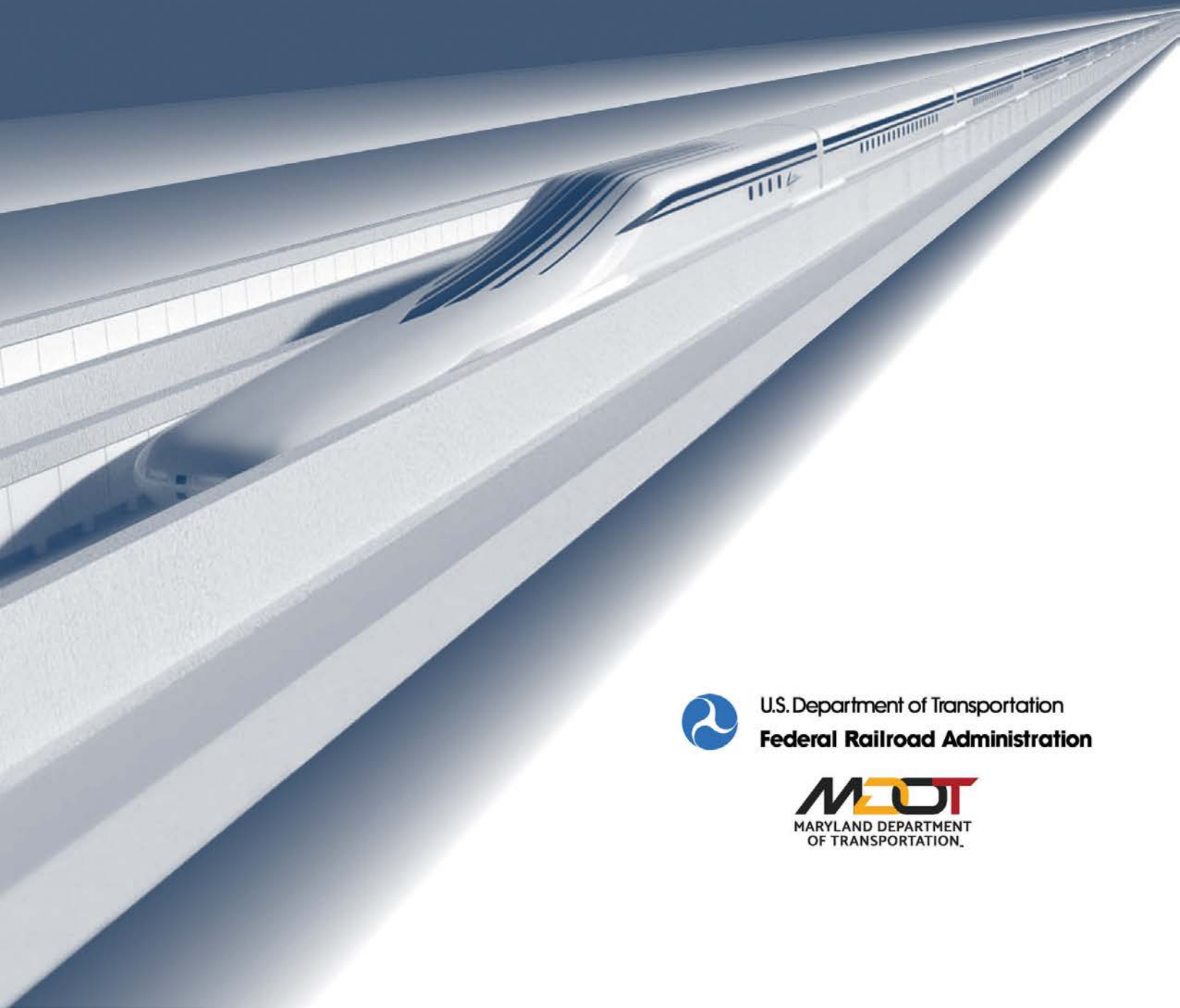


APPENDIX D.6

Aesthetics, Visual Quality and Light Emissions

BALTIMORE-WASHINGTON 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.6 Aesthetics, Visual Quality, and Light Emissions

D.6.1 Introduction

This Appendix supports Section 4.9 Aesthetics, Visual Quality, and Light Emissions with additional details and descriptions of resources and potential impacts associated with the Superconducting Magnetic Levitation Project (SCMAGLEV Project). Please scroll to the end of this Appendix to view illustrative renderings of the proposed build elements with “before” and “after” views provided for comparison purposes.

D.6.1.1 Regulatory Context and Methodology

D.6.1.1.1 Regulatory Context

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) FRA assessed visual quality and aesthetic impacts from implementation of the SCMAGLEV Project. In addition, the following Federal, state and local laws, regulations and guidance were used to complete this assessment:

- National Scenic Byways program (23 U.S.C. § 162)
- U.S. Department of Transportation Act (Section 4(f)) (49 U.S.C. § 303)
- Lands and Water Conservation Fund Act (Section 6(f)) (54 U.S.C. § 20031 et seq)
- Executive Order (EO) 1862 U.S. Commission of Fine Arts
- National Historic Preservation Act (NHPA) (54 U.S.C. § 300101 et seq)
- Antiquities Act of 1906 (16 U.S.C. § 431 et seq.)
- Federal Land Policy and Management Act (43 U.S.C. § 1701 et seq)
- Executive Order 11593, Protection and Enhancement of the Cultural Environment (May 13, 1971)
- National Capital Planning Act of 1952
- The Height of Buildings Act of 1910
- Approved local area planning documents (for more details on plans see Appendix D.3 Socioeconomic Environment Technical Report).
- Approved Local Area Planning Documents (for more details on plans see Appendix D.3).

D.6.1.1.2 Methodology

Area of Visual Effects (AVE)

The Build Alternatives are generally located along rolling terrain and the above ground portions (i.e. where visible) pass through and near areas of parklands, public lands, wooded ecological areas, urban light industrial/commercial and residential areas. Due to the rolling nature of the existing topography and variations in existing vegetative growth, development and structural obstructions, viewshed distances along the Build Alternatives vary significantly for all resources within the Area of Visual Effects (AVE). The cities bookending the proposed Build Alternatives (Baltimore City and Washington, D.C.) are urbanized with restricted views due to a high density of buildings and other tall structures. Due to the suburban nature of the adjacent counties connecting Baltimore and Washington, D.C., the viewshed can be a combination of restricted and unrestricted views.

To account for variations in topography and development, FRA considered a 2,000-foot viewshed as an AVE from all proposed facilities and contributing elements required for the long-term safety and operations of the SCMAGLEV system. For this resource assessment, the AVE is synonymous with the SCMAGLEV Project Affected Environment defined for other resources. For above-ground resources (buildings, structures, districts, and objects) in Maryland, the AVE includes the geographic area within 2,000 feet of the Limits of Disturbance (LOD), defined as the construction footprint of the Build Alternatives, including any permanent and temporary easements, access roads, all locations of ancillary facilities, and any other SCMAGLEV Project-specific locations. The AVE is inclusive of the Area of Potential Effects (APE) for the assessment of cultural and archaeological resources identified in Section 4.8 Cultural Resources and Appendix D.5 for Maryland and Washington, D.C.

Effects-Assessment Methodology

FRA developed an effects-assessment methodology for the visual and aesthetic resource evaluation for this study. FRA methodology provides a detailed definition of each resource, data sources, and how the effects on each resource were evaluated. FRA assessed the visual effects of the proposed guideway, stations, and miscellaneous fixed support facilities on adjacent and nearby communities, general public areas, sensitive viewsheds, historic sites, and other special features considered to be visually sensitive.

FRA considered the perspectives and sensitivities of viewer groups potentially affected by visual changes within the vicinity of the Project. These groups primarily include residents living in the immediate surrounding areas, business and property owners with existing undisturbed views, users of recreational lands and facilities, Federal, state, and local agencies with undeveloped or sensitive property, and the travelling public. Not all visual effects would be negative to all viewers; some viewers may perceive proposed elements as improvements over existing conditions.

In addition to sensitivity, the assessment considered viewer exposure to and awareness of potential visual impacts. Exposure is considered:

- Spatial proximity: the distance between viewer and the visual resource being viewed,
- Extent: the number of viewers viewing, and
- Duration: length of time visual resource is viewed.

The greater the exposure of a given resource, the higher the expected degree of potential visual impact would be considered.

Viewer awareness is a measure of:

- Attention: level of observation based on routine and familiarity,
- Focus: level of concentration, and
- Protection: legal and social constraints on the use of visual resources.

The greater the attention given to a resource, the higher the expected degree of potential visual impacts would be considered.

For the purposes of the assessment, visual impacts experienced by viewer groups have been categorized as having **Relatively Imperceptible** (no effect), **Lower** (minimal to very little effect), **Moderate** (average but mostly insignificant effect), and **Higher** (or significant and detrimental effect) degrees of potential effect on resources considered sensitive to visual and aesthetic variance. Additional details related to these categories are provided in the section below.

Key Terms

This section defines the key terms used throughout the impact analysis for aesthetics and visual quality and light emissions. U.S. DOT's Guidelines for the Visual Impact Assessment of Highway Projects¹ was used to supplement FRA's procedures. These guidelines helped define the visual character or quality of a common aesthetic area and objectively evaluate whether the Build Alternatives would have a substantial adverse impact on a scenic vista or substantially degrade the existing visual character or quality of a common aesthetic area. The definitions are provided in **Table D.6-1**.

¹ FHWA. Guidelines for the Visual Impact Assessment of Highway Project, June 2016.
https://www.environment.fhwa.dot.gov/guidebook/documents/VIA_Guidelines_for_Highway_Projects.asp

Table D.6-1: Terms and Definitions

Term	Definition
Aesthetics	Perception of, and appreciation for, beauty in one's surroundings, whether natural or built environment
Area of Visual Effect (AVE)	The area in which views of the SCMAGLEV system will be visible as influenced by the presence or absence of intervening topography, vegetation and structures
Common Aesthetic Area (CAA)	Similar to the traditionally used Landscape Unity (LU), the CAA's are defined areas within the AVE that have contiguous, consistent visual features and/or homogeneous visual character. The CAA is the spatial element used for assessing visual impacts.
Direct Viewshed	Location from which a viewer can see either iconic or representative landscapes.
Viewer group (Residents)	Viewers who occupy or would occupy land adjacent or visible to the SCMAGLEV system and elements. Residents are further defined by their land use. Viewer groups consisting of residents can be residential, retail, commercial, industrial, agricultural, recreational or civic in nature. The land use definition is used to distinguish among residents' use of property; for instance, an agricultural property-owning resident typically occupies the same view much longer than a property-leasing resident who may only occupy the view for a relatively short period of time.
Viewer group (Travelers)	Viewers who will see the proposed SCMAGLEV system while commuting, hauling, touring or recreating. Travel mode is classified as transit users/transit riders, motorists/drivers, bicyclists/riders or pedestrians.
Viewer sensitivity	The degree to which viewers are sensitive to changes in the visual character of surrounding natural and/or built environments. Viewer sensitivity is assessed on a scale of low, moderate and high. Viewer sensitivity is the consequence of two factors, viewer exposure and viewer awareness. Sensitivity to views varies among viewer types, which will, therefore, affect the significance of the impact.
Viewer exposure	A measure of the proximity, extent and duration of a viewer to a visual resource. Proximity is the distance between the viewer and the visual resource being viewed. Extent is the number of people viewing the visual resource. Duration is the length of time the visual resource is viewed.
Viewer awareness	A measure of attention (level of observation based on routine and familiarity), focus (level of concentration) and protection (legal and social constraints on the use of visual resources)
Viewshed	All of the surface area visible from a particular location (e.g., an overlook) or sequence of locations (e.g., a roadway or trail). There are three types of viewsheds: static, dynamic and restricted.
Static viewshed	Areas residents adjacent to the Build Alternative will see from a stationary location
Dynamic viewshed	Areas travelers see as they move through the landscape.
Constrained viewshed	Areas where views are limited by land cover, the built environment or atmospheric conditions, such as cloud cover, fog or precipitation
Visual character	The description of the visible attributes of a scene or object. This

Term	Definition
	description is an impartial narrative of the components of the landscape and defined by the relationship between the natural environment and built environment
Visual quality	Viewers' perception of visual resources that compose the visual character of a viewshed. Residents and Travelers may evaluate the visual quality of specific visual resources differently based on the factors of natural harmony, cultural order, vividness, and SCMAGLEV system coherence, as defined below
Natural harmony	What a viewer perceives about the natural environment, labelling the environment as being either harmonious or inharmonious
Cultural order	How viewers perceive the organization of the cultural visual environment, or the man-made built environment, including buildings, transportation facilities, structures or historical artifacts, labeling the built environment as orderly or disorderly.
Vividness	The degree of memorable, dramatic or distinctive components of the landscape. Vividness is an overall aggregation of topography, vegetation, water features and cultural element.
Project coherence	The viewer's perception about how constructed facilities associated with the Build Alternatives will fit into the existing environment
Visual resources	Components of the natural, cultural or project environments capable of being seen. Brief definitions for the three subcomponents of visual resources are natural, cultural, and project visual resources
Natural visual resources	The land, water, vegetation and animals which compose the natural environment. Although natural visual resources may have been altered or improvised by people, resources which are primarily geological or biological in origin are considered natural. An open vegetated/grassy field with rolling terrain, scattered trees and no man-made structures or elements, for example, is a natural visual resource, even though it is a landscaped park created by people
Cultural visual resources	The man-made built environment, which is composed of the buildings, structures and artifacts of a particular area
Project visual resources	The geometrics, structures and fixtures which compose the SCMAGLEV system's environment. This includes any constructed facility, feature or fixture along the SCMAGLEV system, as well as a constructed facility, feature or fixture at station areas

Data Collection

Data collection for aesthetic and scenic resources included desktop research, coordination with other resource areas and review of Project Sponsor provided preliminary design drawings, and supporting technical memorandums to identify the location of the Build Alternatives in relation to key viewpoints. Data collection activities included the following:

- Desktop research identified Maryland Scenic Byways, scenic vistas, historical and cultural sites and other specific views along the Build Alternatives. These views could include residential areas or farmlands, areas of scenic beauty, parks

and recreational areas, historically and/or culturally significant features, urban landmarks, water bodies, public facilities, and protected public lands.

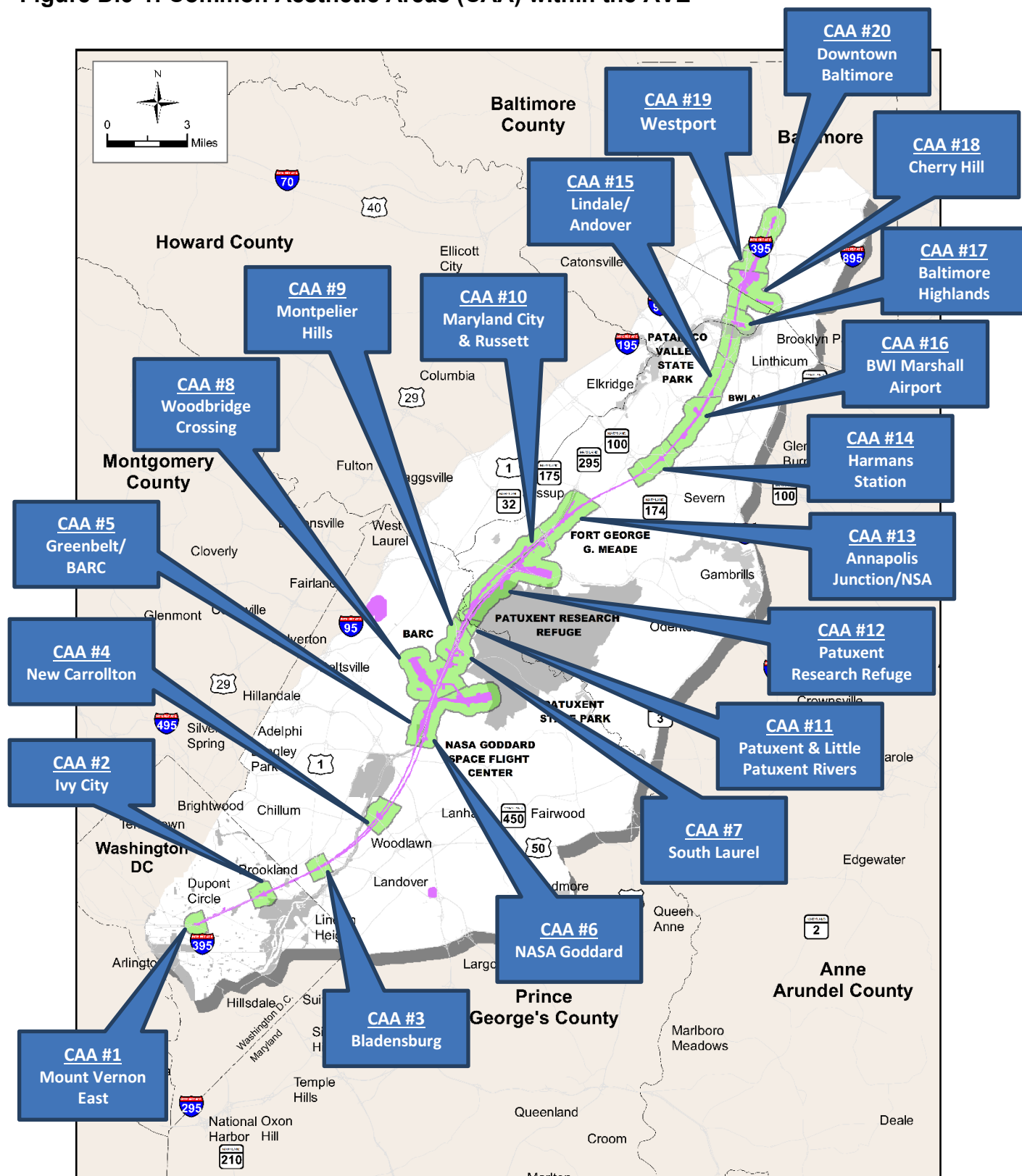
- Documentation of potential aesthetic and scenic resources within the AVE based on topographic maps and resource area reports (DEIS Sections: 4.2 Transportation; 4.3 Land Use and Zoning; 4.4 Neighborhood and Community Resources; 4.6 Economic Resources; 4.7 Recreational Facilities and Parklands; 4.8 Cultural Resources; 4.10 Water Resources; 4.12 Ecological Resources; 4.14 Soils and Farmlands).
- A visual resource inventory was created of the existing visual quality of the AVE using the researched data discussed above and presented below in Environmental Consequences.

Common Aesthetic Area, Visual Resource and Visual Quality Assessment

Due to the substantial size of the SCMAGLEV Project, FRA established Common Aesthetic Areas (CAAs), similar to a traditional Landscape Unit (LU), defined as select areas within the AVE that have contiguous, consistent visual features and/or homogeneous visual character. Due to the numerous and varied geographical areas that needed to be evaluated for this Project, FRA is utilizing the more concise CAA as the spatial element to give greater attention to those locations with cohesive community features. FRA identified twenty CAAs for which existing conditions and impacts are evaluated. CAAs are described in

The CAA and visual resources, as defined above, were used to evaluate the existing visual conditions within the AVE and conduct the visual quality assessment. Due to the numerous and varied geographical areas that needed to be evaluated for this project, FRA is utilizing the more concise CAA as the spatial unit used for assessing visual impacts to give greater attention to those locations with cohesive community features contained within specifically selected and defined regions with anticipated project affects. See **Figure D.6-1** for a map of the CAA within the AVE.

Figure D.6-1: Common Aesthetic Areas (CAA) within the AVE



The methodology included the following:

1. **Define the project setting and viewshed:** Due to the length of the Build Alternatives, the AVE was broken into CAAs with similar visual characteristics within a 2000-foot buffer of proposed project elements. Each CAA is made up of visual resources, such as a site, object or landscape feature that contributes to the composition of the CAA. Given the size and diversity of the region, there are some areas with predominant characteristics that may contain small areas that differ from the overall character of the CAA. For example, the predominant characteristics of an area may be that it is suburban with limited trees, but it may contain pockets that are dense forested parklands or wooded areas.
2. **Determine who has views of the proposed project elements:** The primary viewers of each CAA were identified through field observations and aerial mapping. The sensitivity of the primary viewers or viewer groups within each CAA was determined by viewer type (resident or traveler) and their frequency and duration of the potential views towards the Build Alternatives.
3. **Identify direct viewsheds for visual assessment:** To provide examples of existing views of the landscape, at least one direct viewshed was designated within each CAA. Furthermore, a direct viewshed was selected as either a typical view or a specific view. Typical direct viewsheds offer a common viewpoint of the Build Alternatives, such as from a highway, utility corridor, residential community or agricultural area. Specific direct viewsheds include views from parks, trails, historic districts and designated viewpoints. Illustrative renderings from most viewsheds were prepared to represent the visual characteristics of the CAAs.
4. **Analyze changes in existing visual resources and viewer response:** Using the information gathered from determining common aesthetic areas, viewsheds and viewer sensitivity, the visual quality of the existing viewshed was then assessed. Using professional judgement, each factor (natural harmony, cultural order and vividness) and the overall visual quality were assigned one of five categories: low, moderately-low, moderate, moderately-high and high.

Low refers to areas lacking valued or having degraded visual resources with no aesthetically pleasing composition. An example would be a disjointed, abandoned industrial area adjacent to a heavily trafficked highway or railroad.

Moderately-low refers to areas containing some visual resources but lacking a coherent and aesthetically pleasing composition and some disruptive visual detractors. An example would be poorly maintained commercial area adjacent to a new community center or park.

Moderate refers to areas primarily of visual resources combined in an aesthetically pleasing composition with few disruptive visual detractors. An example would be a cohesive, well-maintained development. This could be urban, suburban or protected lands.

Moderately-high refers to areas of visual resources combined in an aesthetically pleasing composition, expressing a sense of place and lacking prominent

disruptive visual detractors. An example would be a planned development that includes open space and trails, or well-maintained protected public lands with open vistas.

High refers to areas comprising visual resources free of disruptive visual detractors and with a strong sense of place. An example would be federally protected, undeveloped land with unique, scenic vistas.

Visual Quality Impact Assessment

The second phase of the assessment evaluated the Build Alternatives' impacts on visual quality and included the following steps:

1. Generate illustrative renderings of the proposed project elements in common aesthetic settings: Visual impacts result from the combination of viewer sensitivity and visual quality. Visual impacts were evaluated based on professional judgment and illustrative renderings of how proposed elements may change common aesthetic landscapes to predict viewer groups' perceptions of the change to the environment.
2. Assess the project's visual impacts and determine degree of impact: the extent of the impact is based on the following:
 - a) *Compatibility of the impact*: the perceived ability of the Build Alternatives to blend in with the existing visual and aesthetic environment.
 - b) *Viewer Sensitivity of the impact*: the degrees to which viewer groups are exposed to and are aware of the changes to the environment. Viewer sensitivity is rated on the following scale: low, moderate and high.
 - Low sensitivity may exist when there are few viewers who experience a defined view, when potential views of the project are screened or filtered by intervening terrain, structures or landscaping, or where viewers are not particularly concerned about the quality of views due to their activity type, such as a commuter on the highway.
 - Moderate sensitivity may occur where views of a project are distant enough that the project does not dominate the view or where viewer activity is not focused on visual quality and expectations are moderate, such as office workers, field laborers or an organized sporting event.
 - High sensitivity occurs where a project is highly prominent, open to view, and seen by relatively high numbers of viewers and where viewer concern and expectations of visual quality is also high, as in a rural park where scenery is a primary focus, or in a residential neighborhood.

- c) *Degree of impact*: The result of combining the compatibility of the impact with the viewer sensitivity of the impact. As noted previously, the qualitative degree of impacts are described as ***relatively imperceptible, lower, moderate, or higher***. In some circumstances, impacts could be considered beneficial if they present an improved experience for the viewer and enhance visual resources or create improved views of those resources. Impacts which adversely impact visual quality degrade the quality of the visual resources, obstruct sensitive views or change desired views. Beneficial impacts and adverse impacts are both assessed in terms of lower, moderate, and higher degrees.

Neutral impacts occur when the existing visual quality is not perceived to be enhanced or degraded. These impacts could result in a change to the existing visual quality; however, viewer sensitivities are low to moderate, and the proposed project elements would be compatible within the context of the existing visual landscape and common aesthetic area. Therefore, neutral impacts occur in an environment where sensitivities are below moderate, which result in most viewers not perceiving visual enhancements or degradation and are rated as relatively imperceptible.

D.6.1.1.3 Resource Descriptions

This visual analysis identified, and took into consideration, resources that comprise the visual environment (such as natural areas, parks, scenic areas, bodies of water, prominent landscapes) and cultural resources (such as historic landmarks and historic districts) documented as part of this EIS.

The visual environment of the AVE ranges from undeveloped agricultural areas and open spaces, and small towns to large-scale industrial development and vibrant urban districts. The SCMAGLEV proposed Build Alternatives traverse and connect large metropolitan areas, Washington, D.C., and Baltimore, which are built on and around major water bodies such as the Chesapeake Bay and large rivers (i.e., Potomac, Anacostia, Patuxent, Patapsco, etc.).

Cultural resources and historic properties are dispersed throughout, with higher numbers of sites found in urban areas in and around Washington, D.C., Baltimore, as well as scattered throughout central Maryland counties like Prince George's, Anne Arundel, and Baltimore, which were considered relatively heavily populated and developed during pre-colonial, colonial and civil war eras.

Parklands are also scattered throughout the AVE with higher acreages found in central Maryland, particularly in Prince George's and Anne Arundel Counties. The Baltimore-Washington Parkway (BWP), a National Park Service (NPS) property, runs adjacent to much of the proposed build alternative alignment. In addition, significant ecological resources such as the Patuxent Research Refuge (PRR) and the Beltsville Agricultural Research Center (BARC) are found within the AVE and within proximity of proposed SCMAGLEV build alternatives and elements. Similarly, portions of Fort George G. Meade, a U.S. Army property, contains significant acreages of undeveloped forested lands that fall within the AVE.

D.6.1.2 SCMAGLEV Project Affected Environment

The SCMAGLEV Project Affected Environment is densely developed in the metropolitan areas of Washington, D.C., Baltimore, all of which are surrounded by large, relatively densely populated suburban areas. Large areas of Forest/Shrub and Wetlands land covers occur in Anne Arundel, and Prince George's Counties, MD.

As noted previously, visual and aesthetic resources vary, consisting of cultural resources, developed park settings, and natural settings consisting of either water, wooded, or open views. Smaller, developed park resources are more prevalent in the Washington, D.C. and Baltimore City areas, as well as scattered throughout the suburban city and towns in central Maryland. Undeveloped resources like the PRR in Maryland are located within tributaries to larger watersheds or ecosystems such as the Chesapeake Bay. Larger, undeveloped resources can also be found around Beltsville, MD in the Beltsville Agricultural Research Center (BARC) property as well as the NPS-managed Baltimore-Washington Parkway (BW Parkway or BWP). The greatest numbers of cultural sites are typically found in municipalities that date from the 18th to early 20th centuries and contain older buildings and structures. Municipalities with many cultural sites include Baltimore City, MD, Washington, D.C., and the central Maryland suburban towns of Bladensburg, Greenbelt, and Linthicum.

For more detailed descriptions of the SCMAGLEV Project Affected Environment and related visually sensitive resources that may be affected see analysis of CAAs in the Environmental Consequences section below.

D.6.1.3 Environmental Consequences

Visual impacts occur where elements related to the Build Alternatives are near or within sight of a visually sensitive resource. Potential effects could also occur where the Build Alternatives would require the removal of an existing visual feature (such as clearing an existing forested area) and changes in existing topography (which would occur through land acquisitions or construction). Potential changes to visually sensitive areas, areas where the proposed SCMAGLEV infrastructure would have unique aesthetic qualities (such as graded embankments, aerial structures, and tunnel portals), and support facilities (such as stations, parking structures, maintenance facilities), would introduce new elements into the existing visual settings.

Effects on visual and aesthetic resources at stations would be in the immediate vicinity of the station location. Stations are traditionally placed within communities in downtown areas or as part of a larger transportation hub serving the local population, such as Baltimore-Washington Thurgood Marshall International Airport (BWI Marshall Airport). Proposed stations would introduce new visual elements into the landscape and could have additional effects on visual and aesthetic resources. Elements associated with new stations might include buildings, platforms, guideway, parking, elevated roadways and ramps, and other supporting structures. Proposed underground stations may result in minimal effects to visual and aesthetic resources since the majority of the station

infrastructure would be underground. Underground stations may include above-ground features such as entrances and parking structures.

Similarly, the effects on visual and aesthetic resources at support facilities would be in the immediate vicinity of the constructed element, whether a proposed maintenance facility, emergency egress/ventilation building, electrical substation, or other significant site or structure that is a key contributing element to the operations and maintenance of the proposed SCMAGLEV System.

The effects of each Build Alternative are described in the following sub-sections.

D.6.1.3.1 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 changes to the visual and aesthetic qualities of the Affected Environment.

D.6.1.3.2 Build Alternatives

Each Build Alternative includes an alignment; three stations (one southern terminus station, one intermediate station, and one northern terminus station), and one trainset maintenance facility (TMF)/maintenance of way (MOW) facility (see Chapter 3, Alternatives Considered, for a description of each element, and drawings in Appendix G.2). By including the various elements of the Project, various end-to-end build alternative options are possible. Light emissions related to the proposed elements are provided in greater detail in the discussion below, but for the purposes of this summary, the Project Sponsor, Baltimore-Washington Rapid Rail, LLC (BWRR), stated the following:

- The elevated viaduct guideway is not expected to have significant permanent lighting (maintenance crews would bring lighting as needed for work zones),
- The fresh air and emergency egress (FA/EE) building is expected to have lighting equivalent to a typical five story office building,
- The TMF facilities (BARC West, BARC Airstrip, and MD 198) are expected to feature permanent lighting equivalent to those found at current Amtrak and Maryland Department of Transportation Maryland Transit Administration (MDOT MTA) light rail maintenance facilities, and
- The stations (Mount Vernon Square East Station (MVS), BWI Marshall Airport Station, Cherry Hill Station, Camden Yards Station) are expected to feature permanent lighting roughly equivalent to those currently experienced at train stations like Union Station in Washington, D.C., and Penn Station in Baltimore.

Table D.6-2 provides an overview summary of the Build Alternatives elements.

Table D.6-2: Build Alternatives Summary of Options

Build Alternative	Alignment ¹		Stations ²				TMF ³		
	BWP East	BWP West	MVS East	BWI Marshall	Cherry Hill Station	Camden Yards Station	BARC Airstrip	BARC West	MD 198
J-01	X	-	X	X	X	-	-	-	X
J-02	X	-	X	X	X	-	X	-	-
J-03	X	-	X	X	X	-	-	X	-
J-04	X	-	X	X	-	X	-	-	X
J-05	X	-	X	X	-	X	X	-	-
J-06	X	-	X	X	-	X	-	X	-
J1-01	-	X	X	X	X	-	-	-	X
J1-02	-	X	X	X	X	-	X	-	-
J1-03	-	X	X	X	X	-	-	X	-
J1-04	-	X	X	X	-	X	-	-	X
J1-05	-	X	X	X	-	X	X	-	-
J1-06	-	X	X	X	-	X	-	X	-

¹ Alignment = alignment between station limits and ancillary facilities (vent plants, emergency egress, storm water management, substations, transition areas)

² Stations = station footprint and parking (if parking is included at the station), plus surface access points and underground access tunnels to the stations or parking

³ TMF = TMF footprint (includes the connecting tracks, substations, and employee parking) plus MOW, as determined by alignment

Build Alternatives Effects Summary - J (BWP East) and J1 (BWP West)

The guideway alignments would be a combination of tunnel segments and above ground structure (also known as a viaduct). Build Alternatives J would average approximately 75 percent tunnel and 25 percent of aboveground guideway. Build Alternatives J1 would average approximately 83 percent tunnel and 17 percent of aboveground guideway.

The following is a summary of the anticipated effects and potential consequences related to the Build Alternatives on the existing visually sensitive resources resulting from the implementation of proposed SCMAGLEV system elements. Each CAA provides a summary of the anticipated visual effects on the existing visual resources and viewsheds by Build Alternative.

Potential effects are described in terms of long-term potential impacts and short-term potential impacts. The long-term potential impacts are described along with the anticipated degree of impact. The short-term potential impacts are generally related to construction activities and are considered temporary. See **Tables D.6-3 thru D.6-11**.

For each short-term potential impact discussion, construction activities are identified. Throughout this section construction activities could include but are not limited to: cut/cover work, staging and work areas, heavy equipment, materials, temporary signage, scaffolding, fencing and other barrier elements. At the end of construction, these elements would be removed and temporarily disturbed areas would be restored to

the extent practicable. These construction activities will temporarily impact the visual environment in the area where work is occurring.

CAA #1 – Mount Vernon East (Figure D.6-2)

CAA #1 Location: Mount Vernon Square East near New York Avenue and 6th Street NW

Proposed SCMAGLEV Element(s): Underground station and corresponding head house structures (approximately 3 to 4 stories tall).

Existing Visual Sensitivity: Moderately-Low to Moderately-High for public lands, historic districts, religious buildings, and commercial, retail, and high-density residential mid-rise structures

Viewer Sensitivity: Residents (Low sensitivity) and Travelers (Low sensitivity)

Figure D.6-2: CAA #1- Mount Vernon East



Table D.6-3: Resources and Anticipated Effects within the CAA #1 Viewshed:

Resource Name	Type of Resource & Visual Sensitivity of Existing Resource	Degree of Anticipated Visual Impact*	
		Build Alternatives J	Build Alternatives J1
L'Enfant Plan	Public Lands – Moderately High	L	L
Central Public Library (Carnegie Library)	Public Building – Moderately High	L	L
Seventh St NW, East Side of 1000 Block	Commercial Buildings – Moderately Low	L	L
Mount Vernon Square Historic District	Historic District – Moderately High	L to M	L to M
Yale Steam Laundry (including Garage and Stable)	Commercial Building – Moderately Low	L	L
Fletcher Chapel (Church of God & Saints of Christ)	Religious Building – Moderately Low	L	L
The New York	Multiple-family Residential Building – Moderately Low	L	L
M Street High School (Perry School)	Educational Building – Moderately Low	L	L
Augusta & Louisa Apartment Buildings	Multiple-family Residential Building – Moderately Low	L to M	L to M
Southern Baptist Church	Religious Building – Moderately Low	L	L
Mount Vernon Triangle Historic District	Historic District – Moderately High	L to M	L to M
921 6th St NW	Residential Building – Moderately Low	L to M	L to M
919 6th St NW	Residential Building – Moderately Low	L to M	L to M
917 6th St NW	Residential Building – Moderately Low	L to M	L to M
Lord Baltimore Filling Station	Transportation-related Building – Moderately Low	L to M	L to M
Buildings North Side 600 Block K St NW	Residential and Commercial Buildings – Moderately Low	L to M	L to M
Downtown Historic District	Historic District – Moderately High	L	L
Downtown Historic District Addition	Historic District – Moderately High	L	L

*Degree of Visual Impacts (RI, L, M, H) = RI – Relatively Imperceptible, L – Lower levels, M – Moderate levels, H – Higher levels

CAA #2 – Ivy City (Figure D.6-3)
CAA #2 Location: Ivy City
near the intersection of New
York Avenue NE (US 50)
and Montana Avenue NE.

**Proposed SCMAGLEV
Element(s):** A FA/EE
Facility (approximately 50-
feet tall) and power
substation.

Existing Visual Sensitivity:
Low to Moderately-Low for
light Industrial, commercial,
residential neighborhoods,
public lands, parklands,
transportation facilities.

Viewer Sensitivity:
Residents (Low sensitivity)
and Travelers (Low
sensitivity)

Figure D.6-3: CAA #2- Ivy City



Table D.6-4: Resources and Anticipated Effects within the CAA #2 Viewshed

Resource Name	Type of Resource & Visual Sensitivity of Existing Resource	Degree of Anticipated Visual Impact*	
		Build Alternatives J	Build Alternatives J1
Ivy City, Langdon, Gateway, Brentwood Neighborhoods	Residential Communities – Low	RI	RI
The National Arboretum	Park Resource – Moderately Low	RI	RI
Loomis Park	Park Resource – Low	RI	RI

*Degree of Visual Impacts (RI, L, M, H) = RI – Relatively Imperceptible, L – Lower levels, M – Moderate levels, H – Higher levels

CAA #3 – Bladensburg (Figure D.6-4)

CAA #3 Location:

Bladensburg at the existing Washington Suburban Sanitary Commission (WSSC) Equipment Shop located at 4103 Lloyd Street, between Kenilworth Avenue (MD 201) to the east and an existing freight rail line to the west.

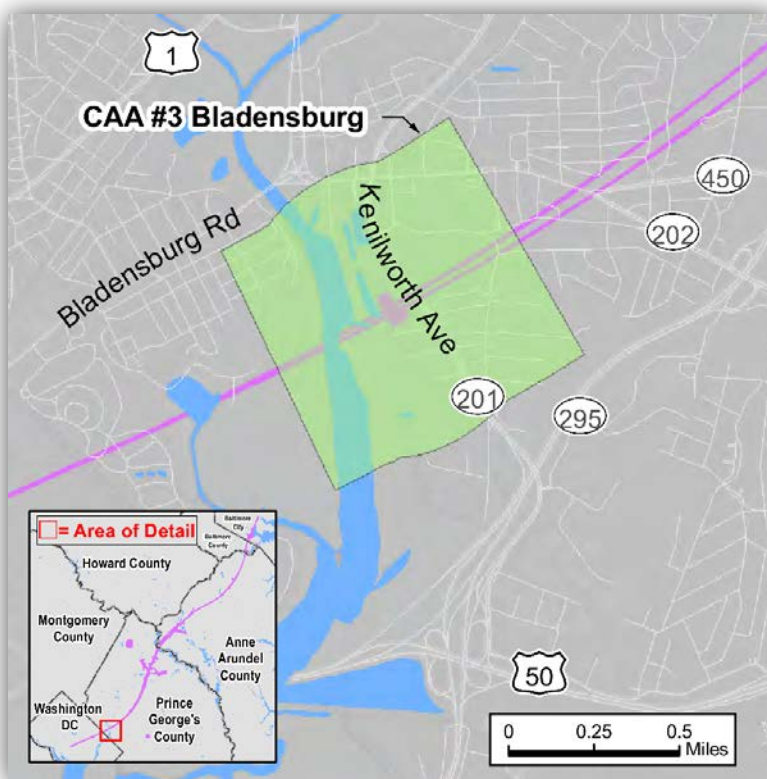
Proposed SCMAGLEV

Element(s): FA/EE facility (approx. 50-feet tall).

Existing Visual Sensitivity:

Moderate for light industrial, commercial, residential neighborhoods, public lands, parklands, transportation facilities.

Figure D.6-4: CAA #3- Bladensburg



Viewer Sensitivity: Residents (Moderate sensitivity) and Travelers (Low sensitivity)

Table D.6-5: Resources and Anticipated Effects within the CAA #3 Viewshed

Resource Name	Type of Resource & Visual Sensitivity of Existing Resource	Degree of Anticipated Visual Impact*	
		Build Alternatives J	Build Alternatives J1
Anacostia River, Anacostia River Stream Valley Park, Anacostia River Trail	Ecological, Park, and Recreational Resources – Moderate	RI to L	RI to L
Bladensburg Waterfront Park	Park Resource – Moderate	L	L
Bladensburg South Park	Park Resource – Moderate	L	L
Bladensburg Neighborhood	Residential Communities – Moderate	RI to L	RI to L

*Degree of Visual Impacts (RI, L, M, H) = RI – Relatively Imperceptible, L – Lower levels, M – Moderate levels, H – Higher levels

CAA #4 – New Carrollton (Figure D.6-5)

CAA #4 Location: New Carrollton Neighborhood in a forested area directly off Veterans Highway (MD 410) near the new Washington Metro Area Transit Authority (WMATA) Purple Line Maintenance Facility.

Proposed SCMAGLEV

Element(s): FA/EE facility (approximately 50-feet tall). The slight shift in alignments would result in slightly different building locations, with Build Alternatives J building slightly to the east and Build Alternatives J1 to the west.

Existing Visual Sensitivity:

Moderately-Low to High for residential neighborhoods, parklands, transportation facilities/light Industrial (WMATA Purple Line Maintenance Facility, currently under construction), and historic district (Martins Woods).

Viewer Sensitivity: Residents (Moderate sensitivity) and Travelers (Low sensitivity)

Figure D.6-5: CAA #4- New Carrollton

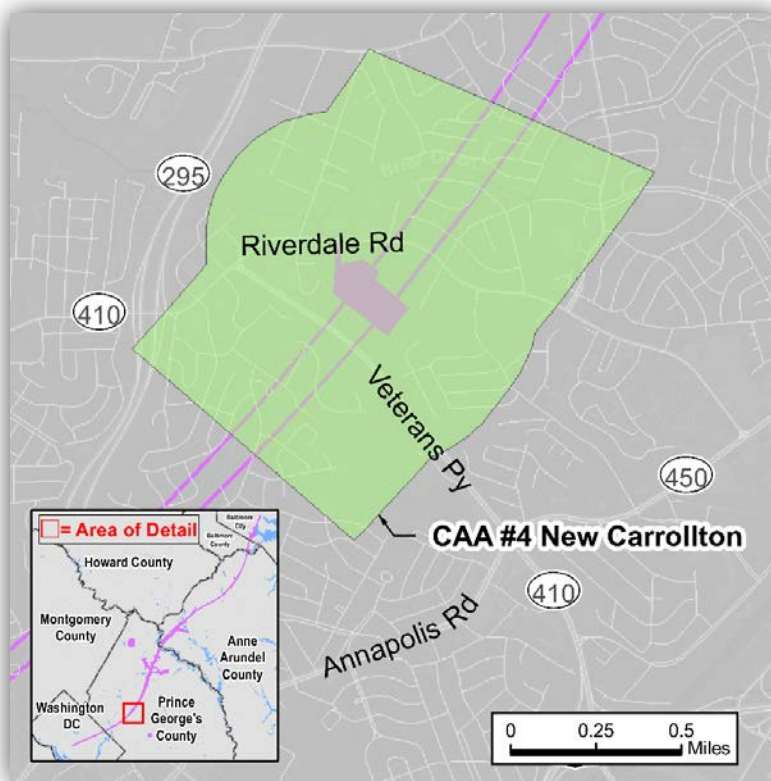


Table D.6-6: Resources and Anticipated Effects within the CAA #4 Viewshed:

Resource Name	Type of Resource & Visual Sensitivity of Existing Resource	Degree of Anticipated Visual Impact*	
		Build Alternatives J	Build Alternatives J1
Martins Woods Park/Patterson Park	Historic District & Park Resource - High	M to H	L to M
Glenridge Park	Park Resource – Moderately High	RI	RI
Wildercroft Park	Park Resource – Moderately Low	RI	RI
Wildercroft-Riverdale, Woodlawn, West Lanham Hills Neighborhoods	Residential communities – Moderately Low	M to H	L to M

*Degree of Visual Impacts (RI, L, M, H) = RI – Relatively Imperceptible, L – Lower levels, M – Moderate levels, H -Higher levels

CAA #5 and #6 –
Greenbelt/BARC, and NASA
Goddard (Figure D.6-6, D.6-7)

CAA #5 and #6 Locations:

CAA # 5 includes Greenbelt, BARC west of BWP just south of Beaver Dam Road. CAA #6 includes National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC) and NASA Goddard Geophysical and Astronomical Observatory (GGAO) east of BWP and just north of the BWP interchange with Explorer Road on BARC property not far from NASA GSFC. CAA #6 is impacted by Build Alternatives J, tunnel portal, BARC Airstrip TMF, and 198 MOW.

Proposed SCMAGLEV

Element(s): CAA #5 is impacted by Build Alternatives J and J1, tunnel portal and aboveground elevated viaduct, and contributing elements of the BARC West TMF, BARC Airstrip TMF, MD 198 MOW and SCMAGLEV Systems. CAA #6 is impacted by Build Alternatives J and J1, tunnel portal and above ground elevated viaduct, and elements of the BARC Airstrip TMF, BARC West TMF, MD 198 MOW and SCMAGLEV Systems.

Existing Visual Sensitivity:

Moderately-Low to High for public lands, research

Figure D.6-6: CAA #5- Greenbelt, BARC

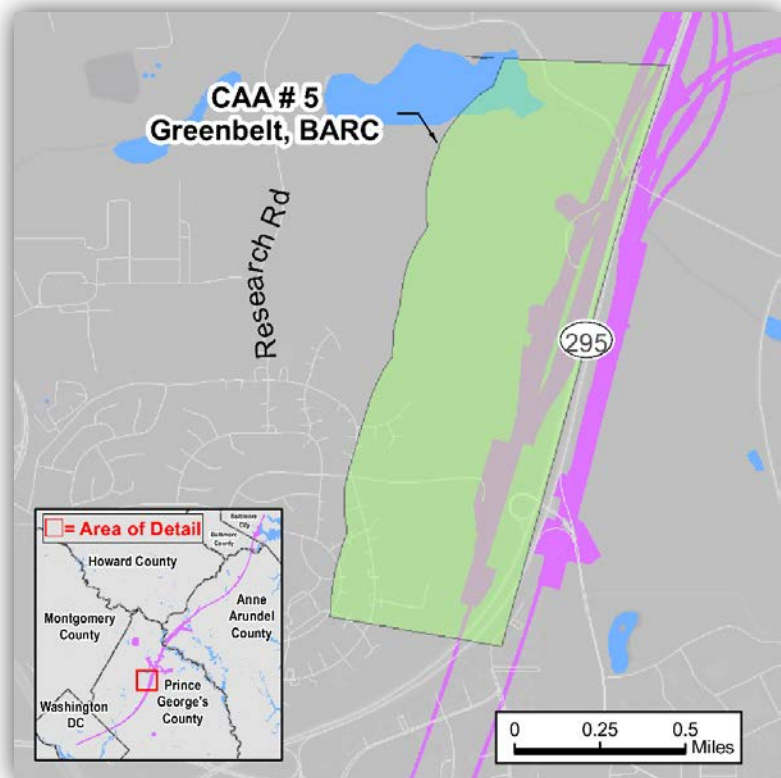
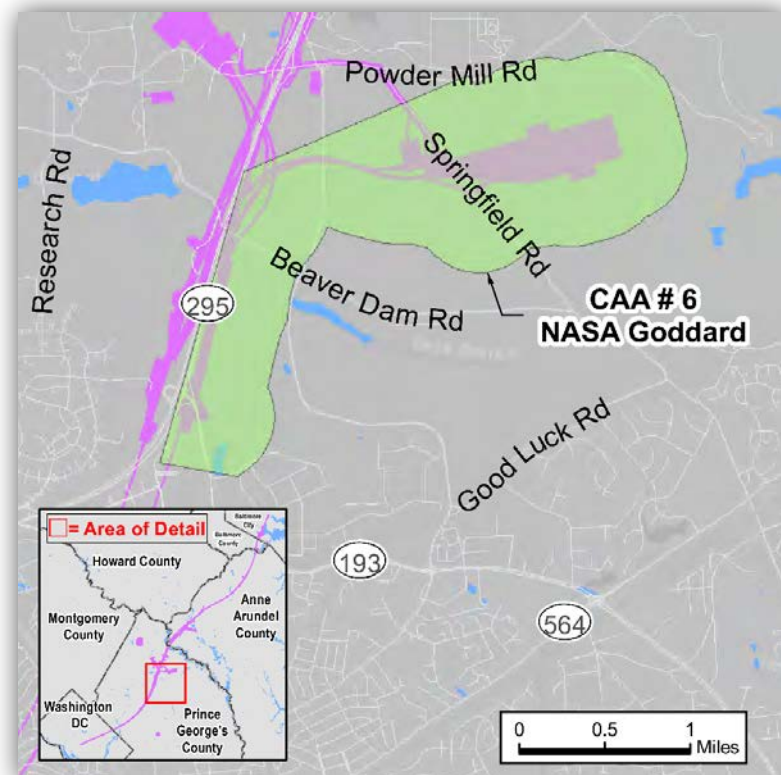


Figure D.6-7: CAA #6- NASA Goddard



facilities, recreational facilities, historic district, transportation facility.

Viewer Sensitivity: Residents (Moderate sensitivity) and Travelers (High sensitivity)

Table D.6-7: Resources and Anticipated Effects within the CAA #5 and #6 Viewsheds

Resource Name	Type of Resource & Visual Sensitivity of Existing Resource	Degree of Anticipated Visual Impact*	
		Build Alternatives J	Build Alternatives J1
NASA Goddard Space Flight Center	Research facility – High	M	M
Beltsville Agricultural Research Center	Research facility – High	H	H
NASA Goddard Geophysical and Astronomical Observatory	Research and Operations Facility - High	H	H
Odell Road/Gross Ln/ Ellington Dr Neighborhoods	Residential District – Moderately-High	RI to H	RI to H
Baltimore-Washington Parkway	Public Lands / Historic Cultural Landscape / Transportation Infrastructure / Park Resource – High	H	H
City of Greenbelt Observatory and Northway Field/James N. Wolfe Field	Recreational Resource – Moderate	M	H
United States Secret Service James J. Rowley Training Center	Public Lands - High	H	M

*Degree of Visual Impacts (RI, L, M, H) = RI – Relatively Imperceptible, L – Lower levels, M – Moderate levels, H - Higher levels

CAA #7, #8, and #9 – South Laurel, Woodbridge Crossing, and Montpelier Hills

(Figures D.6-8, D.6-9, D.6-10)

CAA #7, #8, and #9 Locations:

CAA #7 includes portions of South Laurel communities. CAA #8 includes Woodbridge Crossing and portions of Muirkirk Communities. CAA #9 includes portions of Muirkirk and Montpelier Communities. The three CAA's comprise the portions of BARC and residential communities east and west of the BWP between Powder Mill Road and the Prince George's/Anne Arundel County boundary.

Proposed SCMAGLEV

Element(s): CAA #7 is impacted by Build Alternatives J and J1 elevated viaduct, contributing elements of the BARC Airstrip TMF and MD 198 MOW, and a proposed power substation/electric power transmission line relocation south of MD 197. CAA #8 is impacted by Build Alternatives J and J1 elevated viaduct, BARC West TMF and MD 198 MOW. CAA #9 is impacted by Build Alternatives J and J1 elevated viaduct, and a proposed power substation/electric transmission power transmission line relocation south of MD 197.

Existing Visual Sensitivity: These CAAs are Moderately-Low to Moderately-High for park resources and residential communities.

Viewer Sensitivity: Residents (High sensitivity) and Travelers (High sensitivity)

Figure D.6-8: CAA #7- South Laurel

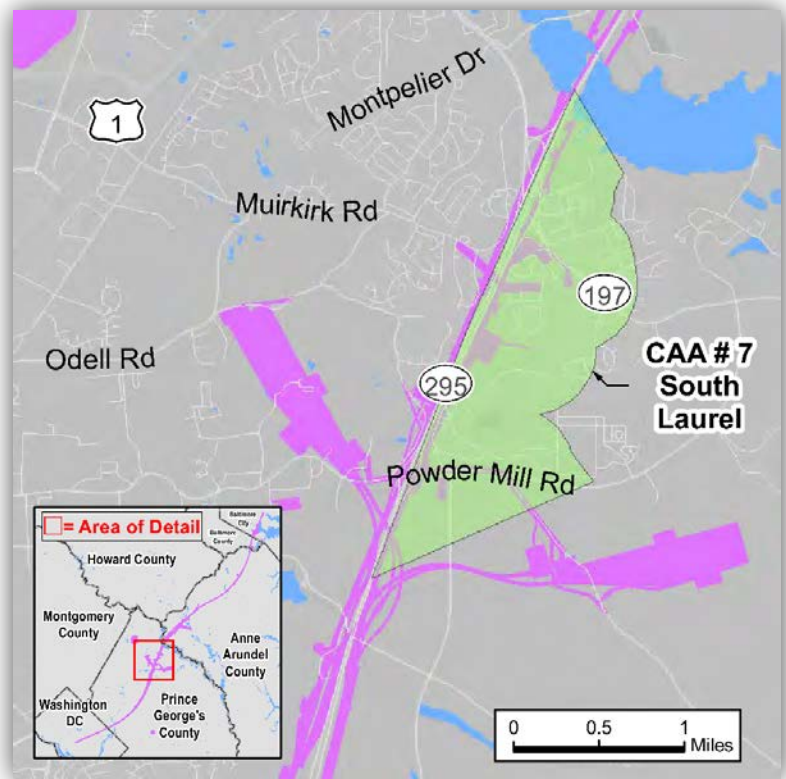


Figure D.6-9: CAA #8- Woodbridge Crossing

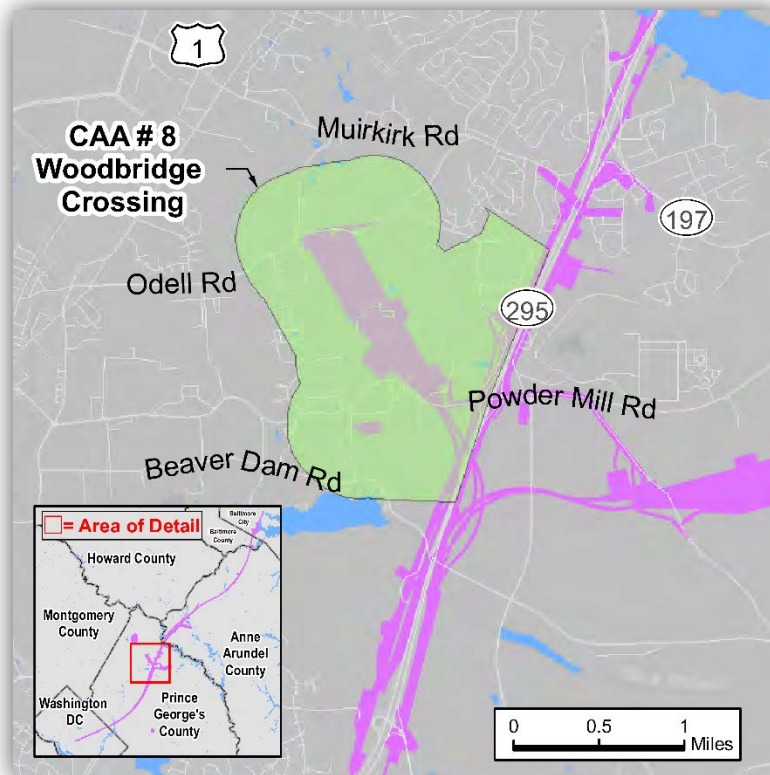
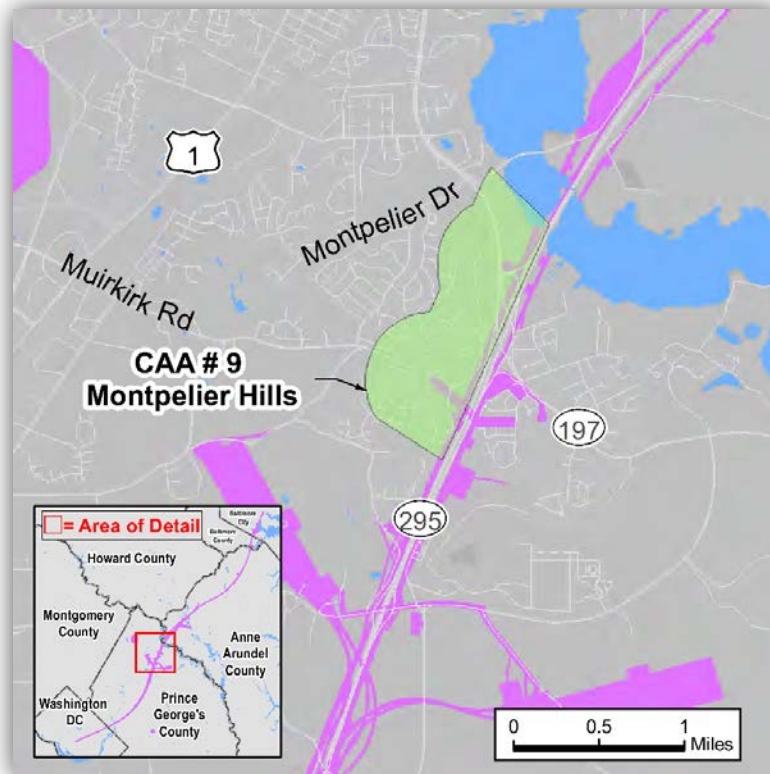


Figure D.6-10: CAA #9- Montpelier Hills



**Table D.6-8: Resources and Anticipated Effects within the CAA #7, #8, #9
Viewsheds:**

Resource Name	Type of Resource & Visual Sensitivity of Existing Resource	Degree of Anticipated Visual Impact*	
		Build Alternatives J	Build Alternatives J1
Montpelier Park, Springfield Park, South Laurel Park, Muirkirk Park, Pheasant Run Park	Park Resources – Moderately Low	L	L
Montpelier ES, South Laurel, Woodbridge Crossing, Montpelier Hills (Hermosa Drive) Neighborhoods	Residential Communities – Moderately High	RI to L	M to H
Pheasant Run Dr / Snowden Rd	Residential Communities – Moderate	L to M	N/A
Evergreens At Laurel Apartments	Residential community – Moderate to High	M to H	M to H
Baltimore-Washington Parkway	Public Lands / Historic Cultural Landscape / Transportation Infrastructure/ Park Resource– High	H	H
United States Secret Service James J. Rowley Training Center	Public Lands - High	H	M

*Degree of Visual Impacts (RI, L, M, H) = RI – Relatively Imperceptible, L – Lower levels, M – Moderate levels, H – Higher levels

CAA #10, #11, #12, and #13 – Maryland City & Russett, Patuxent Research Refuge, and Annapolis Junction/ National Security Agency (NSA) (Figures D.6-11, D.6-12, D.6-13, D.6-14)

CAA #10, #11, #12, and #13

Locations: These four CAAs combine to cover the area between the Prince George's/Anne Arundel County boundary at the Patuxent River and Patuxent River Park up to MD 175 near Jessup. CAA #10, to the west of BWP, includes Maryland City Park, Brock Bridge Elementary School and Maryland City and Russett Communities. CAA #11, crosses east and west of the BWP and includes Patuxent River and

Patuxent River Park and portions of PRR. CAA #12, to the east of BWP and the MD 198/MD 32/BWP triangle, includes the majority of PRR, the DC Children's Center and portions of Fort George G. Meade. CAA #13, crosses east and west of BWP, includes Annapolis Junction and NSA, and Fort George G. Meade.

Proposed SCMAGLEV Element(s): CAA #10 is impacted by Build Alternatives J and J1, proposed power substation/electric power transmission line relocation, and the MD 198 TMF and its contributing elements. CAA #11 is impacted by Build Alternatives J and J1. CAA #12 is impacted by Build Alternatives J and J1, proposed power substation/electric power transmission line relocation, and the MD 198 TMF and its contributing elements. CAA #13 is impacted by Build Alternatives J and contributing elements, and an FA/EE associated with Build Alternative J.

Existing Visual Sensitivity: Moderate to High for park resources, ecological resources, public lands, transportation infrastructure, commercial districts, and residential communities

Viewer Sensitivity: Residents (High sensitivity) and Travelers (High sensitivity)

Figure D.6-11: CAA # 10- Maryland City & Russett

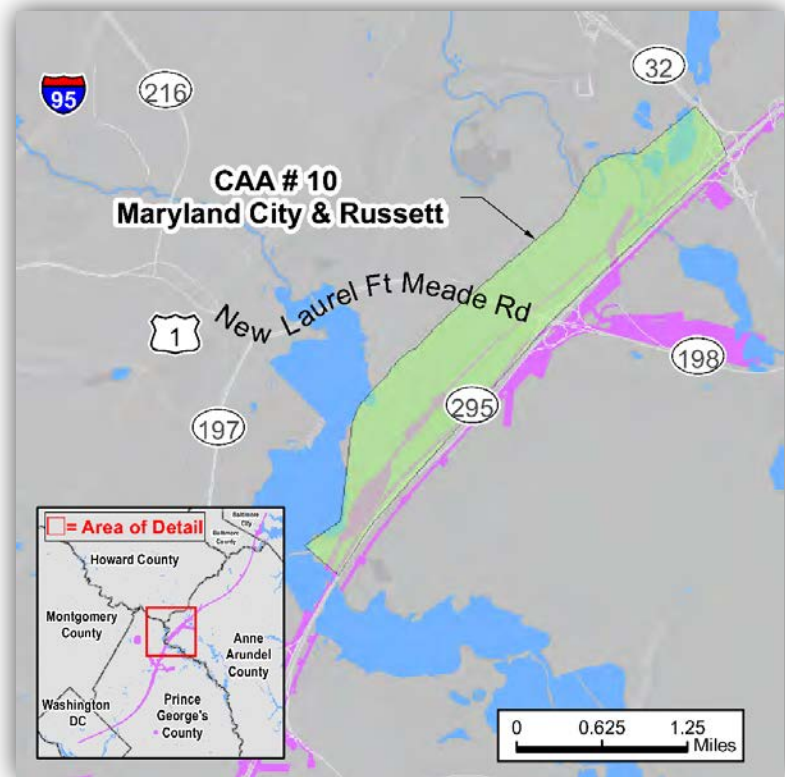


Figure D.6-12: CAA #11- Patuxent and Little Patuxent Rivers

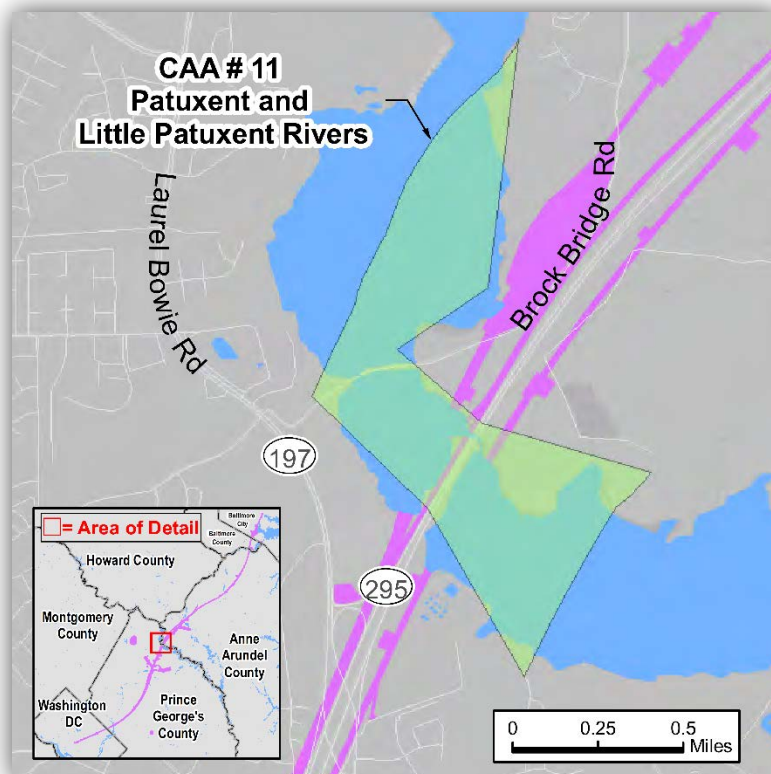


Figure D.6-13: CAA #12 – Patuxent Research Refuge

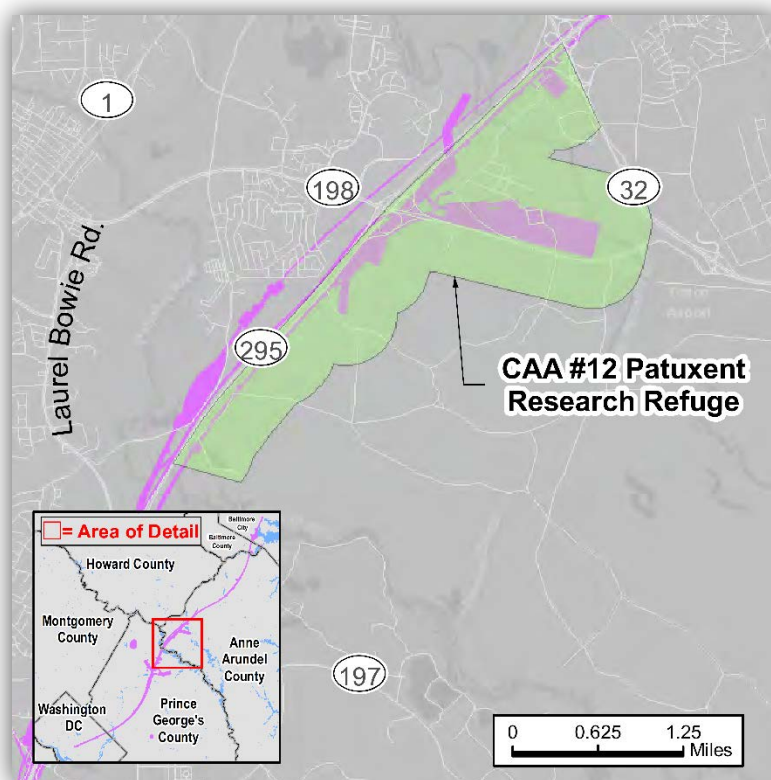


Figure D.6-14: CAA #13- Annapolis Junction, NSA

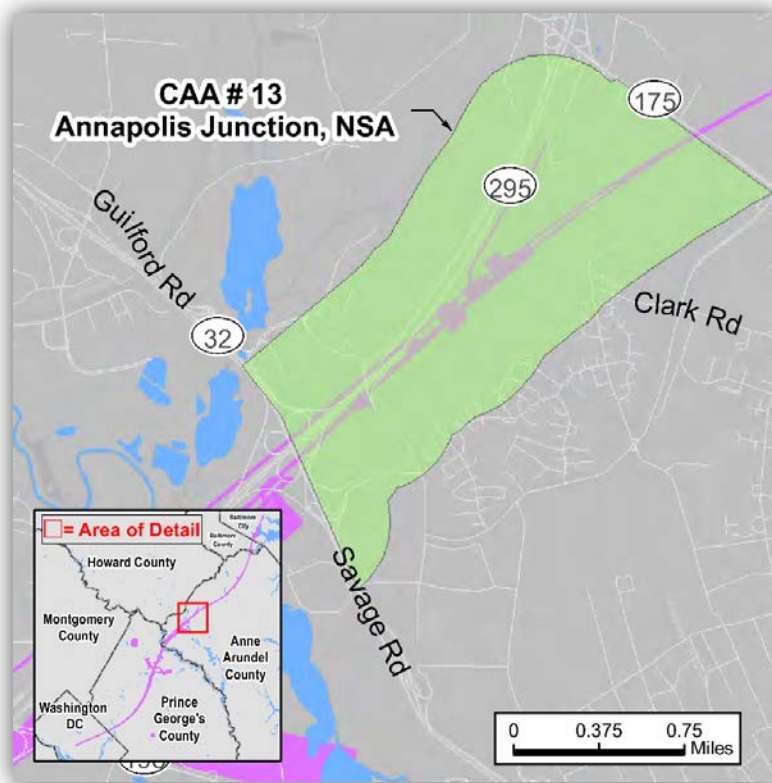


Table D.6-9: Resources and Anticipated Effects within the CAA #10, #11, #12, #13 Viewsheds:

Resource Name	Type of Resource & Visual Sensitivity of Existing Resource	Degree of Anticipated Visual Impact*	
		Build Alternatives J	Build Alternatives J1
Maryland City Park	Park Resource-High	RI	H
Patuxent River	Ecological Resource – High	H	H
Patuxent Research Refuge	Public Lands –High	M to H	M
Brock Bridge Elementary School	Public Lands –Moderate	RI	H
Thomas J.S. Waxters Children's Center	Public Lands – High	RI	M (J1-01, J1-04 only)
Maryland City, Sudlersville South, Barbersville, Russett Neighborhoods	Residential Communities – Moderately High	RI	M to H

Resource Name	Type of Resource & Visual Sensitivity of Existing Resource	Degree of Anticipated Visual Impact*	
		Build Alternatives J	Build Alternatives J1
Tipton Airport	Transportation infrastructure – High	L to H	RI to M (J1-01, J1-04 only)
DC Children’s Center	Hospital Campus - High	L to H	RI to H (J1-01, J1-04 only)
Woodlands Job Corps Center	Public Lands – Moderately High	L to H (J-01, J-04 only)	RI to H (J1-01, J1-04 only)
Baltimore-Washington Parkway	Public Lands / Historic Cultural Landscape / Transportation Infrastructure / Park Resource– High	H	H
Fort George G. Meade (U.S. Army)	Public Lands – Moderately High	L to M	H
National Security Agency	Public Lands – Moderately High	H	N/A
Little Patuxent River	Ecological Resource – High	H	N/A
Annapolis Junction	Commercial District – High	H	N/A
Matthewstown Rd/Post Rd/David Victoria Ln/Hekla Ln Neighborhoods	Residential Communities – Moderate	M to H	M to H
Watershed and Welchs Ct Neighborhoods	Residential Communities – Moderately Low	L to H (J-01, J-04 only)	RI to H (J1-01, J1-04 only)

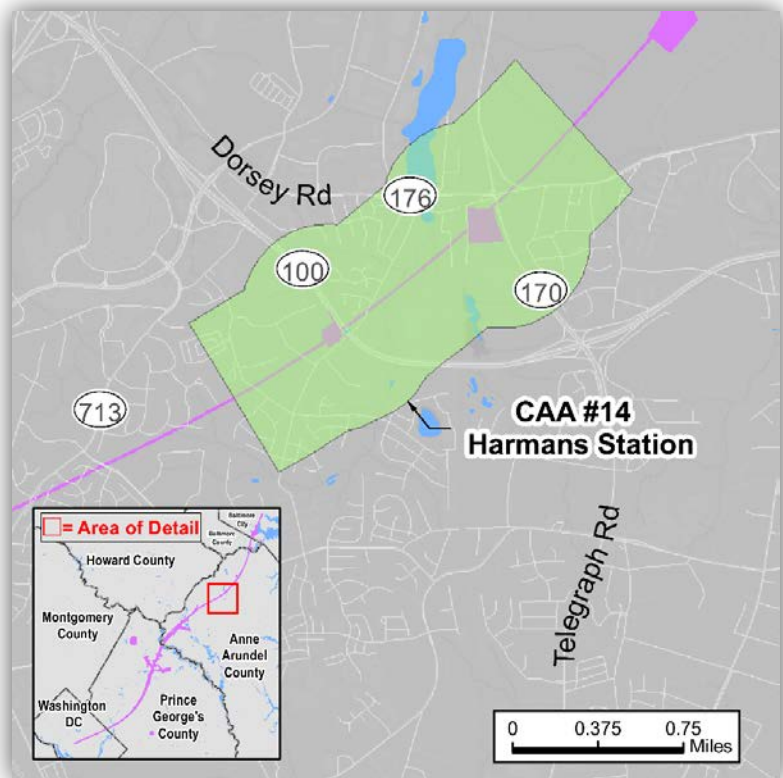
*Degree of Visual Impacts (RI, L, M, H) = RI – Relatively Imperceptible, L – Lower levels, M – Moderate levels, H – Higher levels

CAA #14, #15, and #16 –
Harmans Station,
Lindale/Andover, and BWI
Marshall Airport (Figures D.6-
15, D.6-16, D.6-17)

CAA #14, #15, and #16

Locations: CAA #14 includes Harmans Station near the intersection of Dorsey Road (MD 176) and Telegraph Road (MD 170) and the Matthewstown Road/Post Road community near MD 100 and Harmans Road. CAA #15 includes the Lindale/Andover area near the intersection of Aviation Boulevard (MD 162) and South Camp Meade Road (MD 170). And CAA #16 includes BWI Marshall Airport.

Figure D.6-15: CAA #14- Harmans Station



Proposed SCMAGLEV

Element(s): Build Alternatives J and J1 are in underground tunnel through these CAAs. CAA #14 is impacted by two aboveground FA/EE facilities, one proposed near Matthewstown Road/Post Road community and the other at Harmans Station. CAA #15 is impacted by an aboveground FA/EE facility near the Lindale/Andover area. CAA #16 is impacted by a station and associated parking proposed at BWI Marshall Airport.

Existing Visual Sensitivity: Moderately-Low for park resources, public lands, transportation infrastructure, residential communities, commercial areas, and historic districts

Viewer Sensitivity: Residents (Low sensitivity) and Travelers (Low sensitivity)

Figure D.6-16: CAA #15- Lindale/Andover

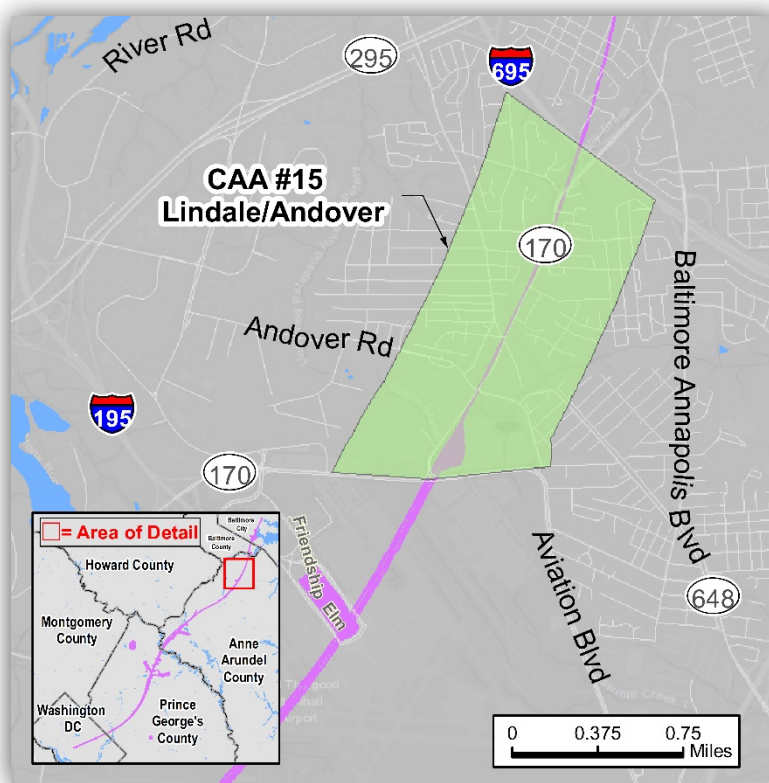


Figure D.6-17: CAA #16- BWI Marshall Airport

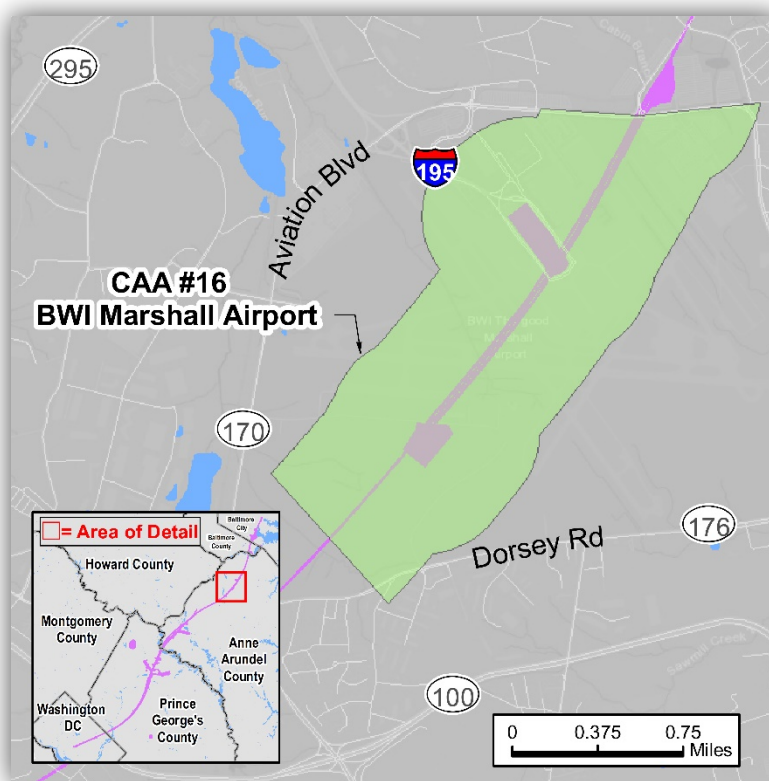


Table D.6-10: Resources and Anticipated Effects within the CAA #14, #15, #16 Viewsheds:

Resource Name	Type of Resource & Visual Sensitivity of Existing Resource	Degree of Anticipated Visual Impact*	
		Build Alternatives J	Build Alternatives J1
BWI Marshall Airport Station	Transportation Infrastructure – Moderately Low	L	L
Lindale Middle School	Public Lands – Moderately Low	L	L
Andover Park	Park Resource – Moderately Low	RI	RI

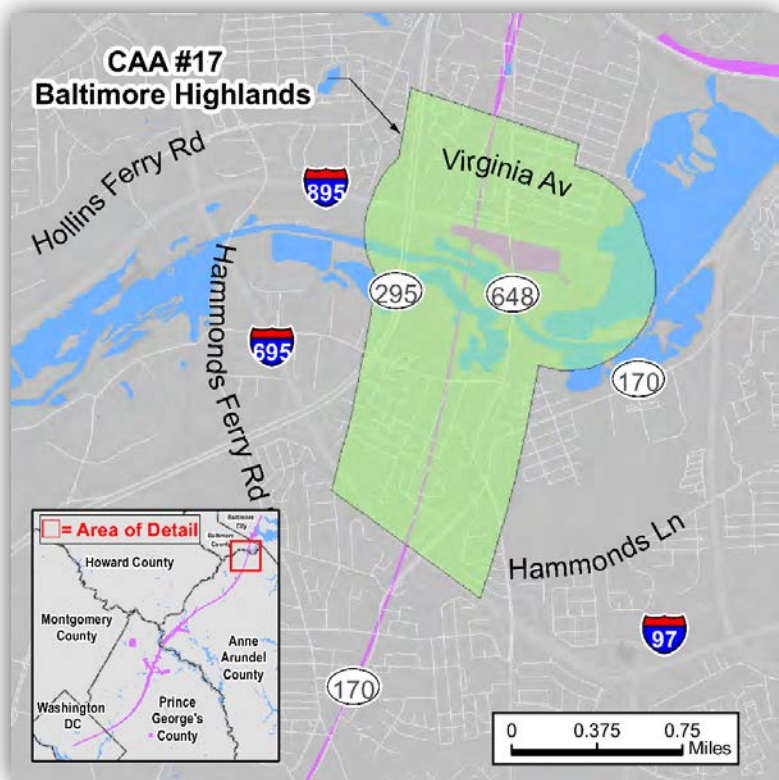
*Degree of Visual Impacts (RI, L, M, H) = RI – Relatively Imperceptible, L – Lower levels, M – Moderate levels, H – Higher levels

CAA #17, #18, #19, and #20 – Baltimore Highlands, Cherry Hill, Westport, and Downtown Baltimore (Figures D.6-18, D.6-19, D.6-20, D.6-21)

CAA #17, #18, #19, #20

Locations: CAA #17 includes Baltimore Highlands and Lansdowne communities near I-895 at Annapolis Road (MD 648). CAA #18 includes Cherry Hill communities near Patapsco Avenue and the Cherry Hill Light Rail Station. CAA #19 includes Westport and Waterview Park up to I-95. CAA #20 includes the area from I-95 through Federal Hill and into the downtown Baltimore business district near Camden Yards and the Baltimore Convention Center.

Figure D.6-18: CAA #17- Baltimore Highlands



Proposed SCMAGLEV Element(s): Build Alternatives J and J1 are in underground tunnel and will either surface at the Cherry Hill Station or will continue underground to the Camden Yards Station. CAA #18 would be impacted by an aboveground FAVEE

facility is proposed near I-895 and MD 648, and the aboveground station is proposed at the Cherry Hill Light Rail Station with associated tunnel portal, MOW, tail tracks, and parking structures (Build Alternatives J-01, J-02, J-03, J1-01, J1-02, and J1-03). CAA #18 is also impacted by a power substation is proposed just south of I-95. CAA #19 is also impacted by the aboveground Cherry Hill Station with associated tunnel portal, MOW, tail tracks, and parking structures (Build Alternatives J-01, J-02, J-03, J1-01, J1-02, and J1-03). CAA #20 is impacted by the construction of an underground station and aboveground station entrance proposed near Camden Yards/Baltimore Convention Center in downtown Baltimore (Build Alternatives J-04, J-05, J-06, J1-04, J1-05, and J1-06).

Existing Visual Sensitivity:
Low to High for park resources, ecological resources, public lands, government buildings, religious buildings, transportation infrastructure, commercial properties/districts, historic districts, and residential communities

Viewer Sensitivity: Residents (Moderate sensitivity) and Travelers (Low sensitivity)

Figure D.6-19: CAA #18- Cherry Hill

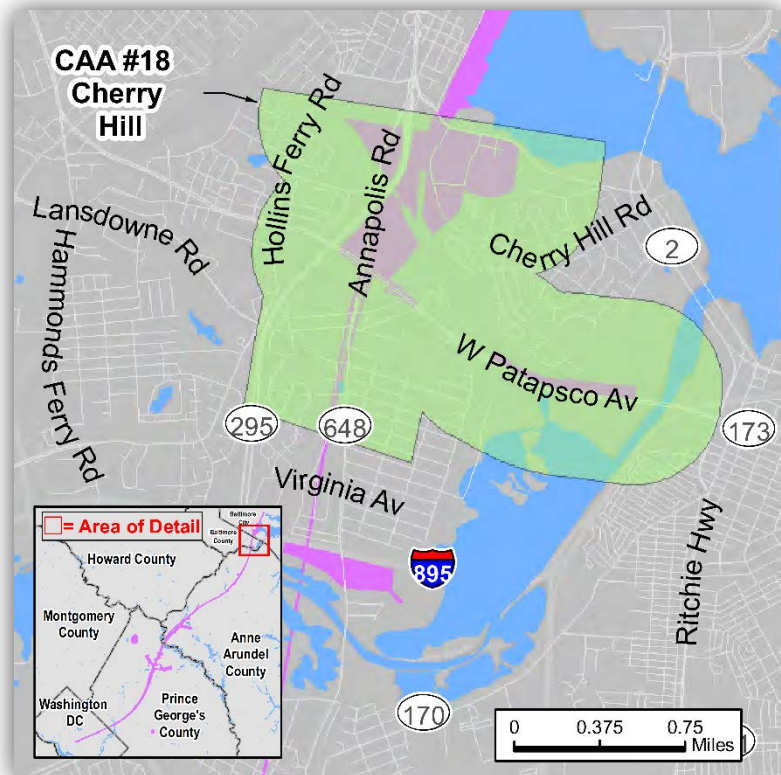


Figure D.6-20: CAA #19- Westport

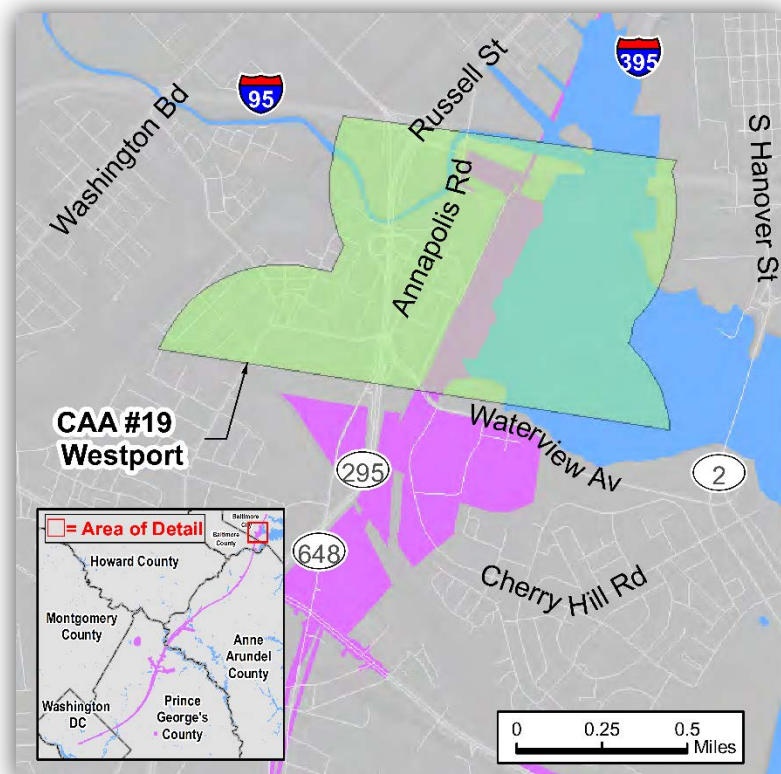


Figure D.6-21: CAA #20- Downtown Baltimore



Table D.6-11: Resources and Anticipated Effects within the CAA #17, #18, #19, #20 Viewsheds:

Resource Name	Type of Resource & Visual Sensitivity of Existing Resource	Degree of Anticipated Visual Impact*	
		Build Alternatives J	Build Alternatives J1
Baltimore Highlands, Lansdowne, Dorchester Heights Neighborhoods	Residential Communities – Moderately Low	RI	RI to L
Patapsco Valley State Park and Patapsco River	Park Resource and Ecological Resource - Moderate	RI to L	L
Cherry Hill, Westport Neighborhoods	Residential Communities – Moderate	L (J-01, J-02, J-03 only)	H (J1-01, J1-02, J1-03 only)
Mt. Auburn Cemetery	Cemetery – Moderate	M to H (J-01, J-02, J-03 only)	M to H (J1-01, J1-02, J1-03 only)

Resource Name	Type of Resource & Visual Sensitivity of Existing Resource	Degree of Anticipated Visual Impact*	
		Build Alternatives J	Build Alternatives J1
Middle Branch Patapsco River, Gwynns Falls, Gwynns Falls Trail, Middle Branch Park and Trail	Ecological, Park, and Recreational Resources – Moderately High	H (J-01, J-02, J-03 only)	M to H (J1-01, J1-02, J1-03 only)
Northeast Highlands Park/Ungers Field, Lakeland Park, Indiana Avenue Park	Park Resources – Moderately High	M to H (J-01, J-02, J-03 only)	M to H (J1-01, J1-02, J1-03 only)
Westport Historic District	Historic district – Moderately High	H (J-01, J-02, J-03 only)	H (J1-01, J1-02, J1-03 only)
Southwest Area Park, Cherry Hill Park, Reedbird Park	Park Resources – Moderately High	RI	RI to L
Arundel Elementary School, Westport Elementary School	Public Lands – Moderate	M to H (J-01, J-02, J-03 only)	M to H (J1-01, J1-02, J1-03 only)
Baltimore Convention Center, Edward A. Garmatz US District Courthouse, Bank of America Financial Center, Federal Reserve Bank-Richmond	Commercial Buildings and Public Lands - Moderate	M to H (J-04, J-05, J-06 only)	H (J1-04, J1-05, J1-06 only)
McKeldin Square, Solo Gibbs Park, Patapsco River	Park and Ecological Resources – Moderate	H (J-04, J-05, J-06 only)	H (J1-04, J1-05, J1-06 only)
Howard St Tunnel & Power House	Transportation Infrastructure – Low	L (J-04, J-05, J-06 only)	L (J1-04, J1-05, J1-06 only)
Camden Station and B&O Warehouse/Baggage Depot	Transportation Building – Moderately Low	M to H (J-04, J-05, J-06 only)	M to H (J1-04, J1-05, J1-06 only)
Baltimore and Ohio (B&O) Railroad Baltimore Belt Line	Transportation Infrastructure – Moderately Low	L (J-04, J-05, J-06 only)	L (J1-04, J1-05, J1-06 only)

Resource Name	Type of Resource & Visual Sensitivity of Existing Resource	Degree of Anticipated Visual Impact*	
		Build Alternatives J	Build Alternatives J1
Wilkens-Robins Building	Cast-iron Commercial Building – Moderately Low	M to H (J-04, J-05, J-06 only)	M to H (J1-04, J1-05, J1-06 only)
George H. Fallon Federal Building	Government Building – Moderate	M to H (J-04, J-05, J-06 only)	M to H (J1-04, J1-05, J1-06 only)
Business and Government Historic District	Historic District - Moderate	M to H (J-04, J-05, J-06 only)	M to H (J1-04, J1-05, J1-06 only)
Otterbein Church	Religious Building - Moderate	M to H (J-04, J-05, J-06 only)	M to H (J1-04, J1-05, J1-06 only)
Otterbein Historic District	Historic District – Moderately High	H to H (J-04, J-05, J-06 only)	M to H (J1-04, J1-05, J1-06 only)

*Degree of Visual Impacts (RI, L, M, H) = RI – Relatively Imperceptible, L – Lower levels, M – Moderate levels, H – Higher levels

D.6.1.3.3 Illustrative Renderings – Before and After Depictions

Visualizations for various SCMAGLEV Project elements are provided in this section. These artistic renderings are based upon preliminary designs and are provided for illustrative purposes. These figures are draft and subject to change and will continue to be revised and refined as the project development process continues. For comparison purposes “before” and “after” images are provided.

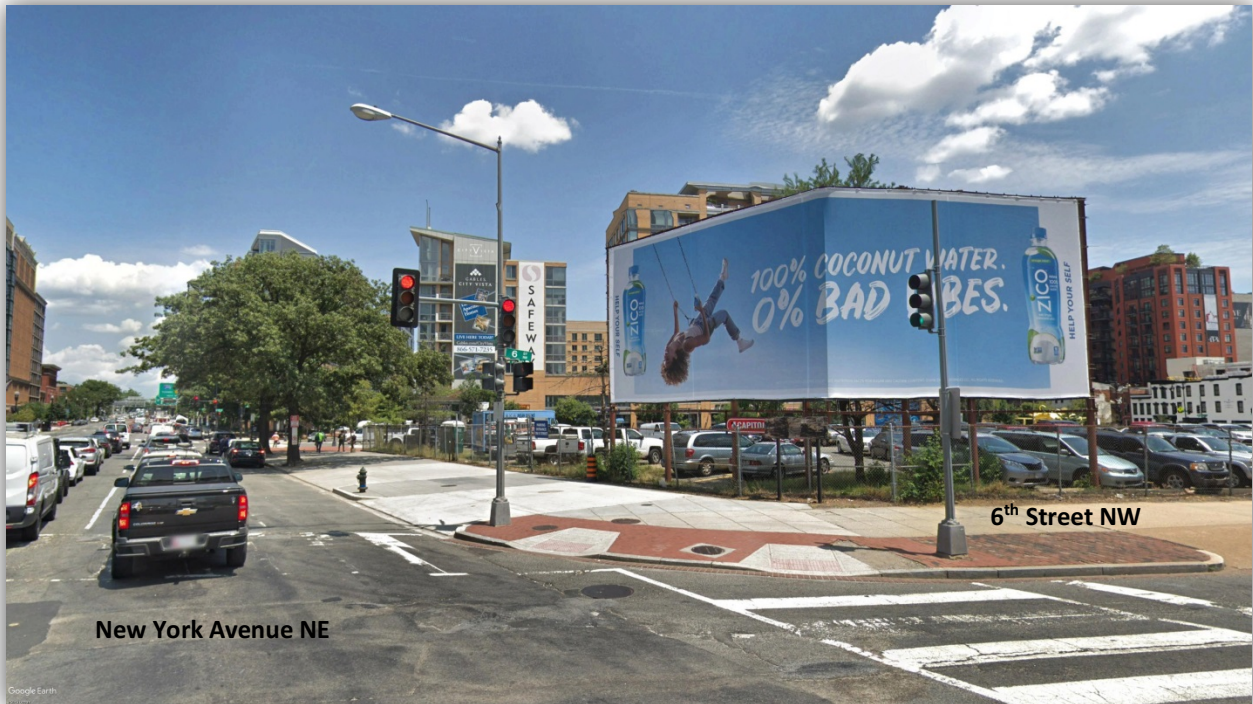


Figure D.6-22 CAA #1 BEFORE: Street View of Location of Proposed Mount Vernon Station, New York Ave at 6th St NW, Looking Northeast



Figure D.6-23 CAA #1 AFTER: Illustrative Rendering of Possible Entrance to Proposed Mount Vernon Station, Looking Northeast



Figure D.6-24 CAA #2 BEFORE: Aerial View of Location of Proposed Power Substation and Fresh Air and Emergency Egress Facility in Ivy City, Looking Northeast



Figure D.6-25 CAA #2 AFTER: Illustrative Rendering of Proposed Power Substation and Fresh Air and Emergency Egress Facility in Ivy City, Looking Northeast

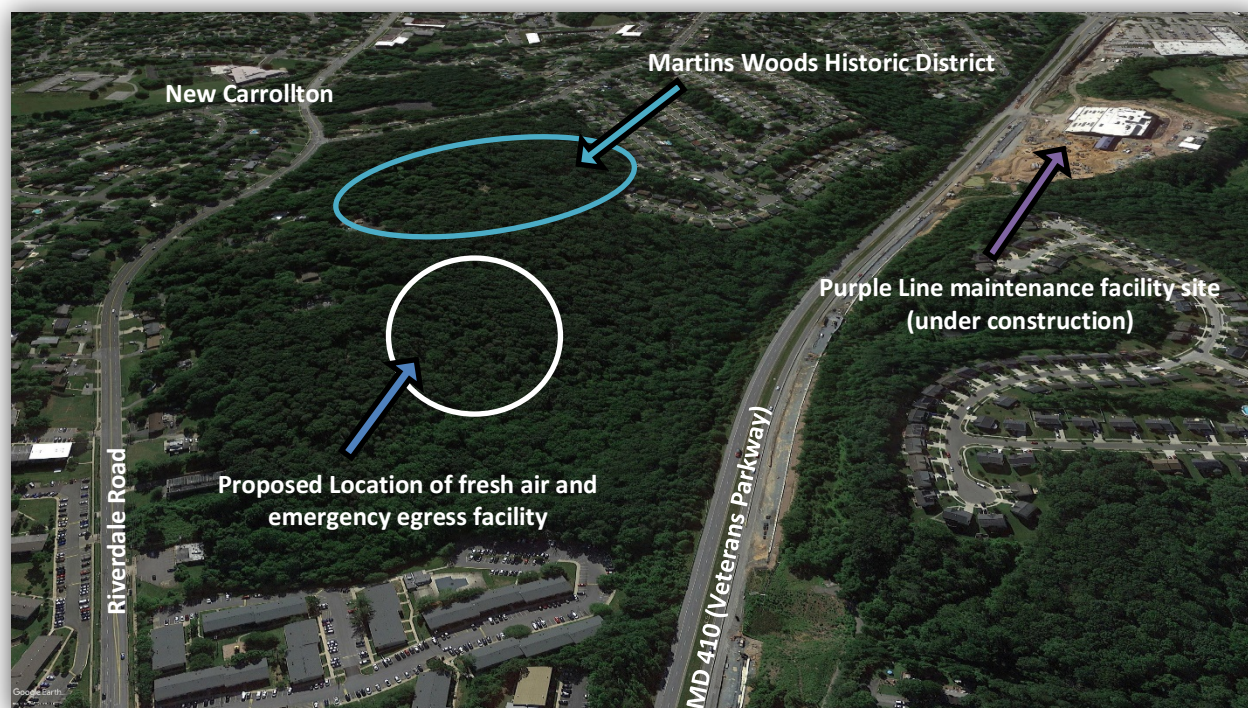


Figure D.6-26 CAA #4 BEFORE: Aerial View of Location of Fresh Air and Emergency Egress Facility New Carrollton, Looking East

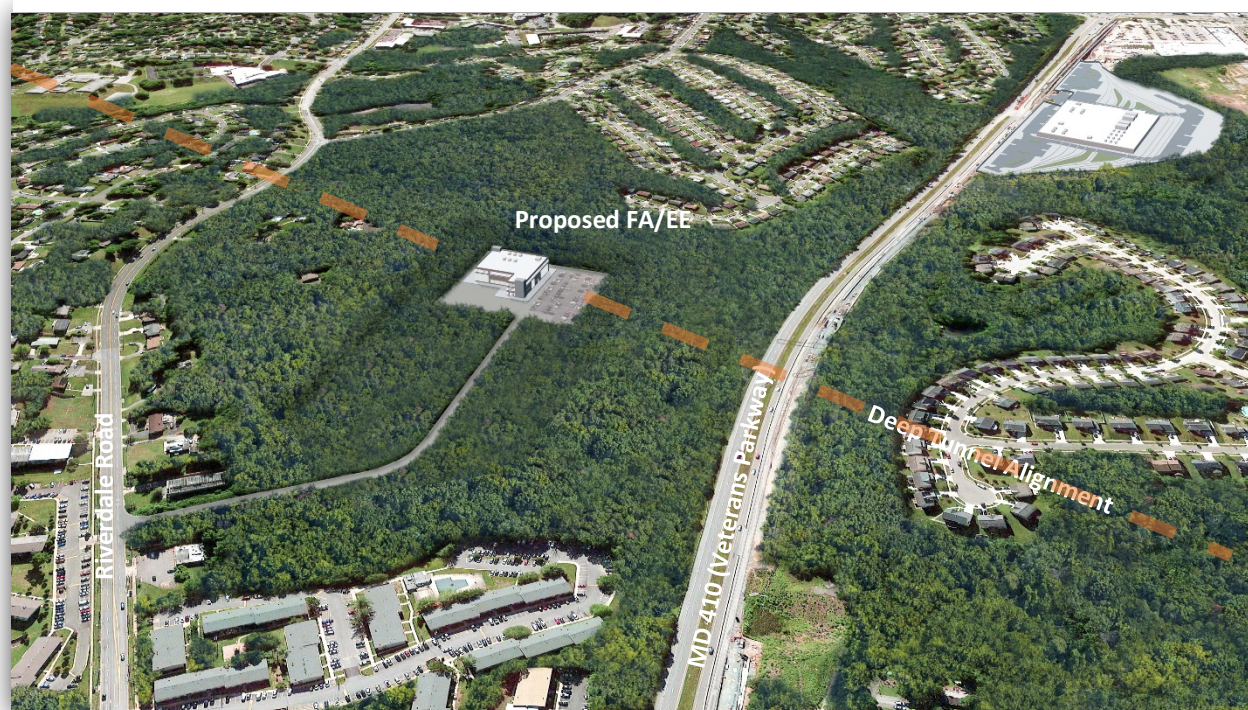


Figure D.6-27 CAA #4 AFTER: Illustrative Rendering of FA/EE Proposed in New Carrollton, Looking East



Figure D.6-28 CAAs #5, #6, #7, #8, #9 BEFORE: Aerial View of Location for Proposed Alignment J Tunnel Portal Transition to Viaduct at BARC Property Adjacent to BWP East, Looking North

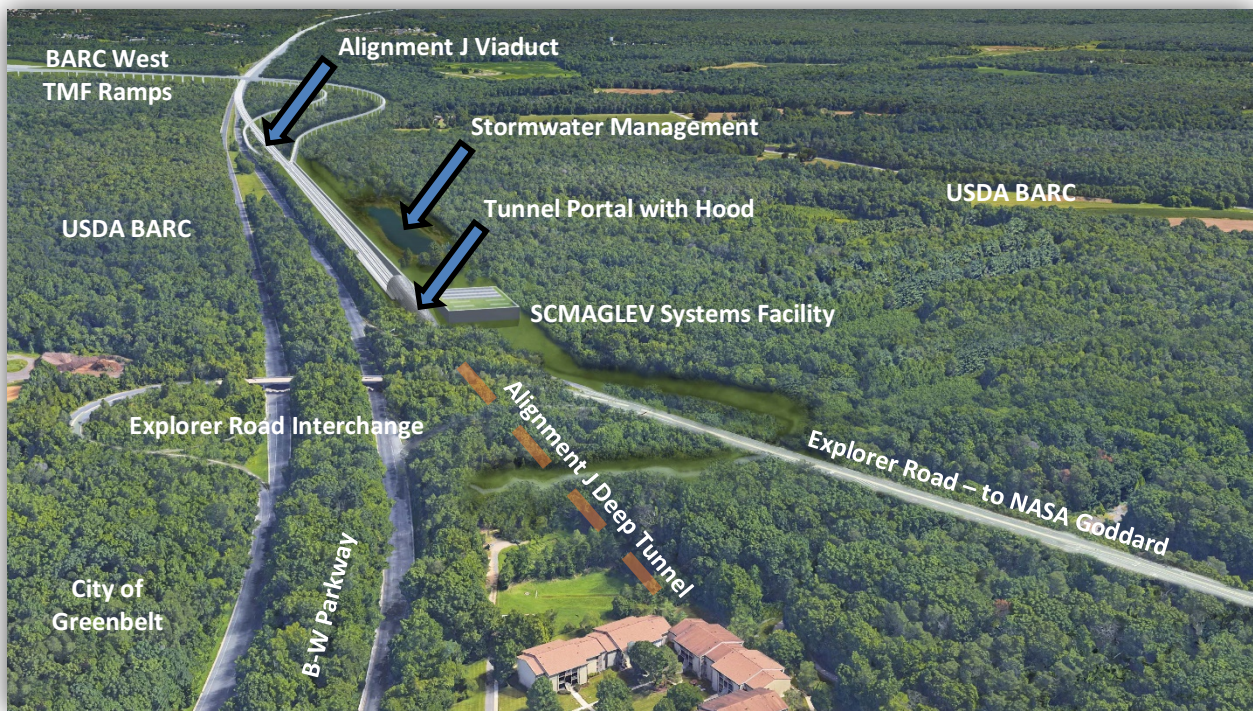


Figure D.6-29 CAAs #5, #6, #7, #8, #9 AFTER: Illustrative Rendering of Alignment J Tunnel Portal at Explorer Road Interchange with Ramps to BARC West TMF, Looking North



Figure D.6-30 CAAs #5, #6, #7, #8, #9 BEFORE: Aerial View of Location for Proposed Alignment J1 Tunnel Portal Transition to Viaduct at BARC Property Adjacent to BWP West, Looking North

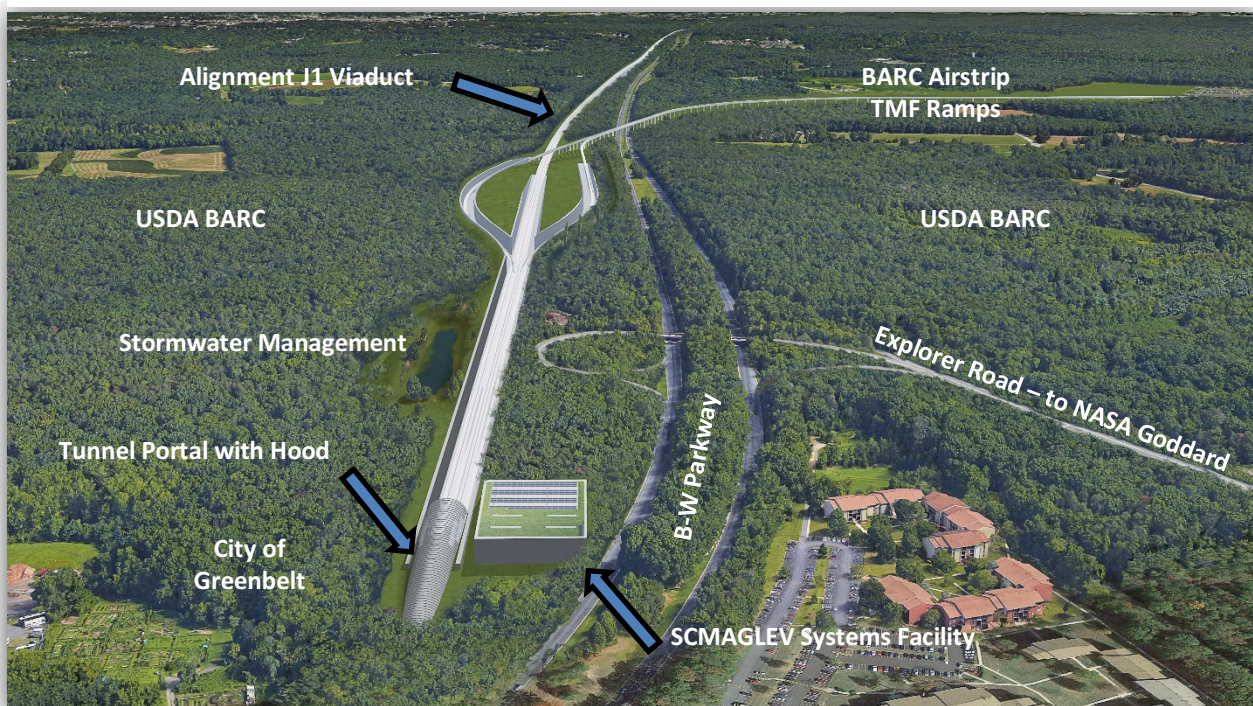


Figure D.6-31 CAAs #5, #6, #7, #8, #9 AFTER: Illustrative Rendering of Alignment J1 Tunnel Portal at Explorer Road Interchange with Ramps to BARC Airstrip TMF, Looking North



Figure D.6-32 CAA #5 BEFORE: Street View of Location of Proposed Alignment J1 Viaduct at Powder Mill Road, Looking Southwest from Southbound BWP at BARC Property

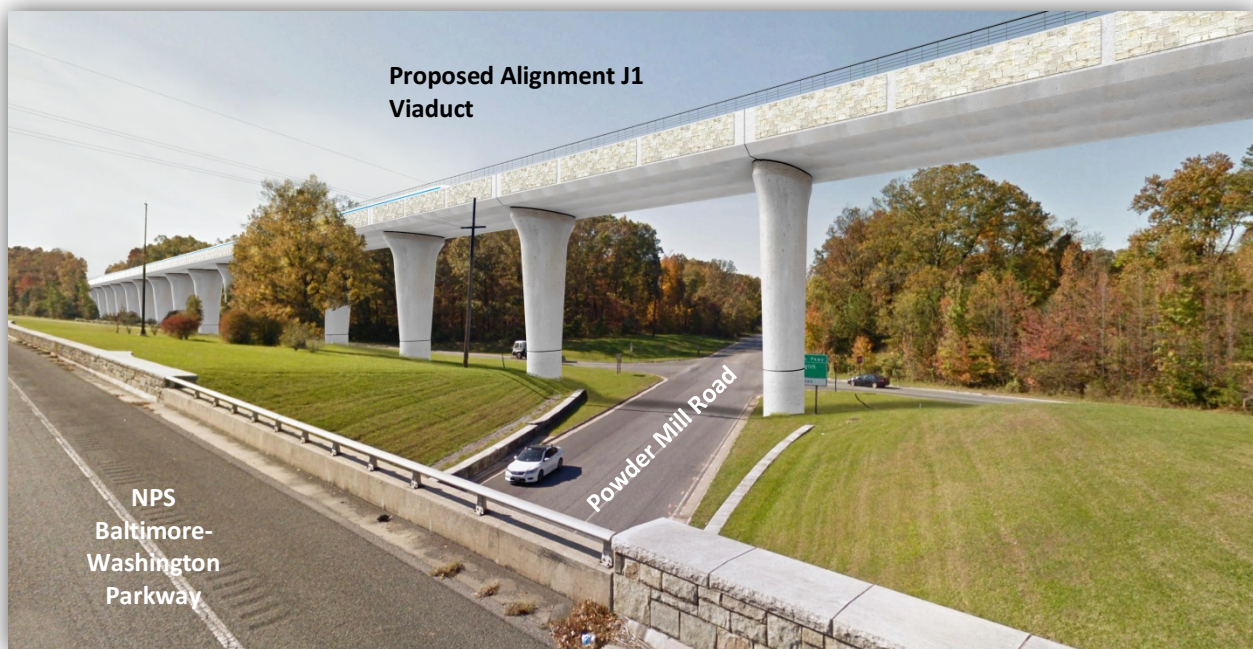


Figure D.6-33 CAA #5 AFTER: Illustrative Rendering of Proposed Alignment J1 Viaduct at Powder Mill Road, Looking Southwest from Southbound BWP at BARC Property



Figure D.6-34 CAAs #5, #6, and #8 BEFORE: Aerial View of Location for Proposed BARC West TMF with and Corresponding Ramps with Alignment J, Looking North

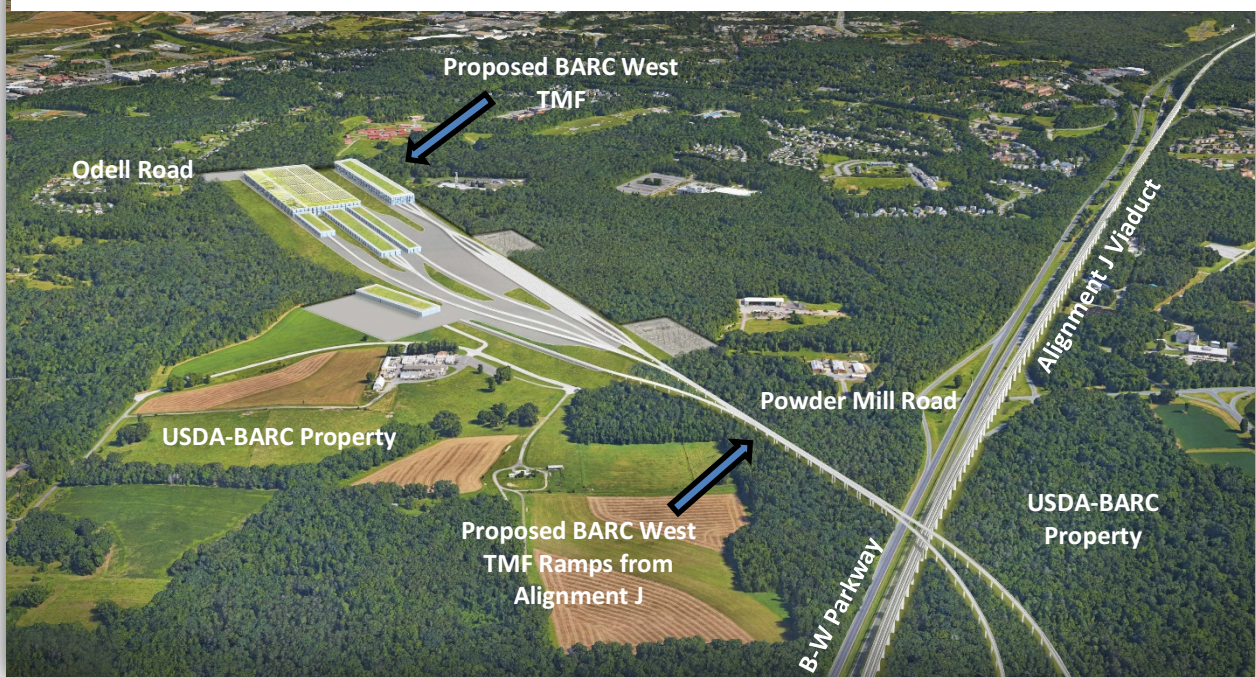


Figure D.6-35 CAAs #5, #6, and #8 AFTER: Illustrative Rendering of Proposed BARC West TMF with and Corresponding Ramps with Alignment J, Looking North



Figure D.6-36 CAAs #5 and #6 BEFORE: Aerial View of Location Proposed BARC Airstrip TMF and Corresponding Ramps with Alignment J1, Looking East

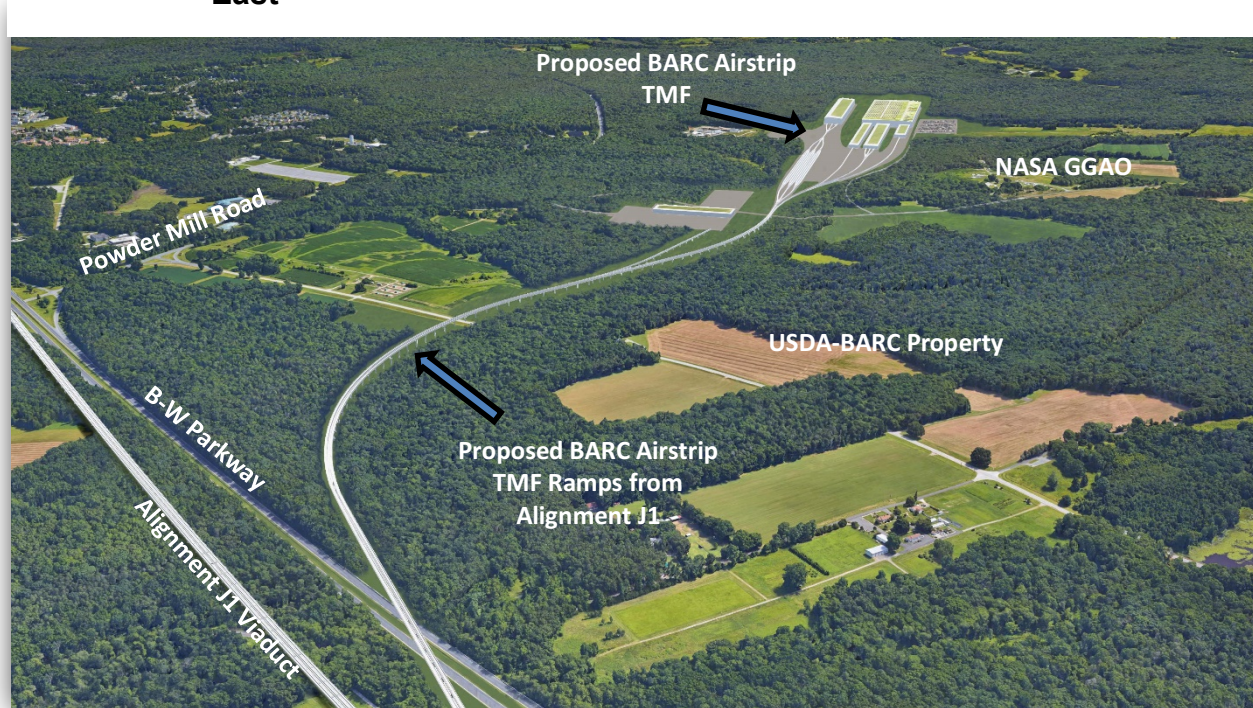


Figure D.6-37 CAAs #5 and #6 AFTER: Illustrative Rendering of Proposed BARC Airstrip TMF and Corresponding Ramps with Alignment J1, Looking East



Figure D.6-38 CAA #7 and #8 BEFORE: Street View Location of Proposed Alignment J Viaduct near MD 197, Looking Northeast from Northbound BWP



Figure D.6-39 CAA #7 and #8 AFTER: Illustrative Rendering of Proposed Alignment J Viaduct near MD 197, Looking Northeast from Northbound BWP (Autumn/Winter Season)



Figure D.6-40 CAA #11 and #12 BEFORE: Street view of Location of Proposed Alignment J1 Parallel to Southbound BWP Crossing the Patuxent River, Looking Southwest



Figure D.6-41 CAA #11 and #12 AFTER: Illustrative Rendering of Proposed Alignment J1 Parallel to Southbound BWP Crossing the Patuxent River, Looking Southwest

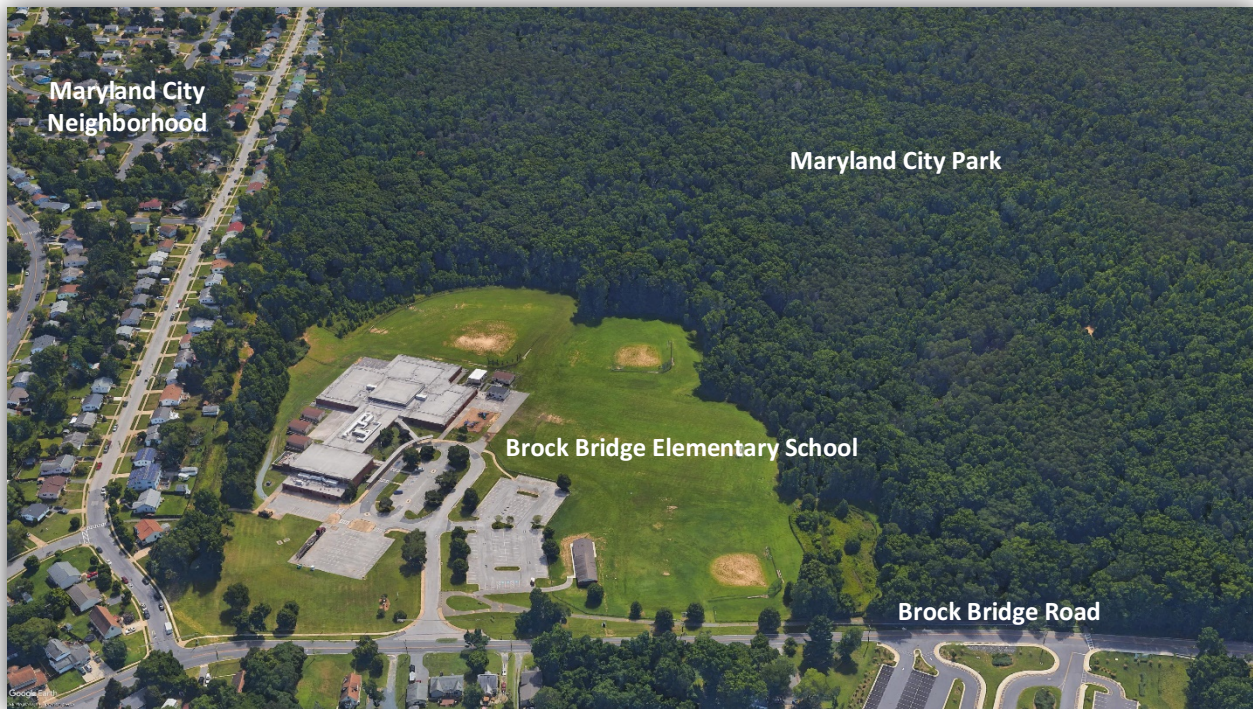


Figure D.6-42 CAA #10 BEFORE: Aerial View of Location of Proposed Build Alignment J1 Tunnel Portal near Brock Bridge Elementary School and Maryland City, Looking East

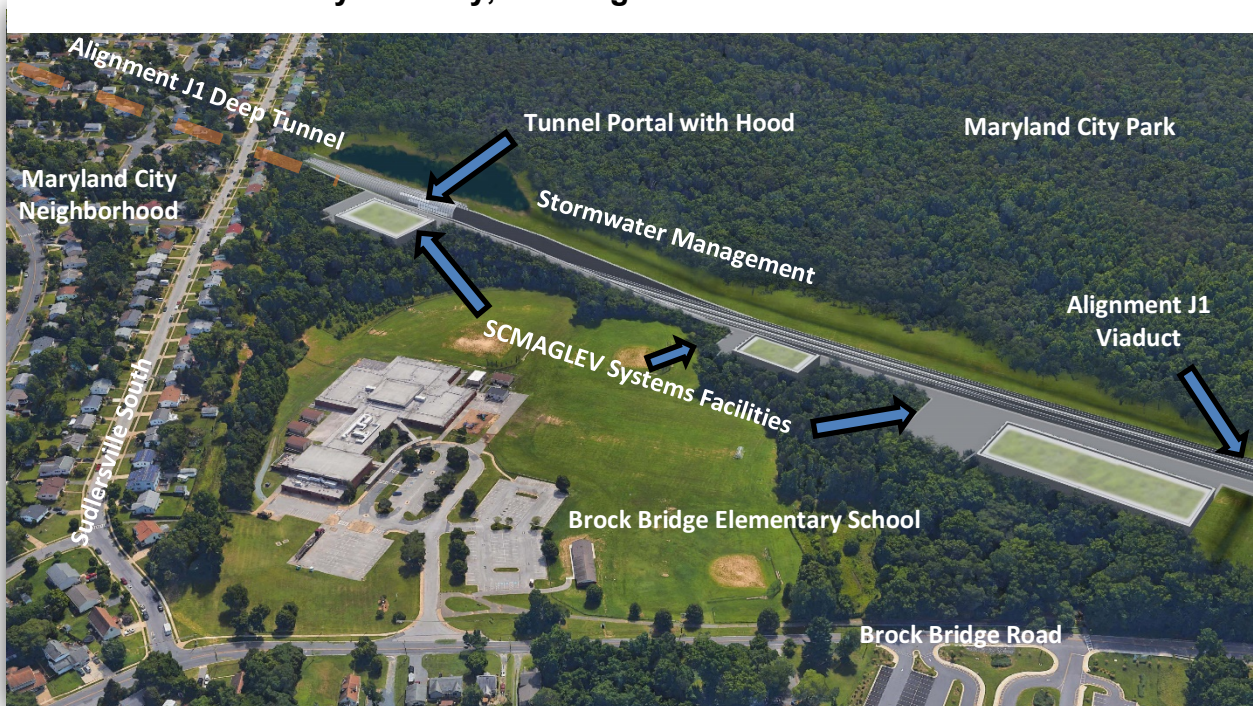


Figure D.6-43 CAA #10 AFTER: Illustrative Rendering of Proposed Build Alignment J1 Tunnel Portal near Brock Bridge Elementary School and Maryland City, Looking East



Figure D.6-44 CAAs #10 and #12 BEFORE: Aerial View of Location of Proposed MD 198 TMF near Patuxent Research Refuge, Fort George G. Meade, and NSA, Looking North

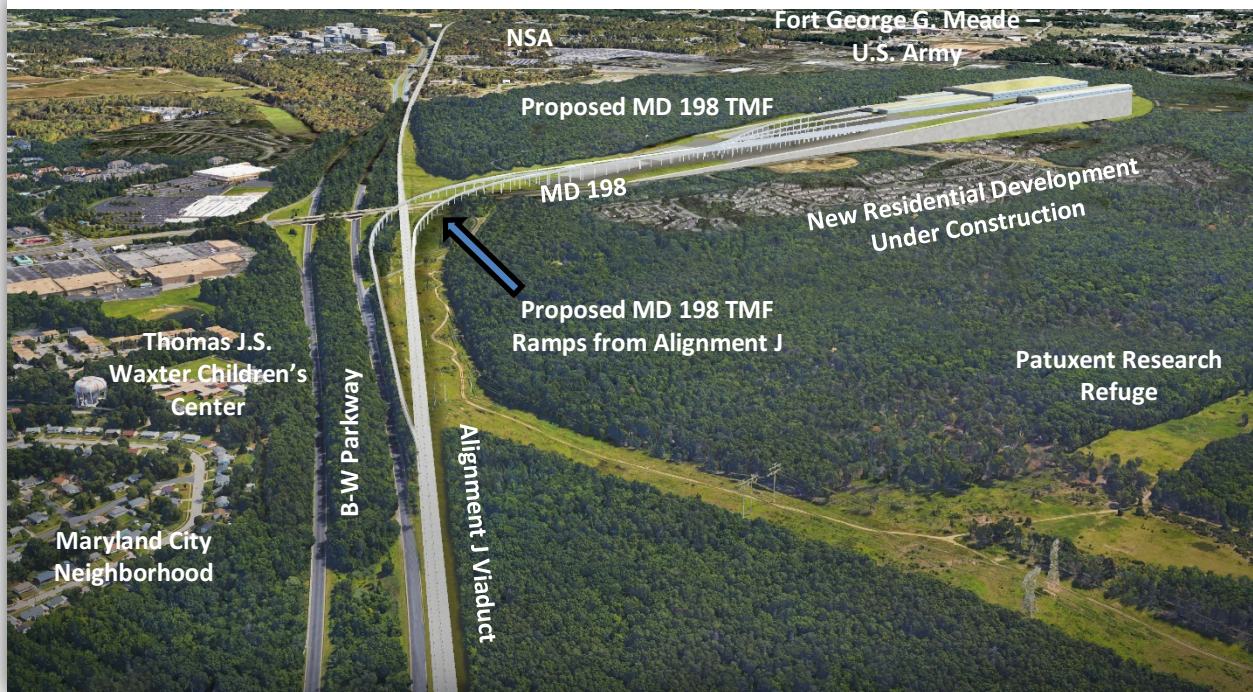


Figure D.6-45 CAAs #10 and #12 AFTER: Illustrative Rendering of Proposed MD 198 TMF with and Corresponding Ramps with Alignment J near Patuxent Research Refuge, Fort George G. Meade, and NSA, Looking North

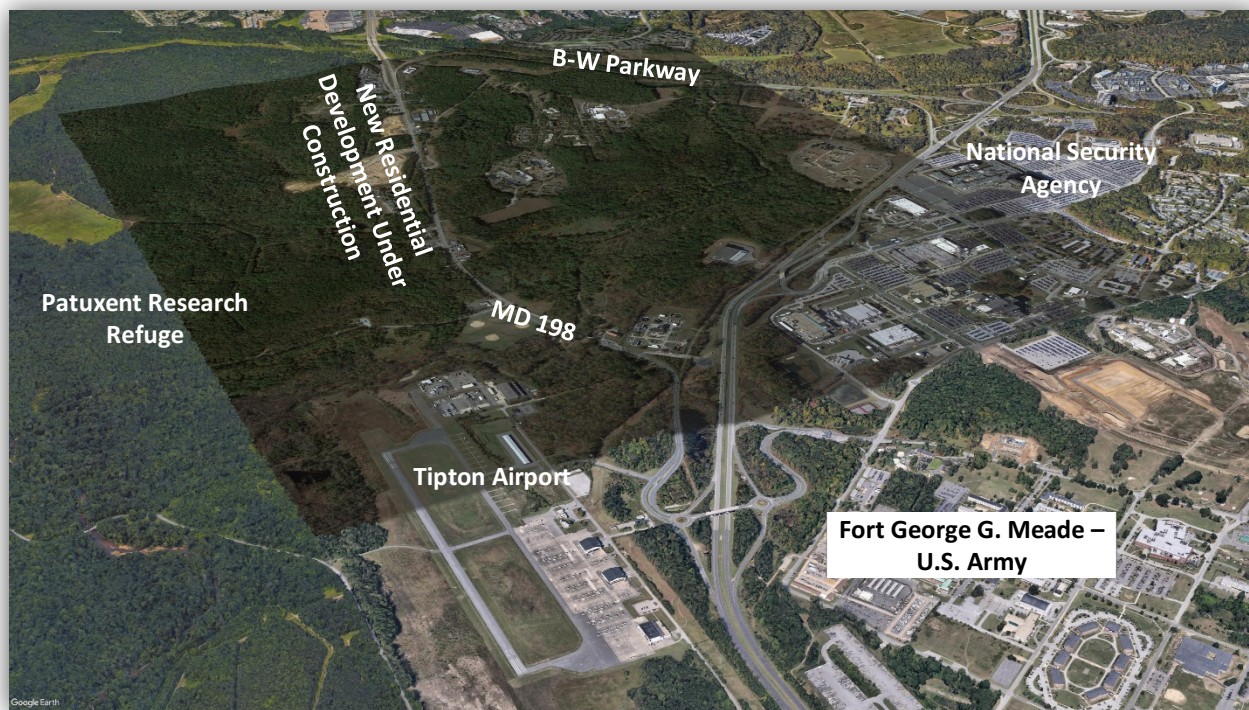


Figure D.6-46 CAAs #10, #11, and #12 BEFORE: Aerial View of Location of Proposed MD 198 TMF with and Corresponding Ramps with Alignment J near Tipton Airport, Fort George G. Meade, and NSA, Looking West



Figure D.6-47 CAAs #10, #11, and #12 AFTER: Illustrative Rendering of Proposed MD 198 TMF with and Corresponding Ramps with Alignment J near Tipton Airport, Fort George G. Meade, and NSA, Looking West



Figure D.6-48 CAA #13 BEFORE: Aerial View of Location of Proposed Alignment J1 FA/EE near Fort George G. Meade and BW Parkway, Looking North



Figure D.6-49 CAA #13 AFTER: Illustrative Rendering of Proposed Alignment J1 FA/EE near Fort George G. Meade and BW Parkway, Looking North



Figure D.6-50 CAA #16 BEFORE: Location of Proposed Station at BWI Marshall Airport – Parking Garage and Terminal, Looking East



Figure D.6-51 CAA #16 AFTER: Illustrative Rendering of Proposed Station at BWI Marshall Airport – Parking Garage and Terminal, Looking East



Figure D.6-52 CAAs #18 and #19 BEFORE: Aerial View of Location of Proposed Cherry Hill Station, Tunnel Portal, Maintenance of Way Facility, and Parking Structures, Looking North



Figure D.6-53 CAAs #18 and #19 AFTER: Illustrative Rendering of Proposed Cherry Hill Station, Tunnel Portal, Maintenance of Way Facility, and Parking Structures, Looking North



Figure D.6-54 CAAs #18 and #19 BEFORE: Aerial View of Location of Proposed Cherry Hill Station, Tail Tracks, Parking Structures near Westport , Looking South



Figure D.6-55 CAAs #18 and #19 AFTER: Illustrative Rendering of Proposed Cherry Hill Station, Tail Tracks, Parking Structures near Westport , Looking South



Figure D.6-56 CAA #20 BEFORE: Location of Proposed Station near Camden Yards in Downtown Baltimore on Pratt Street, Looking East



Figure D.6-57 CAA #20 AFTER: Illustrative Rendering of Proposed Station near Camden Yards in Downtown Baltimore on Pratt Street, Looking East