9     | 82%  | 316    | 81%  |
| <b>J-03</b>  |                |     |           |      |           |      |        |     |           |      |       |      |       |      |        |      |
| Non-EJ       | 1              | 33% | 2         | 5%   | 1         | 6%   | 2      | 18% | 0         | 0%   | 0     | 0%   | 2     | 15%  | 72     | 100% |
| EJ           | 2              | 67% | 40        | 95%  | 15        | 94%  | 9      | 82% | 359       | 100% | 6952  | 100% | 11    | 85%  | 330    | 82%  |
| <b>J-04</b>  |                |     |           |      |           |      |        |     |           |      |       |      |       |      |        |      |
| Non-EJ       | 2              | 50% | 8         | 19%  | 2         | 13%  | 2      | 20% | 0         | 0%   | 0     | 0%   | 2     | 18%  | 81     | 21%  |
| EJ           | 2              | 50% | 35        | 81%  | 13        | 87%  | 8      | 80% | 359       | 100% | 6808  | 100% | 9     | 82%  | 302    | 79%  |
| <b>J-05</b>  |                |     |           |      |           |      |        |     |           |      |       |      |       |      |        |      |
| Non-EJ       | 2              | 50% | 8         | 19%  | 2         | 13%  | 2      | 20% | 0         | 0%   | 0     | 0%   | 2     | 18%  | 81     | 21%  |
| EJ           | 2              | 50% | 35        | 81%  | 13        | 87%  | 8      | 80% | 359       | 100% | 6808  | 100% | 9     | 82%  | 302    | 79%  |
| <b>J-06</b>  |                |     |           |      |           |      |        |     |           |      |       |      |       |      |        |      |
| Non-EJ       | 2              | 50% | 8         | 17%  | 2         | 13%  | 2      | 20% | 0         | 0%   | 0     | 0%   | 2     | 15%  | 81     | 20%  |
| EJ           | 2              | 50% | 39        | 83%  | 13        | 87%  | 8      | 80% | 359       | 100% | 6820  | 100% | 11    | 85%  | 316    | 80%  |
| <b>J1-01</b> |                |     |           |      |           |      |        |     |           |      |       |      |       |      |        |      |
| Non-EJ       | 1              | 33% | 0         | 0%   | 0         | 0%   | 2      | 22% | 0         | 0%   | 0     | 0%   | 0     | 0%   | 70     | 18%  |
| EJ           | 2              | 67% | 37        | 100% | 15        | 100% | 7      | 78% | 98        | 100% | 6180  | 100% | 12    | 100% | 328    | 82%  |
| <b>J1-02</b> |                |     |           |      |           |      |        |     |           |      |       |      |       |      |        |      |
| Non-EJ       | 1              | 33% | 0         | 0%   | 0         | 0%   | 2      | 20% | 0         | 0%   | 0     | 0%   | 0     | 0%   | 70     | 17%  |
| EJ           | 2              | 67% | 35        | 100% | 12        | 100% | 8      | 80% | 288       | 100% | 5794  | 100% | 12    | 100% | 339    | 83%  |
| <b>J1-03</b> |                |     |           |      |           |      |        |     |           |      |       |      |       |      |        |      |
| Non-EJ       | 1              | 33% | 0         | 0%   | 0         | 0%   | 2      | 25% | 0         | 0%   | 0     | 0%   | 0     | 0%   | 70     | 18%  |
| EJ           | 2              | 67% | 34        | 100% | 12        | 100% | 6      | 75% | 47        | 100% | 5772  | 100% | 12    | 100% | 330    | 83%  |
| <b>J1-04</b> |                |     |           |      |           |      |        |     |           |      |       |      |       |      |        |      |
| Non-EJ       | 2              | 50% | 6         | 14%  | 1         | 7%   | 2      | 25% | 0         | 0%   | 0     | 0%   | 0     | 0%   | 79     | 20%  |
| EJ           | 2              | 50% | 36        | 86%  | 13        | 93%  | 6      | 75% | 98        | 100% | 6048  | 100% | 12    | 100% | 314    | 80%  |
| <b>J1-05</b> |                |     |           |      |           |      |        |     |           |      |       |      |       |      |        |      |
| Non-EJ       | 2              | 50% | 6         | 15%  | 1         | 9%   | 2      | 22% | 0         | 0%   | 0     | 0%   | 0     | 0%   | 79     | 20%  |
| EJ           | 2              | 50% | 34        | 85%  | 10        | 91%  | 7      | 78% | 288       | 100% | 5662  | 100% | 12    | 100% | 325    | 80%  |

|              | Transportation |     | Aesthetic |     | Community |     | Hazmat |     | Vibration |      | Noise |      | Parks |      | Parcel |     |
|--------------|----------------|-----|-----------|-----|-----------|-----|--------|-----|-----------|------|-------|------|-------|------|--------|-----|
|              | No.            | %   | No.       | %   | No.       | %   | No.    | %   | No.       | %    | No.   | %    | No.   | %    | No.*   | %   |
| <b>J1-06</b> |                |     |           |     |           |     |        |     |           |      |       |      |       |      |        |     |
| Non-EJ       | 2              | 50% | 6         | 15% | 1         | 10% | 2      | 29% | 0         | 0%   | 0     | 0%   | 0     | 0%   | 79     | 20% |
| EJ           | 2              | 50% | 33        | 85% | 9         | 90% | 5      | 71% | 47        | 100% | 5640  | 100% | 12    | 100% | 316    | 80% |

\*65 of these parcels are associated with one parking lot in Washington DC; therefore, the Non-EJ Parcel impacts are overrepresented

**Transportation.** FRA projects slight decreases in vehicular traffic volumes within the regional roadway network within the SCMAGLEV Project Affected Environment, along with localized traffic volume increases on major roadways surrounding SCMAGLEV Project stations. Build Alternatives would generally result in corridor congestion during weekday morning or evening peak periods and additional congestion at several intersections primarily near stations and TMF locations.

Traffic level of service would decline to LOS F for PM peak times at five identified intersections near the Mount Vernon East Station. Each intersection is located within an EJ population area, and EJ populations in the proximity would experience degradation in traffic operations under each Build Alternative:

- New York Avenue @ 6<sup>th</sup> Street NW
- New York Avenue @9<sup>th</sup> Street NW
- New York Avenue @ 10<sup>th</sup> Street NW
- L Street NW @ 6<sup>th</sup> Street NW
- Massachusetts Avenue @ 6<sup>th</sup> Street NW

The Build Alternatives with the Cherry Hill Station would experience changes to access in mobility. Although traffic increases at the Cherry Hill Station are anticipated to have minimal impacts, roadways in the vicinity have been identified for signal and striping improvements as part of the roadway upgrade. Environmental Justice communities in the area of Cherry Hill Station would experience changes to access and mobility with the upgrades along Annapolis Road and Waterview Avenue. There is also potential for intermittent delays in traffic during AM and PM peak periods for both the BARC Airstrip TMF on Odell Road and BARC West TMF on Springfield Road. Nearby EJ populations may experience an increase in traffic delays in these areas.

Despite isolated traffic and access changes, overall, the region will benefit from the increased mobility resulting from the operation of the SCMAGLEV. In general, the addition of SCMAGLEV Project to the transportation network will change the way in which trips are made within the SCMAGLEV Project Affected Environment, with individual travelers making trip choices based on factors such as changes in cost and total trip time. One impact of the addition of SCMAGLEV Project to the network will be changes in forecasted Build Alternatives aggregate travel times within the SCMAGLEV

Project Affected Environment when compared to the No Build Alternative.

The SCMAGLEV Project will result in forecasted travel times savings in 2030 and 2045, and for both Baltimore Station scenarios. This decline is a result of the forecasted diversion of trips from modes with longer travel times to the SCMAGLEV system and is a benefit for travelers within the SCMAGLEV Project Affected Environment.

- **Mitigation.** The Project Sponsor would apply mitigation strategies as needed, such as detailed wayfinding signage to disperse pedestrian movement, mobile applications, and street-level, real-time signage to identify crowded areas. FRA and the Project Sponsor would continue to coordinate with Federal, state, county, and local area jurisdictions to identify mitigation strategies for site-specific design elements. Planned mitigation measures and case-by-case mitigation would reduce impacts. The Project Sponsor will develop a detailed mitigation plan to address traffic impacts during construction.

**Community facilities.** Collectively, the Build Alternatives would impact 20 community facilities, 18 of which are located in EJ population areas. SCMAGLEV Project impacts differ by option depending on the alignment, station, and TMF chosen, however nearly all of the property acquisitions and disruptions to community facilities will occur in neighborhoods and areas containing EJ populations. Impacted facilities that are not only located within EJ population areas, but also serve EJ population include the Adams Place, the Woodlands Job Corps, and the Medmark Treatment Center.

The Adam's Place Shelter in Washington, DC would be displaced by each of the Build Alternatives. The Adam's Place is operated by the Catholic Charities and is a men's emergency shelter open 7pm to 7am that offers a hot dinner, access to case management staff, showers, and a bed on a nightly basis. The New York Avenue Shelter is located approximately a mile away and is the closest men's shelter.

The Woodlands Job Corps would be displaced by each Build Alternative that includes the MD 198 TMF. This community facility provides a residential career training program and job placement program for low-income individuals. During ongoing outreach with impacted agencies, the US Department of Labor (DOL), which manages and oversees the Woodlands Job Corps facility and program, expressed opposition to any Build Alternatives that would remove the facility. The DOL stated that the Woodlands Job Corps facility is only one of two in the DC area. The Potomac Job Corps Center, located in Washington, DC and the Woodstock Job Corps Center located in Woodstock, MD in Baltimore County are the next closest facilities. The DOL also stated that relocating the center would be extremely costly.

The MedMark Treatment Center would be displaced by each Build Alternative that includes the Cherry Hill Station. The MedMark Treatment Center is an addiction treatment facility that helps people overcome opioid addiction with comprehensive medication-assisted treatment (MAT) programs. The University of Maryland Addiction Treatment Center and the Kolmac Outpatient Recovery are the next closest addiction treatment facilities and are located approximately 3 miles away.

Indirect impacts would occur to community facilities in the area of the SCMAGLEV Project, such as increased patronage and nearby land use changes due to operation of the SCMAGLEV. The SCMAGLEV Project could spur development and commercial investment in neighborhoods in the vicinity of station locations. This indirect effect could impact the long-term character of neighborhoods' economic and demographic makeup due to changes in rents and mortgages, changes to commercial and retail offerings, and changes to available community facilities.

- **Mitigation.** Build Alternatives would optimize underground tunnels where practicable and elevate the aboveground alignment above existing transportation corridors to maintain access and mobility. Minimization of facility footprints would also occur, such as consolidation of tunnel boring machine (TBM) launch sites, storage, and staging areas. To reduce or eliminate property acquisitions and displacements, where feasible, the Project Sponsor would coordinate with affected property owners.

**Economics.** The SCMAGLEV would positively affect the labor market. The number of job opportunities would increase, and some workers would find jobs and transition from unemployment to employment. Some workers would find better jobs than they have currently as they now face a large selection of job opportunities. In this instance, underemployed workers would find jobs that better fit their skills with an associated increase in labor productivity and earnings. Also, construction of the SCMAGLEV Project would support the local economy through the hiring of personnel, renting or purchasing equipment, and procurement of materials for the duration of the construction period, as quantified in Section 4.6. Total construction employment impacts across Build Alternatives would range between 161,000 job-years and 195,000 job-years. Construction earnings for Build Alternatives would range between \$8.8 billion and \$10.6 billion. Average annual direct jobs per year, limited only to the construction industry, range between over 8,700 to over 10,560. These economic benefits would be regional, within a region where the majority of the population lives in areas that meet the environmental justice thresholds identified above. Therefore, a portion of these benefits would be experienced by environmental justice populations. A full disproportionality analysis will be conducted for the selected Build Alternatives to be identified in the Final Environmental Impact Statement (FEIS).

Although the SCMAGLEV Project would result in commercial acquisitions, most of the acquisitions are not sufficiently unique in their commercial activity that the business could not find comparable building, resource, and transportation access elsewhere in the same jurisdiction. There would be multiple commercial acquisitions along W. Patapsco Avenue that could be relocated in nearby shopping centers. However, the Patapsco Flea Market, which has provided a long-standing retail space for numerous merchants and entrepreneurs, would be more difficult to relocate and/or attract long-standing consumers, provided the owner would seek relocation options.

- The SCMAGLEV Project could potentially have gentrification and displacement impacts. Triggered by the SCMAGLEV investment, the Baltimore and Washington,

D.C. economies would be much more accessible to one another, which would allow some workers in Washington D.C. to locate in Baltimore where housing costs are lower. This would increase demand for Baltimore housing in areas readily accessible to the SCMAGLEV stations and drive-up housing costs. There are more renters (53%) than homeowners (47%) within the study area, and neither the Washington, D.C. and Baltimore rental markets currently qualify as “tight” rental markets under the Department of US Department of Housing and Urban Development thresholds. The following factors are now or would be present with the construction of the SCMAGLEV system, including a high rate of renters in some neighborhoods, ease of access to job centers, rising congestion in the Baltimore-Washington metro area, lower housing values in Baltimore neighborhoods, a large rent gap between Baltimore City and Washington D.C., construction of transportation infrastructure, and urban amenities. Thus, it is reasonable to expect that Baltimore neighborhoods would experience gentrification and resident households may feel pressure to relocate.

**Parkland.** Impacts to public recreational facilities and parklands primarily result from the aboveground features of the Build Alternatives. The degree of impact differs depending on the alignment, station, and TMF chosen. Collectively, the Build Alternatives would impact 14 parks, 12 of which are located in EJ population areas. The other two parks are large Federal properties that do not have an EJ designation. The majority of the parkland impacts would be to parkland of national significance, which is maintained and administered by Federal agencies including NPS and PRR. Impacts to the Maryland City Park and the Greenbelt Forest Preserve, both of which are located in EJ population areas, would have to greatest impacts to the nearby EJ populations. The ballfields at the Maryland City Park. Build Alternatives J1 alignment would impact Maryland City Park due to the construction of a tunnel portal, overhead electric lines, viaduct, SCMAGLEV systems, and stormwater management. Build Alternatives J1 would impact two baseball fields, two multi-purpose fields, and a paved trail that joins the two parcels that comprise the park. Anne Arundel County DPR representatives noted that Maryland City Park serves an area of the County less well served than others by ball fields and courts due to the presence of large Federal land areas such as Fort Meade and PRR (Anne Arundel County 2019).

Also, the Greenbelt Forest Preserve would be adversely impacted by the Build Alternatives J1. It is historically significant as the “greenbelt” that surrounds the district, and therefore recreational opportunities offered within the greenbelt cannot be moved elsewhere. While it may be possible to move the public ballfields elsewhere within the forest preserve, the cut/cover tunnel associated with the Build Alternatives J1 would remove access to a large portion of the Greenbelt Forest Preserve to trail users, and lighting associated with the SCMAGLEV System would impede operation of the astronomical observatory.

- **Mitigation.** Throughout preliminary design, FRA and the Project Sponsor discussed mitigation options to offset potential impacts to park properties. FRA coordinated with officials with jurisdiction, such as the National Park Service (NPS) and United States Fish and Wildlife Service (USFWS), to

assess the presence of park properties and consider potential impacts and sought input from stakeholders (i.e., persons, groups, government agencies, and organizations with an interest or concern) and the public regarding effects on parks and other properties. In addition to coordination, FRA and Maryland Department of Transportation, Maryland Transit Administration (MDOT MTA) directed alignment options to use existing transportation and utility corridors as feasible to keep additional right-of-way (ROW) needs to a minimum and consider other design refinements to avoid or reduce impacts to park properties (i.e. retaining walls). Where park impacts cannot be avoided, the Project Sponsor would further implement design refinements, as feasible, and offer opportunities for public involvement to develop further mitigation strategies. Access to the Greenbelt Forest Preserve park and the Maryland City Park would be restricted during construction, and the Project Sponsor would consult with the City of Greenbelt and Anne Arundel County to develop mitigation plans to address temporary construction impacts.

***Aesthetics and visual quality.*** Changes in aesthetics and visual quality would occur for both Build Alternatives in areas near aboveground and elevated portions of the SCMAGLEV Project. The degree of impact differs on the alignment, station, and TMF chosen. FRA determined that surface features of both alignments, including the viaduct tunnel portal and ancillary facilities, would result in visual impacts to resources within the AVE ranging from lower level or relatively imperceptible to higher level degrees. Collectively, of the 56 locations identified as a moderate or high sensitivity aesthetic impacts, 47 would be located in EJ population areas. The Build Alternatives with the longer Alignment J viaduct results in more visually sensitive resources impacted compared to the shorter viaduct/longer deep tunnel of Build Alternatives J1 alignments. With the exception of PRR, the entire length of the viaduct is located within and adjacent to EJ population areas, and the new aboveground elevated guideway would be visible to those EJ populations.

- ***Mitigation.*** To address aesthetic and scenic impacts of the Build Alternatives, FRA and the Project Sponsor would meet with impacted neighborhoods and stakeholders. In addition to the extensive use of tunneling, the Project Sponsor would develop design criteria that adapts to local context and surroundings to help achieve integration into the local setting; adhere to existing utility and transportation corridors to reduce impacts to prime public lands, parklands, and ecological impacts; and employ vegetation management where feasible to maintain coverage and a natural appearance in locations of necessary clearing.

***Hazardous materials.*** Long-term operational effects of the SCMAGLEV Project for either Build Alternatives can include potential spills of hazardous substances or accidents. Incidents would be more likely to occur at stations, substations, maintenance of way (MOW) facilities, or TMFs. Such accidents could include spills and leaks from hazardous material storage equipment that could include fuel storage tanks, storage tanks for lubricants and waste oils; wash racks; storage tanks for degreasing solvents and for waste solvents, paints/coatings, and associated solvents; and compressed gases and solder for welding. Other spills could include chemical products used for

cleaning and maintenance, such as acids or caustics. These spills are more likely to occur in EJ communities, as nearly all of the viaduct, ancillary facilities, MOW, and TMFs are within are in EJ population areas. A potential long-term benefit of the SCMAGLEV Project may result if remediation is required and performed at identified and existing hazardous material sites within the SCMAGLEV Project Affected Environment; the resultant cleaned up site may reduce risks to public health and the environment.

- **Mitigation.** To address long-term operational effects, FRA would require establishment of procedures for the proper storage and maintenance of equipment and hazardous materials. Procedures would include training of all SCMAGLEV Project personnel, frequent and routine spill drills, and adequate supply of spill kits. All SCMAGLEV Project personnel receive the appropriate type and level of hazardous materials training and Resource Conservation and Recovery Act training that includes:
  - Conducting frequent and routine documented inspections of the construction site for violations, to verify consistent implementation of general construction permit conditions and Best Management Practices (BMPs).
  - Designating special storage areas for hazardous materials and hazardous waste, containment berms, and coverage from rain.
  - Avoiding disturbing contaminated locations, if possible.
  - Conducting frequent and routine spill drills.
  - Ensuring adequate supply of spill kits.

The Project Sponsor will develop a Construction Management Plan that describes how to avoid and/or mitigate existing contamination and handle discovery of unknown contamination. The plan would also establish roles, responsibilities and procedures for workers to follow in areas with known or suspected soil or groundwater contamination. For sites that require demolition and removal, the plan will address issues such as lead, asbestos, PCBs, and other materials that would require disposal in a Toxic Substances Control Act (TSCA) landfill. The plan will specify how to appropriately contain, remove, and dispose of the asbestos and lead-containing material at licensed disposal facilities. The Project Sponsor will consider the addition of site-specific plans for high-risk sites.

For SCMAGLEV Project operations, the Project Sponsor will develop a Hazardous Materials and Solid Waste Management Plan as a tool for compliance that will address the following:

- Waste characterization (e.g. hazardous) and accumulation (inspections, secondary containment, liners and covers, waste compatibility, selecting the proper container, security, communication, equipment, etc.)
- Green Procurement/Waste Minimization
- HAZMAT safety requirements

- Spill Prevention Control and Countermeasure plan or Spill Prevention Plan for fuels and oils to address tank design (leak detection, overfill protection, double-walled, etc.); drum storage area design/containment system; tank and container inspections; spill prevention techniques; spill response; and spill training and reporting
- Stormwater Pollution Prevention Plan requiring that all persons are trained on the plan and know how to implement all the required BMPs

**Noise.** FRA evaluated the cumulative noise effects from new future sources, including SCMAGLEV train operations and facilities at over 3,600 noise-sensitive receptors. Noise impacts are concentrated along the viaduct. As such, over 99% of the impacted noise receptors are located with EJ population areas. For the SCMAGLEV Project, noise impacts related to the Build Alternatives are similar for each Build Alternative, though each is present in a slightly different area. With only minor differences in the corridor wide impact counts, FRA predicted essentially the same number of impacts at noise-sensitive receptors for each of the Build Alternative alignments.

- **Mitigation.** The Project Sponsor proposed several final design features to minimize potential noise impacts at residential communities within the Affected Environment, such as taller parapet walls along the viaduct, concrete-lined tunnels, and concrete viaducts. In addition, design would include sound attenuation walls, sound attenuation hood and shrouds, aerodynamic design of the nose of the SCMAGLEV trainset, and implementation other tunnel design features. At fresh air/emergency egress facilities, silencers and acoustical louvers would reduce fan noise along ventilation ducts. Substations would employ equipment enclosures and acoustical louvers. At TMF and MOW facilities, attenuation of noise impacts would occur through equipment enclosures, perimeter noise barriers, and relocation of loud maintenance activities to indoor areas.

**Vibration.** Vibration impacts related to the Build Alternatives are similar, though each is present in a slightly different area. Vibration impacts are concentrated along the viaduct. As such, 100% of the severe vibration impacts would be located in EJ population areas. FRA predicted future vibration levels from SCMAGLEV train operations for all Build Alternatives. The primary differences between the Build Alternatives are different paths along the Patuxent Research Refuge and the length of the viaduct through this region. The longer viaduct would have more areas with vibration impacts.

- **Mitigation.** Vibration control measures are not as well understood as other mitigation measures, due to the uniqueness of the magnetic levitation technology for transportation projects. Several final design features, including concrete-lined tunnels and concrete viaducts, would reduce vibration impacts at residential communities within the Affected Environment. Mitigation of vibration impacts would occur through application of first-order principles and experience gained from using successful control measures for other concrete-constructed systems. Controls, including resilient track beds and viaducts, would reduce the vibration

produced by the SCMAGLEV system. With the incorporation of design and mitigation measures, the goal is to achieve compliance with FRA vibration impact criteria.

**Land Use and Parcel Impacts.** Property acquisition would range from partial to full property acquisitions. **Attachment A, Table A.1** identifies all of the parcel impacts and whether or not impacts parcels are located in EJ population areas. Over 80% of the parcels that would be impacted are located within EJ population areas (note that 65 of the impacted parcels in a non EJ population area actually comprise a single parking lot in Washington DC [See **Attachment F**]). Land use conversions and some rezoning would result from the surface features of the Build Alternatives. All Build Alternatives would generally support statewide and regional transportation goals as identified in various approved comprehensive planning documents. The aboveground SCMAGLEV Project elements for each Build Alternative would require land use changes.

**Attachment A** shows property acquisitions for the Build Alternatives, Notably, there would be full permanent acquisition that would displace a residential structure in Baltimore City, all other full permanent acquisitions would occur on residential properties owned by an homeowners association or to non-residential properties including the Old Otterbein Church (for the alternatives that include the Camden Yards Station) and the Woodlands Job Corps facility (for all alternatives that include the MD 198 TMF). Both of those community facilities are located within EJ population areas and serve EJ populations. Two impacted commercial areas have a long history in the South Baltimore area and are integral to the surrounding EJ community, including the Patapsco Village Shopping Center and Patapsco Plaza Shopping Center. The Patapsco Village Shopping Center contains a laundromat and grocery store, and the SCMAGLEV Project design would avoid impacts to these businesses, although a banking business and some parking areas would be adversely impacted. The Patapsco Plaza Shopping Center contains the Patapsco Arena and the Patapsco Flea Market, a staple in the area for over 20 years that offers shopping and international fare every weekend and an affordable place to rent space and sell merchandise. Although only a small portion of the Patapsco Flea Market would be permanently impacted, the SCMAGLEV Project could potentially result in a full take of the Patapsco Flea Market.

- **Mitigation.** SCMAGLEV Project design relied upon incorporation of tunneling in the Build Alternatives to avoid aboveground land use impacts and generally placed the location of viaducts parallel to existing transportation corridors. The Mount Vernon Square East Station and Camden Yards Station would be underground to avoid significant permanent land use changes in highly developed, urban areas. The Cherry Hill Station would be located above an existing transportation facility to avoid and minimize land use impacts. The Project Sponsor would continue to coordinate with local and Federal governments regarding the location and positioning of the Build Alternatives to further reduce potential SCMAGLEV Project impacts. During final design, refinement of SCMAGLEV Project elements would further minimize land use impacts under the structures.

The Project Sponsor would provide fair compensation and property relocations to all residences and businesses without discrimination. All station alternatives would provide for intermodal connections with other existing modes of transportation, such as the metro in Washington, D.C., and the LightRail Link at Baltimore-Washington International Thurgood Marshall Airport (BWI Marshall Airport) and in Baltimore City. In addition to mitigation efforts from the Project Sponsor, the SCMAGLEV Project would result in regional benefits for affected populations. For example, transition of land use from industrial and commercial to transportation in the area of Cherry Hill would provide opportunities for local investment in new and infill development.

To reduce or eliminate property acquisitions and displacements, where feasible, the Project Sponsor would coordinate with affected property owners. In the event of federally funding, the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Uniform Act) would be followed to ensure equitable and uniform land acquisition policies.

**Economic Considerations.** The SCMAGLEV Project would provide short-term and long-term economic benefits for the region. EJ populations in the SCMAGLEV Project Affected Environment would likely experience these economic benefits. Construction would support the local labor and manufacturing markets. As the largest civil works project in the region, residents of Maryland and Washington, D.C., would fill openings for a variety of work activities. Specialized SCMAGLEV support facilities (for example, stations, FA/EE facilities, TMF/MOW) would require a variety of skills and trades, presenting significant opportunities for focused training and apprenticeship programs to ensure a diversified workforce. The Project Sponsor would work with local jurisdictions to ensure residents within the SCMAGLEV Project Affected Environment are afforded special employment opportunities. Each Build Alternative would have a short-term beneficial impact on local employment as total construction employment would provide employment opportunities for up to 7 years.

- In the area surrounding SCMAGLEV stations, development is expected to centralize; more compact development would generate benefits such as decreased travel times and improvements to health, safety, and the environment. In addition, compact development would encourage mode shifts (for example, from automobile to pedestrian, bicycle, or transit) for local trips, decreasing auto emissions and improving air quality. Transit-oriented development (TOD) opportunities around station locations, particularly in Baltimore, would potentially include expanded housing and employment opportunities for residents; increased retail, especially supermarkets; improved vehicular and bicycle safety; direct ferry access to downtown Baltimore; enhanced security, lighting, and wayfinding; and added community amenities (for example, recreation, landscaping, waterfront access).
- The urban area existing around the Mount Vernon Square East Station is a hub of transportation, offering multiple modes within proximity. The Camden Yards Station is also a densely populated urban center with existing access to multiple transportation modes. The greatest change would occur in the area of the

proposed Cherry Hill Station, where the introduction of the SCMAGLEV could potentially bring redevelopment and private investment to the area. Construction of the station and associated features would reduce the presence of abandoned properties and industrial space, improve the local aesthetics, and continue to allow waterfront access.

- Property values may increase around stations (except in the location of the BWI Marshall Airport Station), generally within a 1/2-mile radius for walkability purposes, because of improved access. Property value increases may potentially outprice existing low-income populations in the future.
- The cost of the SCMAGLEV system would be prohibitive for some, notably low-income populations in EJ areas near stations. The SCMAGLEV would provide a premium service at a higher fare, estimated at \$60 per one-way trip, or seven times the cost of an existing MDOT MTA Maryland Area Regional Commuter (MARC) commuter train fare between Washington, D.C. and Baltimore City. The Project Sponsor is investigating opportunities for fare subsidies to provide greater access for low-income populations since the introduction of the SCMAGLEV would provide an additional transportation choice between Washington, D.C. and Baltimore. The SCMAGLEV Project also provides improved direct access to BWI Marshall Airport. Low-income populations in EJ areas would likely choose to continue utilizing existing commuter services at the current estimated fare unless fare equity was provided by the Project Sponsor to affected EJ communities.

**Air Quality.** The SCMAGLEV Project would likely result in an increase to mobile source air emissions throughout the affected environment, particularly in areas around station locations due to increased traffic. However, the operations of the SCMAGLEV Project would reduce overall mobile source air emissions regionally. Therefore, long-term impacts to air quality due to the SCMAGLEV Project would not contribute to the disproportionate impacts to EJ population areas.

**Safety and Security.** The areas of the SCMAGLEV with the most notable safety and security concerns are in proximity to the ancillary facilities including the portals, MOW, and FA/EE facilities. The primary concern is for unauthorized entry into these areas that would prohibit public access. Nearly all the ancillary facilities are located in EJ population areas. Other public concerns include the change of collision of very high-speed trains and other operational accidents.

- **Mitigation.** The SCMAGLEV Project has incorporated safety in the planning and design, core systems, facilities, and maintenance practices. The SCMAGLEV Project includes a systemwide state-of-the-art signaling system to avoid collisions and implements intrusion detection to avoid unsafe conditions. Open cut tunnel transition portals, maintenance of work, FA/EE, and other ancillary facilities would be strictly controlled to prevent unauthorized entry by using fencing, security cameras, and security lighting.

### **D.3E.3.3 Short-term Construction Effects**

The construction of and the associated construction staging and laydown areas and haul routes for the SCMAGLEV Project would predominately occur within Environmental Justice population areas. Construction of the SCMAGLEV Project would include activities such as digging and tunneling using multiple tunnel boring machines, ground clearing, pile driving, excavating, grading, and the stockpiling of soil, muck, and materials. The SCMAGLEV Project would require temporary property acquisition and could cause potential short-term impacts to air quality (fugitive dust and construction equipment exhaust), noise and vibration (construction equipment and activities), transportation (work vehicles, increased congestion, detours, and road closures), and changes to views and visual quality. Temporary construction impacts that would be concentrated around the viaducts, portals, ancillary facilities, TMFs, stations, and construction staging and laydown areas. Construction would occur simultaneously at different locations.

The underground stations and tunnel portions of the SCMAGLEV Project would be achieved using tunnel boring machine (TBM) technology. In order to create the underground stations and tunnels, construction staging areas would be needed for assembly, launch, operation, and retrieval of the TBMs. The TBM launch and retrieval areas would be located along the alignment and would be located at the future station locations and FA/EE facilities. The majority of the underground stations (Mount Vernon Square East Station and Camden Yards Station) and FA/EE facilities would be located in areas with Environmental Justice populations. The BWI Marshal Station and FA/EE facilities located north and south of the BWI Marshall Station, are not in Environmental Justice population areas. Additionally, portions of the proposed hauling routes to and from TBM sites would be located within or immediately adjacent to EJ population areas including the Queen Chapel Road, MD 410, Kenilworth Avenue, MD 193, Brock Bridge Road, MD 197, MD 170, and MD 643/Annapolis Road.

The viaduct would be located in portions of Prince George's and Anne Arundel Counties either just east of the BWP (Build Alternatives J-01 – J-06) or just west of the BWP for (Build Alternatives J1-01 – J1-06), and in Baltimore City for Build Alternatives J-01, J-02, J-03, J1-01, J1-02, and J1-03 that would include the Cherry Hill Station. Elevated viaduct ramp structures would also be constructed to access TMFs. The entirety of the viaduct and viaduct ramp locations would be located in or adjacent to Environmental Justice population areas. There is a section of unpopulated PRR-owned land adjacent to Build Alternatives J-01 – J-06. Powder Mill Road, MD 197, MD 198, and MD 32 are potential construction access points during viaduct construction. Both local and state roads within these EJ population areas would serve as access points to construction areas and would be subject to associated traffic, noise, and vibration impacts from construction vehicles.

Construction laydown areas would be required in multiple locations throughout the SCMAGLEV Project corridor. All identified construction laydown areas would be located within areas with Environmental Justice populations. The four long-term laydown areas include:

- Landover Mall Site (on a vacant site adjacent to commercial and residential areas within an EJ Population Area) – in the Summerfield neighborhood in Prince George’s County and adjacent to the Landover and Glenarden neighborhoods. The Maple Ridge Apartment Community is across Brightseat Road from and within 225 feet of the Landover Mall Site. EJ populations would be temporarily impacted due to increased noise, vibration, and changes to aesthetics.
- Konterra Site (on a vacant site within an EJ Population Area largely surrounded by major transportation corridors) – in the Konterra neighborhood in Prince George’s County and adjacent to the Laurel neighborhood. The Avalon Laurel Apartment community is within 450 feet of the Konterra Site. EJ populations would be temporarily impacted by to noise, vibration, and changes to aesthetics during construction.
- Suburban Airport Site (within a non-populated section of an EJ Population Area) – in the Maryland City neighborhood in Anne Arundel County. No impacts to EJ populations are anticipated because residential areas and community facilities are not present in the general vicinity.
- Patapsco Avenue Site (with an EJ population Area)– in the Cherry Hill neighborhood in Baltimore City. EJ populations in proximity of Round Road, Spelman Road, and Bethune Road north of Patapsco Avenue would be temporarily impacted due to increased noise and changes to aesthetics.

Construction of the SCMAGLEV Project would result in short-term adverse impacts to Environmental Justice populations due to temporary use of property, increased noise and vibration, air quality/emissions, changes in aesthetics and visual quality, changes to access and mobility, changes in current transit service, and the use of community facilities. Environmental Justice populations subject to these impacts may also experience community disruption, a population’s ability to navigate their way around their community, and adverse effects to community cohesion, the disruption of interaction between people and groups within a community. Community disruption would include temporary impacts to traffic (i.e. detours), pedestrian access, and neighborhood access and mobility during construction.

Construction impacts would occur at varying locations and for varying durations during the construction period. Construction operations would occur for up to 24 hours a day in some areas and last from 1 – 7 years. FRA anticipates construction impacts to cease upon completion of construction.

Prior to construction, the Project Sponsor would develop and continually implement a Public Safety Plan for the SCMAGLEV. Maintenance of traffic plans would also be developed in accordance with local requirements and in consultation with emergency services to ensure that temporary detours and road closure would not significantly impact emergency response times.

### D.3E.3.4 Environmental Justice Outreach

Environmental justice outreach requires full and fair participation by affected communities in the transportation decision making process. Throughout the NEPA process, FRA tailored efforts to provide project awareness, engage communities, and generate opportunities for involvement and feedback from EJ populations. FRA developed an EJ outreach plan prior to performing EJ outreach activities; the plan identified area demographics and targeted strategies for engagement of EJ communities within the SCMAGLEV Project vicinity. A summary of EJ outreach efforts is below. Several tools and techniques are being used to generate continued meaningful public involvement, including public meetings, a SCMAGLEV Project website, news and print media, social media, fliers, advertisements on public transit and community facilities, briefings to local government officials and stakeholders, and mass emails.

- FRA held four rounds of meetings (five meetings per round) prior to the release of the Baltimore-Washington SCMAGLEV DEIS. Meetings occurred throughout the corridor, with efforts to schedule each at convenient times and accessible (local) locations, and with strategically targeted outreach to nearby populations. FRA and the Project Sponsor prepared and are executing a public outreach plan that includes the following strategies geared toward EJ communities, among others:
- Use of information hubs, including churches and community centers, within EJ neighborhoods to serve as drop-off locations for SCMAGLEV Project materials
- Placement of targeted advertisements on mass transit, at ethnic grocery stores, social service provider offices, and on targeted social media, as well as print media, radio, and websites that target minority populations
- Consultation with social service providers, which include agencies and non-profit organizations that provide education, food, housing, health care, and employment benefits and facilities, regarding population types and organizations they serve within EJ communities
- Consultation with elected officials who serve EJ communities
- Use of clear and concise language in printed materials
- Use of highly visual project displays and renderings
- Translation of SCMAGLEV Project materials into Spanish, Korean, and Russian, with additional translations by request
- Use of bilingual staff and interpreters at SCMAGLEV Project outreach events and public meetings in targeted areas
- Mailings with the SCMAGLEV Project Affected Environment, which is predominately comprised of EJ block groups.

During the public involvement process, FRA and the MDOT MTA received a variety of comments in support of or in opposition to different characteristics of the SCMAGLEV

Project, as well as specific concerns about the property impacts and SCMAGLEV Project costs and funding sources (for example, ticket price, taxes, and overall cost).

At the Bowie and Gambrills meetings in October 2017, attendees expressed concerns over direct impacts to historic Bowie, Odenton, and surrounding areas. Commenters also voiced opposition over impacts to the Odenton Volunteer Fire Company and Bowie Assisted Living, facilities that provide one-of-a-kind services for the area. At a later date, the alternative in question was eliminated. At the Cherry Hill/Patapsco Avenue, Baltimore City Open House in December 2018, FRA generally received positive feedback. Public comments focused on safety, security, hazardous materials, potential negative environmental impacts, transportation connectivity, economic constraints, appropriation of Federal and state funding, station location, ticket pricing, and potential benefits and impacts on Baltimore City.

Several civic organizations local to South Baltimore attended meetings with the Project Sponsor and NEPA team members to discuss the SCMAGLEV Project, including the Lakeland Neighborhood Association, Cherry Hill Development Corporation, Westport Neighborhood Association, and the Westport Community Development Corporation. The Project Sponsor views these organizations as critical in helping define future development opportunities adjacent to the Cherry Hill Station. During these meetings, citizen stakeholders predominately voiced support for the SCMAGLEV Project and the corresponding economic benefits to the area. There were a few citizens who were more cautious about the SCMAGLEV Project and raised concerns about affordable fare pricing, property impacts, and cost of living increases potentially forcing current residents to relocate. See Chapter 5 Public Involvement and Agency Coordination for additional details on comments received.

Correspondences from communities surrounding the proposed Cherry Hill Station, which predominantly contain EJ populations, strongly support a nearby station and acknowledge the associated benefits that would likely be available to their communities. Following SCMAGLEV Project meetings, the Project Sponsor received letters in support of the Cherry Hill Station location. Additionally, the Project Sponsor met twice with the owner of the Patapsco Flea Market and Arena – a major source of small business activity in the area - and they expressed support for the SCMAGLEV Project. The owners also attended the December 2018 Cherry Hill Public Meeting, held at their Arena property, and they again expressed their support for the SCMAGLEV Project to NEPA team members.

The Westport Neighborhood Association's letter in support of the Cherry Hill Station, dated February 2019, is on behalf of residents of the Westport, Mt. Winans, Curtis Bay, Lakeland, and Cherry Hill communities in Baltimore City (all in EJ population block groups). The letter recognizes the value of the proposed SCMAGLEV station in Cherry Hill for increased access to jobs and support of local economic revitalization, and voices opposition to the Camden Yards Station location as a "failure to optimize potential development opportunities in the city's residential neighborhoods." An undated letter from the Westport Community Economic and Development Corporation cites conditional support of the Cherry Hill Station as an opportunity to increase access to jobs and a

pathway to overcome “generations of disinvestment.” The letter also expresses concerns about potential negative effects of the SCMAGLEV Project on air quality, noise pollution, increased traffic volumes, preservation of the existing sight lines to the waterfront for all residents, adequate station parking, damage to existing structures during SCMAGLEV Project construction, adequate compensation for property acquisitions, and successful negotiation of a community benefits agreement. Provided abatement of these concerns, the Westport Community Economic and Development Corporation endorses the Cherry Hill Station.

In another demonstration of support for the SCMAGLEV Project, the Cherry Hill Development Corporation stated plans to include SCMAGLEV’s Cherry Hill Station in their updated master plan while meeting with the Project Sponsor. In a letter dated January 2019, the Cherry Hill Development Corporation expresses strong support and excitement for the station, noting the potential for growth and creation of “meaningful opportunities” for residents, businesses, and institutions. The letter calls the SCMAGLEV Project a “major win” for the community and an opportunity to “allow [the] community to flourish going into the future, raising the profile of Baltimore as a whole.” Furthermore, the Cherry Hill Development Corporation shares concerns over possible selection of the Camden Yards Station, conveying that this choice “would sadly continue the unfortunate past practices of neglecting to optimize potential development opportunities in the city’s residential neighborhoods.”

During meetings with elected officials, the Project Sponsor received support for the Cherry Hill Station from the councilman for the Cherry Hill/Westport area, area delegates, and the District’s State Senator. In a letter from February 2019, the Vice President of the Baltimore City Council shares support and excitement for the Cherry Hill Station, considering it as a way to expand transportation options and TOD and provide construction related and long-term job opportunities for area residents. Also, the Vice Chair of the Land Use and Transportation Committee, the councilwoman sees the Cherry Hill Station in alignment with area strengths and an opportunity for housing improvements, as well as commercial expansion and industrial investments. The President of the Baltimore City Council also conveys support for the Cherry Hill Station and surrounding facilities in South Baltimore, pointing to expansion of TOD potential and characterizing the SCMAGLEV Project as “responsible neighborhood development... key to increasing Baltimore’s population, decreasing vacant homes, and improving its local economy.” An undated letter from another councilmember and Chair of the Land Use and Transportation Committee discusses the Cherry Hill Station as beneficial in respect to land use, transportation connectivity, and the economy. He writes, “[t]he beneficial economic consequences of locating a station in Cherry Hill will be huge and healthy, resulting in increased development potential for expanded residential, commercial, and industrial opportunities.”

In a *Baltimore Sun* article dated June 28, 2019, local leaders of the National Association for the Advancement of Colored People (NAACP) conveyed support for the SCMAGLEV Project. NAACP leaders see the SCMAGLEV as an opportunity to offer new construction and permanent job opportunities for area residents. NAACP plans to provide outreach and education to inform minority communities about the SCMAGLEV

Project, the lack of residential displacements, and potential for employment, as well as hold town hall meetings to elicit resident feedback. Again, the owner of the Patapsco Flea Market and Arena, a major source of small business activity in this area, expressed support for the SCMAGLEV Project and the Cherry Hill Station.

Following publication of the Baltimore-Washington SCMAGLEV DEIS, FRA and MDOT MTA will hold public hearings. The public hearings will include an opportunity for oral testimony, to be recorded by a stenographer. Comments and testimony provided at the public hearings will be addressed in the FEIS. Spanish language translators will be available at the public hearing. FRA and MDOT MTA will also conduct additional outreach in EJ communities to obtain additional information on the scope of impacts to these communities and develop appropriate mitigation. FRA will use this information to make the ultimate determination about whether or not disproportionate impacts to EJ communities exist for this Project in the FEIS.

### **D.3E.3.5 Potential Mitigation Strategies**

This section previously summarized FRA's and the Project Sponsor's specific mitigation initiatives intended to minimize adverse impacts of the Build Alternatives to EJ populations reducing the context and intensity of anticipated impacts. Additionally, there were multiple minimization strategies incorporated into the design process. Prior to the determination to study Build Alternatives J and Build Alternatives J1 in detail, FRA, in coordination with the Project Sponsor, minimized impacts to EJ populations by refining the Build Alternatives in response to public concerns with the goal of avoiding and minimizing the potential for negative impacts identified by the public and the analyses during the NEPA process. The Project Sponsor identified and incorporated reasonable and feasible design elements in the Build Alternatives with the goal of avoidance or minimization of impacts to the natural and human environment, with targeted considerations for EJ populations. Design elements include optimizing the use of underground guideway and stations and locating the viaduct along or within existing transportation and utility corridors. As examples, the Mount Vernon Square East, BWI Marshall Airport, and Camden Yards Station options would be located underground to avoid significant surface impacts in urban, highly developed areas. The guideway under all Build Alternatives would be in a tunnel in Washington, D.C. and Baltimore City. The guideway viaduct would be parallel to the BWP for part of its alignment. The Cherry Hill station in Baltimore City would be located above an existing transportation facility. Finally, consolidation of TBM launch sites, storage, staging areas, and fresh air and emergency egress facilities would reduce the geographic extent of facility impacts.

Despite minimization efforts during design, the SCMAGLEV Project would still have impacts to the natural and human environment within EJ population areas. To address these impacts, FRA and the Project Sponsor identified additional, resource-specific mitigation strategies as discussed above. As the SCMAGLEV Project design progresses, the Project Sponsor will continue to refine the design regarding the location, positioning, and construction methods with the goal of avoiding temporary construction and permanent impacts where reasonably feasible, as well as minimizing and mitigating impacts as practicable. The Project Sponsor would also continue with public,

stakeholder, and agency involvement activities, such as targeted planning for inclusion of EJ populations, engaging metropolitan planning organizations, hosting small group meetings with EJ populations and communities, and incorporating traditional and nontraditional outreach methods to reach potentially affected populations. The Project Sponsor is committed to identifying and implementing adequate mitigations that specifically benefit EJ populations. The Project Sponsor wants local longtime residents, especially those in places like Cherry Hill and Westport who have been subject to years of chronic disinvestment, to benefit from the SCMAGLEV Project, specifically if Cherry Hill is selected as the Baltimore station.

Also, EJ populations would experience some transportation and economic benefits from each Build Alternative. Adverse effects would be reduced by mitigation. Potential impacts would also be partially offset by SCMAGLEV Project benefits.