National Park Service
U.S. Department of the Interior

George Washington Memorial Parkway

October 2026

Triumphal Arch at Memorial Circle

Revised Environmental Assessment **DOI-NPS-136973**

The National Park Service (NPS) has considered the factors mandated by the National Environmental Policy Act (NEPA). This environmental assessment represents the NPS's good-faith effort to fulfill NEPA's requirements by prioritizing documentation of the most important relevant considerations within the statutorily mandated page limits and timeline. This prioritization reflects the NPS's expert judgment; and any considerations addressed briefly or left unaddressed are, in NPS's judgment, comparatively non-substantive and would not meaningfully inform NPS's consideration of environmental effects and the decision to be made. The environmental assessment is substantially complete, considers the factors mandated by NEPA, and, in the decisionmaker's judgment, contains analysis adequate to inform NPS's decision regarding the proposed action.

KEY CHANGES FROM THE JUNE 2026 ENVIRONMENTAL ASSESSMENT

Changes to Chapter 1

Section 1.3 – Project Area

The project area map was updated to reflect the two remaining utility corridors (Figure 1).

Changes to Chapter 2

Section 2.2 – Proposed Action

- The description of the proposed action has been updated to incorporate the most recent design information for the Triumphal Arch, including fabrication materials and a lighted torch (Section 2.2).
- Final utility corridors and additional detail regarding installation methods and associated routing considerations were included (Section 2.2.4).
- Construction-related requirements were updated to incorporate noise blankets or barriers as a project design element (Section 2.2.8).
- The signalization plan has been refined, along with other transportation-related modifications, to reflect current design updates and to enhance overall circulation and safety (Section 2.2.9).

Changes to Chapter 3

Section 3.2 – Cultural Resources

The Area of Potential Effect (APE) Map was revised to reflect the final APE included in the Assessment of Effect (Section 3.2.1).

Section 3.3 – Historic Views

- The affected environment was updated to describe existing views from within George Washington Memorial Parkway and Arlington National Cemetery (Section 3.3.1).
- The environmental effects were updated to include effects on other views within George Washington Memorial Parkway and were to include additional views within Arlington Cemetery (Section 3.3.2).

Section 3.4 – Cultural Landscapes and Historic Districts

- The affected environment was updated to describe four cultural landscapes: Mount Vernon Memorial Highway, North Cultural Landscape; The National Mall Cultural Landscape; Washington Monument and Grounds Cultural Landscape; and the Thomas Jefferson Memorial Cultural Landscape (Section 3.4.1).
- The environmental effects were updated to include effects on four cultural landscapes: Mount Vernon Memorial Highway, North Cultural Landscape; The National Mall Cultural

Landscape; Washington Monument and Grounds Cultural Landscape; and the Thomas Jefferson Memorial Cultural Landscape (Section 3.4.2).

- The environmental effects of impacts to the Boundary Channel Bridge (Memorial Avenue Bridge) were removed because utilities are no longer proposed to cross the bridge (Section 3.4.2).

Section 3.5 – Cultural Landscapes and Historic Districts

- The methods section was updated to include the Phase IB investigation, including geomorphological analysis (Section 3.5.1).
- The environmental effects analysis was updated with the result from the Phase IB investigation, including geomorphological analysis o (Section 3.5.3).

Section 3.7 – Traffic and Circulation

The methods section was updated to include all the additional data the relied on in the analysis (Section 3.7.1).

Section 3.9. – Noise

- The noise methodology section was revised to include an explanation of the noise-modeling approach used in the analysis (Section 3.9.1).
- The environmental effects were updated to explain the results of the noise modeling and to disclose additional information regarding noise impacts within Arlington National Cemetery (Section 3.9.3.2).

Section 3.10

This section was added to reflect additional analysis completed.

Changes to Appendix A

Section A.1 – Alternatives Considered but Eliminated from Detailed Analysis

The alternatives considered but eliminated were updated to address proposals for relocating the Triumphal Arch or creating a different feature or design to celebrate the 250th anniversary.

Section B.1 – Issues and Impact Topic Considered but Eliminated from Detailed Analysis

- Aviation Safety: This section was updated with information from the Federal Aviation Administration's aeronautical study.
- Air Quality: This section was updated to include additional air quality details.
- Night Skies: This section was removed. Impacts to night skies are included in Section 3.10.

Changes to Appendix B

This appendix was replaced with an updated report titled, *Arlington Memorial Circle: Transportation Access, Safety, and Operations Analysis*. The updated report includes additional details of the proposed transportation changes and includes revised data that support the conclusions presented in the EA.

Changes to Appendix C

This appendix was replaced with the historic property tables included in the Final Assessment of Effect.

Changes to Appendix D

This appendix has been updated to incorporate the additional mitigation measures that the NPS proposed during the Section 106 consultation under the National Historic Preservation Act.

Changes to Appendix E

This appendix has been updated to reflect the most recent changes in the Section 106 consultation and coordination process.

Changes to Appendix F

This appendix has been updated to include an additional planned action within the project area.

Added Appendix G

This appendix was added to support the dismissal of noise as an impact topic in Appendix A.

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CHAPTER 1. INTRODUCTION

To comply with the National Environmental Policy Act (NEPA), the National Park Service (NPS) prepared an Environmental Assessment (EA) analyzing the alternatives and evaluating the potential environmental effects associated with constructing the proposed United States Triumphal Arch (the Arch) on the George Washington Memorial Parkway (Parkway). The EA is prepared in accordance with 516 Departmental Manual 1, U.S. Department of the Interior, Handbook of National Environmental Policy Act Implementing Procedures, February 2026 (DOI NEPA Handbook) and its appendices, along with the NEPA Implementing Regulations at 43 Code of Federal Regulations (CFR) Part 46.

1.1. Background

The Arch would serve as a signature monumental structure honoring the nation's 250th anniversary and contributing to Washington, D.C.'s tradition of honoring national principles. Drawing on the historic Roman precedent of erecting freestanding arches to celebrate civic achievement, the Arch is envisioned as a prominent addition to the capital's architectural landscape in the monumental core.

1.2. Purpose and Need

The purpose of the proposed action is to celebrate 250 years of American independence by honoring America's founding principles through installation of an arch at the intersection of Arlington Memorial Bridge and Memorial Avenue within George Washington Memorial Parkway, in a manner consistent with the avenue's established role as a ceremonial gateway and "Avenue of Heroes" celebrating valor, sacrifice, and American heritage.

Arlington Memorial Bridge and Memorial Avenue serve as a ceremonial entrance to Washington, D.C. and the gateway to Arlington National Cemetery, physically and symbolically uniting the nation's history along a corridor already lined with monuments honoring diverse figures of American significance. Executive Order 14252, *Making the District of Columbia Safe and Beautiful*, directs the Secretary of the Interior to develop proposals to ensure Federal buildings and lands uplift and beautify public spaces and generate in the citizenry pride in and respect for our Nation, promoting beautification and the preservation of our history and heritage. Installation of an appropriate structure presents an opportunity to advance that directive within one of the most symbolically significant corridors in the Capital.

1.3. Project Area

The Arch would be located within Memorial Circle (the Circle), a formally designed feature of the George Washington Memorial Parkway at the west end of Arlington Memorial Bridge. The Parkway, administered by the NPS, is a 25-mile scenic and commemorative corridor along the Potomac River that integrates early 20th century landscape design with transportation, natural and cultural resources, and recreational access. Developed to honor President George Washington and to connect significant historic and cultural sites, it blends naturalistic plantings with sculptural features.

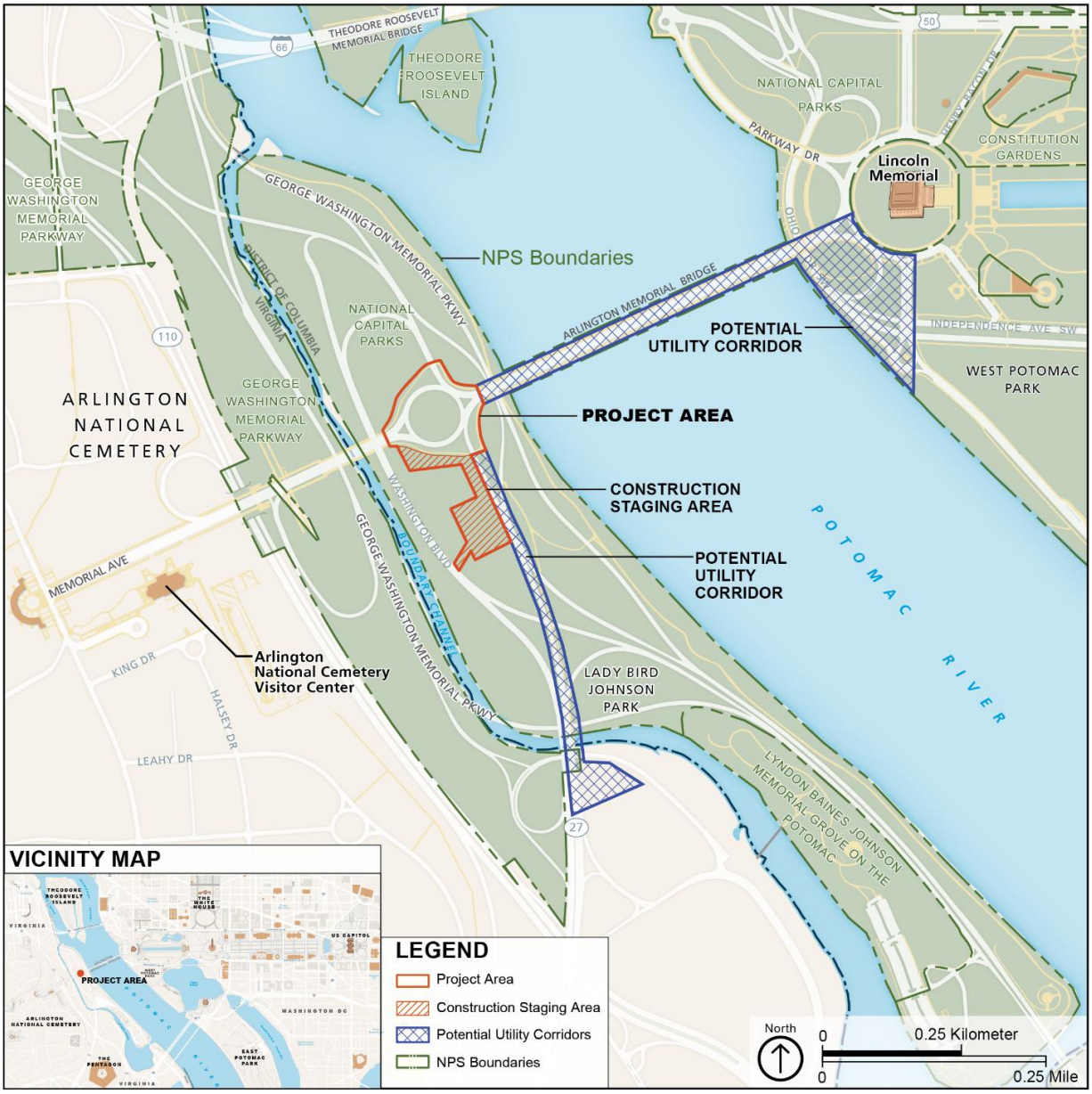


Figure 1. Map of the Project Area

Memorial Circle lies within Lady Bird Johnson Park, a manmade island constructed between 1915 and 1930 and renamed in 1968 in recognition of First Lady Claudia "Lady Bird" Johnson's conservation and beautification efforts. The park's landscaped grounds, native trees, pedestrian and bicycle facilities, and cultural features, including the Lyndon Baines Johnson Memorial Grove and the Navy–Merchant Marine Memorial, provide the broader setting that frames and supports Memorial Circle within the Parkway corridor.

CHAPTER 2. ALTERNATIVES

This chapter provides a description of the no action alternative and the proposed action. Alternatives and alternative elements that were considered but were eliminated from detailed analysis are described in Appendix A.

2.1. Alternative A: No Action Alternative

Under the no action alternative (alternative A), the NPS would not authorize construction of a structure at Memorial Circle in support of EO 14252.

2.2. Alternative B: Proposed Action

The proposed action includes construction of an Arch within Memorial Circle, associated plaza and landscape improvements, supporting utility and stormwater infrastructure, traffic and pedestrian circulation modifications, security features, lighting, and temporary staging and laydown areas required for construction.

The Arch would be an approximately 250-foot-tall reinforced concrete structure clad in granite or marble veneer and ornamented by a central winged figure and two statues, positioned above each Arch leg. Dimensions would be finalized during future design efforts. The following dimensions are current approximations. The principal architectural component would rise approximately 166 feet above finish grade, with surmounting statuary extending the total height to approximately 250 feet. The main footprint of the structure would be approximately 108 feet by 184 feet, with a 16,380-square-foot footprint at ground level. The maximum lateral projection at the upper cornice would extend to 107 feet 4 inches by 183 feet 4 inches. The structure would contain approximately 66,524 gross square feet distributed across four levels. The observation deck would provide approximately 9,560 square feet of exterior deck area. The Arch would serve as a monumental architectural feature aligned with the axis between Memorial Avenue and the Arlington Memorial Bridge. The main body of the Arch would be 166 feet wide with a 55-foot-wide opening, providing views through the Arch to the Lincoln Memorial, Memorial Bridge, the Women's Military Memorial, and the Arlington House.

- Ground Floor Level: The ground level would contain security screening, back-of-house functions, and vertical circulation lobbies.
- Gallery/ Mezzanine Level: The gallery/mezzanine level would also contain exhibit space, back-of-house areas, restrooms, and vertical circulation lobbies, with the possibility of including a café and gift shop.
- Mechanical Level: The mechanical level would contain mechanical and support spaces.
- Observation Deck Level: The observation deck level would include the vertical circulation lobby and exterior deck.

The structure would be built from concrete and finished with a granite or marble veneer. The granite or marble veneer for the Arch would be sourced from a single quarry located in Vermont, California, or Italy selected according to availability, overall cost, and the desired color and ultimately delivered by truck to Memorial Circle.

The structure would include six stairways and five elevators. Two pairs of elevators in the north and south legs would serve the ground and gallery levels, and a fifth elevator would serve the observation deck. Two large circular spiral stairs would connect the ground level to the gallery level; two elliptical spiral stairs would connect the gallery level to the observation deck; and two egress stairs would connect all levels to dedicated exit-only doors at grade.

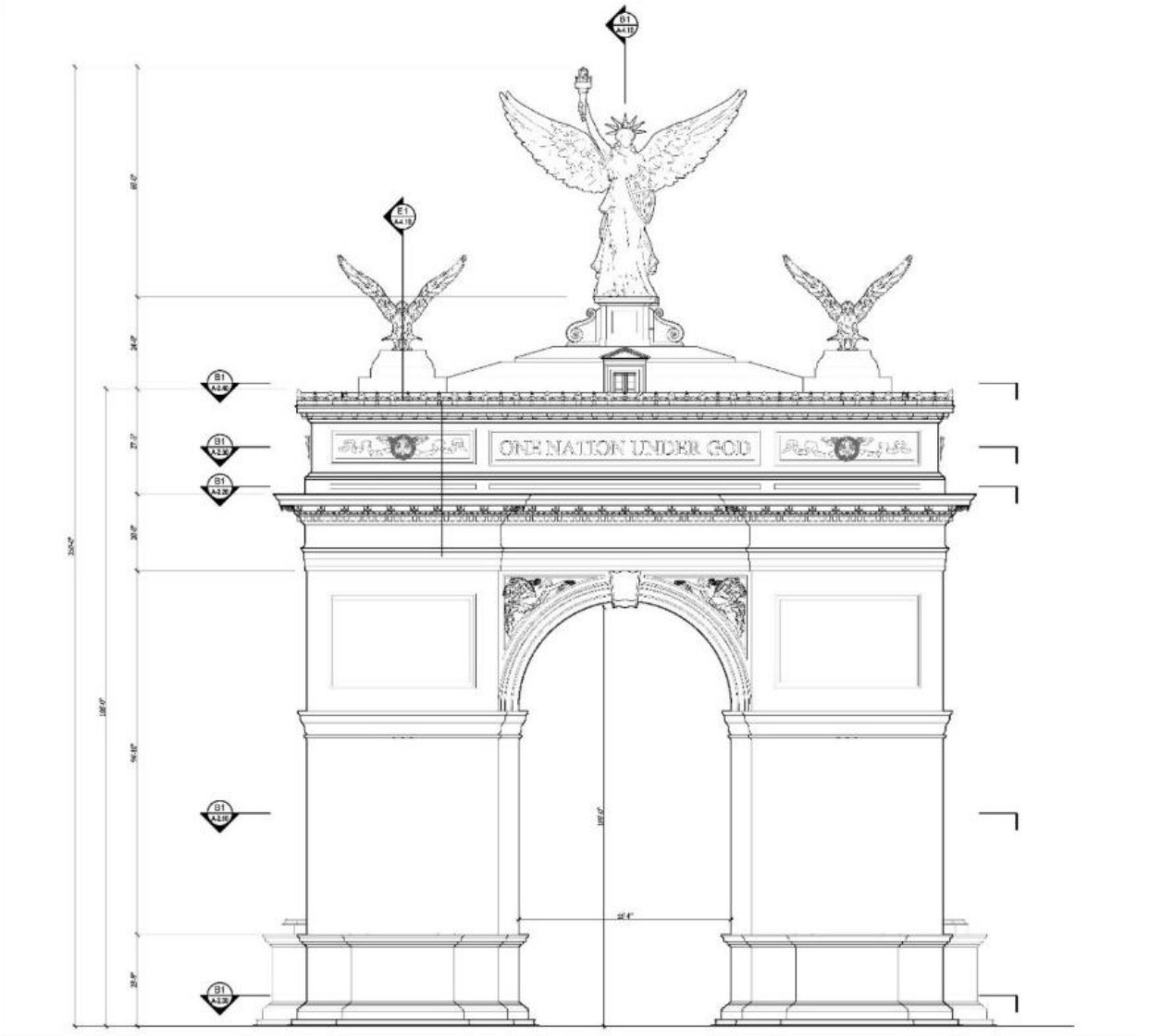


Image 1. Proposed Triumphal Arch ©Harrison Design

The proposed action would also include site development within and immediately around Memorial Circle. A paved public plaza would surround the Arch inside the traffic circle. The plaza would be protected by a barricade seat wall generally located at the existing inner curb and by removable or retractable bollards at authorized vehicle access points. Exterior lighting would be installed to illuminate the Arch and plaza, and the proposed action would include minimal exterior signage, perimeter and rooftop security cameras, access-control systems for major doors and nonpublic areas, interior and exterior video surveillance, and a security screening area with walk-through magnetometers, x-ray equipment, and explosive trace detection equipment.

Vehicle access to the plaza would be restricted to authorized maintenance, contractor, law enforcement, and emergency vehicles.

Memorial Circle would be illuminated by six approximately 30-foot light poles, each equipped with eight fully shielded, low-spill luminaires. Linear lighting installed along the underside of the Arch's vault would provide illumination of the Arch walls. Sixteen luminaries on the roof deck would light the statues. The winged liberty statue would hold a sculptural torch containing a natural-gas-fueled eternal flame, which would remain continuously lit and serve as the FAA-required obstruction light for aviation safety.



Image 2. Proposed Triumphal Arch ©Harrison Design

2.2.1. Proposed Changes to Vehicle, Pedestrian, and Bicycle Use

During construction, temporary closures would be implemented. Those include:

- Westbound traffic from Arlington Memorial Bridge would be reduced to two lanes.
- Eastbound traffic from Memorial Avenue will not be able to turn northbound on Arlington Boulevard (U.S. Highway 50) and will be directed onto Arlington Memorial Bridge.
- Northbound traffic from Washington Boulevard (State Route 27) would not be permitted into the circle, but would need to turn right onto Arlington Memorial Bridge.
- The sidewalk on the south side of the Circle would be temporarily rerouted to the north side.

Additional short-term closures and detours would be required at the beginning of the project to establish the maintenance of traffic configuration, during construction to accommodate utility installations, and again near the end of construction to complete final transportation-related elements.

Under the proposed action, new traffic signals would be installed to control vehicle movements within and around Memorial Circle. The signalization plan would activate pedestrian crossing phases through passive or active detection to ensure safe and efficient circulation for all users. These upgrades would replace existing yield and merge conditions with full signal control. The signalization of the eastern approaches to Memorial Circle, the addition of a new crosswalk across Arlington Memorial Bridge, and the realignment of existing crosswalks and conversion of RRFBs to fully signalized pedestrian crossings have independent utility as a separate transportation and safety project that improves pedestrian access to Memorial Circle. These improvements are included in the proposed action because they will also enhance access and safety for visitors to the Triumphal Arch.

Signalization-related changes include the following:

- Full signalization of Memorial Circle and all pedestrian crossings
- Three signal groups at Washington Boulevard, Arlington Boulevard, and Memorial Avenue
- Eight new fully signalized pedestrian crossings with access to the center of the Circle
- Elimination of all existing yield and merge movements
- Pedestrian actuation and detection for walk phases that activate only when needed
- Dedicated signal phases for high-volume turning movements to minimize conflicts

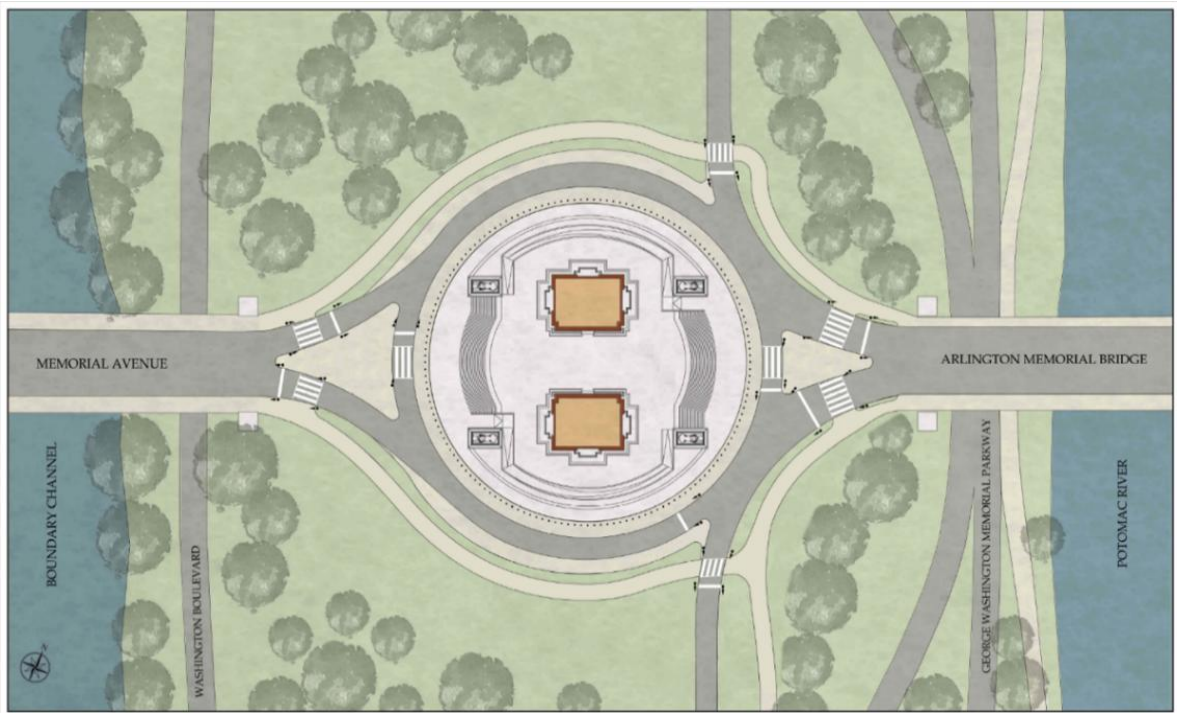


Figure 2. Final Signal Concept Plan (Appendix B)

The proposed action would also include implementation of a series of physical modifications within and around Memorial Circle. These improvements would reshape roadway geometry, expand pedestrian space, and incorporate new materials and features that calm traffic and create safer conditions for people walking. Construction activities would include enlarging key median islands, possibly converting existing pavement treatments to more durable and pedestrian

friendly materials, and adjusting the circulating roadway to reduce speeds and better accommodate all users. Physical construction–related changes include:

- Enlarged median islands on the east and west sides of Memorial Circle
- Circulating roadway narrowed to approximately 20 feet
- Conversion of the pavement marked truck apron to a mountable concrete truck apron
- Replacement of existing Belgian block along the outer edge of the Circle with grass
- Construction phase changes, including closure of the south half of the Circle, detouring two-way traffic to the north side, elimination of certain left-turn movements, and temporary pedestrian routing with a new temporary crosswalk that is designed in compliance with the Americans with Disabilities Act (ADA) and the Architectural Barriers Act (ABA) and that meets the Public Right-of-Way Accessibility Guidelines (PROWAG) incorporated into the ABA Accessibility Standards.

The proposed action would include designating a dedicated pickup and drop off area along Memorial Avenue to accommodate short-term loading and unloading and enhanced wayfinding to direct visitors toward designated safe crossings.

A detailed description of the proposed changes, including maps, figures, and alternative comparisons, is provided in Appendix B.

2.2.2. Construction Phasing

Construction of the Arch would occur in multiple phases over an approximately two-to-three-year period. Construction activities would generally proceed as described below.

Phase 1–Site Excavation (2–3 months). The initial phase would include site preparation, excavation within the construction footprint, and installation of temporary utilities. Temporary fencing, erosion and sediment control measures, stormwater management protocols, and staging areas would be established. Temporary pedestrian, bicycle and vehicle detours would be implemented.

Phase 2–Foundation and Support of Excavation (4–5 months). Following excavation, drill rigs would be mobilized to install the deep foundation system. Caissons would be installed to a depth of approximately 75 feet to reach bedrock. This phase would involve drilling and constructing reinforced concrete piles to support the future structure. Continuous heavy equipment operations would occur during this period.

Phase 3–Structural Concrete (10–11 months). After the foundation system is completed, crews would construct the primary structural components of the Arch. This phase would include use of tower cranes (up to 320 feet tall), forklifts, skid steers, and concrete pump systems to construct the vertical and horizontal elements of the Arch.

Phase 4–Precast Cladding (4–5 months). During this phase, the granite panels would be affixed to the Arch. Granite panels would be delivered from their source quarry and assembled on-site as the structure progresses. At the same time, work inside the structure would begin, including installing the stairs and elevators, starting the roofing system to make the building weather-tight, and beginning major mechanical, electrical, and plumbing work.

Phase 5–Statue Placement and Ceiling Installation (5–6 months). Before the facade is fully completed, a scaffold system would be built to create a working platform to install the Arch ceiling panels. To install the statue, a 300' tall mobile crane would be required to set and assemble the statue components. As the statue is constructed, a scaffold tower would need to be installed around it to facilitate access for connections, welding, and finishing of the statue. During these events, interior fit out would be concurrently running inside the Arch.

Phase 6–Site Hardscapes / Landscaping / Project Completion (6–7 months). At this phase, the project would be near completion. All the stone pavers and site walls would be set during this time, as well as the completion of any other landscape, hardscape, and stormwater management facilities. The interior features would be completed. The demobilization process would be underway and any construction related temporary traffic control would be removed. Permanent traffic changes, including changes to signalization, installation of crosswalks, etc. would be put in place.

Phase 7–Site Restoration and Demobilization (2 months). At the conclusion of construction, the contractor would remove temporary infrastructure, staging materials, and construction fencing. Disturbed turf and landscape areas within NPS jurisdiction would be restored to preconstruction conditions.

2.2.3. Staging Areas

The construction staging footprint would encompass approximately 45,000 square feet immediately south of the project site, with an additional 80,000 square feet designated for parking and to minimize vehicular traffic obstruction. The staging area would be surfaced with geotextile fabric and six inches of stone to protect underlying soils. These areas would support equipment storage, material laydown, and construction trailers. After construction is complete, these areas would be restored to their current condition and replanted. Tree removal is not anticipated at this time.

2.2.4. Utility Installation

To support operation of the Arch and associated facilities, new potable water, sanitary sewer, electric, gas and telecommunications utilities would be extended to the Memorial Circle area. Utilities would be extended to Memorial Circle from existing utilities using new utilities that would run south along Washington Boulevard to the north end of the Pentagon campus limits and then extend south further into the campus to access available infrastructure. All road crossings associated with the proposed action would be constructed using jack-and-bore methods, while utility crossings beneath the Boundary Channel would be installed using HDD. Where practicable, construction activities occurring within the roadway would be scheduled during non-peak commuting periods to minimize disruption to traffic operations. During peak travel periods, temporary steel plating may be installed over roadway work areas to maintain all travel lanes and sustain vehicular circulation. Installation of utilities would occur over multiple construction phases identified above.

Traffic signal infrastructure would be integrated with the existing system serving Lincoln Circle and the surrounding roadway network. To support this integration, new communication and electric connections would be extended from existing facilities in proximity to the Lincoln

Memorial. These utilities would be installed either using HDD or would be placed within or attached to Arlington Memorial Bridge.

2.2.5. Stormwater Management Actions

2.2.5.1. *Stormwater Management Actions During Construction*

During construction, stormwater and erosion control practices would be implemented across the construction site to minimize sediment transport and protect adjacent drainage systems and waterways. Perimeter controls would include installing silt fence or mulch socks along all site fencing to prevent runoff from leaving the disturbed areas. Stormwater and any accumulated groundwater would be managed through a sediment treatment tank prior to discharge into the existing sewer system.

To protect inlets within and adjacent to the work zone, storm drains would be fitted with inlet protection devices. At primary site access points, a stabilized construction entrance would be established, consisting of a concrete apron paired with a 20-foot track of stone to remove sediment from vehicle tires before they enter public roadways. These measures are designed to provide effective sediment control, limit off-site impacts, and maintain compliance with applicable stormwater requirements.

2.2.5.2. *Long-term Stormwater Management*

Because the project would create approximately 62,875 square feet of new impervious surface, on-site stormwater retention is required under District of Columbia regulations. Preliminary estimates indicate a retention volume of about 6,300 cubic feet, with final calculations to be developed during detailed design and included in the stormwater management plan.

To meet these requirements, the project would incorporate perimeter bioretention facilities within the landscaped zones around the monument and within the traffic circle. These features would capture and treat stormwater runoff, reduce reliance on underground structures, and be designed with appropriate pretreatment, overflow, and underdrain components to meet standards developed in compliance with District of Columbia stormwater management regulations.

2.2.6. Groundwater and Dewatering Approach

Geotechnical investigations indicate that groundwater is located roughly 15 feet below the existing surface. As a result, only minimal dewatering would be required during construction. Water management efforts would focus on collecting shallow stormwater and surface water that accumulates in excavations. Small sump pumps would direct this water to a sediment treatment tank before it is discharged into the existing storm sewer system. Construction wastewater, expected to be minimal, would be contained and transported off-site for proper disposal, rather than discharged on-site.

2.2.7. Soil Excavation

The project would require the removal of approximately 1,400 truckloads of existing soils and the import of roughly 400 truckloads of engineered fill. All construction vehicles would be staged within the designated south project staging lot, with loading and unloading occurring

inside the project fence to reduce congestion on adjacent roadways. Daily trucking activity is anticipated to involve between 20 and 30 trucks, transporting an estimated 80 to 100 loads per day. Excavated soils would be transported to approved private disposal facilities in Maryland or Virginia, contingent upon the results of in situ characterization and contamination testing.

2.2.8. Construction Equipment and Work Hours

Construction would require several tower cranes, forklifts, skid steers, drill rigs, and concrete pumping systems. Work would occur year-round with work occurring in two 10-hour shifts per day (20 hours per day) for the duration of the construction period.

Noise blankets or noise curtains would be placed around the pile hammer carriage to mitigate noise transmission.

2.2.9. Road Closures and Transportation Routes

The south side of Memorial Circle is anticipated to remain closed for the majority of construction and would represent the primary transportation access impact during this time. To maintain traffic operations, eastbound traffic from Memorial Avenue would be shifted to the north side of the circle.

During this configuration, certain lower-volume movements would be temporarily restricted. Eastbound traffic from Memorial Avenue would not be permitted to turn northbound onto Arlington Boulevard and would instead be directed onto Arlington Memorial Bridge. Northbound traffic from Washington Boulevard also be restricted from entering the circle and would be required to turn right onto Arlington Memorial Bridge. Westbound traffic from Arlington Memorial Bridge also be reduced to two travel lanes.

During this time, pedestrian and bicycle access would be maintained through a short detour. This detour would include one additional crossing of two travel lanes, with a rectangular rapid flashing beacon installed to improve crossing visibility and support safer pedestrian and bicycle movements through the construction area.

Additional short-term closures and detours would also be required at the beginning of the construction to establish the maintenance of traffic configuration, and again near the end of construction to complete final transportation-related elements and utility installation.

Construction deliveries and haul-off activities would primarily access the project site via I-395 using Route 27 (Washington Boulevard), which provides the most direct and operationally feasible connection to the south project staging area. As a secondary option, U.S. Route 50 (Arlington Boulevard) may be used when needed, as it offers acceptable access for construction vehicles.

Daily construction trucking would involve approximately 20–30 trucks transporting an estimated 80–100 loads per day. To limit congestion and avoid impacts to public roadways, trucks would be staged within the south project staging lot and all loading and unloading activities would occur inside the project fence line. This approach would maintain safe traffic flow and reduce conflict points between construction vehicles and the surrounding transportation network.

2.2.10. Proposed Visitor Access and Visitor Facilities at the Triumphal Arch

Visitor use would be managed through a timed entry system, similar to the system used at the Washington Monument, which may be administered online, on-site, or through a combination of both. Visitors would arrive at their designated entry time, enter a queue, proceed to the screening area on the first floor of the Arch, and undergo security screening before entering the public area of the Arch.

After screening, visitors would enter the public area of the Arch and proceed to the gallery level by either the stairs or the elevator. The internal circulation system would allow visitors to access the gallery, which would house all visitor service functions, including exhibit space, a café, a gift shop, and public restrooms. Visitors may experience guided time and free time within the public area of the Arch and would be expected to depart by the designated exit time to maintain capacity for entry of additional visitors.

CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the current and expected future condition of historic views, cultural landscapes and historic districts, archeology, water resources, traffic and circulation, visitor experience, and noise in the project area. It also analyzes the short and long-term, beneficial and adverse effects that may result from implementing the proposed action.

3.1. Methods and Assumptions

For each environmental impact category, the analysis describes how conditions under the proposed action would differ from the affected environment, which includes the current and expected future condition if no action is taken. The affected environment establishes the baseline for this analysis and includes the impacts of other reasonably foreseeable planned actions that may impact the resource in the future.

The environmental effects analysis then evaluates both the beneficial and adverse reasonably foreseeable environmental impacts of the proposed action. Unless otherwise specified for a particular resource, the study area for each environmental impact topic includes Memorial Circle and the immediately surrounding lands. See Figure 1, page 2.

3.2. Cultural Resources

3.2.1. Methods and Assumptions for Assessing Impacts to Cultural Resources

To evaluate potential impacts on historic resources and cultural landscapes, the NPS focused its analysis on impacts to historic properties potentially eligible, that are included on, or eligible for inclusion on, the National Register of Historic Places (National Register), because these are the types of impacts that are most likely to rise to the level of significance. More specifically, the NPS evaluated, for NEPA purposes, the effects of changes to character-defining features of historic properties within the Area of Potential Effect (APE), which are the features of a historic property that qualify the property for inclusion in the National Register. An Assessment of

Effect, in accordance with Section 106 of the National Historic Preservation Act (NHPA), is being completed concurrently with, but separately from, this document.

To identify potentially affected historic properties for the NEPA analysis, the NPS used the APE developed in accordance with Section 106 of the NHPA. The NPS updated the APE after consultation with the State Historic Preservation Offices and other consulting parties. A detailed description of the Area of Potential Effect is provided in the Final Section 106 Assessment of Effect dated August 28, 2026 and incorporated by reference here. The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties and is influenced by the scale and nature of an undertaking. This approach is derived from the Secretary of the Interior's Standards for Treatment of Historic Properties, Director's Order 28: *Cultural Resource Management Guidelines*, as well as the regulations of the Advisory Council on Historic Preservation implementing the provisions of NHPA. The current conditions of cultural resources, as presented under the "Affected Environment" sections, are compared with the conditions that would result from the proposed action to identify any short and long-term effects and adverse and beneficial effects to historic views and to cultural landscapes, and historic districts.

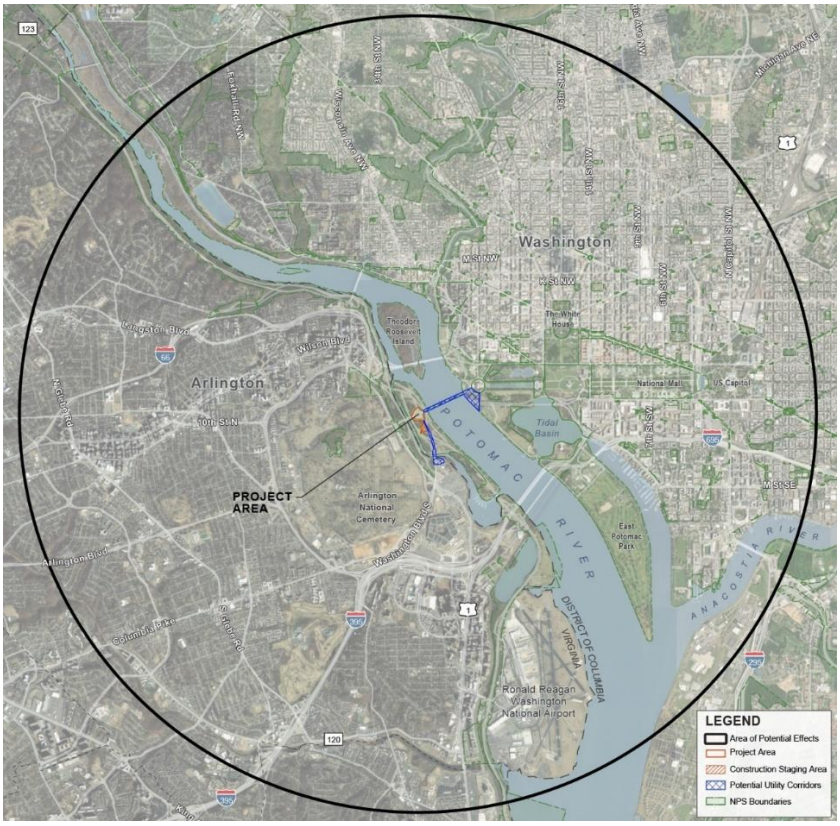


Figure 3. Cultural Resources Study Area (Area of Potential Effect)

Resource-specific context for assessing impacts on cultural resources includes the following:

- The Parkway contains cultural resources that have been determined to be contributing features in National Register nominations, including the resources described in the "Affected

Environment – Current and Expected Future Condition of Cultural Landscapes and Historic Districts if No Action is Taken" section.

- While there has been change to the historic character of the Parkway area through modernization and increased public usage and traffic congestion, the area maintains its historic integrity as a whole.
- Historic structures and small-scale features in the project area could be affected by design changes, introduction of new structures or circulation, and the use of historically incompatible materials and methods in repair and maintenance.
- Small-scale features contributing to the Memorial Avenue Corridor cultural landscape include the triangular islands of granite blocks at the east and west ends of Memorial Circle.

This section describes the important axial views that would be impacted by the proposed action, followed by a description of the cultural landscapes and historic districts that may be affected and concludes with a description of archeology. Numerous cultural landscapes, historic districts, memorials, historic structures, and small-scale features are located within and surrounding the project area, with additional resources visible across the broader viewshed. This area analyzed is intentionally broad to ensure that the assessment captures not only the potential changes to key historic axes but also the wider range of possible conditions that would influence how these cultural resources are understood and experienced within the landscape. Contributing features associated with these landscapes and districts are listed individually in Appendix C, which has been updated.

The initial concepts for the Columbia Island plaza, now Memorial Circle, evolved over many years and went through repeated reviews by the Commission of Fine Arts (CFA). A detailed description of this history is included in the Final Section 106 Assessment of Effect, dated August 28, 2026 and incorporated by reference here. Early plans envisioned a grand, highly symbolic landscape that integrated Arlington Memorial Bridge with a formal traffic ellipse on Columbia Island (NPS, 2024b). The earliest designs proposed that the bridge roadway would meet at a large elliptical plaza from which crossarms extended north and south. Westward, the bridge axis would continue toward Arlington National Cemetery as a formal, hedge-lined grand avenue culminating in pylons, gates, and a hemicycle, reinforcing the ceremonial approach. A dramatic focal point of the ellipse was to be two monumental 166-foot columns, each topped with a winged figure (representing the North and South) to symbolize national reunion after the Civil War (NPS, 2024b). The ellipse would be framed by a granite balustrade, joining the pylons located at the bridge ends. At the termini of the north and south crossarms, small circular Greek temples were planned, each positioned within a circular roadway that connected to major regional routes, Lee Highway to the north and Mount Vernon Memorial Highway to the south. The column concept was ultimately abandoned in December 1931. Design revisions ultimately eliminated the proposed cross-axis, reducing the scheme from three circles with temples to a single traffic circle. Kendall's 1932–1933 submissions replaced the earlier monumental columns with two basin-framed pavilions housing 18-foot gilded bronze figures of Liberty and Unity, retaining an emphasis on axial formality and tree plantings but at a substantially reduced scale (NPS, 2024b). Ultimately, none of the planned monuments or statues were placed within Memorial Circle.

3.3. Cultural Resources – Historic Views

3.3.1. Affected Environment (Current and Expected Future Condition of Historic Views if No Action is Taken)

Reciprocal Views Between Arlington House and Lincoln Memorial – Main Axial View

The 1901 McMillan Plan established a westward axis extending from the future site of the Lincoln Memorial across the Potomac River toward Arlington House. Its designers, McKim, Mead & White, envisioned a ceremonial line that would visually and symbolically connect the monumental core of Washington, D.C., with the heights of Arlington. This design aligned the memorial site with the Arlington House, to be connected by the then-proposed Arlington Memorial Bridge. The bridge design, river crossing, and ascending topography created a vista meant to inspire reverence for our nation's leaders, celebrate unity, and establish a connection to the river. The significance of this alignment is heightened by the importance of the two termini: the Lincoln Memorial, the foremost national memorial to the 16th president and the formal western anchor of the National Mall, and Arlington House, the symbolic heart of Arlington National Cemetery and the former home of Robert E. Lee, who resided there until the Civil War (NPS, 2024b).

Today, visitors standing on the West side of the Lincoln Memorial steps look over the Potomac River and up to Arlington House, a grand and symmetrical axial view. Similarly, the long axis of Arlington House runs north–south, and the front façade faces Washington, D.C., to the east across the Potomac River. The principal vista of the site is from the front of the mansion eastward toward Washington, D.C., and the Lincoln Memorial, overlooking Memorial Circle (NPS, 2010).



Image 3. Current View From Lincoln Memorial to Arlington House and Arlington Hemicycle ©Harrison Design



Image 4. Current View From Arlington House of Lincoln Memorial ©Harrison Design

Reciprocal view between Arlington Hemicycle and Lincoln Memorial

The 1901 McMillan Plan created an axial sightline linking the Lincoln Memorial and the Arlington Hemicycle as the formal entrance to Arlington National Cemetery.



Image 5. Current View From Arlington Hemicycle of Lincoln Memorial ©Harrison Design

Memorial Circle –views east to Lincoln Memorial, west to Arlington House and Arlington National Cemetery, north up island and south down island.

Memorial Circle is a traffic circle of approximately 300 feet in diameter at the intersection where Arlington Memorial Bridge meets two roads: the Mount Vernon Memorial Highway (mostly completed by 1932 and connecting the bridge to Mount Vernon) and George Washington Memorial Parkway (completed in 1965, stretching from the bridge to the Capital Beltway, I-495). The central circle is a component of the Memorial Avenue corridor, providing access to a number of secondary destinations that are tangents to the Parkway, with destinations and routes all in close proximity to one another. The designed vistas from Memorial Circle east to the Lincoln Memorial and west to Arlington House and Arlington National Cemetery offer views bordered by pairs of classical pylons on the east and west, which frame entrances to Arlington Memorial Bridge with a sightline toward the Lincoln Memorial, and Memorial Avenue with a view toward the entrance to Arlington National Cemetery and Arlington House (NPS, 2010).

Panoramic views from the Lincoln Memorial structure toward Watergate Steps, Arlington Memorial Bridge, Arlington House— The Robert E. Lee Memorial, and Parkway Drive

The elevated and open design of the Lincoln Memorial's portico allows uninterrupted views to the west. The Watergate Steps area also remains broadly open due to limited vegetation preserving its open views to the Potomac River and Virginia. Two historic planting beds flanking the Watergate Steps frame the inner edges of the fan-shaped views. Mature foundation plantings for the Lincoln Memorial both frame and obscure the western views.

George Washington Memorial Parkway –views southeast from U.S. Marine Corp War Memorial and Netherlands Carillon

The U.S. Marine Corps War Memorial provides an elevated, southeast-facing panorama across the Potomac River corridor toward the National Mall, including views of the Arlington Memorial Bridge and portions of the Lincoln Memorial and Washington Monument. The ridge-top setting offers largely unobstructed long-distance visibility that contributes to the site's contemplative character.

From the Netherlands Carillon, visitors experience a series of elevated and expansive views across Arlington Ridge Park. These include clear sightlines toward the National Mall, framed by the Potomac River corridor and visible landmarks such as the Lincoln Memorial and surrounding commemorative landscape. The Carillon also offers direct views downslope to the landscaped flower beds below and across the parade ground toward the U.S. Marine Corps War Memorial. The vantage point integrates open lawn, ridge-top elevation, and mature vegetation, producing broad, long-distance panoramas characteristic of Arlington Ridge.

Views from Arlington National Cemetery

Arlington National Cemetery spans approximately 639 acres of intentionally managed landscape characterized by rolling topography, mature tree canopy, and formally designed memorial gardens. Several elevated locations within the cemetery offer long-distance views across the Potomac River toward prominent landmarks in Washington, D.C. These views, together with the cemetery's cultivated horticultural areas and historic landscape features, are key components of the current visual environment. Collectively, these natural and designed elements create a

predominantly tranquil setting that reflects the cemetery's historic significance and its continuing role as a national memorial landscape.

NPS considered views from locations within Arlington National Cemetery—particularly areas closest to the cemetery entrance and higher-elevation sections—where long-range scenic vistas toward the Potomac River and the monumental core are defining features of the historic landscape. For specific locations of these areas, see https://www.arlingtoncemetery.mil/Visit/Map-of-ANC

- Section 35 is located near the Memorial Amphitheater and includes the Vietnam Helicopter Pilot and Crewmember Monument, as well as burial sites for notable figures associated with space and aviation exploration.
- Section 55 is located along Eisenhower Drive and is an active burial area.
- Section 57 occupies a portion of the cemetery near the central roadway network.
- Section 60 spans approximately 14 acres along the eastern portion of the cemetery and is widely known as the resting place for many service members who served in Iraq and Afghanistan. In addition to modern-era burials, this section contains more than 600 WWII burials.
- Section 66 is located in the southern portion of Arlington National Cemetery near Patton Drive. Section 66 is part of the Medal of Honor Walking Tour and contains numerous recipients of the nation's highest military honor.
- Section 73 lies in the north-central portion of the cemetery, positioned between Sections 57 and 60. This section includes active burials areas.
- Section 74 is shown on cemetery maps as lying adjacent to Sections 75 and 76, situated within the same general area of rolling terrain and established burial plots.
- Section 75 is located near Patton Drive.
- Section 76, positioned near the western perimeter of the cemetery.
- The Lee Portico stands prominently at Arlington House atop the cemetery's highest ridge, serving as the Greek Revival–style entrance to the historic Custis-Lee residence. Its eight massive Doric columns are modeled on ancient Greek temples, and the structure dates to 1802–1818 under George Washington Parke Custis, later becoming the home of Robert E. Lee.
- The Tomb of the Unknown Soldier is located at the eastern steps of the Memorial Amphitheater, and serves as one of the cemetery's most recognized national memorials. Dedicated in 1921, it is guarded continuously by the 3rd U.S. Infantry Regiment and functions as the focal point of national Memorial Day and Veterans Day ceremonies.
- The Memorial Amphitheater sits adjacent to the Tomb of the Unknown Soldier and serves as Arlington's central ceremonial venue. Completed in 1920 using Danby marble, it hosts major national observances, including Memorial Day, Veterans Day, and Easter Sunrise services, and features inscriptions honoring 44 battles and numerous historic military leaders.

3.3.2. Environmental Effects Cultural Resources – Historic Views

3.3.2.1. *Effects of the No Action Alternative, Cultural Resources – Historic Views*

Under Alternative A, an Arch would not be constructed in Memorial Circle. Consequently, the condition of the Parkway's historic views would remain unchanged from that described in the "Affected Environment: Current and Expected Future Condition of Historic Views if No Action is Taken" section.

3.3.2.2. *Effects of the Proposed Action, Cultural Resources – Historic Views*

Although the Arch would introduce a new structure to Memorial Circle, it would offer new vantage points for understanding the existing spatial relationships among major landmarks and would help define Memorial Circle as a more intentional and identifiable point along the Memorial Avenue corridor.

Construction activities would introduce temporary visual intrusions, such as cranes, fencing, staging areas, and construction equipment, that would partially obstruct key historic views along Memorial Avenue, Memorial Circle, and the broader axial relationship between the Lincoln Memorial and Arlington National Cemetery. These elements would interrupt the clarity of long-established sightlines and the formal spatial organization of the corridor, resulting in short-term, adverse effects on the setting and feeling of these historic views.

Daytime visual simulations in this section illustrate how the proposed Arch would appear within key historic views. Because the Arch and its statuary would be illuminated, including both fully shielded exterior lighting and aviation-required safety lighting, the structure would also be visible at night. This nighttime illumination would introduce a new vertical, lighted focal element into the same historic views where the Arch and statuary are visible during the day, and in some locations would detract from the character of nighttime settings within the broader commemorative landscape; additionally, the statuary's torch would include an eternal flame that would be visible wherever the statuary itself is visible.

Nighttime renderings corresponding to the views presented here are provided in the Final Section 106 Assessment of Effect dated August 28, 2026, Attachment A, which includes a viewshed study completed on August 24, 2026.

All impacts disclosed in the section below are long-term.

<u>Reciprocal view between Arlington House and Lincoln Memorial – Main Axial View</u>

The Arch would introduce a large form directly within the axial alignment between the Lincoln Memorial and Arlington House. The placement of the Arch would obstruct a portion of this reciprocal view. This obstruction would impact the alignment and alter a defining sightline.



Image 6. View From Arlington House Toward the Lincoln Memorial Without the Proposed Triumphal Arch ©Harrison Design



Image 7. View From Arlington House Toward the Lincoln Memorial with the Proposed Triumphal Arch ©Harrison Design



Image 8. View From the Lincoln Memorial Toward the Arlington House and Arlington Hemicycle Without the Proposed Triumphal Arch ©Harrison Design



Image 9. View From the Lincoln Memorial Toward the Arlington House and Arlington Hemicycle with the Proposed Triumphal Arch ©Harrison Design

Reciprocal view between Arlington Hemicycle and Lincoln Memorial

The Lincoln Memorial would remain visible from the Hemicycle, but the Arch would be visible in the foreground and would affect the broader visual setting. However, while the Arch would partially obstruct the view, the historic visual relationship would not be eliminated.



Image 10. View From the Arlington Hemicycle Toward the Lincoln Memorial Without the Proposed Triumphal Arch ©Harrison Design



Image 11. View From the Arlington Hemicycle Toward the Lincoln Memorial with the Proposed Triumphal Arch ©Harrison Design

Memorial Circle – view east to Memorial, west to Arlington House and Arlington National Cemetery, north up island and south down island

The westward view from Memorial Circle toward Arlington House and the entrance to Arlington National Cemetery would be potentially obstructed in some locations, reducing visibility of this historic vista. The eastward view toward the Lincoln Memorial would be visually altered. The north–south views across the Circle's central island would be changed due to the Arch's massing.

Panoramic views from the Lincoln Memorial structure toward Watergate Steps, Arlington Memorial Bridge, Arlington House, and Parkway Drive

The upper portions of the Arch, including the statuary, would appear prominently within the westward panoramic view from the Lincoln Memorial. This would impact the axial sightline toward Arlington House and introduce a new vertical focal element into the horizon. While the wider panorama toward the Watergate Steps, Parkway Drive, and Arlington Memorial Bridge would remain mostly open, the presence of the Arch's statuary within the central field of view could potentially impact the clarity and emphasis of the historic westward alignment. This could result in effects meeting the criteria of 36 CFR 800.5(a)(1).

George Washington Memorial Parkway –views southeast from U.S. Marine Corp War Memorial and Netherlands Carillon

The upper portions of the Arch, including the statuary, would appear within the southeast view from the U.S. Marine Corp War Memorial, but would not obstruct the broader panoramic views. From the Netherlands Carillon, the wider panorama of the Lincoln Memorial and Washington Monument and views of the Arlington Ridge Park would remain unobstructed and open. The statuary would be visible from Netherlands Carillon. The presence of the Arch within these views could detract from the broader commemorative landscape. This could result in effects meeting the criteria of 36 CFR 800.5(a)(1).



Image 12. View From U.S. Marine Corp War Memorial, Facing the Southeast ©Harrison Design



Image 13. View From U.S. Marine Corp War Memorial, Facing the Southeast with the Proposed Triumphal Arch ©Harrison Design



Image 14. View From Netherlands Carillon, Facing Southeast ©Harrison Design



Image 15. View From Netherlands Carillon, Facing Southeast with the Proposed Triumphal Arch ©Harrison Design

Views from Arlington National Cemetery

The upper portions of the Arch, including the statuary, would appear prominently from the following sections of Arlington Cemetery: Section 57, Section 73, Section 75 and Section 75. The Arch will also be visible from other locations within the Cemetery. This could result in effects meeting the criteria of 36 CFR 800.5(a)(1).



Image 16. View From Arlington National Cemetery, Section 57 Facing the Northeast ©Harrison Design



Image 17. View From Arlington National Cemetery, Section 57, Facing North, Northeast with the Proposed Triumphal Arch ©Harrison Design



Image 18. View From Arlington National Cemetery Section 73, Facing North © Harrison Design



Image 19. View From Arlington National Cemetery Section 73, Facing North with the Proposed Triumphal Arch ©Harrison Design



Image 20. View From Arlington National Cemetery Section 75, Facing North © Harrison Design



Image 21. View From Arlington National Cemetery Section 75, Facing North with the Proposed Triumphal Arch © Harrison Design



Image 22. View From Arlington National Cemetery, Section 76 Facing the North ©Harrison Design



Image 23. View From Arlington National Cemetery, Section 76 Facing the North with the Proposed Triumphal Arch ©Harrison Design

The Arch's statuary would be visible, although in some areas partially obstructed, in the following sections of Arlington Cemetery: Section 43, Section 55, Section 74 and the Netherlands Carillon. This could result in effects meeting the criteria of 36 CFR 800.5(a)(1).



Image 24. View From Arlington National Cemetery, Section 43 Facing East ©Harrison Design



Image 25. View From Arlington National Cemetery, Section 43 Facing East with the Proposed Triumphal Arch ©Harrison Design



Image 26. View From Arlington National Cemetery, Section 55 Facing Northeast ©Harrison Design



Image 27. View From Arlington National Cemetery, Section 55 Facing Northeast with the Proposed Triumphal Arch ©Harrison Design



Image 28. View From Arlington National Cemetery, Section 74 Facing North ©Harrison Design



Image 29. View From Arlington National Cemetery, Section 74 Facing North with the Proposed Triumphal Arch ©Harrison Design

Neither the Arch nor the statuary are visible from the following sections of the Arlington Cemetery, either during the day or at night: Section 35, Section 60, Section 66. The Arch would not be visible from the Tomb of the Unknown Solider.

3.4. Cultural Resources – Cultural Landscapes and Historic Districts

3.4.1. Affected Environment (Current and Expected Future Condition of Cultural Landscapes and Historic Districts if No Action is Taken)

Cultural landscapes and historic districts previously identified and inventoried by the NPS within the APE include the Parkway; Mount Vernon Memorial Highway-North; the Memorial Avenue Corridor; Lady Bird Johnson Park; the Lincoln Memorial; Arlington National Cemetery; the National Mall; Washington Monument and Grounds; Thomas Jefferson Memorial; and Arlington House. Brief descriptions of the general boundaries, background, and significance of each cultural landscape are provided in the following sections. For a complete description of these landscapes and historic districts, please refer to these References.

Cultural Landscape Inventories (CLIs)
Arlington House, Robert E. Lee Memorial (NPS, 2024a)
George Washington Memorial Parkway (NPS, 2009)
Lady Bird Johnson Park, George Washington Memorial Parkway (NPS, 2010)
Lincoln Memorial, National Mall and Memorial Parks (NPS, 2022a)
Lyndon Baines Johnson Memorial Grove on the Potomac, George Washington Memorial Parkway (NPS, 2022b)
Memorial Avenue Corridor, George Washington Memorial Parkway (NPS, 2024b)
Mount Vernon Memorial Highway – North of Alexandria (NPS, 2022c)
The National Mall, National Mall and Memorial Parks (NPS, 2018b)
Washington Monument Grounds (NPS, 2009d)

Cultural Landscape Reports (CLRs)
Arlington House (NPS, 2025)
Memorial Avenue Corridor, George Washington Memorial Parkway (NPS, 2024c)
Mount Vernon Memorial Highway, Volume 1: History (NPS, 1992)
Washington Monument Grounds (2015)

National Register of Historic Places Nomination
Arlington National Cemetery (NPS, 2014)

<u>George Washington Memorial Parkway Cultural Landscape and Historic District</u>

The George Washington Memorial Parkway is a national parkway of over 7,000 acres traversed by a planned roadway system and associated plantings that extend 38.3 miles along the Potomac River through the District of Columbia, Virginia, and Maryland. Initially conceived as a memorial to George Washington, in 1930, through the Capper-Cramton Act, Congress legislated the George Washington Memorial Parkway to include the original Mount Vernon Memorial Highway as well as additional lands along both sides of the Potomac River. The Parkway serves as a grand entryway to the nation's capital and preserves the Potomac River and its watersheds. The Parkway comprises 27 sites replete with natural and cultural resources. These sites, while each possessing a distinct history and individual merits, are united by the Parkway and together represent broad themes in the nation's history. The Parkway is a major historic circulation structure with associated designed views and vistas of significant natural scenery and historical iconic features that traverses the project area northwest to southeast (NPS, 2009). It is also a

major cultural resource and transportation feature of the project area. The Parkway is listed in the Virginia Landmarks Register and in the National Register (Virginia Department of Historic Resources, 2024).

Mount Vernon Memorial Highway-North Cultural Landscape

The Mount Vernon Memorial Highway - North of Alexandria (MVMH-North) cultural landscape consists of an approximately 4.45-mile long, 813-acre parcel that extends from the intersection of First and North Washington Streets in Alexandria, Virginia to the Boundary Channel in Arlington, Virginia. The MVMH–North cultural landscape is comprised of a linear park that includes a limited-access, four-lane highway, divided by a central median, which provides unparalleled views of the Potomac River and nationally significant landmarks. It is the first comprehensively designed modern motorway constructed by the federal government and among the first roadways that combined transportation, recreation, and commemoration into one coherent design. The engineers and landscape architects of the highway utilized state-of-the-art technology and created detailed plans and models to ensure that the roadway would be well-integrated into the existing topography and to maximize its scenic qualities. Just as great efforts were made to preserve and enhance the natural character of the river's shoreline and the undulating topography along its banks, an equally significant undertaking resulted in the reclamation of the river's tidal flats and the creation of new land, as nearly 20 percent of the full length of the MVMH-North was built on imported fill. In addition to the use of the roadway for recreational driving and general transportation, MVMH-North provides myriad recreational opportunities including wildlife and wildflower viewing, organized sports, hiking, bicycling, kayaking and canoeing, picnicking, fishing, and enjoying cultural activities. Picnic areas, boat launches and a marina, multipurpose playfields, natural areas, access to the shoreline, and the Mount Vernon Trail all support passive and active recreational amenities. (NPS, 2022)

Memorial Avenue Corridor Cultural Landscape

The project area includes a portion of the Memorial Avenue Corridor, which is a 1-mile-long axial landscape that includes Arlington Memorial Bridge, Memorial Circle, Memorial Avenue Bridge, Memorial Avenue, and the entrance to Arlington National Cemetery. Conceived as a grand entryway to Arlington National Cemetery, it is a major element of the system of public buildings, parks, memorials, bridges, and drives that constitutes the monumental core of Washington, D.C. Memorial Avenue was conceived as an "Avenue of Heroes," a theme reinforced by the addition of seven memorials since 1960. The avenue's formal character is defined by its holly hedge and mature white oaks, which frame views and emphasize the processional route. The Arlington National Cemetery visitor services building constructed in 1988, along with below-grade State Route 110 and Arlington Cemetery Metrorail station infrastructure, introduced modern elements into the historic corridor (NPS, 2024b). Contributing circulation features include Memorial Circle, the pedestrian system on the two bridges and avenue, and the pedestrian walks around Memorial Circle. Contributing small-scale features include the granite curbstones and the triangular "islands" of granite blocks at the east and west ends of Memorial Circle as well as the Washington standard globe light posts. Details regarding contributing views and vistas can be found in the "Historic Views" section of this document (NPS, 2016).

Lady Bird Johnson Park Cultural Landscape

Memorial Circle sits within Lady Bird Johnson Park, which is a 157-acre island located within the District of Columbia, along the Virginia shore of the Potomac River. The landscape's physical form was shaped by large-scale alterations to the Potomac River shoreline. Both termini of Arlington Memorial Bridge rest on land created from dredged river material, forming East and West Potomac Parks on the east side and Columbia Island (renamed Lady Bird Johnson Park in 1967) on the west side. It is a unique landscape within the wider, nationally significant areas of the Mount Vernon Memorial Highway and the George Washington Memorial Parkway. In the 1960s, as part of the Johnson Administration's Beautification Program, landscape architect Edward D. Stone, Jr. designed a planting plan for the island. At Memorial Circle, Stone's plan included stands of white pine trees to flank the Memorial Avenue pylons, drifts of daffodil beds and flowering dogwoods, and other native trees planted around the open grassy circle. Other groupings of native trees frame and define views for motorist and pedestrians along the shoreline and mainline roadways. Contributing circulation features of the Lady Bird Johnson Park cultural landscape include Memorial Circle and the George Washington Memorial Parkway. Circulation patterns for vehicles and pedestrians in the park have changed over time. The Mount Vernon Trail, once planned as a bridle path, now serves walkers and bikers, and runs along a broad, grassy verge between the Parkway and the river. Details regarding contributing views and vistas can be found in the "Historic Views" section of this document (NPS, 2010).

Lincoln Memorial Cultural Landscape

The Lincoln Memorial cultural landscape forms the western end of the National Mall and is one of the most recognizable public spaces in Washington, D.C. The area encompasses approximately 83 acres and includes the Lincoln Memorial; the Reflecting Pool; the John Ericsson Monument; the Watergate Steps; and the surrounding paths, plantings, and views that connect these features into a cohesive whole. These elements create the open, formal setting experienced by millions of visitors each year and reflect major planning efforts that shaped the nation's capital, beginning with the 1791 L'Enfant Plan and later the 1901 McMillan Plan. The landscape reached its defining form between 1914 and 1933, when the Memorial, Reflecting Pool, and tree-lined walks were constructed. It is also nationally important for its role in civil rights history, including Marian Anderson's 1939 concert and the 1963 March on Washington where Dr. Martin Luther King, Jr. delivered his "I Have a Dream" speech. Surrounding areas contribute to this broader setting and meaning. The long views between the Capitol, the Washington Monument, and the Lincoln Memorial are essential to the design of the National Mall, while nearby places such as Constitution Gardens, the Vietnam Veterans Memorial, and West and East Potomac Parks help maintain the contextual landscape, consisting of open parkland character and historic continuity of the landscape (NPS, 2022a).

Overall, the Lincoln Memorial cultural landscape retains essential integrity of setting and a high degree of integrity of location, design, workmanship, feeling, and association. Its major features, including the Lincoln Memorial structure, Reflecting Pool, formal layout, and long-established views, remain intact and continue to reflect the historic design. Some changes have occurred over time, including the loss or aging of certain trees and the introduction of modern roads and other non-historic elements that slightly affect the setting. Despite these changes, the landscape continues to strongly convey its historic character and remains an important national space for reflection, recreation, commemoration, and civic expression (NPS, 2022a). The axial view

between Arlington House and Lincoln Memorial is a significant contributing feature of this Cultural Landscape. Details regarding contributing views and vistas can be found in the "Historic Views" section of this document.

Arlington National Cemetery Historic District.

Arlington National Cemetery was established as a military cemetery during the Civil War in 1864 on 200 acres of the Arlington estate. Due to its strategic position overlooking Washington, D.C., the U.S. Army seized possession of the Arlington estate during the Civil War and established three forts on the property during this period. While burials on the cemetery grounds predate the establishment of Arlington National Cemetery, the first military burial was conducted in 1864. Today, it is listed in the National Register as a historic district due to its significance as the country's premier national cemetery, as the final resting place of military veterans from each of America's wars, from the Revolutionary War to modern conflicts, and as a testament to those who have played a role in United States history. The 1901 McMillan Plan called for simple, uniform gravestones, leading to the contemporary design of Arlington National Cemetery. Today, the cemetery serves as the final resting place of over 400,000 veterans and their eligible family members, comprises 639 acres, and includes a portion of the project area. The cemetery is administered by the Department of the Army and continues to evoke a sense of reverence and remembrance (NPS, 2014).

Arlington House Cultural Landscape

Arlington House, the Robert E. Lee Memorial and grounds, is the former home of Robert E. Lee, who resided there with his family for 30 years before resigning from the U.S. Army in 1861 on the eve of the Civil War. The site became part of the National Park System in 1933 and was known as the Custis-Lee Mansion, named for both Lee and former resident and owner George Washington Parke Custis, the adopted grandson of George Washington. The house and grounds were formally designated by the Federal government on June 29, 1955, to memorialize General Robert E. Lee. Today, situated within Arlington National Cemetery, the property consists of the prominently sited Greek Revival mansion, the north and south slave buildings, a museum dedicated to Robert E. Lee, the flower and kitchen gardens, and a 12-acre mature forest, known as Arlington Woods. The mansion structure is composed of a large two-story central section, flanked by two one-story wings, set upon its highest topographic point and designed and built between the years of 1803 and 1818 by George Hadfield. The front portico faces east, positioned for the panoramic views of Washington, D.C. The 1901 McMillian Plan purposely aligned the future Lincoln Memorial's western axis with Arlington House. A contributing feature of this Cultural Landscape is the axial view between Arlington House and Lincoln Memorial. Details regarding contributing views and vistas can be found in the "Historic Views" section of this document (NPS 2025).

The National Mall Cultural Landscape

The National Mall Cultural Landscape is a rigorously simple but monumental landscape that encompasses 135 acres between 3rd and 14th Streets, and Madison and Jefferson Drives, N.W., in the center of Washington, D.C. The Periods of Significance extend from 1791-1792, the date of the L'Enfant Plan and its revision by Andrew Ellicott, and 1902-1975, extending from the date of the McMillan Plan to the year when the last tree panel on the Mall was planted, following

the removal of the last temporary military buildings in 1971. The Mall retains a high level of historic integrity and is in fair condition overall. The major problems affecting the Mall are soil compaction and chronic wear and tear on the turf caused by recurrent visitor use (both passive, individual use and far more intrusive organized activities); and the unevenness of the elm canopy, caused by later in-fill plantings, construction activities, over fifty years of Dutch elm disease losses, and the incompatible form of some replacement elms.

Washington Monument and Grounds Cultural Landscape

The Washington Monument Grounds are located in Washington D.C. and comprise U.S. Reservation 2. Containing approximately 106 acres, the landscape is bounded by 14th Street to the east, Constitution Avenue to the north, 17th Street to the west, and the Tidal Basin to the south.

The Washington Monument Grounds were first listed on the National Register of Historic Places automatically in 1966 under the National Historic Preservation Act. An updated 1980 nomination concluded that the site possesses national significance, and is listed under Criterion C for its architecture, engineering, and landscape architecture, with a period of significance lasting from 1848-1849. In 1997, a National Register nomination for the L'Enfant Plan for the City of Washington, D.C. was accepted by the Keeper and found Washington D.C.'s Monumental Core, within which the monument grounds are located, to be nationally significant under Criterion A in the areas of politics/government, social history, and commemoration. The period of significance listed by this nomination is 1791-1943. The most significant structure of the Washington Monument Grounds is the Washington Monument. This structure was listed as a National Historic Civil Engineering Landmark in 1981 and is also listed in the National Register. Other structures located on the monument grounds that are also listed in the register are the Monument Lodge, the Survey Lodge, the Jefferson Pier and two U.S. Capitol Gateposts (designed by Charles Bulfinch).

Thomas Jefferson Memorial Cultural Landscape

The Jefferson Memorial landscape is comprised of 19.2 acres of land immediately south of the Tidal Basin. With the neo-classical white marble memorial modeled after the Roman Pantheon as its focal point, this component landscape forms the southern end of the kite-shaped design plan for the city proposed by the McMillan Commission in 1902. The planting within the encircling roadway, now used solely by pedestrians, is predominantly evergreen with some small flowering trees and shrubs. Beyond the circular roadway, there are tall shade trees and cherry trees that are part of the ring of flowering cherries that encircles the Tidal Basin. The ring of cherry trees is the characteristic for which the landscape is most noted, and which attracts thousands of visitors each spring.

The period of significance for the landscape spans the years from 1934 to 1943. During this period the design for the memorial and landscape was developed, the memorial was constructed, and the landscape was installed. The period ends with the dedication of the memorial on April 13, 1943, the 200th anniversary of Jefferson's birth.

Because the land has been continuously used as a memorial site since the period of significance, the integrity of this historic landscape is generally high. Lack of alteration to natural systems,

spatial organization, land use, topography, and structures preserves the integrity of these characteristics, but changes in vegetation and circulation have resulted in their loss of integrity. Work recently completed addresses the need to restore the vegetation and circulation to a condition more closely resembling the original. Views and vistas, with the exception of the view to the Lincoln Memorial, have been retained.

Historic Bridges: Arlington Memorial Bridge, Boundary Channel Bridge (Memorial Avenue Bridge) and Washington Boulevard Bridge

Arlington Memorial Bridge and Boundary Channel Bridge are contributing historic structures within the Memorial Avenue Corridor Cultural Landscape (NPS, 2024b), and Washington Boulevard Bridge is a contributing historic structure within the Lady Bird Johnson Park Cultural Landscape (NPS, 2010). All three bridges are contributing historic structures to the broader George Washington Memorial Parkway system. Arlington Memorial Bridge forms the ceremonial eastern anchor of the corridor, reinforcing the formal axial connection between the Lincoln Memorial and Arlington House through its neoclassical architectural features and expansive views that shape the monumental approach to Arlington National Cemetery.

The Boundary Channel Bridge is also a contributing historic resource within the Memorial Avenue Corridor and the George Washington Memorial Parkway (NPS, 2024a). It carries Memorial Avenue across Boundary Channel between Columbia Island and the Virginia shoreline and serves as the first bridge encountered when traveling from Arlington Memorial Bridge into the pParkway landscape. Built between 1929 and 1932, reflecting early Parkway design principles, the bridge maintains its historic character and continues to function as an integral element of the corridor's circulation system and cultural landscape.

Together these bridges help define the designed processional experience along Memorial Avenue and contribute to the area's historic setting.

Washington Boulevard Bridge, though more utilitarian in character, is likewise a contributing feature that supports the historic circulation network linking Washington Boulevard, Memorial Circle, and the Parkway.

Other Contributing Historic Structures and Features to the Cultural Landscapes and Districts

There are other historic structures and features in the APE, many of which are contributing features within the cultural landscapes and districts described above. These features are included in the analysis because of their proximity to or within the viewshed of the Arch and would all experience similar impacts under the proposed action. Because of the number of features and overlapping nature of these features, the full list is included in Appendix C. The full description of these features, including their historic significance and how they contribute to the cultural landscape or district, can be found in the documents listed in the section above.

Cultural Resources- Ongoing and Planned Actions in the Project Area

The planned and ongoing actions in the project area, described in Appendix F, have the potential to result in small, temporary impacts to these cultural landscapes through the presence of construction equipment, staging areas, temporary detours, noise, and visual impacts. These effects may influence qualities of setting, feeling, and association for contributing cultural

landscapes identified in the administrative record, including the Lincoln Memorial cultural landscape, the Memorial Avenue corridor, and adjoining Parkway-related historic districts, by interrupting spatial relationships or altering the visual character of views and vistas during construction. Such effects would be temporary and would not permanently alter character-defining features as documented in existing cultural landscape descriptions. Overlapping construction periods across multiple infrastructure and memorial projects may also create short-term changes in how these landscapes are experienced, particularly where projects introduce cranes, barges, lane closures, temporary fencing, or adjustments to pedestrian and bicycle circulation.

3.4.2. Environmental Effects on Cultural Resources – Cultural Landscapes and Historic Districts

3.4.2.1. *Effects of the No Action Alternative, Cultural Resources – Cultural Landscapes and Historic Districts*

Under Alternative A, a Triumphal Arch would not be constructed in Memorial Circle. Consequently, the condition of the cultural landscapes and historic districts would remain unchanged from that described in the "Affected Environment: Current and Expected Future Condition of Cultural Landscapes and Historic Districts if No Action is Taken" section.

3.4.2.2. *Effects of the Proposed Action, Cultural Resources – Cultural Landscapes and Historic Districts*

<u>Short-term Effects on Cultural Landscapes and Historic Districts from Construction of the Arch and Utility Installation</u>

Short-term construction impacts would occur across the cultural landscapes and historic districts surrounding Memorial Circle during installation of the Arch and associated utilities. Construction activities such as trenching, limited vegetation removal, equipment operation, and temporary staging would introduce noticeable but temporary changes to the appearance and continuity of these landscapes.

Construction fencing, equipment staging on or adjacent to roadway and bridge features, lane closures, and exposed work areas would introduce visible intrusions into otherwise open and formally organized views. If utilities are embedded within the roadway or sidewalks, the work would require cutting pavement or removing sections of sidewalk, resulting in short-term visual discontinuity and noticeable ground disturbance. These effects would persist only for the duration of construction activities, after which disturbed surfaces would be restored to maintain the continuity of the cultural landscape.

During construction, the presence of cranes, fencing, lane closures, and construction equipment and vehicles would create short-term visual intrusions and localized noise and dust that could impact the clarity of views along Memorial Avenue, within Memorial Circle, and toward the Lincoln Memorial and Potomac River corridor. Installation of utilities near Arlington National Cemetery would introduce localized visual intrusions and noise to the historic district. These effects would be limited to the project's construction footprint and would not permanently alter the organization or defining characteristics of the surrounding cultural landscapes. The long-term impacts of the Arch are disclosed below.

Long-Term Effects on Cultural Landscapes and Historic Districts

George Washington Memorial Parkway Cultural Landscape

The George Washington Memorial Parkway emphasizes horizontally oriented views, natural scenery, and modestly scaled built features that support an experience focused on the Potomac River corridor (NPS, 2009). The Arch would become a dominant visual element along a route designed to highlight natural features and subtle architectural forms.

At the same time, installing an Arch at Memorial Circle would provide a beneficial effect by strengthening the Parkway's symbolic role as a principal gateway into the capital region. Although the early McMillan era planning did not include Memorial Circle, the later design of the Circle as a key rotational node within the Parkway system created a location where a distinctive architectural element would function as a point of orientation and arrival. In this sense, the Arch would reinforce the Parkway's gateway function by offering a clearly legible feature marking a major landscape transition.

Mount Vernon Memorial Highway-North Cultural Landscape

The Triumphal Arch's illuminated statuary and prominent vertical form would be visible from portions of the Mount Vernon Memorial Highway, subtly affecting views toward nationally significant landmarks along the Potomac River. Its presence would alter long-distance vistas and introduce a new element into the broader scenic skyline that supports the roadway's commemorative purpose. Because the highway was carefully engineered to maximize scenic quality, integrating roadway geometry, river views, reclaimed shoreline, and natural topography, the introduction of a major vertical feature would impact the view of the northern terminus, where the landscape transitions toward Arlington Memorial Bridge and Memorial Circle. The Arch would also modify how the Potomac River corridor is perceived, adding a contemporary monumental feature.

Although the Triumphal Arch would introduce new visual elements into distant views from the Mount Vernon Memorial Highway – North landscape, it would also provide beneficial effects. By establishing a prominent architectural focal point at Memorial Circle, the Arch would enhance the legibility of the northern gateway where the highway transitions toward Arlington Memorial Bridge, helping visitors better understand how this commemorative roadway connects to the broader system of nationally significant landscapes. The Arch's elevated observation deck would reinforce the cultural landscape's interpretive value by offering new opportunities for visitors to comprehend long-range spatial relationships along the Potomac River corridor, including the historic linkages between the Parkway, Arlington National Cemetery, and the monumental core.

Memorial Avenue Corridor Cultural Landscape

The Memorial Avenue Corridor is defined by its formal axial organization, symmetrical plantings, and a clear visual relationship between Arlington National Cemetery and the monumental core (NPS, 2024b). The addition of the Arch at Memorial Circle would alter this organization by introducing a visually dominant vertical element into an area historically defined by open space and low structural forms. The Arch would reshape the axial view from Memorial Avenue toward the Lincoln Memorial and change how visitors experience the processional movement between the cemetery, Potomac River and Arlington Memorial Bridge.

Minor modifications to roadway edges and adjustments to circulation features around Memorial Circle would affect only limited portions of the historic circulation system. Because these elements help define the roadway and contribute to the spatial organization of the cultural landscape, even small changes would subtly alter how these features appear and function. However, the number of alterations would be minimal, and the proposed changes would be similar to existing materials and profiles, leaving the overall historic character of Memorial Circle's roadway network largely unchanged.

Beneficial effects would also occur. Memorial Circle was not part of the McMillan Plan but instead developed later as an intentional landscape and transportation feature (NPS, 2024b). Within this later design framework, the Circle functions as a major organizational node, and the introduction of a contemporary architectural element would enhance the legibility of this transition point. By marking the threshold between the cemetery, the bridge, and the broader monumental area, the Arch and elevated viewpoint from the observation deck would strengthen visitor orientation and highlight the corridor's role as an important connective route.

Lady Bird Johnson Park Cultural Landscape

Lady Bird Johnson Park is defined by open lawns, tree groupings, and naturalistic plantings intended to create a soft-edged river landscape that contrasts with the more formally ordered monumental core (NPS, 2010). The Arch would introduce a strong vertical focal point at the northern end of the island and alter the visual balance between the Circle's circulation features and the surrounding parkland. The structure would impact views from the Mount Vernon Trail, the Parkway, and shoreline areas, possibly reducing the prominence of Edward D. Stone Jr.'s mid-twentieth-century planting design.

Positively, because Memorial Circle functions as the primary organizing feature at the park's northern tip, the presence of a new architectural element would enhance spatial definition and visitor orientation within the island landscape. A strong architectural expression could help articulate the transition between the natural park setting and the ordered monumental landscape across the river.

Lincoln Memorial Cultural Landscape

The installation of the Arch in Memorial Circle could impact cross-river views from the Lincoln Memorial toward Arlington House (NPS, 2022a), altering the clarity of the significant axial relationship. The Arch would be visible as a large vertical form within the middle ground of these views, likely changing the existing visual between the Lincoln Memorial, Reflecting Pool, and the distant ridge on which Arlington House is sited.

Beneficially, the addition of an architectural structure at Memorial Circle would reinforce the perception of the cross-river landscape as an interconnected system shaped by successive planning periods. Although the Circle itself was not part of the McMillan Plan, the later establishment of the Circle introduced a defined geometric node along the alignment. A new architectural feature would help mark this node and may strengthen the overall legibility of the east–west relationship across the Potomac River, providing a contemporary acknowledgment of this historic alignment without claiming origins in the earlier planning era.



Image 30. View From Parkway Drive Northwest Toward Arlington Memorial Bridge and Memorial Circle Without the Proposed Triumphal Arch ©Harrison Design



Image 31. View From Parkway Drive Northwest Toward Arlington Memorial Bridge and Memorial Circle with the Proposed Triumphal Arch ©Harrison Design

Arlington National Cemetery Historic District

Views from Arlington National Cemetery toward the Potomac River and the monumental core are an important aspect of the cemetery's historic character (NPS, 2014). The Arch would create a middle-ground element that alters the view of the existing focal points such as the Lincoln Memorial and the river corridor. This change would alter the visual experience of the cemetery's entrance sequence.

The addition of an architectural structure at Memorial Circle would produce beneficial effects by emphasizing the visual and spatial connection between the cemetery and the broader cityscape. Because the Circle was designed after the McMillan Plan as a major landscape feature linking the bridge to the highway system, an architectural element would enhance the sense of arrival and reinforce the cemetery's relationship to the regional landscape framework established during the Circle's own planning period.

Arlington House Cultural Landscape

The installation of the Arch at Memorial Circle would modify one of the most important designed views associated with the Arlington House Cultural Landscape: the axial relationship intentionally established between the Arlington House portico and the Lincoln Memorial as part of the 1901 McMillan Plan. From the elevated terrace of Arlington House, the Arch would appear as a new, prominent vertical element within the middle ground of this eastward panorama.

At the same time, the introduction of an architectural structure at Memorial Circle would also reinforce the understanding of the cross-river ceremonial landscape as a continuum shaped by successive planning periods. While the Circle was added after the McMillan Plan, its geometric configuration contributes to the region's broader planning framework. In this sense, the Arch would subtly enhance the legibility of the east–west landscape relationship that has structured the setting of Arlington House for more than a century.

The National Mall Cultural Landscape

The proposed Arch, though situated outside the National Mall Cultural Landscape, would introduce a new vertical architectural feature to the broader monumental core, subtly altering long-range reciprocal views between the Mall and the Arlington Memorial Bridge/Memorial Circle area. It would become a new focal point on the skyline, especially when viewed westward from select locations on the Mall. However, these impacts do not fundamentally change the character of the National Mall Cultural Landscape, whose historic significance is anchored in its formal geometry, monumental axes, and the McMillan Plan's landscape composition. The presence of the Arch would not alter the spatial relationship of the Mall.

The Arch would reinforce the perception of the Mall and its surrounding landscapes as part of a larger, interconnected ceremonial system shaped by successive planning eras, strengthening legibility of long-range spatial relationships across the Potomac corridor. Its elevated observation deck would offer visitors new opportunities to understand how the Mall's major landmarks, such as the Lincoln Memorial and Washington Monument, fit into broader cross-river axes, enhancing interpretation of the Mall's historic design framework.

Washington Monument and Grounds Cultural Landscape

The construction of the Triumphal Arch would introduce a highly prominent new vertical element into the Monumental Core, resulting in effects to the Washington Monument and Grounds Cultural Landscape. The Arch would alter contributing views and vistas, including long-established axial sightlines and reciprocal views that define the landscape's historic character. Its height, massing, and nighttime illumination would intrude upon the setting and diminish the Washington Monument's traditional visual dominance. The Arch would modify the broader spatial organization and perceptual unity of the core by somewhat altering the historic

design relationships extending from the Washington Monument to the Lincoln Memorial, Arlington House, and the Potomac corridor.

Although the Triumphal Arch would introduce adverse effects to this cultural landscape, the views from the observation deck of the Arch would enhance visitor understanding of the monumental core's spatial relationships and commemorative themes and help visitors interpret how the Washington Monument relates visually to Arlington House, the Lincoln Memorial, the Potomac River corridor, and the broader ceremonial landscape. By establishing a clear architectural focal point at Memorial Circle, the Arch would strengthen the perception of the core as an interconnected system shaped by successive planning eras, offering a contemporary interpretive element within a historic framework.

Thomas Jefferson Memorial Cultural Landscape

The Thomas Jefferson Memorial Cultural Landscape includes key vistas—notably east–west views including the Lincoln Memorial, broad views across the Tidal Basin, and reciprocal views that link the Jefferson Memorial with other monumental-core resources. These views are identified as contributing features within the cultural landscape. The Jefferson Memorial is largely oriented north toward the Tidal Basin, however, and the Triumphal Arch would be visible within the view, but from some areas would be partially screened by vegetation.

Because the Arch would be visible, though not obstructive, within the established view from the Jefferson Memorial toward the Lincoln Memorial, it would alter the long-standing visual relationship between these symbolic nodes of the McMillan Plan. Its presence would change the landscape's setting and weaken the sense of spatial continuity across the Tidal Basin and West Potomac Park. Vegetation around the Tidal Basin would soften some direct views, although the Arch's height and nighttime illumination would still introduce a prominent vertical form into the broader composition. Thus, the Arch would subtly but noticeably diminish the clarity of the designed visual connections linking the Jefferson Memorial with the Lincoln Memorial, the Washington Monument, and the Potomac River corridor.

The Arch could provide several beneficial effects for the Thomas Jefferson Memorial Cultural Landscape by enhancing how visitors understand and navigate the broader monumental core. Although the Memorial itself is oriented north toward the Tidal Basin, the Arch's elevated observation deck and framed ground-level views would offer new opportunities for visitors to perceive the spatial and visual relationships that link the Jefferson Memorial with surrounding landmarks, including the Lincoln Memorial, the Washington Monument, and the Potomac River corridor, relationships central to the memorial's historic design context. By establishing a clear architectural focal point at Memorial Circle, the Arch would also strengthen public comprehension of the cross-river landscape as an interconnected system shaped by multiple planning eras, improving landscape legibility and orientation.

Historic Bridges: Arlington Memorial Bridge, Boundary Channel Bridge (Memorial Avenue Bridge), and Washington Boulevard Bridge

The proposed installation of utilities within the Memorial Avenue Corridor and Lady Bird Johnson Park cultural landscape and on or within Arlington Memorial Bridge and Washington Boulevard Bridge, would introduce contemporary infrastructure onto historic structures designed to maintain a cohesive parkway character. For both bridges, impacts would depend on the

installation method. Utilities embedded beneath the roadway or sidewalk and restored in kind would result in small, long-term impacts because the bridges' appearance and function would remain consistent with existing conditions. In contrast, externally mounted utilities would introduce visible modern features onto bridges defined by simple forms, restrained detailing, and a unified corridor setting. Even with measures such as color matching or conduit enclosures, these additions would remain noticeable and incrementally increase visual clutter. Utilities would not be installed on Boundary Channel Bridge.

Past utility installations on these bridges mean that adding new lines would not represent a new type of change; however, additional exterior features could impact the simplicity of their historic profiles. Despite this incremental visual effect, utility installations, whether on one or all of the bridges, would not alter the character-defining features that convey their historic significance. Their integrity of design, materials, workmanship, and setting would remain intact, and the bridges would continue to contribute to the cultural landscapes. If utilities are installed via HDD under the bridges, impacts to the bridges would be avoided completely.

Other Contributing Historic Structures and Features to the Cultural Landscapes and Districts

While the proposed action would not physically affect the contributing features within the cultural landscape, its prominence could meaningfully impact the design, setting, feeling, and association that give these resources their cohesive significance. The contributing features within these cultural landscapes, though individually modest in stature and function, derive much of their interpretive and historical value from their relationship to one another and to the broader landscape in which they are situated.

For these reasons, the analysis appropriately considers contextual effects to the contributing features, even where no physical impact is anticipated. This approach reflects recognition that the integrity of a cultural landscape depends not only on the condition of its individual elements but also on the preservation of the spatial, visual, and experiential relationships among them.

3.5. Cultural Resources – Archeology

3.5.1. Methods and Assumptions Cultural Resources – Archeology

Potential impacts to archeological resources were assessed based on a review of the recent Phase IA archeological overview prepared by Langan Engineering and Environmental Services, LLC (2026a) and a search of archeological resources documented in the NPS Cultural Resources Inventory System and the Virginia Cultural Resource Information System databases. The conceptual plans for the Arch design and construction were reviewed to determine which areas within the APE may be impacted by ground-disturbing activities. These areas were cross-referenced with archeological site documentation to assess the potential of the proposed action to affect archeological resources.

A subsequent Phase IB investigation, including geomorphological analysis of the proposed construction area, was conducted to assess the potential for intact buried archaeological deposits within the Arch footprint. The investigation evaluated subsurface conditions and the likelihood that archaeological resources remained within areas that would be affected by construction.

3.5.2. Affected Environment (Current and Expected Future Condition of Archeology if No Action is Taken)

There are seventeen archeological resources within a one-mile radius of Memorial Circle. None of the known sites fall within the area where ground disturbance is anticipated. There are no other documented archeological resources within the project area.

Ground-disturbing activities would be primarily concentrated on Memorial Circle, which is located on approximately 14 feet of fill, according to historic mapping and preliminary geotechnical borings conducted in May 2026. Between 1915 and 1927, the U.S. Army Corps of Engineers dredged this fill from the Potomac River bottom and deposited it to create present-day Lady Bird Johnson Park. The fill sits atop an earlier landscape of alluvial deposits of sandy clay, likely laid down on sandbars or shallow tidal flats/floodplains during the late precolonial period or early historic period. The landscape was further altered in the 1920s and 1930s by the construction of Arlington Memorial Bridge and Memorial Avenue, and in 1940 by the installation of Memorial Circle. Because the majority of Lady Bird Johnson Park has been altered by substantial amounts of fill and construction, it is unlikely that archeological resources exist within Memorial Circle above depths of 14 feet. However, the buried landscape has the potential to contain intact precolonial and/or historic archeological resources (Langan Engineering and Environmental, LLC 2026a).

3.5.3. Environmental Effects – Cultural Resources – Archeology

3.5.3.1. *Effects of the No Action Alternative – Cultural Resources – Archeology*

Under Alternative A, a Arch would not be constructed in Memorial Circle along the Parkway. Consequently, the condition of the Parkway's archeology would remain unchanged from that described in the "Affected Environment: Current and Expected Future Condition of Archeology if No Action is Taken" section.

3.5.3.2. *Effects of the Proposed Action – Cultural Resources – Archeology*

The proposed action entails construction of the Arch along with associated landscaping, site grading, stormwater management features, and utility installation. Permanent ground disturbances are anticipated for the construction of footers, foundations, landscape elements, utilities, and stormwater management features while temporary ground disturbances are anticipated for the temporary staging / laydown area. New potable water, sanitary sewer, electric, and telecommunications utilities would be extended to the Memorial Circle area from various utility corridors. A Phase IB survey south of Memorial Avenue noted that much of the canal has been destroyed by development, with only a small, preserved section remaining (Dovetail Cultural Resource Group 2016). Following completion of a cut-and-fill analysis, a geomorphological investigation was conducted within Memorial Circle to evaluate the potential for intact archaeological resources within the proposed construction footprint. The investigation found no archaeological sites within the area that would be affected by construction of the Arch. Based on these findings, the potential for impacts to archaeological resources within Memorial Circle is low, and no additional archaeological investigations are warranted within the Arch footprint. As a result, construction of the Arch is not expected to adversely affect archaeological resources at Memorial Circle.

Utilities would be installed within existing roadways or adjacent previously disturbed areas where archaeological resources are no longer present; therefore, no impacts to archaeological resources are anticipated from utility installation. Archeological monitoring during construction may be required in certain locations where utilities are installed.

3.6. Water Resources

3.6.1. Methods and Assumptions – Water Resources

The study area for water resources includes all surface waters and groundwater potentially affected by construction of the Arch within the project area where direct effects would be experienced, as well as adjacent areas within 500 feet to address the potential for indirect effects to water quality. The District of Columbia does not participate in the National Coastal Zone Management Program and does not have a coastal zone management plan (NOAA 2026).

3.6.2. Affected Environment (Current and Expected Future Condition of Water Resources if No Action is Taken)

3.6.2.1. *Groundwater*

Groundwater beneath Memorial Circle is shallow, perched, and strongly influenced by the Potomac River, with generally low-yield, low-permeability soils and frequent seasonal saturation. The area is not known to contain significant aquifers; instead, groundwater occurs in thin, discontinuous layers within alluvial and fill materials. Based on geotechnical investigations conducted in 2026, the groundwater table beneath Memorial Circle is estimated to be approximately 15 feet below the ground surface (Langan Engineering and Environmental Services, LLC 2026b). During major storm events, groundwater levels are expected to rise to shallower depths. The area is prone to temporary groundwater mounding due to impermeable pavement, stormwater infiltration from adjacent slopes, and backwater effects from the Potomac River. These processes maintain natural infiltration, moderate soil moisture, and reduce stormwater runoff volumes. The groundwater connection with the Potomac River would continue to fluctuate in response to rainfall and river stage, with no new adverse impacts expected.

The ongoing and planned actions in Appendix F may result in localized, temporary groundwater disturbance where excavation or foundation work requires dewatering, but these effects would remain tied to the individual project sites and would not influence groundwater conditions at Memorial Circle. Because groundwater in the area generally occurs at approximately 15 feet, construction activities beyond the immediate Memorial Circle footprint, such as bridge rehabilitations, trail work, or roadway improvements, are unlikely to interact with groundwater in a way that affects the Circle's subsurface conditions.

Any dewatering or subsurface construction conducted for those projects would follow standard geotechnical and water management practices and would occur in accordance with both District and Federal regulations. No long-term changes to groundwater flow or availability at Memorial Circle are anticipated once construction is complete.

3.6.2.2. *Surface Water*

Surface water at Memorial Circle is dominated by Potomac River influence, tidal backwater, and engineered stormwater drainage, with no natural surface-water bodies present, and all movement controlled by rainfall runoff, roadway drainage, and tidal fluctuations of the adjacent Potomac River. Memorial Circle is a fully engineered landscape, including paved roadways, curbs, grassy medians, and drainage inlets. Rainfall does not form natural surface water bodies but instead runs off pavement into storm drains, moves toward the Potomac River via engineered conveyances, and collects temporarily in low spots during intense storms. Surface water would be absorbed by the central lawn and conveyed through the existing storm drainage system. Evaporation and transpiration would continue to reduce runoff and moderate localized temperatures.

The project site lies outside of the delineated 100- and 500-year floodplain, so no additional compliance would be needed for project activities beyond employing additional consideration to stormwater management related to the increased area of impervious surface.

The ongoing and planned actions in Appendix F may create construction-related increases in runoff and sediment in the broader area, especially where bridge, roadway, or trail work occurs near drainage pathways. Across all phases of this project, standard stormwater best management practices would limit these temporary effects, and no long-term changes to surface water behavior at Memorial Circle are anticipated once construction has concluded.

3.6.3. Environmental Effects – Water Resources

3.6.3.1. *Effects of the No Action Alternative – Water Resources*

Under Alternative A, the Arch would not be constructed in Memorial Circle. Consequently, the condition of the Parkway's water resources would remain unchanged from that described in the "Affected Environment: Current and Expected Future Condition of Water Resources if No Action is Taken" section.

3.6.3.2. *Effects of the Proposed Action – Water Resources*

<u>Groundwater</u>

Under the proposed action, replacing the central lawn with an impermeable surface would sharply reduce groundwater recharge within Memorial Circle. This would create long-term adverse impacts by lowering the shallow water table in some areas due to loss of local infiltration. However, in other areas, groundwater may rise if it becomes trapped beneath the new pavement. Because the soils contain clay lenses and discontinuous fill layers, perched groundwater could become pressurized, leading to short-term and long-term adverse impacts such as sub-pavement mounding, pavement heave, soft subgrade conditions, and frost-related damage. These effects are common in low-lying Potomac terrace soils and would require ongoing monitoring and maintenance and potentially pressure-reducing drive points.

Although the reduction in infiltration decreases groundwater recharge, it may also reduce localized soil saturation and surface seepage, representing a long-term beneficial impact in areas currently prone to wetness. However, this benefit is outweighed by the broader adverse hydrologic changes associated with isolating groundwater beneath an impermeable surface.

Under predicted future hydroclimatic conditions, elevated river stage from high flows resulting from intense precipitation events upstream may result in elevated water levels and/or pore pressures, which may cause stress on the structure or other impervious ground cover. Additionally, salinity changes in the river due to upstream encroachment of brackish water may increase the salinity of groundwater under the monument, potentially creating more unfavorable conditions to the integrity of the concrete piles.

Surface Water

Under the proposed action, surface water runoff would increase substantially because the new impermeable surface would prevent infiltration and evapotranspiration. This would create long-term increases of runoff volumes, velocities, and peak flows. Storm drains would need to handle all rainfall, not just roadway runoff, turning the circle into a system that quickly directs water to the Potomac River or stormwater inlets. These conditions increase the risk of flash flooding, erosion at outfalls, roadway ponding, and sediment transport into the Potomac River.

The proximity to the Potomac River also introduces possible long-term adverse impacts related to tidal backwater. High river stages, storm surges, and high tides could slow drainage or push water back into the circle's stormwater system, increasing the likelihood of backwater flooding. Loss of evapotranspiration and vegetated cover would contribute to higher surface temperatures and more intense runoff during storms. A bioretention system would offset the increased impervious surfaces and manage stormwater on-site instead of draining directly into the existing drainage inlets.

In the short term, construction activities would generate temporary adverse impacts such as soil disturbance, altered drainage patterns, and increased sediment potential. These impacts would be mitigated through erosion and sediment controls and would cease once construction is complete.

3.7. Traffic and Circulation

3.7.1. Methods and Assumptions – Traffic and Circulation

The transportation analysis relies on multiple complementary datasets describing traffic demand, multimodal activity, and roadway operating conditions. Key data inputs include:

- Traffic volumes at intersections within Arlington Memorial Circle, Washington Boulevard at George Washington Memorial Parkway ramps, Memorial Avenue at Richmond Highway/George Washington Memorial Parkway off-ramp, Memorial Avenue at Richmond Highway southbound on-ramp, Richmond Highway northbound off-ramp at George Washington Memorial Parkway southbound off-ramp, proportionally adjusted using January 2024 counts and. These volumes were projected to 20310 assuming a 0.5% per year growth rate projections from the Lincoln Memorial Circle Traffic Study
- 2026 Pedestrian and cyclist counts at Arlington Memorial Circle as well as pedestrian and bicycle activity estimates from Arlington County EcoCounter stations on the Arlington Memorial Bridge
- A stopping sight distance (SSD) analysis at four locations around Memorial Circle identifying average circulating speeds of ~18–25 mph (recorded 2021–2022), establishing

design controls necessary for ≥200-ft SSD (U.S. Department of Transportation, Volpe National Transportation Systems Center [Volpe], 2026a)

These datasets were integrated to create a representative forecast of how vehicles, pedestrians, and bicyclists interact at Memorial Circle. The traffic volumes informed modeling of intersection delay, queuing, and level of service; pedestrian and bicycle estimates clarified expected demand at crosswalks; and speed data shaped assumptions about vehicle approach behavior, sight distance requirements, and pedestrian exposure risk. Collectively, this information formed the analytical basis for evaluating how new crosswalks and pedestrian signal phases would function under varying conditions (U.S. Department of Transportation, Volpe National Transportation Systems Center [Volpe], 2026a). The full Volpe report is included in Appendix B.

3.7.2. Affected Environment (Current and Expected Future Condition of Traffic and Circulation if No Action is Taken)

Because of its location at the gateway to Washington, D.C., and its role as a connection between Virginia and the District, the project area serves as a key commuter corridor for both motorists and bicyclists. Roadways in Memorial Circle's immediate vicinity experience consistently high traffic demand and serve as a major convergence of regional roadways and travel modes that interact through a complex series of merges, weaves, and intersections. The heavy use of the project area results in ongoing safety concerns, particularly at multiple bicyclist and pedestrian crosswalks and at locations where roadway movements require close interaction among different users.

Visitation to Memorial Circle

During the peak visitation months in spring, approximately 700 pedestrians and 700 bicyclists travel around Memorial Circle each day, totaling roughly 1,400 daily walk and bicycle trips. (Volpe, 2026a). Most of these existing users are engaged in exercise, recreation, or commuting, and tend to travel during peak commuting periods, when temperatures are cooler and conditions are more favorable for outdoor activity.

Nearby visitation patterns also influence the area: Arlington National Cemetery receives an average of 4 million visitors per year, or about 16,000 daily visitors during peak season, many of whom visit in the late morning through early afternoon and on weekends or holidays. Transit use at the Arlington Cemetery Metrorail station remains relatively low compared to regional stations, with about 1,000 daily riders in 2025 and occasional sharp increases on nationally significant days such as Inauguration Day, Memorial Day, and Independence Day. During the peak season, average daily station entries increase to approximately 1,500 riders. Together, these patterns indicate that Memorial Circle currently supports steady levels of commuter walking and biking activity, overlaid with variable visitor peaks associated with Arlington National Cemetery and special event visitation (Volpe, 2026a).

Pedestrian and Bicycle Circulation

Memorial Circle is a key connection point for bicyclists and pedestrians traveling both recreationally and for commuting. Many pedestrians walk around Memorial Circle from the Arlington National Cemetery parking lot and the Arlington Metrorail station. Additionally, the Mount Vernon Trail passes under and around the roadways near the Circle, bringing trail users

directly into the area. Bicyclists and pedestrians must navigate narrow, high-volume crossings near bridge approaches, which creates safety challenges. There are no pedestrian crosswalks to the central circle.

Ongoing and planned projects in the vicinity (see Appendix F) are expected to result in temporary changes to trail connections, bridge access points, and crossing locations in areas outside the immediate project area. Although none of these construction activities would fully restrict access to Memorial Circle, they may reduce ease of movement, require longer or less direct routes, and influence wayfinding until project phases are completed and standard circulation patterns are restored.

Daily use of Arlington Memorial Bridge by nonmotorized travelers is high, with approximately 1,100 bicyclists and 1,200 pedestrians crossing each day, mostly during peak travel periods (6–10 a.m. and 3–7 p.m.) (KLS Engineering, LLC 2022: Table 2). Pedestrian and bicycle activity shows substantial variation by location. At the busiest street crossings, peak volumes reached 93 crossings per hour in the morning (7–8 a.m.), up to 136 per hour in the evening (5–6 p.m.), and up to 1,194 crossings per day. At lower volume locations, peak activity reached 62 crossings per hour in the morning (8–9 a.m.), up to 98 per hour in the evening (6–7 p.m.), and up to 729 crossings per day (KLS Engineering, LLC 2022: Table 2).

Vehicle Circulation

Traffic operations at Memorial Circle currently experience periods of heavy demand, particularly during weekday morning and afternoon commuter peaks when inbound traffic toward Washington, D.C. is at its highest. Existing vehicle circulation relies on a combination of yield and merge movements, which contribute to driver confusion, friction at pedestrian crossing points, and intermittent delays and queuing. Drivers experience constrained flow during busy periods, with some approaches—such as the high volume northbound right turn from Washington Boulevard onto Arlington Memorial Bridge—regularly exhibiting operational strain. Overall, present operations range from generally smooth flow on some movements to capacity-approaching conditions on others during peak travel times.

Following a series of safety improvements completed in December 2020, the NPS conducted postconstruction traffic monitoring in May 2022. Data from the Washington Boulevard side, the busier segment of the Circle, showed more than 27,000 vehicles per day, with peak hourly volumes reaching 2,402 vehicles in the morning (8:30–9:30 a.m.) and 2,017 vehicles in the afternoon (3–4 p.m.) (KLS Engineering LLC 2022: Table 1). Traffic on the west side of the Circle was lower but still significant, with 3,886 vehicles per day and peak hourly volumes of 263 vehicles in the morning (9:15–10:15 a.m.) and 371 vehicles in the afternoon (3:30–4:30 p.m.) (KLS Engineering LLC 2022: Table 1).

Traffic in the Memorial Circle area is projected to remain high under future peak-hour conditions. According to the Volpe 2026 report, major approaches, including Washington Boulevard, Arlington Memorial Bridge (inbound and outbound), and Arlington Boulevard, are all expected to carry substantial traffic loads, with the Washington Boulevard approach continuing to serve as one of the highest volume entry points to the Circle. These 2031 projections confirm that Memorial Circle would continue to function as a heavily traveled

multimodal gateway, with vehicle volumes expected to grow through the end of the decade. See Appendix B.

Ongoing and planned transportation, monument, and infrastructure projects outlined in Appendix F would introduce temporary but noticeable changes to traffic circulation within Memorial Circle in the future. As multiple projects progress concurrently, including bridge rehabilitations, trail upgrades, seawall replacement, roadway work, and multimodal improvements, visitors approaching from both Arlington National Cemetery and the National Mall may encounter detours, temporary closures, lane shifts, and construction staging that alter familiar travel routes. Because the Circle already accommodates complex merges, weaves, and high levels of multimodal activity, these overlapping construction efforts could intensify congestion, redirect vehicles into fewer available approach routes, and reduce the predictability of travel for all road users. Such conditions may result in increased queuing, intermittent delays, and less consistent traffic flow, particularly along key approaches such as Arlington Memorial Bridge and Boundary Channel Drive.

There are currently designated parking areas for personal vehicles at Arlington National Cemetery, along with established drop-off locations for motorcoaches and buses. While personal vehicle parking is generally not at capacity, bus and motorcoach parking often operates at or near capacity.

3.7.3. Environmental Effects – Traffic and Circulation

3.7.3.1. *Effects of the No Action Alternative – Traffic and Circulation*

Under Alternative A, a Triumphal Arch would not be constructed in Memorial Circle. Consequently, the traffic and circulation conditions would remain unchanged from that described in the "Affected Environment: Current and Expected Future Condition of Traffic and Circulation if No Action is Taken" section.

3.7.3.2. *Effects of the Proposed Action – Traffic and Circulation*

<u>Effects of the Proposed Action on Visitation to Memorial Circle</u>

Visitation to Memorial Circle would increase substantially above current conditions. Visitation projections, based on comparable National Mall and Memorial Parks sites and the proximity of Arlington National Cemetery, indicate that peak season daily visitation could range from approximately 2,000 visitors per day under a low scenario to more than 22,000 visitors per day under a high scenario (Volpe, 2026a). This represents a 40 to 1,500 percent increase over existing conditions, depending on the season. Consistent with trends observed at newly opened memorials, visitation is expected to be highest in the initial years following opening before stabilizing at lower long-term levels. Regardless of arrival mode, most visitors would walk into the center of the Circle to experience the Arch (Volpe, 2026a). The Arch itself can accommodate approximately 450 people, although the number of people admitted each hour would be determined by operational considerations.

Bicycle and Pedestrian Circulation

Short-Term Construction Effects on Bicycle and Pedestrian Circulation

During the two to three years of construction of the Arch, bicyclists and pedestrians would encounter detours that could require longer travel distances. For roughly 80 percent of this period, users coming from the south side of the Circle would be rerouted to the north side of the Circle, resulting in increased travel time and less direct access to the Mount Vernon Trail and other destinations such as the Arlington Metrorail station or Arlington National Cemetery. In addition, utility installation from the various potential utility corridors would also disrupt bicyclists and pedestrians, especially if utilities are routed under roadways or sidewalks. Although the detours would be ADA accessible, they may still result in navigational challenges, which would be partially mitigated with clear signage and wayfinding during construction.

Visitors walking through the area would also experience construction activity, including equipment, noise, and temporary barriers. In addition, overlapping construction zones associated with regional infrastructure projects could extend walking distances or compress foot traffic into fewer open corridors, intensifying crowding and increasing variability in travel times. Concurrent trail and bridge improvement projects in the region could further constrain bicyclist movement and increase congestion in key approach areas, leading to more frequent interruptions to travel flow than the Arch project would create on its own.

At the conclusion of construction, all temporary closures would be removed, and pedestrian, bicycle, and overall circulation patterns would return to the conditions described in the section above. In addition, any effects associated with other ongoing regional projects would diminish as those projects conclude, restoring more predictable movement and fewer disruptions over time.

Long-Term Effects of the Proposed Action on Bicycle and Pedestrian Circulation

Once the proposed traffic and circulation changes have been implemented, the proposed action would produce substantial long-term safety and circulation benefits for pedestrians and bicyclists by installing eight fully signalized crosswalks with pedestrian actuation/detection, removing inconsistent yield and merge controls, and enlarging median islands to create refuge and reduce total exposure distance. These improvements would substantially reduce pedestrian–vehicle conflict potential, provide intuitive and clear routing to the center of Memorial Circle, and accommodate the large groups expected to visit the Triumphal Arch.

For bicyclists, more predictable pedestrian movements and fully signalized crossings would clarify right-of-way expectations and reduce erratic crossing behavior. Together, these elements would create a lasting and measurable improvement in safety for people walking and biking.

By maintaining a minimum of 200 feet of SSD the design would improve drivers' ability to detect pedestrians and bicyclists, which would help reduce sudden braking, increase yield compliance, and enhance overall safety for nonmotorized users.

Design features such as raised crossings, curb extensions, advanced stop bars, and clear wayfinding would further increase the likelihood that drivers would stop for pedestrians and bicyclists at designated crossings, reducing conflicts and supporting more orderly movement.

Additional information is included in Appendix B.

Vehicle Circulation

Short-Term Construction Effects on Vehicle Circulation

During Arch construction, lane closures and reconfigurations would temporarily impact several roadways in and around Memorial Circle, including segments of Memorial Avenue, Arlington Memorial Bridge, Boundary Channel Bridge, Arlington Boulevard, and Washington Boulevard. This includes, for the majority of construction, reducing westbound traffic from Arlington Memorial Bridge to two lanes, restricting eastbound traffic from Memorial Avenue from turning northbound onto Arlington Boulevard and directing vehicles onto Arlington Memorial Bridge, prohibiting northbound traffic from Washington Boulevard from entering the circle and requiring vehicles to turn right onto Arlington Memorial Bridge.

During construction, maintenance of traffic (MOT) measures would temporarily reconfigure traffic patterns using a suite of lane detours, lane closures, and controlled pedestrian routes used to safely maintain travel conditions during construction. The temporary traffic circulation pattern changes are anticipated to maintain access for the most high-volume traffic movements with limited disruption throughout construction.

In addition to the primary maintenance of traffic plan anticipated to be in place for most of the construction period, shorter-duration traffic impacts are expected during the MOT setup, utility installations, and implementation of the permanent traffic configuration. Overall, these short-term conditions are typical of major civil work and would be mitigated by avoiding peak-hour closures where feasible, signal timing adjustments, and continuous ABBAS compliant pedestrian pathways. Impacts on vehicle circulation would remain localized to the area around Memorial Circle and would be acceptable given the substantial multimodal safety benefits of the final transportation plan.

Utility work along Washington Boulevard would result in short-term, temporary traffic delays, as at least one lane would likely need to be closed during installation. Most utility line installation would occur during non-peak hours to the greatest extent feasible in order to reduce traffic impacts. Steel plates placed over the work area may be considered to avoid lane closures where practicable.

In addition to the impacts related to construction of the Arch, several other major regional projects (see Appendix F), including bridge rehabilitations, trail improvements, roadway preservation efforts, and bridge projects, would contribute additional construction activity, detours, and travel delays. These overlapping activities would create broader disruptions to visitor approach routes, increasing uncertainty and reducing predictability for travelers. The proposed action has been planned with the timing of these projects in mind.

Additional information is included in Appendix B.

Long-Term Effects of the Proposed Action on Vehicle Circulation

Once the proposed traffic and circulation changes have been implemented, approaches to Memorial Circle would be expected to operate under stable flow conditions, generally without signs of congestion or operational instability. Drivers would encounter low to moderate delay

during the busiest commuting times but overall experience predictable movement through the area.

The only notably constrained movement would be the Washington Boulevard northbound right turn onto Arlington Memorial Bridge during the weekday morning peak. Under assumptions of maximum pedestrian signal activation, conditions could approach the upper limit of roadway capacity, resulting in significant delay, reduced maneuverability, and limited ability to recover from disruptions. Vehicles would continue to move, but at slower speeds and under constrained conditions. However, these effects would be offset by the removal of the Arlington Boulevard northbound merge lane, which would reduce confusion and improve driver expectancy, likely limiting the severity of the delays.

Sight distance measures in the proposed action, including maintaining at least 200 feet of SSD, and reducing visual clutter from signal hardware, would help ensure that drivers can clearly see crosswalks, approaching pedestrians, and bicyclists as they enter and navigate Memorial Circle. Maintaining this level of approach visibility means drivers have enough time and space to recognize people in or near the crossing and respond safely, supporting more predictable and secure interactions between vehicles and nonmotorized users.

Together with the planned safety and traffic improvements at the Memorial Bridge and Lincoln Memorial Circle area, and the traffic calming measures described above, the proposed action would create a safer and more connected system for people walking, biking, and driving along the Potomac riverfront. Because the busiest visiting times at the memorials usually do not occur during rush hour, the project is not expected to cause major slowdowns for commuters. After construction, NPS would collect new traffic and speed data and would work with the District Department of Transportation and other partners to adjust signal timing, as needed, to keep traffic moving smoothly.

Increased visitation associated with the project is expected to result in higher traffic at the Arlington National Cemetery parking area. While visitor numbers may rise, the existing parking facilities for personal vehicles at Arlington National Cemetery currently operate well below capacity. Based on this existing condition, the additional demand generated by increased visitation is anticipated to be accommodated within the current parking supply for personal vehicles. Therefore, no adverse impacts on personal vehicle parking availability would be expected, and the existing lot is considered sufficient to meet foreseeable visitation needs. At present, overflow parking for these larger vehicles occurs along Memorial Avenue, and this practice would continue under the proposed action. Should visitation patterns shift substantially in the future, additional designated bus or motorcoach parking may be considered to improve circulation and reduce reliance on overflow parking areas.

3.8. Visitor Experience

3.8.1. Affected Environment (Current and Expected Future Condition of Visitor Experience if No Action is Taken)

Memorial Circle functions as a major traffic rotary connecting the Arlington Memorial Bridge, the north–south George Washington Memorial Parkway, U.S. Highway 50 (Arlington Boulevard) and access roads to Arlington National Cemetery.

Most pedestrians and bicyclists passing Memorial Circle do so while traveling through the area rather than visiting it as a destination. Visitors do not use the inside turf area of the Circle itself. There are no parking areas or pull-offs directly adjacent to the Circle. Visitors typically reach the Circle in one of three ways: from the Mount Vernon Trail; by parking at Arlington National Cemetery or exiting the adjacent Arlington Metrorail station and walking approximately 0.4 miles (a 7–8 minute walk); or by taking the footpath from the Lincoln Memorial across Memorial Bridge, about 0.6 miles (a 10–12 minute walk). The Mount Vernon Trail is the primary way nondrivers experience the area. Information on traffic and more details about access are provided in the Traffic and Circulation section.

Visitor Experience

The current visitor experience at Memorial Circle is primarily that of a transportation corridor, not a destination. People encounter it while traveling to the National Mall, Arlington National Cemetery, or along the George Washington Memorial Parkway. Visitors experience the Circle from a vehicle, often at speed, while navigating complex roadway geometry with attention focused on lane changes, exits, and traffic flow. There is no internal destination, monument, or interpretive feature within the Circle that would draw visitors to this site. The experience is generally brief.

Pedestrians and bicyclists using the area experience high traffic noise from the Parkway. The Mount Vernon Trail provides excellent views of the Potomac River and the National Mall. From Memorial Circle in Washington, D.C., visitors can enjoy a sweeping view eastward across Arlington Memorial Bridge toward the Lincoln Memorial and parts of the National Mall, including glimpses of the Washington Monument. The Circle also offers views of the ceremonial approach to Arlington National Cemetery along Memorial Avenue and the Arlington Hemicycle, as well as nearby parkland, the Potomac River, and the wooded landscape of the George Washington Memorial Parkway. Depending on your position, you may also see the Netherlands Carillon and the surrounding ridge near the U.S. Marine Corps War Memorial.

The area is difficult to navigate for both pedestrians and bicyclists, who must navigate complex crossings where the trail intersects access roads and bridges. There is limited wayfinding for navigating toward the Lincoln Memorial or Arlington National Cemetery, and many visitors report that the area feels confusing to navigate. The area is known for conflict points between bicyclists, pedestrians, and vehicles, as the trail alignment near the Circle is narrow and constrained, with limited buffers from traffic.

Other regional planned actions (see Appendix F) may also influence the broader visitor experience at Memorial Circle in the future by increasing exposure to construction-related noise, equipment, movement, and visual disruptions. Bicyclists would experience irregular travel flow where trail routes are rerouted or temporarily constrained, and drivers may encounter slower speeds and variable traffic patterns associated with construction activity. While such conditions would be temporary and tied to phased project schedules, their overlapping timelines could result in recurring periods where there is new conflict between park users and construction equipment moving through the area and the overall visitor environment feels more congested and less serene than usual. Over the long term, once construction activities are complete, visitor experience is expected to return to existing conditions, as none of the referenced projects would create permanent changes within Memorial Circle itself.

3.8.2. Environmental Effects – Visitor Experience

3.8.2.1. *Effects of the No Action Alternative – Visitor Experience*

Under Alternative A, the Arch would not be constructed in Memorial Circle. Consequently, the condition of visitor experience and access to Memorial Circle would remain unchanged from that described in the "Affected Environment: Current and Expected Future Condition of Visitor Experience if No Action is Taken" section.

3.8.2.2. *Effects of the Proposed Action – Visitor Experience*

Under the proposed action, the movement-oriented traffic hub would become a hybrid environment where high-volume pedestrian activity intersects with fast-moving vehicle circulation. Consistent with current conditions, most visitors would continue to access Memorial Circle on foot or by bicycle. Visitors would continue to access from the footpath connecting to Arlington National Cemetery and the parking lot and Arlington National Cemetery Metrorail station there, from the footpath across Arlington Memorial Bridge from the Lincoln Memorial, or from Mount Vernon Trail. However, Memorial Circle would be more accessible under the proposed action with the addition of pullouts for vehicles to drop off visitors. Impacts associated with traffic are analyzed under Traffic and Circulation.

<u>Approaching the Destination</u>

Visitors approaching from Arlington National Cemetery or Arlington National Cemetery Metrorail station would experience an outstanding and immediate view of the Arch as they begin their walk. Consistent with current conditions, the walk from this direction would involve a long, exposed walk (roughly a half mile) toward Arlington Memorial Bridge, with heavy traffic noise and limited shade. To reach the Arch, visitors would activate a pedestrian signal and wait for traffic to stop before crossing multiple lanes of traffic. Improvements in signaling and raised crosswalks would substantially improve safety conditions for pedestrians walking to Memorial Circle compared to current conditions.

Visitors approaching from the National Mall would experience iconic views of the Arch as they cross Arlington Memorial Bridge. Consistent with current conditions, the walk would cross multiple busy crosswalks from the Lincoln Memorial and a long, exposed walk (roughly over a half mile) over Arlington Memorial Bridge, with heavy traffic noise and no shade. At the bridge's connection to Memorial Circle, narrow and crowded sidewalk conditions would persist, particularly during busy periods. New directional signage would clarify crossing points and reduce confusion over how to access the site. To reach the Circle's center island, visitors would still need to wait for a pedestrian signal and cross several lanes of traffic, similar to the experience of those arriving from Arlington National Cemetery. During peak visitation, increased pedestrian volumes from both directions would contribute to longer waits and greater congestion at crossings. Planned improvements in signaling and installation of raised crosswalks would meaningfully improve pedestrian safety compared to existing conditions.

Because of the potential increase in pedestrians walking to Memorial Circle to visit the Arch, bicyclists on the Mount Vernon Trail would experience increased congestion as pedestrian activity increases in the vicinity of the trail. With more pedestrians sharing space with bicyclists, conflicts and close encounters could become more frequent. However, planned improvements in

signaling and installation of raised crosswalks would substantially improve pedestrian and bicyclist safety, compared to existing conditions. Also, with the installation of bicycle racks, the Circle would become more accessible for bicyclists and would provide a safe way for them to leave the Mount Vernon Trail and access Memorial Circle and the Arch.

During peak driving hours, drivers would encounter repeated pedestrian activated stops and thus slower circulation. However, the planned signal changes and roadway modifications to address circulation (see Appendix B) would improve traffic congestion compared to current and expected future conditions. Also, the introduction of the Arch would also create a new visual experience for drivers as they travel through Memorial Circle. The impacts of the proposed action on traffic are discussed under Traffic and Circulation.

Arriving at the Arch

Once visitors reach the Circle, their experience shifts from moving through traffic to entering a dedicated monument space. It would be part of Washington, D.C.'s long-standing tradition of using structures to convey national themes and values. The Arch would establish a new focal point within the monumental setting, giving visitors a defined place to pause and reflect with clear sightlines toward nearby national landmarks and memorials. By celebrating 250 years of American independence, the Arch would introduce a new interpretive opportunity within an existing corridor of national remembrance. It would offer elevated and framed views of the surrounding landscape and provide interior exhibit space that supports visitor engagement. Together, these elements would create a distinct new experience embedded within the broader tradition of Washington's monumental landscape.

As described in the description of the proposed action, once visitors enter the Arch, full amenities would be available, including restroom facilities, a store, and café or similar food establishment. The Arch would be fully ADA compliant.

From both the ground level and the observation deck, the Arch would offer visitors new opportunities to see major landmarks from perspectives not currently available within Memorial Circle. Visitors ascending the Arch would experience broad, outward views toward Arlington House, the Potomac River, the Lincoln Memorial grounds, and the surrounding Parkway landscape, while those at ground level would encounter framed views through the Arch's central opening and a more clearly defined focal point at the center of the Circle. These viewing experiences would provide additional ways for visitors to understand the spatial relationships among the corridor's major features and would provide a new interpretive opportunity not currently available. The Arch would provide sweeping, outward views similar to the panoramic experience offered from the Washington Monument, extending that type of elevated perspective onto the broader axis that links the region's major monuments.

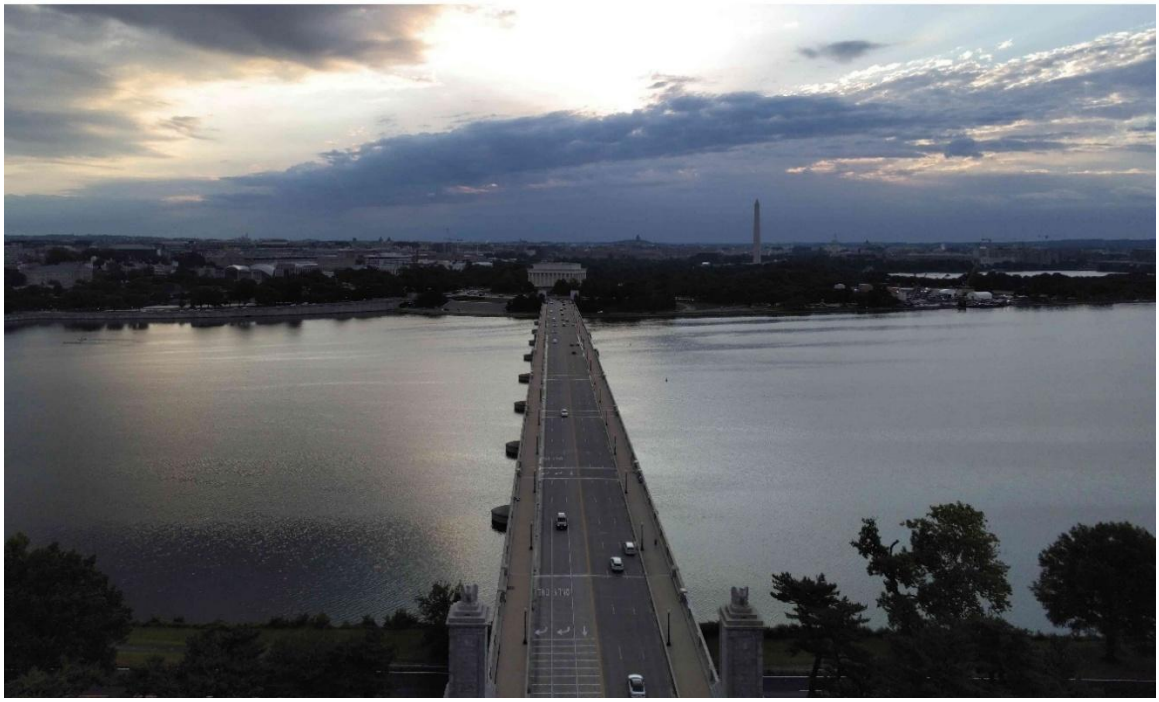


Image 32. View From the Proposed Triumphal Arch Toward Lincoln Memorial ©Harrison Design

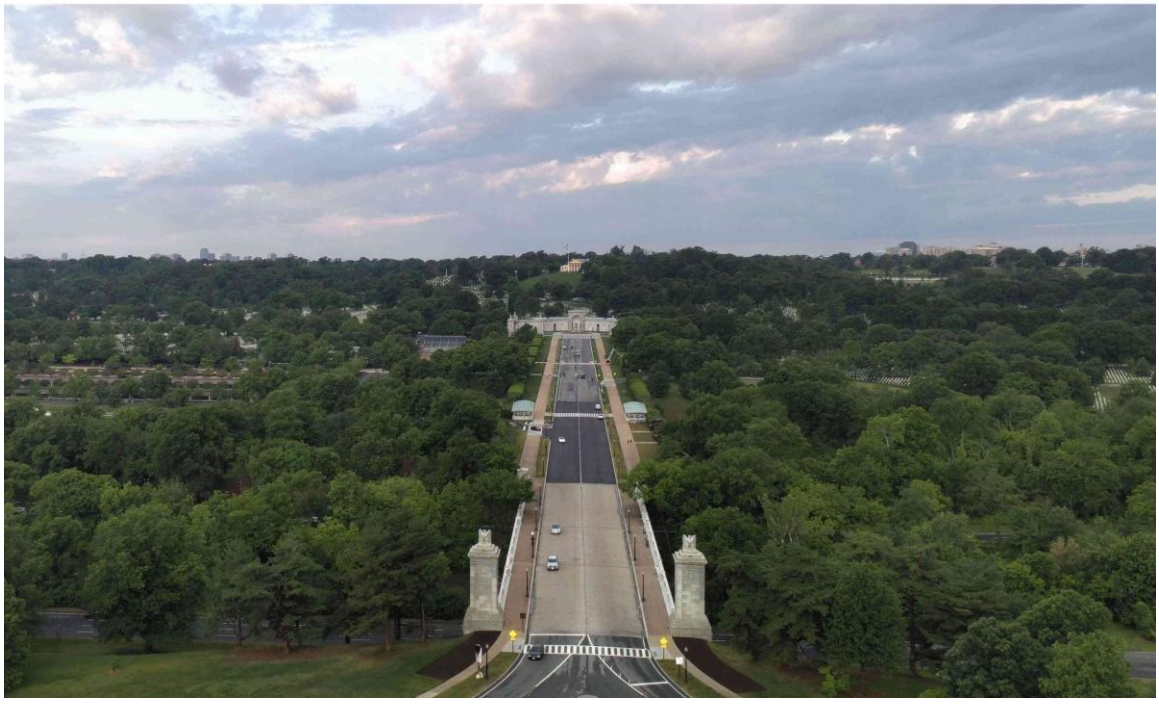


Image 33. View From the Proposed Triumphal Arch Toward Arlington National Cemetery ©Harrison Design

At the same time, introduction of the Arch would alter long familiar views from key public areas. The structure would interrupt or partially obscure segments of the historic axial sightline between the Lincoln Memorial and Arlington House, changing visitors' perception of the current landmark-to-landmark connection from traditional viewing points.



Image 34. View From the Washington Monument Looking Toward the Lincoln Memorial ©Harrison Design

All visitors would be required to obtain a timed ticket and complete security screening before entering. Managing this flow would require coordinated oversight of queuing, gathering, interpretation, circulation, and accessibility within a confined area. Similar to other high-use destinations such as the Washington Monument, access to the Arch would involve obtaining a timed ticket, completing security screening, and using an elevator or stairs to reach public spaces. Timed entry would regulate the number of visitors entering the Arch at any one time, helping maintain steady movement through the check-in, security, and interior circulation points. With visitors moving continuously both into and out of the Arch and across the Circle's center island, prolonged crowding would be limited. Because no additional visitor facilities would be located on the island outside the Arch, most visitors would be unlikely to remain for extended periods after completing their tour or viewing experience. Given the absence of facilities outside the Arch, visitors should plan ahead to ensure they are adequately prepared.

Overall, within Memorial Circle, visitors would experience sustained periods of high activity and concentrated visitor movement, representing a substantial increase in overall use compared to current conditions.

Some visitors would come to Memorial Circle without entering the Arch. As described above, these visitors would need to plan accordingly, as no visitor amenities would be available outside the building and entry would require a ticket. Visitors who come only to view the exterior of the Arch are unlikely to remain for long, which would limit their contribution to crowding or congestion except during the busiest periods.

Finally, while the outward views would change, traffic noise would remain a characteristic of the setting, similar to current conditions. From the Arch, visitors could experience a reflective or contemplative moment based on the visual setting alone. However, the acoustic environment would continue to be influenced by surrounding roadway activity and periodic aircraft

overflights, and these sound sources would limit the extent to which the space could function as a quiet or tranquil area. As a result, the visitor experience would be shaped by a combination of expansive views and ongoing ambient noise typical of the Memorial Circle environment.

Leaving the Destination

Visitors departing the monument would encounter similar circulation conditions as during arrival, including required pedestrian crossings and exposure to traffic. Bicyclists and drivers would continue to experience periods of concentrated activity as visitor activity increases near the trail, bridge, and roadway interfaces. Overall, the departure experience would involve continued interaction with traffic in a busy and exposed environment.

3.9. Noise

3.9.1. Methods

Sound pressure level measures the intensity of sound as perceived by the human ear, expressed in decibels[1](dB) on a logarithmic scale, meaning a 10-dB increase represents a sound roughly twice as loud to a listener.

Table 1. Sound Level Examples.

Common Sound Sources	Sound Level dB*
Human breathing at 3 meters	10
Whispering	20
Residential area at night	40
Car at 15 meters, traveling 30 miles per hour	60
Curbside of busy street	80
Jackhammer at 2 meters	100
Train horn at 1 meter	120
Jet engine at 100 feet	140

*dB re 20 µPa A-weighted broadband (12.5 Hz–20 kHz), sound level measured over varied measurement durations and at the distances indicated.

Sources: Buxton et al. (2019); Yale Environmental Health and Safety (2026)

NPS conducted noise modeling to evaluate how pile driving—the loudest anticipated construction activity—could affect sound conditions in the project area. Because pile driving produces short, high-intensity impulses, focusing the analysis on this activity provides a conservative basis for assessing potential noise impacts.

[1] Sound pressure levels are often defined in terms of frequency-weighted scales (A, B, C, or D). The A-weighted decibel scale is used most commonly; it reflects the varying frequency sensitivity of the human ear to low level sounds (low level meaning 40 dBA above the human threshold of hearing at 1 kilohertz [kHz]). Unless otherwise stated, the sound level measurements used to describe sound as perceived by the human ear in this document represent 1-second A-weighted average level measurements, or $LA_{eq,1s}$ in the standard terminology of the American National Standards Institute (1994). However, for simplicity and conformance with many other public documents, all sound level values specific to humans will be denoted by "dB" or "dBA," a more common term for the same measurement (NPS 2026).

The modeling relied on the Noise Model Simulation (NMSim) acoustic propagation tool, which simulates how impulsive noise travels through the environment.[2] Noise inputs were developed using detailed, frequency-specific data for diesel impact hammers, reflecting both low- and high-frequency components from previous NPS studies and Soderberg and Laughlin (2016). Source levels were standardized to a 50-foot reference distance.

NMSim uses a digital elevation model (DEM) to represent terrain and account for shielding, channeling, and other topographic influences on sound propagation. Modeling was performed using standard meteorological assumptions (59°F and 70 percent relative humidity). Ambient background noise was intentionally excluded so the model could isolate sound generated solely by the construction activity and evaluate how it propagates across the three-dimensional landscape.

The sound-propagation maps included in this chapter were produced using a 10-by-10-meter grid. To determine noise levels at specific locations addressed in the environmental analysis, log-averaged sound levels were calculated from the pixels intersecting each coordinate, providing representative levels at each point of interest. Because impact hammers can produce blows approximately once per second, one-second equivalent continuous sound levels (LAeq,1s) were used, an appropriate metric for characterizing short-duration, high-intensity impulsive sources.

This approach provides a conservative, terrain-sensitive method appropriate for NEPA analysis and for understanding potential effects associated with the project's noisiest construction activity.

See Appendix G for the noise report.

3.9.2. Affected Environment (Current and Expected Future Condition of Noise if No Action is Taken)

The NPS defines acoustic resources as the physical sound sources present within a park landscape, including natural sounds (e.g., wind, water, wildlife) and cultural or historic sounds (e.g., ceremonies, commemorative events, quiet reverence). Memorial Circle lies within an urban parkway dominated by persistent roadway noise from the Parkway and nearby regional transportation corridors.

Across Memorial Circle, Arlington National Cemetery's perimeter, Arlington Memorial Bridge, and the Mount Vernon Trail, the dominant noise source is vehicular traffic, including cars, buses, and motorcycles, moving through one of the region's busiest transportation nodes. Event-related traffic surges further elevate noise levels, particularly near Washington Boulevard and Memorial Avenue. Frequent aircraft overflights from Ronald Reagan Washington National Airport further contribute to the elevated noise levels. Reflective surfaces, including the Potomac River and surrounding paved areas, facilitate sound propagation and reduce natural attenuation. As a result, ambient noise levels in the vicinity of Memorial Circle, the Mount Vernon Trail, and the approaches to the Lincoln Memorial are consistently high during daytime hours. Modeled data from the Federal Highway Administration's National Transportation Noise Map indicate typical

[2] NMSIM does not account for non-linear acoustic effects of this kind. Noise may travel further than the linear acoustic model predicts.

24-hour A-weighted average sound levels (LAeq) of approximately 60–69.9 A-weighted decibels (dBA). Although ambient sound levels typically decrease at night, the George Washington Memorial Parkway experiences persistent background noise due to continuous vehicular traffic and its location within a major metropolitan soundscape.

A number of ongoing and planned infrastructure, memorial, transportation, and utility projects are expected to occur within the broader project area in the coming years (Appendix F). Collectively, these actions involve typical heavy construction activities such as bridge deck and pavement rehabilitation, structural repairs, seawall upgrades, trail reconstruction, and installation of new transportation and utility infrastructure. Work would generally require the use of cranes, excavators, haul trucks, concrete equipment, and other standard machinery. Because many of these projects are located within the Potomac River waterfront transportation corridor, and several occur on bridges or along major regional routes, construction activity would be audible at times from areas around Memorial Circle.

These projects would generate intermittent construction noise during their respective work periods. This noise would occur primarily during daytime hours and would vary depending on project scale, equipment type, and distance from Memorial Circle. Given the already high ambient noise environment of the Parkway and surrounding transportation network, the noise associated with these concurrent actions would represent temporary, lasting a few weeks to months, localized fluctuations rather than long-term or continuous increases to noise in the project area.

3.9.3. Environmental Effects – Noise

3.9.3.1. *Effects of the No Action Alternative – Noise*

Under Alternative A, the Arch would not be constructed in Memorial Circle. Consequently, the condition of noise at Memorial Circle would remain unchanged from that described in the "Affected Environment: Current and Expected Future Condition of Noise if No Action is Taken" section.

3.9.3.2. *Effects of the Proposed Action – Noise*

Short-Term Noise Impacts

Under the proposed action, construction of the Arch and proposed changes to roadways, sidewalks, etc., would involve standard heavy equipment such as cranes, excavators, drilling rigs, concrete mixers, and construction vehicles. The U.S. Department of Transportation's *Construction Noise Handbook*, Section 9.0, Construction Equipment Noise Levels and Ranges, (U.S. Department of Transportation 2006), lists equipment and operation noise levels associated with common construction equipment. Equipment such as impact or vibratory pile drivers have actual measured L_{max} values at 50 feet of 101 dBA (Federal Highway Administration, 2006). Pile driving, the loudest construction activity associated with the project, is expected to occur intermittently over approximately six months, meaning the highest noise levels would not persist for the full duration of construction. To evaluate potential effects, NPS modeled pile-driving noise under two conditions: (1) without mitigation and (2) with a noise blanket incorporated into the construction design. As described in Section 2.2.8, the noise blanket is a mandatory project design element. Modeling results demonstrate that the blanket would substantially reduce noise

levels across the project area, including at sensitive locations within Arlington National Cemetery.[3] The use of noise blankets is projected to lower noise levels at certain locations within the Cemetery an average of 28 dB, a substantial reduction. Overall, inclusion of the noise blanket meaningfully reduces the intensity and geographic extent of construction-related noise and limits the potential for adverse acoustic impacts. Because pile driving represents the loudest construction activity within Memorial Circle and would occur during the early portion of the Arch construction, noise levels later in the construction phase would be expected to be lower than those depicted in Figure 5.

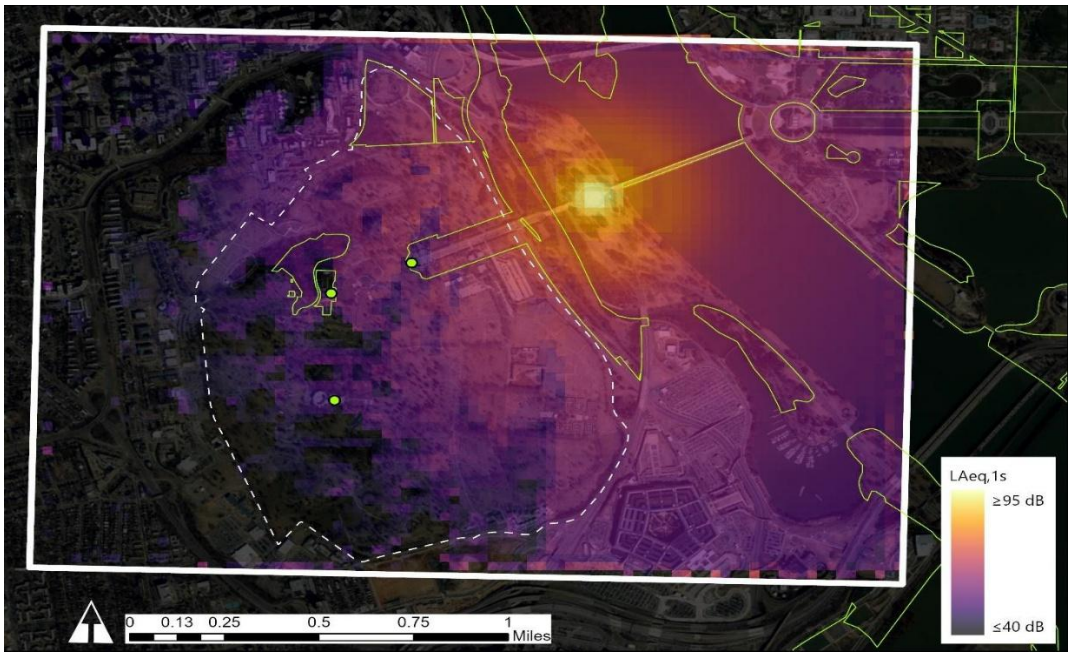


Figure 4. Predicted noise (LAeq) from pile-driving operations occurring in Memorial Circle, displayed across the project area and Arlington National Cemetery without noise blankets included in the project design [4]

[3] Piledriving causes vibrations resulting in a wavefront which likely causes an upward reflection of sound production off the ground. `NMSIM` model does not account for directivity of this kind. An upward reflection might reduce sound level nearby, or possibly cause anomalous, distant audibility under strongly inverted atmospheric conditions.

[4] Estimated sound level LAeq,1s [40 - 12,500 Hz] for a diesel impact hammer without blanket-backed composite curtain mitigation. The colormap spans sound levels from 40 to 95 dB. The study area boundary is shown as a solid white line. The boundary of Arlington National Cemetery is shown as a dashed white line. NPS boundaries are shown as solid green lines. Monuments selected for detailed sound level summaries are shown as green circles

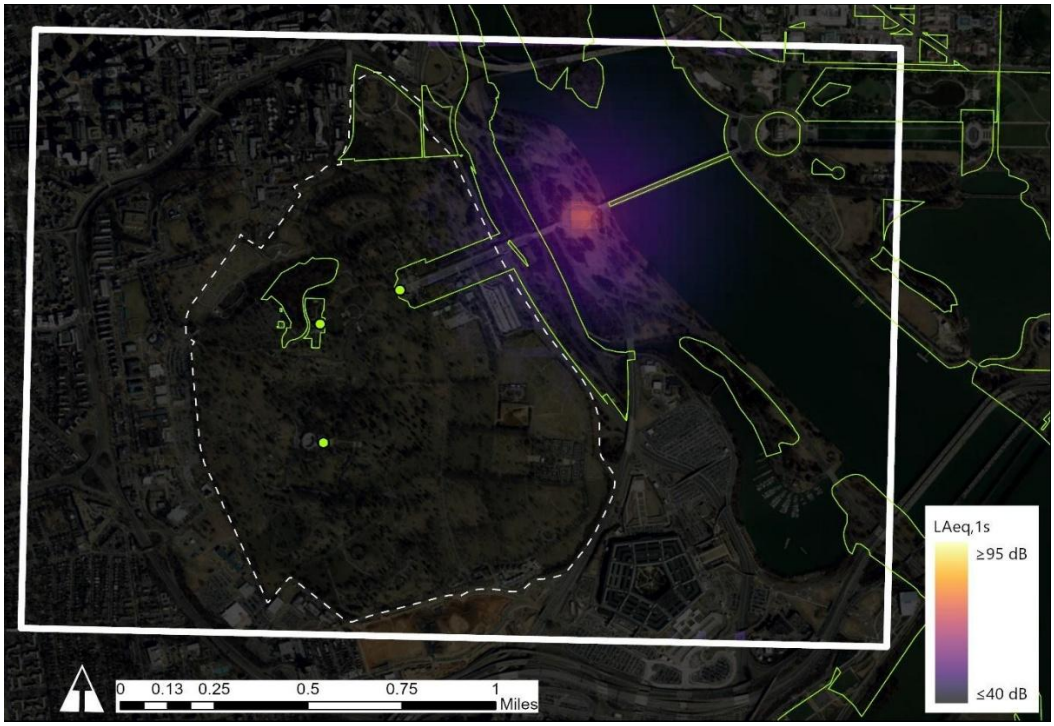


Figure 5. Predicted noise ($L_{Aeq,1s}$) from pile-driving operations occurring in Memorial Circle, displayed across the project area and Arlington National Cemetery with noise blankets included in the project design.[5]

Utility installation along the proposed utility corridors would also generate increases in noise from equipment such as excavators, drilling rigs, cranes, concrete trucks, and support vehicles. Utility installation would occur along Washington Boulevard and Arlington Memorial Bridge where ambient noise levels are already elevated due to continuous vehicle traffic, aircraft overflights, and other urban sound sources. As a result, construction noise from utility installation would be noticeable but would blend into an environment with comparatively high baseline sound levels. Noise would be temporary and confined to the immediate work area, diminishing rapidly with distance consistent with standard attenuation rates for construction equipment. Because utility installation typically advances in short segments, noise at any individual location would occur for limited durations, days to weeks, before activity would shift farther along the corridor. Overall, noise impacts from utility installation would be short, localized, and characteristic of routine utility roadway-adjacent construction.

Because the project area is characterized by consistently high ambient noise, additional sound from construction would be partially attenuated by distance and the natural topographic variation of the surrounding landscape. To minimize temporary effects during construction, noise control measures, such as using quieter equipment when feasible and scheduling the loudest work during daytime hours, may be implemented.

[5]Estimated sound level LAeq,1s [40 - 12,500 Hz] for a diesel impact hammer with blanket-backed composite curtain mitigation. The colormap spans sound levels from 40 to 95 dB. The study area boundary is shown as a solid white line. The boundary of Arlington National Cemetery is shown as a dashed white line. NPS boundaries are shown as solid green lines. Monuments selected for detailed sound level summaries are shown as green circles

Short-term Noise Impacts at Arlington National Cemetery

Under 23 CFR 772, certain areas of Arlington National Cemetery qualify as Category A lands, where serenity and quiet are essential to their intended purpose. Category A thresholds are 57 dBA equivalent continuous sound level (Leq [1 hour]) and 60 dBA sound level exceeded 10% of the time (L10). These conditions exceed thresholds at which speech interference occurs, as noted in the preceding discussion.

To evaluate potential noise effects within Arlington National Cemetery, NPS modeled sound propagation across the entire area. As part of this analysis, NPS assessed whether noise would exceed the 57 dBA Category A threshold at key receptor locations: Arlington House, the Tomb of the Unknown Soldier, and the Women's Military Memorial.

As shown in the figure below, incorporation of the noise blanket is predicted to prevent construction noise from exceeding 57 dBA Leq (1 hour) across most of Arlington National Cemetery. None of the key receptor locations exceeded this threshold, as illustrated in Figure 6.

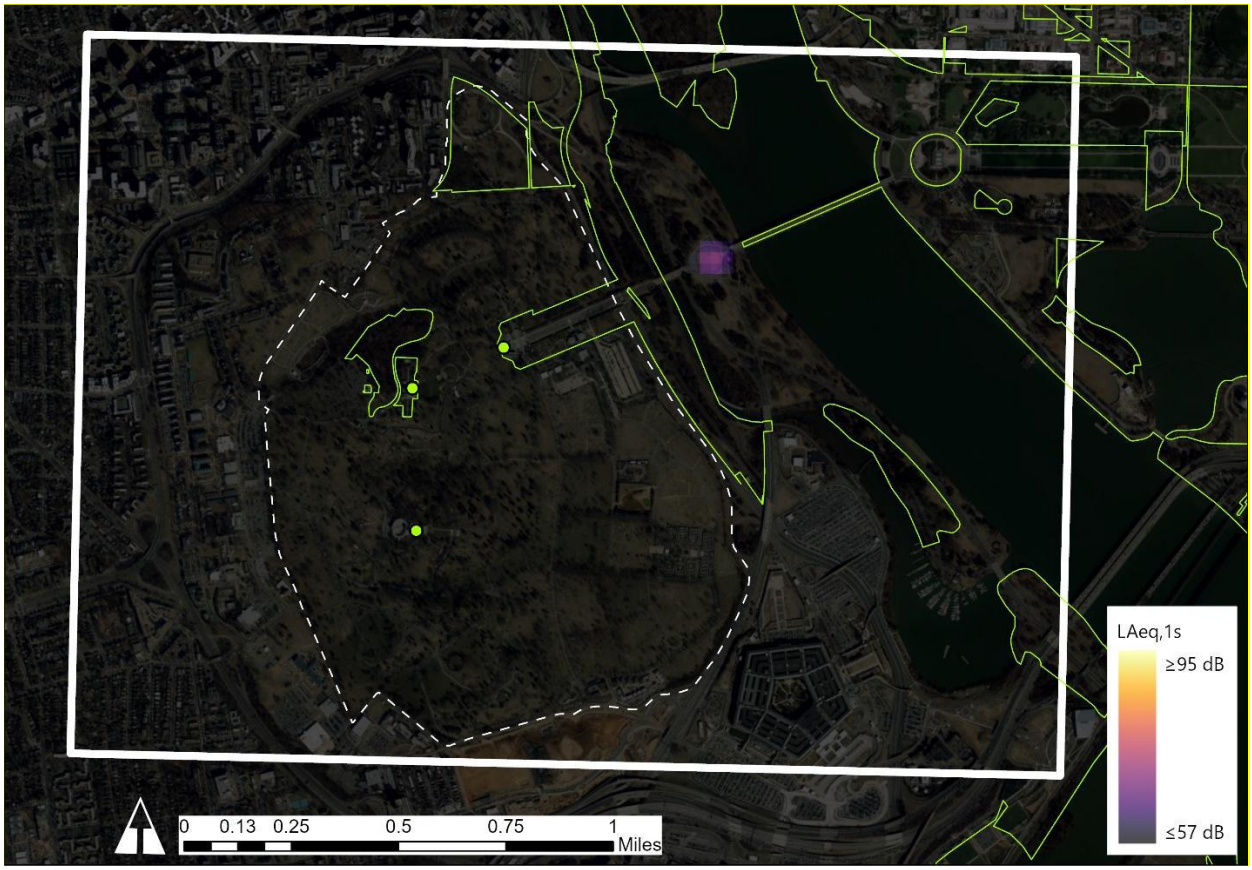


Figure 6. Predicted noise (LAeq) exceeding 57 dBA from pile-driving operations occurring in Memorial Circle, displayed across the project area and Arlington National Cemetery with noise blankets included in the project design[6]

[6] Estimated sound level LAeq,1s [40 - 12,500 Hz] for a diesel impact hammer with barrier-backed composite curtain mitigation. The colormap spans sound levels from 57 to 95 dB. The study area boundary is shown as a solid white line. The boundary of Arlington National Cemetery is shown as a dashed white line. NPS boundaries are shown as solid green lines. Monuments selected for detailed sound level summaries are shown as green circles.

In summary, the proposed action is not expected to negatively impact the solemn and ceremonial atmosphere of Arlington National Cemetery. Areas such as the Tomb of the Unknown Soldier and locations where most interments are expected to occur are projected to remain below the 57 dBA Leq (1-hour) Category A threshold. A limited number of small, discrete locations within the cemetery may experience noise; however, these occurrences are geographically rare and do not represent widespread effects. See Figure 5 in the section above. Overall, with the incorporation of noise-reduction measures, the proposed action would maintain and protect Arlington Cemetery's solemn and ceremonial character throughout the construction period.

Short-term Noise Impacts Across the Potomac River and on the Mount Vernon Trail

If noise blankets are placed on all four sides of the pile driver carriage, noise generated at Memorial Circle would not propagate across the Potomac River toward the Lincoln Memorial and adjacent recreational areas. See Figure 5. If noise blankets are only placed on three sides of the pile driver carriage, noise would propagate across the Potomac River and result in short term adverse impacts to the soundscape along the Potomac River and near the Lincoln Memorial. With the noise blankets in place and given the already high urban ambient sound levels near the Lincoln Memorial, most construction noise would be substantially reduced. Areas immediately surrounding the Circle would experience the greatest noise disruption, with sound becoming increasingly noticeable as distance to the Circle decreases.

Pedestrians and bicyclists on the Mount Vernon Trail may hear construction noise as they move through the area, with sound levels increasing as they approach the work zone. In locations immediately adjacent to the construction, the noise would temporarily interfere with normal conversation between trail users. Overall, construction would not alter the overall acoustic character of these areas.

Short-term Nighttime Considerations

Construction is expected to occur in two 10-hour shifts per day, resulting in 20 hours of activity**.** Because nighttime ambient sound levels are lower, noise during evening and early morning hours would be more perceptible even if absolute levels remain unchanged. This may increase the potential for temporary disturbance, to the soundscape during construction. However, as shown in Figure 5, elevated noise levels would not extend to nearby residential or ceremonial areas. Construction noise in these areas would likely be either not audible or only faintly perceptible.

Long-Term Noise Impacts

Once construction is complete, construction-related noise would cease, and sound levels would return to conditions similar to the current ambient environment dominated by traffic and aircraft. There could also be a slight increase in noise in the immediate area around the Circle associated with a drop-off area. While a pullover lane on Memorial Drive would allow brief vehicle drop offs, idling would be short-term and would not result in any sustained increase in noise. Because no new parking is proposed and most visitors are expected to arrive on foot or by bicycle, long-term operational noise levels would remain minimal.

Because the site's background noise levels would remain high even after project completion, speech intelligibility for interpretive programs and group discussions outside the Arch would

continue to be reduced. Speech interference occurs when noise interferes with human speech. If sound levels exceed 52 dBA, and if a speaker and audience are far apart, as they often are during interpretive programs (approximately 10 meters), speech interference begins to occur (Environmental Protection Agency, 1974). If the speaker and listener are just 1 meter apart, speech interference starts to occur when sound levels reach 60 dBA. The modeled background sound level at Memorial Circle is high enough that group discussions, such as interpretative programs, would not be fully audible to an audience around 5 meters apart (U.S. Environmental Protection Agency, Office of Noise Abatement and Control, 1974).

3.10. Night Skies

3.10.1. Methods

NPS manages night sky quality as an element of the natural and cultural environment that contributes to visitor experience, ecological integrity, and the broader scenic values of national parks. Even within urban parks, maintaining minimized glare, reduced light trespass, and appropriate color temperature is considered essential to preserving nighttime character. Cultural resources, including historic views, and visitor experience are analyzed elsewhere in this document. The focus of this section is on the introduction of a new light source.

The evaluation of night sky conditions relied on comparing the proposed exterior lighting for the Triumphal Arch with established illumination practices used across the monumental core of the National Capital Region. Color temperature and illuminance levels were measured at nearby historic monuments and memorials, including the Air Force Memorial, Arlington House, the Military Women's Memorial, the White House, the Washington Monument, and the Lincoln Memorial, to establish representative baseline lighting characteristics for the region's ceremonial nighttime environment. These reference measurements were then used to determine the Arch's potential effects on night sky conditions within its surrounding context.

3.10.2. Affected Environment (Current and Expected Future Condition of Night Skies if No Action is Taken)

Memorial Circle's nighttime environment is distinctly urban bright, shaped by regional skyglow and offering little natural darkness. As a transportation-oriented space, vehicle headlights, roadway fixtures, and illumination from nearby infrastructure, including Arlington Memorial Bridge, dominate the visual experience, creating consistently high light levels. At the same time, the area reflects the ceremonial lighting character of the surrounding monumental landscape, where commemorative features and axial views contribute additional layers of illumination. Together, these factors result in a brightly lit, movement-focused nighttime setting with limited opportunities for dark-sky viewing.

Eastward views from Memorial Circle include the brightly illuminated Lincoln Memorial and Washington Monument, while north–south sightlines along Memorial Avenue and the wooded slopes of the Parkway, where vegetation softens but does not eliminate regional skyglow. Overhead, aircraft arriving and departing from Ronald Reagan Washington National Airport add intermittent brightness to an already luminous urban night environment.

3.10.3. Environmental Effects – Night Skies

3.10.3.1. *Effects of the No Action Alternative – Night Skies*

Under Alternative A, the Arch would not be constructed in Memorial Circle. Consequently, the condition of noise at Memorial Circle would remain unchanged from that described in the "Affected Environment – Current and Expected Future Condition of Night Skies if No Action is Taken" section.

3.10.3.2. *Effects of the Proposed Action – Night Skies*

The proposed action includes lighting around Memorial Circle, lighting on the Arch to illuminate its walls, and lighting on the roof to illuminate the statuary and torch. The torch and roof luminaires serve as the required FAA-required obstruction light.

The lighting design features for the light poles around Memorial Circle and the linear lighting illuminating the Arch walls include fully shielded fixtures, reducing the potential for light trespass and skyglow from these lights. Below the 150-foot elevation, light levels are intentionally tapered to create a smooth transition down the monument, reducing unnecessary brightness while maintaining the desired nighttime appearance.

The lighting on the Arch's roof, including the upward-facing lights that illuminate the statuary, would introduce a highly visible, persistent vertical light source, increasing skyglow and adding a prominent illuminated element that diminishes the darkness of the surrounding night-sky environment. Additionally, the projected light alters the character of some surrounding historic views. Nighttime renderings from some historic views are presented in the Final Section 106 Assessment of Effect dated August 28, 2026, Attachment A, which includes a viewshed study completed on August 24, 2026. The natural-gas-fueled eternal flame atop the statuary would create a small but continuously visible point of light at 260 feet above ground level. While far less bright than the electric luminaires, its constant combustion would introduce a persistent nighttime light source and a distinct vertical focal point in the skyline, contributing minimally to localized skyglow, but adding another illuminated element visible across the surrounding night-sky environment. This lighting is required for aviation safety (Federal Aviation Administration, 2026). Coordination between NPS and the FAA would ensure lighting meets the necessary illumination for safety compliance.

Lighting the Triumphal Arch would provide several beneficial effects within the ceremonial landscape. Nighttime illumination of the Arch and its statuary would establish a clear, visually prominent focal point that reinforces Memorial Circle's long-intended role as a ceremonial gateway along the Memorial Avenue corridor. By highlighting the Arch's architectural form, lighting would enhance visitors' ability to perceive and understand the spatial relationships among major landmarks and architectural details. The illuminated Arch would also extend visitor opportunities into evening hours, providing a distinctive interpretive experience similar to other monumental features in Washington, D.C., and contributing to the corridor's symbolic continuity as an avenue honoring national heritage.

In summary, the project area is in an urbanized setting with substantial existing ambient lighting, and the proposed Arch lighting will introduce additional brightness into the area. The new

lighting will increase skyglow around Memorial Circle and will be visible from many surrounding locations. The lighting on the statuary and torch, while atypical for lighting of monuments in the area, is required to meet FAA obstruction-light standards. The low-spill, fully shielded luminaires around Memorial Circle and the illumination on the Arch walls are consistent with established monumental lighting practices in the area, preserving the ceremonial character of the surrounding landscape.

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APPENDIX A: ALTERNATIVES AND ISSUES AND IMPACT TOPICS CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

A.1 Alternatives Considered but Eliminated from Detailed Analysis

The range of alternatives includes alternatives, or alternative elements, considered during the NEPA process but eliminated from detailed analysis. Below is a description of alternatives, or alternative elements, considered but eliminated and an explanation of why the alternative or element was eliminated.

Construction of the Triumphal Arch at smaller heights

During and prior to the design process, various smaller arch heights were evaluated. The smaller arches were ultimately dismissed because they would have had greater impacts on the cultural landscapes, specifically the views between the Lincoln Memorial and Arlington National Cemetery (see Cultural Landscapes section above). The smaller designs fully obstructed this view and did not create any new viewing opportunities – by contrast to the proposed Arch, which would allow a less obstructed view through its central opening. In addition, because the Arch is intended to celebrate 250 years of American independence, the smaller heights were not considered representative of this milestone.

Construction of a Triumphal Arch at an alternative location

The NPS dismissed alternative locations outside Memorial Circle because the proposed undertaking is grounded in the historic design intent for the Arlington Memorial Bridge and Memorial Avenue corridor. The location is not being treated as an interchangeable site for a new commemorative feature; rather, it is the specific location identified in the historic planning framework for the bridge, Memorial Avenue, and Columbia Island/Memorial Circle. The 1924 Report of the Arlington Memorial Bridge Commission described a design concept that included monumental vertical elements at Columbia Island in connection with the bridge's western terminus and the ceremonial approach to Arlington National Cemetery. Those proposed columns were intended to frame, mark, and give architectural emphasis to the transition between Arlington Memorial Bridge, Memorial Circle, Memorial Avenue, and the entrance sequence to Arlington National Cemetery.

Alternative locations may reduce or avoid some adverse effects associated with Memorial Circle, but they would also sever the project from the specific historic planning precedent that provides the rationale for the undertaking's placement. For that reason, the NPS did not carry forward alternative locations outside Memorial Circle as reasonable alternatives for this undertaking.

Placing the Triumphal Arch within the George Washington Memorial Parkway is consistent with the park's purpose as a scenic roadway honoring the nation's first president and protecting the cultural and natural resources that frame the Potomac River corridor. The Arch's role in celebrating the 250th anniversary of the United States aligns with the Parkway's long-standing function as a landscape dedicated to reflection on national ideals, unity, and sacrifice. The project also relates to several of the Parkway's fundamental resources and values, including its iconic vistas and views, by offering a new elevated vantage point from which visitors can experience sweeping views of the Potomac River and nearby commemorative features, and its diverse recreational opportunities, by introducing a new destination for learning, contemplation,

and sightseeing. While the project occurs within a complex transportation setting, planned adjustments to the traffic circle, crosswalks, and pedestrian facilities would improve visitor safety and comfort, making it easier and safer for pedestrians and bicyclists to access Memorial Circle and the Arch.

Construction of a feature other than an arch to celebrate the 250th anniversary of American Independence

During the planning process and the NHPA Section 106 comment period, a wide range of alternative concepts were suggested, including smaller or more discreet commemorations and landscape-based features such as gardens, fountains, walls, benches, reflective areas, or plantings. Some commenters also recommended focusing on conservation and ecological restoration rather than pursuing new constructed elements. The purpose and need for action is to celebrate 250 years of American independence by honoring America's founding principles through installation of an Arch in Memorial Circle. The suggested conservation measures and continued maintenance of parklands, by themselves, do not meet the purpose and need for action. The proposed Arch's size, design and statuary are intended to celebrate America's independence through a grand and ornate design. Thus, alternative designs and concepts that did not meet this purpose and need were dismissed.

Over several decades, the Commission of Fine Arts reviewed concepts including a large elliptical plaza framed by formal cross-axes, monumental pavilions, and prominently, two columns representing national reunion. Although successive design revisions in the 1930s scaled back these ambitions, reducing three planned circles to one and replacing proposed monumental columns with smaller sculptural pavilions, the original vision of a major commemorative feature anchoring the Circle was never fulfilled. The proposed action, a Triumphal Arch, continues this historic lineage by introducing a focal point that reflects the site's intended character and celebrates 250 years of American independence. In doing so, it completes a century-old civic design concept while providing a new interpretive and experiential landmark.

Construction of tunnels and elevated pathways for pedestrians and cyclists

During the planning process, the NPS evaluated tunnels and elevated structures as potential ways to improve pedestrian and bicycle access at Memorial Circle in response to identified safety concerns. Pedestrian access via a long tunnel was included in the early design concepts presented to the Commission of Fine Arts, but the Commission did not support this approach and instead recommended exploring surface-level access options. Ultimately, both a tunnel and elevated pathways were dismissed after analysis showed that safety would be addressed through modifications to traffic signaling and other small-scale improvements. Elevated structures would have introduced substantially greater impacts on the surrounding cultural landscapes, while tunnel construction would have posed more extensive disturbances to water and soil resources. As noted in the Volpe (2026) study, NPS would continue to monitor safety and circulation conditions to determine whether additional measures may be needed in the future. If warranted, those options would be evaluated under a separate NEPA review. At this stage, however, the tunnel and elevated alternatives were eliminated from detailed analysis because they would result in greater resource impacts, could not be constructed within the project schedule, and a less costly and feasible option is available.

A.2 Issues and Impact Topic Considered but Eliminated from Detailed Analysis

The impact topics described below represent resources within the project area that may be affected by the proposed action. Impact topics that were considered but not carried forward for detailed analysis are also identified, along with an explanation of why they were excluded.

Public Safety – Helicopter Access to Memorial Circle and Emergency Vehicles

Although Memorial Circle is used intermittently (approximately five times per year) for U.S. Park Police medical evacuation (medevac) operations, the Park Police have identified other nearby areas that can safely accommodate helicopter landings when operational needs require. While Memorial Circle offers a convenient location, the availability of these alternative sites ensures that emergency response functions would continue without meaningful disruption. As a result, removing the Circle from medevac use would not result in significant changes to public safety or diminish overall emergency response capability.

Transportation modeling conducted for the project indicates that neither construction activities nor operation of the completed Arch would result in delays to emergency vehicles traveling on Washington Boulevard, Memorial Avenue, or other nearby roadways.

Aviation Safety

Because of Memorial Circle's proximity to Ronald Regan Washington National Airport, NPS has considered whether the proposed project would adversely affect aviation safety. NPS does not possess specialized expertise in aviation safety and therefore relies on the expertise of the Federal Aviation Administration (FAA). The FAA completed a feasibility study and concluded that the proposed project would have no significant adverse effect on airspace or on visual or instrument procedures at Ronald Reagan Washington National Airport and would not have any effect on airport facilities or radio/visual navigational and landing aids (Federal Aviation Administration, 2026a). FAA subsequently completed an aeronautical study for the Arch and concluded, "the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities," and that the Arch would not be a hazard to air navigation (Federal Aviation Administration, 2026). The FAA feasibility study and aeronautical study determined that the Arch would require an obstruction light. The FAA approved a natural-gas-powered flame on the torch atop the Arch's tallest statuary. The "eternal flame" will serve as the Arch's required obstruction light (Federal Aviation Administration, 2026). The National Park Service will implement any required mitigation measures and will address additional FAA compliance steps as the project progresses through subsequent design and implementation phases.

Cultural Resources—Ethnographic Resources

The 2020 *Ethnographic Resource Study: Subsistence Fishing on the Potomac and Anacostia Rivers* provides an overview of communities that engage in subsistence fishing along both rivers and documents the cultural and social importance of these practices across multiple NPS-managed shorelines. The study identifies where subsistence fishing occurs, the communities involved, and general management considerations.

Subsistence fishing does not occur along the Mount Vernon Trail near the Arlington Memorial Bridge, and therefore is dismissed from detailed analysis in this EA.

Soils

Soils within Memorial Circle are predominantly disturbed urban soils composed of historic fill, placed during construction of Arlington Memorial Bridge, the circle, and associated parkway infrastructure. Native floodplain soils such as Hatboro and Codorus remain only in limited low-lying areas, but most of the site consists of Urban Land and Udorthents, reflecting extensive grading, reworking, and imported material. (Soil Survey Staff, n.d.) These soils exhibit high variability in texture, compaction, and drainage, typical of intensively modified landscapes. Overall, Memorial Circle is characterized by a highly altered soil environment shaped primarily by long-standing transportation and memorial construction activities.

Construction of the Arch and installation of utilities would result in ground disturbance and localized, temporary impacts on soils, including excavation, compaction, and minor erosion where landscaping is removed. The soils in the project area not considered sensitive, unique, or otherwise notable, and the areas affected have been previously disturbed by infrastructure and routine maintenance. Impacts would be generally limited to the construction window and not anticipated to exceed three years. Standard erosion and sediment control measures and postconstruction stabilization would further minimize the duration and extent of effects, and no long-term adverse impacts on soil resources are expected. See Appendix D, Mitigations.

In the first two to three months of the project, approximately 1,400 truckloads of existing soils would be removed from the Circle. Excavated soils would be transported to approved disposal facilities in Maryland or Virginia, contingent upon the results of in situ characterization and contamination testing.

Because impacts to soils are small in scale, temporary, and would not influence the selection among alternatives or meaningfully affect the environmental outcome of the project, these impacts are not central to the decision. For this reason, soils were dismissed from detailed analysis in the EA.

Vegetation

Vegetation within Memorial Circle consists exclusively of intensively maintained turf grass and ornamental groundcover that form part of the Circle's designed historic landscape. No natural plant communities, native vegetation assemblages, or sensitive species occur within the project area, and there are no existing trees within Memorial Circle.

Implementation of the project would require the removal of the entire lawn area within Memorial Circle to allow for construction of the Triumphal Arch. Although this represents a complete change to the existing vegetation within the construction footprint, the lawn itself is a highly managed, regularly replaced landscape feature that does not constitute a special or unique natural resource.

The potential utility corridors consist of manicured lawn, pedestrian and bike paths, and road intersections that would be replaced in-kind if disturbed by utility installation. Utility installation along the proposed corridors would result in direct, ground disturbing impacts to vegetation,

primarily through trenching, equipment access, and temporary staging areas. These activities can disturb turf, compact soils, and affect trees or shrubs located near work zones, even when removal is not anticipated. Where possible, utilities would use the same general routing corridors as other utilities, consolidating disturbance and minimizing new ground impacts.

The NPS would restore disturbed vegetation impacted by construction and, though no trees are planned to be removed at this time, if any trees outside the Circle are removed to support construction staging or access or utility installation, the NPS would replace those trees consistent with NPS landscape practices and generally aligned with National Capital Planning Commission (NCPC) tree replacement requirements. During the later phases of construction, any trees removed from the cultural landscapes would be replaced in kind, or with a more acceptable/suitable species for the location as determined appropriate by an interdisciplinary team led by a historical landscape architect, to mitigate the adverse effects from the loss of contributing vegetation. Trees would be replaced based on diameter at breast height (DBH) with an overall increase in total DBH at the site, as per NCPC policy. Trees and vegetation within the construction area that are to remain would be protected throughout construction to avoid adverse effects.

Because the affected vegetation is limited to fully managed turf with no trees identified currently for removal, and the removal and restoration of lawn do not represent meaningful ecological impacts, vegetation does not warrant detailed analysis in this EA. Instead, any changes in vegetation that affect the historic character, spatial organization, or integrity of the designed landscape are addressed in the Cultural Landscapes section, where those impacts are most appropriately evaluated.

Wildlife

The Memorial Circle area supports a subset of the broader wildlife community associated with the Parkway. Due to its highly maintained landscape and proximity to major transportation corridors and the Potomac River, wildlife present in the immediate project area is primarily composed of species adapted to sustained human activity, traffic noise, and fragmented habitat. Commonly occurring species include urban tolerant birds such as Canada goose, mallard, rock pigeon, house sparrow, northern cardinal, and mourning dove, along with small mammals such as eastern gray squirrel, eastern cottontail, raccoon, and opossum. Amphibians and reptiles may occur only intermittently within adjacent planted and riparian vegetation, including regionally common frogs and skinks. (National Park Service, n.d.)

Because the proposed action would occur within an already developed traffic circle and would not remove or substantially alter natural habitat, impacts to wildlife would be negligible. Construction activities would be temporary and highly localized. Longterm presence of the Arch would not meaningfully change habitat conditions, movement patterns, or species composition relative to existing conditions. For these reasons, there would be no measurable or adverse effects from the proposed action, and therefore this topic was dismissed from further detailed analysis in the environmental assessment.

Wildlife —Threatened and Endangered Species

On May 8, 2026, a threatened and endangered species list was generated from the US Fish and Wildlife Service (FWS) Three listed threatened and endangered species have the potential to occur within the project area: the endangered Northern long-eared bat (*Myotis septentrionalis*), the proposed endangered Tricolored bat (*Perimyotis subflavus*), and the proposed threatened monarch butterfly (*Danaus plexippus*).

Northern Long-Eared Bat: Potential summer habitat for the northern long-eared bat is present within the deciduous trees with a diameter at breast height (dbh) of three inches or greater located in the project area. Mist-netting efforts between 2016-2018 did not capture NLE bats. Passive acoustic monitoring conducted between 2016- 2018 of NLE bats in the area resulted in mean nightly activity of 0.0- 0.01 which indicates a low presence of NLE bats (NPS 2021).

Tri-colored Bat: The tri-colored bat utilizes similar habitat as the northern long-eared bat. During the winter, tricolored bats are found in caves and mines, although in the southern United States, where caves are sparse, tricolored bats are often found roosting in road-associated culverts. During the spring, summer and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leaves. Mist-netting efforts between 2016-2018 did not capture tricolored bats. Passive acoustic monitoring of tricolored bats during 2016-2018 resulted in a mean nightly activity of 0.01 – 0.08 which indicates a low presence of tricolored bats (NPS 2021).

Given that no trees would be removed, the National Park Service has determined a *no effect* for the Northern long-eared bat and tri-colored bat. The Boundary Channel Bridge may be used for utility routing. In 2025 the bridge was surveyed for presence of bats in 2025 with no evidence of bat roosting or guano observed (Stantec, 2025).

Monarch Butterfly: The monarch butterfly utilizes a variety of habitat types; however, the dependence on milkweeds (*Asclepias spp.)* for the egg-laying and the primary food source for the larval stages of the species is a crucial component of their life cycle. Adult monarch butterflies can utilize nectar from a variety of plant species as a food source. The terrestrial vegetation within the study area is regularly maintained. The project area consists of manicured fields and does not provide suitable habitat for the egg-laying and larval stages of this species. Therefore, the determination of effect for the monarch butterfly is *no effect*.

Air Quality

To protect air quality, the Clean Air Act (CAA) requires the EPA to set National Ambient Air Quality Standards (NAAQS) for six pollutants that can be harmful to public health and the environment (called "criteria" air pollutants) (EPA, 2025b). The primary NAAQs are established at levels considered protective of public health, including "sensitive" populations such as children, the elderly and people with heart and lung conditions. Areas where monitored air quality does not meet the NAAQS are designated as nonattainment and the appropriate air regulatory agency must develop an implementation plan to address air pollutants contributing to the NAAQS violations. (In this case, the District of Columbia Department of Energy and Environment, or DOEE, is the air regulatory agency responsible for the Washington D.C. area.)

Recent monitoring in the region shows that air quality at Memorial Circle is generally meeting the federal health-based national ambient air quality standards (NAAQS) (DOEE, 2025). However, the Washington, DC area (DC-MD-VA) is currently a designated nonattainment area for the 2015 ozone (O3) NAAQS (moderate status, (EPA 2026), despite recent monitoring data reflecting ozone values below the NAAQS. This is because the official redesignation process takes time; DOEE is seeking formal redesignation to attainment for ozone as of April 2025 (DOEE, n.d.), and the area would become a maintenance area for O3 if redesignated. The area is also a designated maintenance area for particulate matter less than 2.5 microns, called PM2.5 (EPA 2026).

Section 176(c) of the Clean Air Act requires federal agencies to ensure that air emissions from federal actions located in nonattainment or maintenance areas would not cause or contribute to new violations of the NAAQS or increase the frequency or severity of existing NAAQS violations (called a "general conformity" determination). To assist federal agencies in making conformity determinations, the associated regulations provide "de minimis thresholds," which are emission thresholds (in tons per year) below which federal actions are assumed to conform, and a conformity determination is not required (EPA, 2025a). As explained below, emission generating activities associated with the construction of the Triumphal Arch are estimated to be below the de minimis thresholds identified in the regulations.

Construction activities associated with the proposed project would result in temporary air emissions, mainly from the following construction-related emission sources:

- Emission from on-site generators to power construction activities/equipment.
- Tailpipe emissions from construction equipment (e.g., excavators) and heavy-duty trucks hauling materials to and from the site.
- Vehicle emissions from construction workers commuting to and from the site.
- Emissions from drill rigs to drill deep foundation pile caissons.

These activities may cause localized, short-duration increases in particulate matter, nitrogen oxides and volatile organic compounds immediately adjacent to the work zone. Occasional nuisance conditions (e g, minor dust or diesel exhaust odors) could occur in areas closest to construction. All effects would be temporary and would end upon completion of construction, which is anticipated to occur over approximately three years.

Construction emissions would dissipate rapidly and would not cause or contribute to NAAQS exceedances because emission estimates are below de minimis thresholds established for O3 and PM2.5 in the General Conformity regulations (see 40 C.F.R. § 93.153(b)(1)–(2) (2026). Ozone is secondary air pollutant, formed through atmospheric reactions of NOx and. For this reason, ozone de minimis thresholds are established for NOx and VOC emissions. $PM_{2.5}$ is both a primary pollutant (e.g., emitted directly from a tailpipe), and a secondary pollutant formed through atmospheric reactions of particle-forming pollutants such as SO_2, NO_x, VOC and ammonia. For this reason, de minimis thresholds for $PM_{2.5}$ are established for primary $PM_{2.5}$ as well as SO_2, NO_x, VOC and ammonia.

Emission estimates for the conformity analysis were based on (1) the project size, (2) the types of construction equipment used, (3) the relatively small emissions generated by individual pieces of equipment, and (4) the numbers of equipment used in a project of this scope. Standard

construction best management practices, including dust suppression, and use of properly maintained machinery, would be implemented to further minimize temporary construction emissions. It is expected that all construction activities would conform with Washington DC on road and \onroad diesel engine idling requirements, which would further reduce construction-related emissions (District of Columbia Municipal Regulations, n.d., Chapter 20-9).

Following construction, the Triumphal Arch would remain primarily accessible by bicycle and on foot, limiting ongoing transportation-related emissions. Air quality conditions would return to baseline, and no lasting degradation of ambient air quality would occur. Therefore, air quality was not carried forward for detailed analysis.

Floodplains

Executive Order 11988, "Floodplain Management" (1977b), and NPS DO #77-2: Floodplain Management require an examination of impacts on floodplains and potential risk involved in placing facilities within floodplains (NPS, 2003). Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map panel 1100010018C (revised September 27, 2010) details that the entire project area is outside of the regulated five percent annual chance floodplain of the Potomac River and Boundary Channel. Based on the project location, the proposed project would not result in negative impact to human health, capital investment, or natural and beneficial floodplain values. Therefore, this project is anticipated to conform to the requirements of Executive Order 11988 and NPS DO #77-2, and the issue has been dismissed from detailed analysis in this EA and a Floodplain Statement of Findings is not necessary.

Socioeconomics

The socioeconomic environment of the project area consists of local, regional, and national businesses, government agencies, residences, and tourist attractions. Currently there is no internal destination, no monument, plaza, or interpretive feature within Memorial Circle, that would draw visitors to this site. The experience is brief, directional, and utilitarian as visitors pass by while traveling to the National Mall, Arlington National Cemetery, or along the George Washington Memorial Parkway.

Construction of the proposed Arch would introduce temporary changes to travel and access conditions for pedestrians, motorists, and bicyclists throughout the three-year construction period. A temporary change in travel patterns represents a limited inconvenience to some visitors but is not expected to meaningfully affect the regional economy, tourism sector, or local employment. Following construction, all temporary closures would be removed and pedestrian, bicycle, and vehicle travel routes would return to their pre-construction configurations, with no lasting socioeconomic effects.

The proposed Arch would create a new visitor experience along the corridor of national remembrance that includes an exhibit space, café, gift shop, and an elevated viewing platform. Visitation projections indicate that peak season daily visitation could range from approximately 2,000 visitors under a low scenario to more than 22,000 visitors under a high scenario (Volpe, 2026). Visitors to Washington, DC, typically visit numerous museums, monuments, and cultural institutions during their trip. Therefore, it is anticipated that a new visitor opportunity would

contribute to the collective positive economic benefits generated by visitor attractions in Washington, DC, but would not constitute a major economic driver for the region.

Construction of the proposed Arch would result in a short-term need for construction workers, but the number of workers would be minimal and most of them would already be employed, and there would be no effect on the population, income, or employment base of the surrounding community. The need for construction workers would provide minimal increases in employment opportunities and revenues for local businesses, but any increases would be below the level of detection due to the scale of the local economy. For these reasons, impacts related to socioeconomics were dismissed from detailed analysis.

Water Quality

If utilities are installed via horizontal directional drilling (HDD) across the Boundary Channel, impacts to water quality is not expected. HDD is a trenchless construction method that installs utilities well below the bed of the waterway, so no open excavation or direct disturbance of the water column is required. The drill path is designed with sufficient depth of cover and appropriate geotechnical controls to prevent disturbance to the bed of the waterbody and water column. Because construction activities, staging, and fluid handling occur outside the ordinary high-water mark, there is no direct discharge of sediment or drilling fluid to surface waters, and therefore no mechanism for sustained increases in turbidity. In addition, best management practices, such as secondary containment, spill prevention, and rapid response procedures, are implemented under applicable District of Columbia and federal permits, ensuring that water quality and turbidity in the Boundary Channel remain protected throughout HDD operations. Therefore, water quality was considered but dismissed from detailed analysis.

APPENDIX B: ARLINGTON MEMORIAL CIRCLE: TRANSPORTATION ACCESS, SAFETY, AND OPERATIONS ANALYSIS

1. Background and Purpose

This report provides a traffic and safety evaluation of proposed pedestrian circulation improvements around the Arlington Memorial Circle (AMC). The proposed pedestrian circulation improvements address existing pedestrian safety and circulation challenges around AMC, as well as potential future pedestrian circulation patterns related to the use of the site for the Triumphal Arch to be constructed in the central island.

The purpose of this report is to update previously completed traffic impact analyses related to the proposed pedestrian circulation improvements and to provide additional analysis and information, as needed, to support evaluation of the proposed improvements. In June 2026, new traffic volume data was collected around the AMC and nearby intersections to better model and evaluate potential traffic impacts to the transportation network. The previous traffic evaluation report, dated May 2026, contained traffic volume data from 2019 that was adjusted using data collected in June 2026. The new traffic data provides a current assessment of traffic evaluation and impacts, and responds to recent questions and requests. This report also expands the study area to incorporate nearby intersections and roadway segments, providing a more comprehensive analysis of the surrounding transportation network associated with the proposed pedestrian circulation improvements and construction of the Triumphal Arch.

The existing pedestrian demand at AMC demonstrates a current need for protected pedestrian crossings, independent of the proposed changes to the site. The current roadway geometry poses multiple safety challenges between pedestrians, bicyclists, and vehicles, including indirect pedestrian routes that encourage unsafe crossing attempts along natural desire lines; uncontrolled crosswalks that rely on driver yielding compliance; and unconventional traffic operations that may be confusing for motorists who are unfamiliar with the site. The proposed transportation improvements address these longstanding deficiencies by providing eight fully protected and signalized crosswalks, including four new pedestrian crossing routes. These crossings eliminate conflicting movements, improve the pedestrian connection between the north side of Arlington Memorial Bridge (AMB) and the Mount Vernon Trail (MVT), and simplify vehicle operations. Existing pedestrian volume counts demonstrate crossing volumes exceeding 150 people during the peak hour, further reinforcing that protected signalized crossings are warranted to safely accommodate both existing users and future visitors. During periods of higher pedestrian visitation, the traffic signals will prioritize pedestrian movements and improve safety for the most vulnerable road users. During weekday commuter periods with lower pedestrian visitation, the traffic signals will support efficient vehicle throughout to help accommodate peak commuting traffic volumes.

The addition of the Triumphal Arch reinforces the existing need for protected pedestrian crossings by increasing pedestrian activity around the site. Alternative approaches for providing safe pedestrian access pedestrian access were also considered, including limiting pedestrian access to only the western side of AMC where traffic volumes are lower; constructing pedestrian tunnels under the roadways to avoid vehicle conflicts; and installing Rectangular Rapid Flashing Beacons (RRFBs) and Pedestrian Hybrid Beacons (PHBs) instead of conventional traffic signals. Ultimately, full signalization on both sides of the site was selected as the preferred option given

the high level of current and future pedestrian activity; the visitor experience and anticipated pedestrian demand for safe, direct, and intuitive access from both sides of the site; the familiarity and predictability of conventional traffic signals for all roadway users; and the ability to accommodate existing traffic operations with minimal operational impacts.

The traffic operations analysis found that the only recurring congestion in the study area occurs during the weekday morning commuter peak period along Washington Boulevard at the merge point with the George Washington Memorial Parkway (GWMP) ramp, south of AMC. National Park Service (NPS) experience at comparable memorials indicates the Triumphal Arch will generally attract the highest volumes of visitors during early afternoon, weekends, and holidays, when vehicular traffic demand through AMC is substantially lower. The analysis further concluded that both existing and future traffic delay are driven by the downstream weave condition south of AMC at the Washington Boulevard/GWMP ramps, not by the proposed traffic signals or pedestrian circulation improvements. The weave condition leads to an average queue length of about 2,700 feet in the existing condition and is expected to maintain a length of about 3,000 feet in the future. This average queue length does not extend to the interchange with I-395, which is approximately 7,000 feet south of AMC.

The traffic operations analysis also found that vehicle queues originating from the proposed traffic signal at the Washington Boulevard northbound approach to AMC are expected to extend about 270 to 470 feet and not extend into the Washington Boulevard/GWMP ramp weave area. Therefore, the proposed traffic signals are not expected to exacerbate existing traffic congestion, and the congestion that already occurs today will remain localized without affecting the broader transportation network.

The proposed pedestrian crosswalks and median island areas are expected to regularly accommodate high volumes of pedestrians. The eastern median island, with over 2,000 square feet (sf) of waiting area, can accommodate more than 2,400 pedestrians per hour while still providing more than 25 sf of space per pedestrian. Although pedestrians may have to adjust their path to avoid conflicts and their walking speed and ability to maneuver may be slightly restricted, this level of space provides adequate room for pedestrians to safely maneuver through the crosswalks, triangular median refuge islands, and into the site of the Triumphal Arch.

Lastly, dedicated space along Memorial Avenue will serve pick-up/drop-off activities, staff parking, bus loading and unloading, and delivery and service operations. Memorial Avenue is a 60 foot wide roadway, which can sufficiently accommodate activities along the curb while maintaining two-way traffic. There is sufficient parking available for personal vehicles at the Arlington National Cemetery (ANC), while motorcoaches will continue to use ANC or Memorial Ave in the case of overflow. Close coordination with the ANC related to parking and access will continue as the project moves forward.

2. Proposed Design Plan

The transportation design plan remains generally consistent with the previously submitted approach. The design includes four (4) new signalized intersections with eight (8) signalized pedestrian crossings. This configuration enhances pedestrian circulation and improves visitor safety by providing controlled crossing opportunities throughout the project area. The signalized intersections provide fully protected pedestrian crossings and restricts permissive turning

movements and conflicting pedestrian and vehicle movements. Additionally, all pedestrian signals will operate with automated pedestrian detection limiting the need for people to manually push a button to request a pedestrian signal. This operational approach will prioritize pedestrian movements during periods with expected high visitation to the Triumphal Arch and lower vehicular traffic volumes, such as weekends and holidays, while prioritizing vehicle movements during periods of high traffic volumes, such as the weekday morning commuting period.

Additional benefits result from the signalization of AMC by addressing several existing safety concerns. First, pedestrian and bicycle connections between the north side of AMB and the MVT will be much more direct via the two crosswalks on the eastern side of AMB, which eliminates the need for users to circulate all of AMC to cross the bridge. This will help discourage the unsafe pedestrian and bicycle desire path from the north side of AMB to MVT across the lanes of GWMP north of AMB. The signals will also allow for the removal of the short Arlington Boulevard left-most lane exiting AMC. The lane quickly tapers to reduce the number of travel lanes from three to two lanes before the crosswalk. This lane was added to manage conflicts between northbound vehicles coming from the traffic circle and AMB. This geometry is unconventional and can be confusing for people unfamiliar with the intersection.

While the initial signal design included 32 traffic signal posts to be located throughout AMC, that number has been further refined and reduced to 17 in the current proposal. The plan may be adjusted through detailed design phases which will continue to optimize the traffic signal placement for safety and operations, while minimizing the number of posts where feasible. The design will maintain all Manual on Uniform Traffic Control Devices (MUTCD) requirements for traffic signal locations within the driver's cone of vision and location of pedestrian signal indications.

3. Updated Traffic Volume and Crossing Data

The traffic analysis was refined with updated vehicle, pedestrian, and bicycle traffic volume data and an expansion of the study area. These updates allowed for a more comprehensive evaluation of traffic operations and potential impacts to the broader transportation network.

New traffic volume data was collected throughout the study area between Wednesday, June 10, and Tuesday, June 17, 2026. Data collection included intersection turning movement counts and directional traffic volumes along key roadway segments to and from AMC, including AMB, Washington Boulevard, Arlington Boulevard, and Memorial Avenue. This data was used to characterize traffic patterns and variations in travel demand by time of day and day of week.

3.1 Expanded Study Area

The study area was expanded to the south and west to evaluate potential impacts to the broader transportation network resulting from concerns that projected vehicle queues extended beyond the original study limits. Previous iterations of the traffic analysis only included AMC. This analysis was expanded to 4 additional approaches in the larger transportation network. The study area is shown in Figure 1 and includes the following areas and intersections:

1. AMC, including all surrounding approaches
2. Washington Boulevard at GWMP Ramps

3. Memorial Avenue at Richmond Highway/GWMP Off-Ramp
4. Memorial Avenue at Richmond Highway SB On-Ramp
5. Richmond Highway NB Off-Ramp at GWMP SB Off-Ramp

Figure 1: Study Area Intersections



3.2 Updated Existing Traffic Volume

The Existing (2026) Scenario traffic volumes at the study area intersections are shown below in Figure 2, Figure 3 through Figure 4 during the weekday a.m. peak, weekday p.m. peak, and Saturday midday peak hours.

Figure 2: Existing (2026) Vehicular Traffic Volumes, Weekday a.m. Peak Hour

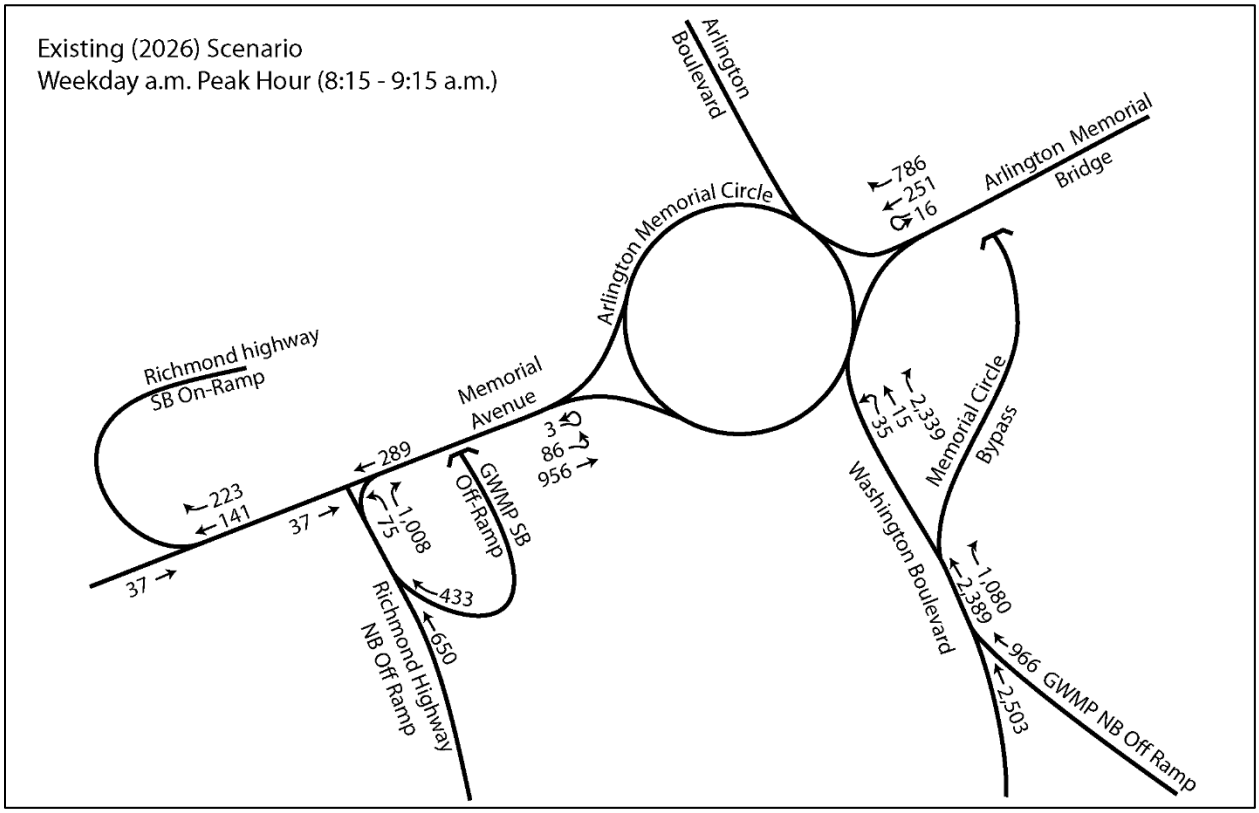


Figure 3: Existing (2026) Vehicular Traffic Volumes, Weekday p.m. Peak Hour

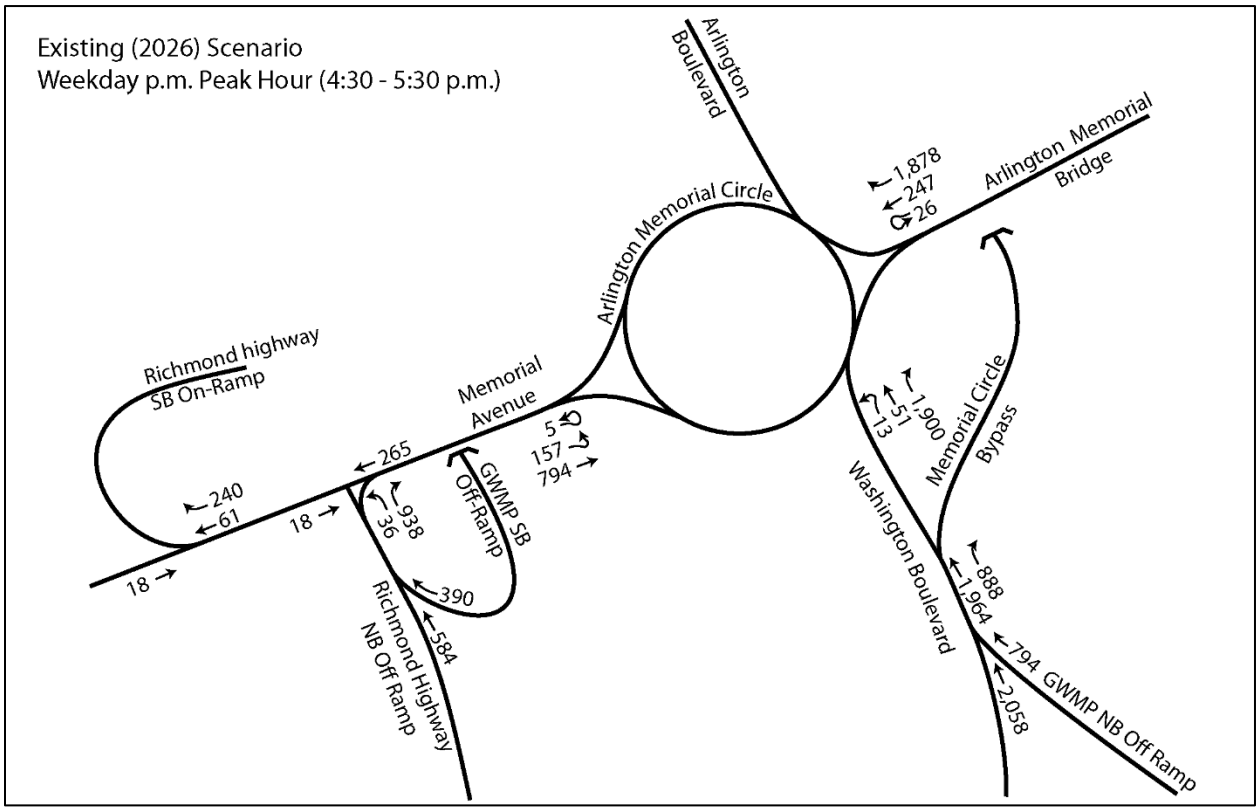
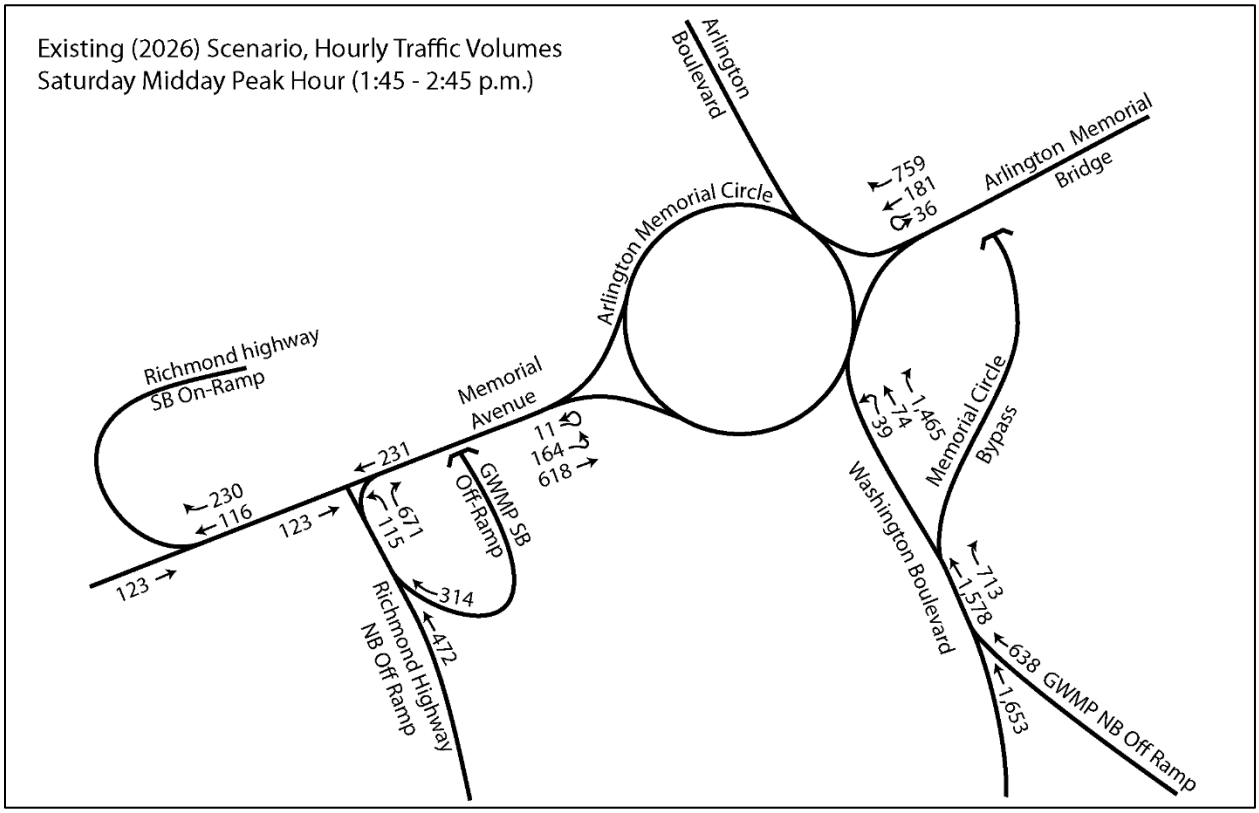


Figure 4: Existing (2026) Vehicular Traffic Volumes, Saturday Midday Peak Hour



Throughout AMC, the highest traffic volumes occur at the Washington Boulevard northbound right turn movement and the Memorial Avenue eastbound through movement. Traffic from Washington Boulevard and from Memorial Avenue combine into traffic traveling over the AMB towards Washington D.C. The hourly traffic volume throughout one week is shown in Figure 5. The highest volume occurs during the morning commuting period with a second peak occurring during the afternoon commuting period. The morning commuting period is shorter with a higher peak exceeding 3,000 vehicles per hour, while the afternoon commuting period is longer, extending about 4 hours between 2:00 to 6:00 p.m, with less concentrated volumes.

Figure 6 shows the hourly traffic volumes along the AMB in the westbound direction, which is significantly lower with a peak of under 2,500 vehicles per hour. Additionally, the westbound direction does not have a morning peak. Figure 7 shows the hourly traffic volumes along Washington Boulevard in the northbound direction approaching AMC. This generally mirrors traffic volumes along the eastbound direction of AMB.

Figure 5: Existing (2026) Vehicular Traffic Volumes, AMB Eastbound Hourly Traffic Volume

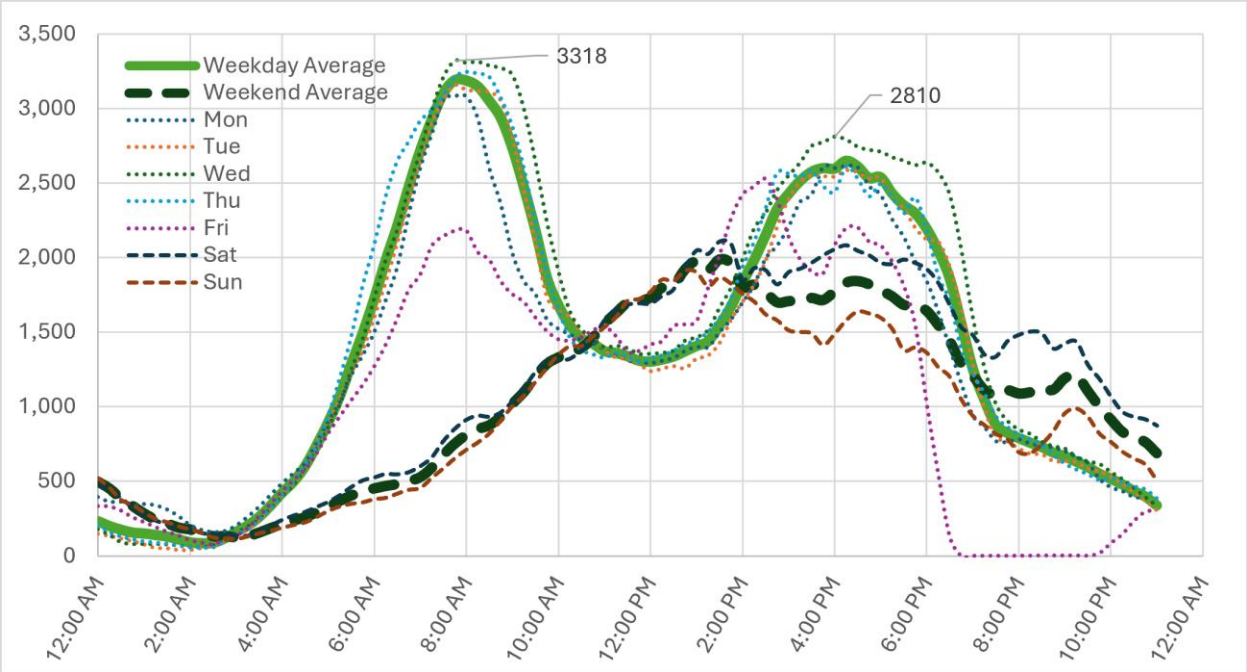


Figure 6: Existing (2026) Vehicular Traffic Volumes, AMB Westbound Hourly Traffic Volume

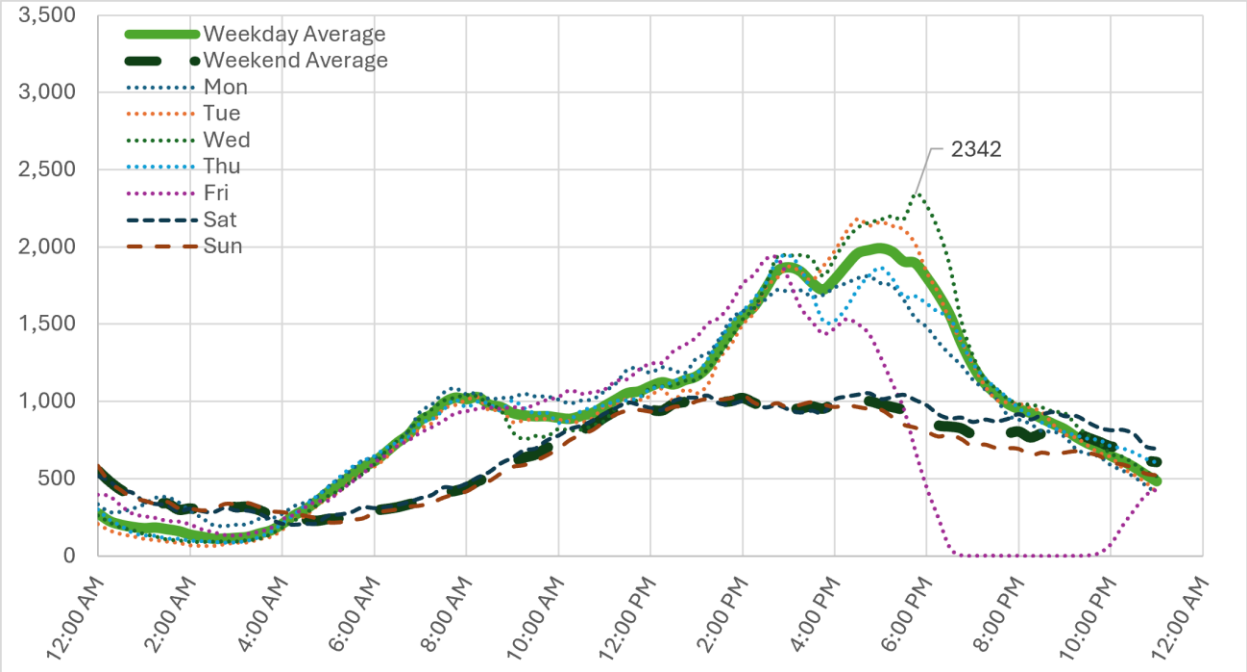
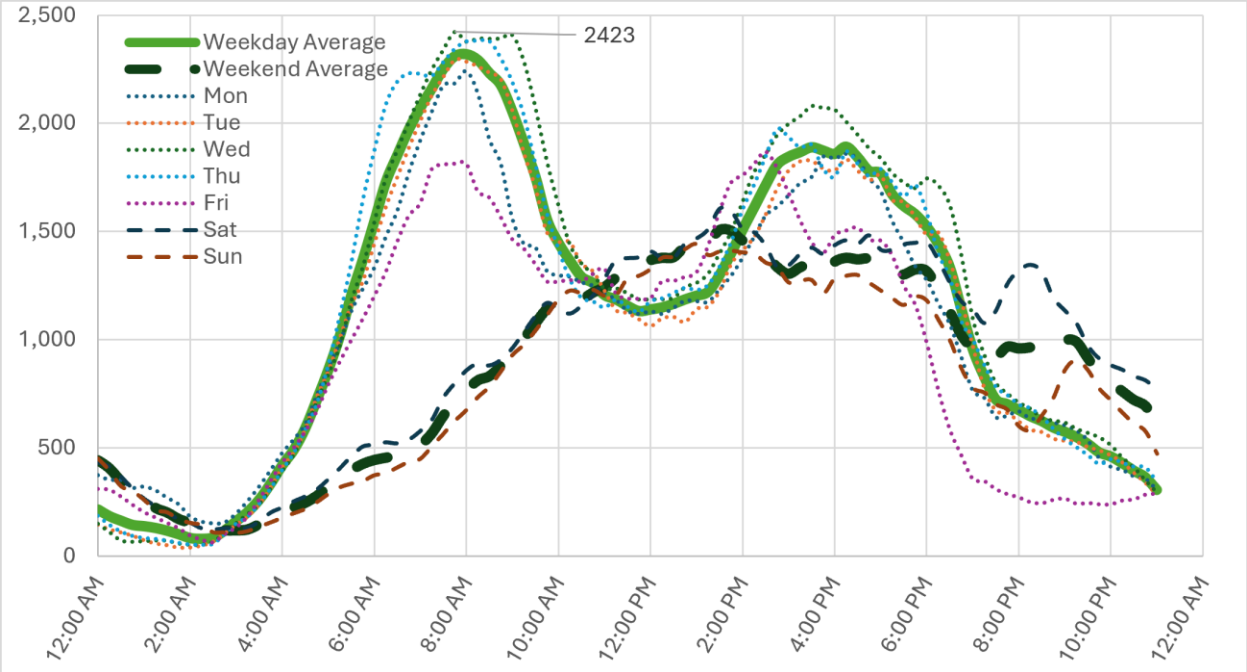


Figure 7: Existing (2026) Vehicular Traffic Volumes, Washington Blvd Northbound Hourly Traffic Volume



3.3 Pedestrian and Bicycle Traffic Volumes

The state of Virginia maintains the Virginia Statewide Active Transportation Count Network, including bicycle and pedestrian counters owned by Arlington County, which provide continuous pedestrians and bicycle data collection along AMB. This data is highly useful to understand the trends in behavior and volume of people walking and biking along the AMB. Between March and October, as shown in Table 1, daily users regularly exceed 1,000 people per day on both the northern and the southern sides of AMB. The southern sidewalk accounts for about 60% of the total users and the northern side is used by about 40% of the users. Pedestrians also make up more of the total volume of users with about 57% of all people walking over the bridge and 43% of people biking over the bridge.

Table 1: Average Daily Pedestrian and Bicycle Volume over AMB by Month

Month (2025)	North Side Average Daily Pedestrians	North Side Average Daily Cyclists	North Side Average Daily Users	South Side Average Daily Pedestrians	South Side Average Daily Cyclists	South Side Average Daily Users
January	329	216	545	291	289	580
February	350	272	621	430	408	838
March	638	439	1,077	1,063	748	1,811
April	675	470	1,145	873	779	1,651
May	609	498	1,107	1,034	747	1,781
June	495	455	950	2,355	691	3,046
July	521	517	1,038	507	750	1,256

August	703	536	1,239	820	829	1,648
September	670	514	1,184	970	786	1,756
October	671	490	1,162	998	676	1,674
November	443	390	833	536	514	1,050
December	260	295	556	320	414	734

The counters also demonstrate the daily variation in pedestrian and bicycle volumes, with volumes varying due to the weather and on weekdays vs weekend. Weekend days have about 30% more people walking and biking over the AMB. This contrasts with vehicular volumes, which tend to be higher on weekdays compared to weekends.

Concurrent with the traffic volume data, pedestrian and bicycle data was also collected at the crosswalks around AMC. During the updated data collection, about 0.6 inches of rain fell on Wednesday, June 10 and impacted the volume of pedestrians and bicyclists that were in the area. According to data at the counters, the number of people walking and biking along the bridge were down about 25 to 40% during rainy conditions relative to times when it was not raining. On Saturday, June 13, the weather was sunny without rain and the volume of people walking and biking represented a typical nice weekend in June on the corridor.

The existing pedestrian and bicycle volume during the weekday a.m., p.m., and Saturday midday peak hours are shown in Figure 8 and Figure 9.

Figure 8: Hourly Pedestrian and Bicycle Volumes at Washington Boulevard Crosswalk, Tuesday, June 16

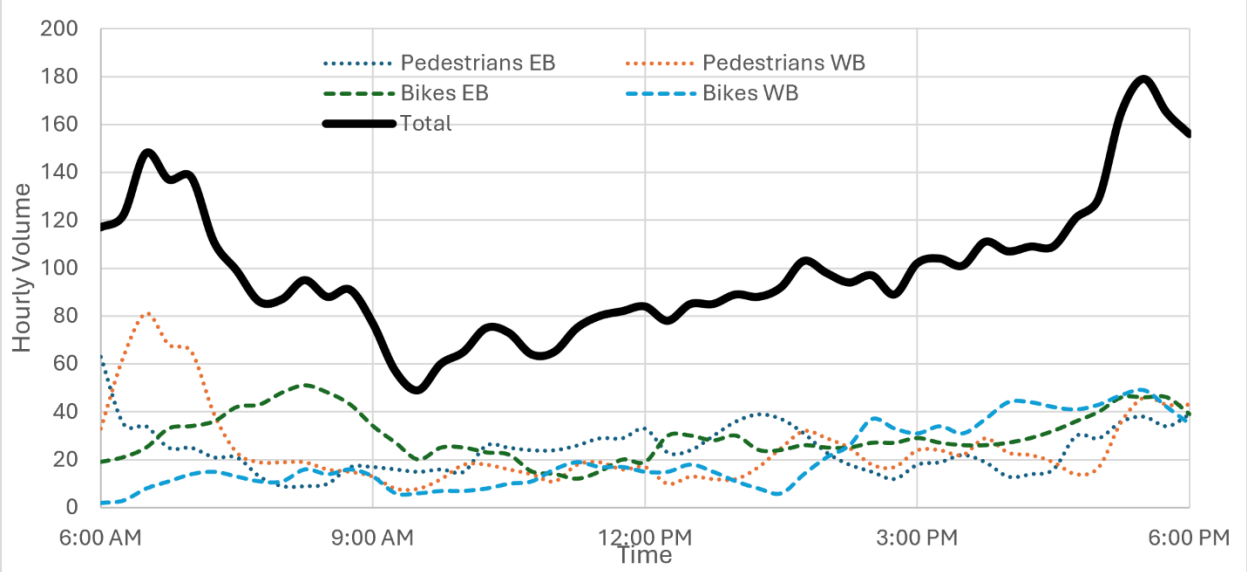
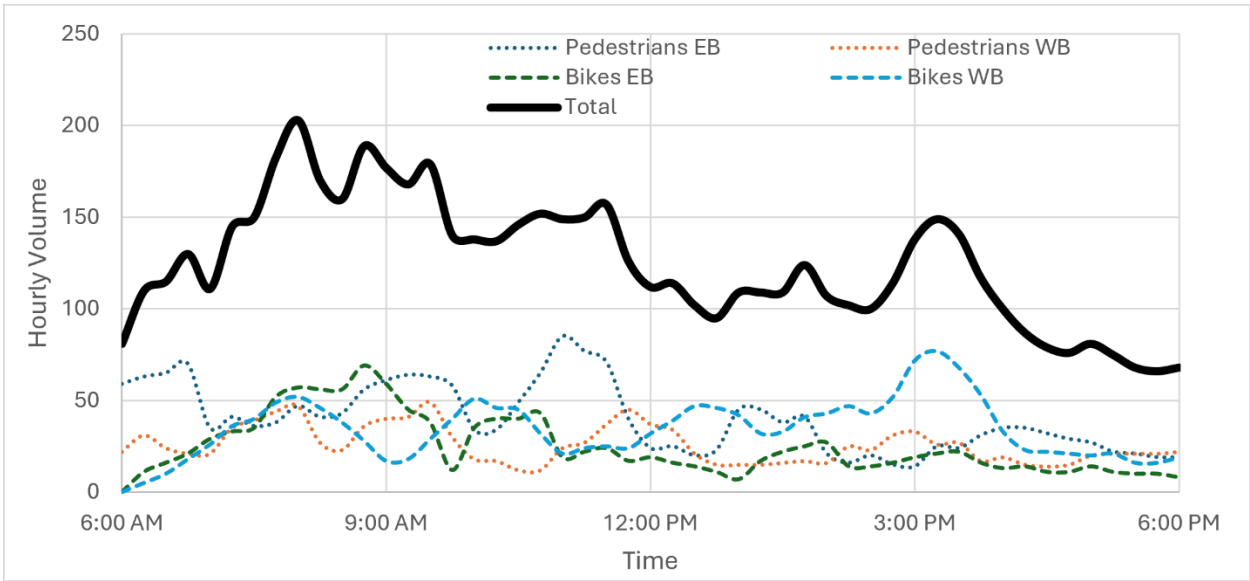


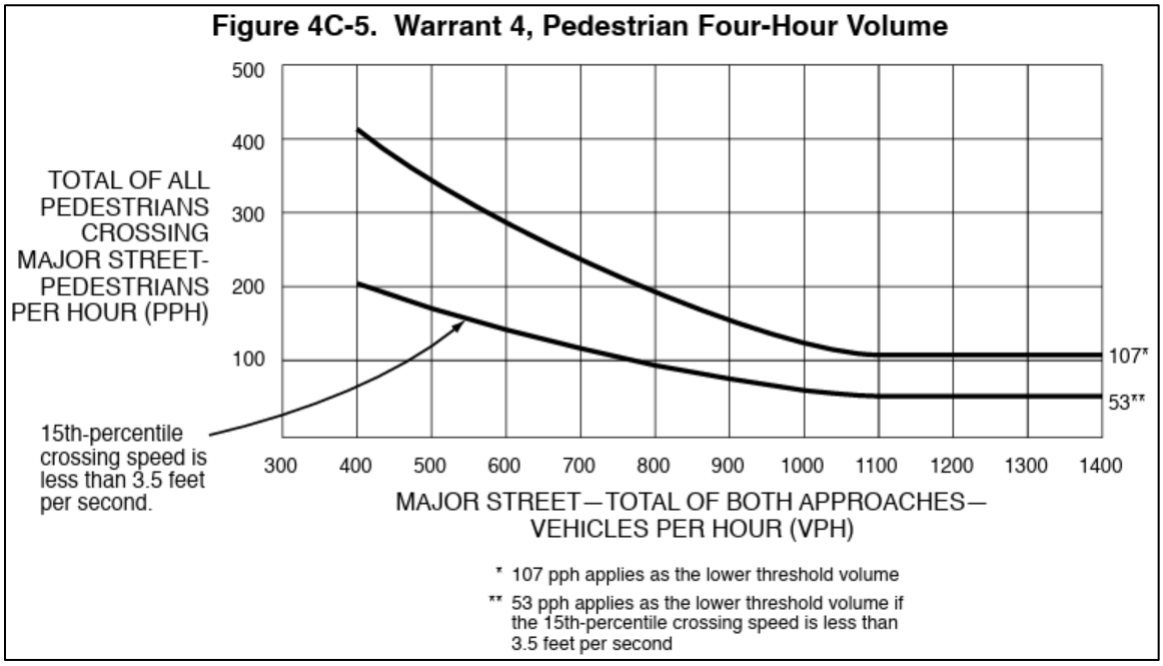
Figure 9: Hourly Pedestrian and Bicycle Volumes at the Arlington Boulevard Crosswalk, Saturday, June 13



3.4 Traffic Signal Warrant: Warrant 4, Pedestrian Volume

The MUTCD pedestrian signal warrant evaluates whether a crossing location experiences enough crossing activity to justify installing a full traffic control signal to allow adequate time for pedestrians to safely cross a street while also managing traffic efficiently. This analysis presents information that even without the Triumphal Arch, the two existing crosswalks across Washington Boulevard and Arlington Boulevard experience enough crossing demand to justify a signalized crossing. The MUTCD establishes two pedestrian warrants, a four-hour volume warrant, and a peak hour volume warrant. The figure from the MUTCD for the Pedestrian Four-Hour Volume and peak Hour Volume Warrants are shown in Figure 10.

Figure 10: MUTCD Warrant 4, Pedestrian Volumes Four-Hour and Peak Hour Volumes



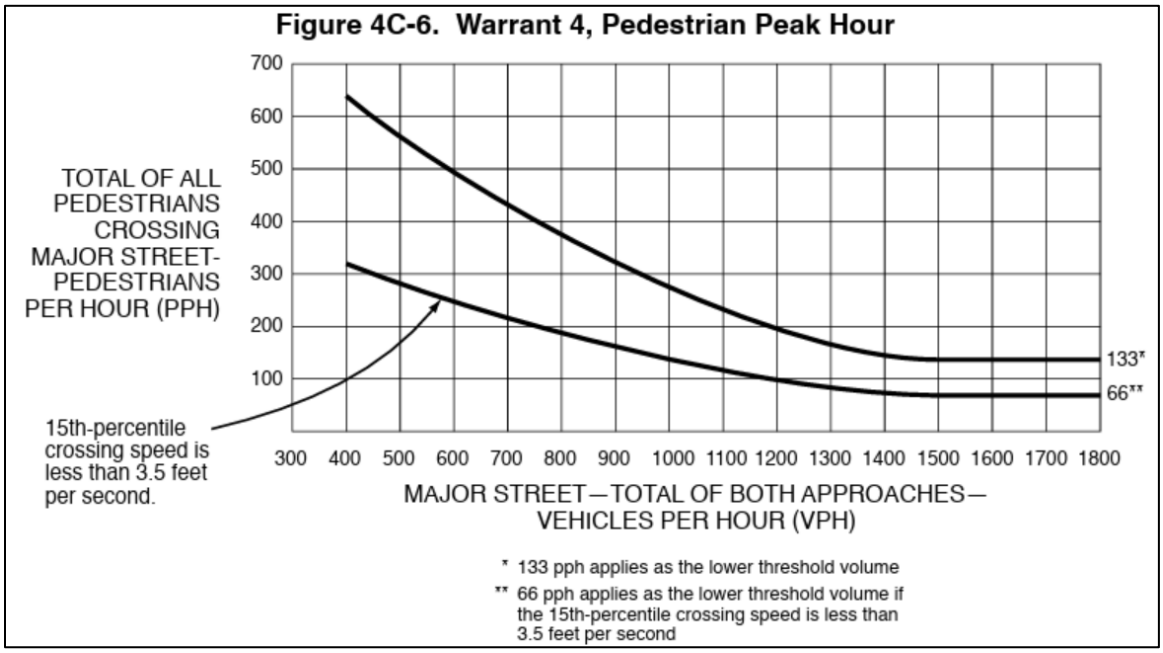


Table 2: North Crosswalk at Arlington Boulevard – Four-Hour Warrant

Hour	Hourly Crossing Volume	Hourly Vehicle Volume	Warrant Satisfied?
Hour 1 – 11:15 a.m. – 12:15 p.m.	148	1,018	Yes
Hour 2 – 12:00 noon – 1:00 p.m.	113	1,076	Yes
Hour 3 – 1:30 – 2:30 p.m.	124	1,056	Yes
Hour 4 – 3:00 – 4:00 p.m.	138	1,045	Yes

Data from Saturday, June 13, 2026

Table 3: South Crosswalk at Arlington Boulevard – Four-Hour Warrant

Hour	Hourly Crossing Volume	Hourly Vehicle Volume	Warrant Satisfied?
Hour 1: 6:00 – 7:00 a.m.	117	1,442	Yes
Hour 2: 7:00 – 8:00 a.m.	138	2,010	Yes
Hour 3: 3:45 – 4:45 p.m.	111	1,791	Yes
Hour 4: 5:30 – 6:30 p.m.	179	1,636	Yes

Data from Tuesday, June 16, 2026

While Table 2 and Table 3 show the warrant being satisfied during the data collection period, the pedestrian and bicycle volumes sustained along AMB and around AMC throughout most of the year indicate a clear justification for a full signal to be installed.

3.4.1 Projected Increase in Walking and Biking

The proposed Triumphal Arch at AMC could generate increased pedestrian and bicycle traffic around the site. Visitation trends can be roughly estimated by analyzing nearby sites throughout the National Mall and Memorial Parks (NAMA) and the ANC. The months with the highest visitation of these nearby sites are generally in the spring, which can be used to form the basis of the projection. With the ANC located nearby, it is likely that the ANC visitation will also impact the visitation projection at the Triumphal Arch, as visitors destined for the Arch could combine their trip with a visit to ANC. According to the Office of Army Cemeteries, "ANC receives, on average, 4 million visitors a year," which translates to about 16,000 daily visitors during the peak season in the springtime. Based on this information, Table 4 shows a low, medium, and high daily projection of pedestrians and bicyclists during the peak month of comparable NCR park units.

Currently during the peak month, about 700 people walk and 700 people bike through the AMC daily, for a total of 1,400 daily walk and bike trips. Table 4 also shows percent increase in activity compared to the number of visitors that currently walk and/or bike around the AMC. Research of newer memorial sites shows a trend indicating that new memorials maintain a relatively higher visitation for the first few years after opening and then normalize down to slightly lower visitation level.

Table 4: Existing and Projected Multimodal Usage: Low, Medium, High Projections

	Projected Pedestrian and Bicyclist Usage		
	Low	Medium	High
Existing Daily Multimodal Usage	1,400	1,400	1,400
Projected Daily Additional Demand	600	4,400	21,000
Total Estimated Daily Users During Peak Month	**2,000**	**5,800**	**22,400**
Percent Increase in Activity	**40%**	**315%**	**1,500%**

Whether a visitor drives, takes transit, uses ride share, walks, bikes, or takes a tour bus to visit the site, most visitors are expected to walk to the center of the AMC and back as part of their experience.

3.5 Future Traffic Volume Projections

Consistent with standard traffic study methodology, existing traffic volumes were projected to future-year conditions to evaluate and compare anticipated traffic operations without the proposed project (Future Baseline) and with the proposed improvements in place (Future Build). By comparing these two scenarios the traffic model can present a better measure of the impact of the project after it is fully operational. The future year for this project was established as five years, consistent with a typical short-term future traffic forecasting period.

Future traffic volumes were projected using a growth rate of 0.5% per year over five years. This growth rate is consistent with the forecasting of other regional transportation models and is supported by travel demand projections developed by the Metropolitan Washington Council of Governments (MWCOG).

3.5.1 Future Baseline (2031) Traffic Volumes

The future baseline scenario accounts for the 0.5% per year growth rate over the next five years. The Future Baseline (2031) Scenario traffic volumes at the study area intersections are shown in Figure 11, Figure 12, and Figure 13 during the weekday a.m., p.m., and Saturday midday peak hours.

Figure 11: Future Baseline (2031) Vehicular Traffic Volumes, Weekday a.m. Peak Hour

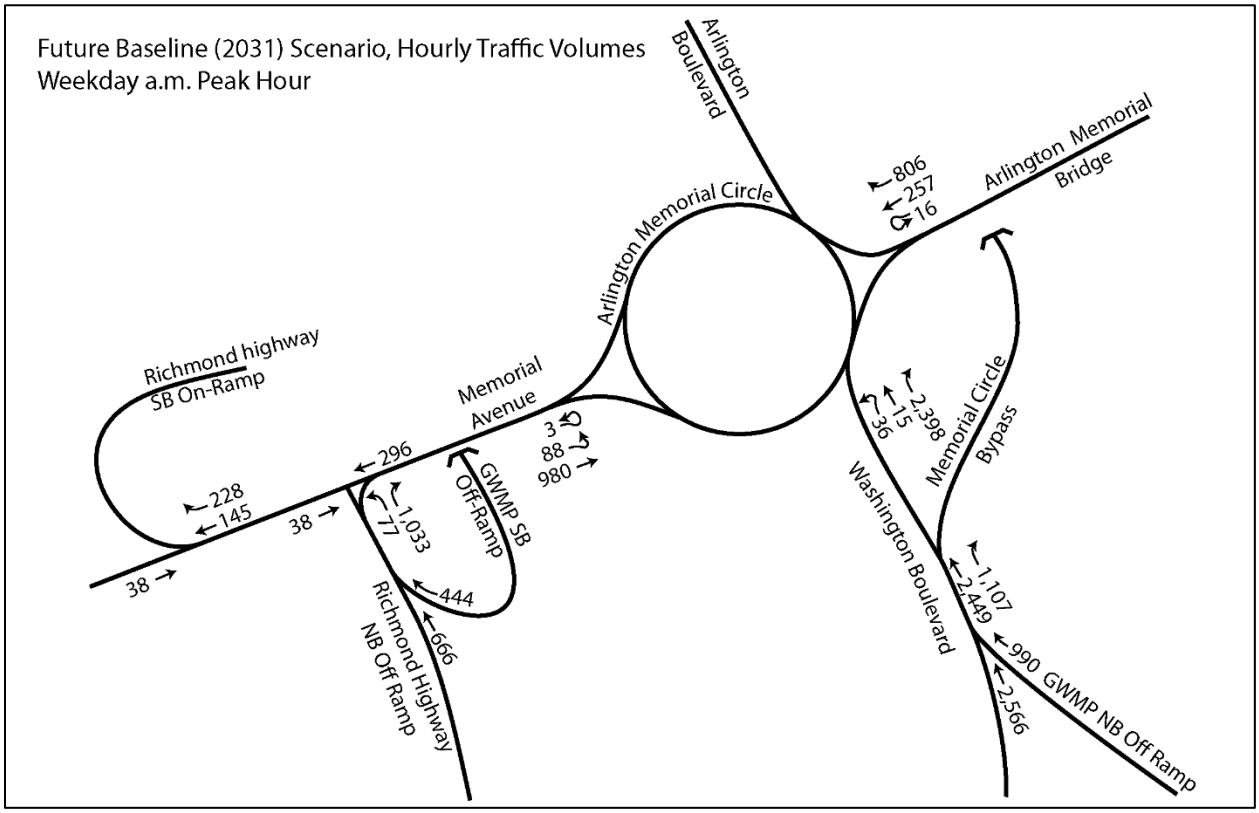


Figure 12: Future Baseline (2031) Vehicular Traffic Volumes, Weekday p.m. Peak Hour

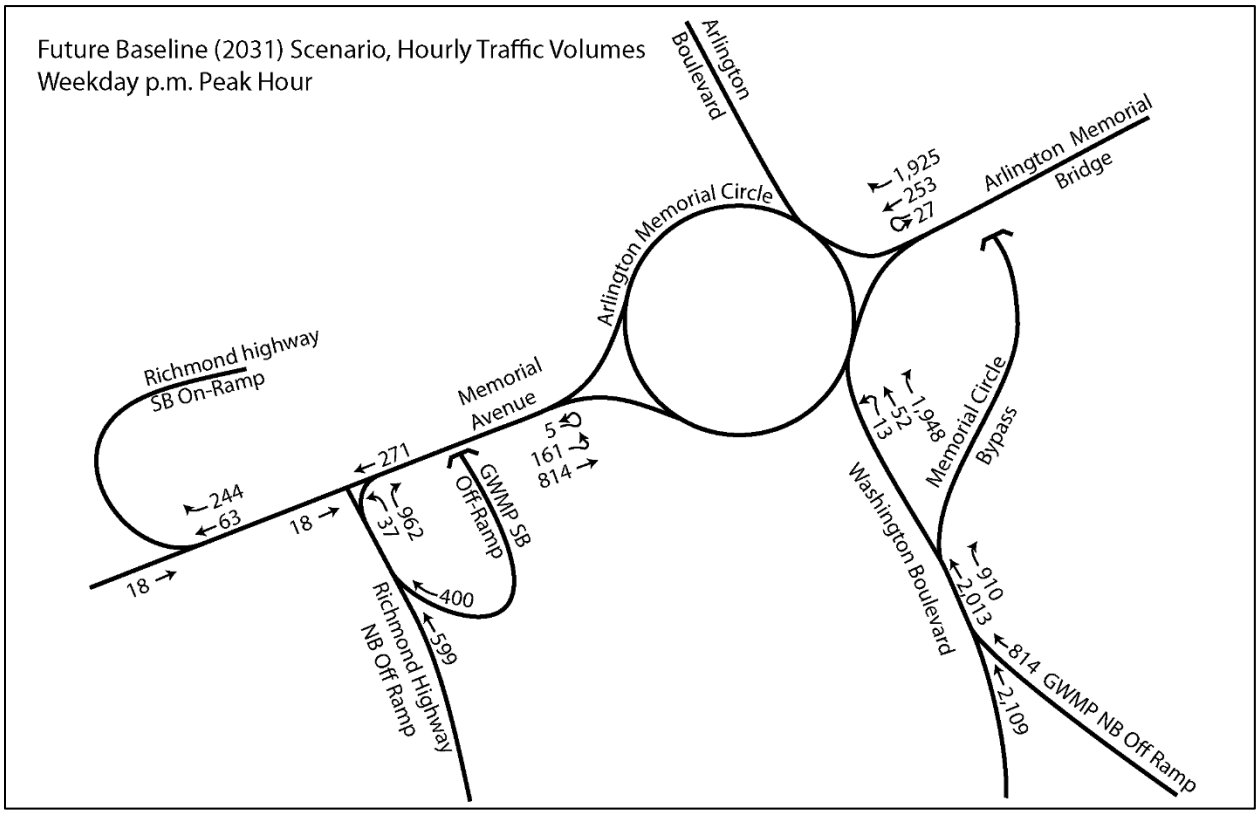
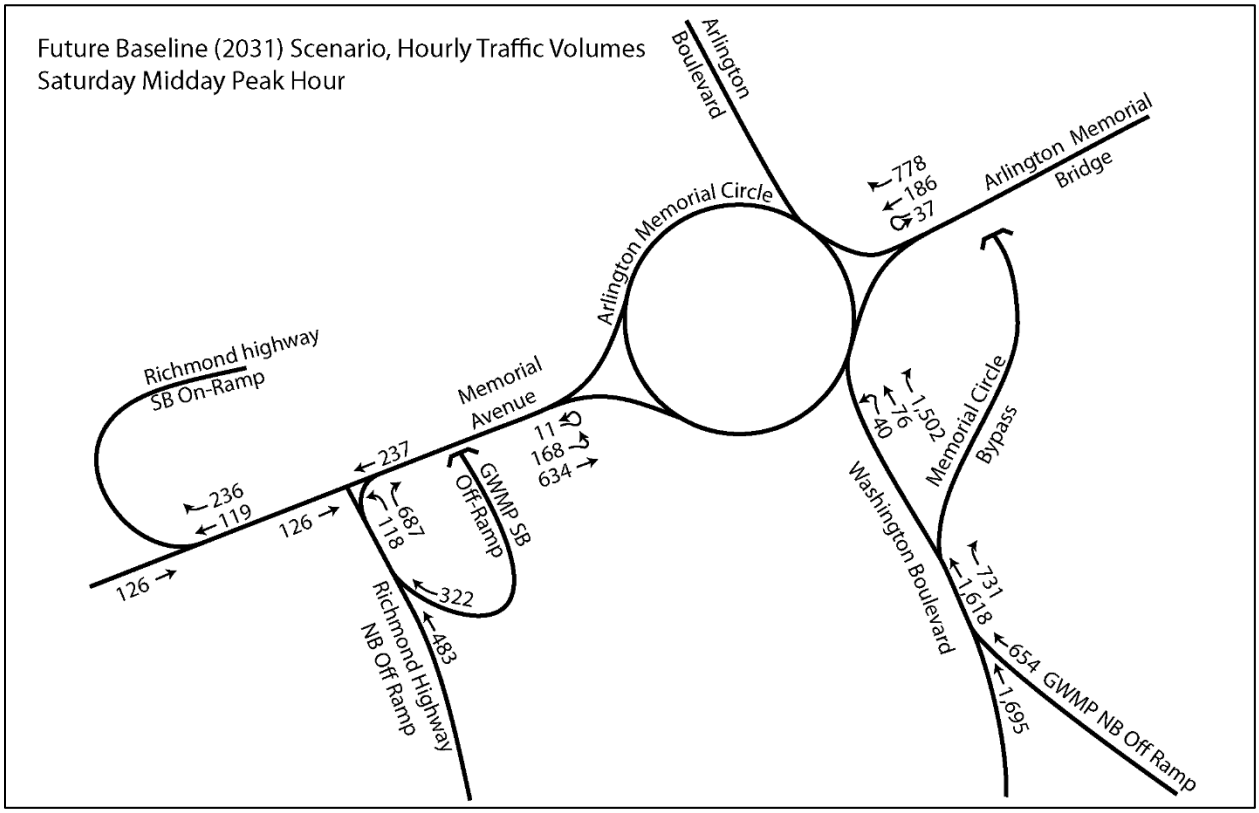


Figure 13: Future Baseline (2031) Vehicular Traffic Volumes, Saturday Midday Peak Hour



3.5.2 Future Build (2031) Traffic Volumes

For new development projects, future project-generated traffic is typically estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual. Since the Trip Generation Manual does not provide trip generation rates specific to this type of project, project-generated traffic for this study was estimated based on the anticipated operational conditions and associated visitation documented in the Environmental Assessment (EA). As previously mentioned, the highest visitation to the site is expected during weekends and holidays, while other higher visitation periods will likely occur during the weekday summer afternoons and early evenings. To ensure the analysis provides a conservative estimate of future traffic conditions and potential operational impacts, vehicular visitation generated was modeled to reach 80 vehicles during the Saturday Midday, 40 vehicles during the Weekday p.m. Peak Hour, and 0 vehicles during the Weekday a.m. Peak Hour. Since visitation is expected to last under 1 hour, 50% of visitors are expected to be entering and 50% are expected to be exiting during the peak hours. The vehicle trip generation by direction and time period is shown in Table 5.

Table 5. Vehicle Trip Generation, by Direction and Time Period

Direction	Weekday a.m. Peak Hour	Weekday p.m. Peak Hour	Saturday Midday Peak Hour
Entering	0	20	40
Exiting	0	20	40
Total	0	40	80

The proposed signalized concept also eliminates one approach lane serving two movements through AMC, the Washington Boulevard northbound through movement to Arlington Boulevard and the Washington Boulevard northbound left-turn movement to Memorial Avenue. The traffic volumes can detour to alternative routes as shown in Figure 14 and Figure 15 for the northbound through and left-turn movements, respectively. The figures also show the traffic volume expected to detour during the weekday a.m., p.m., and Saturday midday peak hours and have been incorporated in the traffic volumes and traffic modeling analysis. The Future Build (2031) Scenario traffic volumes at the study area intersections are shown in Figure 16, Figure 17, and Figure 18

Figure 14: Rerouted Trips from Eliminating Washington Boulevard NB Through Movement

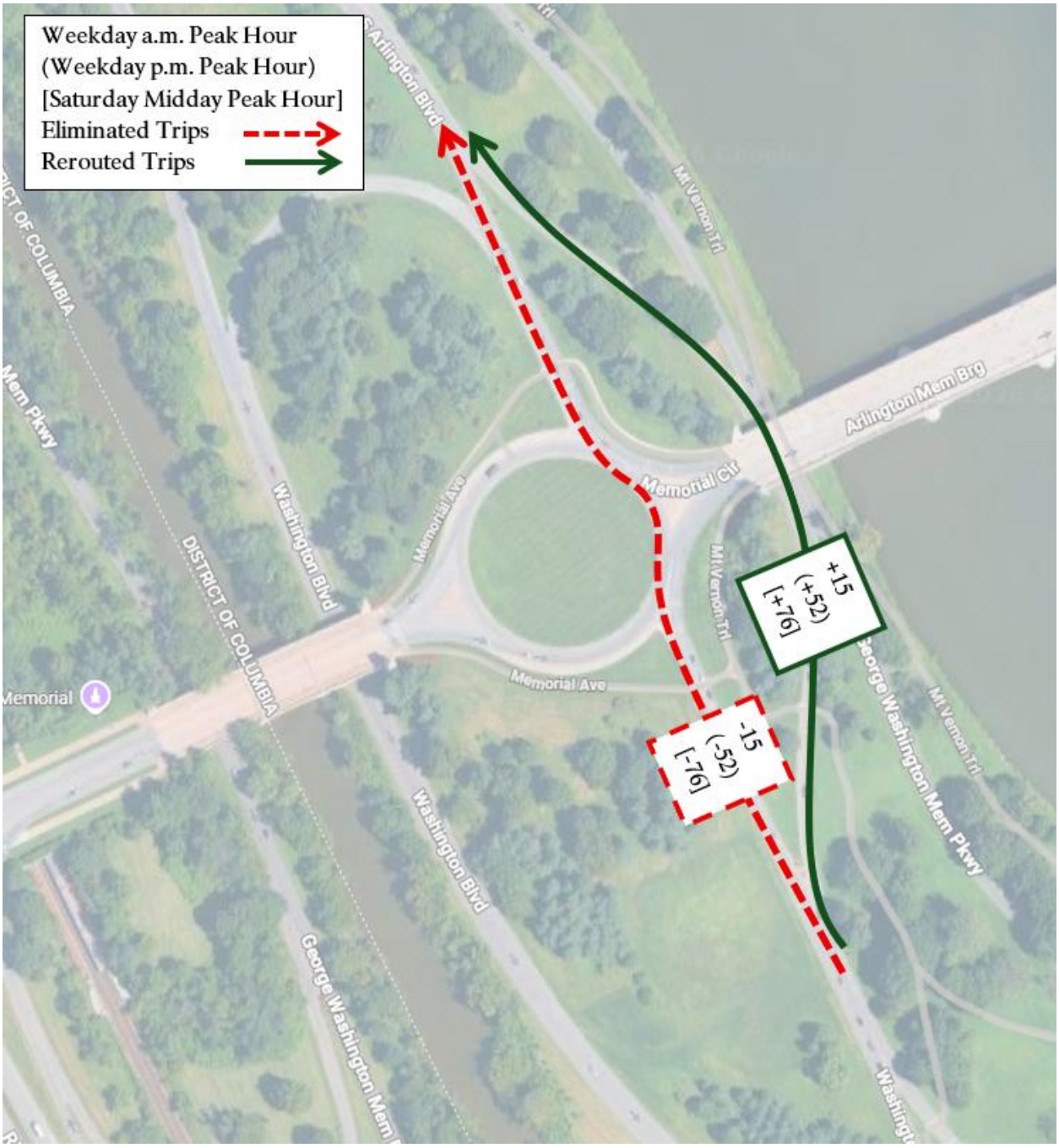


Figure 15: Rerouted Trips from Eliminating Washington Boulevard NB Left-Turn Movement

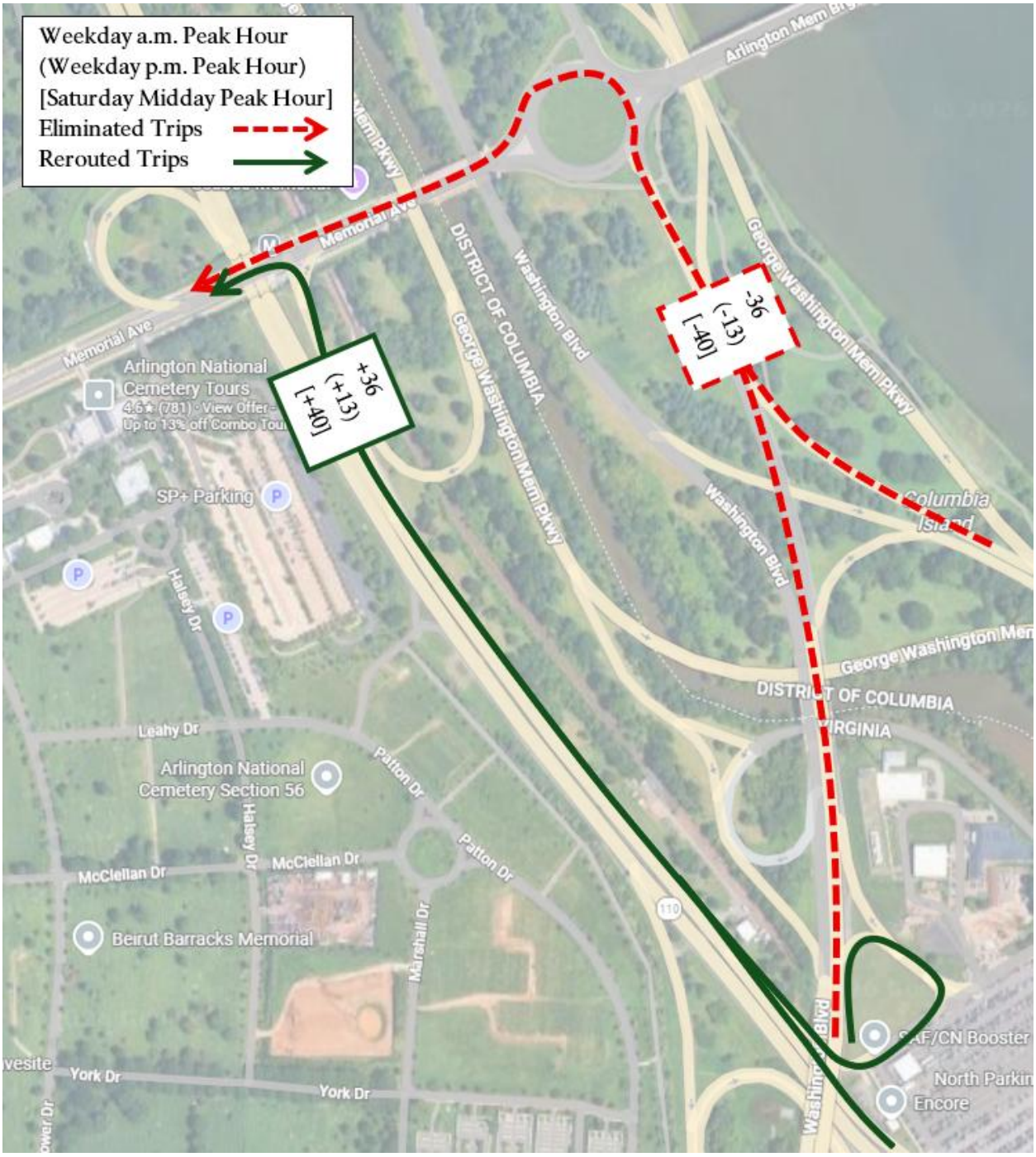


Figure 16: Future Build (2031) Vehicular Traffic Volumes, Weekday a.m. Peak Hour

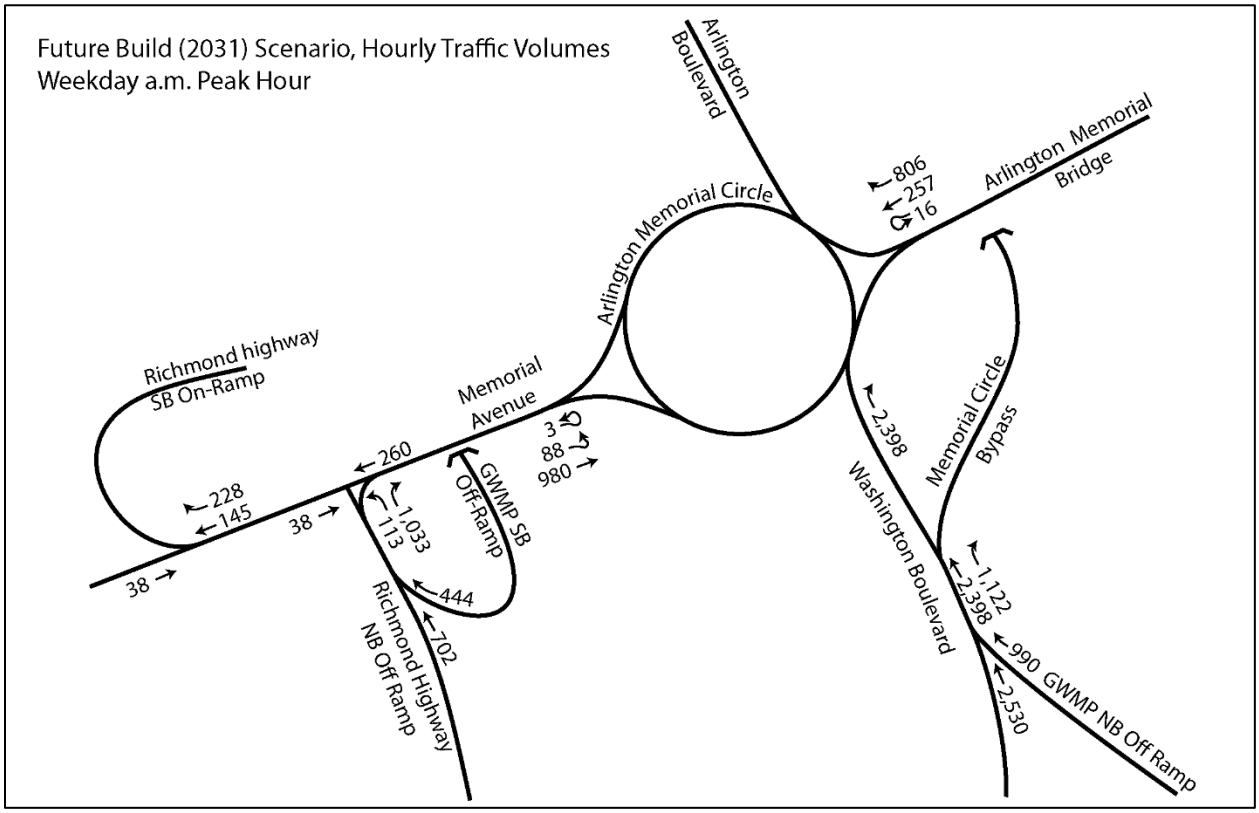


Figure 17: Future Build (2031) Vehicular Traffic Volumes, Weekday p.m. Peak Hour

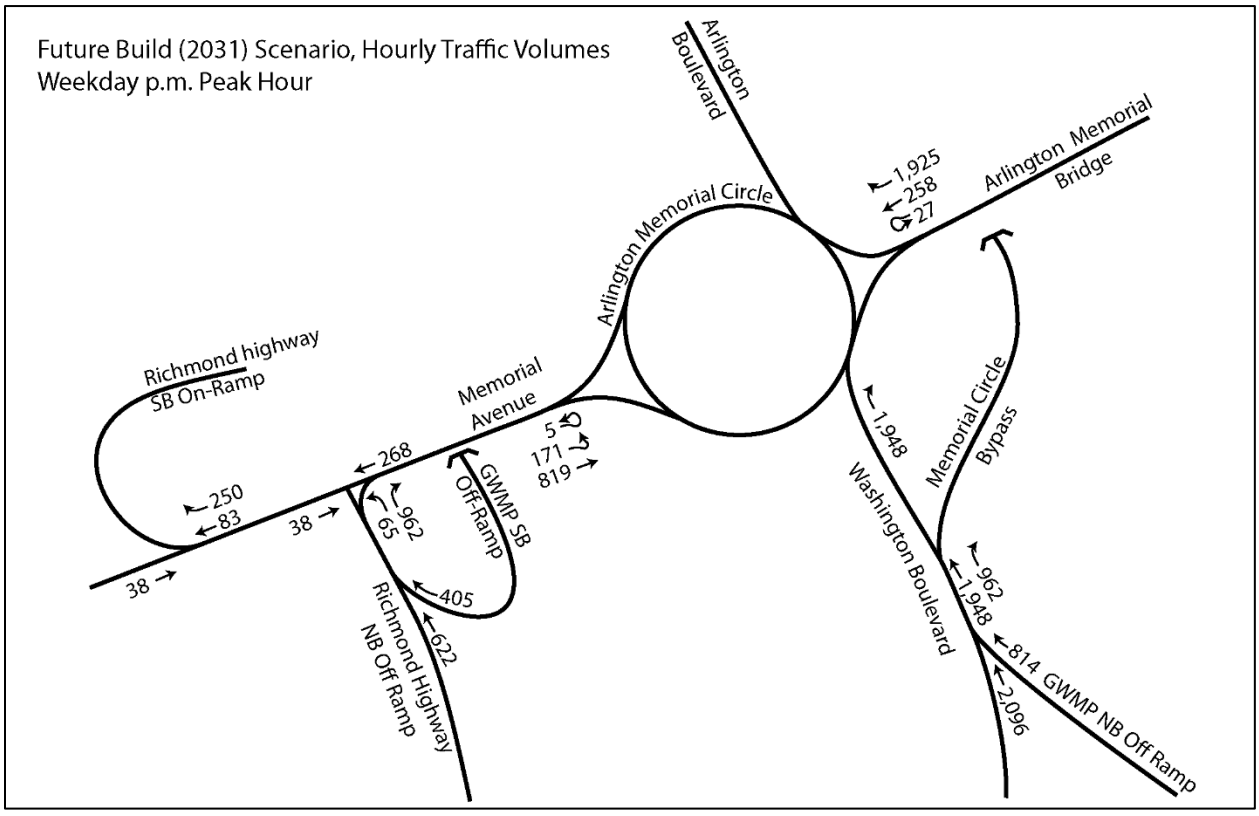
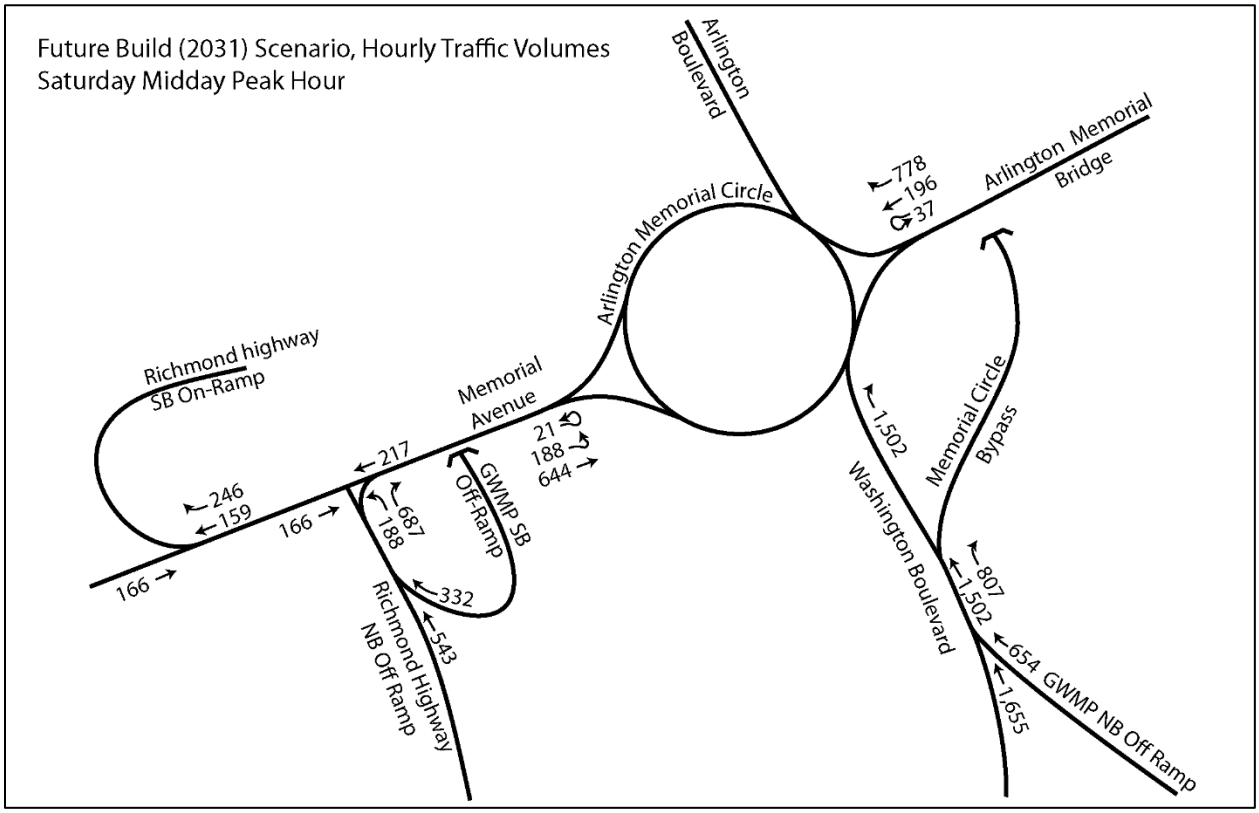


Figure 18: Future Build (2031) Vehicular Traffic Volumes, Saturday Midday Peak Hour



4. Operations Analysis

Preliminary traffic operations, modeled in Synchro and SimTraffic, show the initial traffic impacts of signalizing eight crosswalks around AMC. As previously mentioned, this analysis includes updated traffic volumes and an expanded study area to improve the analysis and evaluate the wider impacts of the project on the surrounding transportation network.

The vehicular traffic operations analysis was conducted in accordance with methodologies established in the most recent edition of the Transportation Research Board's (TRB) *Highway Capacity Manual* (HCM), 7th Edition, published in 2022. The intersection geometry and traffic volumes play critical roles in determining the Level of Service (LOS) and vehicle delay. The vehicular traffic operations analysis relies on model simulation and subsequent calculations. LOS and delay at the signalized and unsignalized intersections were calculated using SimTraffic, which is part of the Synchro Studio V12 developed by Cubic. Table 6 is an excerpt from the HCM with LOS criteria and delay for signalized and unsignalized intersections.

Table 6. Vehicle Level of Service Criteria

Source: 2022 Highway Capacity Manual, Transportation Research Board, 7th Ed.

Level of Service	Average Stopped Delay (seconds/vehicle) at Signalized Intersection	Average Stopped Delay (seconds/vehicle) at Unsignalized Intersection
A	≤10	≤10
B	>10 – ≤20	>10 – ≤15
C	>20 – ≤35	>15 – ≤25
D	>35 – ≤55	>25 – ≤35
E	>55 – ≤80	>35 – ≤50
F	≥80	≥50

While a LOS F is a failing grade, transportation safety, especially for people walking, biking, or accessing transit, is a critical component of the transportation network. Safety is not a factor that is evaluated through the traffic operations analysis. Accordingly, LOS F conditions may be considered acceptable in certain circumstances when evaluated in the context of site-specific conditions and physical constraints, and the need to prioritize safety over vehicular operational performance.

Traffic volumes form the basis of the traffic operations analysis. The traffic volumes used in this study were collected in 2026 and projected to 2031 using a 0.5% annual growth rate, typical of most dense metro regions and supported by the MWCOG long-range projections. The analysis also models the impact of traffic detours for movements to be eliminated and additional traffic from visitation at the Triumphal Arch. Lastly, when proposing new traffic signals, the traffic signal phasing and timing are critical components and impact the overall operations of the traffic. Although the signal phasing and timing will be further refined as the design moves forward, this traffic analysis demonstrates an option for the signal operation that adequately serves all users, safely separates the phases, and presents the maximum number of pedestrian phases called to the signal.

4.1 Intersections within the Traffic Model

AMC is a unique, non-traditional traffic circle and as such, the intersection cannot be modeled as one single intersection, but is instead modeled through a series of smaller intersection within the traffic circle as a whole. This operational analysis also allows for more detailed understanding of how the intersections operate and which approaches and movements to the traffic circle may impact vehicle operations.

As previously mentioned, Figure 1 shows the study area intersections and Figure 19, shows the intersection within AMC (Intersection 1) broken down into five sub-intersections that were modeled in the traffic operations analysis section.

a. Washington Boulevard at AMC eastbound
b. AMB westbound at AMC northbound
c. Washington Boulevard at South Pedestrian Crossing
   Note: This intersection was eliminated in the Future Build Scenario since the pedestrian crossing was incorporated into the larger signalized intersection at location 1a.
d. Arlington Boulevard at North Pedestrian Crossing
e. Memorial Avenue at AMC southbound

Figure 19: Traffic Operations Analysis intersections within AMC



4.2 Vehicle Traffic Operations Analysis

The Traffic Operations Analysis Summary Table is shown in Table 7, Table 8, and Table 9 for the weekday a.m., p.m., and Saturday midday peak hours, respectively. The tables show the LOS, Delay (in seconds), and the queue length (in feet). The queue length shown includes the average queue length and the 95th percentile queue length, which will likely only occur for a few minutes during the entire peak hour.

Table 7. Traffic Operations Analysis Summary, Weekday a.m. Peak Hour

Scenario	Existing	Existing	Existing	Existing	Future Baseline	Future Baseline	Future Baseline	Future Baseline	Future Build	Future Build	Future Build	Future Build
Intersection/Approach	LOS	Delay (s)	Average Queue Length (ft)	95th %ile Queue Length (ft)	LOS	Delay (s)	Average Queue Length (ft)	95th %ile Queue Length (ft)	LOS	Delay (s)	Average Queue Length (ft)	95th %ile Queue Length (ft)
#1a: Washington Blvd at AMC/AMB	A	2.6	-	-	A	2.7	-	-	A	9.2	-	-
AMC EB L/T	A	3.5	2	14	A	4.0	2	15	B	12.8	299	518
Washington Blvd NB T	E	49.4	34	75	E	41.3	29	61				
Washington Blvd NB R	A	1.2	0	0	A	1.4	4	44	A	7.2	243	422
Washington Blvd NB R	A	1.4	0	0	A	1.5	0	0	A	8.0	268	466
#1b: Arlington Blvd at AMC/AMB	A	1.5	-	-	A	1.6	-	-	B	12.6	-	-
AMB WB T	A	4.8	50	80	A	4.8	57	83	B	10.7	98	173
AMB WB R	A	0.5	12	36	A	0.4	6	24	A	9.6	129	221
AMB WB R	A	0.3	2	18	A	0.2	0	0	B	10.9	134	226
AMC NB L/T	A	1.7	4	24	A	1.7	5	23	D	42.1	69	123
#1c: Washington Blvd Crosswalk	A	6.9	-	-	A	8.7	-	-				
Washington Blvd NB T	A	6.7	183	301	A	8.7	210	370				
Washington Blvd NB T	A	7.1	180	320	A	8.6	225	382				
#1d: Arlington Blvd Crosswalk	A	1.5	-	-	A	1.5	-	-	A	0.4	-	-
Arlington Blvd NB T	A	1.4	28	69	A	1.5	36	66	A	0.4	1	10
Arlington Blvd NB T	A	1.6	42	91	A	1.6	38	87	A	0.4	1	10
#1e: Memorial Ave at AMC	A	9.1	-	-	A	9.3	-	-	C	25.9	-	-
Memorial Ave EB R	B	11.1	0	0	B	11.6	0	0	C	32.0	252	837
AMC SB T	D	29.9	0	0	C	23.4	0	0	B	15.5	33	86
AMC SB R	A	0.2	0	0	A	0.2	0	0	A	0.1	31	61
#2: Washington Blvd at GWMP Ramp Merge	F	146.6	-	-	F	111.2	-	-	F	164.2	-	-
Washington Blvd NB T	F	176.2	2,689	4,629	F	129.7	1,967	4,393	F	215.8	3,093	4,673
Washington Blvd NB T	F	233.1	2,717	4,656	F	185.0	1,958	4,333	F	233.0	3,285	4,910
GWMP Ramp NWB R	A	4.1	8	41	A	6.2	39	152	A	4.7	42	133
GWMP Ramp NWB R	A	0.7	4	36	A	0.9	16	109	A	2.5	28	118
#3: Memorial Ave at Richmond Hwy Off-Ramp	A	4.0	-	-	A	3.7	-	-	A	9.0	-	-
Memorial Ave EB T	A	0.0	0	0	A	0.0	0	0	A	0.1	0	0
Memorial Ave WB T	A	1.9	0	0	A	2.0	0	0	A	5.2	0	0
Ramp NB L	C	15.1	89	315	C	17.5	86	318	E	44.5	133	423

Ramp NB R	A	3.8	104	394	A	3.3	85	366	A	6.3	121	443
#4: Memorial Ave at Richmond Hwy On-Ramp	A	0.7	-	-	A	0.8	-	-	A	1.3	-	-
Memorial Ave EB T	A	0.0	0	0	A	0.0	0	0	A	0.1	0	0
Memorial Ave WB T	A	1.9	0	0	A	2.3	0	0	A	3.4	0	0
Memorial Ave WB R	A	0.1	1	10	A	0.1	0	0	A	0.1	0	0
#5: Richmond Hwy Ramp at GWMP Ramp	A	4.1	-	-	A	4.3	-	-	A	3.9	-	-
Richmond Hwy NB T	A	5.2	0	0	A	5.4	0	0	A	5.5	0	0
GWMP Ramp NWB R	A	2.6	0	0	A	2.6	0	0	A	1.1	1	6

Table 8. Traffic Operations Analysis Summary, Weekday p.m. Peak Hour

Scenario	Existing	Existing	Existing	Existing	Future Baseline	Future Baseline	Future Baseline	Future Baseline	Future Build	Future Build	Future Build	Future Build
Intersection/Approach	LOS	Delay (s)	Average Queue Length (ft)	95th %ile Queue Length (ft)	LOS	Delay (s)	Average Queue Length (ft)	95th %ile Queue Length (ft)	LOS	Delay (s)	Average Queue Length (ft)	95th %ile Queue Length (ft)
#1a: Washington Blvd at AMC/AMB	A	2.5	-	-	A	3.0	-	-	A	8.4	-	-
AMC EB L/T	A	3.5	3	19	A	3.5	9	36	B	14.6	348	493
Washington Blvd NB T	D	34.1	32	58	F	50.4	34	75				
Washington Blvd NB R	A	1.1	0	0	A	1.7	17	101	A	5.1	190	276
Washington Blvd NB R	A	1.2	0	0	A	1.3	8	58	A	4.8	203	283
#1b: Arlington Blvd at AMC/AMB	C	21.7	-	-	C	21.1	-	-	B	18.4	-	-
AMB WB T	C	23.3	197	359	C	17.2	136	308	A	9.8	97	170
AMB WB R	D	27.4	250	374	D	28.2	254	370	B	16.9	281	288
AMB WB R	C	20.7	253	359	C	20.4	244	365	B	18.5	282	299
AMC NB L/T	A	1.7	6	29	A	1.9	8	33	D	38.1	116	195
#1c: Washington Blvd Crosswalk	A	4.8	-	-	A	8.1	-	-				
Washington Blvd NB T	A	4.7	136	276	A	8.1	175	342				
Washington Blvd NB T	A	4.9	141	268	A	8.1	176	342				
#1d: Arlington Blvd Crosswalk	A	6.5	-	-	A	8.5	-	-	A	0.7	-	-
Arlington Blvd NB T	A	6.5	168	268	A	8.4	184	299	A	0.8	9	32
Arlington Blvd NB T	A	6.6	162	252	A	8.5	184	280	A	0.6	6	23
#1e: Memorial Ave at AMC	A	7.1	-	-	A	7.0	-	-	C	25.0	-	-
Memorial Ave EB R	A	8.5	0	0	A	8.2	0	0	C	30.0	179	686
AMC SB T	C	21.5	0	0	C	18.2	0	0	B	17.0	28	78
AMC SB R	A	0.2	0	0		0.2	0	0	A	0.1	25	61
#2: Washington Blvd at GWMP Ramp Merge	C	17.7	-	-	C	22.8	-	-	C	16.7	-	-
Washington Blvd NB T	C	23.3	15	103	D	27.6	107	498	C	20.9	65	232
Washington Blvd NB T	C	23.3	53	190	D	32.8	135	502	C	22.8	97	266
GWMP Ramp NWB R	A	2.8	1	14	A	2.6	1	7	A	2.6	10	44
GWMP Ramp NWB R	A	0.8	0	0	A	0.2	0	0	A	0.7	3	27
#3: Memorial Ave at Richmond Hwy Off-Ramp	A	2.4	-	-	A	2.4	-	-	A	5.2	-	-
Memorial Ave EB T	A	0.0	0	0	A	0.0	0	0	A	0.1	0	0
Memorial Ave WB T	A	1.9	0	0	A	2.0	0	0	A	5.6	0	0
Ramp NB L	C	15.7	22	49	C	15.7	22	45	C	18.9	46	183

Ramp NB R	A	2.0	0	0	A	2.1	15	146	A	4.4	51	272
#4: Memorial Ave at Richmond Hwy On-Ramp	A	0.8	-	-	A	0.9	-	-	A	1.0	-	-
Memorial Ave EB T	A	0.0	0	0	A	0.0	0	0	A	0.1	0	0
Memorial Ave WB T	A	3.7	0	0	A	4.2	0	0	A	4.7	0	0
Memorial Ave WB R	A	0.1	1	10	A	0.1	1	10	A	0.1	0	0
#5: Richmond Hwy Ramp at GWMP Ramp	A	3.8	-	-	A	3.6	-	-	A	3.9	-	-
Richmond Hwy NB T	A	5.1	0	0	A	4.7	0	0	A	5.5	0	0
GWMP Ramp NWB R	A	1.9	0	0	A	1.8	0	0	A	1.6	0	0

Table 9. Traffic Operations Analysis Summary, Saturday Midday Peak Hour

Scenario	Existing	Existing	Existing	Existing	Future Baseline	Future Baseline	Future Baseline	Future Baseline	Future Build	Future Build	Future Build	Future Build
Intersection/Approach	LOS	Delay (s)	Average Queue Length (ft)	95th %ile Queue Length (ft)	LOS	Delay (s)	Average Queue Length (ft)	95th %ile Queue Length (ft)	LOS	Delay (s)	Average Queue Length (ft)	95th %ile Queue Length (ft)
#1a: Washington Blvd at AMC/AMB	A	3.7	-	-	A	3.9	-	-	A	6.7	-	-
AMC EB L/T	A	3.7	12	41	A	3.6	12	39	B	12.5	218	420
Washington Blvd NB T	E	37.0	61	105	D	29.3	62	99				
Washington Blvd NB R	A	1.6	19	101	A	2.8	22	113	A	3.3	76	190
Washington Blvd NB R	A	1.0	7	52	A	1.0	16	97	A	3.4	108	224
#1b: Arlington Blvd at AMC/AMB	A	1.5	-	-	A	1.7	-	-	B	16.4	-	-
AMB WB T	A	4.6	44	64	A	5.3	51	81	B	12.5	96	155
AMB WB R	A	0.8	16	45	A	0.9	19	44	B	13.3	146	222
AMB WB R	A	0.3	8	44	A	0.3	4	31	B	16.0	155	241
AMC NB L/T	A	1.8	1	9	A	1.9	7	27	C	29.4	110	178
#1c: Washington Blvd Crosswalk	A	3.4	-	-	A	5.3	-	-				
Washington Blvd NB T	A	3.7	100	168	A	5.7	105	235				
Washington Blvd NB T	A	3.1	92	158	A	4.9	105	229				
#1d: Arlington Blvd Crosswalk	A	2.2	-	-	A	2.8	-	-	A	0.5	-	-
Arlington Blvd NB T	A	2.5	42	97	A	2.8	51	123	A	0.5	3	16
Arlington Blvd NB T	A	1.9	47	102	A	2.7	71	141	A	0.5	1	8
#1e: Memorial Ave at AMC	B	10.1	-	-	A	9.4	-	-	B	18.2	-	-
Memorial Ave EB R	B	12.9	3	26	B	12.1	0	0	C	21.7	130	350
AMC SB T	B	10.5	0	0	A	9.2	0	0	B	19.4	38	115
AMC SB R		0.2	0	0		0.2	0	0	A	0.1	21	55
#2: Washington Blvd at GWMP Ramp Merge	B	13.7	-	-	B	12.8	-	-	B	13.3	-	-
Washington Blvd NB T	C	21.2	5	35	C	21.2	22	147	C	20.5	17	114
Washington Blvd NB T	C	16.1	36	208	B	14.7	24	149	C	15.7	27	122
GWMP Ramp NWB R	A	1.8	0	0	A	1.8	0	0	A	1.8	2	16
GWMP Ramp NWB R	A	0.2	0	0	A	0.3	0	0	A	0.2	0	0
#3: Memorial Ave at Richmond Hwy Off-Ramp	A	3.3	-	-	A	3.1	-	-	A	4.7	-	-
Memorial Ave EB T	A	0.1	0	0	A	0.1	0	0	A	0.1	0	0
Memorial Ave WB T	A	1.8	0	0	A	1.8	0	0	A	5.1	0	0
Ramp NB L	A	8.2	50	162	A	7.9	46	151	B	9.5	61	163

Ramp NB R	A	3.5	52	247	A	3.4	54	257	A	4.5	93	333
#4: Memorial Ave at Richmond Hwy On-Ramp	A	0.6	-	-	A	0.6	-	-	A	0.9	-	-
Memorial Ave EB T	A	0.1	0	0	A	0.1	0	0	A	0.2	0	0
Memorial Ave WB T	A	2.0	0	0	A	2.1	0	0	A	2.7	0	0
Memorial Ave WB R	A	0.1	1	10	A	0.1	0	0	A	0.1	0	0
#5: Richmond Hwy Ramp at GWMP Ramp	A	3.4	-	-	A	3.6	-	-	A	2.8	-	-
Richmond Hwy NB T	A	4.4	0	0	A	4.6	0	0	A	3.9	0	0
GWMP Ramp NWB R	A	2.0	0	0	A	2.2	0	0	A	1.2	0	0

4.3 Vehicle Traffic Operations Summary

Traffic generally operates well through AMC today, and is expected to continue to operate well with the proposed signalized improvements in the future. The weekday morning commuting period is the only time of day that congestion occurs throughout this area and is generally not related to operations at AMC.

The traffic operations analysis demonstrates that during the weekday morning commuter peak period congestion originates along Washington Boulevard at the merge point with the GWMP ramp, south of AMC. The weave condition leads to an average queue length of about 2,700 feet today and is expected to maintain a length of about 3,000 feet in the future. This average queue length does not extend to the interchange with I-395, which is approximately 7,000 feet south of AMC. Figure 20 shows the average queue lengths during the Weekday a.m. peak Hour.

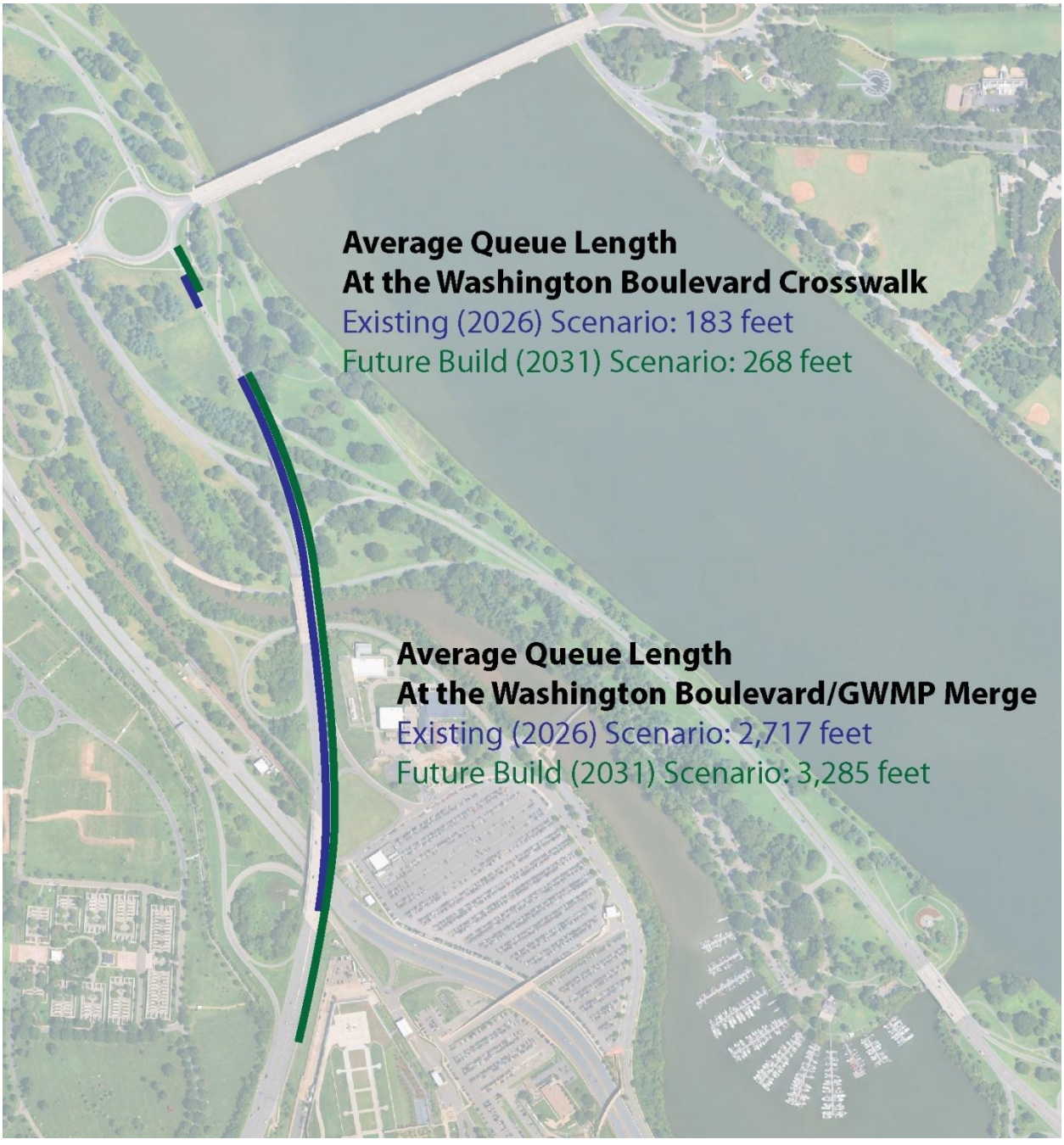
The traffic operations analysis also shows that vehicle queues originating from proposed traffic signal at the Washington Boulevard northbound approach to AMC are expected to extend about 270 to 470 feet and remain short of the Washington Boulevard/GWMP ramps weave area. Therefore, the proposed traffic signals are not expected to exacerbate existing traffic congestion, and the congestion that already occurs today will remain localized without affecting the broader transportation network.

Additionally, the elimination of the Washington Boulevard northbound through and left-turn movements is expected to reduce the traffic volume by about 36 vehicles (about 2% of the approach) during the weekday a.m. peak hour. The elimination will redistribute traffic volume from the most congested intersection to intersections with excess capacity, it will simplify the lane usage, and simplify the signal phasing which allows the intersection to operate more efficiently.

The other movement that is expected to be slightly impacted by the signalization of AMC is the Richmond Highway NB off-ramp northbound left-turn movement to Memorial Avenue, which will decrease from LOS C to LOS E. The queue length will average about 150 feet (6 vehicles). The queue is not expected to impact traffic operations throughout the network.

Traffic operates well during the Weekday p.m. Peak Hour and the Saturday Midday Peak Hour and is expected to continue to operate without any congestion or excessive delays if traffic signals or the Triumphal Arch is constructed.

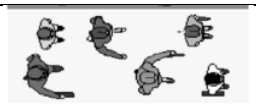
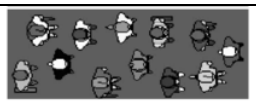
Figure 20: Washington Boulevard Average Queue Length, Weekday a.m. Peak Hour



4.4 Pedestrian Level of Service and Delay Calculations

Similar to the vehicular LOS metrics, the HCM also establishes pedestrian LOS metrics for crowding and signalized pedestrian delay. Thus, pedestrian LOS metrics are based on the amount of space available to queue and subsequently cross a street. Table 10 below elaborates on the different pedestrian LOS metrics and provides illustrations of the amount of space at each level.

Table 10. Pedestrian Space per Person for Random Flow

Space per Pedestrian (sf/ped) Random Flow	Space per Pedestrian Reference Image*	Qualitative Description
>60		Ability to move in desired path, no need to alter movements
>40–60		Occasional need to adjust path to avoid conflicts
>24–40		Frequent need to adjust path to avoid conflicts
>15–24		Speed and ability to pass slower pedestrians restricted
>8–15		Speed restricted, very limited ability to pass slower pedestrians
≤8		Speed severely restricted, frequent contact with other users

Source: HCM, 7th Ed., 2022 Exhibit 18-15: Qualitative Description of pedestrian Space

* Image Source: Fruin's pedestrian levels of service for walkways, Pedestrian planning for the 2006 Commonwealth Games

The pedestrian level of service at the proposed crosswalks will illustrate how well the design meets the potential demand of the crosswalks and median pedestrian islands. Since the demand can only be projected, the calculation has estimated the pedestrian capacity at the median islands to maintain an acceptable level of comfort. Since the pedestrian space calculations do not have traditional LOS grades, the HCM recommends that 25 sf per pedestrian is appropriate for urban areas. With 25 sf per pedestrian, people may need to adjust their path to avoid conflicts and their walking speed and ability to maneuver may be slightly restricted, but this level of space provides adequate room for pedestrians to maneuver through the crosswalks, triangular median refuge islands, and into the center of AMC.

The central median waiting areas have slightly more than 2,000 sf of space for pedestrians to wait while crossing. In order for pedestrians to have less than 25 sf of space, more than 2,400 pedestrians will have to cross per hour, or more than 80 pedestrians per crossing cycle.

The pedestrian delay at the signalized intersections can also be calculated using the HCM method. If the traffic signals operate with a maximum cycle length of 120 seconds and an effective walk time of 12 seconds, the average pedestrian delay is calculated at 48.6 seconds per pedestrian per crosswalk. Further refinements are expected to the traffic signal phasing and timing as the design progresses, which will further reduce pedestrian delays, especially during periods of expected higher visitation and lower traffic demand such as weekends and holidays.

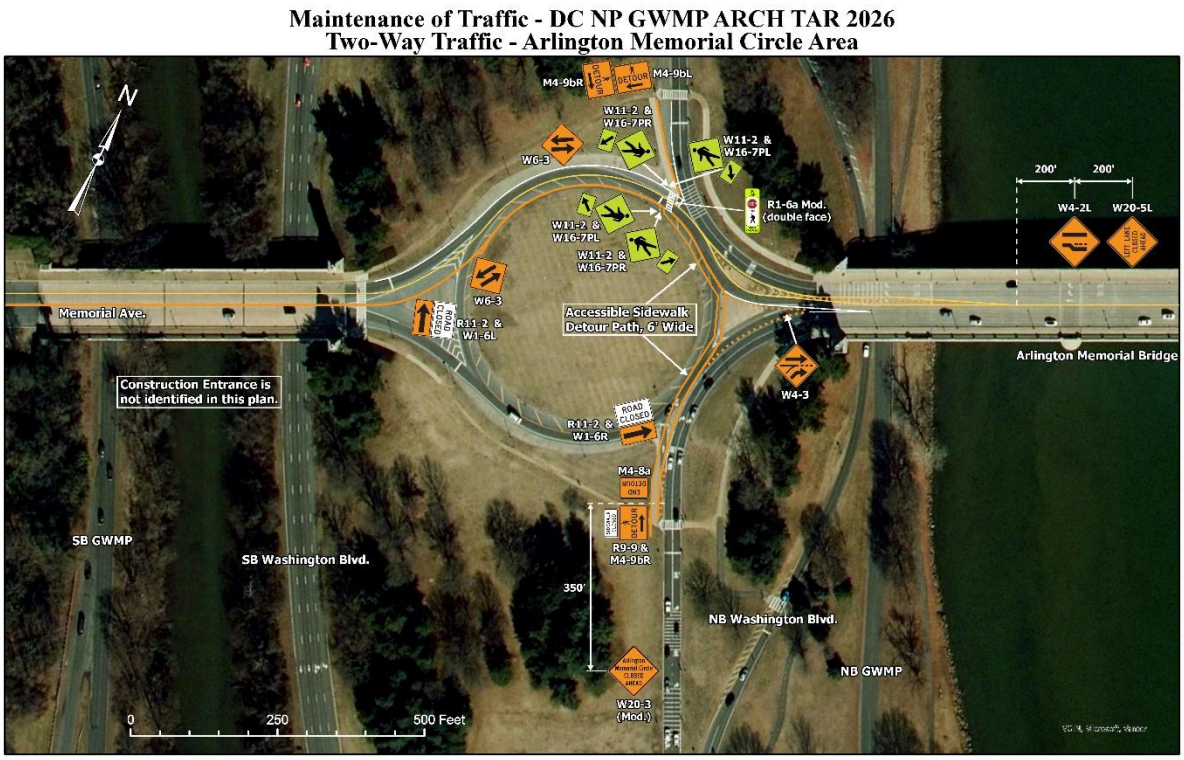
On weekends and holidays, when traffic volumes are expected to be lower, the traffic signals can operate on a reduced cycle length of 100 seconds, resulting in a lower pedestrian delay of about 38.7 second of average delay.

4.5 Construction Period Traffic Operations

This report includes a traffic operation analysis during construction and uses the same analysis method to analyze the construction period. Figure 21 shows the Maintenance of Traffic plan with several eliminated vehicle movements. All pedestrian and bicycle circulation will be maintained through AMC during construction. The traffic detours for construction include:

- Closure of the southern side of the circle and conversion of the north side to accommodate two-way traffic and the eastbound through movement from Memorial Avenue to the AMB in the inbound direction. The eastbound movement will be accommodated along the north side of the circle and then merge into a designated lane at the east side of the AMC upon entering the AMB.
- Elimination of the Washington Boulevard northbound left-turn movement to Memorial Avenue and through movement to Arlington Boulevard.
- Elimination of the Memorial Avenue eastbound left-turn movement to Arlington Boulevard.
- The AMB westbound approach will be reduced from three lanes to two lanes and the leftmost lane will accommodate the through movement to Memorial Avenue and the right-turn movement to Arlington Boulevard.
- Pedestrian circulation will be modified to the east and northern side of the AMC adjacent to the construction zone and a new crosswalk will provide pedestrian crossing from the center of the circle to the outside of the circle.

Figure 21: Maintenance of Traffic Plan and Intersection Reference Key for Level of Service Tables



The traffic operations analysis during construction are shown in Table 11 for the weekday a.m., weekday p.m., and Saturday midday peak hours, respectively. The traffic operations show similar congestion at the Washington Boulevard/GWMP ramp merge area that occurs today, although slightly reduced vehicle traffic due to the elimination of the turning movements. The operations also shows some queueing and delay at the newly created AMC eastbound through movement to AMB to accommodate the new crosswalk to facilitate pedestrian movements between the inside and outside of the circle. All pedestrians crossing at the Washington Boulevard crossing will have to cross again at this intersection. This queueing does not cause congestion or excessive delays but does cause vehicle queues for vehicles traveling in the eastbound direction to extend about 150 feet (6 vehicles). The westbound through vehicles also yield to pedestrians in the crosswalk, which spills back to the shared lane. However, according to the traffic model, queueing and delays are negligible.

Table 11. Construction Period Traffic Operations Analysis Summary, Weekday a.m., p.m., and Saturday Midday Peak Hours

Time Period	AM	AM	AM	AM	PM	PM	PM	PM	SAT	SAT	SAT	
Intersection/Approach	LOS	Delay (s)	Average Queue Length (ft)	95th %ile Queue Length (ft)	LOS	Delay (s)	Average Queue Length (ft)	95th %ile Queue Length (ft)	LOS	Delay (s)	Average Queue Length (ft)	95th %ile Queue Length (ft)
#1a: Washington Blvd at AMC/AMB	A	1.6	-	-	A	1.2	-	-	A	1.0	-	-
Washington Blvd NB R	A	1.5	0	0	A	1.2	0	0	A	1.0	0	0

Washington Blvd NB R	A	1.7	0	0	A	1.2	0	0	A	1.1	0	0
#1b: Arlington Blvd at AMC/AMB	A	3.2	-	-	A	4.2	-	-	A	2.1	-	-
AMB EB T	A	5.5	144	312	A	6.9	163	350	A	3.9	88	218
AMB WB T/R	A	1.0	20	63	A	2.2	62	190	A	0.8	16	49
AMB WB R	A	0.6	0	0	A	3.5	53	208	A	0.5	0	0
#1c: Washington Blvd Crosswalk	B	10.5	-	-	A	3.7	-	-	A	2.4	-	-
Washington Blvd NB T	A	9.6	241	437	A	3.7	109	218	A	2.6	68	135
Washington Blvd NB T	B	11.5	246	427	A	3.7	113	212	A	2.3	72	119
#1d: Arlington Blvd Crosswalk	A	2.2	-	-	A	5.2	-	-	A	1.2	-	-
Arlington Blvd NB T	A	0.9	21	65	A	4.7	145	239	A	1.0	27	74
Arlington Blvd NB T	A	1.3	39	89	A	5.6	167	263	A	1.3	44	88
#1e: Memorial Ave at AMC	A	8.1	-	-	A	7.8	-	-	B	10.1	-	-
Memorial Ave EB L	A	9.8	31	120	A	9.5	54	222	B	12.3	17	66
AMC SB R	A	0.8	0	0	A	0.9	0	0	A	0.7	0	0
#2: Washington Blvd at GWMP Ramp Merge	F	56.1	-	-	C	17.1	-	-	B	13.2	-	-
Washington Blvd NB T	F	59.7	891	2,135	C	22.4	47	209	C	22.1	11	93
Washington Blvd NB T	F	90.5	909	2,199	C	22.8	121	704	B	14.6	3	22
GWMP Ramp NWB R	A	3.8	11	65	A	2.3	0	0	A	1.4	0	0
GWMP Ramp NWB R	A	1.9	7	51	A	0.2	0	0	A	0.1	0	0
#3: Memorial Ave at Richmond Hwy Off-Ramp	A	3.1	-	-	A	3.3	-	-	A	3.3	-	-
Memorial Ave EB T	A	0.0	0	0	A	0.0	0	0	A	0.1	0	0
Memorial Ave WB T	A	1.9	0	0	A	1.6	0	0	A	1.5	0	0
Ramp NB L	A	9.5	68	235	C	24.9	59	257	A	8.2	105	335
Ramp NB R	A	2.7	63	296	A	2.7	49	267	A	3.3	81	328
#4: Memorial Ave at Richmond Hwy On-Ramp	A	0.8	-	-	A	0.7	-	-	A	0.6	-	-
Memorial Ave EB T	A	0.0	0	0	A	0.0	0	0	A	0.1	0	0
Memorial Ave WB T	A	1.8	0	0	A	3.5	0	0	A	2.2	0	0
Memorial Ave WB R	A	0.1	0	0	A	0.1	1	10	A	0.1	1	10
#5: Richmond Hwy Ramp at GWMP Ramp	A	4.3	-	-	A	4.5	-	-	A	3.5	-	-
Richmond Hwy NB T	A	5.4	0	0	A	5.9	11	79	A	4.5	1	14
GWMP Ramp NWB R	A	2.8	0	0	A	2.5	0	0	A	2.0	0	0

5. Other Design and Operational Elements

5.1 Other Options Considered

Several alternatives were considered to safely accommodate pedestrians through AMC and to provide access to the Triumphal Arch. Ultimately, full signalization on both sides of the site was selected as the preferred option given the high level of current and future pedestrian activity; the visitor experience and anticipated pedestrian demand for safe, direct, and intuitive access from both sides of the site; the familiarity and predictability of conventional traffic signals for all roadway users; and the ability to accommodate existing traffic operations with minimal operational impacts. Other options considered include:

Pedestrian Tunnel: The tunnel option was dismissed due to the length of the required tunnel system, limited access points and associated wayfinding challenges, and a less desirable below-grade visitor experience. The tunnel would require pedestrians to travel farther than an at-grade crossing, adding out-of-direction travel and increasing the time required to reach the Triumphal Arch. Limited tunnel entrances would further constrain pedestrian circulation and could make the intended route less intuitive, particularly for first-time visitors unfamiliar with the site. Collectively, these factors would be inconsistent with anticipated pedestrian desire lines and could result in visitors continuing to cross AMC at grade rather than using the tunnel, introducing uncontrolled pedestrian–vehicle conflicts and reducing the overall safety effectiveness of the improvement. Additionally, a below-grade route would provide a less visually connected visitor experience by temporarily removing pedestrians from the surrounding landscape and limiting views of the Triumphal Arch and other visual landmarks.

Rectangular Rapid Flashing Beacons (RRFBs) and Pedestrian Hybrid Beacons (PHBs): Prior to recommending full traffic signalization, alternative pedestrian traffic control treatments, including RRFBs and PHBs, were evaluated. While both treatments can effectively facilitate pedestrian crossings, they provide less comprehensive control of pedestrian–vehicle conflicts than conventional traffic signals, particularly where pedestrian demand is high and frequent crossing activity is anticipated. Full signalization also provides the ability to manage existing vehicle–vehicle conflicts associated with merging and weaving movements within AMC by providing defined phases and clearer assignment of right-of-way. In addition, RRFBs and PHBs may be less familiar or intuitive to some roadway users. Given the anticipated level of visitation and the likelihood of drivers and pedestrians who are unfamiliar with the site, conventional traffic signals provide a more recognizable and predictable form of traffic control. This familiarity is expected to promote more consistent roadway-user behavior, improve compliance, and provide clearer assignment of right-of-way for both pedestrian and vehicular movements.

West-Side Only Pedestrian Access: An option to provide pedestrian crossings to the Triumphal Arch exclusively from the west side of AMC was considered, where traffic volumes are substantially lower and crossings could be accommodated with comparatively limited traffic control and safety improvements. The ANC parking facilities and Arlington Cemetery Metro Station are also located to the west of the site and are expected to serve as primary arrival points for many visitors. However, visitors approaching from the east would be required to travel substantially out of direction and cross Washington Boulevard or Arlington Boulevard, both of which carry substantial traffic volumes, before reaching the designated crossings. As a result, this alternative would not eliminate pedestrian exposure to high-volume roadways and would

largely shift potential pedestrian–vehicle conflicts to other locations. Given the direct sightline to the Triumphal Arch, many visitors may also choose to cross the higher-volume eastern segments of AMC at uncontrolled locations rather than follow the indirect route to the western side. West-side-only access would therefore provide limited safety benefit for visitors approaching from the east and would be less compatible with the intended intuitive circulation and visitor experience of the site.

5.2 Parking, Pick-up/Drop-off, and Loading/Unloading

Memorial Avenue is approximately 60 feet wide, providing sufficient roadway width to accommodate curbside activities while maintaining two-way vehicular operations. Dedicated curbside space will support passenger pick-up and drop-off, staff parking, bus loading and unloading, and other delivery and service activities. Existing parking at ANC provides capacity for personal vehicles, while motorcoach parking and staging will continue to be accommodated primarily at ANC, with Memorial Avenue available to support overflow operations as needed. Coordination with ANC regarding parking, curbside operations, and site access will continue as the project advances. The curb use management plan along Memorial Avenue is shown in Figure 22 below.

Figure 22: Memorial Avenue Curb Use Plan



5.2.1 Visitor Parking

Private vehicles accessing the site are expected to utilize the existing parking facilities at ANC rather than parking directly at the site. ANC has confirmed that its existing parking facilities have additional capacity to accommodate additional visitor demand for private vehicles. Motorcoach parking and staging will also continue to be accommodated primarily at ANC; however, during periods when motorcoach parking reaches capacity, Memorial Avenue currently serves as an overflow area and is expected to continue supporting this function as needed. NPS and ANC will continue to coordinate on visitor parking as the project advances.

5.2.2 Staff Parking

Staff parking will be accommodated within designated parallel curbside parking zones along Memorial Avenue west of the site. Staffing estimates indicate approximately 14 to 17 personnel per shift, including three United States Park Police (USPP) officers, five to eight contract security officers, and six NPS rangers. Three dedicated USPP parking spaces will be located

closest to AMC to minimize response time and provide officers with direct access to the surrounding roadway network when responding to incidents and emergency calls. Other staff parking will be located farther west along Memorial Avenue to preserve the curb space closest to the site for passenger pick-up and drop-off activities. This configuration will maximize the use of curb space adjacent to the sidewalk, reducing the need for passengers to load, unload, or traverse existing grassy areas, and minimize walking distances for arriving and departing visitors.

5.2.3 Pick-Up and Drop-Off

Designated pick-up and drop-off zones will be provided for active loading activities, where drivers generally remain with their vehicles and extended parking or standing is not permitted. These areas will accommodate rideshare vehicles such as Uber and Lyft, tour buses actively loading or unloading passengers, delivery vehicles, and other short-duration loading and unloading activities. During periods when motorcoach parking at ANC reaches capacity, Memorial Avenue may also continue to accommodate overflow motorcoach parking and staging, consistent with existing operations.

2.3 Traffic Signal Post Placement and Reduction

The preliminary design initially assumed four signal posts at each signalized crosswalk to provide a conservative estimate of the maximum number of posts that could be required prior to completing a detailed evaluation of signal visibility and sight lines. To reduce visual clutter within the landscape and provide a more representative estimate of the infrastructure required, a preliminary analysis was subsequently conducted to evaluate potential sight-distance and visibility constraints for each signal face. Based on this analysis, 15 traffic signal posts were eliminated from the preliminary design. Each signalized crosswalk will retain a minimum of two traffic signal posts and the necessary three-section vehicular signal indications, pedestrian signal indications, and accessible pedestrian push buttons. As the design advances, the number and placement of signal posts will continue to be refined to minimize infrastructure and visual impacts while maintaining compliance with the MUTCD and Public Right-of-Way Accessibility Guidelines (PROWAG), including signal face visibility within the driver's cone of vision and appropriate placement and accessibility of pedestrian signal indications and push buttons. The traffic signal post reduction at each signalized crosswalk is show in Figure 23, Figure 24, Figure 25, and Figure 26.

Figure 23: Traffic Signal Post Elimination, Memorial Avenue at AMC, 1 of 4

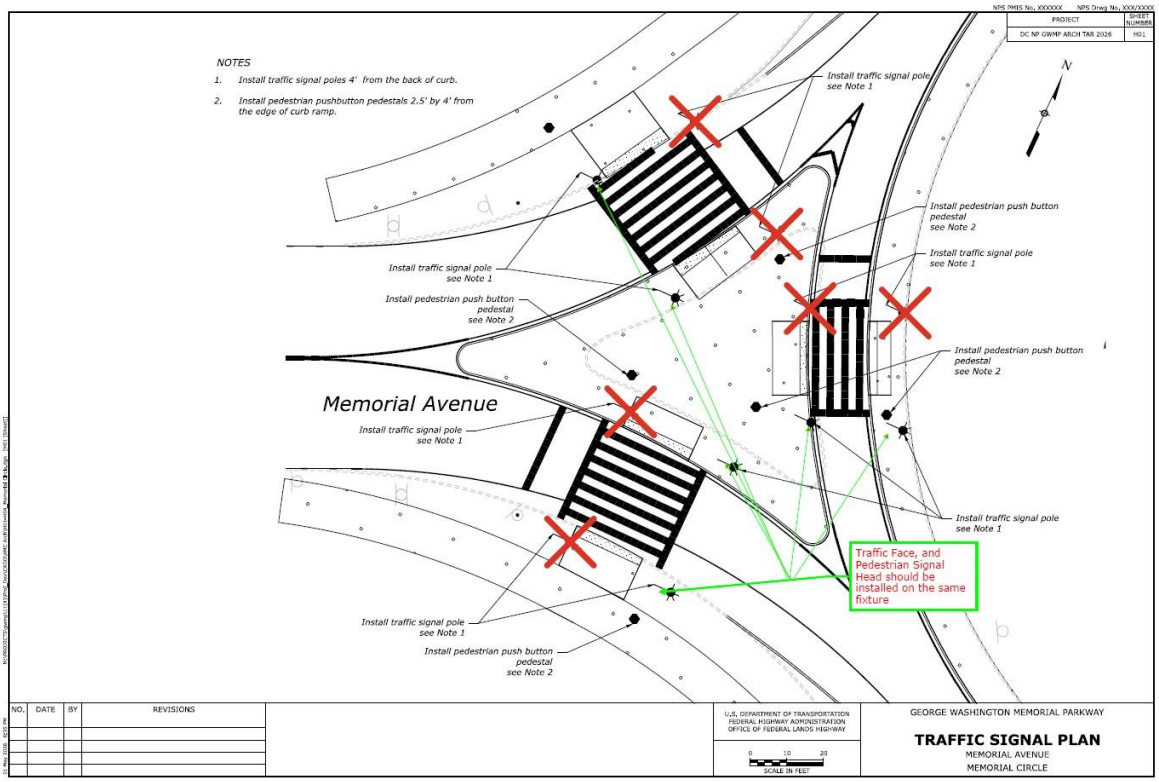


Figure 24: Traffic Signal Post Elimination, AMB at AMC, 2 of 4

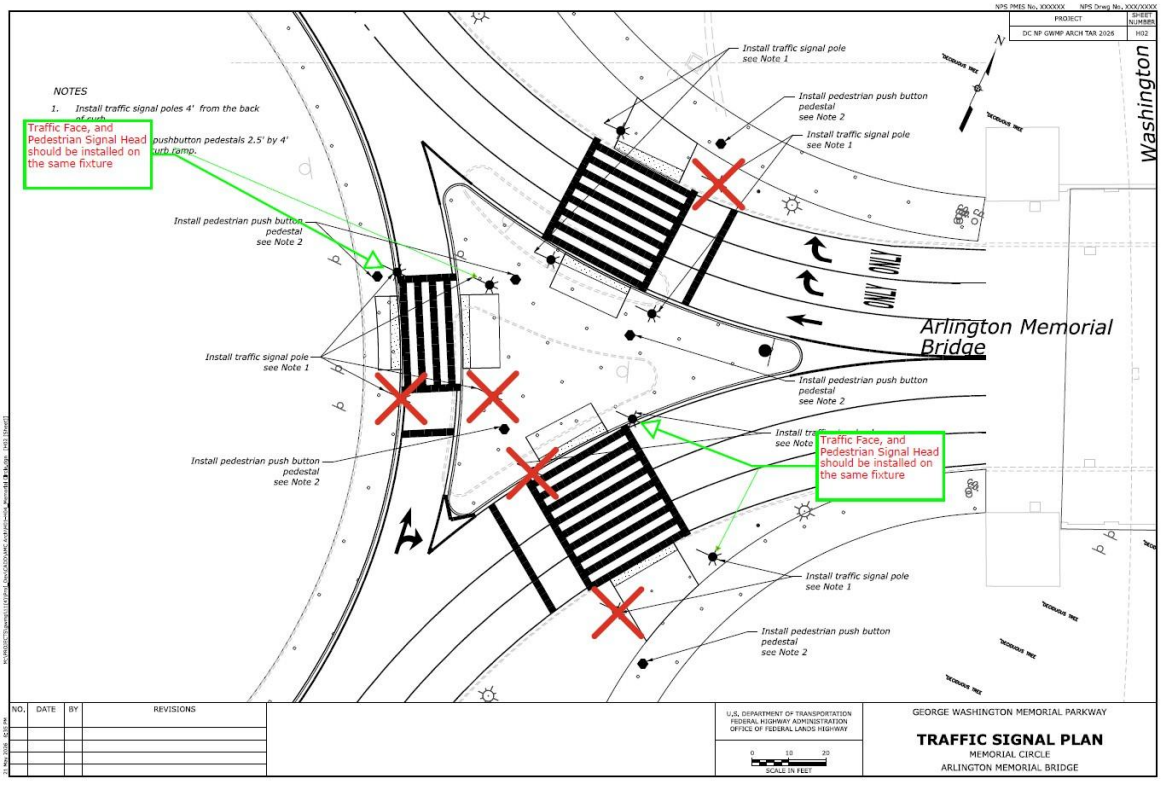


Figure 25: Traffic Signal Post Elimination, Washington boulevard Crosswalk, 3 of 4

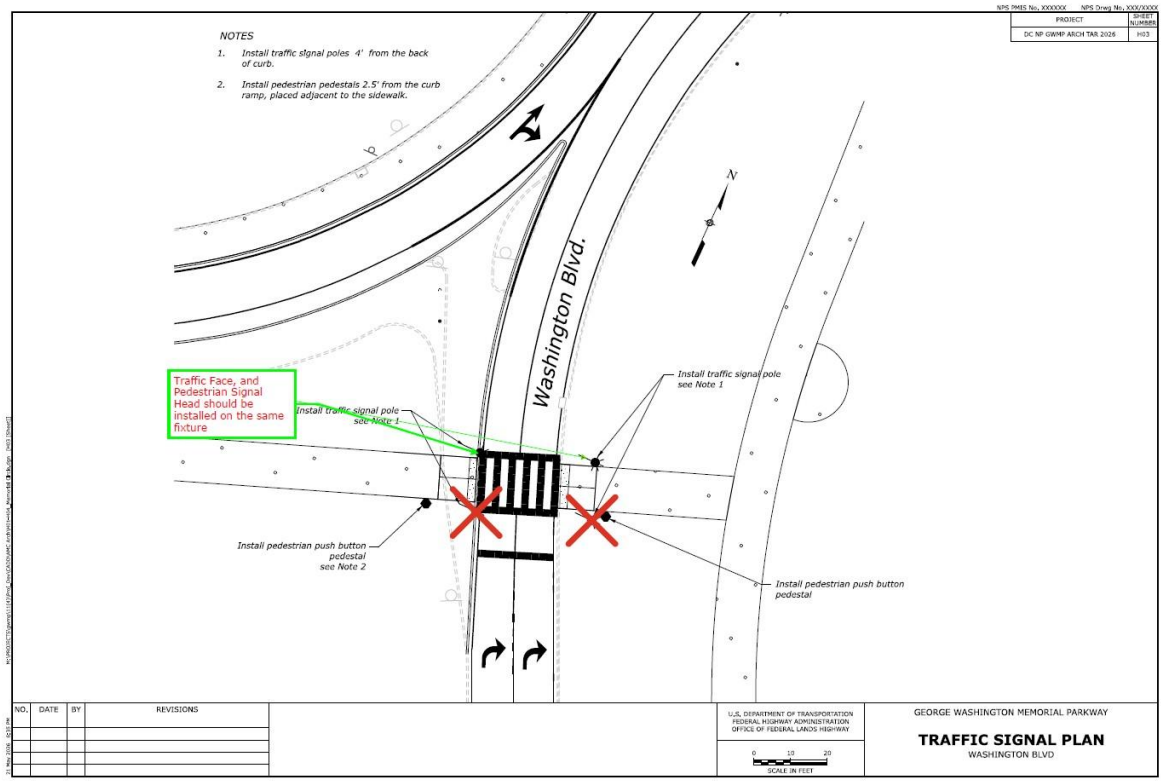
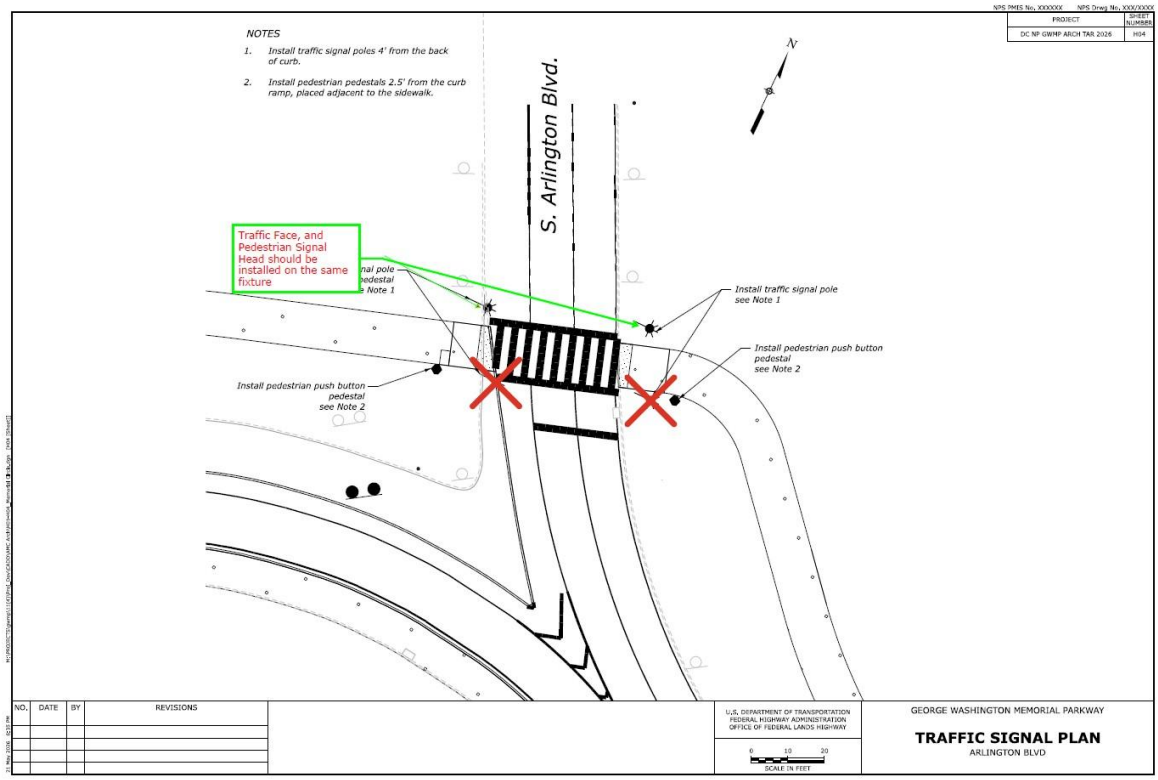


Figure 26: Traffic Signal Post Elimination, Arlington Boulevard Crosswalk, 4 of 4



APPENDIX C: HISTORIC PROPERTIES TABLES

Table 1. Historic Properties within the Area of Potential Effect, Adjacent and Overlapping the Project Area

APPENDIX C
List of Historic Properties within the Project Area

Map ID	Resource Name		NRHP Designation
1	Memorial Avenue Corridor Cultural Landscape		National Register of Historic Places (NRHP) cultural landscape
		Memorials: 101st Airborne Division Memorial, 4th Infantry Division Memorial, American Armored Force Memorial, Seabees Memorial, United Spanish War Veterans Memorial (The Hiker), Women in Military Service for America Memorial	Contributing
		Statues and Monuments: Arts of War-Sacrifice, Arts of War-Valor, Rear Admiral Richard Evelyn Byrd Monument	Contributing
		Arlington Hemicycle and Pylons	Contributing
		Arlington Hemicycle circular pool (including basin in central niche)	Contributing
		Arlington National Cemetery Gates and Gate Pylons (Gatehouses)	Contributing
2		Arlington Memorial Bridge and Related Features	Contributing/NRHP
		Memorial Avenue Bridge (Arlington Memorial Bridge Extension, also referenced as Boundary Channel Bridge)	Contributing
		Memorial Circle Pylons	Contributing
		Circulation: Memorial Avenue, Memorial Circle, and the pedestrian system on the two bridges (Memorial and Arlington) and avenues	Contributing
		Boundary Channel below Memorial Avenue Bridge (Arlington Memorial Bridge Extension)	Contributing
		Small-scale features: original cast-iron inlet grates along both bridges and Memorial Avenue; Washington standard lampposts, "Durax" centerline of Memorial Avenue and both bridges; granite block "Durax" surface of Memorial Avenue Bridge; granite curbstones; granite header stones at the ends of bridges; granite lamppost bases; paving of sidewalks on two bridges and avenue, and triangular "islands" of granite blocks at east and west ends of Memorial Circle	Contributing
		Vegetation: Grass panels and Holly hedge along Memorial Avenue, White oak border of Memorial Avenue, White pines at four pylons near Memorial Circle, White oaks near Arlington Cemetery gates and hemicycle stairways, Yews along hemicycle stairways and wrought iron fence	Contributing
		Views and vistas: View of the Washington Monument from various locations along the corridor, view to hemicycle and Arlington House - the Robert E. Lee Memorial, view to Lincoln Memorial, views of green parkland along both sides of Potomac from Arlington Memorial Bridge, and views to river, the Capitol dome, and other monuments from Memorial Circle	Contributing
3	Lady Bird Johnson Park Cultural Landscape		NRHP cultural landscape
		Circulation: George Washington Memorial Parkway (GWMP) (see below under George Washington Memorial Parkway Cultural Landscape); Lyndon B. Johnson Memorial Grove; Memorial Circle; Mount Vernon Memorial Highway; Mount Vernon Trail (southern portion, to Humpback Bridge); Columbia Island Marina, parking lot and entrance to Lyndon Baines Johnson (LBJ) Memorial Grove	Contributing
		Vegetation: All of the stone plantings, Cottonwoods, crabapple, pear and elm trees remaining from 1932 planting, daffodils, dogwoods, large white pines near pylons, plantings of LBJ Memorial Grove, yews at Navy and Merchant Marine Memorial	Contributing

Map ID	Resource Name		NRHP Designation
		Buildings and Structures: Arlington Memorial Bridge Boundary Channel Extension; Bridge over Boundary Channel; Boundary Channel Bridge (New); Columbia Island Marina snack bar; Memorial Circle, four pylons; rip rap, historic, south end of island; LBJ Memorial Grove, wooden entrance deck on Virginia shore including walks, stone walls, etc.; LBJ Memorial Grove, megalith; LBJ Memorial Grove, flagstone plaza; LBJ Memorial Grove, entire site; LBJ Memorial Grove, pedestrian bridge; Navy and Merchant Marine Memorial; flagstone plaza; U.S. Route 50 Overpass, westbound; Washington Boulevard Bridge; Washington Boulevard Overpass; Arlington Memorial Bridge; LBJ Memorial Grove, low stone-and-concrete wall along flagstone walk	Contributing
		Views and vistas: GWMP, northbound views north of Arlington Memorial Bridge to Theodore Roosevelt Island, D.C. shoreline, Kennedy Center; GWMP, northbound views to LBJ Memorial Grove, megalith, and Navy and Merchant Marine Memorial; GWMP, northbound views to Washington shoreline and National Mall; GWMP, northbound views up river to Arlington Memorial Bridge; LBJ Memorial Grove views and vistas along entry route, from plaza on VA shore, across bridge, along walks to meadow area and to Grove and flagstone plaza; LBJ Memorial Grove vistas from flagstone plaza to National Mall and East and West Potomac Parks; Memorial Circle views east to Lincoln Memorial, west to Arlington House and Arlington National Cemetery, north up island and south down island; Mount Vernon Trail views along trail near Potomac River shore, corresponding to views from northbound and southbound GWMP	Contributing
		Small-scale features: benches, granite panels, light posts, plaque, drinking fountains, guardrails	Contributing
		Water features: Boundary Channel; Columbia Lagoon (also called Columbia Basin, Pentagon Lagoon)	Contributing
4	Arlington National Cemetery Historic District		NRHP historic district
		Vegetation and Landscapes: Argonne Cross Landscape; Arlington Hemicycle Landscape; Chaplains Hill; Civil War Unknowns Landscape; Columbarium Courts Landscape; Confederate Memorial Section; Custis Woods; James Tanner Amphithteater; Kennedy Family Gravesites; Memorial Amphitheater; Memorial Arboretum; Millenium Woods and Stream; Nurses Memorial Associated Features; Pershing Gravesite Landscape; Red Spring Landscape; Scatter Area; Trees, Medal of Honor; Trees, Memorial Tres; Trees, State Champions and Co-Champions; U.S. Coast Guard Memorial; picturesque plantings patterns, hedgerows, oak trees	Contributing
		Views and vistas: View of Air Force Memorial; View of Arlington House from Kennedy Memorial; View to Arlington House down Crook Walk from Memorial Amphitheater; View of Arlington National Cemetery (ANC) from Memorial Bridge Memorial Drive, and Lincoln Memorial; View of ANC from Washington D.C. Potomac Shoreline (between 14th Street Bridge and Memorial Bridge); View of Lincoln Memorial and Washington Monument from Arlington House, Kennedy Gravesite; View to Main Gates from Southern perspective and Northern perspective; Views to Memorial Amphitheater from various locations; View to Netherlands Carillon; View of Old Amphitheater from various locations; View of the Pentagon from Pentagon Memorial; View to Spanish-American War Memorial from U.S.S Maine Memorial; View to U.S.S Maine Memorial from Memorial Amphitheater; View toward Fort Myer Gate and Chapel from ANC; Views of Washington Monument from ANC	Contributing
		Boundary Gates, Demarcations and Walls: Welcome Center Gate; Welcome Center Parking Gate; Administration Building Gate; East /Jefferson Davis Highway Gate; Service Complex Gate; South/Clayton Gate; Hobson Gate; Memorial Chapel Gate; West Gate (Selfridge); Fort Meyer/Old Post Chapel Gate; Ord & Weitzel Gate (New); Memorial Avenue north gate; Memorial Avenue south gat	Contributing
		Circulation Systems: Crook Walk; Custis Walk; Custis Walk Extension; Footbridges, Crook Walk; Memorial Avenue (“Avenue of Heroes”); Memorial Avenue Fountain Plaza; Memorial Avenue West Terminus (Cobblestone Drive); Millenium Bridge (Gifford Drive Bridge); Pedestrian Bridge; Road System; Sidewalks; Stairs and stone steps	Contributing
		Drainage Features: Select Drainage Ditches and Culverts; Historic Concrete Channels; Red Spring	Contributing

Map ID	Resource Name		NRHP Designation
		Monuments and Memorials: 2nd Connecticut (Volunteer) Heavy Artillery Regiment; Civil War Headstones; Confederate Headstones; 1903 Government Headstones; USCT and Freedman Village Residents; “Standard” Headstones; Flat Headstones; Victorian-Era Monuments; Group Headstones; 3rd Infantry Division Memorial; 4th Infantry (Ivy) Division Memorial; 101st Airborne Division Memorial; Air Force Memorial Complex; Apollo 1 Memorial Plaque; Argonne Cross (and associated features); Armored Forces Memorial; Chaplains Hill; Battle of the Bulge Memorial; Richard Evelyn Byrd Memorial; Canadian Cross Memorial; Civil War Unknown; Confederate Memorial; Iran Rescue Mission Memorial; John F. Kennedy Memorial Gravesite; Robert F. Kennedy Memorial Gravesite; Korean War Veterans Memorial; Nurses Memorial; Office of Strategic Services Memorial; Pan Am Flight 103 Memorial; Pentagon Group Burial Marker; Rough Riders Memorial; Space Shuttle Challenger Memorial; Space Shuttle Columbia Memorial; Spanish-American War Memorial; Third Infantry Division Memorial; Tomb of Remembrance; Tomb of the Unknowns and Associated Features; U.S. Coast Guard Monument; U.S.S. Maine Memorial; U.S.S. Serpens Memorial; U.S.S Thresher Memorial; Unknown Dead of 1812; Tree Memorial Markers & Living Memorials	Contributing
		Memorial Graves: Custis Graves; George Crook; Sir John Dill Monument; Matthew Henson; Philip Kearny Monument; Edward M. Kennedy; Major Pierre L’Enfant; Robert Todd Lincoln; Audie Murphy; Gen. John Pershing; Robert Edwin Peary; Mary Randolph; Wallace Fitz Randolph; Revolutionary War Ground Tablets; Philip Henry Sheridan; William H. Taft; John Wingate Weeks; MG Horatio Wright	Contributing
		Small-scale features: Arlington House Flagpole, benches, bollards, drinking fountains, exterior lighting,	Contributing
		Arlington House	Contributing/NRHP
		Arlington Memorial Bridge	Contributing/NRHP
		Arlington House Cultural Landscape	Contributing/NRHP
		Arlington Hemicycle / Military Women’s Memorial	Contributing
		Administration Building	Contributing
		Columbarium Pavilion 1	Contributing
		Columbarium Pavilion 2	Contributing
		Millenium Pavilion 11	Contributing
		Millenium Pavilion 12	Contributing
		Hemicycle (“The Court of Honor”, “The Great Entrance”, Military Women’s Memorial)	Contributing
		Lodge 1 (Superintendent’s Lodge)	Contributing
		Lodge 1 Gazebo	Contributing
		Lodge 2 (Assistant Superintendent's Lodge)	Contributing
		Lodge 2 Garage	Contributing
		Memorial Amphitheater	Contributing
		Old Amphitheater (James R. Tanner Amphitheater)	Contributing
		Parking: Chaffee Lot; Funereal Queuing; Wheaton Lot	Contributing
		Receiving Vault	Contributing
		Service Complex #1 (4 buildings)	Contributing

Map ID	Resource Name		NRHP Designation
		Service Complex #2 (8 buildings)	Contributing
		Tourmobile (Tram) Bus Stop Structure (Tour Bus Shelter)	Contributing
		Welcome Center (Visitor's Center)	Contributing
5	Arlington House Historic District (also known as Robert E. Lee Historic District)		NRHP historic district
		Site: Landscape and associated features	Contributing
6		Arlington House (also known as the Robert E. Lee Memorial)	Contributing/NRHP
		North Slave Quarter and Kitchen	Contributing
		South Slave Quarter, Storehouse, and Smokehouse	Contributing
		Potting Shed	Contributing
		National Park Service Administration Building, 1931	Contributing
		Mary Randolph's Tomb	Contributing
		Custis Burial Plot	Contributing
		Civil War-era Officers' Graves and Grave Markers Site along Lee Avenue and East of Mansion	Contributing
		Well, ca. 1805, superstructure	Contributing
		Civil War Unknown Soldiers Monument, 1866	Contributing
		Arlington National Cemetery Old Amphitheater	Contributing
		General Sheridan, Admiral Porter, and General Wright Monuments	Contributing
		Pierre Charles L'Enfant Grave and Monument	Contributing
		Arlington House Cultural Landscape	Contributing
7	Arlington House Cultural Landscape		NRHP cultural landscape
		Land Use: Arlington Woods; Flower and Vegetable Gardens	Contributing
		Spatial Organization: Building locations; yard; garden terraces; Arlington Woods	Contributing
		Buildings and Structures: Arlington House; North Slave Quarters; South Slave Quarters; Potting shed; Below-ground section of well	Contributing
		Circulation: Trace road at the north end of Arlington Woods; Flower garden central path; Kitchen garden central path; East/west oriented road connecting Lee Drive and Sherman Avenue between yard and flower garden; Potting shed access road; Portion north/south section of Custis Walk on National Park Service property	Contributing
		Vegetation: trees in mixed hardwood forest of Arlington Woods ravine	Contributing

Map ID	Resource Name		NRHP Designation
		Views and Vistas: View between Arlington House and Washington, D.C.; View between kitchen garden, through yard to flower garden; view north and south along Lee Drive	Contributing
		Small-scale features: rectangular cut bench or mounting stone	Contributing
8	LBJ Memorial Grove		NRHP
9	Mount Vernon Memorial Highway		NRHP historic district
		Richmond, Fredericksburg & Potomac Railroad (RF&P) Underpass	Contributing
		Route 1/I-395 Downstream Underpass	Contributing
		Route 1/I-395 Upstream Underpass	Contributing
		Mount Vernon Memorial Highway alignment	Contributing
		Mount Vernon Trail adjacent to the Mount Vernon Memorial Highway	Contributing
10	Lincoln Memorial Cultural Landscape		NRHP cultural landscape
		Spatial organization: axial relationship with the Mall, axial alignment of the Lincoln Memorial statue with the Approachway, Washington Monument, and U.S. Capitol, axiality of the Reflecting Pool, radial arrangement of central rond-point around Lincoln Memorial Circle, radial arrangement of secondary allées, descent of the Watergate plaza and steps to the Potomac River, location of monuments and memorials establishing the landscapes termini, layout of Ohio Drive SW and Parkway Drive NW along the western edge of the cultural landscape, parallel with the Potomac River shoreline, Open character of playing fields and turf panels between the radial roads and the parkway	Contributing
		Land Use: Commemorative land use as a memorial landscape, dedicated to President Abraham Lincoln, John Ericsson, and Martin Luther King, Jr., Commemorative use as a memorial tree grove, dedicated to the individuals and organizations represented, a space of protest associated with the Civil Rights Movement and First Amendment causes, passive and active recreational use	Contributing
		Topography: Generally flat topography consistent with the construction of East/West Potomac Parks via reclamation, Mounded (round point) topography within Lincoln Memorial Circle, Steeply sloped topography on the east and west sides of Lincoln Memorial Circle, descending to the Reflecting Pool and the Potomac River, Gently sloping topography from the Belvedere and Parkway Drive to 23rd Street NW, Steeply sloping abutments flanking the Parkway Drive and Arlington Memorial Bridge overpasses	Contributing
		Vegetation: plantings in Lincoln Memorial Circle, elm allées and trees, turf island at Constitution Avenue Belvedere, turf panels along Reflecting Poll, in Lincoln Memorial Circle, and between radial roads and parkway, plantings along Watergate Steps area and approach road, remnant naturalistic groves of memorial trees	Contributing
		Circulation: Lincoln Memorial Circle and associated concrete sidewalks, Parkway Drive NW and associated concrete sidewalks, 23rd Street NW/SW and associated concrete sidewalks, Henry Bacon Drive NW and associated concrete sidewalks, Daniel French Drive SW and concrete sidewalk on northeast side, Ohio Drive SW and associated concrete sidewalks, traffic circle and concrete sidewalks at the Belvedere, gravel service road to underground storage area, remnant bridle paths west of Lincoln Memorial Circle, primary, east-west asphalt allée paths, Secondary, north-south concrete paths at east end of Reflecting Pool, Paths and stairs between Reflecting Pool plaza and Lincoln Memorial Circle, Approachway, raised terrace stairs, and stylobate, Gravel walk around outer edge of raised terrace, Lincoln Memorial Circle former parking area, including granite block edging, Watergate Steps area concrete sidewalks, Concrete sidewalks around Ericsson Monument, Concrete sidewalk along south side of Constitution Avenue	Contributing

Map ID	Resource Name		NRHP Designation
		Potomac River seawall between Theodore Roosevelt Bridge and John Ericsson Monument	Contributing
11		Lincoln Memorial statue and structure, including raised terrace, marble stylobate steps, and granite walls	Contributing/NRHP
		John Ericsson Monument and compass terrace	Contributing
		Parkway Drive overpass, including integrated balustrades and benches	Contributing
		Statuary on approach pedestals (Music and Harvest, and Aspiration and Literature)	Contributing
		Underground storage area and retaining walls on Parkway Drive NW	Contributing
		Watergate Steps including plaza wing walls, integrated balustrades and benches	Contributing
		Constitution Avenue Belvedere	Contributing
		Reflecting Pool	Contributing
		Views and vistas: reciprocal views along and between contributing features, panoramic views from the Lincoln Memorial structure toward Watergate Steps, Arlington Memorial Bridge, Arlington House—The Robert E. Lee Memorial, and Parkway Drive, and framed views long Lincoln Memorial porticoes	Contributing
		Small-scale features: granite benches at entrance to Approachway	Contributing
		Small-scale features: cast-iron frame wooden slat benches, Alaska and Hawaii plaque, Martin Luther King Jr “I have a Dream” plaque, memorial tree plaques, Washington Standard lampposts, and Twin-20 lampposts.	Managed as cultural resource
12	National Mall Historic District		NRHP historic district
		Vistas/Views: views from Mall to Union Square; views to building facades from Mall; views up cross streets; vista Capitol to Washington Monument	Contributing
		Circulation roads and walkways and small-scale features	Contributing
		The Mall (Reservation Nos. 3, 3A, 3B, 4, 5, 6, and 6A)	Contributing site/NRHP
		Reservation No. 553	Contributing site
		Reservation No. 201	Contributing site
		National Gallery of Art Sculpture Garden	Contributing site
		President’s Park South	Contributing site
		Ellipse	Contributing site
		Washington Monument Grounds (Reservation No. 2)	Contributing site
		Sylvan Theater	Contributing site
		German-American Friendship Garden	Contributing site
		West Potomac Park (Reservation No. 332)	Contributing site
		Constitution Gardens	Contributing site
		Vietnam Veterans Memorial	Contributing site
		Lincoln Memorial grounds	Contributing site

Map ID	Resource Name		NRHP Designation
		District of Columbia War Memorial grounds	Contributing site
		Korean War Veterans Memorial	Contributing site
13		World War II Memorial	Contributing site
		Thomas Jefferson Memorial grounds	Contributing site
		Franklin Delano Roosevelt Memorial	Contributing site
		George Mason Memorial	Contributing site
14		Martin Luther King, Jr. Memorial	Contributing site/NRHP
		Lock B Archeological Site	Contributing site
		Lockkeeper's House Foundation Archeological Site	Contributing site
		White House Stable Archeological Site	Contributing site
		Tiber Creek Sewer Archeological Site	Contributing site
		Smithsonian Institution Building	Contributing building
		Arts and Industries Building	Contributing building
		U.S. Department of Agriculture Administration Building	Contributing building
		National Museum of Natural History	Contributing building
		Freer Gallery of Art	Contributing building
		National Gallery of Art West Building	Contributing building
		National Museum of American History	Contributing building
		Hirshhorn Museum and Sculpture Garden	Contributing building
		National Air and Space Museum	Contributing building
		National Gallery of Art East Building	Contributing building
		Quadrangle	Contributing building
		National Museum of the American Indian	Contributing building
		Survey Lodge	Contributing building
		Monument Lodge	Contributing building
		National Museum of African American History and Culture	Contributing building
		Constitution Gardens Refreshment Kiosk	Contributing building
15		Lockkeeper's House	Contributing structure/NRHP
		Bulfinch Gatehouses (U.S. Capitol Gatehouse)	Contributing structure
		Bulfinch Gatepost (U.S. Capitol Gateposts)	Contributing structure

Map ID	Resource Name		NRHP Designation
		Washington Monument	Contributing structure/NRHP
		Flood Control Levee	Contributing structure
		Lincoln Memorial	Contributing structure/NRHP
		Reflecting Pool	Contributing structure
		Watergate steps	Contributing structure
		Constitution Avenue Belvedere	Contributing structure
		District of Columbia War Memorial	Contributing structure
		Stone Seawalls	Contributing structure
		Tidal Basin	Contributing structure
		Outlet Bridge	Contributing structure
		Inlet Bridge	Contributing structure
		Kutz Bridge	Contributing structure
		Independence Avenue Extension	Contributing structure
		Thomas Jefferson Memorial	Contributing structure/NRHP
		Constitution Avenue, NW	Contributing structure
		Madison Drive	Contributing structure
		Jefferson Drive	Contributing structure
		Maryland Avenue, SW	Contributing structure
		Pennsylvania Avenue, NW	Contributing structure
		Henry Bacon Drive	Contributing structure
		Daniel French Drive	Contributing structure
		Lincoln Circle	Contributing structure
		Ohio Drive	Contributing structure
		Terminus of the Rock Creek and Potomac Parkway	Contributing structure
		3rd Street, SW	Contributing structure
		4th Street, SW	Contributing structure
		7th Street, NW-SW	Contributing structure
		14th Street, NW-SW	Contributing structure
		Raoul Wallenberg Place (15th Street south of Independence Avenue)	Contributing structure

Map ID	Resource Name		NRHP Designation
		17th Street, NW	Contributing structure
		23rd Street, NW	Contributing structure
		E Street, NW	Contributing structure
		Downing Urn	Contributing object
		Joseph Henry Memorial	Contributing object
		National Grange Marker	Contributing object
		Ellipse Meridian Stone	Contributing object
		General William Tecumseh Sherman Memorial	Contributing object
		Butt-Millet Memorial Fountain	Contributing object
		Zero Milestone	Contributing object
		First Division Monument	Contributing object
		Original Patentees of the District of Columbia Memorial	Contributing object
		Second Division Memorial	Contributing object
		Boy Scout Commemorative Tribute	Contributing object
		John Saul Plaque	Contributing object
		National Christmas Tree Plaque	Contributing object
		Jefferson Pier	Contributing object
		Elevation Obelisk	Contributing object
		100th Anniversary Plaques	Contributing object
		Washington City Canal Memorial Stone and Plaque	Contributing object
16		Memorial to the 56 Signers of the Declaration of Independence	Contributing object/NRHP
		John Ericsson Monument	Contributing object
		The Arts of Peace: Aspiration and Literature	Contributing object
		The Arts of Peace: Music and Harvest	Contributing object
		The Arts of War: Sacrifice	Contributing object
		The Arts of War: Valor	Contributing object
		First Airmail Flight Marker	Contributing object
		Number 4 Fountain	Contributing object
		Commodore John Paul Jones Statue	Contributing object
		First Cherry Tree Planting Plaque	Contributing object

Map ID	Resource Name		NRHP Designation
		Japanese Lantern	Contributing object
		Japanese Pagoda	Contributing object
		Cuban Friendship Urn	Contributing object/NRHP
17	The Mall Cultural Landscape		NRHP cultural landscape
		Vegetation: grass panels, elm tree panels, Ulmus americana planted 1920s-1975, Ulmus americana cultivars replacement of the original elms	Contributing
		Circulation: Jefferson Drive, Madison Drive, 3rd Street, 4th Street, 7th Street, 14th Street, North Vista Walk (formerly Washington Drive), South Vista Walk (formerly Adams Drive), sidewalks along Madison and Jefferson Drives, walk along 5th Street axis, walk along 6th Street axis, walk along 8th Street axis, walk along 9th Street axis, walk along 10th Street axis, walk along 12th Street axis, walk along 13th Street axis	Contributing
		Views and vistas: vista from the Capitol to Washington Monument, views from Mall to Union Square, views to building facades from Mall, views to elms from walks and grass panels, views up cross streets	Contributing
		Small-scale features: benches (1930s design for NCP) and streetlights (1930s design for Mall)	Contributing
18	Washington Monument and Grounds Historic District		NRHP historic district
		Views and vistas: Axial views through Jefferson Pier of the White House and Thomas Jefferson Memorial; Views from the site to the Lincoln Memorial, White House, Thomas Jefferson Memorial, and the U.S. Capitol; Views from top of Monument to the surrounding city and important sites	Contributing
		Circulation roads and walkways, vegetation, and small-scale features	Contributing
		Monument Lodge	Contributing building
		Survey Lodge/Boiler House	Contributing building
		Washington Monument Grounds cultural landscape	Contributing site
		German-American Friendship Garden	Contributing site
		Sylvan Theater	Contributing site
19		Washington Monument	Contributing structure/NRHP
		Bulfinch Gateposts (2) (U.S. Capitol Gateposts)	Contributing structure
		Raoul Wallenberg Place (15th Street south of Independence Avenue)	Contributing structure
		Independence Avenue corridor (including Maine Avenue corridor)	Contributing structure
		Tidal Basin Parking Lot Corridor	Contributing structure
		Tidal Basin Walk with metal pipe handrail – near Tidal Basin Parking Lot	Contributing structure
		Survey Lodge service drive	Contributing structure

Map ID	Resource Name		NRHP Designation
		100th Anniversary Plaques (2)	Contributing resource
		Benches – cast-iron-and-wood slat at perimeter of site (1 group)	Contributing resource
		Cobblestone gutters along Survey Lodge service drive (1 group)	Contributing resource
		Washington Globe lights along the service drive behind the Survey Lodge (1 group)	Contributing resource
		Twin-20 streetlights along Independence and Maine Avenues (1 group)	Contributing resource
		Ring of 50 aluminum flagpoles (1 group)	Contributing resource
		Jefferson Pier Marker	Contributing resource
		Elevation Obelisk	Contributing resource
20	Washington Monument Grounds Cultural Landscape		NRHP cultural landscape
		Vegetation: Street Trees along Tidal Basin Parking; Lawn; Mulberry Tree; Street Trees along 17th Street, Constitution Avenue, 14th Street; Cherry Groves along Tidal Basin; Open Groves; Elm tree along Raoul Wallenberg Place; Elms along Tidal Basin Parking Lot; Elm in southwest grove near Survey Lodge; Catalpa tree behind Survey Lodge; and Large Elm along Tidal Basin near intersection of Raoul Wallenberg and Maine Avenue	Contributing
		Circulation: 17th Street corridor, including sidewalks; Constitution Avenue corridor, including sidewalks; 14th Street corridor, including sidewalks; Independence and Maine Avenue corridors; Tidal Basin Parking Lot corridor; Tidal Basin walk; Raoul Wallenberg Place corridor; Flagstone steps at the Sylvan Theater	Contributing
		Washington Monument	Contributing/NRHP
		Monument Lodge	Contributing
		Survey Lodge	Contributing
		Jefferson Pier survey marker	Contributing
		Bulfinch gateposts (U.S. Capitol Gateposts)	Contributing/NRHP
		Independence Avenue Overpass	Contributing
		Seawall	Contributing
		Views and vistas: Views from D.C. and surrounding region to Monument, Views from top of Monument to the surrounding city and important sites, Views from the site to the Lincoln Memorial, White House, Thomas Jefferson Memorial, and the U.S. Capitol, Vistas of the Monument from Lincoln Memorial, White House, Thomas Jefferson Memorial, and the U.S. Capitol, Axial views through Jefferson Pier of the White House and Thomas Jefferson Memorial, Screened views of the site features	Contributing
		Small-scale features: Elevation Obelisk, Twin-20 double lamp streetlights, Washington Globe single lamp streetlights, Cast-iron and wood slat benches, Ring of flagpoles, Dedication plaque at monument base, Stone-lined drainage ditch at Survey Lodge Service Drive, and Pipe Handrail - Tidal Basin	Contributing
21	Civil War Monuments in Washington, D.C.	Inclusive of Ulysses S. Grant Memorial	NRHP

Map ID	Resource Name		NRHP Designation
22	Rock Creek Park and Potomac Parkway Historic District		NRHP historic district
		Spatial organization: the linear arrangement of the parkway including component roads, pedestrian circulation, open spaces, etc. from north to south; the linear arrangement of the seawall, shared use trail and lawn, parkway roadway proper, and lawn from west to east	Contributing
		Land use as a link connecting Rock Creek Park to West Potomac Park, as a commuter roadway, and a recreational area	Contributing
		Circulation: Rock Creek Potomac Parkway roadway; Pedestrian path to the west of the parkway, between Virginia Avenue, N.W., and F Street, N.W.; Kennedy Center Promenade; granite block median and shoulder; and granite curbs	Contributing
		Topography: human-made site, with a gentle slope rolling downwards from the adjacent properties to the east toward the Potomac River seawall	Contributing
		Vegetation: Sycamore Allée, ca. 1936 vegetation, ca. 1966 vegetation, medium to large specimen trees, trees adjacent to the Roosevelt bridge	Contributing
		Stone seawall along the Potomac Waterfront Section of the Rock Creek Potomac Parkway	Contributing
		The Belvedere (Constitution Avenue, N.W.)	Contributing
		Retaining walls and rip rap along the banks of the Rock Creek	Contributing
		Kennedy Center Stone Retaining Wall	Contributing
		Aluminum handrail along the promenade and integrated bench seat to the east of the promenade	
		Views and vistas from the parkway to the surrounding environs, including the Potomac River, Theodore Roosevelt Island, Georgetown and Key Bridge, Arlington Memorial Bridge, Virginia, shoreline, and West Potomac Park.	Contributing
		Twin-20 Lampposts at the Belvedere	Contributing
23	East and West Potomac Park Historic District		
		Views and Vistas from locations: Tidal Basin; Tidal Basin Inlet Bridge; Tidal Basin Outlet Bridge; Potomac River Seawall; Commodore John Paul Jones Statue; Cuban Friendship Urn; Franklin Delano Roosevelt Memorial; Korean War Veterans Memorial; Martin Luther King, Jr. Memorial; World War II Memorial; Franklin Delano Roosevelt Memorial Visitor Center; Martin Luther King, Jr. Memorial Visitor Center; World War II Memorial Restrooms; World War II Memorial Visitor Center; East Basin Drive Bridge.	
		Lockkeeper's House	Contributing/NRHP
		Stone Seawalls	Contributing
		Tidal Basin	Contributing
		Tidal Reservoir Outlet Bridge	Contributing
		Commodore John Paul Jones Statue	Contributing
		Japanese Cherry Trees	Contributing
		Lincoln Memorial	Contributing/NRHP

Map ID	Resource Name		NRHP Designation
		Dutch Elm Trees	Contributing
		Reflecting Pool	Contributing
		Lincoln Memorial Grounds	Contributing
		John Ericsson Monument	Contributing
		Arlington Memorial Bridge	Contributing/NRHP
		District of Columbia World War I Memorial	Contributing
		Flood Control Levee	Contributing
		Jefferson Memorial	Contributing
		Independence Avenue Extension	Contributing
		Jefferson Memorial Grounds	Contributing
		Kutz Bridge	Contributing
		Guard House	Contributing
		Japanese Lantern	Contributing
		Japanese Pagoda	Contributing
		Constitution Gardens	Contributing
		56 Signers Memorial	Contributing/NRHP
		Vietnam Veterans Memorial	Contributing
		Vietnam Women’s Memorial	Contributing
		Franklin Delano Roosevelt Memorial	Contributing/NRHP
		Korean War Veterans Memorial	Contributing
		Stone Seawalls	Contributing
		Potomac Railroad Bridge	Contributing
		Ohio Drive, SW	Contributing
		U.S. Engineers' Storehouse	Contributing
		East Potomac Park Field House	Contributing
		East Potomac Park Golf Course	Contributing
		East Potomac Park Miniature Golf Course	Contributing
		East Potomac Park Swimming Pool	Contributing

Map ID	Resource Name		NRHP Designation
24	American Revolutionary Statuary in the District of Columbia	Inclusive of Commodore John Paul Jones Statue	NRHP

Sources: Army National Military Cemeteries and Virginia State Historic Preservation Officer (2026); Arlington National Cemetery et al. (n.d. [2026]); Bobeczko and Robinson (1998); Dillon (1972); EDAW, Inc. (1992a, 1992b); EHT Traceries, Inc. and Stantec (2018); Frisbie et al. (2024); Krakow (1993); McIntosh (1979, 1980a, 1980b); National Park Service (2004, 2005, 2006a, 2006b, 2009a, 2009b, 2015, 2016, 2018a, 2018b, 2022a, 2022b, 2024); Pfanz (1980, 1981); Robinson et al. (2016); Scott (1977); Seagraves et al. (1980); Smith et al. (2013); Virginia Polytechnic Institute and State University (2009).

NHL: National Historic Landmark; NRHP: Designated Lised/Eligible for the National Register of Historic Places.

List of Historic Properties within the APE

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
25	Mount Vernon Memorial Highway Cultural Landscape – North of Alexandria	NRHP	Views and Vistas: Northbound vista of the Washington Monument; Northbound views of the Potomac; Views of the U.S. Capitol Building Northbound vista of the Washington Monument; Southbound view of the Roaches Run lagoon.
26	Cuban Friendship Urn	NRHP	Located in West Potomac Park with views of the Potomac River.
27	Franklin Delano Roosevelt Memorial	NRHP	Views from memorial to the Tidal Basin. View from Eleanor Roosevelt statue to the White House.
28	L'Enfant Plan of the City of Washington, District of Columbia	NRHP	Primary vista from U.S. Capitol along the Mall to the Lincoln Memorial and the western horizon; vistas along radiating avenues; vistas along orthogonal avenues; vistas along major cross-axes; tangential views; other frontal vistas; axial street vistas
29	Arlington Ridge Park	NRHP	Views and Vistas: view along Ridge Path to Netherlands Carillon; view from Marine Corps War Memorial to parade ground; view from Netherlands Carillon to flower beds below; view from Netherlands Carillon to Mall; view from reviewing stand to parade ground, and across parade ground to Marine Corps War Memorial; view from U.S. Marine Corps War Memorial to Lincoln Memorial, Watergate Steps, and National Mall; views along entrance drive into park; views along pedestrian walks to Marine Corps Memorial statue; views along Ridge Path and from Netherlands Carillon grounds to National Mall; views from park to Arlington National Cemetery.
30	Pentagon	NHL/NRHP	View/vista: view of Arlington National Cemetery, vistas of the Monumental Core of Washington D.C., across the Potomac, clear views of Washington from Arlington National Cemetery, and vice versa.
31	Fort Myer Historic District	NHL/NRHP	Views toward Washington D.C, Arlington Cemetery; the Pentagon; Potomac River. Contributing resource Whipple Field is significant for its sweeping eastward/southeastward vista of the monumental core of DC.
32	Quarters 1, Fort Myer	NHL/NRHP	Views toward Washington D.C, Arlington Cemetery; the Pentagon.
33	Theodore Roosevelt Island Historic District	NRHP	Views to and from the memorial plaza and statue.
34	Theodore Roosevelt Island Cultural Landscape	NRHP	Views and Vistas: Internal views within and across memorial plaza.
35	Washington Canoe Club	NRHP	Views and Vistas: Views from north of the Washington Canoe Club (WCC) boathouse toward the Chesapeake & Ohio Canal (C&O Canal) and Georgetown; Views from the aqueduct's northern abutment toward the Potomac River, the WCC, the C&O Canal, Georgetown, the Potomac Boat Club, and Key Bridge; Views from the C&O Canal toward the Potomac River, the WCC boathouse, and the aqueduct's northern abutment; Views from the WCC boathouse's façade toward the Virginia shore, Key Bridge, and Three Sisters Islands; Vista along the C&O Canal.

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
36	George Mason Memorial	NRHP	Views and Vistas: Inward views of the George Mason Memorial; vista from the George Mason Memorial Sculpture to the Inlet Bridge.
37	Thomas Jefferson Memorial	NRHP	Views and Vista to and from to the Thomas Jefferson statue to the Tidal Basin and White House and Washington Monument.
38	Thomas Jefferson Memorial Cultural Landscape	NRHP	Views and vistas: View across Tidal Basin to Cherry Trees; view south to Interstate 395 and 14th Street Bridge; View West to Potomac River past Franklin Delano Roosevelt Memorial; Vista North to White House and Washington Monument; Vista to Lincoln Memorial; Vistas to East and West of Memorial.
39	DC War Memorial Cultural Landscape	NRHP	Views and Vistas: View looking north of the Reflecting Pool; View looking south of the Tidal Basin.
40	United States Capitol	NHL/NRHP	Views/vistas of the National Mall, the Tidal Pool, the Washington Monument; and other adjacent resources. Axial views up Pennsylvania Avenue NW and SE. Views to Union Station.
41	U.S. Capitol Gatehouses and Gateposts	NRHP	No contributing views. Gateposts flank 15th Street and Constitution Avenue, NW in Washington Monument Grounds and President's Park. Gatehouse in SE corner of President's P*ark.*
42	Smithsonian Building	NHL/NRHP	Views/vistas of the National Mall, within the National Mall. Views of the Potomac River from the waterfront.
43	White House	NHL/NRHP	Views/vistas along North-south axis, view along east-west axis; Andrew Jackson statue as focal point; corner statues as focal points; urban views to nearby squares; view to the Washington Monument
44	Georgetown Historic District	NHL/NRHP	Views/vistas of Rock Creek and Potomac Parkway.
45	Old Naval Observatory	NHL/NRHP	View of the Potomac River below Theodore Roosevelt Island, including Memorial Bridge, Arlington Cemetery, and Arlington House; view over Theodore Roosevelt Island and the Georgetown waterfront, including Key Bridge; view over West Potomac Park and the Lincoln Memorial.
46	Observatory Hill Historic District	NRHP	View to the National Mall/West Potomac Park; Reciprocal views to and from Arlington House/Arlington National Cemetery; Views from Memorial Bridge; View to Lincoln Memorial/West Potomac Park.
47	Pennsylvania Avenue National Historic Site	NRHP	Contributing resources include Old Post Office and Clock Tower. Views and vistas of the Pennsylvania Avenue National Historic Site.
48	Alban Towers Apartment Building	NRHP	Some of most "spectacular" views of city from property.
49	Alice Pike Barnley Studio House	NRHP	Not identified
50	All Souls Church, Unitarian	NRHP	Located at height ("important rise in the topography of the city along 15th and 16th Streets north of Florida Avenue known as Meridian Hill") in northwest Washington. Constructed adjacent to collection of grand Beaux-Arts style mansions and foreign legations surrounding a formal, Neo-Classical style park then under construction. Developers of area were inspired by City Beautiful movement to create enclave of architecturally notable buildings to replace modest Civil War era frame houses. Vision was to transform 16th Street into "a ceremonial gateway to the White House".
51	American Institute of Pharmacy Building	NRHP	The building is visually integral part of ceremonial public spaces developed under McMillan Plan as extension of the Mall to the Potomac
52	Andrew Rankin Memorial Chapel, Frederick Douglass Memorial Hall, Founders Library	NRHP/NHL	Not identified
53	Arlington Heights Historic District	NRHP	Not identified

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
54	Arts and Industries Building	NRHP/NHL	On the Mall on east side of original Smithsonian building
55	Ashburton House	NRHP/NHL	View to Lafayette Square
56	Auditor's Building Complex	NRHP	Not identified
57	Aurora Highlands Historic District	NRHP	Views to Washington D.C.
58	Babcock-Macomb House	NRHP	Resource is oriented towards Massachusetts Avenue
59	Baker, Newton D., House	NRHP/NHL	Not identified
60	Banneker Recreation Center	NRHP	Relationship to Howard University across the street
61	Barr Building	NRHP	Views to and from Farragut Square
62	Bayly, Mountjoy, House	NRHP/NHL	Not identified
63	Beale, Joseph, House	NRHP	Views of recourse from Massachusetts Avenue and Sheridan Circle
64	Bond Building	NRHP	Relationship to New York Avenue axis between Mount Vernon Square and the White House to the downtown commercial grid; setting within the L'Enfant Plan
65	Cairo Apartment Building	NRHP	Views of downtown Washington and surrounding area.
66	Capitol Hill Historic District	NRHP	Views within the district, downtown Washington, and the surrounding area.
67	Cardozo, Francis L., Senior High School	NRHP	Views of monumental Washington, Arlington, and the broad Potomac River valley.
68	Cathedral Mansions Apartment Buildings	NRHP	Not identified
69	Central Heating Plant	NRHP	Views within Washington D.C.'s central business district and immediately adjacent neighborhoods, including the National Mall.
70	Chase's Theater and Riggs Building	NRHP	Not identified
71	Christ Church	NRHP	Not identified
72	Christ Church	NRHP	Views within Georgetown Historic District and immediately adjacent neighborhoods.
73	City Hall	NRHP/NHL	Not Identified
74	City Tavern	NRHP	Not identified
75	Cleveland Park Historic District	NRHP	Views within the district; views of the city center.
76	Clifton Terrace	NRHP	Views of the city of Washington, D.C.;
77	Codman-Davis House	NRHP	Not identified
78	Commercial National Bank	NRHP	Not identified
79	Constitution Hall	NRHP/NHL	View to eighteenth street between C and D streets, northwest. Otherwise not identified.
80	Corcoran Hall	NRHP	Not identified
81	Cosmos Club	NRHP	View south to Massachusetts Avenue.

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
82	Customhouse and Post Office	NRHP	Not identified
83	Davidson Building	NRHP/NHL	Views from Dupont Circle neighborhood on the west side of nineteenth street, northwest, and north of south street.
84	District Building	NRHP	Not identified
85	District of Columbia Municipal Center and Plaza	NRHP	View from south of Judiciary Square and north of Indiana Avenue
86	Downtown Historic District	**NRHP**	View from northwest sector of the District of Columbia, between Pennsylvania Avenue and Mount Vernon Square; View from Market Square: a portion of Indiana Avenue between Market Square and Sixth Street, a portion of D Street between Seventh and Sixth Streets, a portion of E Street between Eighth and Seventh Streets, portions of G Street between Eleventh and Seventh Streets, portions of H Street between Eighth and Fourth Streets, portions of I Street between Eighth and Fifth Streets, portions of Eleventh Street between F and H Streets, portions of Eighth Street between Pennsylvania Avenue and I Street, portions of Sixth Street between G and I Streets, and portions of Fifth Street between G and I Streets View to the Pennsylvania Avenue National Historic Site/Market Square area
87	Dumbarton House	**NRHP**	View to historic Georgetown, District of Columbia; View to Rock Creek and the Q Street Bridge; View to nearby Evermay (erected in 1790s) and Dumbarton Oaks (which dates to 1801)
88	Duncanson-Cranch House	NRHP	Not identified
89	Dupont Circle Historic District	NRHP	Focal point of vistas to and from the Circle, part of original L'Enfant plan
90	Eastern Market	NRHP	Not identified
91	Embassy of Mexico--MacVeagh House	NRHP	Not identified
92	Euclid Apartments	NRHP	Not identified
93	Everglades, The	NRHP	Not identified
94	Evermay	NRHP	Distant views to Rock Creek Park and downtown Washington
95	Fifteenth Street Financial Historic District	NRHP	Located on axis with US Treasury
96	Foggy Bottom Historic District	NRHP	Not identified
97	Folger Shakespeare Library	NRHP	Setting is in Capital Hill section of city, close to Library of Congress
98	Forrest-Marbury House	NRHP	Not identified
99	Founders Library	NRHP/NHL	Not identified
100	Fourteenth Street Historic District	NRHP	Views within district and to immediately adjacent neighborhoods
101	Friendship House	NRHP	Not Identified

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
102	Fulford, The	NRHP	Views within Meridian Hill Subdivision, valued for its scenic views
103	Garfinckel's Department Store	NRHP	Not identified
104	George Washington Memorial Parkway	NRHP	Views of the city; Northern section protects scenic vistas into D.C. and along the corridor; Includes view of monumental core and skyline of Washington D.C., which was a central purpose for its establishment and continued protection
105	Georgetown Academy for Young Ladies	NRHP	Views within Georgetown Historic District; southward view of Georgetown, downtown Washington, the Potomac River, and beyond
106	Georgetown University Astronomical Observatory	NRHP	Not Identified
107	Glenn Arms, The	NRHP	Views within the Adams Morgan neighborhood and the Meridian Hill Subdivision, and immediately adjacent neighborhoods
108	Grace Protestant Episcopal Church	NRHP	Not Identified
109	Greater U Street Historic District	NRHP	Views within district and immediately adjacent neighborhoods
110	Halcyon House	NRHP	Not identified
111	Harbour Square	NRHP	Views to the Potomac River; views towards immediately adjacent neighborhoods; views of downtown Washington's monumental core, the Washington Channel and Anacostia River, Georgetown
112	Healy Building, Georgetown University	NRHP/NHL	Not identified
113	Heurich, Christian, Mansion	NRHP	Not identified
114	Hotel Washington	NRHP	Views along 15th and F Streets and Pennsylvania Avenue, NW, including the White House; views within the Pennsylvania Avenue National Historic Site and the 15th Street Financial Historic District
115	House at 2437 Fifteenth Street, NW	NRHP	Views of Meridian Hill Park, Sixteenth Street Historic District, and immediately adjacent neighborhoods.
116	Howard, Gen. Oliver Otis, House	NRHP	Views within Howard University and immediately adjacent neighborhoods.
117	Hughes, Charles Evans, House	NRHP/NHL	Views of Massachusetts Avenue and Sheridan Circle
118	Hume School	NRHP	Arlington Ridge neighborhood; view of Crystal City area, land surrounding school to remain open
119	Ingleside	NRHP	Mount Pleasant Neighborhood
120	Interior Department Offices	NRHP	Views of the Ellipse, Washington Monument, and National Mall
121	Kalorama Triangle Historic District	NRHP	Recognized as an area with a strong visual, distinct identity within three major thoroughfares, Connecticut Avenue, Calvert Street, and Columbia Road
122	Kennedy-Warren Apartment Building	NRHP	Views of Connecticut Avenue, Rock Creek Park, and Smithsonian National Zoological Park; surrounded on three sides by government-owned parkland
123	Key, Francis Scott, Bridge	NRHP	Views of Potomac River, Theodore Roosevelt Island, Three Sisters, North Highland and Rosslyn neighborhoods in VA, George Washington Memorial Parkway, K Street, C&O Canal, Georgetown neighborhood
124	Keystone, The	NRHP	Views of Pennsylvania Ave, 22nd St, and Washington Circle
125	Lafayette Building	NRHP/NHL	Views of Lafayette Park, McPherson Square, the White House, Vermont Avenue, I Street, 15th Street, and H Street

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
126	Lafayette Square Historic District	NRHP/NHL	Views of the White House, Ellipse, Pennsylvania Avenue NW, I Street NW, H Street NW, 15th Street, 16th Street, 17th Street, E Street NW, G Street NW, F Street NW, New York Avenue NW
127	Lisner Auditorium	NRHP	Views of George Washington University, H Street NW, and 21st Street NW
128	Lyon Park Historic District	NRHP	Views of 10th Street North, Arlington Boulevard, North Irving Street, Washington Boulevard, and North Pershing Drive; Views of district including 1171 contributing features
129	Massachusetts Avenue Historic District	NRHP	Views of Massachusetts Avenue, Dupont Circle Historic District, Kalorama Historic Area, Sheridan Circle, Rock Creek, and Naval Observatory Complex
130	Memorial Continental Hall	NRHP/NHL	Views of 17th Street NW, the Ellipse, the White House, Washington Monument, National Mall
131	Meridian House	NRHP	Views of Meridian Hill Park, 16th Street NW, 17 Street NW, Crescent Place, and Belmont Street NW
132	Meridian Manor	NRHP	Views of Chapin Street, 15th Street, 14th Street, Belmont Street, and Meridian Hill Park
133	Meridian Mansions	NRHP	Views of 16th Street NW and Meridian Hill Park
134	Milton Hall	NRHP	Views of George Washington University, Washington Circle, 23rd Street NW, and I Street NW
135	Miner Normal School	NRHP	Views of Georgia Avenue, Fairmont Street, Howard Place, and Howard University campus
136	Moran Building	NRHP	Views of G Street NW and 5th Street NW
137	Mount Pleasant Historic District	NRHP	Views of 16th Street, Harvard Street; and Rock Creek Park
138	Mount Vernon Square Historic District	NRHP	Views of New York Avenue NW, 7th Street NW, M Street NW, US Capitol
139	Mount Vernon Triangle Historic District	NRHP	Views of Massachusetts Avenue, 5th, K, and I Streets, Cobb Park, US Capitol
140	Mount Zion United Methodist Church	NRHP	Views of 29th Street NW and Georgetown Historic District
141	Mullett Rowhouses	NRHP	Contributing views not identified; Views exist within and beyond Foggy Bottom neighborhood
142	National Academy of Sciences	NRHP	Views to the south of wooded terraces by Charles Downing Lay in consultation with Bertram Goodhue; Views within and beyond Foggy Bottom neighborhood, near Lincoln Memorial and West Potomac Park
143	National Archives	NRHP	Views within and beyond the Pennsylvania Avenue National Historic Site
144	National Cathedral, The	NRHP	The National Cathedral is one of three “dominant visual focal points” in D.C; Views are expansive within and beyond the 57-acre landscaped site on top of Mount Saint Alban in Northwest Washington; View from the cathedral is “one of the most magnificent in the city”
145	National Geographic Society Headquarters	NRHP	Views exist within and beyond area of development of National Geographic Society between Sixteenth, Seventeenth and M Streets; Landscaped plaza adjacent to east
146	National Home for Destitute Colored Women and Children	NRHP	Views exist within and beyond Columbia Heights neighborhood, from the building’s “siting at the height of the hill”
147	National Metropolitan Bank Building	NRHP	Views to ceremonial route between Capitol and White House; Visually integrated with 15th Street financial district
148	National War College	NRHP/NHL	Views exist within and beyond site of the Army War College and Washington Arsenal, with Washington Channel of the Potomac River and East Potomac Park to the west, Parade Ground to the north and Anacostia River to the south.

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
149	Northumberland Apartments	NRHP	Visual significance noted for association with New Hampshire Avenue streetscape between Sixteenth Street and Florida Avenue, where diagonal intersecting roads of L'Enfant's plan define irregular shaped lots and short blocks with a variety of building types and styles considered to be unusual, rich and intact.
150	Old Woodley Park Historic District	NRHP	Located on high ground with reciprocal views to the east and south of Rock Creek Park, and the National Cathedral to the west; Views toward parklands
151	Olympia Apartments	NRHP	Views within and beyond the setting of the Columbia Heights neighborhood along 14th Street, a historical major thoroughfare in and out of D.C.
152	Pan American Union	NRHP	Views within and beyond the 17th Street corridor, on a 5-acre site, with "Blue Aztec" garden and reflecting pool and Van Ness House Stables
153	Pennsylvania Avenue National Historic Site	NRHP	View from downtown Washington; View of the White House and the Capitol
154	Penrose Historic District	NRHP	Not Identified
155	Pension Building	NRHP/NHL	View from downtown Washington; View from Fourth, Fifth, F, and G Street, otherwise not identified.
156	Phillips, Duncan, House	NRHP	View from Twenty-First Street and Q Street, NW; View of Dupont Circle, including the Larz Anderson House, the Cosmos Club, and the Indian Embassy
157	Potomac Electric Power Company Substation No. 25	NRHP	View from/to Adams Morgan neighborhood; View facing Champlain Street and Old Morgan School Place
158	President's Park South	NRHP	View to the White House grounds, Executive Avenue, Constitution Avenue, Sixteenth Street N.W; View to monuments in park, including The General William Tecumseh Sherman Monument, The First Division Monument, The Butt-Millet Memorial Fountain, The Second Division Memorial, The Zero Milestone, The Original Patentees of the District of Columbia Memorial, The Boy Scout Commemorative Tribute, The Haupt Fountains, The National Christmas Tree, and The Bulfinch Gatehouses
159	Prospect House	NRHP	View to the Potomac River
160	Quality Hill	NRHP	View south from NE corner of 35th and Prospect St., Georgetown
161	Randall Junior High School	NRHP	Not Identified
162	Riggs--Tompkins Building	NRHP	Not identified
163	Riggs National Bank, Washington Loan And Trust Company Branch	NRHP	Not identified
164	Sewall-Belmont House National Historic Site	NRHP/NHL	Not identified
165	Sheridan--Kalorama Historic District	NRHP	View to the city; overlooks the steep grade of the Rock Creek Park
166	Sixteenth Street Historic District	NRHP	The Sixteenth Street Historic District is characterized by the linear experience Sixteenth Street, a Major Element of the L'Enfant Plan
167	Sixteenth Street Historic District (Boundary Increase)	NRHP	Vista south to the White House; stretch of 16th Street from from Lafayette Square to its current boundary at Florida Avenue on the north
168	Southeast Branch Library	NRHP	Not identified
169	Southern Railway Building	NRHP	Not identified

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
170	St. John's Church	NRHP/NHL	Not identified
171	St. Matthew's Cathedral And Rectory	NRHP	Not identified
172	Stockton Hall	NRHP	Not identified
173	Strivers' Section Historic District	NRHP	Not identified
174	Strong, Hattie M., Residence Hall	NRHP	Not identified
175	Sun Building	NRHP	Not identified
176	Supreme Court Building	NRHP/NHL	Not identified
177	Tiber Island	NRHP	Not identified
178	Tower Building	NRHP	Not identified
179	Trinity Towers	NRHP	Sited on one of city's highest points, offering commanding views of downtown from upper story apartments.
180	Tucker House and Myers House	NRHP	Not identified
181	Tudor Place	NHL/NRHP	View to Georgetown
182	Twin Oaks	NRHP	Not identified
183	U.S. Civil Service Commission Building	NRHP	Not identified
184	U.S. Department of Agriculture Administration Building	NRHP	View across Jefferson Drive to Mall lawn
185	U.S. Department of Agriculture Cotton Annex	NRHP	Not identified
186	U.S. Department of Housing and Urban Development	NRHP	View to southwest quadrant of Washington, D.C.; View from D Street, Seventh Street, Southwest Freeway, and L'Enfant Plaza/Ninth Street
187	U.S. Department of State Building	NRHP	View from D Street, C Street, 21st Street, and 23rd Street
188	U.S. Department of the Interior	NRHP	View from C and E Streets and Eighteenth to Nineteenth Streets NW; View to the White House, DAR Constitutional Hall, the Red Cross Building, Simon Bolivar Park, Pan American Annex, the Office of Personnel Management, Rawlins park, and the old Interior Building (currently the General Services Administration)
189	Union Station	NRHP	View to the Capitol; View from the intersection of Massachusetts and Delaware Avenues
190	United Mine Workers of America	NRHP/NHL	View from Fifteenth Street, I Street, and Vermont Avenue; View to McPherson Square.
191	US Courthouse--District of Columbia	NRHP	View from Judiciary Square and Municipal Center complex; View from Constitution Avenue, Third Street, C Street, and John Marshal Place in northwest quadrant of the city; View toward National Mall
192	US Department of Agriculture South Building	NRHP	View from southwest quadrant of Washington, D.C.; View from Independence Avenue, C Street, Twelfth Street, and Fourteenth Street. View to the National Mall, the Washington Monument, the Freer Gallery, the Smithsonian Castle, and Paul Cret's Central Heating Plant – all prominent buildings in Washington, D.C.'s monumental core
193	US General Accounting Office Building	NRHP	Seven-story view, from square 518; View from G, H, Fourth, and Fifth Street

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
194	US Public Health Service Building	NRHP	View from Constitution Avenue, C Street, Nineteenth Street, and Twentieth Street, otherwise not identified
195	Vigilant Firehouse	NRHP	View from Wisconsin Avenue, view to C&O Canal
196	Wardman Park Annex and Arcade	NRHP	View to Rock Creek Park and the city; View from 140-foot above street level, hilltop site at the intersection of Woodley Road, N.W.; the eight-story wings radiating from spoke-like from its central octagonal tower provides all rooms with exterior views
197	Washington Heights Historic District	NRHP	View from northwest quadrant of the District of Columbia; View from general boundaries of Connecticut Avenue and Columbia Road, 18th street, and Florida Street. Washington Heights is located on a rise that begins at Florida Avenue and continues northward to Columbia Road, where the topography becomes level.
198	Washington National Airport Terminal and South Hangar Line	NRHP	View to George Washington Memorial Parkway; View to the Potomac River; View to Roaches Run and Waterfowl Sanctuary; View toward Washington skyline
199	Watergate	NRHP	View to Potomac River and Rock Creek Parkway; View to Virginia Avenue to the northeast and New Hampshire Avenue to the southeast
200	Watterston House	NRHP	View from Capitol Hill National Register Historic District, View toward nearby Capitol, Supreme Court, and Library of Congress
201	Western High School	NRHP	View from 35th and R Streets; View to Georgetown Historic District
202	Westory Building	NRHP	View from northeast corner of Fourteenth and F streets
203	White – Meyer House	NRHP	Views to and from Sixteenth Street
204	Willard Hotel	NRHP	View from Square 225; view from Pennsylvania Avenue
205	Wilson, Woodrow, House	NRHP/NHL	View from Embassy Row section of Northwest Washington
206	Windsor Lodge	NRHP/NHL	Not identified
207	Wire Building	NRHP	View to McPherson Square
208	Wyoming Apartments	NRHP	View to southwest Columbia Road at the juncture of Connecticut Avenue and California Street
209	1948 Southern Addition (Current Name)	Determined Eligible	Not identified
210	Abingdon (Historic/Current), Abingdon Ruins (Historic/Current)	Determined Eligible	Not identified
211	Al's Motors (NRHP Listing), Gold's Gym (Current)	NRHP; VLR	Not identified
212	Arlington Cinema and Drafthouse (Current Name), Arlington Theater (Historic)	DHR Staff: Potentially Eligible	View to Columbia Pike/Walter Reed Drive Commercial Historic District; occupies prominent location along the Columbia Pike Commercial Corridor.
213	Arlington Forest Historic District (Historic/Current)	NRHP; VLR	Streetscape views within the district; wooded setting within the district.
214	Arlington Hall Junior College (Historic), Arlington Hall Station Historic District (Current)	Determined Eligible	Axial views along the central path south to Building E and north to Buildings H and I and panoramic views from various points along the route of a former U-shaped drive that historically defined the Grove; view from central path toward Building D and reciprocal view north toward Building E and views along the historic paths toward the former fountain area; view within historic district and neighboring streets.

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
215	Arlington Post Office (Historic/Current), Clarendon Post Office (Current)	NRHP; VLR	Designed as focal point of streetscape at intersection of North Hudson Street and Washington Boulevard; views within the Clarendon Commercial Historic District and neighboring streets; otherwise, not identified.
216	Arlington Service Center (Historic), NSF Arlington (Current), U.S. Naval Radio Station Arlington (Historic), U.S. Naval Radio Station Arlington Historic District (Descriptive)	DHR Staff: Potentially Eligible	Not identified
217	Arlington Village Historic District (Historic/Current)	NRHP; VLR	Views within the historic district and to adjacent streets; otherwise, not identified.
218	Arthur W. Walls House (Historic), Lomax African Methodist Episcopal Zion Church (NRHP Listing), Manse, 2704 S. 24th Road (Function/Location),	NRHP; VLR	Not identified
219	Barcroft Apartments (Historic), Building 18 (Historic), Multiple Dwelling, 1124-1138 South Wakefield Street (Function/Location)	Determined Eligible	Views within surrounding Barcroft Apartments Historic District and to adjacent streets; otherwise, not indicated.
220	Barcroft Apartments (Historic), Commercial Building (Descriptive), Commercial Strip, 4700-4714 Columbia Pike (Function/Location)	Determined Eligible	Views within surrounding Barcroft Apartments Historic District and adjacent streets; otherwise, not identified.
221	Barcroft Apartments (NRHP Listing), Barcroft Apartments Historic District (Historic/Current)	NRHP; VLR	Views within the historic district and adjacent streets; otherwise, not indicated.
222	Barcroft Community House (Historic), Barcroft School House (Historic), St. Paul's Episcopal Church (Historic)	NRHP; VLR	Not identified.
223	Barcroft Historic District (Current)	Determined Eligible	Views within the historic district and adjacent streets; otherwise, not indicated.
224	Bridge #5020 (Current Name), State Bridge #5020 (NRHP Listing)	Determined Eligible	Views of Arlington National Cemetery; views of Memorial Avenue landscaping; designed to disappear into Memorial Avenue landscaping; views within Arlington Memorial Bridge Historic District and adjacent streets.
225	Buckingham Historic District and Boundary Increases (Historic/Current)	NRHP; VLR	Views within the district and adjacent streets; otherwise, not identified.
226	Cabocel (Historic/Current), Colonial Village (Historic)	NRHP; VLR	Views within the residential complex and immediate vicinity; otherwise, not identified.
227	Caleb Cushing House (Historic), The Glebe (NRHP Listing)	NRHP; VLR	Located on an elevated position; views of and from the Waverly Hills Historic District; otherwise, not identified.
228	Calvert Manor (Historic)	NRHP; VLR	Not identified.
229	Carlin Springs (Historic), Glencarlyn Historic District (NRHP Listing)	NRHP; VLR	Views within the district and adjacent streets; otherwise, not identified.
230	Charles Richard Drew House (NRHP Listing)	NHL, NRHP, VLR	Views to and from surrounding Penrose Historic District; otherwise, not identified.

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
231	Cherrydale Fire Station #3 (Historic), Cherrydale Volunteer Fire House (Historic)	NRHP; VLR	Views to and from the surrounding Cherrydale Historic District; otherwise, not identified.
232	Cherrydale Historic District (Historic/Current)	NRHP; VLR	Views within the district and adjacent streets; otherwise, not identified.
233	Clarendon Commercial Historic District (Historic/Current)	Determined Eligible	Views within the district and adjacent streets; otherwise, not identified.
234	Columbia Forest Historic District (Historic/Current)	NRHP; VLR	Views within the district and adjacent streets; otherwise, not identified
235	Columbia Pike/South Walter Reed Drive Commercial Historic District (Current)	DHR Staff: Potentially Eligible	Views within the district and adjacent streets; otherwise, not identified
236	Green Valley Pharmacy (NRHP Listing), Hyman Grocery Store (Historic)	Determined Eligible	Not identified
237	Commercial Building, 919-927 South Walter Reed Drive (Function/Location), Elkins Building, Commercial Building, 2801-2811 Columbia Pike (Current Name)	DHR Staff: Potentially Eligible	Not identified
238	Eagle Automotives (Current Name), Filling Station (Historic)	DHR Staff: Potentially Eligible	Not identified
239	Filling Station (Historic), Shell/Liberty Gas Station (Current)	DHR Staff: Potentially Eligible	Not identified
240	Commons of Arlington (Historic/Current), Walter Reed Gardens Historic District (Historic/Current)	NRHP; VLR	View of adjacent streets; otherwise, not identified.
241	Dorchester Apartments (Current), Garden Apartment Complex, 1900 Columbia Pike (Function/Location)	DHR Staff: Potentially Eligible	Not identified
242	Dorothy Hamm Middle School (Current Name), H-B Woodlawn School (Historic/Current), Stratford Junior High School (NRHP Listing)	NRHP; VLR	Not identified
243	Garden Apartment Complex, 3710 Columbia Pike (Function/Location), Oakland Apartments (Current)	DHR Staff: Potentially Eligible	Views within the residential complex and immediate vicinity; otherwise, not identified.
244	Garden Apartment Complex, 4010-4032 Columbia Pike (Function/Location), Quebec Apartments (Current)	DHR Staff: Potentially Eligible	Views within the residential complex and immediate vicinity; otherwise, not identified.

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
245	Glebe Center (Historic), Glebe Shopping Center (Current)	NRHP; VLR	Views of adjacent streets; otherwise, not identified
246	Halls Hill Historic District (Historic), High View Park (Current Name), Highview Park (Alternate Spelling)	Determined Eligible	Highest elevation in Arlington County; otherwise, not identified.
247	Harry Gray House (NRHP Listing), House, 1005 S. Quinn St. (Function/Location)	NRHP; VLR	Views within Arlington View neighborhood; otherwise, not identified.
248	House, 2306 North Richmond Street (Function/Location), Joseph J. Accardo House (Historic)	Determined Eligible	Not identified.
249	Key Boulevard Apartments (Historic)	Determined Eligible	Views of adjacent streets; otherwise, not identified.
250	Lee Gardens North Historic District (Historic/Current)	NRHP; VLR	Views within the district and adjacent streets; otherwise, not identified.
251	Lyon Village Historic District (Historic/Current)	NRHP; VLR	Views within the district and adjacent streets; otherwise, not identified.
252	Maywood Historic District (Historic/Current)	NRHP; VLR	Views within the district and adjacent streets; otherwise, not identified.
253	Monroe Courts Historic District	NRHP; VLR	Views within the district and adjacent streets; otherwise, not identified.
254	Mount Vernon Memorial Highway North Cultural Landscape Inventory (Current Name)	Determined Eligible	Views of Washington D.C. and monuments; views of Potomac River;
255	Old Dominion Historic District (Historic/Current)	Determined Eligible	Views within district and adjacent streets; views of Washington D.C.; views of Potomac River;
256	Old Warehouse Area and Ground Maintenance Complex (Function/Location)	DHR Staff: Potentially Eligible	Limited views within the surrounding Arlington National Cemetery Historic District; otherwise, not identified.
257	Parkfairfax Historic District (Historic/Current)	NRHP; VLR	Pastoral vistas in areas between or behind groups of buildings out of sight of the roads; tree-lined streetscapes; views within the surrounding historic district.
258	Reeb Hall (Historic), Unitarian Church of Arlington (Historic/Current), Unitarian Universalist Church of Arlington (NRHP Listing)	NRHP; VLR	Views of surrounding hilly, wooded setting; otherwise, not identified.
259	Wakefield Manor Apartments (Historic/Current), Wakefield Manor Garden Apartment Complex (Historic/Current)	Determined Eligible	Not identified.
260	Waverly Hills Historic District (Historic/Current)	NRHP; VLR	Views within the historic district and adjacent streets; otherwise, not identified.
261	Waycroft-Woodlawn Historic District (Historic/Current)	Determined Eligible	Views within the historic district's wooded setting and adjacent streets; otherwise, not identified.

Map ID	Resource Name	NRHP Designation	Contributing Views/Vistas
262	Frederick Douglass National Historic Site	NRHP	Panoramic distant views toward the monumental core and south west waterfront; visual relationship between Douglass House and street; View east from bay window of Douglass House; view south from bay window of Douglass House

Sources: Army National Military Cemeteries and Virginia State Historic Preservation Officer (2026); Arlington National Cemetery et al. (n.d. [2026]); Bobeczko and Robinson (1998); Dillon (1972); EDAW, Inc. (1992a, 1992b); EHT Traceries, Inc. and Stantec (2018); Frisbie et al. (2024); Krakow (1993); McIntosh (1979, 1980a, 1980b); National Park Service (2004, 2005, 2006a, 2006b, 2009a, 2009b, 2015, 2016, 2018a, 2018b, 2022a, 2022b, 2024); Pfanz (1980, 1981); Robinson et al. (2016); Seagraves et al. (1980); Scott (1977); Smith et al. (2013); Virginia Polytechnic Institute and State University (2009); (Adams 1982); (Adams 1983); (Adams 1989a); (Adams 1989b); (Adams 1989c); (Adams 1989d); (Adams 2009); (Adams and Christian 1976); (Albee et al. 2005); (Alexander et al. 1976a); (Alexander et al. 1976b); (Allen et al. 1990); (Barsoum 1994a); (Barsoum 1994b); (Barsoum 1994c); (Barsoum 1994d); (Barsoum 1994e); (Barsoum 1994f); (Barsoum 1995a); (Barsoum 1995b); (Barsoum 1995c); (Beauchamp 1973); (Beauchamp 1974); (Beauchamp 1977); (Beauchamp 1978a); (Beauchamp 1978b); (Beauchamp 1980); (Beauchamp 1983a); (Beauchamp 1983b); (Beauchamp 1993); (Beauchamp 2001); (Beauchamp and Adams 1983); (Bird 1991a); (Bird 1991b); (Brasell 2006a); (Brasell 2006b); (Brassel 2006c); (Brassel 2006d); (Brassel 2006e); (Breiseth et al. 2007); (Brown 1973a); (Brown 1973b); (Brown 1973c); (Brown 1973d); (Brown 1973e); (Brown 1973f); (Boese 2016); (Callcott 1994); (Callcott 1995a); (Callcott 1995b); (Closs 1986); (DC Preservation League 2009);(DC Preservation League 2015); ;(Eig 1987); (Eig and Mueller 1989); (Eig and Williams 1994); (EHT Traceries 1983); (EHT Traceries 2008); (Erem et al. 2008); (Field et al. 1990); (Flynn and Hughes 2006a); (Flynn and Hughes 2006b); (Flynn and Hughes 2006c); (Franklin 1979); (Friedlander and Bowers 1984); (Gamble and Redburn 1972); (Gamble et al. 1972a); (Gamble et al. 1972b); (Ganschinietz 1971a); (Ganschinietz 1971b); (Ganschinietz 1971c); (Ganschinietz 1971d); (Ganschinietz 1971e); (Ganschinietz 1971f); (Ganschinietz 1971g); (Ganschinietz 1971h); (Ganschinietz 1972a); (Ganschinietz 1972b); (Ganschinietz 1972c); (Ganschinietz 1972d); (Ganschinietz 1973a); (Ganschinietz 1973b); (Ganschinietz 1974); (Ganschinietz 1976); (Ganschinietz 1979); (Ganschinietz ; 1982); (Ganschinietz 1984a); (Ganschinietz 1984b); (Ganschinietz 1985); (General Service Administration 1978); (Gentry 2018a); (Gentry 2018b); (Gerson and Ganschinietz 1972); (Harper 2005); (Helwig 1978); (Helwig ; 1979); (Helwig and Ganschinietz 1978); (History Matters 2002); (Hooper et al. 1994); (Hughes 1987); (Hughes and Moffett 2000); (Hughes et al. 2001a); (Hughes et al. 2001b); (Jones et al. 2022); (Krakow 1993); (Levy 1973); (Lowe 2000); (Mackintosh 1979); (Marzella 2015); (Marzella et al. 2018); (McClane 2022); (McDermott 1970); (Milner 1973); (Morton 1971a); (Morton 1971b); (Morton 1971c); (Pitts 1986); (Poh 1974); (Pousson and Williams 2009); (Pousson and Williams 2012); (Pousson and Williams 2015); (Pousson and Williams 2016); (Rebeck 1986); (Riggle 2003); (Robinson and Gasparini 2008); (Robinson and Kerr 2003); (Schroer et al. 1977); (Schroer et al. 1980); (Scott 1984); (Sefton 2012); (Sefton 2018); (Sefton 2019); (Sefton and Williams 2005); (Snyderman 1987); (Snyderman 1988); (Snyderman 1990a); (Snyderman 1990b); (Snyderman 1991); (Sommerville 1985); (Taylor 1969a); (Taylor 1969b); (Taylor 1969c); (Taylor 1969d); (Taylor 1970a); (Taylor 1970b); (Taylor 1970c); (Taylor 1970d); (Taylor 1971); (Trieschmann 1999); (Trieschmann 2006); (Trieschmann and Hughes 1995); (Trieschmann et al. 1998); (Trieschmann et al. 2006); (Virginia Historic Landmarks Commission 1979); (Weeks 1986); (Williams 2005); (Williams 2012); (Williams 2016); (Williams 2020); (Wood 1987); (Young 2013); (Young et al. 2015); Albee and Trieschmann (2002, 2003); Bird (1985); Bobeczko (1998); Didden, Trieschmann, and Weidlich (2001); EHT Traceries Inc. (2007, 2008); Hallock (2003); Hallock and Trieschmann (2003); Liccese-Torres (2004); Moffett (2002); Riggle and Trieschmann (2003); Ritson (2014); Shrimpton (1997); Trieschmann (2003); Virginia Department of Historic Resources (2003).

NRHP = Designated listed/eligible for the National Register of Historic Places; NHL = National Historic Landmark; VLR = Virginia Landmarks Register Listing; DHR = Virginia Department of Historic Resources

Determined Eligible resources = Determined NRHP Eligible by DHR Staff; DHR Board; or that have been issued a Federal Determination of Eligibility.

Assessment of Adverse Effect

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Memorial Avenue Corridor Cultural Landscape	A, B, C, D, F, G	The proposed undertaking would be prominently visible throughout the resource. The proposed undertaking would adversely affect the corridor's setting, context and viewshed, including the obstruction of distant views that characterize the historic resource, and which serve as a defining feature of the corridor, including: the view of the Washington Monument from various locations along the corridor; view to Hemicycle and Arlington House; view to Lincoln Memorial; and views to the Capitol dome and other resources of the D.C. monumental core from Memorial Circle. Due to proposed illuminations the undertaking would be visible at night. Memorial Avenue corridor is architecturally significant as a mile-long axial composition. Memorial Circle is the one portion of the Memorial Avenue composition that was not designed by McKim Mead and White architectural firm; the circle is attributed to Gilmore Clarke, an early designer of the American Parkway. With the proposed undertaking, the corridor would be physically altered with an intrusion that changes the circulation patterns, and contributing viewsheds, and modifies the design continuity of the corridor. The corridor is identified as meeting moderate rather than high integrity, although its primary architectural features are identified as retaining high integrity. With the proposed undertaking, these architectural resources may be adversely affected. In addition, the proposed undertaking may result in the loss of contributing landscape elements The pines at the four pylons near Memorial Circle are identified as contributing to the cultural landscape and may be adversely affected. The granite block paving surfaces, along the bridges as well as appearing in triangular islands to the east and west of Memorial Circle, are also contributing elements and should be retained.	The proposed undertaking would result in adverse effects to the historic property.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Arlington Memorial Bridge and Associated Features	C	The proposed undertaking would be prominently visible throughout the resource. Views from the resource and to the resource, as well as the bridge's immediate setting would be altered. Due to proposed illuminations the undertaking would be visible at night. The Arlington Memorial Bridge historic resource encompasses architectural, landscape, and sculptural features to the east and west, including Memorial Circle. The bridge and associated features serve as a symbolic linkage of the North and South by connecting the Lincoln Memorial and Arlington House. With the proposed undertaking, this balanced architectural relationship would be altered, and the visual continuity would be obstructed. The sculptural and landscape elements that define Memorial Circle, including two sets of 35-foot-tall granite pylons and the circulation pattern, circular lawn and annual floral plantings, would be removed or diminished. The design continuity of Memorial Drive is also a contributing element of the resource.	The proposed undertaking would result in adverse effects to the historic property.
Lady Bird Johnson Park Cultural Landscape	A, C	The island's significance is tied to its central role in the axial composition linking the Lincoln Memorial with the entrance to Arlington National Cemetery. The main axis of Arlington Memorial Bridge, Memorial Cricle, and Boundary Channel Extension bridge are as originally built, with medium integrity, and are significant for their design as well as their association with the history of the American parkway. The proposed undertaking would affect the circulation of Memorial Circle, a contributing resource of the cultural landscape. Anticipated construction staging is planned for a portion of the park, which may alter contributing vegetation. The proposed undertaking would physically obstruct contributing views within the landscape and along Arlington Memorial Bridge, and it would alter views to resources such as Arlington House, Lincoln Memorial, the Potomac River, and Arlington Memorial Bridge. Due to proposed illuminations the undertaking would be visible at night.	The proposed undertaking would result in adverse effects to the historic property.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Arlington National Cemetery Historic District	A, B, C, D, F, G	The proposed undertaking would alter and partially obstruct contributing views from Arlington House and Kennedy Gravesite to Lincoln Memorial and Washington Monument. The undertaking would also alter contributing views to and from Memorial Amphitheater from various locations. The proposed undertaking would alter contributing views of ANC from the Lincoln Memorial, Memorial Bridge, Memorial Drive. Due to proposed illuminations the undertaking would be visible at night. Sections 43, 60 and 66 of the Arlington National Cemetery were assessed in further detail due to the sensitivity of these grounds. According to visual analyses, the proposed undertaking would be visible from ground level at Section 43 but would not be visible from Section 60 or 66. The proposed undertaking would result in effects to contributing resources in the Arlington National Cemetery Historic District, including circulation system resources that are identified as contributing to the historic district and contributing monuments adjacent to the proposed site. Adverse effects from the proposed undertaking would also result from the partial obstruction of the resource's visual relationship with Lincoln Memorial and the Memorial Avenue Corridor. The axial relationship of the historic property to other major monuments is integral to its historic significance.	The proposed undertaking would result in adverse effects to the historic property.
Arlington House Historic District	A, B, C, D	The proposed undertaking would alter contributing views east from Arlington House. There is potential that the proposed undertaking would partially obstruct views of Lincoln Memorial and Arlington Memorial Bridge from Arlington House. Due to proposed illuminations the undertaking would be visible at night. Arlington House is oriented with long views toward Washington D.C. This relationship to Washington D.C. and the Potomac is a character-defining feature of the resource. Contributing resources in the historic district also derive significance from their orientation and views toward the Potomac River and Washington D.C.	The proposed undertaking would result in adverse effects to the historic property.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Arlington House (Robert E. Lee Memorial)	A, B, C, D	The proposed undertaking would alter contributing views east from Arlington House, disrupting the symbolic spatial relationship between Arlington House, the Lincoln Memorial and the Memorial Avenue Corridor. Due to proposed illuminations the undertaking would be visible at night.	The proposed undertaking would result in adverse effects to the historic property.
Arlington House Cultural Landscape	A, B, C, D, F	The proposed undertaking would alter contributing views from and to the resource, including the view between the house and Washington D.C. Due to proposed illuminations the undertaking would be visible at night.	The proposed undertaking would result in adverse effects to the historic property.
Lyndon B. Johnson Memorial Grove	A, C	The resource would have views of the proposed undertaking. Primary views from the resource are generally eastward across the Potomac River and views of the undertaking would therefore not be prominent but may have an adverse effect to the setting.	The proposed undertaking may result in adverse effects to the historic property.
Mount Vernon Memorial Highway Historic District	A, C	The resource's setting would be changed with the proposed undertaking. Due to proposed illuminations the undertaking would be visible at night. The proposed undertaking would occupy the northern terminus of the resource, altering circulation patterns in this designed landscape.	The proposed undertaking would result in adverse effects to the historic property.
Lincoln Memorial Cultural Landscape	A, C	The setting and context of the cultural landscape would be adversely affected by the loss of contributing vistas as well as the altered character of the landscape and built environment in westward views from the Lincoln Memorial grounds. Due to proposed illuminations the undertaking would be visible at night. The proposed undertaking would result in an adverse effect to the reciprocal views between the Lincoln Memorial and Arlington House, which are identified as a contributing resource in the cultural landscape.	The proposed undertaking would result in adverse effects to the historic property.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Lincoln Memorial	A, B, C,	The Lincoln Memorial west façade is oriented toward the proposed undertaking. Views across the river would therefore be altered by the proposed undertaking. Due to proposed illuminations the undertaking would be visible at night. The resource is significant for its architectural design, as a major element of the McMillan Commission Plan to form the western terminus of the Mall composition and as the northeastern terminus of an axis that extends across the Arlington Memorial Bridge to Arlington House. The proposed undertaking would result in an adverse effect to the Lincoln Memorial as it would change the interrelationships of the existing monumental landscape, which forms an intentional balance between natural and built features, axial and picturesque landscape elements.	The proposed undertaking would result in adverse effects to the historic property.
National Mall Site and National Mall Historic District	A, C, D, F	The character of views of the Potomac River would be altered with the proposed undertaking, as the proposed undertaking introduces a feature that is dissimilar to its surroundings on the west side of the river. Due to proposed illuminations the undertaking would be visible at night. The resource includes grounds and memorials that derive significance from their distant views, with designs and orientations that rely on direct views of civic monuments.	The proposed undertaking would result in adverse effects to the historic property.
The Mall Cultural Landscape	A, B, C	The character of views of the Potomac River would be altered with the proposed undertaking, as the proposed undertaking introduces a feature that is dissimilar to its surroundings on the west side of the river. Due to proposed illuminations the undertaking would be visible at night. The resource includes grounds and memorials that derive significance from their distant views, with designs and orientations that rely on direct views of civic monuments.	The proposed undertaking would result in adverse effects to the historic property.
World War II Memorial	F, G	The resource would be visible at ground level from a location at the northeast end of the fountain	The proposed undertaking would result in adverse effects to the historic property.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Martin Luther King Jr. Memorial	F, G	The proposed undertaking would not adversely affect the resource's contributing views, due to distance, the topography of the site, and intervening vegetation and buildings. Primary views from the memorial are southeast to the Jefferson Memorial. The undertaking would therefore not be prominent or direct.	No adverse effect is anticipated.
Lockkeeper's House and C&O Extension	A, C	The resource is located on the south side of Constitution Avenue, situated with its primary elevation-oriented north and away from the proposed undertaking.	No adverse effect is anticipated.
56 Signers Memorial	F, G	No adverse effects.	No adverse effect is anticipated.
Washington Monument	A, C, D	The proposed undertaking would be visible from the contributing grounds immediately north of the Monument, thereby altering the setting and contributing vistas from the Washington Monument. Due to proposed illuminations the undertaking would be visible at night.	The proposed undertaking would result in adverse effects to the historic property.
Washington Monument and Grounds Historic District	A, C, B, F, G	Views from the top of the monument are a contributing resource and would be altered with the proposed undertaking. The grounds and base of the monument would include direct views of the proposed undertaking. Due to proposed illuminations the undertaking would be visible at night.	The proposed undertaking would result in adverse effects to the historic property.
Washington Monument and Grounds Cultural Landscape	A, C, F	The context and setting of the resource would be adversely affected by the proposed undertaking, due to the visibility of the proposed undertaking. The proposed undertaking would be illuminated and visible at night. Views to the monument are identified as a contributing resource; these views would be altered and obstructed by the proposed undertaking, resulting in an adverse effect to the cultural landscape.	The proposed undertaking would result in adverse effects to the historic property.
Rock Creek and Potomac Parkway Historic District	A, C	Views southwest toward Memorial Bridge are a contributing resource in the Historic District and would be altered with the proposed undertaking. The proposed undertaking would be illuminated and visible at night.	The proposed undertaking would result in adverse effects to the historic property.
Civil War Monuments in Washington, D.C.	A, C	Civil War Monuments include the Ulysses S, Grant Memorial. Views west along the primary mall axis from the front of the Grant Monument near the U.S. Capitol would not include the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
East and West Potomac Park Historic District	A, B, C, F, G	Contributing views from the resource are generally oriented toward the Tidal Basin as well as vistas from built resources within the parks. However, the West Potomac Park riverfront would have direct views of the proposed undertaking. The proposed undertaking would be illuminated and visible at night.	The proposed undertaking would result in adverse effects to the historic property.
American Revolutionary Statuary in the District of Columbia	A, C	The resource includes the John Paul Jones Memorial. Due to the distance of this resource from the proposed undertaking site, and the diminished visibility, this resource would not experience adverse indirect effects.	No adverse effect is anticipated.
Mount Vernon Memorial Highway Cultural Landscape - North of Alexandria	C	The proposed undertaking would be visible from the resource, although it would not affect contributing views.	No adverse effect is anticipated.
Cuban Friendship Urn	B, C	The proposed undertaking would not be visible.	No adverse effect is anticipated.
Franklin Delano Roosevelt Memorial	F, G	The proposed undertaking would not be visible, due to the topography of the site as it is lower than the surrounding land to the west.	No adverse effect is anticipated.
L'Enfant Plan of the City of Washington, District of Columbia	A, B, C	Views toward the Lincoln Memorial are a contributing resource and would be altered with the proposed undertaking. The proposed undertaking would be illuminated and visible at night, disrupting the composition of reciprocal views that characterize the resource. The proposed undertaking would disrupt the 160-foot height limit that has preserved the broad, horizontal nature of the city and that was central to the original L'Enfant Plan and subsequent modifications, including those of the McMillan Plan. The Lincoln Memorial is defined as the western terminus of the National Mall; the proposed undertaking would disrupt this balance.	The proposed undertaking would result in adverse effects to the historic property.
Arlington Ridge Park	A, C, F, G	Situated on a ridge with long views across the Potomac River, to the monumental core, southeastern views from the site would include the proposed undertaking. The proposed undertaking would be illuminated and visible at night.	The proposed undertaking would result in adverse effects to the historic property.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Pentagon	A, B, C	Contributing views, including the views to and from Washington D.C from the east and north terraces, would include the proposed undertaking. Views of the resource from the south may also include the proposed undertaking. The proposed undertaking would be illuminated and visible at night. The northeastern and eastern facades of the Pentagon are designed to capture unobstructed vistas of Washington D.C.'s Monumental Core across the Potomac River, with large terraces including the River Entrance Terrace and Mall Entrance Terrace, the parade ground, and landscaping that are designed to interface with these views. The proposed undertaking would be constructed within this contributing viewshed.	The proposed undertaking would result in adverse effects to the historic property.
Fort Myer NHL District	A	The proposed undertaking would not be prominently visible from the resource, due to differentiation in elevation and intervening tree cover. However, the undertaking would be visible in some conditions from Buffalo Soldier Avenue and the open field west of McNair Road The proposed undertaking would be illuminated and visible at night.	The proposed undertaking would result in adverse effects to the historic property.
Quarters 1, Fort Myer	A, B, C	The proposed undertaking would not be visible.	No adverse effect is anticipated.
Theodore Roosevelt Island	A, C, D, F	The island is characterized by thick vegetation and the Theodore Roosevelt Memorial bridge is an intervening structure between the site and proposed undertaking.	No adverse effect is anticipated.
Washington Canoe Club	A, C	The proposed undertaking would not be visible.	No adverse effect is anticipated.
George Mason Memorial	A, F	Contributing view from the George Mason Memorial Sculpture to the Inlet Bridge. In leaf off condition, the proposed undertaking would potentially be visible, including at night due to planned illumination.	The proposed undertaking would result in adverse effects to the historic property.
Thomas Jefferson Memorial	A, C, F	The resource would have views of the proposed undertaking from the front steps and plaza to the north and the ground and walkway to the west of the memorial.	The proposed undertaking would result in adverse effects to the historic property.
Thomas Jefferson Memorial Cultural Landscape	A, C	The resource would have views of the proposed undertaking from the front steps and plaza to the north and the ground and walkway to the west of the memorial.	The proposed undertaking would result in adverse indirect effects to the historic property.
DC War Memorial Cultural Landscape	A, F	The resource is within a park setting of mature trees that largely block long views to the west.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
United States Capitol	A, C	The proposed undertaking would be visible from the upper stories of the Capitol building, thereby altering contributing views. The proposed undertaking would be illuminated and visible at night.	The proposed undertaking would result in adverse effects to the historic property.
U.S. Capitol Gatehouses and Gateposts	C	The proposed undertaking would not be visible from the resource.	No adverse effect is anticipated.
Smithsonian Building	A, C	The proposed undertaking would not be visible.	No adverse effect is anticipated.
White House	A, C	The proposed undertaking would not be visible from the resource.	No adverse effect is anticipated.
Georgetown Historic District	A, C, D	The proposed undertaking would be visible from multiple locations in the historic district, altering the waterfront views that define the resource.	The proposed undertaking would result in adverse effects to the historic property.
Old Naval Observatory	A, B, C	Visible from the grounds as well as upper levels of the building, the proposed undertaking would adversely affect the resource's contributing views, including reciprocal views with Arlington National Cemetery. Views at night would include the illuminated resource.	The proposed undertaking would result in adverse effects to the historic property.
Observatory Hill Historic District	A, B, C, D	The proposed undertaking would adversely affect the resource's contributing views, including reciprocal views with Arlington House and Arlington National Cemetery. Views at night would include the illuminated resource.	The proposed undertaking would result in adverse effects to the historic property.
Pennsylvania Avenue National Historic Site (Old Post Office and Clock Tower)	A, C	The proposed undertaking would not adversely affect the resource's significance views, due to the property's orientation and primary views as well as its distance from the proposed undertaking. Distant views of the resource from the west would not be adversely affected.	No adverse effect is anticipated.
Alban Towers Apartment Building	A, C	Views to D.C. are character-defining and would be changed with the proposed undertaking. The proposed undertaking would be distant but visible from the resource.	The proposed undertaking would result in adverse effects to the historic property.
Alice Pike Barnley Studio House	A, B, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
All Souls Church, Unitarian	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
American Institute of Pharmacy Building	C*	The undertaking would be visible from the area at the primary elevation of the building, and would alter the resource's character-defining relationship to the McMillan Plan.	The proposed undertaking would result in adverse effects to the historic property.
Andrew Rankin Memorial Chapel, Frederick Douglass Memorial Hall, Founders Library	A, B	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Arlington Heights Historic District	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Arts and Industries Building	A,C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Ashburton House	A*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Auditor's Building Complex	A,C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Aurora Highlands Historic District	A,C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Babcock--Macomb House	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Baker, Newton D., House	A,B*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Banneker Recreation Center	A,C	The proposed undertaking would not be visible from the ground level nor would it be visible from the level of the recreation center, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Barr Building	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Bayly, Mountjoy, House	A,B*	The resource is oriented southeast, away from the proposed project site, and would therefore not retain direct views of the proposed undertaking.	No adverse effect is anticipated.
Beale, Joseph, House	C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Bond Building	A,C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Cairo Apartment Building	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Capitol Hill Historic District	A, C*	The historic district is located at a distance from the proposed undertaking and views would likely be obstructed by intervening buildings, including the Capitol Building	No adverse effect is anticipated.
Cardozo, Francis L., Senior High School	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Cathedral Mansions Apartment Buildings	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Central Heating Plant	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Chase's Theater and Riggs Building	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Christ Church	A, C*	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Christ Church	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
City Hall	A, B*	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
City Tavern	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Cleveland Park Historic District	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Clifton Terrace	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Codman-Davis House	A, B, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Commercial National Bank	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Constitution Hall	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Corcoran Hall	C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Cosmos Club	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Customhouse and Post Office	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Davidson Building	A, B, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
District Building	C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
District of Columbia Municipal Center and Plaza	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Downtown Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Dumbarton House	A*, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Duncanson-Cranch House	C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Dupont Circle Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Eastern Market	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Embassy of Mexico--MacVeagh House	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Euclid Apartments	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Everglades, The	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Evermay	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Fifteenth Street Financial Historic District	A, C	Views to the proposed undertaking would likely be diminished by intervening buildings and vegetation.	No adverse effect is anticipated.
Foggy Bottom Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Folger Shakespeare Library	A, C	Views to the proposed undertaking would likely be diminished by intervening buildings and vegetation.	No adverse effect is anticipated.
Forrest-Marbury House	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Founders Library	A, B	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Fourteenth Street Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Friendship House	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Fulford, The	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Garfinckel's Department Store	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
George Washington Memorial Parkway	B, C	The proposed undertaking would be visible, introducing a change to the contributing views. The undertaking would be illuminated at night, which would also present a change to the setting and views from the parkway.	The proposed undertaking would result in adverse effects to the historic property.
Georgetown Academy for Young Ladies	A, B, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Georgetown University Astronomical Observatory	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Glenn Arms, The	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Grace Protestant Episcopal Church	C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Greater U Street Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Halcyon House	C	The primary elevation and the adjacent property at ground level would have direct views of the proposed undertaking.	The proposed undertaking would result in adverse effects to the historic property.
Harbour Square	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Healy Building, Georgetown University	C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Heurich, Christian, Mansion	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Hotel Washington	C	Views from the resource to the proposed undertaking would likely be diminished or obstructed by intervening buildings and vegetation.	No adverse effect is anticipated.
House at 2437 Fifteenth Street, NW	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Howard, Gen. Oliver Otis, House	A, B*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Hughes, Charles Evans, House	B, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Hume School	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Ingleside	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Interior Department Offices	A, B, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Kalorama Triangle Historic District	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Kennedy--Warren Apartment Building	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Key, Francis Scott, Bridge	C	The resource's contributing views would include the proposed undertaking. Views of Potomac River, Theodore Roosevelt Island, George Washington Memorial Parkway would be altered with the proposed undertaking. The planned illuminations would also substantially alter nighttime views from the bridge.	The proposed undertaking would result in adverse effects to the historic property.
Keystone, The	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Lafayette Building	A, B	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Lafayette Square Historic District	A, B, C	Views from the resource to the proposed undertaking would likely be diminished or obstructed by intervening buildings and vegetation.	No adverse effect is anticipated.
Lisner Auditorium	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Lyon Park Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Massachusetts Avenue Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Memorial Continental Hall	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Meridian House	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Meridian Manor	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Meridian Mansions	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Milton Hall	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Miner Normal School	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Moran Building	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Mount Pleasant Historic District	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Mount Vernon Square Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Mount Vernon Triangle Historic District	A, C, D	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Mount Zion United Methodist Church	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Mullett Rowhouses	A, B, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
National Academy of Sciences	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
National Archives	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
National Cathedral, The	A, C*	The proposed undertaking would be visible and would alter the contributing long distance views from the resource	The proposed undertaking would result in adverse effects to the historic property.
National Geographic Society Headquarters	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
National Home for Destitute Colored Women and Children	A	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
National Metropolitan Bank Building	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
National War College	A, C*	The resource is characterized by distant views, which would include the proposed undertaking and may introduce an adverse effect to the property.	The proposed undertaking would result in adverse effects to the historic property.
Northumberland Apartments	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Old Woodley Park Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Olympia Apartments	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Pan American Union	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Pennsylvania Avenue National Historic Site	A, C	Views from the resource to the proposed undertaking would likely be diminished or obstructed by intervening buildings and vegetation.	No adverse effect is anticipated.
Penrose Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Pension Building	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Phillips, Duncan, House	A*, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Potomac Electric Power Company Substation No. 25	**A, C**	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
President's Park South	A*	Views from the resource to the proposed undertaking would likely be diminished or obstructed by intervening buildings and vegetation.	No adverse effect is anticipated.
Prospect House	In progress B*, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Quality Hill	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Randall Junior High School	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Riggs--Tompkins Building	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Riggs National Bank, Washington Loan And Trust Company Branch	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Sewall-Belmont House National Historic Site	A, C*	Views from the resource to the proposed undertaking would likely be diminished or obstructed by intervening buildings and vegetation.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Sheridan--Kalorama Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Sixteenth Street Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Sixteenth Street Historic District (Boundary Increase)	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Southeast Branch Library	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Southern Railway Building	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
St. John's Church	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
St. Matthew's Cathedral And Rectory	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Stockton Hall	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Strivers' Section Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Strong, Hattie M., Residence Hall	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Sun Building	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Supreme Court Building	A,C*	Views from the resource to the proposed undertaking would likely be diminished or obstructed by intervening buildings and vegetation.	No adverse effect is anticipated.
Tiber Island	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Tower Building	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Trinity Towers	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Tucker House and Myers House	C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Tudor Place	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Twin Oaks	A, B*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
U.S. Civil Service Commission Building	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
U.S. Department of Agriculture Administration Building	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
U.S. Department of Agriculture Cotton Annex	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
U.S. Department of Housing and Urban Development	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
U.S. Department of State Building	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
U.S. Department of the Interior	A*, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Union Station	A	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
United Mine Workers of America	A, B, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
US Courthouse--District of Columbia	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
US Department of Agriculture South Building	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
US General Accounting Office Building	C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
US Public Health Service Building	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Vigilant Firehouse	A*, C	The proposed undertaking would be visible from the resource and may alter the resource's relationship to its setting.	The proposed undertaking would result in adverse effects to the historic property.
Wardman Park Annex and Arcade	A*, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Washington Heights Historic District	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Washington National Airport Terminal and South Hangar Line	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Watergate	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Watterston House	A*, **B**, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Western High School	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Westory Building	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
White – Meyer House	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Willard Hotel	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Wilson, Woodrow, House	A*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Windsor Lodge	A*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Wire Building	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Wyoming Apartments	A*, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
1948 Southern Addition (Current Name)	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Abingdon (Historic/Current), Abingdon Ruins (Historic/Current)	D	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Al's Motors (NRHP Listing), Gold's Gym (Current)	C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Arlington Cinema and Drafthouse (Current Name), Arlington Theater (Historic)	C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Arlington Forest Historic District (Historic/Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Arlington Hall Junior College (Historic), Arlington Hall Station Historic District (Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Arlington Post Office (Historic/Current), Clarendon Post Office (Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Arlington Service Center (Historic), NSF Arlington (Current), U.S. Naval Radio Station Arlington (Historic), U.S. Naval Radio Station Arlington Historic District (Descriptive)	A, B	The proposed undertaking would only be visible from the top of the radio tower, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Arlington Village Historic District (Historic/Current)	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Arthur W. Walls House (Historic), Lomax African Methodist Episcopal Zion Church (NRHP Listing), Manse, 2704 S. 24th Road (Function/Location),	A	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Barcroft Apartments (Historic), Building 18 (Historic), Multiple Dwelling, 1124-1138 South Wakefield Street (Function/Location)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Barcroft Apartments (Historic), Commercial Building (Descriptive), Commercial Strip, 4700-4714 Columbia Pike (Function/Location)	Not identified	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Barcroft Apartments (NRHP Listing), Barcroft Apartments Historic District (Historic/Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Barcroft Community House (Historic), Barcroft School House (Historic), St. Paul's Episcopal Church (Historic)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Barcroft Historic District (Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Bridge #5020 (Current Name), State Bridge #5020 (NRHP Listing)	C	The proposed undertaking would be visible from the resource and may alter the resource's relationship to its setting.	The proposed undertaking would result in adverse effects to the historic property.
Buckingham Historic District and Boundary Increases (Historic/Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Cabocel (Historic/Current), Colonial Village (Historic)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Caleb Cushing House (Historic), The Glebe (NRHP Listing)	C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Calvert Manor (Historic)	C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Carlin Springs (Historic), Glencarlyn Historic District (NRHP Listing)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Charles Richard Drew House (NRHP Listing)	A	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Cherrydale Fire Station #3 (Historic), Cherrydale Volunteer Fire House (Historic)	A	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Cherrydale Historic District (Historic/Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Clarendon Commercial Historic District (Historic/Current)	A, C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Columbia Forest Historic District (Historic/Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Columbia Pike/South Walter Reed Drive Commercial Historic District (Current)	C	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Green Valley Pharmacy (NRHP Listing), Hyman Grocery Store (Historic)	A, B	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Commercial Building, 919-927 South Walter Reed Drive (Function/Location), Elkins Building, Commercial Building, 2801-2811 Columbia Pike (Current Name)	C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Eagle Automotives (Current Name), Filling Station (Historic)	A	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Filling Station (Historic), Shell/Liberty Gas Station (Current)	A	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Commons of Arlington (Historic/Current), Walter Reed Gardens Historic District (Historic/Current)	C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Dorchester Apartments (Current), Garden Apartment Complex, 1900 Columbia Pike (Function/Location)	A, C*	The proposed undertaking would only be visible from the rooftop level, and therefore views to and from the resource would not be adversely affected by the proposed undertaking.	No adverse effect is anticipated.
Dorothy Hamm Middle School (Current Name), H-B Woodlawn School (Historic/Current), Stratford Junior High School (NRHP Listing)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Garden Apartment Complex, 3710 Columbia Pike (Function/Location), Oakland Apartments (Current)	A	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Garden Apartment Complex, 4010-4032 Columbia Pike (Function/Location), Quebec Apartments (Current)	A	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Glebe Center (Historic), Glebe Shopping Center (Current)	C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Halls Hill Historic District (Historic), High View Park (Current Name), Highview Park (Alternate Spelling)	A	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Harry Gray House (NRHP Listing), House, 1005 S. Quinn St. (Function/Location)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
House, 2306 North Richmond Street (Function/Location), Joseph J. Accardo House (Historic)	C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Key Boulevard Apartments (Historic)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Lee Gardens North Historic District (Historic/Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Lyon Village Historic District (Historic/Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Maywood Historic District (Historic/Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Monroe Courts Historic District (NRHP Listing)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Mount Vernon Memorial Highway North Cultural Landscape Inventory (Current Name)	A, C	The proposed undertaking would be visible from the resource and may alter the resource's relationship to its setting.	The proposed undertaking would result in adverse effects to the historic property.

Resource Name	Criteria of Significance	Adverse Effects	Summary of Adverse Effects
Old Dominion Historic District (Historic/Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Old Warehouse Area and Ground Maintenance Complex (Function/Location)	A, C*	The resource would be visible from the lawn and walkway areas along Lewis Drive and may alter the resource's relationship to its setting.	The proposed undertaking would result in adverse effects to the historic property.
Parkfairfax Historic District (Historic/Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Reeb Hall (Historic), Unitarian Church of Arlington (Historic/Current), Unitarian Universalist Church of Arlington (NRHP Listing)	C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Wakefield Manor Apartments (Historic/Current), Wakefield Manor Garden Apartment Complex (Historic/Current)	C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Waverly Hills Historic District (Historic/Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Waycroft-Woodlawn Historic District (Historic/Current)	A, C	The resource would not retain views of the proposed undertaking.	No adverse effect is anticipated.
Frederick Douglass National Historic Site	A, B	The proposed undertaking would be visible from the resource and may alter the resource's relationship to its setting. The resource would be visible from a location immediately west of the Caretaker's Cottage, and from a point along the brick walkway to the north. The site is beyond the APE and is located 4.3 miles from the project site.	The proposed undertaking would result in adverse effects to the historic property.

APPENDIX D: MITIGATIONS

To minimize environmental impacts related to the action alternatives, the NPS would implement mitigation measures whenever feasible. Exact mitigation measures to be implemented would depend upon the final design and approval of plans by relevant agencies and would be determined during future design and construction phases. The following is a list of actions that could take place:

D.1. General Mitigations

- Instruct all contractor employees on the sensitivity of the general environment and monitor their activities by NPS staff in order to mitigate and minimize potential impacts on natural and cultural resources during construction. Corridors for construction vehicle movement would be established and defined on the ground. Staging of construction equipment would be restricted to the road corridor, parking lots, and other identified previously disturbed areas to avoid impacts on natural resources.
- All permits would be acquired from the regulatory agencies before commencement of work, and all stipulations of those permits would be followed.
- Clearly state all protection measures in the construction specifications and instruct workers to avoid conducting activities beyond the fenced construction zone.
- Fence all areas in order to keep related disturbances within an NPS-defined and minimal impact area required for construction.
- Implement standard noise abatement measures during construction. Standard noise abatement measures could include the following elements: a schedule that minimizes impacts on adjacent noise-sensitive uses, the use of the best available noise control techniques wherever feasible, the use of hydraulically or electrically powered impact tools when feasible, and location of temporary noise sources as far from sensitive uses as possible.
- Minimize soil erosion by limiting the time that soil is left exposed and by applying other erosion control measures, such as erosion matting and silt fencing in construction areas to reduce erosion, surface scouring, and discharge to water bodies.
- Reseed all areas with native grasses or other NPS approved turf seed mix approved for the Mid-Atlantic Region.
- Remove invasive plants from construction areas using approaches prescribed in the NPS Integrated Pest Management Program.
- Implement measures to prevent invasive plants from returning to sites where they have been removed, such as ensuring that construction-related equipment arrives at the site free of mud or seed-bearing materials and certifying that all seeds and straw material are weed-free.
- Rehabilitate areas that are temporarily disturbed during construction with native grasses and other native species as per NPS standards and consistent with the cultural landscape report and applicable historic planting plans.
- During construction, the staging area limits should be fenced off and located outside the Critical Root Zone (CRZ) of any existing tree. The CRZ is calculated as 1.5 feet for every 1-inch DBH (Example: 20-inch DBH = 30-foot radius circle of protection around the tree).

Any construction activity (staging, storage, parking, etc.) should be strictly prohibited outside the staging area fence limits to properly protect the existing trees and their root systems.

- If needed, tree removal, clearing, and construction activities would not take place during the roosting and pupping season of the northern long-eared bat (June 1-July 31) to avoid disturbance to potential maternity roosts in the area. During future project phases, if it is determined that clearing or construction is needed during these seasons, the NPS would coordinate with the US Fish and Wildlife Service to ensure no impacts would occur.
- If tree removal or cutting is to be undertaken between April 1 and October 3, the NPS would conduct a nest survey for bald eagles and other migratory nesting birds. If nests are observed within the project area, measures to avoid disturbance would be determined through coordination between the NPS, the US Fish and Wildlife Service, and/or appropriate state agencies. If nests are present, a biological monitor may be employed to prevent potential impacts to birds during construction activities undertaken during this period.

D.2. Mitigations Applying to Historic Properties

Construction Management Control

- Develop and implement a vibration monitoring plan - Install vibration monitors near Arlington Memorial Bridge and other historic structures, bridge approaches, historic stonework, pylons, retaining walls, and other sensitive resources. Establish thresholds requiring work modification or stoppage if vibration exceeds approved limits.
- Screening of Construction Areas - Use neutral, visually recessive screening to reduce temporary visual effects from construction fencing, equipment, trailers, stockpiles, and staging areas.
- Control Temporary Lighting - Limit construction lighting to the minimum necessary, direct it downward, shield it, and prohibit unnecessary nighttime lighting that would affect historic views or cemetery solemnity.
- Construction Noise Control Plan - Establish enforceable limits, monitoring, notification, and work restrictions for noise-generating activities. Would include the use of sound barriers or acoustic blankets, locate generators where noise is reduced, coordinate with Arlington National Cemetery, and limits nighttime work.
- Ceremonial Route Protection Plan - Coordinate with Arlington National Cemetery to avoid disruptive construction activities during funerals, wreath ceremonies, major commemorative events, and ceremonial movements.
- Work-hour limitations - Restrict work hours for high-noise, high-vibration, or highly visible construction activities to minimize effects on visitor experience and ceremonial use of historic properties.
- Pedestrian and visitor access protection - Maintain safe, legible pedestrian routes to Arlington Memorial Bridge, Memorial Avenue, LBJ Park, Arlington National Cemetery, and nearby memorials during construction.
- Construction Management Plan - Require a Construction Management Plan to minimize construction-period effects to historic properties, adjacent resources, traffic circulation, visitor access, and the surrounding commemorative landscape. The plan would address traffic control, sediment and erosion controls, laydown-area limits and restoration, off-site

fabrication to reduce on-site activity, limited worker parking with use of Metro or remote parking, enclosed workforce break areas, self-contained restroom facilities, vibration and movement monitoring for adjacent structures, coordination of pile-driving and other disruptive activities around planned events, use of a fixed tower crane to reduce street impacts, and off-site fabrication of arch cladding to minimize truck trips, equipment, labor, and laydown needs at the project site.

- Construction Dust Control Plan - Fugitive emission sources include the transfer of sand and aggregate, truck loading, mixer loading, vehicle traffic, and wind erosion from sand and aggregate stockpiles. The amount of fugitive emissions generated during the transfer of sand and aggregate depends primarily on the surface moisture content of these materials. Wetting materials prior to moving or if dust is being generated reduces air emissions that then become sediment that falls into surrounding waterways.
- Maintain Construction Site and Staging Area BMPs for Wildlife/IPM - All trash receptacles must be lidded and emptied regularly to avoid attracting wildlife. Trailer crawl spaces should be screened to avoid wildlife utilizing them. Doors should be fitted, remain closed when not in use, and maintain sweeps to avoid rodent infiltration.

Archeological Investigation

- Implement Archaeological Identification, Protection, Monitoring, and Treatment Measures – complete additional archaeological identification, evaluation, monitoring, and treatment prior to and during ground disturbance. Measures would include review of final design and utility routes for archaeological sensitivity; preparation of an Archaeological Work Plan; completion of Phase IB, geoarchaeological, or other investigations where warranted; avoidance of significant archaeological resources where feasible; preparation of an Archaeological Treatment Plan or Data Recovery Plan if avoidance is not feasible; archaeological monitoring during excavation, foundation work, and utility installation; stop-work and notification procedures for unanticipated discoveries; specific protocols for human remains and culturally sensitive materials; contractor cultural-resource training; and final reporting, analysis, and curation of recovered materials and records. This could include the following:
    - Phase IB archaeological testing before final design
    - Geoarchaeological study of buried landforms
    - Utility corridor archaeology investigations
    - Archaeological monitoring during deep excavation
    - Archaeological Treatment Plan / Data Recovery Plan
    - Public archaeology component
- If previously unknown archeological resources are discovered during construction, all work in the immediate vicinity (600 feet) of the discovery shall be halted until the resources are identified and documented and an appropriate mitigation strategy developed, if necessary, in accordance with pertinent laws and regulations, including the stipulations of the 2008 Programmatic Agreement Among the NPS (US Department of the Interior), the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers.

Park Improvements

- Rehabilitate Memorial Avenue historic landscape - Rehabilitate contributing landscape features along Memorial Avenue to reinforce its historic role as the ceremonial approach between Arlington Memorial Bridge and Arlington National Cemetery. Improvements could include restoration of turf panels, medians, walkways, curbs, planting patterns, tree canopy, lighting, and other character-defining landscape features that contribute to the formal procession from the bridge to the cemetery. Work would be designed to preserve the corridor's axial organization, solemn character, and commemorative function while improving landscape condition, pedestrian safety, and long-term maintainability.
- Restore or enhance Arlington Memorial Bridge approach landscapes – Restore or enhance the designed landscapes at the approaches to Arlington Memorial Bridge to improve the integrity of associated historic landscape features and strengthen the visual and ceremonial relationship between the Lincoln Memorial, the Arlington Memorial Bridge, Memorial Circle, and Memorial Avenue. Improvements could include repair or replacement in kind of damaged paving, curbs, walls, planting areas, lawn panels, and other contributing features; removal or consolidation of non-historic visual clutter; and rehabilitation of landscape areas disturbed by construction, staging, utilities, or circulation changes. These measures would be implemented using materials, planting treatments, and design details compatible with the historic bridge setting.
- Improve visitor wayfinding and pedestrian orientation - Improve visitor wayfinding between Memorial Avenue, Arlington National Cemetery, Arlington House, nearby transit facilities, and associated pedestrian routes to reduce confusion, improve safety, and minimize conflicts among visitors, vehicles, funeral processions, and daily cemetery operations. Wayfinding improvements could include coordinated directional signage, pavement markings, accessible route information, maps, digital tools, and discreet interpretive orientation at key decision points. All wayfinding elements would be designed to be visually compatible with the historic setting, avoid unnecessary sign clutter, and support movement through the corridor without diminishing the solemn and ceremonial character of Memorial Avenue and Arlington National Cemetery.

Documentation

- Prepare Historic American Landscapes Survey (HALS)documentation for Memorial Circle and the Memorial Avenue corridor - Prepare HALS documentation for Memorial Circle, Memorial Avenue, and associated designed landscape features to create a permanent record of the corridor prior to project implementation. The documentation would address the corridor's historic development, spatial organization, circulation patterns, planting structure, lawn panels, views and vistas, small-scale features, and relationship to Arlington Memorial Bridge, Arlington National Cemetery, Arlington House, Lady Bird Johnson Park, and the Lincoln Memorial. Documentation would include large-format photography, written historical narrative, existing-condition plans, and other materials meeting applicable HALS standards.
- Prepare Historic American Building Survey (HABS)/HALS documentation for affected designed landscapes and views - Prepare appropriate HABS and/or HALS documentation for affected historic properties, designed landscapes, and significant views that may experience

adverse visual, spatial, or setting-related effects. This documentation would record character-defining features, designed views, circulation relationships, landscape composition, and the physical and visual connections among the Lincoln Memorial, Arlington Memorial Bridge, Memorial Circle, Memorial Avenue, Arlington National Cemetery, Arlington House, and adjacent parklands. The documentation would supplement existing National Register or National Historic Landmark documentation where current records do not fully describe viewsheds, spatial relationships, or cultural landscape significance.

- Complete historic viewshed documentation - Prepare a systematic photographic and narrative record of existing views and vistas within the cross-Potomac commemorative corridor. The documentation would include key viewpoints from the Lincoln Memorial, Arlington Memorial Bridge, Memorial Circle, Memorial Avenue, Arlington National Cemetery, Arlington House, Lady Bird Johnson Park, Fort Myer, and other locations identified through consultation. Photography would be completed in leaf-on and leaf-off conditions, during daytime and nighttime conditions, and, where feasible, during ceremonial or high-use conditions to document how the corridor is experienced in different seasonal, lighting, and operational contexts. The final record would identify the viewpoint, date, time, lens information, field of view, direction, and historic significance of each view.
- Develop a 3D digital model and LiDAR record of the corridor - Prepare a three-dimensional digital documentation package, which may include LiDAR scanning, photogrammetry, GIS-based viewshed modeling, or other digital survey methods, to create a permanent record of pre-project spatial relationships and existing conditions. The model would document the relationship among Memorial Circle, Arlington Memorial Bridge, Memorial Avenue, Arlington National Cemetery, Arlington House, Lady Bird Johnson Park, and the Lincoln Memorial, including topography, circulation, landscape features, and key sightlines. The digital record could be used for archival purposes, future preservation planning, public interpretation, and comparison with post-construction conditions.
- Prepare archival-quality drone and ground photography - Complete archival-quality aerial and ground-based photography to document existing views, landscape organization, circulation patterns, and cultural landscape relationships before construction. Drone photography would be used where permitted and appropriate to capture the spatial relationship of the corridor from above, including the alignment from the Lincoln Memorial across Arlington Memorial Bridge to Memorial Circle, Memorial Avenue, Arlington National Cemetery, and Arlington House. Ground photography would document the visitor-level experience from key public viewpoints and ceremonial routes. All photography would be catalogued and retained as part of the project's permanent mitigation record.
- Conduct oral histories related to the commemorative corridor - Develop an oral history program to document the meaning, use, and public significance of the Lincoln Memorial–Arlington House commemorative corridor. Interviewees could include historians, veterans, preservation professionals, Arlington National Cemetery families, representatives of veterans' organizations, NPS staff, Arlington National Cemetery staff, landscape architects, design experts, and others with knowledge of the corridor's history, symbolism, and contemporary use. Oral histories would address the meaning of the visual axis, the ceremonial role of Memorial Avenue and Arlington Memorial Bridge, the experience of visiting Arlington National Cemetery and Arlington House, and the evolution of the corridor

as a commemorative landscape. Transcripts and recordings would be archived and, where appropriate, made available for interpretation, research, or public education.

- Develop a history of the creation of Lady Bird Johnson Park - Prepare a focused historical study documenting the creation, design, naming, development, and evolution of Lady Bird Johnson Park within the broader Columbia Island and Memorial Circle landscape. The study would address the park's relationship to Arlington Memorial Bridge, the George Washington Memorial Parkway, Memorial Circle, the Potomac River, and the commemorative landscape connecting Washington, D.C. and Arlington. The history would also examine the park's landscape design, plantings, circulation, commemorative associations, environmental setting, and role as a visual and physical frame for Memorial Circle. The final product could support future management, interpretation, National Register documentation, and cultural landscape treatment recommendations.
- Create a meadow management program and plan for Lady Bird Johnson Park - Where appropriate (based on use), consider transitioning lawns throughout Lady Bird Johnson Park (Columbia Island) to meadows with native grasses. In addition to making Lady Bird Johnson Park compatible with the proposed conditions on Memorial Avenue, conversion to native grasses (rather than turf) would also reduce the need to mow, increase biodiversity, and provide habitat for pollinators. Collaborate with natural resource management to determine appropriate grasses and seed selection.

Interpretation

- Develop an interpretive program on the Lincoln Memorial–Arlington House axis - Develop an interpretive program explaining the historic, symbolic, and commemorative relationship among the Lincoln Memorial, Arlington Memorial Bridge, Memorial Avenue, Arlington National Cemetery, and Arlington House. The program would address the corridor's design intent, its association with national unity and reconciliation, its role as a ceremonial connection between Washington, D.C. and Arlington, and the ways in which the landscape has evolved over time. Interpretation could be delivered through ranger-led programs, digital media, waysides, printed materials, and educational content.
- Develop a digital interactive or wayside viewshed exhibit- Create an interactive digital exhibit, wayside exhibit, or combination of both that allows visitors to compare historic, existing, and post-project views within the commemorative corridor. The exhibit would help visitors understand how views across the Potomac River have changed over time and how the monumental core evolved through successive periods of planning, design, commemoration, transportation development, landscape change, and federal stewardship. The exhibit could include historic maps, plans, photographs, visual simulations, annotated viewsheds, and layered "then-and-now" comparisons.
- Install interpretive waysides at Memorial Circle and Memorial Avenue - Install a limited number of compatible interpretive waysides at Memorial Circle and along Memorial Avenue to explain the design history and significance of Memorial Circle, Columbia Island, Arlington Memorial Bridge, Memorial Avenue, and the McMillan-era commemorative landscape. The waysides would describe the corridor's role as a formal ceremonial approach, its relationship to Arlington National Cemetery and Arlington House, and its connection to the Lincoln Memorial and National Mall. The signs would be designed to be visually

compatible with the historic setting and located to avoid sign clutter or interference with character-defining views.

- Develop an NPS webpage on the development and significance of the cross-Potomac commemorative corridor - Develop a publicly accessible webpage describing the development of Lady Bird Johnson Park, the Lincoln Memorial, Arlington National Cemetery, Arlington House, Arlington Memorial Bridge, Memorial Avenue, and the scenic and symbolic connections among these resources. The webpage would provide historical context for the corridor, explain its commemorative and landscape significance, and present historic plans, photographs, maps, and interpretive narratives showing how the corridor has changed over time. The webpage could also serve as a central repository for related interpretive materials, historic documentation, and links to digital exhibits.
- Develop a webpage on the history and significance of triumphal arches - Develop an interpretive webpage explaining the history, symbolism, and evolution of triumphal arches as monumental forms. The webpage would address the origins and use of triumphal arches in different historical and cultural contexts, their association with military victory, civic identity, national celebration, and public memory, and how the proposed Arch relates to or differs from those traditions. The webpage could also discuss how monumental forms are evaluated within historic landscapes and how new memorials become part of an evolving public landscape.
- Display archaeological materials recovered from project-related investigations where appropriate - Develop a curated display of archaeological materials recovered from the Arch project and other related improvement projects, where appropriate and consistent with applicable laws, curation standards, and consultation outcomes. The display could be located within a climate-controlled public or interpretive space in the base of the Arch and would present recovered materials in a manner that explains their historical context, research value, and relationship to the development of Columbia Island, Lady Bird Johnson Park, Memorial Circle, and the Potomac River landscape. Sensitive materials, including human remains, funerary objects, sacred objects, or culturally sensitive items, would not be displayed unless expressly appropriate and consistent with applicable consultation and legal requirements.
- Develop an exhibit on archaeological investigations, made land, and landfilling - Develop an exhibit explaining the archaeological investigation process, the importance of made land surfaces, and the engineering history of landfilling in the development of Lady Bird Johnson Park and Washington, D.C. The exhibit would describe how archaeologists identify buried landforms, former shorelines, fill episodes, historic deposits, and other subsurface evidence of landscape change. It would also explain the broader role of land reclamation, dredging, filling, and shoreline modification in the growth of the capital city and the creation of parkland along the Potomac River.
- Install QR-code interpretation on maritime activity along the Potomac River – Develop discreet signage with a QR code linking to information about maritime activity along the Potomac River, particularly in relation to Washington, D.C., Arlington, Columbia Island, and the development of the river corridor. The digital content could address navigation, commerce, military activity, ferry crossings, bridges, shoreline change, dredging, landfilling, stormwater management and related water quality, and the transformation of the

Potomac from a working river landscape into a monumental, recreational, and ceremonial setting.

- Install interpretation on Native peoples and the Potomac River - Develop interpretive signage, digital content, or both, addressing Native peoples with ancestral connections to the Potomac River and surrounding landscape. The interpretation would explain the importance of the river for travel, trade, subsistence, settlement, and cultural life before and during early colonial contact. This content would be developed in consultation with affiliated Tribes to ensure that the interpretation is accurate, respectful, and appropriate, and that it reflects Tribal perspectives where Tribes wish to provide them.
- Install signage and QR-code interpretation on affected scenic viewsheds and vistas - Develop a coordinated set of interpretive signs and QR-code-linked digital materials explaining the scenic viewsheds and vistas affected by the proposed project. The interpretation would identify key views, explain their original design intent and historic significance, and describe how the Arch fits within the continued evolution of Washington, D.C.'s memorial landscape and public commemoration. The signs would be limited in number, carefully sited, and designed to avoid adding visual clutter to sensitive historic views.
- Lincoln Memorial viewshed: Interpretation would explain the view from the Lincoln Memorial toward Arlington Memorial Bridge, Memorial Avenue, Arlington National Cemetery, and Arlington House, including the symbolic association of this cross-Potomac axis with national unity, reconciliation, and remembrance.
- Arlington National Cemetery viewshed: Interpretation would describe views from cemetery approaches, Memorial Avenue, Arlington House, and other appropriate vantage points toward the Lincoln Memorial and the monumental core, emphasizing the ceremonial and commemorative role of the corridor.
- Lady Bird Johnson Park: Interpretation would explain the creation, design, naming, and evolution of Lady Bird Johnson Park, including its relationship to Columbia Island, Memorial Circle, Arlington Memorial Bridge, the George Washington Memorial Parkway, and the Potomac River landscape.
- Mount Vernon Trail / regional trail connections: Interpretation would explain relevant trail connections, pedestrian routes, and recreational corridors within the broader commemorative landscape, including their relationship to the Potomac River, park development, and public access.
- Digital map stories and QR-code content: QR codes could link to map-based stories showing the development of each location over time, including historic plans, photographs, aerial imagery, design drawings, National Register documentation, and changes in views, circulation, landform, vegetation, and commemorative use.

APPENDIX E: AGENCY CONSULTATION AND COORDINATION

In developing this EA, the National Park Service (NPS) coordinated with the Executive Office of the President, the Federal Highway Administration, the Federal Aviation Administration, the U.S. Army Corps of Engineers, the Department of War, and Arlington National Cemetery.

Consistent with the requirements of the National Capital Planning Act of July 19, 1952 (which amended the original June 6, 1924, act to formally establish the NCPC) and the Act Establishing a Commission of Fine Arts (May 17, 1910), the Department of Interior (DOI) is providing project information and seeking concurrence for the proposed action with the National Capital Planning Commission and Commission of Fine Arts. DOI received final approval from the Commission of Fine Arts.

Section 7 Endangered Species Act

On May 8, 2026, the NPS requested an IPaC project review from the USFWS Chesapeake Bay Field Office. The IPaC review identified three species that may be present within the project area: the federally endangered northern long-eared bat (*Myotis septentrionalis*), the federally proposed endangered tricolored bat (*Perimyotis subflavus*) and the federally proposed threatened monarch butterfly (*Danaus plexippus*). There were no critical habitats identified within the project area that fall under USFWS jurisdiction. NPS determined that the proposed action would have no effect on species listed under Section 7 of the Endangered Species Act As a result, neither informal nor formal consultation was required. Additional information is provided in Appendix A, Issues and Impact Topics Considered but Eliminated from Detailed Analysis, Threatened and Endangered Species.

Section 106 of the National Historic Preservation Act

Pursuant to Section 106 of the NHPA and its implementing regulations (36 CFR Part 800, "Protection of Historic Properties"), the NPS consulted under Section 106 with the District of Columbia and Virginia SHPOs, Federally Recognized Tribes, and consulting parties to identify historic properties, assess how an undertaking may affect them, and then seek ways to avoid, minimize, or mitigate any adverse effects. Compliance with the requirements of Section 106 will be completed before a decision is made.

APPENDIX F: REASONABLY FORSEEABLE PLANNED ACTIONS IN THE PROJECT AREA

Anticipated Major Construction in the Vicinity of Memorial Circle, 2026-2029

Projects are listed by date of anticipated construction completion.

I-395 HOV Rehabilitation (DDOT)

This project will rehabilitate the I-395 HOV Rochambeau Bridge, including physical improvements to both the bridge's superstructure (deck, travel surfaces, railings, and lighting) and substructure (structural steel, piers and fenders). Construction is currently underway and is anticipated to continue through Fall 2026 (DDOT, 2026).

The Desert Shield and Desert Storm Memorial Construction (NPS)

The National Desert Storm and Desert Shield War Memorial will establish a commemorative work on federal land in the District of Columbia to commemorate and honor those who, as members of the Armed Forces, served on active duty in support of Operation Desert Storm or Operation Desert Shield. Construction is currently underway, and the Dedication Ceremony is projected in 2026.

East Potomac Park Potomac River Seawall Replacement (NPS)

This project will rehabilitate the seawall in West Potomac Park between Inlet Bridge and Arlington Memorial Ave, while raising the seawall to account for wind and wave conditions along the Potomac River. Construction is currently underway and expected to be completed in Fall 2026.

Memorial Ave Irrigation Extension & Turf Replacement (NPS)

This project will rehabilitate turf panels and install irrigation systems along both sides of Memorial Avenue within the section under National Park Service jurisdiction. In addition, a drip irrigation system will be installed to support the existing holly hedges along the corridor. Construction is anticipated to occur from Summer 2026 through Fall 2026.

GWMP Bridge and Pavement Preservation

This project is implementing preservation-oriented treatments across multiple bridges, paved roadways, and parking areas managed by the George Washington Memorial Parkway. The work is focused on extending asset service life, improving safety, and addressing ongoing maintenance needs through targeted repairs. Construction is currently underway and is anticipated to continue through early 2027.

SeaBees Memorial Rehabilitation

The general rehabilitation of the SeaBees Memorial will include stone reattachment and repair, and flashing work to repair conditions and improve the long-term durability of the memorial. Construction is expected to occur in 2027.

Rehabilitation of I-395 Northbound Bridge over the Potomac River (DDOT)

The Arland D. Williams, Jr. Memorial Bridge Rehabilitation Project includes critical improvements to the four-lane bridge. Work will replace the deteriorated bascule span with a fixed span; rehabilitate and modify substructure elements to support the new configuration; upgrade barriers and marine protection systems to current standards; perform comprehensive bridge repairs and preservation; and utilize accelerated bridge construction to minimize traffic impacts during the anticipated two-year construction period. Construction is expected to begin in Spring/Summer 2027 and continue through Spring 2029 (DDOT, n.d.).

Rehabilitation and Widening of the Mount Vernon Trail - North (NPS/FHWA)

This project will rehabilitate and widen approximately 6.5 miles of the Mount Vernon Trail between Theodore Roosevelt Island and Tide Lock Park. The scope of work includes pavement rehabilitation and trail widening, replacement or rehabilitation of existing timber trail bridges, drainage improvements, and targeted safety enhancements at identified conflict and pinch points, along with other associated trail improvements. The project is currently in the design phase, with construction impacts anticipated to begin in late 2026 and continue through early 2029. The project will also include removal of the Washington Boulevard turnaround north of Memorial Circle and associated roadway modifications along its approach and departure segments. The turnaround, which has been closed to vehicular traffic since 2021, will be converted to green space. Construction is anticipated to begin in fall 2026 and continue through spring 2027.

Rehabilitation of the Theodore Roosevelt Bridge (DDOT)

This project will rehabilitate the Theodore Roosevelt Bridge to extend its service life by approximately 20–30 years while enhancing access for pedestrians and bicyclists. Work includes deck replacement and overlay, widening the northern sidewalk, upgrading traffic barriers and pedestrian railings, and replacing signage and sign structures. The project is currently under construction and is anticipated to continue through Spring 2028 (DDOT, 2025).

Arlington National Cemetery Southern Expansion Project (Army)

The Southern Expansion will add an estimated 50 acres to Arlington National Cemetery, which will allow more than 80,000 additional interment opportunities. Other improvements include seamless access to the Air Force Memorial, realigning roadways in the area, replacing an office building and a warehouse and adding an Operations Complex. The project includes three distinct phases. Construction is currently underway and is anticipated to continue until late 2028 (ANC, 2026).

Long Bridge Project (VPRA)

The Virginia Passenger Rail Authority's Long Bridge Project is a 1.8-mile rail improvement to create a continuous four-track corridor between the Long Bridge Aquatic Center in Arlington and L'Enfant Plaza in DC. It includes five new rail bridges and two new pedestrian/bicycle bridges. A new two-track rail bridge will be built over the Potomac River next to the existing two-track Long Bridge, along with a new bike and pedestrian bridge connecting Long Bridge

Park and Mount Vernon Trail in Arlington to East Potomac Parks in DC. The project is currently under construction and is anticipated to continue through 2030 (VPRA, n.d.).

Potomac River Tunnel Project (DC Water)

The Potomac River Tunnel is the next major phase of the DC Clean Rivers Project. The project consists of a large-diameter deep sewer tunnel, diversion facilities, drop shafts, and support structures to capture flows from existing combined sewer overflows (CSOs) along the Potomac River and convey them to the Blue Plains Advanced Wastewater Treatment Plant. Construction is currently underway and is anticipated to continue through 2030 (DCWASA, n.d.).

Rehabilitation and Safety/Access Improvements at Lincoln Memorial Circle (NPS/FHWA)

This project will comprehensively rehabilitate Lincoln Memorial Circle, including improving pedestrian and bicycle connectivity, accessibility, and safety throughout the area. This includes the installation of traffic control devices (signalization), pedestrian infrastructure (accessible sidewalks, crosswalks, and curb ramps), and modifications to roadway geometry, including ramp closures, lane reconfigurations, and minor curb realignments. Construction is expected to begin in 2027 and continue through 2029.

Rehabilitation of Rock Creek and Potomac Parkway (NPS/FHWA)

This project will rehabilitate Rock Creek and Potomac Parkway from Shoreham Drive to Virginia Ave, and Ohio Drive from Parkway Drive to Independence Ave. Proposed improvements include pavement rehabilitation, lighting, intersection reconfiguration, trail widening, and other safety improvements. Construction is anticipated to begin in 2028 and span multiple construction seasons.

Crystal City to Reagan National Airport Multimodal Connection (CC2DCA)

This project will provide a multimodal connection between Crystal City and Ronald Reagan Washington National Airport (DCA) for use by people walking, biking, and using micromobility devices. The Project Team is currently working towards the 30% design and is finalizing the concept plan based on the input they received on the base concept design from property owners, project partners and the community (ACDOE, n.d.).

APPENDIX G: NOISE TECHNICAL REPORT

2026 08 03 ◘ Methods for modeling Triumphal Arch piledriver construction noise

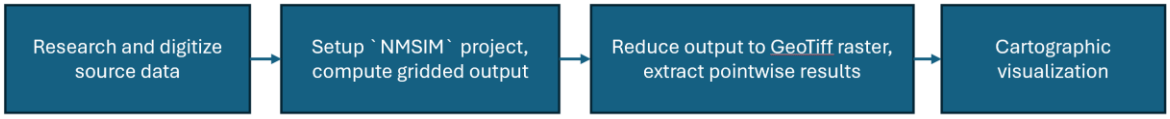


Figure 1. Overview of noise modeling method used. First source data inputs were digitized, then a standard `NMSIM` model was used to compute a rasterized output grid. The output grid was transformed into a georeferenced .TIFF format and various spatial summaries were made, then visualized cartographically.

Research and digitize source data

To model the effects of piledriving operations, we first gathered and digitized previously published source data. These data include measurements of impact hammer type piledriving operations (Soderberg and Laughlin, 2016), which are similar to the intended *Pileco Inc.* D46-32 or D62-22 diesel impact hammers. The authors published source spectra for two steel piles, three hollow concrete piles and two octagonal concrete piles at a reference distance of 50 feet. Ultimately, the various tests share similar 1/3rd-octave band spectra (Figure 2). Also, similar piles are driven by a vibratory method as published elsewhere (Hanus 2010; Figure 2). We selected "Steel Pile 1" from Soderberg and Laughlin as our source spectrum (Table 1).

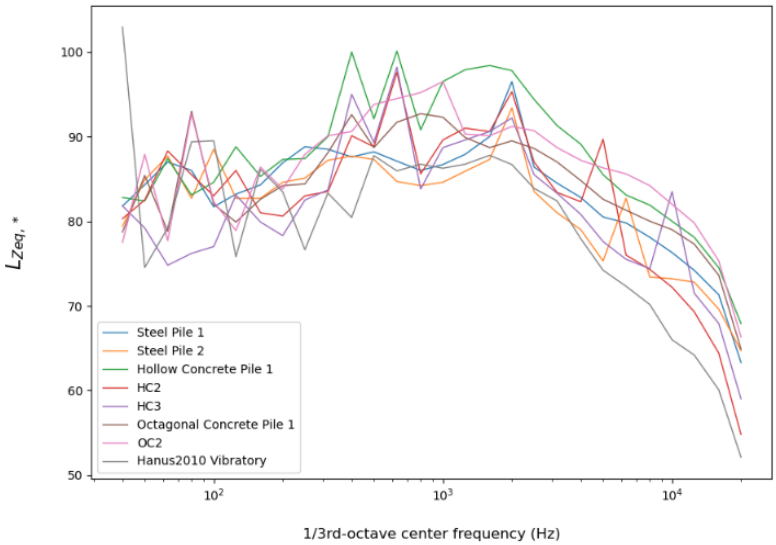


Figure 2. Comparison of published 1/3rd-octave band spectra for impact hammer (Soderberg and Laughlin 2016) and vibratory (Hanus 2010) piledrivers.

We also digitized the noise transmission loss of a sound absorbing barrier-backed composite curtain (Steel Guard Safety, 2019). The curtain is made of 1" thick quilted fiberglass backed with mass-loaded vinyl (averaging 1.22 lb./sq. ft) and acts as a low-pass filter. It is proposed to curtain the sides of the hammer carriage facing away from the river during operations. Because the original data are published at single-octave band resolution, we used the standard practice of log-linear interpolation

to estimate attenuation for the 1/3rd-octave bands in-between (Table 1). To avoid extrapolation errors, we extended the published extrema values into the 1/3rd-octave bands outside of the published specification range. We model the curtained hammer carriage mitigation by linear subtraction of the expected 1/3rd-octave band attenuation from Soderberg and Laughlin's "Steel Pile 1".

Table 1. Source spectra for the two model scenarios: unmitigated and mitigated. The unmitigated spectrum is from Soderberg and Laughlin, 2016. The mitigated source is determined by linear subtraction of a barrier-backed curtain transmission loss spectrum interpolated from Steel Guard Safety, 2019. The published single-octave band values of transmission loss are shown in bold font.

1/3rd-octave center frequency (Hz)	Unmitigated diesel impact hammer source spectrum (dB)	Barrier-backed composite curtain attenuation (dB)	Mitigated diesel impact hammer source spectrum (dB)
40	81.8	11.0	70.8
50	84.3	11.0	73.3
63	87.0	11.0	76.0
80	86.0	11.0	75.0
100	81.7	11.0	70.7
125	83.2	**11.0**	72.2
160	84.3	12.8	71.5
200	86.9	14.4	72.5
250	88.8	**16.0**	72.8
315	88.5	18.7	69.8
400	87.6	21.4	66.2
500	88.2	**24.0**	64.2
630	87.1	28.0	59.1
800	86.0	32.1	53.9
1000	86.7	**36.0**	50.7
1250	87.9	35.7	52.2
1600	90.0	35.0	55.0
2000	96.5	**35.0**	61.5
2500	86.4	35.0	51.4
3150	84.5	35.0	49.5
4000	82.8	**35.0**	47.8
5000	80.5	35.0	45.5
6300	79.8	35.0	44.8
8000	78.1	35.0	43.1
10000	76.3	35.0	41.3
12500	74.2	35.0	39.2

Setup `NMSIM` project, compute gridded output

To incorporate the range-dependent effects of terrain, first-order reflections, and atmospheric absorption, we employed the `NMSIM` ray-tracing acoustic propagation model (Ikelheimer and Plotkin 2005). The two source inputs described above were converted into standard `NMSIM` source inputs using the NPS software `NMSIMSRC.exe`. `NMSIM` source inputs include the 1/3rd-octave bands from 40 to 12,500 Hz.

We used the software `GroundTrackBuilder.exe` to build a fixed-point source of sound in the center of Memorial Circle (38.88557°, -77.06000° WGS84) lasting one second in duration. Based on information from the contractor, we modeled the source height as 80′ above ground level (AGL). A summary of the two modelling scenarios is provided in Table 2.

Table 2. Modeling scenarios. The only difference between the two models is the source input.

Source Input	Height (AGL)	Duration	Location
Diesel Impact Hammer	80′	1 s	Memorial Circle
Diesel Impact Hammer with Barrier-backed Composite Curtain mitigation	80′	1 s	Memorial Circle

We defined a study area encompassing the project site and the entire Arlington National Cemetery and surrounding monuments (southwest corner: 38.86856°, -77.08702°; northeast corner: 38.89286°, -77.04423° WGS84). Because the propagation path is ground-to-ground, we incorporated a digital elevation model (Gesch 2002) to simulate the effects of terrain. We used the `NMSIM`-default weather conditions of 59° F and 70% relative humidity (Ikelheimer and Plotkin 2005). Atmospheric structure was also `NMSIM`-default, corresponding to ISO 9613 standard conditions – a well-developed, moderate ground-based temperature inversion. Ground surface type was not considered in the model.

Reduce output to GeoTIFF raster, extract pointwise results

The output results of `NMSIM` resemble a spatial grid of spectrograms (spectral sound level time-series) regularly distributed across the study area. Because the source in this model is audible for 1 second, the spectrogram consists of only a single frame. We applied the A-weighting network and summed across the frequency bands to calculate $L_{Aeq,1s\ [40-12{,}500\ Hz]}$ in each grid cell. We georeferenced the grid cells into the Tag Image File Format (.TIFF), which allowed cartographic visualization as a spatial raster image.

Specific monuments within the study area (Arlington House: 38.88117°, -77.07261°; The Tomb of the Unknown Soldier: 38.87636°, -77.07231°; Women's Military Memorial: 38.88261°, -77.06869° WGS84) were evaluated by taking the log-average $L_{Aeq,1s\ [40-12{,}500\ Hz]}$ of each raster cell overlapping the

monument (4, 9, and 9 cells, respectively; Table 3). Mitigation is expected to reduce sound level at these sites by an average of 28 dB, a very large effect.

Table 3. Log-average $L_{Aeq,1s}$ at three specific monuments within the modeled study area.

Site	LAeq,1s unmitigated, 80′	LAeq,1s mitigated, 80′	Number of raster cells log-averaged
Arlington House	55.2 dB	26.3 dB	4
The Tomb of the Unknown Soldier	50.8 dB	23.3 dB	10
Women's Military Memorial	54.6 dB	26.9 dB	9

Cartographic visualization

To visualize model results we clipped the sound level to two different ranges. The first range shows sound levels $L_{Aeq,1s\ [40-12{,}500\ Hz]}$ spanning 40 – 95 dB. On this range, a map of the unmitigated model (Figure 3) is useful to emphasize the effect of terrain at the scale of the entire study area.

The second range shows sound levels $L_{Aeq,1s\ [40-12{,}500\ Hz]}$ spanning 57 – 95 dB, the lower limit of which corresponds with a regulatory threshold for, "lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose" (23 CFR Part 772, Appendix Table 1). On this range, a map of the unmitigated model (Figure 5) emphasizes the spatial extent within which the serenity of those mourning the nation's honored dead is potentially disturbed.

By comparison, maps of the mitigated model (Figure 4, Figure 6) visualize how much the curtained hammer carriage is likely to increase the area in which serenity and quiet may be found during piledriving operations. Notably the mitigation is expected to attenuate noise from the source and keep all land area within Arlington National Cemetery to sound levels $L_{Aeq,1s\ [40-12{,}500\ Hz]}$ ≤57 dB (Table 4).

Table 4. Estimated proportion of the study area and the Arlington National Cemetery with $L_{Aeq,1s\ [40-12{,}500\ Hz]}$ >57 dB for each model scenario (unmitigated, mitigated).

Evaluation area	LAeq,1s unmitigated, 80′	LAeq,1s mitigated, 80′
Study area	21% (520 acres)	0.2% (4 acres)
Arlington National Cemetery	19% (468 acres)	0% (0 acres)

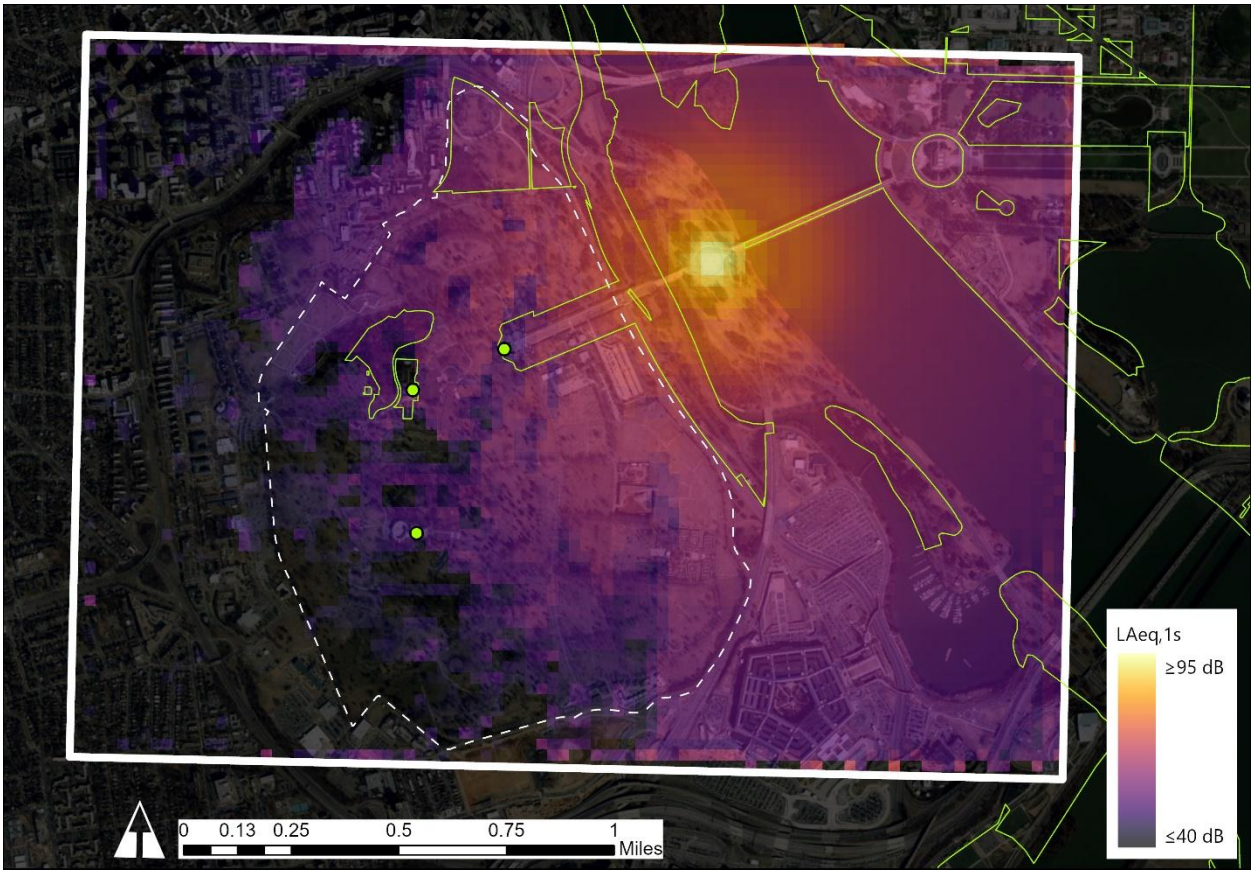


Figure 3. Estimated sound level LAeq,1s [40 - 12,500 Hz] for an unmitigated diesel impact hammer. The colormap spans sound levels from 40 to 95 dB. The study area boundary is shown as a solid white line. The boundary of the Arlington National Cemetery is shown as a dashed white line. NPS boundaries are shown as solid green lines. Monuments selected for detailed sound level summaries are shown as green circles.

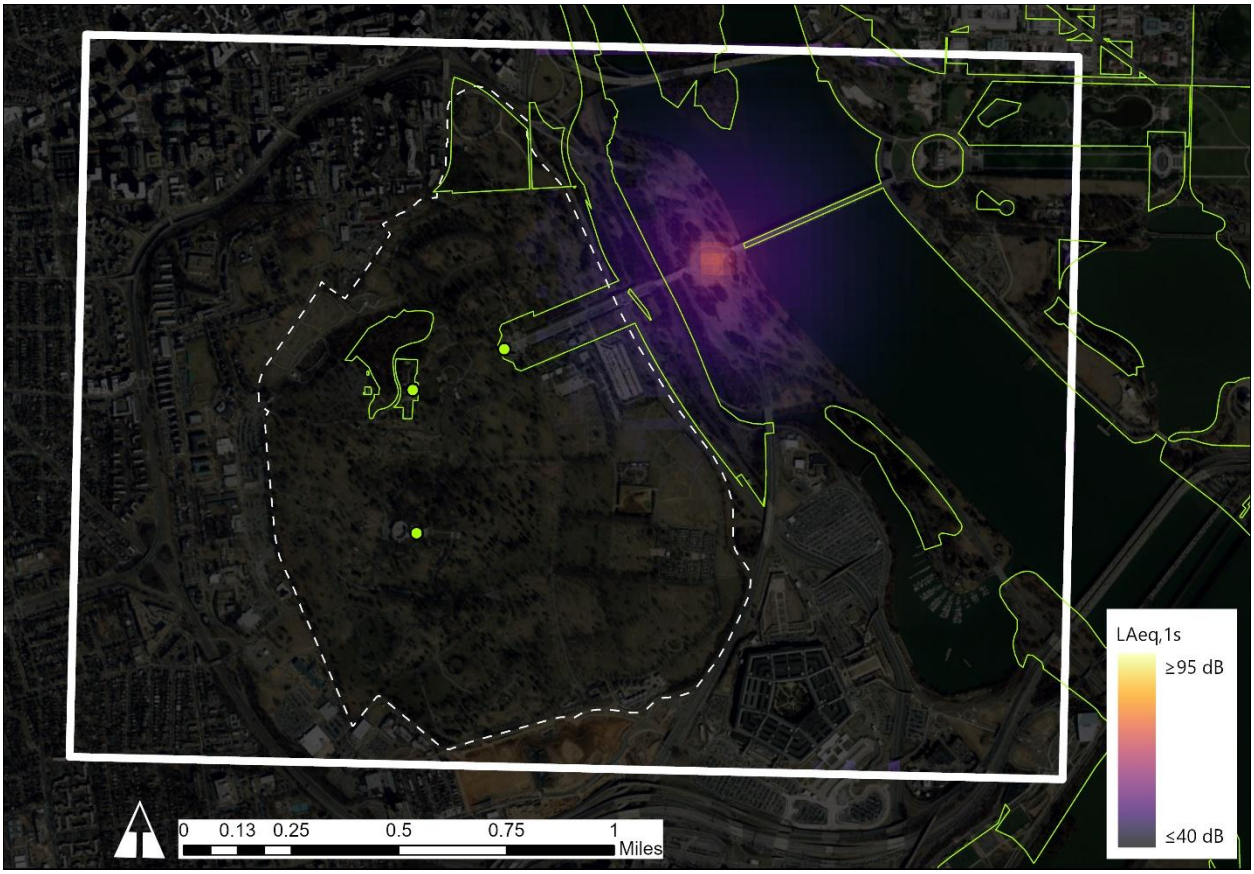


Figure 4. Estimated sound level LAeq,1s [40 - 12,500 Hz] for a diesel impact hammer with barrier-backed composite curtain mitigation. The colormap spans sound levels from 40 to 95 dB. The study area boundary is shown as a solid white line. The boundary of the Arlington National Cemetery is shown as a dashed white line. NPS boundaries are shown as solid green lines. Monuments selected for detailed sound level summaries are shown as green circles.

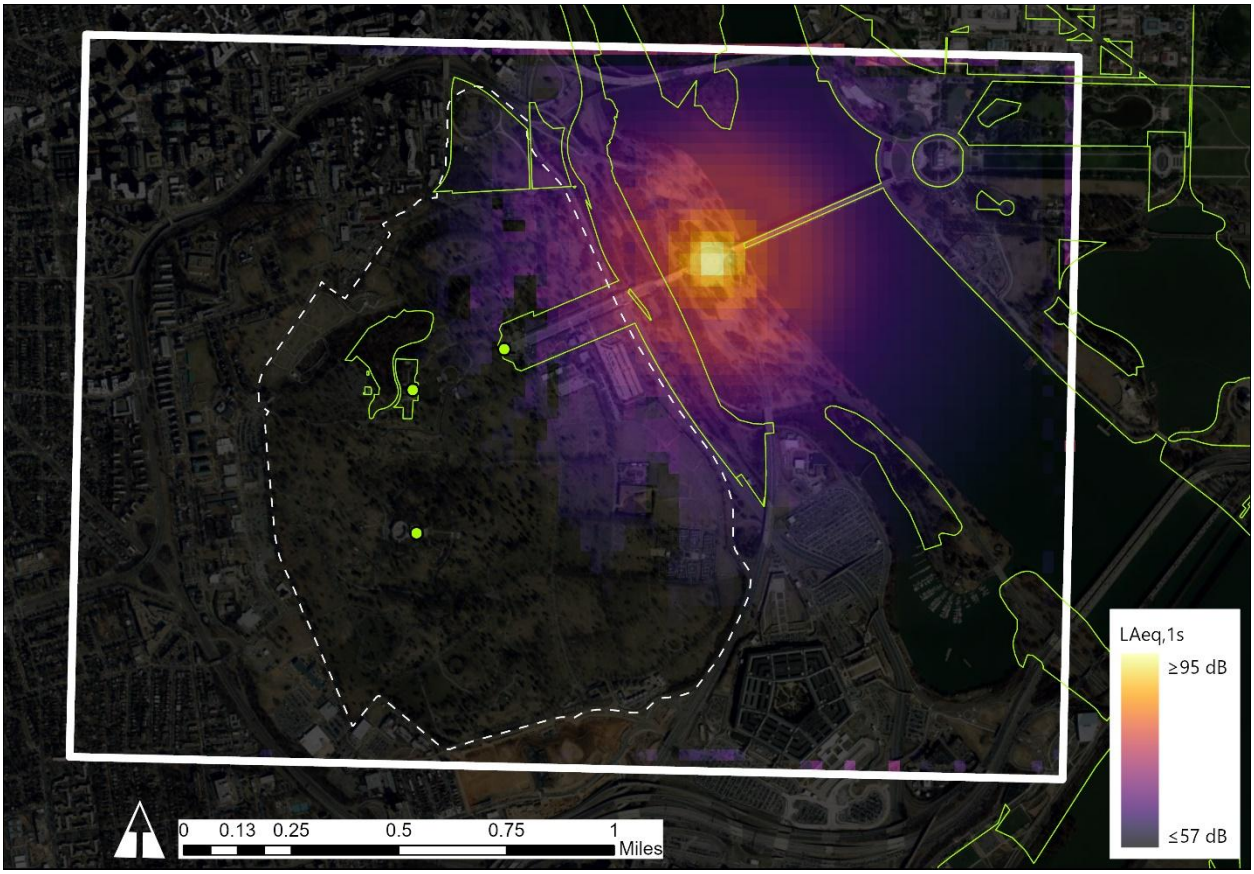


Figure 5. Estimated sound level LAeq,1s [40 - 12,500 Hz] for an unmitigated diesel impact hammer. The colormap spans sound levels from 57 to 95 dB. The study area boundary is shown as a solid white line. The boundary of the Arlington National Cemetery is shown as a dashed white line. NPS boundaries are shown as solid green lines. Monuments selected for detailed sound level summaries are shown as green circles.

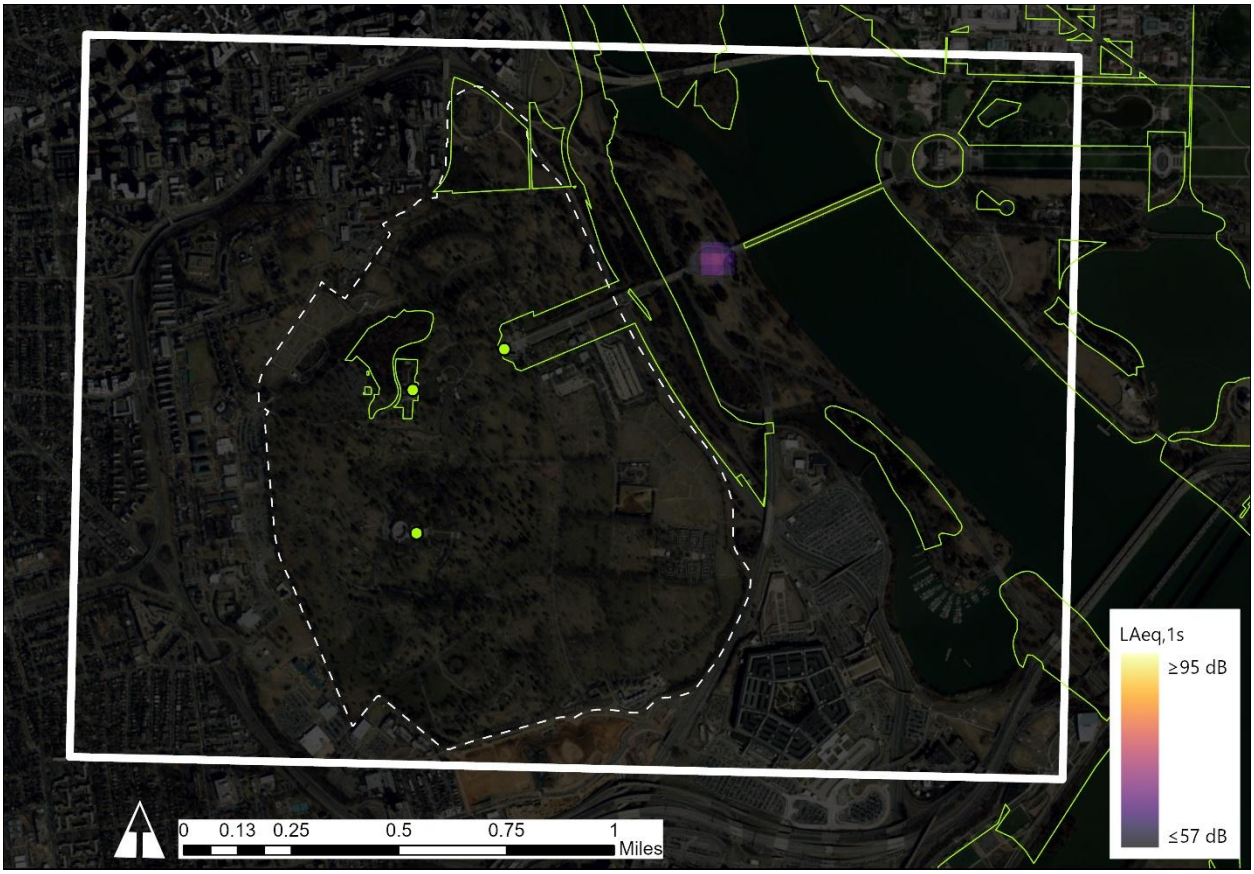


Figure 6. Estimated sound level LAeq,1s [40 - 12,500 Hz] for a diesel impact hammer with barrier-backed composite curtain mitigation. The colormap spans sound levels from 57 to 95 dB. The study area boundary is shown as a solid white line. The boundary of the Arlington National Cemetery is shown as a dashed white line. NPS boundaries are shown as solid green lines. Monuments selected for detailed sound level summaries are shown as green circles.

Model Limitations

Non-linear shockwaves are a "main contribution of the high sound pressure levels encountered in acoustic pile driving measurements" (Lippert and Lippert 2012, citing Reinhall and Dahl 2011). `NMSIM` does not account for non-linear acoustic effects of this kind. Noise may travel further than the linear acoustic model predicts.

The mechanism of sound production in piledriving is a heavy mass striking the pile. Because of this, vibrations take some time to propagate down through the pile. Such a time delay in milliseconds results in a wavefront that is directed slightly downwards towards the ground (Lippert and Lippert 2012; Figure 7), which likely causes an upward reflection off the ground. Our `NMSIM` model does not account for directivity of this kind. An upward reflection might reduce sound level nearby. Such a reflected wavefront could also cause anomalous, distant audibility under strongly inverted atmospheric conditions.

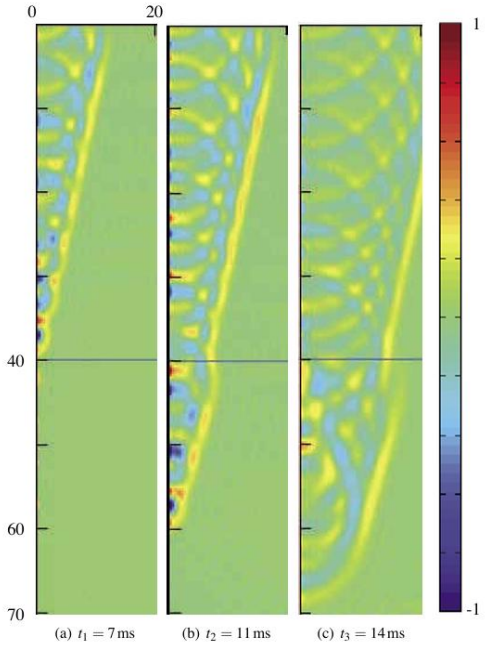


Figure 7. Piledriving pressure fields computed from a physical model (Lippert and Lippert 2012). Time evolution of the wavefront is visualized as small multiples from left (7 ms) to right (14 ms) after hammer impact. The model suggests piledriving noise is directed slightly towards the ground, an attribute that our `NMSIM` model does not account for.

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