

Section 4.7

Recreational Facilities and Parklands

BALTIMORE-WASHINGTON SUPERCONDUCTING MAGLEV PROJECT

DRAFT ENVIRONMENTAL IMPACT STATEMENT AND
SECTION 4(f) EVALUATION



U.S. Department of Transportation
Federal Railroad Administration

MDOT
MARYLAND DEPARTMENT
OF TRANSPORTATION.

4.7 Recreational Facilities and Parklands

4.7.1 Introduction

This section identifies recreational facilities and parklands within the Superconducting Magnetic Levitation Project (SCMAGLEV Project) Affected Environment and evaluates the effects on those resources resulting from the Build Alternatives, as well as the No Build Alternative. The Federal Railroad Administration (FRA) considers public recreational facilities and parklands to be publicly owned lands officially designated as such by a Federal, state, or local agency, overseen by officials with jurisdiction that have determined that the public land's primary purpose is as a park or recreational facility. Resources funded by the Land and Water Conservation Fund Act (LWCF) and Maryland Department of Natural Resources' (MDNR) Program Open Space (POS) are also discussed in this section. Additional descriptions of recreational facilities and parklands is provided in the Section 4(f) Evaluation (Appendix F).

4.7.2 Regulatory Context and Methodology

4.7.2.1 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 National Environmental Policy Act (NEPA) compliance procedures, three Federal laws and a state law address the treatment of recreational facilities and parklands:

- **Section 4(f) of the United States Department of Transportation (USDOT) 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 USDOT. 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), 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 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.

4.7.2.2 Methodology

FRA identified public recreational facilities and parklands within 800 feet of the centerline of the alignments and ancillary facilities of the twelve Build Alternatives. This area represents the noise-screening distance based on FRA guidelines for SCMAGLEV technology and is based on project setting, proposed technology, and study area characteristics¹. The noise-screening distance represents the outer limits of potential

¹ Federal Railroad Administration, "High-Speed Ground Transportation Noise and Vibration Impact Assessment," Office of Railroad Policy and Development, DOT/FRA/ORD-12/15, Final Report, September 2012, Washington, D.C.

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 data and characteristics of recreational facilities and parkland resources from the NPS, the District of Columbia Department of Parks and Recreation (DC DPR), the Maryland-National Capital Parks 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™, and 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 via correspondence with park agencies and review of planning documents.

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

Using GIS, FRA mapped recreational facilities and parklands within the SCMAGLEV Project Affected Environment and quantitatively assessed potential impacts to recreational facilities and parklands resulting from of the Build Alternatives. Direct effects of the Build Alternatives include physical disturbance and permanent incorporation of a property as well as noise and visual changes in proximity to recreational facilities and parklands. Section 4.9 Aesthetics and Visual Quality and Section 4.17 Noise and Vibration provide supporting information on the indirect effects of the Build Alternatives on 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.

4.7.3 SCMAGLEV Project 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. Within the urbanized areas at either end of the SCMAGLEV Project Affected Environment, parks are generally small and meet local community recreational needs. Parks within the central portion of the SCMAGLEV Project Affected Environment tend to be larger, more regional in focus, and are generally significant for both active

and passive recreation as well as natural resource conservation. Recreational facilities and parklands within the SCMAGLEV Project Affected Environment are summarized in **Table 4.7-1** and presented in the Socioeconomic Environment Technical Report (see Appendix D.3). Maps of recreational facilities and parklands are also included in Attachment C of Appendix D.3.

Table 4.7-1: Recreational Facilities and Parklands in the SCMAGLEV Project 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	DC-DPR
Dunbar Aquatic Center	Washington, D.C.	No	DC-DPR
R.H. Terrell Recreation Center	Washington, D.C.	No	DC-DPR
Butler-Wyatt Clubhouse #2 Boys & Girls Club	Washington, D.C.	No	DC-DPR
Loomis Park	Washington, D.C.	No	DC-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 DRP
Patuxent River Park I (PRP)	Prince George’s Co.	No	M-NCPPC
Baltimore-Washington Parkway (BWP)	Prince George’s Co. Anne Arundel Co.	No	NPS
Patuxent Research Refuge (PRR)	Prince George’s Co. 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 Homeowners Association
Montpelier Park	Prince George’s Co.	No	M-NCPPC
Brock Bridge Elementary School/ Brockbridge Park (BP)	Anne Arundel Co.	No	Anne Arundel County BOE
Maryland City Park (MCP)	Anne Arundel Co.	Yes – POS, FLP	Anne Arundel County DRP

Park Name	Location	Funding or transfer in ownership under LWCF 6(f), POS, or FLP	Governing Body/Owner
Patapsco Valley State Park	Anne Arundel Co. and Baltimore Co.	Yes – LWCF 6(f)	Maryland Park Service, MDNR
Lakeland Park	Baltimore	Yes - POS	Baltimore DPR
Middle Branch Park	Baltimore	No	Baltimore DPR
Indiana Avenue Park	Baltimore	No	Baltimore DPR

Source: AECOM/Straughan, August 2020

4.7.4 Environmental Consequences

Section 4.7.4 describes the effects of the SCMAGLEV Project Build Alternatives and the No Build Alternative on the public recreational facilities and parklands. **Table 4.7-2** 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 several impacts to public recreational facilities and parklands to 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 (BWP), Patuxent Research Refuge (PRR), 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.

4.7.4.1 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.

4.7.4.2 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 4.7-1**. **Tables 4.7-2** and **4.7-3** summarize the impacts of the Build Alternatives on public recreational facilities and parklands in the SCMAGLEV Project Affected Environment. Maps of public recreational facilities and parklands may be found in Appendix D.3 Attachment C. **Tables 4.7-4** and **4.7-5**, at the end of this section, quantify temporary and permanent impacts associated with alignment, station, and TMF features at individual parks.

Summary of Build Alternatives Impacts

- 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.
- 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.

Alignment

Build Alternatives J

Build Alternatives J alignment 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 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 impacts to PRR would result from the viaduct and ancillary facilities. The entire land area within the North Tract that would be crossed by the viaduct and ancillary facilities is used for hunting and conservation programs. The viaduct would cross over the westernmost bend of Wild Turkey Way, part of the trail system of PRR's North Tract, which also provides fishing access to Blue Heron Pond. 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. 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.

Table 4.7-2: Total Permanent (P) and Temporary (T) Property Impacts to Recreational Facilities and Parklands by Build Alternative

Build Alternative	Acres of Permanent (P) and Temporary (T) Construction Impacts on Parklands by Alignment, Station, and TMF																Total Permanent Impact
	Alignment		Stations								TMF						
			Mount Vernon Square East		BWI Marshall Airport		Cherry Hill		Camden Yards		BARC Airstrip		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	--	--	--	--	--	--	--	--	23.27	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	0.00	--	--	--	--	108.6
J-05	99.1	59.3	0.2	0.2	--	--	--	--	--	--	--	--	23.27	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	21.98	0.2	0.2	--	--	--	--	--	--	--	--	--	--	9.1	3.6	104.8

Source: AECOM/Straughan, August 2020

Table 4.7-3: Summary of Permanent (P) and Temporary (T) Property Impacts to Recreational Facilities and Parklands by Build Alternative (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	23.53	23.5	23.8	23.53	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

Source: AECOM/Straughan, August 2020

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, construction and operation of the SCMAGLEV system would adversely affect recreation activities in two areas of the PRR; a strip of land between Build Alternative J and the BWP, and an area extending approximately 300 feet southwest of the alignment and ancillary facilities. Land below and adjacent to the viaduct and ancillary facilities, and land between the viaduct infrastructure and the BWP would become unavailable or undesirable for recreational activities. Hunting would be affected for safety reasons, and habitat fragmentation caused by the SCMAGLEV system would impact conservation programs that support wildlife viewing and other recreation such as bird watching or fishing along the North Tract trail system. The areas total approximately 165 acres, but the acreage 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 and ancillary facilities would be less than 800 feet from the following eight 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. A fresh air and emergency egress (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.

Build Alternatives J1

Build Alternatives J1 alignments impacts are identical regardless of the TMF and station option chosen. Build Alternatives J1 alignments 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. Build Alternatives J1 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, SC MAGLEV System elements would intrude on the naturalized scenery that enhances the recreational use of the parkway.

Build Alternatives J1 alignments would impact Brock Bridge Elementary School/Brockbridge Park with portal construction immediately south of the property. Minor, linear acquisition of the school/park property would occur in an undeveloped, wooded area of the park and would not affect the ballfields or other recreational activities at the school.

Build Alternatives J1 alignments would impact Greenbelt Forest Preserve with 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. Other ballfields are available in Greenbelt, including Braden Field at the Greenbelt Recreation Center. However, 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 greenbelt.

Build Alternatives J1 alignment impacts to Maryland City Park would result from 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).

Build Alternatives J1 alignments 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. 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.

Build Alternatives J1 alignments 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.

Build Alternatives J1 alignments impacts to Springfield Road Park would result from construction of SCMAGLEV systems within a wooded, undeveloped portion of the park. The parkland is undeveloped with little impact on user experience at the park.

Build Alternatives J1 alignments and ancillary facilities would be less than 800 feet from the following eight 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 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.

Stations

Mount Vernon Square East

A station entrance to Mount Vernon Square East Station would impact the New York Avenue Recreation Center (NYARC). The entrance would be located in an area of lawn and trees and would limit the available space available for use of the area as a gathering place for social and passive recreational activities adjacent to the south side of the outfield of the baseball field. The Kennedy Recreation Center, approximately 2,200 feet northwest at 6th and O Streets NW, offers similar space of lawn and trees adjacent to a baseball diamond and other ballfields/courts.

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.

Baltimore-Washington International Thurgood Marshall Airport (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.

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.

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 scenery that enhances the recreational use of the parkway.

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

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

The MD 198 TMF impacts to Patuxent River Park 1 would result from the vegetative clearing associated with ramp access within undeveloped wooded parkland and piers located within and adjacent to 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 MD 198 TMF impacts to Springfield Road Park would result from the vegetative clearing associated with the maintenance of way (MOW) facility, as well as the 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.

BARC Airstrip

The BARC Airstrip TMF impacts to BWP would result from vegetative clearing associated with the ramp access to the TMF, which would also cross over the BWP 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 BARC Airstrip TMF impacts to the Greenbelt Forest Preserve would result from the vegetative clearing associated with 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 BARC Airstrip TMF is adjacent to PRR property. It 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, as impacts to these programs affect recreational use of PRR. The area of impact to PRR within the 300-foot buffer would be approximately 13 acres.

BARC West

The BARC West TMF impacts to the BWP would result from the vegetative clearing associated with 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 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.

**Table 4.7-4: Permanent (P) and Temporary (T) Property Impacts to Recreational Facilities and Parklands, Build Alternative J
[in Acres]**

Build Alternative	Impact	Alignment	Stations				TMF		
			Mount Vernon Square East	BWI Marshall Airport	Cherry Hill	Camden Yards	MD 198	BARC Airstrip	BARC West
J-01	P	BWP: 60.18 PRR: 23.53	SPR: 0 NYARC: 0.16	--	--	--	BWP: 28.70 PRR: 0.29	--	--
	T	BWP: 26.87 PRR: 25.87	SPR: 0.14 NYARC: 0.06	--	--	--	BWP: 0.29	--	--
J-02	P	BWP: 65.47 PRR: 23.53	SPR: 0 NYARC: 0.16	--	--	--	--	BWP: 3.29	--
	T	BWP: 35.90 PRR: 25.46	SPR: 0.14 NYARC: 0.06	--	--	--	--	BWP: 0.72	--
J-03	P	BWP: 64.24 PRR: 23.53	SPR: 0 NYARC: 0.16	--	--	--	--	--	BWP: 3.14
	T	BWP: 32.35 PRR: 25.46	SPR: 0.14 NYARC: 0.06	--	--	--	--	--	BWP: 3.63
J-04	P	BWP: 60.18 PRR: 23.53	SPR: 0 NYARC: 0.16	--	--	--	BWP: 28.70 PRR: 0.29	--	--
	T	BWP: 26.87 PRR: 25.87	SPR: 0.14 NYARC: 0.06	--	--	--	BWP: 0.29	--	--
J-05	P	BWP: 65.47 PRR: 23.53	SPR: 0 NYARC: 0.16	--	--	--	--	BWP: 3.29	--
	T	BWP: 35.90 PRR: 25.46	SPR: 0.14 NYARC: 0.06	--	--	--	--	BWP: 0.72	--
J-06	P	BWP: 64.24 PRR: 23.53	SPR: 0 NYARC: 0.16	--	--	--	--	--	BWP: 3.14
	T	BWP: 32.35 PRR: 25.46	SPR: 0.14 NYARC: 0.06	--	--	--	--	--	BWP: 3.63

SPR: Small Park Reservations

BWP: Baltimore-Washington Parkway

MCP: Maryland City Park

NYARC: New York Avenue Recreation Center

SRP: Springfield Road Par

PRR: Patuxent Research Refuge

GFP: Greenbelt Forest Preserve

PRP: Patuxent River Park 1

MHP: Montpelier Hills Park

Source: AECOM/Straughan, August 2020

Table 4.7-5: Permanent (P) and Temporary (T) Property Impacts to Recreational Facilities and Parklands, Build Alternative J1 [in Acres]

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

Build Alternative	Impact	Alignment	Stations				TMF		
			Mount Vernon Square East	BWI Marshall Airport	Cherry Hill	Camden Yards	MD 198	BARC Airstrip	BARC West
J1-03	P	BWP: 36.80 BRP: 0.0008 GFP: 37.46 MCP: 18.30 PRP: 1.35 SRP: 1.69 MHP: 0.57	SPR: 0 NYARC: 0.16	--	--	--	--	--	BWP: 4.57 GFP: 4.51
	T	BWP: 11.70 BRP: 0.005 GFP: 4.48 MCP: 4.30 PRP: 0.80 SRP: 0.70 MHP: 0.3	SPR: 0.14 NYARC: 0.06	--	--	--	--	--	BWP: 2.36 GFP: 1.26
J1-04	P	BWP: 34.86 BRP: 0.0008 PRP: 1.13 GFP: 39.68 MCP: 17.7 PRP: 1.13 SRP: 0.80 MHP: 0.57	SPR: 0 NYARC: 0.16	--	--	--	BWP: 17.85 MCP: 6.74 PRP: 0.69	--	--
	T	BWP: 7.42 BRP: 0.005 PRP: 0.26 GFP: 5.83 MCP: 2.55 PRP: 0.26 SRP: 0 MHP: 0.3	SPR: 0.14 NYARC: 0.06	--	--	--	BWP: 6.15 MCP: 1.23 PRP: 0.26	--	--
J1-05	P	BWP: 36.96 BRP: 0.0008 GFP: 35.94 MCP: 18.30 PRP: 1.35	SPR: 0 NYARC: 0.16	--	--	--	--	BWP: 2.62 GFP: 4.60	--

Build Alternative	Impact	Alignment	Stations				TMF		
			Mount Vernon Square East	BWI Marshall Airport	Cherry Hill	Camden Yards	MD 198	BARC Airstrip	BARC West
		SRP: 1.69 MHP: 0.57							
	T	BWP: 12.71 BRP: 0.005 GFP: 6.58 MCP: 4.30 PRP: 0.80 SRP: 0.70 MHP: 00.3	SPR: 0.14 NYARC: 0.06	--	--	--	--	BWP: 2.09 GFP: 1.04	--
J1-06	P	BWP: 36.80 BRP: 0.0008 GFP: 37.46 MCP: 18.30 PRP: 1.35 SRP: 1.69 MHP: 0.57	SPR: 0 NYARC: 0.16	--	--	--	--	--	BWP: 4.57 GFP: 4.51
	T	BWP: 11.7 BRP: 0.005 GFP: 4.48 MCP: 4.30 PRP: 0.80 SRP: 0.70 MHP: 0.3	SPR: 0.14 NYARC: 0.06	--	--	--	--	--	BWP: 2.36 GFP: 1.26

SPR: Small Park Reservations

BWP: Baltimore-Washington Parkway

MCP: Maryland City Park

NYARC: New York Avenue Recreation Center

SRP: Springfield Road Par

PRR: Patuxent Research Refuge

GFP: Greenbelt Forest Preserve

PRP: Patuxent River Park 1

MHP: Montpelier Hills Park

Source: AECOM/Straughan, August 2020

4.7.5 Short-term Construction Effects

Construction of each Build Alternative would result in temporary impacts to public recreational facilities and parklands:

Alignment

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 five NPS Small Park Reservations (176, 177A, 179, 180, 181, 182, 183, and 185) 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.

Build Alternatives J alignments would result 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 short-term construction effects to BWP would include clearing and grubbing of vegetation, and excavation that would result from construction associated with relocation and construction of powerlines, tunnel laydown areas, operation of a tunnel boring machine (TBM) Launch-Retrieval site, and construction of the viaduct and ancillary facilities. Construction may result in 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 include temporary noise and visual impacts at PRR. Areas of cleared vegetation would occur in areas of mature forest and habitat, with impacts lasting 75-100 years.

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 alignments short-term construction effects to BWP would include clearing and grubbing of vegetation, and excavation that would result from the construction 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 may result in 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 J1 alignments short-term construction effects to Greenbelt Forest Preserve would include clearing and grubbing of vegetation, and excavation that would result from the construction at tunnel laydown areas. 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 to 100 years.

Build Alternatives J1 alignments short-term construction effects to Maryland City Park would include clearing and grubbing of vegetation, and excavation that would result from construction for powerlines and other system elements and tunnel laydown 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 alignments short-term construction effects to Patuxent River Park 1 would include clearing and grubbing of vegetation, and excavation that would result from construction for the viaduct and tunnel laydown areas. 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. The Project Sponsor will consult with the M-NCPPC to develop mitigation plans to address temporary construction impacts.

Build Alternatives J1 alignments short-term construction effects to Springfield Road Park would include clearing and grubbing of vegetation, and excavation that would result from construction for the viaduct for Build Alternatives J1-01 and J1-04, and the construction for new powerlines for Build Alternatives J1-02, J1-03, J1-05, and J1-06. 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.

Build Alternatives J1 alignments short-term construction effects to Brock Bridge Elementary School/Brockbridge Park would include clearing and grubbing of vegetation, and excavation that would result from construction associated with 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.

Stations

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

Mount Vernon Square East

Mount Vernon Square East Station would have short-term construction effects to seven NPS Small Park Reservations, and construction would require removal of sidewalks, curbs, landscaped beds and lawn resulting from the cut/cover tunnel construction. The Project Sponsor will 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 require clearing of vegetation in an area of trees and lawn south of the ballfield. The construction area surrounds the proposed station entrance and construction would result in temporary noise impacts. The Project Sponsor will restore areas of temporary impact in the station area to its existing condition following construction.

TMF

MD 198

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 include clearing of vegetation within undeveloped woodlands and areas of lawn.

BARC Airstrip

The BARC Airstrip TMF short-term construction effects to BWP would include clearing and grubbing of vegetation, and excavation that would result from the construction of new powerlines and other system elements within the Powder Mill Road/BWP interchange in an area of lawn and on both sides of Powder Mill Road. Construction activities may result in lane shifts and temporary lane closures, but the BWP would remain open during construction. Areas disturbed by construction would be restored and replanted following construction.

The BARC Airstrip TMF short-term construction effects to the Greenbelt Forest Preserve would include clearing and grubbing of vegetation, and excavation that would result from the construction associated with various elements of the TMF ramps. 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.

BARC West

The BARC West TMF short-term construction effects to BWP would include clearing and grubbing of vegetation, and excavation that would result from the construction associated with the BARC West TMF ramps. Construction effects may result in clearing of vegetation and would result in lane shifts and temporary lane closures, but the BWP would remain open during construction.

The BARC West TMF short-term construction effects to the Greenbelt Forest Preserve would include clearing and grubbing of vegetation, and excavation that would result from the viaduct and cut/cover tunnel associated with the BARC West TMF ramps. 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.

4.7.6 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.