

Memorial Avenue Corridor

George Washington Memorial Parkway

Cultural Landscape Report

Urban Heritage Project

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Figure 1: Holly hedge restoration underway. (Urban Heritage Project 2022)



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EXECUTIVE SUMMARY

The Memorial Avenue Corridor cultural landscape is a nationally significant site that extends from Washington, D.C. to Arlington, Virginia, spanning the Potomac River and Boundary Channel. The landscape includes Arlington Memorial Bridge, Memorial Circle and its immediate context in Lady Bird Johnson Park (formerly, Columbia Island), and a segment of Memorial Avenue. The western edge of the cultural landscape is defined by the boundary between National Park Service (George Washington Memorial Parkway) land and property owned by the Department of the Army (Arlington National Cemetery), where the avenue crosses over VA Highway 110. The cultural landscape is managed by George Washington Memorial Parkway (GWMP).

A portion of the cultural landscape was documented in a 1980 National Register of Historic Places nomination, titled *Arlington Memorial Bridge and Related Features*; an update to that nomination is currently underway. A cultural landscape inventory (CLI) was also prepared for the corridor in 2004, with updated condition assessments in 2009 and 2015; that CLI predated the land transfer at the western end of the avenue. The study area boundaries for this CLR were established based on GWMP's management boundaries (in other words, they exclude the land managed by the Department of the Army); the boundaries are also based on the boundaries established in the pending update to the National Register nomination.

This CLR defines the period of significance for the Memorial Avenue Corridor as 1901-1979, and recognizes its significance at the national level under Criteria A (in the area of Politics/Government) and C (in the areas of Architecture, Engineering, Landscape Architecture, Art—Sculpture, and Community Planning and Development). This period of significance, and these areas of significance, encompass the initial conception and composition of the corridor as a commemorative and recreational landscape, the construction of the Arlington Memorial Bridge and other corridor features, and the fuller realization of the corridor's design through the installation of memorials and the landscape designs associated with landscape architect Edward Durell Stone, Jr.

The Memorial Avenue Corridor was designed as a symbolic and physical link between the Lincoln Memorial, a tribute to the 16th American President; the entrance to Arlington National Cemetery; and Arlington House, former plantation home of Confederate General Robert E. Lee. The concept for a memorial bridge and avenue first emerged after the Civil War, and gained momentum when it was included within the 1901/1902 McMillan Plan, which proposed improvements to the park system of Washington, D.C. The design of the corridor took shape amidst the City Beautiful Movement, which promoted formal and classical treatments for architectural, engineering, sculptural, and landscape features—all of which were incorporated into the evolving designs for the Arlington Memorial Bridge and the Memorial Avenue Corridor. Architect William Mitchell Kendall, of renowned firm McKim, Mead & White, was responsible for the corridor's overall design.

The corridor was built in phases: Arlington Memorial Bridge was constructed between 1926 and 1932; the Boundary Channel Bridge was built between 1929 and 1930; Memorial Circle was constructed on Columbia Island beginning in 1940; and Memorial Avenue was built beginning in 1930. Designs for the corridor continued to evolve as the broader context changed—most notably with the construction of the Pentagon nearby in the 1940s, which altered the configuration of roads leading to and away from the corridor. These alterations had significant impacts on the design of Memorial Circle as a rotary and node at the heart of the corridor.

Early planting designs for the cultural landscape emphasized the linearity along the avenue, accentuated by turf panels (flanking the sidewalks), holly hedges, and rows of deciduous trees approaching the cemetery entrance. The palette of those trees shifted over time: William Mitchell Kendall initially proposed elm trees, but they were eventually planted as white oaks. Elsewhere within the corridor, the area around Memorial Circle remained largely clear of plantings (other than some trees along the Boundary Channel) until the 1960s, when Edward Durell Stone, Jr. developed a series of landscape plans for Columbia Island (which would become Lady Bird Johnson Park).

Stone's designs were part of Lady Bird Johnson's Beautification Program, an urban planning initiative that sought to improve society through an array of landscape interventions, including planting trees and flowers in highly visited areas. The program targeted Columbia Island as one of its pilot sites, engaging landscape architect Stone to design a master planting plan for trees across Columbia Island. Beginning in 1967, Stone and a consulting horticulturalist developed a planting plan that included an array of deciduous and evergreen trees, accented by flowering dogwoods. Although the plan covered all of Columbia Island, it gave particular emphasis to the area around Memorial Circle, envisioning a much denser context of trees around the rotary than had existed to that point. Stone's plans were implemented in phases, based on available funding, and were never fully realized; however, they did have a transformative effect for the character of the landscape around Memorial Circle, and much of those plantings remain extant today.

The cultural landscape exhibits 11 of the 13 landscape characteristics defined by the National Park Service, including:

- Natural Systems and Features
- Land Use
- Topography
- Spatial Organization
- Views and Vistas
- Cultural Traditions
- Buildings and Structures
- Circulation
- Constructed Water Features
- Vegetation
- Small-Scale Features

This cultural landscape report (CLR) addresses the historic and existing landscape conditions of each characteristic, building an understanding of much the landscape today reflects its character and appearance during the period of significance (1901-1979).

The treatment recommendations of this CLR are organized spatially, according to three character areas that comprise the landscape: (from east to west) Arlington Memorial Bridge, Memorial Circle, and Memorial Avenue. These character areas share several landscape characteristics that transcend any particular area, and yet, each character area also presents specific condition challenges and treatment opportunities.

This CLR recommends preservation and rehabilitation as the treatment approaches for the cultural landscape. Preservation (for the character area that encompasses Arlington Memorial Bridge) will retain the existing form and aesthetic of the historic bridge, as rehabilitated in 2018-20. Rehabilitation (for the character areas that encompass Memorial Circle and Memorial Avenue) allows for the flexibility needed to preserve the historic resources and enhance the historic character of the circle and avenue, while improving site conditions and climate resilience.

The treatment recommendations prioritize the historic significance of the landscape as a cohesive and coherent corridor, even as they acknowledge the realities of fragmented public ownership along the avenue today. The recommendations emphasize the corridor's viewshed connections and significant vistas, and they address the needs of vehicles, pedestrians, and cyclists who pass through the landscape. Finally, the treatment recommendations acknowledge the multiple generations of horticultural design and implementation within the cultural landscape, proposing treatments that respond to the varying tolerances for change and balance the significance of the corridor's historic integrity and its necessary adaptation for climate resilience.

INTRODUCTION

The Memorial Avenue Corridor is a non-legislated park site located within the boundaries of and managed by the George Washington Memorial Parkway (GWMP) unit of the National Park Service (NPS).[1] The purpose of the Memorial Avenue Corridor Cultural Landscape Report (CLR) is to help the NPS develop an informed and consistent approach to managing change within the study area. This guide builds on previous documentation efforts and offers holistic, coordinated management strategies. The project began with a kickoff meeting in November 2021.

Located within Washington, D.C., and Arlington, Virginia, the Memorial Avenue Corridor cultural landscape encompasses Arlington Memorial Bridge, Memorial Circle and surroundings, and the portion of Memorial Avenue managed by the NPS. Although the corridor was developed historically as a cohesive design from Arlington Memorial Bridge to Arlington National Cemetery, the corridor is administratively subdivided today and managed by multiple entities. As this Cultural Landscape Report is produced in partnership with GWMP, the study area is limited to GWMP-managed lands within the corridor. The study area boundaries for this CLR were established based on the location of historic features associated with the corridor's design and development. Additionally, where the land is managed by GWMP, the boundaries of the CLR match the boundaries of the draft 2022 National Register nomination update for Arlington Memorial Bridge and Related Features Historic District.

George Washington Memorial Parkway was established by Congress on May 29, 1930, through Public Law 71-284, the Capper-Cramton Act. The Capper-Cramton Act was an act, "for the acquisition, establishment, and development of the George Washington Memorial Parkway along the Potomac from Mount Vernon and Fort Washington to the Great Falls, and to provide for the acquisition of lands in the District of Columbia and the States of Maryland and Virginia requisite to the comprehensive park, parkway, and playground system of the National Capital." The George Washington Memorial Parkway was designated a unit of the National Park Service in 1933. The unit was developed as a scenic parkway to help preserve the Potomac River Gorge and shoreline while serving as a memorial to George Washington, the first president of the United States.

Located within the boundaries of GWMP, the Memorial Avenue Corridor extends the east-west axis of the L'Enfant and McMillan Plans from the historic center of Washington, D.C., across the Potomac River to Arlington, Virginia. The architectural, engineering, landscape, and statuary features of the Memorial Avenue Corridor cultural landscape are integral components of the Neoclassical monumental core of Washington, D.C. In addition to playing a vital role within the modern transportation system of the nation's capital, the landscape also has commemorative and symbolic functions. The Memorial Avenue Corridor was built as a symbol of reconciliation following the Civil War and creates a physical, visual, and symbolic relationship between the national memorial in D.C. for Abraham Lincoln, the President of the United States during the Civil War, and Arlington House in Virginia, former home of Confederate General Robert E. Lee.

PURPOSE AND SCOPE OF THIS CULTURAL LANDSCAPE REPORT

National Park Service CLRs are the primary tool to inform long-term management decisions regarding cultural landscapes. The CLR documents the history and existing conditions of the cultural landscape, evaluates its significance according to National Register of Historic Places program standards, and provides design and management recommendations for the property. The CLR is part of the park's planning process and is a fundamental tool for integrating information and determining relationships between the cultural landscape and other resource types, in addition to historic district objectives.

The CLR goal is to preserve, restore, or rehabilitate the historic character of the historic district, while providing for opportunities to enhance facilities maintenance, resource management,

1. "Non-legislated" refers to the fact that this landscape does not have its own enabling legislation; rather, it was established as part of the larger George Washington Memorial Parkway administrative unit.

and interpretive opportunities within the district. The CLR is the primary planning document for the treatment of the cultural landscape and provides site managers with a comprehensive understanding of the physical evolution of the cultural landscape, its current condition, and guidance for the future landscape management.

The CLR scope includes identifying cultural landscape significance and current condition, and developing treatment strategies to preserve, restore, and rehabilitate resources within the cultural landscape.

REPORT METHODOLOGY

A thorough investigation and evaluation of the cultural landscape has been conducted using the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, *with Guidelines for the Treatment of Cultural Landscapes* and the *NPS Guide to Cultural Landscape Reports: Contents, Process, and Techniques*. Documentation of historic significance and evaluation of integrity of the landscape serves as a framework upon which treatment recommendations are developed.

The history is documented to focus on the changes to the cultural landscape over time within the previously established National Register eligibility of the cultural landscape under specific contexts and period of significance. These contexts and period of significance were re-examined to provide the full context needed to establish the character-defining features of the cultural landscape. Period plans were prepared to understand the change over time.

The historical documentation was utilized to compare existing site conditions to historic conditions. Through this analysis, contributing and non-contributing features and characteristics of the cultural landscape were identified. This information was then used as the basis for the treatment recommendations, with the goal of preserving character-defining features and characteristics that convey the historic significance of the cultural landscape.

In keeping with the National Park Service's best practices and issued guidance for Cultural Landscape Reports, this project was designed according to several different (at times, overlapping) tasks.

RESEARCH

Using primary and secondary sources, the team conducted research to understand the physical history of the Memorial Avenue Corridor cultural landscape. Key repositories and archives included: the George Washington Memorial Parkway archives; the NPS Electronic Technical Information Center (ETIC); existing documentation (including National Register of Historic Places nominations and cultural landscape inventories); several photograph repositories; and several National Park Service reports.

Based on the research, the team prepared a chronology and physical history to document the evolution of the historic site.

DETERMINATION OF PERIODS OF SIGNIFICANCE

Using the physical history and prior documentation as a guide, the period of significance was determined as 1901 through 1979 (refer to the Statement of Significance, beginning on page 18 of the CLR, for an explanation of the period).

FIELDWORK AND DATA COLLECTION

The team conducted fieldwork and site visits during the project. An initial site visit with park and regional staff took place in March 2022. Fieldwork to document existing conditions and geolocate extant features took place in May and June 2022, with an additional site visit in July 2023. During this time, researchers collected and recorded GIS data using Eos Arrow equipment.

The team identified, photographed, and recorded characteristic landscape features that date to, or postdate, the period of significance at the historic site.

MAPPING

Maps for this CLR were produced following National Capital Regional Office's (NCRO) contemporary

GIS standards. The team collected data in the field, including small-scale features, circulation features, structures, and vegetation. This data was then edited in ArcPro and exported to Adobe Illustrator for graphics and final production.

ANALYSIS AND EVALUATION

Based on an understanding of the cultural landscape, compiled through research, fieldwork, and mapping, our team evaluated the current conditions and integrity of these features. This assessment, contextualized within a larger study of each applicable landscape characteristic, comprises the Analysis & Evaluation section of the CLR.

STAKEHOLDER ENGAGEMENT AND TREATMENT WORKSHOP

The team consulted with National Park Service staff throughout the project, including members of the National Capital Regional Office and George Washington Memorial Parkway. Additionally, the team held stakeholder engagement meetings with representatives from Arlington County Planning Department, Arlington National Cemetery (ANC), and Washington Metropolitan Area Transit Authority (WMATA).

A treatment workshop was convened on September 13, 2023, to present the findings-to-date and our preliminary treatment priorities to representatives from the National Park Service.

TREATMENT RECOMMENDATIONS

Based on the feedback received at the treatment workshop, and all other phases of work, the team prepared treatment recommendations for the Memorial Avenue Corridor cultural landscape.

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THEODORE ROOSEVELT BRIDGE (I-66)
MOUNT VERNON TRAIL
S ARLINGTON BLVD
WASHINGTON BLVD
GEORGE WASHINGTON MEMORIAL PKWY
WMATA (METRO BLUE LINE)
VA-110 / RICHMOND HIGHWAY
D.C.
Virginia
BOUNDARY CHANNEL BRIDGE
HEMICYCLE
STATE BRIDGE #5020
MEMORIAL AVENUE
BOUNDARY CHANNEL
S WASHINGTON BLVD
LADY BIRD JOHN
(COLUMBIA I
To Arlington House, the Robert E. Lee Memorial
ARLINGTON NATIONAL CEMETERY
VA-110 / RICHMOND HIGHWAY
0
500
1,000
2,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Locator Map

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

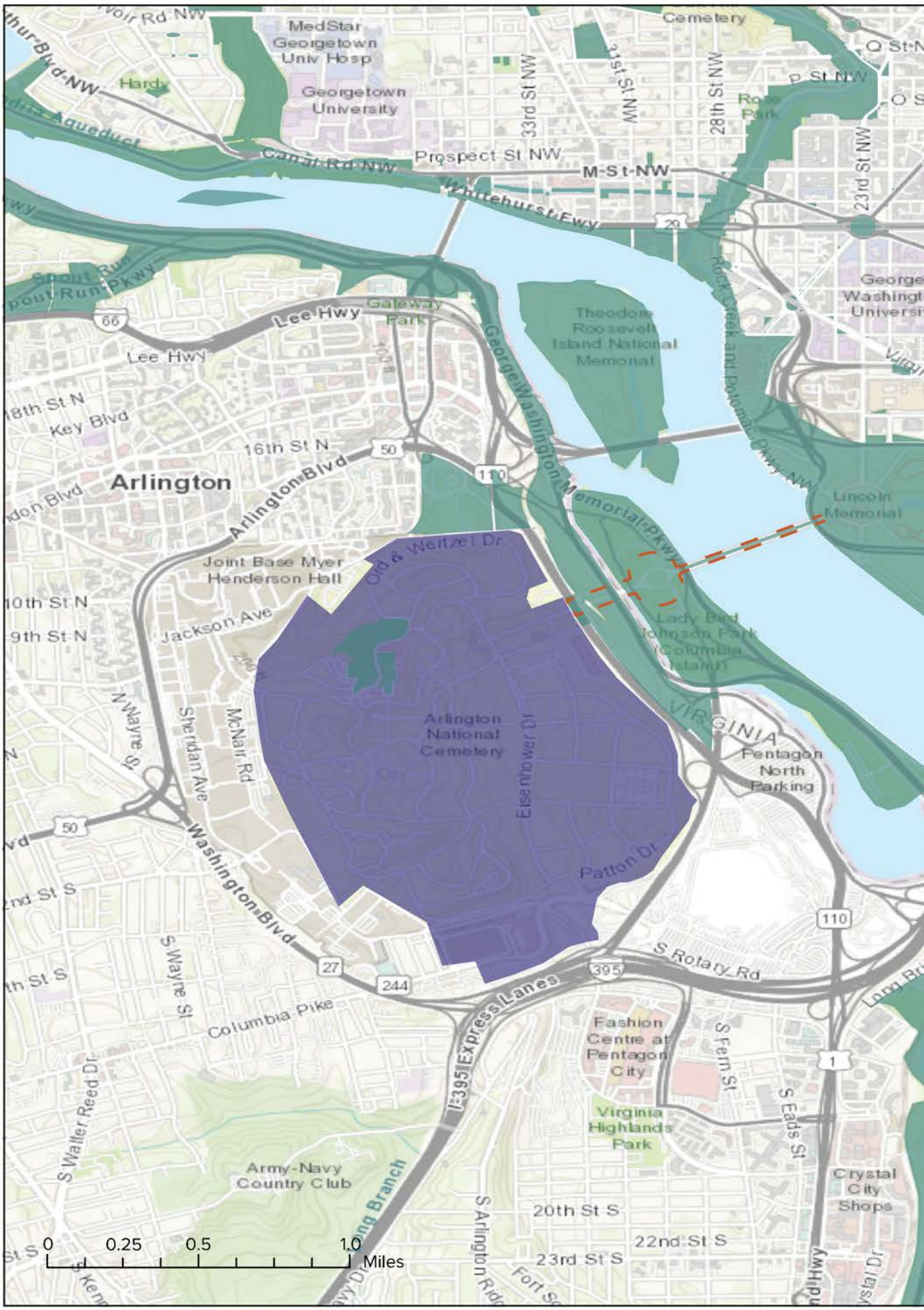
- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Building / Structure *(other than bridge)*
- Bridge (Structure)
- *Arts of War* (Structure)
- Memorial (Structure)
- Circulation - Road
- Circulation - Sidewalk
- Vegetation

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #1


MedStar Georgetown Univ Hosp
Georgetown University
Hardy
Cemetery
Prospect St NW
M St NW
Whitehurst Fwy
Lee Hwy
Gateway Park
Theodore Roosevelt Island National Memorial
George Washington Memorial Pkwy
Lincoln Memorial
Arlington
Arlington Blvd
16th St N
Key Blvd
Joint Base Myer Henderson Hall
Old & Weitzel Dr
Jackson Ave
Arlington National Cemetery
Eisenhower Dr
McNair Rd
Sheridan Ave
N Wayne St
Lady Bird Johnson Park (Columbia Island)
VIRGINIA
Pentagon North Parking
Patton Dr
Washington Blvd
S Wayne St
Columbia Pike
S Rotary Rd
I-395/Express Lanes
Fashion Centre at Pentagon City
Virginia Highlands Park
S Eads St
Crystal City Shops
Army-Navy Country Club
Long Branch
S Walter Reed Dr
20th St S
22nd St S
23rd St S
0 0.25 0.5 1.0 Miles



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Contextual Land Ownership

SOURCES

1. Base imagery: Fairfax County, VA, M-NCPPC, VITA, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA
2. NPS GIS Data
3. Arlington National Cemetery map, https://www.arlingtoncemetery.mil/Visit/Map-of-ANC

DRAWN BY

Meg Frisbie, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- National Park Service
- Department of the Army

NOTES

1. Boundaries for Arlington National Cemetery (owned by the Department of the Army) were drawn in GIS based on ANC boundary maps.

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DRAWING #2

PART 1: HISTORY + EVALUATION

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Period Plans 128

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Statement of Significance

The National Historic Preservation Act of 1966 authorized the creation of the National Register of Historic Places (National Register) as the official list of the nation's historic places worthy of preservation. The National Park Service (NPS) administers the National Register and has developed criteria for evaluating historic resources to determine their eligibility for listing.

The significance of the Memorial Avenue Corridor was documented in a 1980 National Register nomination titled *Arlington Memorial Bridge and Related Features*, and an updated nomination is underway at the time of this report's preparation in 2022-23. Additionally, a Cultural Landscape Inventory (CLI) was completed for the Memorial Avenue Corridor in 2004, with updated condition assessments completed in 2009 and 2015. Resources within the Memorial Avenue Corridor cultural landscape and its greater context are documented in several National Register listings and CLIs, as described below.

Historically, the corridor was developed as a cohesive design, extending from the beginning of the bridge on the east side of the Potomac River to Arlington National Cemetery on the west side. Today, however, that historic configuration is subdivided administratively, managed by separate entities: (from east to west, in approximate order) the National Mall and Memorial Parks (NAMA) unit of the National Park Service; the George Washington Memorial Parkway (GWMP) unit of the National Park Service; the Washington Metropolitan Transit Authority (WMATA); and the Department of the Army. Because this Cultural Landscape Report is produced in partnership with GWMP, it focuses on treatment recommendations specific to the areas managed by that unit of the National Park Service.

The GWMP-managed sections of the corridor constitute the "cultural landscape" for this CLR; these sections are incorporated into the cultural landscape boundary represented on the CLR's maps. The GWMP-managed sections, which determine the boundary of the CLR, are part of what many regard as the greater Memorial Avenue cultural landscape, which includes the sequence of designed landscapes linking Lincoln Memorial to Arlington House. This includes land to the east of Arlington Memorial Bridge around Lincoln Memorial and the western portion of Memorial Avenue and the entrance to Arlington National Cemetery, managed by the Department of the Army. The cultural landscape, all managed by GWMP, is the basis for the Statement of Significance and is addressed in all aspects of this CLR, including the chronology, physical history, analysis and evaluation, and treatment recommendations.

The other sections of the corridor that were historically associated with the cultural landscape, but are managed by the Army, WMATA, and NAMA today, are addressed in the chronology and physical history, where appropriate, in order to understand the full development of the cultural landscape. (Note: Some lands [totaling 16.09 acres] were included within the boundaries of the 2004 Cultural Landscape Inventory for the corridor, but subsequently transferred in 2019 to the Department of the Army. The study area boundaries for this CLR reflect this change.)

The cultural landscape comprises approximately 22 acres, and includes: *The Arts of War* statues; Arlington Memorial Bridge spanning the Potomac River; the Memorial Circle traffic rotary and surrounding landscape features; the Boundary Channel Bridge; and Memorial Avenue complete with statuary and plantings, ending on the west side of where Memorial Avenue crosses over VA Highway 110. (For more detail on the features included within the CLR boundaries, see the "CLR Boundary Summary" section below.) Small in-holdings within these geographic boundaries are related to the Metro; because they are managed by

WMATA, these in-holdings are not addressed in the CLR treatment recommendations.

National Register of Historic Places Summary

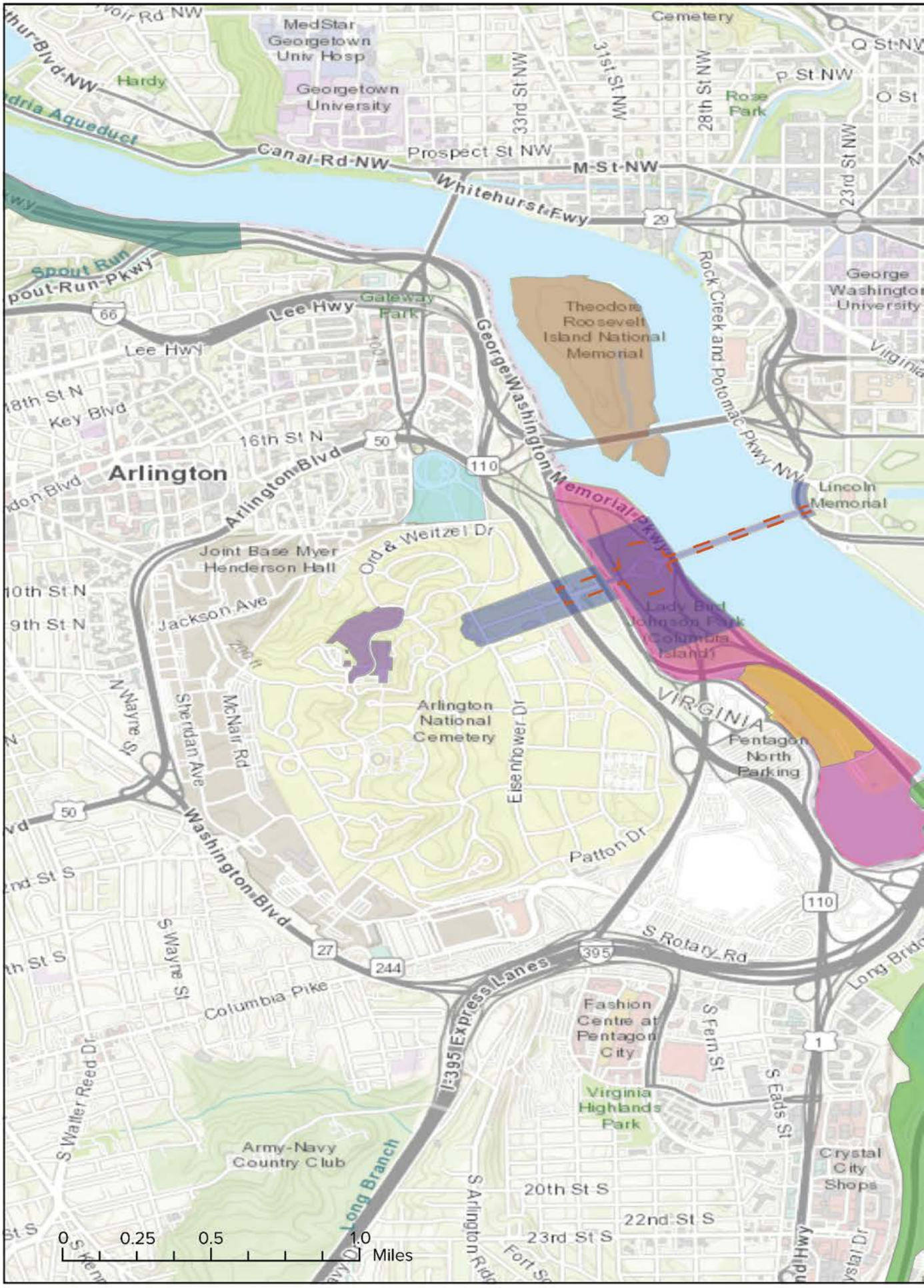
The National Register provides the basis for documenting and evaluating the historic significance and integrity of the Memorial Avenue Corridor cultural landscape. The *Arlington Memorial Bridge and Related Features* National Register nomination was approved for listing in the National Register on April 4, 1980 (NRHP# 80000346). The nomination lists the historic property at the state level of significance in the areas of Architecture, Engineering, Landscape Architecture, and Sculpture. The nomination provides a brief summary of the history, integrity, and elements that comprise the approximately 40-acre district. The significant dates in the 1980 nomination are from 1926 through 1932, encompassing the years when Arlington Memorial Bridge was constructed. The 1980 nomination describes the four military memorials (as of that year) that were installed along Memorial Avenue beginning in 1961. Since listing, two additional memorials have been added along the avenue, and the memorial to Women in Military Service for America has been incorporated into the Hemicycle at the entrance to Arlington National Cemetery at the western end of Memorial Avenue. The boundaries of the 1980 nomination include: the southern terminus of Rock Creek and Potomac Parkway; the Watergate Steps; Arlington Memorial Bridge; Memorial Circle; the Boundary Channel Bridge; and the extent of Memorial Avenue, including the Hemicycle.

In 2022, a draft updated National Register nomination for the Arlington Memorial Bridge and Related Features Historic District is underway. The updated draft nomination records a period of significance from 1926 through 2000, beginning with the construction of the bridge and concluding with the installation of the most recent memorial on Memorial Avenue. The nomination records the resources at the national level of significance under Criteria A and C, with Criteria Considerations F and G, in the areas of Architecture, Landscape Architecture, Art (Sculpture), Engineering, Commemoration, and Community Planning and Development.

The boundaries of the updated draft Arlington Memorial Bridge and Related Features Historic District nomination encompass 37.84 acres and modify the previously listed boundaries of the National Register nomination in order to: align the boundary more closely with the bridge structures; slightly reduce the boundaries around Memorial Avenue and the Women in Military Service for America Memorial; and incorporate the landscape features that were part of the design of Memorial Circle, including the white pines (*Pinus strobus*) alongside the pylons, planted in accordance with the 1968 Edward Durell Stone, Jr., planting plan. The boundaries encompass the District of Columbia approaches to Arlington Memorial Bridge, including the southern terminus of Rock Creek and Potomac Parkway and the Watergate Steps, the equestrian sculpture groups (*The Arts of War* and *The Arts of Peace*), Arlington Memorial Bridge, Memorial Circle, the Boundary Channel Bridge, Memorial Avenue, the Women in Military Service for America Memorial and Hemicycle, and associated landscape features.

In addition to the 1980 nomination and the pending 2023 update, several other National Register-listed historic districts and sites intersect with or relate to the Memorial Avenue Corridor, as it is defined for this CLR (***refer to Drawing #3***):

The Arlington National Cemetery Historic District was listed in the National Register on April 11, 2014 (NRHP# 14000146), and includes the military


MedStar Georgetown Univ Hosp
Georgetown University
Hardy
Cemetery
Rose Park
Canal Rd NW
Prospect St NW
M St NW
Whitehurst Fwy
Spout Run
Lee Hwy
Gateway Park
Theodore Roosevelt Island National Memorial
George Washington University
Rock Creek and Potomac Pkwy NW
George Washington Memorial Pkwy
Lincoln Memorial
Arlington
Arlington Blvd
16th St N
Key Blvd
Joint Base Myer Henderson Hall
Ord & Weitzel Dr
Jackson Ave
Lady Bird Johnson Park (Columbia Island)
VIRGINIA
Pentagon North Parking
Arlington National Cemetery
Eisenhower Dr
Sheridan Ave
McNair Rd
N Wayne St
Washington Blvd
Patton Dr
S Rotary Rd
Columbia Pike
I-395 Express Lanes
Fashion Centre at Pentagon City
S Fern St
S Eads St
Virginia Highlands Park
Army-Navy Country Club
Long Branch
20th St S
22nd St S
23rd St S
Crystal City Shops
0 0.25 0.5 1.0 Miles



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Contextual Cultural Landscapes

SOURCES

1. Base imagery: Fairfax County, VA, M-NCPPC, VITA, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA
2. NPS GIS Data

DRAWN BY

Meg Frisbie, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Memorial Avenue Corridor - CLI Boundary
- George Washington Memorial Parkway, North - CLI Boundary
- Theodore Roosevelt Island - CLI Boundary
- Arlington House, the Robert E. Lee Memorial - CLI Boundary
- Arlington Ridge Park - CLI Boundary
- Lady Bird Johnson Park - CLI Boundary
- LBJ Memorial Grove - CLI Boundary
- Mount Vernon Memorial Highway North to Alexandria - CLI Boundary

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DRAWING #3

cemetery, Arlington House, Memorial Drive, the Hemicycle, and Arlington Memorial Bridge as contributing resources. The nationally significant district is listed under Criteria A, B, and C, with Criteria Considerations D, F, and G, in the areas of Military, Landscape Architecture, Politics/ Government, and Architecture. The period of significance is 1864 through the present.

The southern boundary of the National Register-listed George Washington Memorial Parkway (NRHP# 95000605) ends just south of where the Parkway crosses below Memorial Avenue on Lady Bird Johnson Park (Columbia Island). The Parkway was listed in the National Register at the national level of significance on June 2, 1995, as part of a multiple property nomination entitled "Parkways of the National Capital Region." It is listed under Criteria B and C, with Criteria Consideration G, in the areas of Transportation, Landscape Architecture, and Other (person), based on the landscape's association with First Lady Claudia "Lady Bird" Johnson. The period of significance is from 1930 through 1966. An updated National Register nomination for the George Washington Memorial Parkway is in progress as of 2022. The updated nomination encompasses Mount Vernon Memorial Highway and Clara Barton Parkway, and includes the Patowmack Canal; the nomination does not cover every non-parkway site managed by GWMP.

The Mount Vernon Memorial Highway National Register nomination (NRHP# 81000079), listed on May 18, 1981, addresses a portion of the George Washington Memorial Parkway beginning on the south side of Memorial Circle at Lady Bird Johnson Park (Columbia Island) and ending at the Mount Vernon plantation in Fairfax County, Virginia. The Mount Vernon Memorial Highway meets Criteria A and C in the areas of Engineering, Landscape Architecture, Sculpture, Transportation, and Other (Commemoration), with a period of significance from 1929 through 1932.

Located on the southern end of Lady Bird Johnson Park (Columbia Island), the Lyndon Baines Johnson Memorial Grove on the Potomac is a memorial to the 36th president. The grove was administratively listed in the National Register on December 28, 1973 (NRHP# 73002097), although the memorial was not dedicated until 1976. A full nomination was signed by the Keeper of the National Register on July 14, 1998. The memorial grove is listed at the national level of significance under Criteria A and C, in addition to Criteria Considerations F and G, in the areas of Politics, Conservation, and Landscape Architecture. The period of significance is from 1974 to 1977. The Lyndon Baines Johnson Memorial Grove on the Potomac is located south of the cultural landscape boundaries for this CLR.

The National Mall was administratively listed in the National Register in 1966, with a completed nomination form accepted on May 19, 1981 (NRHP# 66000031). An expanded National Mall Historic District National Register nomination was listed on December 8, 2016 (NRHP# 16000805) at the national level of significance under Criteria A, C, and D, with Criteria Considerations B, F, and G. The areas of significance are Architecture, Archeology, Art, Community Planning and Development, Engineering, Entertainment/Recreation, Ethnic Heritage (Black), Landscape Architecture, Politics/ Government, and Social History. The period of significance for Criterion A is 1791 through the present, and the period of significance for Criteria C and D is 1791 through 1965. Arlington Memorial Bridge falls just outside the boundaries of the district.

Views along the Memorial Avenue Corridor axis are punctuated by the Lincoln Memorial to the east/northeast and Arlington House to the west/ southwest. While outside the boundaries of the Memorial Avenue Corridor cultural landscape, the Corridor physically and figuratively connects the two resources. The Memorial Avenue Corridor is a symbolic representation of the reconciliation between the North and South following the Civil War. Both the Lincoln Memorial and Arlington House are listed in the National Register of Historic Places at the national level of significance. The Lincoln Memorial is a contributing resource to the National Mall Historic District (NRHP# 16000805) and was administratively listed as an individual resource in 1966, with a nomination completed in 1981 (NRHP# 66000030). The Lincoln Memorial was listed for its significance in the areas of Architecture, Landscape Architecture, Sculpture,

and Other (Commemoration). The nomination identified 1912 through 1922 as the property's significant dates. The Lincoln Memorial and associated grounds were also included within the boundaries of the East and West Potomac Parks Historic District (NRHP# 73000217), which was added to the National Register in 1973 and updated in 2001.

Arlington House, the Robert E. Lee Memorial, was administratively listed in the National Register in 1966, with a nomination form completed in 1980 (NRHP# 66000040). A 2014 nomination update (NRHP# 14000067) for Arlington House expanded the historic district boundary to incorporate significant non-National Park Service-owned federal property that has important historical associations with the house and domestic core of the Arlington House plantation. The district was recorded as significant at the national, state, and local levels under Criteria A, B, C, and D, in the areas of Architecture, Landscape Architecture, Military, Politics/Government, Other (Commemoration), Conservation/Historic Preservation, Ethnic Heritage – Black, Archeology – Prehistoric, and Archeology – Historic, Non-aboriginal. The periods of significance are 3000 BCE through 1200 BCE, and 1802 through 1935.

Cultural Landscapes Summary

A Cultural Landscape Inventory (CLI) for the Memorial Avenue Corridor was certified in 2004 (CRIS-CL# 600247). The CLI records the period of significance as 1901 through 2000, encompassing the timespan from when the McMillan Commission outlined the concept, form, and location of the Memorial Avenue Corridor through the installation of the most recent military memorial on Memorial Avenue. The report records the cultural landscape as significant at the National level under Criterion C of the National Register in the areas of Architecture, Landscape Architecture, Art, Engineering, and Community Planning and Development. The CLI does not specify the level of significance. The boundaries of the CLI include the Arlington Memorial Bridge, Memorial Circle, and Memorial Avenue, including the Hemicycle at the entrance to Arlington National Cemetery; as noted above, this CLI boundary included resources that are no longer managed by the National Park Service.

The State Historic Preservation Officer (SHPO) for the Commonwealth of Virginia concurred with the findings of the Memorial Avenue Corridor CLI on July 19, 2004, in accordance with Section 110 of the National Historic Preservation Act. The District of Columbia Historic Preservation Officer (HPO) concurred with the findings of the report on August 16, 2004. The CLI was approved and certified in Good condition by the GWMP Superintendent on June 13, 2003. The cultural landscape was determined to be in Good condition upon reassessment in 2009 and again in 2015.

A CLI for Lady Bird Johnson Park (CRIS-CL# 600245), previously called Columbia Island, was completed in 2005; it includes Memorial Circle. The CLI received Superintendent concurrence on August 30, 2004, and concurrence from the District of Columbia HPO on March 25, 2005. The landscape is significant under Criteria A and C, with Criteria Considerations F and G. The CLI documents significance in the areas of the Architecture and Landscape Architecture, with a period of significance spanning from 1915 through 1979. The landscape was certified in Good condition in 2010, 2016, and again in 2022.

Other CLIs have been completed for properties within the greater context of the Memorial Avenue Corridor (*see Drawing #3*). As noted above, the Lincoln Memorial and Arlington House are outside the boundaries of the cultural landscape but are historically related to the corridor boundary and punctuate the corridor's extant views. A CLI for the Lincoln Memorial Grounds (CRIS-CL# 600010) was completed in 2022. The CLI documents the nationally significant landscape under Criteria A and C, with Criteria Considerations F and G, in the areas of Architecture, Entertainment/recreation, Ethnic Heritage – Black, Social History, Politics/Government, Art, and Landscape Architecture. The periods of significance are from 1791 through 1914, 1914 through 1933, and 1933 through the present. The Lincoln Memorial landscape is listed in Good condition in 2022.

A 2009 CLI for Arlington House (CRIS-CL# 600049) records the nationally significant landscape as

eligible for listing under Criteria A, B, C, and D, with Criteria Consideration F. The areas of significance are Military, Politics/Government, Social History, Architecture, and Archeology. The period of significance is recorded as 1802 through 1880. The landscape was recorded in Good condition, and received Superintendent certification on July 24, 2009, and concurrence from the Virginia SHPO on August 4, 2009. The Robert E. Lee Memorial Cultural Landscape Report, Part I, was completed in 2001. The report provides documentation of the history of land development of the Arlington House plantation and surroundings. The report does not include information on National Register eligibility.

Two CLRs have been completed for resources related to the Memorial Avenue Corridor. A CLR for the *Vegetation of the George Washington Memorial Parkway, Central Section: Alexandria to Arlington Memorial Bridge*, was completed in 2009. This report analyzes the historic integrity of vegetation along the GWMP Parkway between Alexandria, Virginia, and Arlington Memorial Bridge. A Cultural Landscape Report for the Mount Vernon Memorial Highway was completed in 1992. The CLR restates that the Highway was listed in the National Register in 1981.

CLR Boundary Summary

As noted above, the boundaries for this Memorial Avenue Corridor Cultural Landscape Report differ from the National Register nominations for the Arlington Memorial Bridge and Related Features Historic District and from the 2004 CLI for the Memorial Avenue Corridor, based on changes in land ownership and other considerations.

Beginning on the eastern side of the Arlington Memorial Bridge, the CLR boundaries include: *The Arts of War* sculptures; Arlington Memorial Bridge spanning the Potomac River; the Memorial Circle traffic rotary and surrounding landscape features; the Boundary Channel Bridge; and Memorial Avenue itself, complete with pedestrian circulation, statuary, and plantings, ending on the west side of where Memorial Avenue crosses over VA Highway 110.

The boundaries for this CLR were established based on the location of historic features associated with the corridor's design and development. The boundaries of the cultural landscape match the boundaries of the draft 2022 National Register nomination for Arlington Memorial Bridge and Related Features Historic District where the land is managed by GWMP:

- Around Memorial Circle, the boundary creates a circle matching the draft 2022 National Register nomination boundary.
  - On the east side of Memorial Circle, the boundary crosses S Arlington Boulevard from Washington Boulevard, incorporating the white pines (Pinus strobus) planted around the pylons at the west end of Arlington Memorial Bridge;
  - On the north side of Memorial Circle, the boundary encompasses an area north of Memorial Circle incorporating clusters of extant trees at the north of the traffic rotary that were in place by the end of the period of significance in 1979. It continues to the Boundary Channel Bridge;
  - On the south side of Memorial Circle, the boundary follows Washington Boulevard to the south, again incorporating a massing of white pines (Pinus strobus), and then heads west to incorporate tree clusters planted around Memorial Circle during the period of significance. (These clusters are located north of the open area used for staging during the Arlington Memorial Bridge Rehabilitation Project in 2018-2020.) The boundary continues north along Washington Boulevard, near the west side of Lady Bird Johnson Park (Columbia Island), connecting with the Boundary Channel Bridge;
- In the western section of the cultural landscape, the boundaries were confirmed based on the alignment of the avenue and the vegetation (holly hedges and white oaks) that flank the roadway on its north and south sides and match the boundaries of the draft 2022 National Register nomination.
- The westernmost extent is determined by the transition from GWMP management to

Department of the Army management, marked by the western edge of State Bridge #5020 over VA Highway 110. (This boundary ends east of the boundary of the draft 2022 National Register nomination.)

Within the CLR boundaries, west of the Boundary Channel, are small in-holdings managed by WMATA for access to the Arlington Cemetery Metro station. These in-holdings are represented on associated CLR maps, and excluded from the treatment recommendations.

These corridor boundaries cross several planes of landscape, even though the Avenue itself proceeds along a relatively flat, uninterrupted grade. In addition to the Arlington Memorial Bridge and the Boundary Channel Bridge, which span the waterways below, the Memorial Avenue roadway incorporates several overpasses to allow VA Highway 110, the George Washington Memorial Parkway, and the metro line to transect the corridor at a lower grade. Access ramps for vehicles mediate the changes in grade between these roads, and additional walks do the same for pedestrians moving between the roadway above and the metro line and Mount Vernon Trail below.

Statement of Significance Summary

The Memorial Avenue Corridor cultural landscape is a component of the designed network of public buildings, roads, parks, memorials, and other features that comprise the monumental core of the nation's capital. The approximately 0.7-mile-long Memorial Avenue Corridor extends the east-west axis of the L'Enfant and McMillan Plans from the historic center of Washington, D.C., across the Potomac River to Arlington, Virginia. Arlington Memorial Bridge, a central feature of the Corridor, was constructed not only as a transportation route across the river, but also a memorial to military service and as a symbolic representation of the reconciliation between the North and South following post-Civil War reunification. The Memorial Avenue Corridor creates a physical, visual, and symbolic relationship between the national memorial in D.C. for Abraham Lincoln, the President of the United States during the Civil War, and Arlington House in Virginia, former home of Confederate General Robert E. Lee.

The Memorial Avenue Corridor cultural landscape is eligible for inclusion in the National Register of Historic Places at the national level of significance under Criteria A and C, with Criteria Considerations F and G, in the areas of Architecture, Art (Sculpture), Community Planning and Development, Engineering, Landscape Architecture, and Politics/Government. The period of significance for the Memorial Avenue Corridor cultural landscape begins in 1901 with the Senate Park Commission's articulation of the basic elements of the Corridor, and concludes in 1979, with the last known revision of the phased planting plan for Lady Bird Johnson Park (Columbia Island) developed by landscape architect Edward D. Stone, Jr. The period of significance encompasses the initial conception and composition for the Memorial Avenue Corridor, the construction of the Arlington Memorial Bridge and other corridor features, and the fuller realization of the corridor's design with the addition of the memorials on Memorial Avenue and plantings around Memorial Circle.

CRITERION A

Areas of Significance: Politics/Government

Level of Significance: National

Period of significance: 1901-1979

The Memorial Avenue Corridor is significant at the national level in the area of Politics/Government. It was designed as a monumental corridor to unite the Lincoln Memorial, a tribute to the 16th American president, to Arlington House, former home of Confederate General Robert E. Lee, and Arlington National Cemetery. The corridor is also nationally significant in the area of Politics/Government based on its symbolic role as a direct link between Washington, D.C., as the federal capital (associated with the United States Army during the Civil War) and Virginia, a former member state of the Confederacy and the home state of Robert E. Lee, leader of the Confederate Army. Constructed as a conciliatory act, the Memorial Avenue Corridor cultural landscape derives its historic significance

from its role in bridging these political divides in both figurative and literal terms.

Politics/Government

After the Civil War ended, debates over how the events should be remembered took shape over the next several decades. Ulysses S. Grant's death in 1885 prompted discussion of a memorial to the commanding general who led the Union Army to victory during the Civil War and served as the 18th president of the United States. The following year, Congress passed a resolution supporting a memorial bridge. While several proposals were introduced over the following years, further development stalled until it was reframed in 1899 as "a Memorial to American patriotism," commemorating the reunification of the North and South following the Civil War.

President William McKinley, who served as the 25th president from 1897 until his assassination in 1901, included sectional reconciliation between the North and South as a policy in his inaugural address. Reconciliationists emphasized the commonalities between the North and South, abandoning sectionalism for the sake of unity and often overlooking enslavement as the cause of the Civil War. In tandem with advocates of the Lost Cause—an ideology that claims that the principles of the Confederate States were just—Reconciliationists worked to reshape white Americans' public understanding and collective memory of the Civil War. As more politicians and officials adopted this perspective, the Reconciliationist movement influenced the push to create a symbolic bridge.

After the assassination of President McKinley in 1901, the subject of the memorial bridge fully shifted from a commemoration of the preservation of the United States to one dedicated to reconciliation between the North and the South. While initially conceived as a memorial to General/President Ulysses S. Grant, the memorial bridge was ultimately constructed as a symbol of reunification, linking two major Civil War-era symbols within the greater monumental landscape.

CRITERION C

Areas of Significance: Architecture, Engineering, Landscape Architecture, Art (Sculpture), and Community Planning and Development

Level of Significance: National

Period of significance: 1901[1]-1979

Significant dates:

1901/1902: Establishment of the Senate Planning Commission and publication of its recommendations, known as the McMillan Plan, which guided the 20th century development of Washington, D.C.

1926-1932: Construction of Arlington Memorial Bridge

1940: Construction of Memorial Circle

1968: Creation of the Stone planting plan for Memorial Circle

The Memorial Avenue Corridor is an important integration of the principles of the City Beautiful Movement with a functional and commemorative transportation corridor. The Corridor is nationally significant under Criterion C in the areas of Architecture, Engineering, Landscape Architecture, Art (Sculpture), and Community Planning and Development for its embodiment of the Beaux-Arts principles of the City Beautiful Movement expressed in the McMillan Plan recommendations for the Washington, D.C., core. As an influential approach to civic design, the City Beautiful Movement espoused a broad set of tenets that emphasized formal and classical treatments articulated in the architectural, engineering, sculptural, and landscape features of the Corridor, which blend with and complement the surrounding landscapes of the nation's capital. Today, the Memorial Avenue Corridor exists as an important public space designed and utilized both for transportation and memorialization.

Based on the new memorials that were installed in the late 20th century according to the original

1. This start date for the period of significance is consistent with the date listed in the avenue's Cultural Landscape Inventory, but it differs from the start date (1926) named in the updated National Register of Historic Places nomination; refer to that NRHP documentation for the explanation of that period of significance.

City Beautiful landscape design, the landscape is eligible under Criteria Consideration G, having achieved significance within the past 50 years.

Architecture, Engineering, and Landscape Architecture

The Senate Park Commission, which formulated the McMillan Plan in 1901/1902 with recommendations for the design and development of Washington, D.C., was composed of highly regarded American Renaissance period planners and designers, including architects Daniel H. Burnham and Charles F. McKim, landscape architect Frederick Law Olmsted, Jr., and sculptor Augustus Saint-Gaudens. As part of the McMillan Plan's implementation, the Memorial Avenue Corridor was designed in 1923 by William Mitchell Kendall of the architectural firm McKim, Mead & White. The firm was at the forefront of the City Beautiful Movement, emphasizing formal and classical treatments in its designs and wielding national influence in city planning around the turn of the 20th century.

The Memorial Avenue Corridor is a designed civic monument that extends the processional and formal characteristics of the monumental core of the nation's capital across the Potomac River to Arlington National Cemetery and the Arlington House plantation. As a resource significant for its architectural design and engineering, Arlington Memorial Bridge is a Neoclassical, multi-span, masonry, steel, and stone-arch symmetrical bridge serving vehicular and pedestrian traffic. It was designed to be "a low structure on a line from the site of the Lincoln Memorial to the Arlington Mansion - a monumental rather than a traffic bridge, but a significant element in an extensive park scheme" (Moeller, Jr. 2012: 279). Kendall envisioned the bridge to fit within the design aesthetic of Washington, D.C.'s, monumental core as articulated in the McMillan Plan.

The design of Arlington Memorial Bridge is a masterpiece of Neoclassical architecture and an innovation in engineering. Arlington Memorial Bridge was originally constructed with a center bascule span that was seamlessly integrated into the design through modern engineering techniques. The bascule span was removed during a major bridge rehabilitation project that took place between 2018 and 2020. The original design situated the bascule span mechanical equipment and structural elements below the bridge deck so as not to interfere with the horizontality of the bridge. The integrated design maintained the bridge's low profile, preserving the views between the Lincoln Memorial to the east and Arlington National Cemetery and the Arlington House plantation to the west. Arlington Memorial Bridge blended the aesthetic principles of the City Beautiful Movement with sophisticated engineering to create an example of functional monumental architecture that is interwoven into the daily transportation needs of Washington, D.C., and surrounds. While the bascule span is no longer part of the bridge operation, the engineering features were repaired and replaced in situ as part of the rehabilitation project and the integrated design is still evident.

The landscape features of the Memorial Avenue Corridor also ascribe to the design principles of the City Beautiful Movement, carrying the classical forms of the nation's capital across the Potomac River into Virginia. The McMillan Commission conceived of the plans for the Memorial Avenue Corridor landscape features, which evolved over the ensuing decades with input from several practitioners. The design of Memorial Avenue includes grass panels, holly hedges, and rows of oak trees to emphasize the axial composition of Arlington Memorial Bridge and the greater Corridor. These features exist today and continue to frame the formal approach and monumental entrance to Arlington National Cemetery.

Memorial Circle was a focal point of several landscape designs for the corridor, and it was a key element in the circulation plans for Lady Bird Johnson Park (Columbia Island). In the 1960s, landscape architect Edward D. Stone, Jr. created a planting plan as part of the Beautification Program efforts initiated by First Lady, Lady Bird Johnson. Johnson's Beautification Program, which involved both public and private entities, was concerned with environmental improvements and condition enhancements that sought to address the interwoven goals of decreasing pollution, increasing access to recreation, improving mental

health, and creating cleaner water. The Program aimed to impact the overall health of society through interventions in the landscape, including planting flowers, shrubs, and trees, and installing recreational equipment and other amenities. Johnson used Washington, D.C., as the pilot city for the Beautification Program's nationwide park rehabilitation and landscape improvements. Within the pilot city, Memorial Circle and the greater Lady Bird Johnson Park (Columbia Island) landscape were model sites that received large plantings of daffodils (*Narcissus*) and massed flowering dogwoods (*Cornus florida*), white pines (*Pinus strobus*), and scarlet and white oak trees (*Quercus coccinea* and *alba*).

The architectural, engineering, and landscape features within the Memorial Avenue Corridor possess high artistic value and complement the landscape and architectural features of the monumental core of Washington, D.C. The corridor itself is a major civic monument that embodies the design principles of the City Beautiful Movement and extends the capital city center across the Potomac River to Arlington, Virginia.

Art (Sculpture)

Sculptor Leo Friedlander designed equestrian statues that were commissioned in 1925 and installed at the eastern entrance of Arlington Memorial Bridge in 1951. Called "Sacrifice" and "Valor," and collectively known as *The Arts of War*, the gilded bronze equestrian sculptures symbolize the defensive strength of the nation. The statues stand 19 feet tall atop granite pedestals ornamented with carved wreaths and 36 stars to represent the states of the United States at the end of the Civil War. *The Arts of War* equestrian sculptures contribute to the Neoclassical design of the Corridor and to the bridge as a memorial to military service and history. The installation of the equestrian statues marked the completion of the last element prescribed in the modified 1923 McKim, Mead & White design for the Corridor.

Memorial Avenue was originally designed as an "Avenue of Heroes," with niches planned among the holly hedges for the placement of monuments. Since 1961, seven memorials have been installed along Memorial Avenue in accordance with the original design intent, including two within the boundaries of this CLR: the Seabees Memorial (1974)[2] and the United Spanish War Veterans Memorial (1965). These memorials are representative of the several national memorials and monuments to military history established within the core of Washington, D.C., during the latter half of the 20th century. These memorials and monuments throughout the monumental core of the nation's capital commemorate nationally significant units and groups of service members, and important military actions.

The memorials are thematically connected to, and compatible with, the design of the historic landscape, expressing Memorial Avenue's role (and moniker) as a nationally significant commemorative space. The equestrian statues and two military memorials within the CLR boundaries are contributing features that express the full realization of the original Corridor design and add to its significance as a memorial to the union of the States and military service.

Community Planning and Development

The Memorial Avenue Corridor embodies the planning philosophies articulated in the 1901 Senate Park (McMillan) Commission's plan, which was itself a refinement and modernization of the 1791 L'Enfant Plan. The McMillan Plan, considered among the most significant urban plans in American history, incorporated the order, hierarchy, and formality of the 20th century American City Beautiful movement into L'Enfant's 18th century vision, which was grounded in Baroque city planning principles (Kohler and Scott, eds. 2006). These plans are recognized as nationally significant in association with the planning and development of the nation's capital and its surroundings. The basic elements of the Memorial Avenue Corridor were first articulated in the 1901 plan of McMillan Commission, extending the planning philosophies and designs across the

2. Added in 1974, this memorial was installed 48 years ago at the time of this draft. Given its proximity to the 50-year threshold, and the fact that the CLR's review and approval process will approach that threshold, this memorial has not been evaluated under Criteria Consideration G.

Potomac River in order to expand the monumental core into the greater region.

CRITERIA CONSIDERATION F

Eligible under Criteria Consideration F, the Memorial Avenue Corridor stands as a commemorative symbol of national unity through monumental architecture and memorials devoted to military service and history. The Commission of Fine Arts determined that "the proposed Arlington Memorial Bridge would be a "memorial to those who have died in the military service of the country" (Arlington Memorial Bridge Commission Report 1932: 32). Thus, the bridge was envisioned not solely as a transportation link, but also as a memorial to reunification following the sectional rift of the Civil War. The Memorial Avenue Corridor venerates the reconciliation between the United States and the Confederacy, connecting the Lincoln Memorial with Arlington House, the Robert E. Lee Memorial.

The Memorial Avenue Corridor functions as a formal extension of the National Mall and broader monumental core of Washington, D.C., which is the "largest and most significant commemorative landscape in the United States" (Robinson and Associates 2016: 93), featuring monuments and memorials to individuals and events significant in the nation's history. Conceived as an "avenue of heroes," Memorial Avenue is the ceremonial entrance to Arlington National Cemetery and includes seven memorials dedicated to military units and nationally important military actions. Two of these memorials are within the boundaries of the CLR: the Seabees Memorial (1974) and the United Spanish War Veterans Memorial (also called "The Hiker") (1965). Added over the past several decades, these types of memorials were envisioned as part of the original Corridor design. They complement the greater historic landscape and contribute to the commemorative and connective function of the Memorial Avenue Corridor.

The corridor also has a historic and current use as a ceremonial space. It was the site of President John F. Kennedy's funeral procession to Arlington National Cemetery in 1963, and also hosted the 1958 procession for the reburial of the World War II and Korean War unknown soldiers in Arlington National Cemetery, as well as hundreds of other burials of servicemen and women. The Memorial Avenue Corridor landscape fulfills both functional and memorial roles, as a transportation corridor, a memorial to military service, and a civic monument to reconciliation following the Civil War.

CRITERIA CONSIDERATION G

The Memorial Avenue Corridor is eligible under Criteria Consideration G, having achieved exceptional significance within the last 50 years in association with the phased and partial implementation of the Edward D. Stone, Jr., planting plan on Lady Bird Johnson Park (Columbia Island), including around Memorial Circle. Stone's plan called for 12 species of trees to be planted, and was developed under the auspices of the Beautification Program. Implementation of the first phase of the Stone plan began in spring of 1968 with the planting of daffodils (*Narcissus*), 209 dogwoods (*Cornus florida*), 38 white pines (*Pinus strobus*), and 18 scarlet oaks (*Quercus coccinea*) around Memorial Circle. The NPS implemented Stone's 1968 plan in phases based on available funding; the second phase of planting deciduous and evergreen trees took place in the mid-1970s.

The period of significance ends in 1979, when designers reassessed Stone's plan, evaluated the success of the plantings, and modified the plan to suggest replacements, based on survival rates. Changes to the plan in this final round of modifications included planting more white pine trees (*Pinus strobus*) and adapting the dogwood (*Cornus florida*) plantings to better ensure survival, after many died from a combination of factors. Also in 1979, flowerbeds were added at the base of the pylons around Memorial Circle. The last planting recorded during the Stone planting phases dates to 1979, marking the end of the period of significance.

The Stone planting plan was never fully implemented. The plan was revised and altered from its original 1968 form, with the last known phase of the original plan completed in 1979. In the decades since the period of significance, substitutions to existing species from the Stone plan, and the addition of new species, have

been made in the landscape for ecological and horticultural reasons. After the period of significance, the Stone plan was deployed as guidance, rather than a template, for plantings around Memorial Circle.

Conclusion

The Memorial Avenue Corridor cultural landscape, including its architectural, engineering, landscape, sculptural, and statuary features, is an integral component of the Neoclassical designed landscape that comprise the monumental core of the nation's capital. As a nationally-significant district, the cultural landscape is eligible for listing in the National Register under Criteria A and C, with Criteria Considerations F and G, in the areas of Architecture, Art (Sculpture), Community Planning and Development, Engineering, Landscape Architecture, and Politics/Government. Integrated into a modern transportation system that serves vehicles and pedestrians alike, the landscape has both connective and commemorative functions as a bridge spanning the Potomac River and as a memorial to military service, in addition to serving as a symbolic link between the Union and Confederacy following post-Civil War reunification. Today, the Memorial Avenue Corridor continues to function in its original role as a designed public space and transportation passageway that serves as a commemorative and symbolic landscape integrated into the nationally significant monumental core of the nation's capital.

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Chronology

NOTE: Events that occurred outside the study area boundaries are formatted with italics and noted with [Contextual].

START YEAR	END YEAR	ACTION	DESCRIPTION
c. 15,000 BCE	*c. 8000 BCE*	*Inhabited*	*[Contextual] Paleo-Indian peoples formed social groups that hunted, gathered plants, and fished in the coastal plains along what are now called the Potomac and Anacostia Rivers.*[1]
c. 8000 BCE	*c. 1200 BCE*	*Inhabited*	*[Contextual] Subsistence for Archaic-Indian peoples was based on hunting, fishing, and gathering plants. During the late Archaic period, some groups began living in semi-permanent or permanent settlements, and Archaic-Indian peoples seasonally camped along the Potomac and Anacostia Rivers.*[2]
c. 1200 BCE	*1600 CE*	*Farmed/Harvested*	*[Contextual] During the Woodland Period, the Nacotchtank people, established organized villages and trade networks along the Anacostia and Potomac Rivers. At this time, Native American groups began farming and cultivating crops.*[3]
1608	*1608*	*Explored*	*[Contextual] Captain John Smith was the first English colonizer to explore and map the Potomac River. Smith recorded and mapped the villages of Namoraughquend, north of present-day Alexandria, and Nacotchtank, at present-day Anacostia.*[4]
1624	*1624*	*Established*	*[Contextual] Captain John Smith published an account of his travels and maps of his explorations along the Potomac River in his book, General Historie of Virginia, in which he documented the land use and designs of the Algonquian-speaking Native Americans.*[5]
1632	*1632*	*Land Transfer*	*[Contextual] English colonizers claimed the lands described in Captain Smith's accounts. King Charles I granted the land north of the Potomac River that would become Washington, D.C., to George Calvert, Lord Baltimore. The charter passed shortly after Calvert's death and the lands were transferred to Cecilius Calvert, the second Lord Baltimore, and named Charles County, Maryland.*[6]
1651	*1655*	*Purchased/Sold*	*[Contextual] Lands from the northwest shore of the Occoquan to the Falls of the Potomac were granted and patented by English proprietors.*[7]
1669	1669	Land Transfer	A 6,000-acre tract of land on the west side of the Potomac, including the area that would become the Memorial Avenue Corridor and surroundings, was granted by Sir William Berkeley, royal Governor of Virginia, to English Captain Robert Howsing under the authority of King Charles II. The land was dominated by chestnut, oak, and hickory trees and served as home and hunting grounds to Algonquian-speaking tribes.[8]

START YEAR	END YEAR	ACTION	DESCRIPTION
1669	1670	Purchased/Sold	Less than one month after obtaining the land, Howsing sold the tract of land to surveyor and planter John Alexander for about 6000 pounds of tobacco.[9]
1690	1691	Land Transfer	6550 acres of land on the west side of the Potomac, including the original Howsing tract, was bestowed to Robert and Philip, John Alexander`s sons, upon his death.[10]
1735	1735	Land transfer	Upon the death of Robert Alexander, 4930 acres of land was bestowed to his children.[11]
1778	1778	Purchased/Sold	Heirs of Alexander sold 1100 acres of the property to John Parke Custis, stepson of George Washington. This land would become Arlington National Cemetery and Memorial Avenue, as well as part of the site of the Pentagon. Custis, wife Eleanor and two children, Nelly Parke and George Washington Parke Custis, moved into Robert Alexander`s former home at the mouth of Four-mile Creek (present-day Four Mile Run) and named it Abingdon.[12]
1790	*1790*	*Established*	*[Contextual] July 16. The Residence Act of 1790 established the District of Columbia as the nation's capital. Maryland and Virginia ceded the area within a 10-square-mile diamond, laid out by Andrew Ellicott and others, to the federal government. George Washington appointed three city commissioners to oversee the new federal district, including public reservations.*[13]
1791	*1791*	*Established*	*[Contextual] The new location for the nation's capital on the Potomac River was confirmed and a plan of the future city drawn by Pierre L'Enfant. L'Enfant specified a central, 400-foot wide "grand avenue" that would link the planned monument to George Washington on its western terminus with the Capitol on its eastern terminus. The "grand avenue" would later become the basis for the National Mall.*[14]
1792	*1792*	*Designed*	*[Contextual] After L'Enfant was dismissed from his position, Andrew Ellicott created a city plan based on L'Enfant's original design, maintaining the concept of the National Mall.*[15]
1793	1793	Built	By this date, the road to Alexandria crossed the lower river terrace of the Custis property.[16]
1800	*1800*	*Altered*	*[Contextual] The Potomac River in the vicinity of Washington, D.C., began to be silted enough to impede navigation. Attempts to clear the river channels began.*[17]

START YEAR	END YEAR	ACTION	DESCRIPTION
1800	*1800*	*Moved*	*[Contextual] The federal government officially moved from Philadelphia to Washington, D.C.*[18]
c. 1800	*c. 1810*	*Built*	*[Contextual] Between c. 1800 and c. 1810, two brick and stucco quarters for enslaved laborers were constructed on the Custis property.*[19]
1802	1802	Land Transfer	George Washington Parke (GWP) Custis inherited all of his father's properties and moved into a four-room home on the flats of the west side of the Potomac. This land would become part of the Arlington House plantation.[20]
1802	1861	Farmed/Harvested	Custis' enslaved laborers cleared the land, improved the previous tenant farm, and established a large market garden, orchards, pastures, and crop fields. The garden provided fresh fruits and vegetables to urban centers nearby. Wheat and corn were also grown on the flat plains by the Potomac River.[21]
1803	*1818*	*Built*	*[Contextual] Over a span of years and beginning with the north wing of the house, Arlington House was constructed on a high terrace above the Potomac River. Arlington House was intended as the Custis family seat with a decorative landscape and a prominent setting.*[22]
1808	*1809*	*Built*	*[Contextual] The Long Bridge (the location of today's 14th Street Bridge) was constructed in 1808 and opened in 1809.*
1809	*1809*	*Built*	*[Contextual] A road, beginning at a ferry landing across from Analostan Island (now Theodore Roosevelt Island), was built through the Custis' land to the Columbia Turnpike.*[23]
1810	*1810*	*Altered*	*[Contextual] The road to Alexandria at the foot of Arlington Heights was developed as a turnpike and called the Georgetown-Alexandria Road.*[24]
1833	*1843*	*Built*	*[Contextual] The Alexandria Canal, a seven-mile branch canal constructed by the Alexandria Canal Company that connected to the Chesapeake and Ohio Canal, crossed the Arlington House plantation estate.*[25]
1851	1900	Developed	An interest developed in constructing a bridge in the vicinity of where the Arlington Memorial Bridge is currently located. Congress periodically received proposals for a bridge in this location.[26]
1857	*1857*	*Established*	*[Contextual] Civil engineer Alfred Landon Rives completed the first comprehensive study of the Potomac River around Washington, D.C.*[27]
1857	1857	Land Transfer	GWP Custis died in October 1857. His daughter Mary Custis Lee, wife of Robert E. Lee, inherited the Arlington House plantation. Robert E. Lee and their son George Washington Custis Lee improved and maintained the property.[28]

START YEAR	END YEAR	ACTION	DESCRIPTION
1861	*1861*	*Military operation*	*[Contextual] Lee resigned from the U.S. Army in April 1861, fled Arlington House, and took command of the Virginia forces, which he named the Confederate Army of Northern Virginia.*
1861	*1865*	*Military operation*	*[Contextual] Mary Custis left Arlington the month after Lee took command of the Virginia forces. Shortly thereafter the Union Army crossed the Potomac River and encamped around the Lee family's former home, converting it from a plantation into a military stronghold. The Arlington House plantation was used during the four-and-a-half-year period of the Civil War to house and train Union soldiers.*[29]
1861	1862	Built	Roads were built through the Arlington House plantation to allow for passage and communication between military posts.[30]
1863	1888	Established	June. Under the authority of the Department of the Army, a Freedman's Village was established on the southeastern portion of Arlington House plantation, west of the Alexandria-Georgetown Turnpike. Wood frame buildings initially housed 100 people, including fugitives and former enslaved individuals (including many formerly enslaved by the Custis and Lee families). The axis of what would become Memorial Avenue and surrounding lands was divided into roughly 50 farms of approximately 10 acres apiece and farmed by freedmen. The community thrived until it disbanded in the late 1880s. [31]
1864	*1864*	*Established*	*[Contextual] May 13. Pvt. William Henry Christman and William H. McKinney were the first military servicemen to be buried at Arlington National Cemetery, one month before the cemetery was officially established.*[32]
1864	*1864*	*Purchased/Sold*	*[Contextual] Maria and Charles Syphax, formerly enslaved by the Custis family, purchased a 17-acre triangle-shaped parcel of land on the southern border of the Arlington House plantation. This tract of land had been given to them by GWP Custis in 1826.*[33]
1864	*1865*	*Established*	*[Contextual] The Federal government purchased the Arlington House plantation. On June 15, the plantation was deemed appropriate for burial use under Congressional legislation authorizing the President to purchase grounds for national cemeteries for burial of soldiers. Secretary of War Edwin M. Stanton officially designated that Arlington House and not more than 200 acres of the grounds be used as a military cemetery.*[34]
1864	*1870*	*Built*	*[Contextual] A circular drive in the northwest corner of property was built to access graves in that area. The Custis/Lee-era carriage drives winding around Arlington House were reestablished and regraded. Additional roads were also added connecting burial plots to main roads and to the mansion, including a road running along the northern boundary of the cemetery.*[35]

START YEAR	END YEAR	ACTION	DESCRIPTION
1865	*1865*	*Established*	*[Contextual] A survey was completed to document the existing conditions of the former Arlington House plantation, including fence lines, buildings and trees. Additionally, photographs were taken to record the damages to the property from the Civil War.*[36]
1865	*1890*	*Developed*	*[Contextual] The National Cemetery was developed. Following the Civil War, the land became a burial ground, which was a significant change from the residential and working landscape of the Custis/Lee years.*[37]
1867	*1867*	*Restored*	*[Contextual] By 1867, according to a report on the conditions of the Arlington National Cemetery, the lawns, gardens and slopes were gradually repaired from wartime damage and the flower garden was enclosed with a whitewashed narrow paling fence, as it had been before the war. Nearly all of the forests on the site were gone by this point, including the forests near the Potomac by Arlington Spring, around Fort Whipple north of the house, and those to the south near Fort McPherson.*[38]
1868	*1868*	*Memorialized*	*[Contextual] May 30. The first widely observed Memorial Day services were held on the portico of Arlington House in May to commemorate Civil War soldiers. Memorial Day became a legal holiday in 1888, after first established in 1868.*[39]
1869	*1869*	*Planted*	*[Contextual] One hundred cedar trees were planted around officers' graves and the main drives of the National Cemetery.*[40]
1870	*1910*	*Altered*	*[Contextual] The Potomac River was subject to extensive dredging, which reconfigured the waterfront on account of silting caused by poor agricultural practices and urbanization. The silting threatened to halt commercial ship traffic along the Potomac River.*[41]
1872	*1872*	*Established*	*[Contextual] March 5. Congress authorized a plan for the permanent improvements of Washington and Georgetown's harbors, which included a solution for the dumping of dredged material.*
1883	*1883*	*Purchased/Sold*	*[Contextual] A Supreme Court decision granted clear title of ownership of the National Cemetery property to the United States, and the Army took control of the former plantation.*[42]
1885	*1885*	*Memorialized*	*[Contextual] The death of Ulysses S. Grant prompted a national discussion of a memorial commemorating Grant, Abraham Lincoln, and post-Civil War reunification.*[43]

START YEAR	END YEAR	ACTION	DESCRIPTION
1886	1886	Designed	May. Congress passed a resolution supporting a bridge between the monumental core of Washington, D.C., and Arlington, Virginia. The first bridge design was created by Thomas W. Symons with the Army Corps of Engineers. The following year, Symons collaborated with architect Paul J. Pelz and submitted to Congress a Romanesque-style bridge to honor Grant; it featured hipped and conical roofed towers and a central double-leaf bascule. The drawings presented to Congress used the words "Memorial Bridge."[44]
1888	1889	Established	Army regulations stated that no one could reside on a military installation, which led to the gradual disassembly of the Freedman's Village.[45]
1889	*1889*	*Land transfer*	*[Contextual] Congress transferred 142 additional acres to the Arlington Cemetery.*[46]
1890	1890	Designed	Col. Peter C. Hains prepared a second design for a bridge connecting Washington, D.C., with Arlington Cemetery. The design included a suspension bridge without a draw.[47]
1892	c. 1900	Developed	The Senate Committee on Public Buildings and Grounds requested that the Secretary of War provide an estimate for the bridge construction. Major Davis of the Army Corps of Engineers proposed a suspension bridge similar to the 1890 Hains design. In the following years, additional proposals, actions, or bills were presented to Congress regarding the development and design of a bridge across the Potomac.[48]
1892	*1892*	*Engineered*	*[Contextual] Rip rap and other materials were deposited to construct a dike south of Mason's Island (previously called Analostan Island and today called Theodore Roosevelt Island). Materials that built up around the dike, and alluvial deposits that were part of the reclamation of the Potomac Flats, may have been incorporated later into engineering of Columbia Island.*[49]
1893	*1893*	*Established*	*[Contextual] Held in Chicago, the World's Columbian Exposition fully introduced the City Beautiful movement to the United States. At the exposition, the Court of Honor was designed by the architectural firm of McKim, Mead & White. Members of McKim, Mead & White would become part of the McMillan Commission, the Arlington Memorial Bridge Commission, and the Commission of Fine Arts in Washington, D.C. McKim, Mead & White would also be the firm to design Arlington Memorial Bridge and its adjacent resources.*[50]
1894	1894	Farmed/Harvested	By this year, a vegetable garden that served Fort Myer was located in the northern part of the lower terrace at the National Cemetery. The future Memorial Avenue axis would cut through the garden's southern corner when constructed.[51]
1894	*1894*	*Purchased/Sold*	*[Contextual] By this year, the Washington Southern Railway owned the old route of the Georgetown-Alexandria Canal.*[52]

START YEAR	END YEAR	ACTION	DESCRIPTION
1897	*1897*	*Land Transfer*	*[Contextual] An additional 56 acres were added to Arlington Cemetery from surrounding lands.*[53]
1897	*1897*	*Established*	*[Contextual] Lands of the future East and West Potomac Parks in Washington, D.C., were set aside as a public riverside park.*[54]
1899	1899	Designed	Congress appropriated $5,000 for additional study of the memorial bridge between the monumental core of D.C. and Arlington. A team of four engineers prepared plans, and a jury of several engineers and architects distilled the plans into a structure with a steel bascule draw. The design of William H. Burr and Edward P. Casey for a memorial bridge across the Potomac River was selected.[55]
1900	1900	Land Transfer	An act of Congress gave the Department of Agriculture approximately 400 acres of the former Arlington House plantation for an experimental farm. A small part of the Arlington Experimental Farm extended into what would become Memorial Avenue.[56]
1900	1900	Designed	April. The Secretary of War submitted William Burr and Edward P. Casey's plans for a bridge with a bascule to Congress. No further action was taken at this time.[57]
1901	1902	Designed	The Senate Park Commission was appointed at the persuasion of Michigan Senator James McMillan. The recommendations of the Senate Park Commission, known as the McMillan Plan, used Pierre L'Enfant's 1791 plan as the basis for their designs. The Plan included a low-profile monumental bridge that would link the Lincoln Memorial to Arlington House, a symbol of the Confederacy.[58]
1910	1910	Established	The U.S. Commission of Fine Arts (CFA) was established by an act of Congress under President Howard Taft to advise federal agencies on matters relating to statues, fountains, monuments, buildings, coins and medals, and other entities on public lands. The CFA was one of the agencies that would oversee and implement the McMillan Plan's recommendations, including the development and construction of the memorial bridge.[59]
1913	*1913*	*Designed*	*[Contextual] Congress approved Henry Bacon's design for the Lincoln Memorial and its location.*[60]
1913	1913	Established	March 4. The Arlington Memorial Bridge Commission (AMBC) was established with the purpose of overseeing the design, planning, construction, and reporting to Congress on the design of a bridge crossing the Potomac to Arlington.[61]
1915	1927	Altered	The Army Corps of Engineers deposited dredged material from the Potomac River bottom to the west of its main navigation channel, beginning the formation of Columbia Island. By 1927, the island had been filled to an average level of 20 feet.[62]
1917	*1923*	*Built*	*[Contextual] Francis Scott Key Memorial Bridge was constructed, connecting Georgetown to Rosslyn, Virginia.*[63]

START YEAR	END YEAR	ACTION	DESCRIPTION
1921	1921	Abandoned	The Burr-Casey bridge design and the New York Avenue location of this and previous bridge designs were abandoned.[64]
1921	*1921*	*Planned*	*[Contextual] The CFA accepted plans for redesigning the grounds of Arlington National Cemetery with the main goals to improve safety of visitors through the redesign of roads and paths. The plans also aimed to create a solemn and patriotic setting.*[65]
1921	1921	Moved	November. A large traffic jam on Armistice Day, prior to the dedication ceremony for Tomb of the Unknown Soldier, resulted in the decision to construct the memorial bridge.[66]
1922	1922	Designed	Congress authorized appropriations, and the AMBC unanimously decided on a low-level bridge with a draw span constructed on a line from the Lincoln Memorial to the Arlington House plantation. Lieutenant Colonel C.O. Sherrill of the Corps of Engineers and the Executive Officer of the AMBC reported in December meeting that: "The bridge is to start at the Lincoln Memorial and head toward the Lee Mansion, the bridge proper to terminate on Columbia Island, where there would be a round point, from which three roadways are to diverge, one north, to connect with the Lee Highway, one south to connect with the road to Mount Vernon, and one directly west to the Arlington National Cemetery."[67]
1923	1923	Designed	March. The Senate Park Commission selected the architectural firm of McKim, Mead & White to design the memorial bridge.[68]
1923	1923	Designed	May. William Mitchell Kendall of McKim, Mead & White presented his initial design for the Memorial Avenue Corridor to the CFA. The plan presented a design for the bridge and Memorial Avenue, in addition to a design for Columbia Island. In the plans, Columbia Island included a continuation of the bridge axis and a cross axis of north/south roadways intersecting at a plaza that was to be embellished with two large columns flanking the main axis.[69]
1924	*1924*	*Established*	*[Contextual] Congress created the National Capital Park Commission to acquire lands for parks and playgrounds in the District of Columbia, Maryland, and Virginia.*[70]

START YEAR	END YEAR	ACTION	DESCRIPTION
1924	1924	Established	26 April. House Bill 8916 was presented regarding the construction of the memorial bridge, noting "that the said Arlington Memorial Bridge Commission is hereby authorized to occupy such Government-owned lands as may be necessary for the bridge project authorized herein and on completion of the project to transfer to the park system under the Chief of Engineers, United States Army, all or such portions of such lands as the said commission may in its discretion decide to be necessary." The Arlington Memorial Bridge Commission issued its report to Congress with specifics of bridge design and construction.[71]
1926	*1926*	*Established*	*[Contextual] Congress established the National Capital Park and Planning Commission (NCPPC) to replace the National Capital Park Commission. The purpose of the NCPPC was for "the comprehensive systematic, and continuous development of the park, parkway, and playground system of the National Capital." The agency was "instructed to implement almost all of the McMillan Plan's park proposals."*[72]
1926	1926	Established	April 22. Congress passed an act making appropriations for the Executive Office and other offices, bureaus, boards, and commissions. The act also included funds for the AMBC to continue construction of the Arlington Memorial Bridge.[73]
1926	1928	Built	Construction on Arlington Memorial Bridge began with the bridge piers and abutments.[74]
1926	1931	Designed	A competition was held for the design of the bridge bascule span. The contract to fabricate the draw span was awarded to the Phoenix Bridge Company in September 1928, and completed in 1931.[75]
1928	1928	Designed	The CFA considered the designs for the Columbia Island plaza (Memorial Circle), Memorial Avenue, and the National Cemetery entrance.[76]
1928	1928	Designed	May 23. An act was approved that authorized "the survey, construction, and maintenance of a memorial highway [Mount Vernon Memorial Highway] to connect Mount Vernon, in the State of Virginia, with the Arlington Memorial Bridge across the Potomac River at Washington" (HR 4625).[77]
1928	1929	Built	The steel superstructure and masonry work of the Memorial Bridge were completed. The pylons on Columbia Island were constructed.[78]
1928	1932	Built	Congress authorized the construction of the Mount Vernon Memorial Highway in 1928. The highway was constructed between 1929 and 1932, stretching between Arlington Memorial Bridge and Mount Vernon along the Potomac River.[79]
1929	1930	Built	The Boundary Channel Bridge was completed.[80]

START YEAR	END YEAR	ACTION	DESCRIPTION
1929	1929	Designed	Landscape architect Gilmore Clarke and other practitioners were hired to help guide the design and construction of Mount Vernon Memorial Highway.[81]
1929	1929	Designed	Sculptor Leo Friedlander designed sculptures of equestrian figures, called "Valor" and "Sacrifice" and collectively named *The Arts of War*, for the east end of Arlington Memorial Bridge.[82]
1929	1931	Built	Workers constructed the bridge plaza at the Lincoln Memorial, the matching bridgehead of the parkway approach drive, and the seawall in Washington, D.C., in addition to the bascule span.[83]
1930	1932	Established	The CFA debated numerous details associated with the Memorial Avenue Corridor at its meetings. Debates included the treatment of the Columbia Island pylons, Memorial Circle, connections to Lee Highway, lighting for the entire project, the equestrian sculptures, and statues. The design for Memorial Circle changed over time, including from three traffic circles and Greek temples to a single traffic circle connecting with several roadways.[84]
1930	*1932*	*Built*	*[Contextual] Construction of the Watergate Steps area began in late 1930 or early 1931 and was completed by June 1932.*[85]
1930	*1930*	*Established*	*[Contextual] May 16. The Shipstead-Luce Act was passed to "regulate the height, exterior design, and construction of private and semipublic buildings in certain areas of the National Capital."*[86]
1930	1930	Graded	Grading for Memorial Avenue began.[87]
1930	*1970*	*Built*	*[Contextual] The passage of the 1930 Capper Cramton Act (46 Stat. 482) authorized the creation of the George Washington Memorial Parkway (GWMP), which incorporated Mount Vernon Memorial Highway. The northern sections of the GWMP were constructed from 1935 to 1965, while a final section was completed in 1970.*
1931	1931	Built	Sixteen low-relief and free-standing eagles were carved on the pylons on Columbia Island. C. Paul Jennewein designed the eagles.[88]
1931	1931	Designed	James Earle Fraser designed equestrian sculptures for the west side of Memorial Bridge, to match the sculptures on the east side of Memorial Bridge. These sculptures were "Music" and "Harvest," collectively known as *The Arts of Peace*.[89]
1931	1931	Designed	James Greenleaf became the consulting landscape architect for the Arlington Memorial Bridge Commission. Greenleaf developed a planting scheme for Columbia Island and for Memorial Avenue. The plan for Columbia Island presented a formal planting with rows of trees along the straight cross-axis and naturalistic plantings beyond. While the plans were presented and approved, they were never fully implemented.[90]

START YEAR	END YEAR	ACTION	DESCRIPTION
1931	1931	Established	Bids opened for the grading of Memorial Avenue from the boundary channel to the entrance of Arlington National Cemetery. The Warren F. Brenizer Company received the contract, and the project was completed in March 1931.[91]
1931	1931	Built	The statue pedestals were built on Memorial Bridge in 1931, 20 years prior to the installation of the statues. The pedestals consisted of granite on a reinforced concrete foundation.[92]
1932	1932	Built	Arlington Memorial Bridge was completed in early 1932, except for the lighting, which was installed by spring. President Herbert Hoover crossed the bridge in January, and the bridge opened to traffic by May.[93]
1932	*1932*	*Built*	*[Contextual] The Hemicycle was constructed as the ceremonial entrance to Arlington National Cemetery.*
1932	1932	Established	January. In addition to Arlington Memorial Bridge and the Boundary Channel Bridge, the George Washington Memorial Parkway opened for limited use.[94]
1932	1932	Paved	January. Granite blocks, called Belgian block or "durax," were laid in a fish-scale pattern on Arlington Memorial Bridge.[95]
1932	1932	Removed	Charles Moore, CFA secretary, persuaded the CFA to omit the planned sculpture niches in the holly hedges along Memorial Avenue.[96]
1932	1932	Land transfer	The Office of Public Buildings and Public Parks (OPBPP) of the War Department received jurisdiction over Mount Vernon Memorial Highway.[97]
1932	1932	Planned	Gilmore Clarke replaced James Greenleaf as a member of the Commission of Fine Arts. Clarke expanded on the ideas of Kendall and Greenleaf, creating a new landscape report for Columbia Island.[98]
1932	1932	Paved	Sidewalks along both sides of Arlington Memorial Bridge and the Boundary Channel Bridge were paved with an exposed aggregate pavement.[99]
1933	*1933*	*Built*	*[Contextual] Wrought iron gates with the insignia of the armed forces were installed at the Arlington National Cemetery entrance.*[100]
1933	*1933*	*Established*	*[Contextual] June 10. Executive Order 6166 was signed by President Franklin D. Roosevelt, which reorganized federal government agencies.*

START YEAR	END YEAR	ACTION	DESCRIPTION
1933	1933	Established	July 28. The Office of National Parks, Buildings, and Reservations, later called the National Park Service (NPS), assumed responsibility for the Memorial Avenue Corridor after President Roosevelt issued an order consolidating all federally administered parks, monuments, and reservations under the jurisdiction of the NPS. With this reorganization, the Arlington Memorial Bridge Commission and several other commissions were abolished, and their duties transferred to the new office.[101]
1933	1933	Established	The George Washington Memorial Parkway (GWMP) became a unit of the National Park System pursuant to Executive Order 6166 of June 10, 1933, effective on August 10, 1933. GWMP ultimately extended from Mount Vernon on the Virginia side of the Potomac River, and Fort Washington on the Maryland side of the Potomac River, to Great Falls.
1933	1933	Paved	Workers paved Memorial Avenue with concrete and installed the first concrete curbs.[102]
1934	1934	Planned	January. Gilmore Clarke submitted a revised Memorial Circle plan to the CFA that was approved. The plan contained a large single traffic circle rather than the cross-axial ellipse and paired fountains from earlier proposals. This plan was never implemented.[103]
1934	*1934*	*Established*	*[Contextual] April. Funds were approved by the Public Works Administration for the completion of the National Cemetery entrance, including the ornamental gates, sidewalks, small plantings, and the purchase and planting of 200 white oaks (Quercus alba) along Memorial Avenue.*[104]
1934	1939	Established	A Civilian Conservation Corps (CCC) camp (Camp NP-8-VA) was established on the north side of Memorial Avenue, close to the Boundary Channel, from November 14, 1934, through August 30, 1939.
1934	1935	Planted	October 1934 - March 1935. Civilian Conservation Corps enrollees worked on Columbia Island, contributing to planting and landscaping efforts, in addition to erosion control and river bank protection.[105]
1935	1935	Planted	A 1935 planting plan shows approximately 140 trees (of the previously approved 200 white oaks [*Quercus alba*]) marked for planting on both sides of Memorial Avenue, from the Hemicycle to the railroad (Richmond Highway). The planting plan shows that the plantings would be organized into a row of evenly-spaced trees along Memorial Avenue with more randomly spaced trees moving away from the avenue to the north and south.[106]
1935	*1965*	*Established*	*[Contextual] The NPS organized a series of summer concerts in the Watergate Steps area, using its natural amphitheater qualities as a venue. A floating barge and moorings served as the stage for the series.*[107]

START YEAR	END YEAR	ACTION	DESCRIPTION
c. 1936	c. 1936	Altered	Workers paved the sidewalks along Memorial Avenue with what was described in early drawings as “reinforced concrete, scrubbed surface, exposed aggregate” (NPS 2E6-126).[108]
1936	1936	Planted	Work crews planted holly hedges along both sides of Memorial Avenue.[109]
1936	1936	Damaged	March. A major flood resulted in water entering portions of the control and equipment rooms of Memorial Bridge and causing short circuits in the bridge’s electrical system.[110]
1936	1937	Established	Work crews installed granite curbstones on the bridge axis roadway on Columbia Island.[111]
1937	1937	Graded	Work crews completed rough grading and drainage for the George Washington Memorial Parkway from the Arlington Memorial Bridge to Key Bridge.[112]
1938	1938	Developed	Work crews installed Washington standard-style lampposts along Memorial Avenue and the Boundary Channel Bridge.[113]
1938	1938	Planned	September. Based on Clarke’s 1934 plan, the Bureau of Public Roads submitted their design for Memorial Circle to the CFA. The revised plan featured a single traffic rotary at the center with a roadway north to connect with Lee Highway and a roadway south to connect with Mount Vernon Highway.[114]
1938	1939	Built	Lee Boulevard was constructed, crossing over Columbia Island. The name of the road was changed to Arlington Boulevard in 1952.[115]
1939	1939	Designed	The CFA approved the casting in bronze, rather than granite, of the equestrian statues for the Arlington Memorial Bridge bridgehead and the river parkway entrance.[116]
1939	1939	Preserved	The first planned maintenance and repair work on the bridge occurred. Workers repainted and repaved the draw span in kind, heated the west engine room heated, and cleaned and repointed the granite on the Virginia abutments.[117]
1939	1939	Planned	December. NPS submitted a new plan to the CFA for the Columbia Island landscape, which proposed roads south of Memorial Circle to replicate the parallel roads to the north. The new plan included massed trees near the pylons.[118]
1940	1940	Built	Memorial Circle was constructed. At this time, roads were completed on Columbia Island south of Arlington Memorial Bridge.[119]
1940	1940	Built	Workers installed granite curbs on Memorial Avenue (possibly earlier).[120]
1940	1943	Altered	The shorelines of the Boundary Channel underwent straightening.[121]
1941	*1941*	*Land transfer*	*[Contextual] By 1941, all of the Arlington Experimental Farm property had been transferred to the War Department.*[122]

START YEAR	END YEAR	ACTION	DESCRIPTION
1941	1948	Built	September. Construction on the Pentagon began. This construction resulted in a network of new roadways, including the redesign of roadways on Columbia Island. Additionally, three new bridges were constructed in the area between circa 1942 and 1948. The construction of VA Highway 110 required the removal of sections of the young white oak trees (*Quercus alba*) and the holly hedges (*Ilex opaca*) along Memorial Avenue that had been planted in 1935.[123]
1942	1943	Established	During World War II, Arlington Farms was a temporary housing complex administered by the Federal Works Agency for female civil servants and service members, built on the site of the USDA Arlington Experimental Farm.[124]
1943	1943	Reconstructed	Further changes to the roadways occurred on Columbia Island. Workers reconfigured the cross-axial roads on Columbia Island as short, broad access road loops. At this time, work crews planted approximately 20 scarlet oak trees (*Querus coccinea*) on the south side of Memorial Circle.[125]
1945	1945	Built	March. The bridle path along Mount Vernon Memorial Highway reached Arlington Memorial Bridge through Columbia Island and continued along the shoreline to Key Bridge.[126]
1945	1945	Built	Newly constructed Virginia State Bridge #5020 carried Memorial Avenue over the Rosslyn Branch of the Pennsylvania Railroad. Today, the bridge spans VA Highway 110, Richmond Highway.[127]
1951	1951	Moved	The NPS installed two sets of allegorical equestrian statues cast in Italy on Memorial Bridge and the approach to Rock Creek and Potomac Parkways. “Valor” and “Sacrifice,” together called *The Arts of War*, were installed on the eastern side of Arlington Memorial Bridge. “Music and Harvest,” and “Aspiration and Literature,” sculpted as two statues collectively called *The Arts of Peace*, were installed on the southern end of the Rock Creek and Potomac Parkway approach.[128]
1951	1985	Removed	The Belgian block roadbed of Arlington Memorial Bridge was removed and replaced with an asphalt surface. The Belgian block centerline was retained at this time during this project, but ultimately removed in 1985.[129]
1952	*1952*	*Established*	*[Contextual] The federal government renamed the National Capital Park and Planning Commission (NCPPC), created in 1924 and renamed in 1926, to the National Capital Planning Commission (NCPC).*[130]

START YEAR	END YEAR	ACTION	DESCRIPTION
1959	*1961*	*Built*	*[Contextual] Congress authorized a memorial to Admiral Richard Evelyn Byrd, sculpted by Felix de Weldon, was authorized in 1959, and dedicated in 1961 on Memorial Avenue. This was the first memorial approved for Memorial Avenue.*[131]
1960	*1960*	*Abandoned*	*[Contextual] Service for the old Rosslyn branch of the Pennsylvania Railroad that crossed beneath Memorial Avenue ended use.*[132]
c. 1960	c. 1960	Altered	Workers installed cobra-head lampposts around Memorial Circle and elsewhere on Columbia Island.[133]
1960	*1964*	*Built*	*[Contextual] The Theodore Roosevelt Bridge was built between Washington, D.C., and Arlington, Virginia, crossing Theodore Roosevelt Island to the north of Memorial Bridge.*[134]
1961	1961	Abandoned	February. The draw span on Memorial Bridge opened for the last time. Once it was out of operation, the NPS took the opportunity to perform some needed maintenance work on the Arlington Memorial Bridge approach.[135]
1963	1965	Developed	Following a land transfer between the Department of the Interior and Department of Defense, the land north of Memorial Avenue was developed into the Arlington Farms and Horse Show grounds.[136]
1964	*1964*	*Planted*	*[Contextual] Work crews planted the area surrounding the Hemicycle with crabapples, azaleas, flowering bulbs, and annuals.*[137]
1964	*1965*	*Altered*	*[Contextual] The demands of vehicular traffic entering Arlington National Cemetery prompted the Army to limit private automobile access through its main gates.*[138]
1964	1968	Developed	The Beautification Program initiated by First Lady Claudia "Lady Bird" Johnson chose Columbia Island as one of the primary sites for planting daffodils (*Narcissus*) and dogwoods (*Cornus florida*).[139]
1965	1965	Altered	The draw span on Arlington Memorial Bridge was permanently deactivated.[140]
1965	1965	Built	A second memorial was dedicated on Memorial Avenue. Theo Alice Ruggles Kitson sculpted the memorial, which honored the veterans of the Spanish-American War and Philippine Insurrection (1898-1902). The memorial was nicknamed "the Hiker."[141]
c. 1965	c. 1965	Stabilized	Hazelet & Erdal, consulting engineers, made repairs to Arlington Memorial Bridge. Repairs included the first repaving of sidewalks with an exposed-aggregate compound from the exposed-pebble-finish concrete.[142]
1967	1971	Designed	Landscape architect Edward Durell Stone, Jr., designed a comprehensive planting plan for Columbia Island (Earley 2004: 35).

START YEAR	END YEAR	ACTION	DESCRIPTION
1967	1967	Planted	October. The planting of the first 800,000 daffodil (Narcissus) bulbs on Columbia Island began. In spring of 1968, the NPS planted 18 scarlet and white oaks (*Quercus coccinea* and *alba*), approximately 200 dogwoods (*Cornus florida*), and masses of daffodils (*Narcissus*) around the outside of Memorial Circle. Approximately a dozen white pines (*Pinus strobus*) were planted alongside each of the four pylons. As funds permitted, additional plantings followed the Stone planting plan.
1968	1968	Planted	Autumn. 150,000-200,000 more daffodils (*Narcissus*) were planted on Columbia Island, bringing the total to 1,000,000. [143]
1968	1968	Established	May 22. The Southern contingent of the Poor People's Campaign crossed Arlington Memorial Bridge to Resurrection City in Washington, D.C. Photo documentation from the *Washington Star* newspaper depicts Arlington County Fire Department providing drinking water for the mules of the mule train at "the old property yard of the National Park Service on the Virginia end of Memorial Bridge."[144]
1968	1968	Memorialized	November 12. In a ceremony held at the Department of the Interior in honor, Interior Secretary Stewart Udall announced that the name of Columbia Island had been changed to Lady Bird Johnson Park in honor of the myriad of urban design and environmental initiatives that Lady Bird enacted as part of her Beautification Program in Washington, D.C. By this time 1,000,000 daffodils (*Narcissus*) had been planted on Columbia Island.
1969	1971	Planted	Approximately 2,700 additional dogwoods (*Cornus florida*) were planted in Lady Bird Johnson Park (Columbia Island) in phases.[145]
1972	1972	Restored	The statues on Memorial Bridge were sandblasted, brush plated with gold, and coated with lacquer.[146]
1972	1974	Built	Authorized by Congress in 1972, the Seabees Memorial sculpture by Felix de Weldon and architect Anthony Harrer was installed and dedicated on Memorial Avenue.[147]
1973	1973	Removed	The NPS removed the L-shaped walkways along the Watergate wing walls of the Arlington Memorial Bridge, replacing them with curvilinear versions that follow the modern road realignments.[148]
1976	1976	Restored	A "Repair of Bridge and Approaches" project had numerous components, including repairing cracks in the bridge concrete elements and repairing sidewalk surfaces. Rusted portions of the bascule truss and trunnion posts were sandblasted and painted. With the bascule permanently fixed in place, compressible seals were inserted into the gaps formed by the joints. Additionally, a barrier was installed to reduce birds from roosting on bridge truss members.[149]

START YEAR	END YEAR	ACTION	DESCRIPTION
1977	1977	Built	The Washington area's rapid transit system, the Metro, opened a station for Arlington National Cemetery at Memorial Avenue. The addition of the Metro station added an escalator on either side of the avenue, two elevator structures, and small-scale features to the avenue. At this time red oaks and pin oaks were planted around the metro station.[150]
1977	*1977*	*Built*	*[Contextual] A memorial to the 101st Airborne Division was installed on Memorial Avenue to commemorate the service of the division in World War II and Vietnam. Bernhard Zuckerman was the sculptor, and Harold J. Schaller was the architect.*[151]
1977	2001	Planted	The planting of deciduous and evergreen trees, including red maple (*Acer rubrum*), white oak (*Quercus alba*), scarlet oak (*Quercus coccinea*), white pine (*Pinus strobus*), and flowering dogwood (*Cornus florida*), occurred in phases in Lady Bird Johnson Park (Columbia Island) according to the Stone planting plan.[152]
1978	1978	Reconstructed	Arlington Boulevard was rebuilt between the Route 50 overpass and the north loop road, taking traffic from Memorial Circle to an exit leading south.[153]
1979	1979	Altered	Upon assessment of the survival rate of plantings from the Stone plan, alterations were made to the Stone planting plan, adding more white pines (*Pinus strobus*) and dogwoods (*Cornus florida*). This is the last known revision of the Stone planting plan by NPS, and 1979 marked the last planting that was recorded on the Stone drawing set. By 1989, less than half and possibly less than one quarter of the trees specified in the Stone plan had been planted.[154]
1979	1979	Established	Flowerbeds were added on either side of the pylons at the entrance to Arlington Memorial Bridge and the Boundary Channel Bridge.[155]
1980	1989	Altered	1980s. Workers removed lacquer from the statues on Memorial Bridge and replaced it with a wax finish.[156]
1984	*1984*	*Altered*	*[Contextual] The road at the top of the Watergate steps was removed and the area sodded. The granite curb remains along the sidewalk's edge.*[157]
1985	1985	Stabilized	Arlington Memorial Bridge was repaired. Project components included: removing the 1951 asphalt pavement in order to inspect and repair the concrete deck; removing the Belgian block median; repaving the bridge sidewalks using a similar exposed pebble aggregate; and widening the sidewalks around Memorial Circle, from 6 feet to 9 feet and adding curb cuts. The bascule span's fascia was repainted.[158]
1985	1985	Built	The Federal Aviation Administration installed a unique "Guidance Light System" on the four Potomac River bridges, including Memorial Bridge.[159]

START YEAR	END YEAR	ACTION	DESCRIPTION
1986	*1986*	*Established*	*[Contextual] The Commemorative Works Act established the National Capital Memorial Advisory Commission as the regulatory authority for the approval and construction of commemorative works near the National Mall and on federal land in the National Capital Region. The Commemorative Works Act has been amended several times in the decades since its establishment.*
1986	*1988*	*Built*	*[Contextual] The Department of the Army constructed the Arlington National Cemetery Welcome Center and parking garage near the entrance to the cemetery. As many as two dozen white oak (Quercus alba) trees were removed or did not survive the construction of the Arlington Cemetery Welcome Center. Approximately 25 white oak trees were then planted in connection with the project.*[160]
1986	1986	Replaced	The original lampposts were replaced with replacement Washington standard duplicates. It is likely that at this time sodium bulbs were replaced by incandescent bulbs.[161]
1987	1989	Planted	The NPS undertook a "floral enhancement" project for Mount Vernon Memorial Highway. 200,000 daffodils (*Narcissus*) were planted in existing beds in Lady Bird Johnson Park to replace bulbs between National Airport and Arlington Memorial Bridge.[162]
1990	*1990*	*Built*	*[Contextual] The American Armored Forces Memorial was installed on Memorial Avenue outside of the cultural landscape boundaries. The memorial commemorates the service of all American armored forces from the introduction of the first tanks in World War I to the use of armor in recent conflict.*[163]
1990	1990	Restored	Eight lampposts around Memorial Circle were replaced with Washington standard lights. The Cobra style lights that were replaced were likely installed around 1960.[164]
1990	1999	Planted	In the 1990s, about 500 more deciduous and evergreen trees were planted on Lady Bird Johnson Park (Columbia Island), in accordance with the Stone planting plan. It is unknown specifically how many of these trees were within the cultural landscape boundary. The majority of the trees were sugar maples (*Acer saccharum*) and white pines (*Pinus strobus*).[165]
1995	2000	Planted	Fall. A five-year renovation planting plan for George Washington Memorial Parkway began, including replacement of daffodils (*Narcissus*) in Lady Bird Johnson Park.[166]

START YEAR	END YEAR	ACTION	DESCRIPTION
1996	1996	Land transfer	The Secretary of the Army transferred 0.17 acres of land within Arlington National Cemetery, known as the Old Administrative Building site, to the Secretary of the Interior. The site is part of the original reservation of Arlington National Cemetery. As part of the property exchange, the Department of the Interior transferred 2.43 acres associated with the Arlington National Cemetery Welcome Center along Memorial Avenue to the Secretary of the Army.[167]
1996	*1998*	*Built*	*[Contextual] The Women in Military Service for America Memorial (WMSA) was constructed at the hemicycle.*[168]
1998	*1998*	*Planted*	*[Contextual] Work crews installed little leaf linden (Tilia cordata) and other plantings in the plaza of the Hemicycle in connection with the installation of the WMSA memorial.*[169]
1999	2004	Established	Work crews planted approximately two dozen white oaks (*Quercus alba*) along the border of Memorial Avenue. At this time, 400 tree plantings from the Stone plan were approved, in addition to the replacement of 2,000 dogwoods (*Cornus florida*), in accordance with the Stone plan.[170]
2000	*2001*	*Built*	*[Contextual] The 4th Infantry Division Memorial was installed on Memorial Avenue; it is the most recent memorial present on the avenue today.* *July. The 4th Infantry Division Memorial on Memorial Avenue was dedicated.*[171]
2001	2002	Altered	The NPS and the Federal Highway Administration (FHWA) undertook a rehabilitation project for the Boundary Channel Bridge and Memorial Avenue. Workers removed the roadway blocks, curbs, and sidewalk of the Boundary Channel Bridge in order to add an impervious membrane over the bridge deck. The pattern of the reinstalled Belgian blocks approximated the original pattern, but was slightly different due to greater distance between blocks and more mortar. New granite curbs were added.[172]
2002	2002	Paved	Workers paved Memorial Avenue with new asphalt.[173]
2003	2003	Altered	The Commemorative Works Act was amended in 2003. Title II of the act was titled the Commemorative Works Clarification and Revision Act of 2003.
2004	*2006*	*Altered*	*[Contextual] Traffic lanes through the Watergate Plaza and approach to the Arlington Memorial Bridge were realigned.*[174]
2006	2006	Removed	Memorial Circle safety improvements reduced the number of lanes around the traffic rotary.[175]
2013	2013	Altered	Lamppost bulbs throughout the Memorial Avenue Corridor were replaced with light-emitting diode bulbs to reduce energy consumption.

START YEAR	END YEAR	ACTION	DESCRIPTION
2016	2016	Planned	NPS completed an Environmental Assessment (EA) for the Arlington Memorial Bridge Rehabilitation project. The NPS, in cooperation with the FHWA, identified the preferred alternative as Alternative 1B, which called for the replacement of the bascule span with a new span comprised of variable depth steel girders.[176]
2018	2020	Established	November. NPS completed a Memorial Circle Safety Improvements Environmental Assessment with the purpose of assessing alternatives to improve transportation safety at and near Memorial Circle. NPS executed a "Finding of No Significant Impact" in 2019.[177]
2018	2020	Rehabilitated	The NPS and FHWA completed a large-scale rehabilitation of Arlington Memorial Bridge. The work permanently removed the bascule span and replaced it with a fixed span of variable depth steel girders.[178]
2018	2020	Established	Safety measures added to Memorial Circle as a result of the Memorial Circle Safety Improvements Environmental Assessment included higher visibility crosswalks, new signage and rapid flashing beacons, clearer lane markings, lane reductions, and repaved road surfaces. A road segment on the north side of Memorial Circle that connected S Arlington Boulevard and S Washington Boulevard was permanently closed.[179]
2019	2019	Land transfer	The Department of the Interior transferred 16.09 acres of land to the Department of the Army. The land transferred included Memorial Avenue from the Hemicycle to the western side of the VA Highway 110 overpass. The bill also transferred from the Secretary of the Army to the Secretary of the Interior administrative jurisdiction over approximately 1.04 acres of land within Arlington National Cemetery near Arlington House, the Robert E. Lee Memorial.[180]
2022	2022	Established	As this CLR was underway, NPS staff were in the process of updating the National Register of Historic Places nomination for the Arlington Memorial Bridge and Related Features Historic District.[181]

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Physical History

Pre-Colonial History and Early Colonization (11,000 BCE – 1790 CE)

Humans arrived in the Middle Atlantic Coastal Plain and Piedmont by 11,000 BCE (Louis Berger 2016: 6). The Paleo-Indian period is defined as approximately 15,000 to 8000 BCE, and the area now occupied by Washington, D.C., was home to Paleo-Indian peoples who formed social groups that hunted deer and elk, gathered plants, and fished in the coastal plains along the waterways that are now called the Potomac and Anacostia Rivers, which were rich in natural resources (Virginia Department of Historic Resources 2018). (The Anacostia River was historically known as the Eastern Branch of the Potomac River.) Early in the period, coniferous forests of spruce (*Picea* spp.) and pine (*Pinus* spp.) trees were dominant. Deciduous trees, such as oak (*Quercus* spp.) and chestnut (*Castanea* sp.), became more prevalent as the climate slowly warmed in the mid-Atlantic.

During the Archaic Period (approximately 8000 through 1200 BCE), subsistence for Archaic-Indian peoples was based on hunting, fishing, and gathering plants. During the late Archaic period, some groups began living in semi-permanent or permanent settlements, and Archaic-Indian peoples seasonally camped along the Potomac and Anacostia Rivers. Archaeological evidence suggests that squash, sunflower, and chenopodium may have been cultivated during the Late Archaic (Moss 2009: 28; Hanna 2001: 4).

Native Americans, including the Nacotchtank people, established organized villages and trade networks along the Anacostia and Potomac Rivers during the Woodland Period (approximately 1200 BCE through 1600 CE). At this time, Native American groups began farming and cultivating crops as knowledge of plant husbandry transferred from Piedmont groups to the middle Chesapeake, including the area that today constitutes Washington, D.C. (Hanna 2001: 4; National Park Service 2018). Large villages with economies based on maize agriculture were established by the late Woodland Period; after 1300-1400 CE, stockaded villages, which were often dispersed, characterized the upper and middle Potomac.

In the years immediately preceding European settlement, Algonquian-speaking people inhabited the area around present-day Washington. The inner coastal plain of the Potomac River attracted a wide range of fish, including herring, shad, salmon, and sturgeon, which sustained local tribes. Subsistence also included hunting and foraging and slash-and burn agriculture. They cultivated corn, beans, gourds, pumpkins, and other crops—practices and plantings that continued after European contact (Louis Berger 2016: 24). By 1607, the tribes were coalescing into larger entities led by powerful chiefs—notably, Powhatan, who ruled in southeastern Virginia, and the Piscataway Tayac, or Emperor, who dominated Eastern Maryland (Louis Berger 2016: 24)

In 1608, English colonizer Captain John Smith explored the Chesapeake region and recorded information related to a village near the mouth of the Eastern Branch/Anacostia River. He called the village Nacotchtank (translated as “at the trading town”), or Nacotchtant, and referred to the villagers as Necosts, estimating their population at 80 men and a total of 200 to 300 people (Berger 2016: 24). Their central Nacotchtank village was ideally situated to take advantage of trade routes and resources along the rivers. Smith also recorded and mapped the villages of Namoraughquend (translated as “fishing place”), north of present-day Alexandria (Berger 2016: 24; Hanna 2001: 4). In 1624, Smith published an account of his travels and maps of his explorations along the Potomac River

in his book, *General Historie of Virginia*, in which he documented the land use and designs of the Nacotchtank peoples (Burr 1920: 167).

In 1632, English colonizers claimed the lands described in Captain Smith's accounts. King Charles I granted the land north of the Potomac River that would become Washington, D.C., to George Calvert, Lord Baltimore. Shortly after the land was granted, George Calvert died and the lands were transferred to Cecilius Calvert, the second Lord Baltimore. The land was named Charles County, Maryland (Riggs 1946/47: 250). Between 1651 and 1655, English proprietors granted and patented lands from the northwest shore of the Occoquan (a tributary of the Potomac River) to the Falls of the Potomac (Hanna 2001: 10). Upon receiving a land grant, the grantee was required to live on and plant the land within three years in order to establish ownership. As such, during the 1600s, tenant farmers, indentured servants, and enslaved laborers occupied and farmed much of the land between the Potomac and Rappahannock Rivers, an area known as the Northern Neck (Hanna 2001: 14).

In 1669, Sir William Berkeley, royal Governor of Virginia, granted (under the authority of King Charles II) to English Captain Robert Howsing a 6,000-acre tract of land on the west side of the Potomac River, including the area that would become the greater Memorial Avenue Corridor area. The tract encompassed an area that extended from a point near Analostan Island 9later called Mason's Island, and today known as Theodore Roosevelt Island) to Hunting Creek (today part of Alexandria, Virginia). The land was dominated by chestnut (*Castanea* sp.), oak (*Quercus* spp.), and hickory (*Carya* spp.) trees and served as home and hunting grounds to Algonquians, Doeg, and Nacotchtanks tribes (Hanna 2001: 10). The land contained several spring-fed runs and creeks that flowed into the Potomac River. Less than one month after obtaining the land, Howsing sold the tract of land to surveyor and planter John Alexander in exchange for about 6,000 pounds of tobacco (Hannah 2001: 10).

From 1690 through the following year, 6,550 acres of land on the west side of the Potomac River, including the original Howsing tract, was bestowed to John Alexander's sons, Robert and Philip, upon

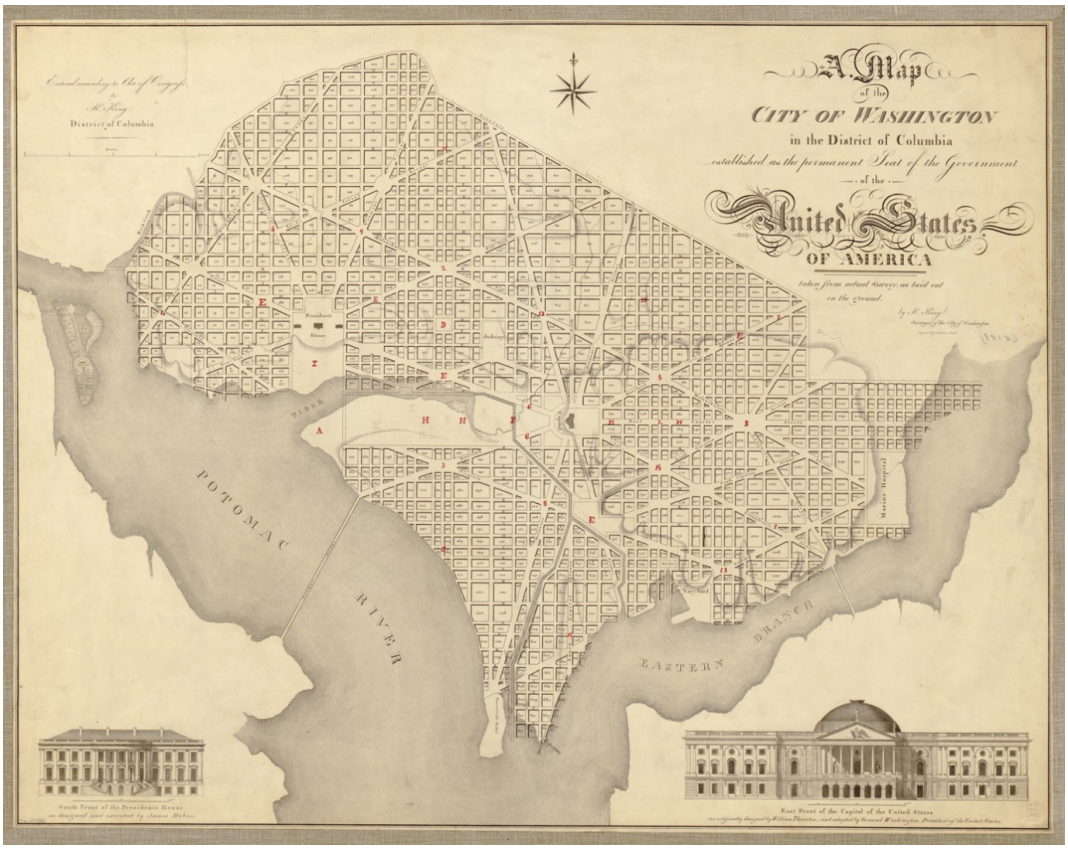


Figure 2: Map of the city of Washington, D.C., 1818 (Source: Library of Congress, Call number: G3850 1818 .K5, Control number: map65001120)

his death. When Robert Alexander died in 1735, 4,930 acres of land was bestowed to his children (Hanna 2001: 11).

The Residence Act of 1790 established the District of Columbia as the nation's capital. Maryland and Virginia ceded the area within a 10-square-mile diamond, laid out by Andrew Ellicott and others, to the federal government. George Washington appointed three city commissioners to oversee the new federal district, including public reservations (Robinson and Associates 2016: 101-102). In 1791, officials confirmed the new location for the nation's capital on the Potomac River, and Pierre L'Enfant developed a plan of the future city. L'Enfant specified a central, 400-foot wide "grand avenue" that would link the planned monument to George Washington on its western terminus with the Capitol on its eastern terminus. The "grand avenue" would later become the basis for the National Mall (Robinson and Associates 2016: 10). After L'Enfant was dismissed from his position, Andrew Ellicott created a city plan based on L'Enfant's original design, maintaining the concept of the National Mall (Robinson and Associates 2016: 104). In 1800, the federal government officially moved from Philadelphia, Pennsylvania, to Washington, D.C. (Robinson and Associates 2016: 105) (*see Figure 2*).

These physical changes documented thus far affected the western extent of the cultural landscape, on the west bank of the Potomac River, and the broader contextual landscape. Meanwhile, throughout the pre-colonial and colonial periods, the eastern extent of the Arlington Memorial Corridor—in particular, the eastern end of the Arlington Memorial Bridge—was not useable land. Rather, that area was part of the Potomac River until the late 19th century (see discussion below), when the waterfront was reconfigured and portions of the shoreline were reclaimed.

Arlington House Plantation and the Freedman's Village (1790 - 1887)

In 1778, heirs of Robert Alexander sold 1,100 acres of the family's property to John Parke Custis, the son of Martha Washington and stepson of President George Washington. This land would eventually include portions of the cultural landscape study area and the greater contextual landscape, encompassing the locations of Arlington National Cemetery and Memorial Avenue, as well as part of the site of the Pentagon, current headquarters of the United States Department of Defense. Custis, along with his wife Eleanor and two children, Nelly Parke and George Washington Parke, moved into Alexander's former home and named the plantation Abingdon. Abingdon Plantation later burned in 1930 (Moss 2009: 29).

In 1802, George Washington Parke (GWP) Custis inherited his father's properties and moved into a four-room home on the flats of the west side of the Potomac River in Virginia (Moss 2009: 30). That same summer, Custis brought 57 enslaved laborers to the Arlington plantation. Between 1802 and 1803, Custis' enslaved laborers cleared the land, improved the previous tenant farm, and established a large market garden. The fields were located on the southern section of the property on terraces of gently sloping land. Wheat and corn grew on these flat plains by the Potomac River and, in addition to produce from a market garden, provided goods for nearby urban centers (Moss 2009: 30; Hanna 2001: 29).

Custis employed architect George Hadfield to design what would become Arlington House, originally called Mount Washington, which would be the Custis family seat. The two-story stuccoed brick house, sited on a rise above the Potomac River and surrounded by a working landscape, would be the first temple-form residence built in the United States (Moss 2009: 30; Hanna 2001: 36) (*see Figure 3*). Beginning in 1803, enslaved laborers constructed the home on a high terrace above the Potomac River, beginning with the northern wing of the house (Moss 2009: 30). Grading to construct the house included creating flat terraces to the north and south of the house in preparation for gardens. In the early 1800s, two brick and stucco quarters for enslaved laborers were constructed in alignment with the wings of the main house (Moss 2009: 30). By 1818, the Custis residence was complete, and laborers planted deciduous and evergreen trees below the home (National Park Service, Native Peoples of Washington, DC, 2021).



Figure 3: View of Washington, D.C., across the Potomac River from the Arlington House plantation, 1838 (Source: Library of Congress, Control number: 2003670215).

No early roads were established within the cultural landscape in the location of today's Memorial Avenue, though other roads existed in the contextual landscape around the Custis property beginning in the 17th century. Ferries were the only source of transportation across the Potomac River to Washington, D.C., until 1809, when the Long Bridge (in the location of present-day 14th Street Bridge) was constructed. At that point, approach roads were constructed south of the cultural landscape, radiating out from the new bridge.

Development in the surrounding contextual landscape included the construction of a road in 1809, connecting the Custis' plantation to the Columbia Turnpike (Moss 2009: 32). Additionally, in 1810, a road to Alexandria that had originally been constructed in 1793 was remade as a turnpike and called the Georgetown-Alexandria Road (Earley 2004: 27) (*see Figure 10*). This road was in use until the 1960s. Between 1833 and 1843, the Alexandria Canal, a seven-mile branch of the Chesapeake and Ohio Canal, crossed the Custis plantation; it connected Alexandria with the canal at Georgetown via the Potomac Aqueduct, also called the Alexandria Aqueduct, which was built in the early 1830s (Earley 2004: 27).

ARLINGTON HOUSE PLANTATION AND THE CIVIL WAR

The passage of the Organic Act of 1801 organized the new capital city of Washington, D.C., carved out from territory ceded by Virginia and Maryland. The federal district was originally shaped like a diamond, with land on the west side of the Potomac River, including present-day Arlington County and the City of Alexandria (*see Figure 4*).

However, as early as 1804, shortly after the passage of the Organic Act, bills were proposed to return Alexandria to Virginia. There were several conflicting interests between the two counties on either side of the Potomac River, with varied interest groups supporting the effort to return Alexandria to Virginia. A central issue was equal representation in Congress and adequate home rule for citizens of the District of Columbia. Alexandrians were not permitted to vote for members of Congress or for president beginning in 1804. That same year Congress issued Alexandria a town charter, but did not create a territorial legislature akin to the Virginia General Assembly. Since the President appointed the district mayor and justice of the peace for local courts, those living in Alexandria County were disenfranchised.

From 1840 to 1846, various lobbying efforts sought to return Alexandria to Virginia. The Virginia General Assembly passed a retrocession bill in February 1846. Three weeks later, the House Committee on the District approved the Retrocession Act, and the House and Senate passed the bill. Congress approved the retrocession on July 9, 1846, and President James K. Polk signed it into law the next day. However, several months of debate still followed before the Virginia General Assembly finally accepted the measure on March 13, 1847, accepting the return of the land to Virginia. From this point, the entire jurisdiction was referred to as "Alexandria County, Virginia" (and ultimately re-named Arlington County in 1920), with the exception of the City of Alexandria, became independent of Alexandria County in 1870.

Thus, the land on the west side of the Potomac was again part of Virginia when Custis died in October 1857, leaving Arlington House and the Custis-Lee

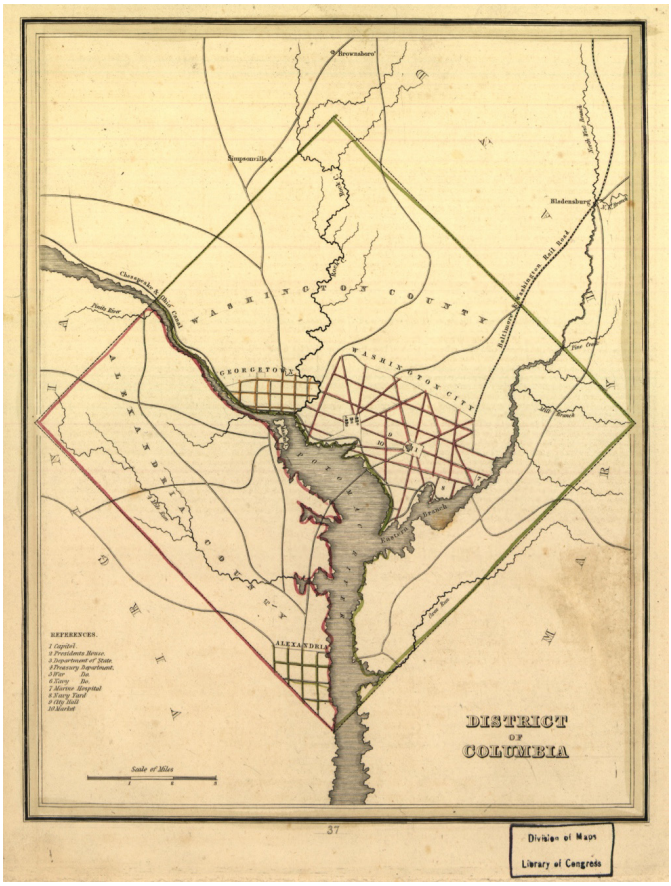


Figure 4: Map of the District of Columbia including Washington City, Georgetown, Washington County, Alexandria City, and Alexandria County, 1835 (Source: Library of Congress, Control number: 88694084).

plantation to his daughter, Mary Custis Lee. She was married to Robert E. Lee, future commander of the Confederate States Army (Moss 2009: 33). At the onset of the Civil War in April 1861, Virginia seceded from the Union and Lee resigned from the U.S. Army, traveling to Richmond to take command of Virginia's military forces, which he named the Confederate Army of Northern Virginia. Mary Custis Lee left Arlington House the following month, initially moving to Ravensworth, a nearby home owned by relatives. She left Selina Gray, her enslaved housekeeper, in charge of the house, expecting the enslaved workers to continue in forced labor even after their enslavers had fled.

At this time, enslaved people lived in cabins south of Arlington House, in the lower fields near the Potomac River, and in proximity to the wooded

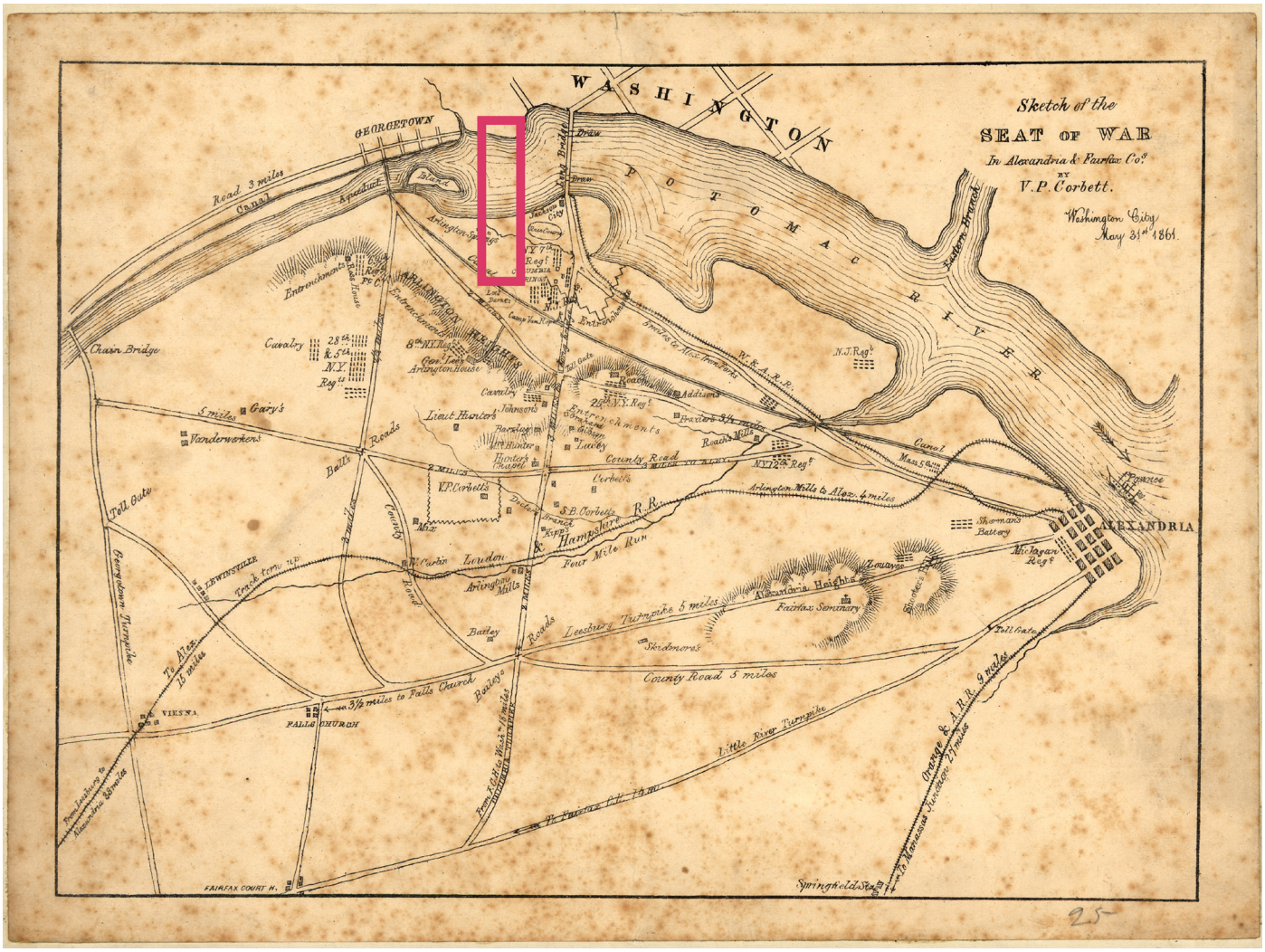


Figure 5: "Sketch of the seat of war in Alexandria & Fairfax Cos., by V. P. Corbett." "Genl. Lee's Arlington House" is below "Arlington Heights," 1861 (Source: Library of Congress, Call number: G3883.A8S5 1861 .C6, Control number: 99439186).

ravine behind Arlington House (***see Figure 6***) (LaRoche and Murphy 2023: 30, 35, 36, 87, 93).

Shortly thereafter, the Union Army crossed the Potomac River and encamped on the grounds of the Lee family's former home, converting it from a plantation landscape into a military stronghold (***see Figure 5***). Occupying the Lee plantation had both "strategic and symbolic significance, protecting the Capital at one of its most vulnerable spots and asserting federal jurisdiction over the family home of the commander of the Confederate forces" (KressCox 1986: 19). For four and a half years during the Civil War, the United States Army used the Arlington House plantation to house and train Union soldiers. In the early 1860s, the army constructed roads throughout the Arlington House plantation (west of the cultural landscape boundaries) to allow for passage and communication between military posts (Moss 2009: 34).

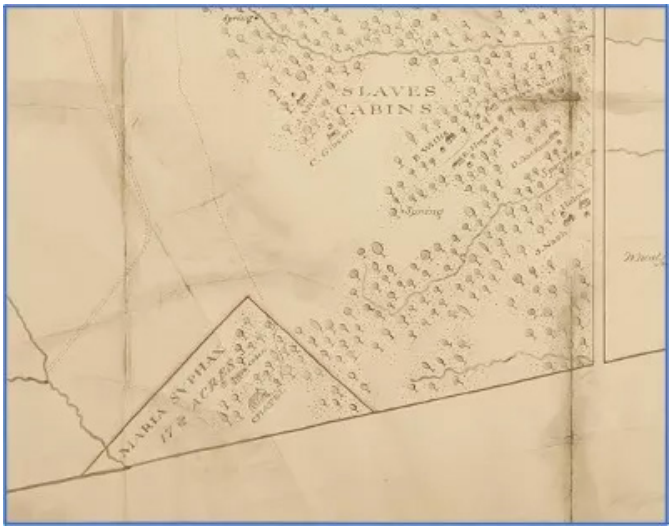


Figure 6: Portion of a map of the Arlington House plantation showing the 17-acre Syphax property, c. 1929 (Source: National Park Service).

Maria Carter was born into enslavement in 1803, the daughter of Arianna (or Airy) Carter, an enslaved woman, and GWP Custis. Carter, later known under her married name as Maria Syphax, was the only person enslaved by the Custis family to later own property within the Arlington plantation lands, within the contextual landscape of this CLR's study area. Some sources suggest that Custis granted Syphax and her two children freedom in 1862 (LaRoche and Fletcher 2021: 143), while other sources indicate that Custis sold Syphax and her two children to Edward Stabler, a Quaker apothecary in Alexandria, who in turn granted them freedom (National Park Service, The Syphax Family, 2021). When Syphax received her freedom, she also received a 17-acre plot of land set aside for her family in the southwest portion of the Custis-Lee plantation, often called "Syphax Corner" (*see Figure 6*). This plot was located near what is today the southwestern boundary of Arlington National Cemetery, southwest of the cultural landscape.

Between 1802, when GWP Custis inherited the land, and 1862, Arlington House was home to nearly 100 enslaved African Americans who lived and worked on the plantation. On December 29, 1862, 57 men, women and children at Arlington House were emancipated (LaRoche and Murphy 2023: 5).

When the United States confiscated the entire Lee plantation from Mary Custis Lee in 1863, based on her failure to pay taxes, it also seized Maria Syphax's property due to lack of ownership documentation. In June of 1866, Maria Syphax's eldest son William petitioned the government for the return of the family's land. The "Bill for Relief of Maria Syphax" was introduced in Congress, voted on, passed, and signed by President Andrew Johnson. The property was thereafter returned to Maria Syphax, and her ownership was reconfirmed in an act of Congress in 1884. At the time of Maria Syphax's death in 1886, the 17 acres of land were divided among her children. In 1944, the federal government condemned the family's acreage in order to extend the boundaries of the Fort Myer military installation west of the cultural landscape boundaries, again expelling the remaining Syphax residents (LaRoche and Fletcher 2021: 143; National Park Service, Freedman's Village, 2021).

FREEDMAN'S VILLAGE

On April 16, 1862, Congressional legislation freed all enslaved people in Washington, D.C. Seeking such liberation, many Black people escaped enslavement by migrating to the capital city from surrounding states; the influx of people was often housed in freedmen's camps established by the government. The population of the camps continued to grow, particularly following the Emancipation Proclamation on January 1, 1863. The Black population of D.C. increased from 19% of the District's population in 1860, to more than 30% by the mid-point of the Civil War (Bestebreurtje 2017: 51-52). The rapid influx of individuals resulted in overcrowding of the camps, with impacts to public health that prompted the decision to create new camps outside of the city proper.

One such camp, called Freedman's Village, was established in June of 1863 across the Potomac River, on the southeastern portion of the Arlington House plantation and west of the Alexandria-Georgetown Turnpike. Under the authority of the Department of the Army, village occupants included people who had been enslaved by GWP

Custis and (after Custis's death) by Robert E. Lee.[1] Intended as a model community for freedpersons, the Confederate general's plantation was thus converted into a village for freedmen and women. As noted by the National Park Service, "For many abolitionists and some in the Government, Robert E. Lee, as the leading Confederate General, came to personify slavery and unrealized freedom for millions of African Americans in America. The use of his home as a camp for freedpersons was, thus, thought to be very appealing and appropriate by many in the north" (National Park Service, Freedman's Village, 2021).

Built by the War Department, the planned community was intended to be a temporary settlement where residents could learn vocations before seeking employment and moving on to other, more permanent stations. While no remnants of Freedman's Village survive, the center of the village is believed to have been located in the southern section of Arlington National Cemetery in Sections 8, 47, and 25, which is south/southwest of the cultural landscape and approximately one-half mile to the south of Arlington House (LaRoche and Fletcher 2021: 36) (*see Figure 7*). Other sources note the main street of the village traveled through Sections 3, 4, 8, and 18, around present-day Jessup, Clayton, and Grant Drives in Arlington National Cemetery (Arlington County Department of Community Planning, Housing and Development 2016: 10). The government employed reform ideals to create a centralized village that envisioned a future beyond agricultural labor for African Americans.

The village was a physical manifestation of the War Department's goals of moral uplift for freedpersons (Bestebreurtje 2017: 55). An 1865 central village plan depicts over 50 residences, a hospital, kitchen/mess hall, a school, "old people's home," and a laundry, among other institutions and structures, tidily arranged around a central pond. Wood frame buildings initially housed 100 people, including

1. In his will, GWP Custis directed that the laborers that he had enslaved should be manumitted five years after his death. Robert E. Lee resisted this timeline, seeking to continue to enslave people beyond those five years in order to relieve the estate's debts. He was eventually required by court order to comply with the manumission directive. (The Emancipation Proclamation was subsequently issued, just a few days later.)

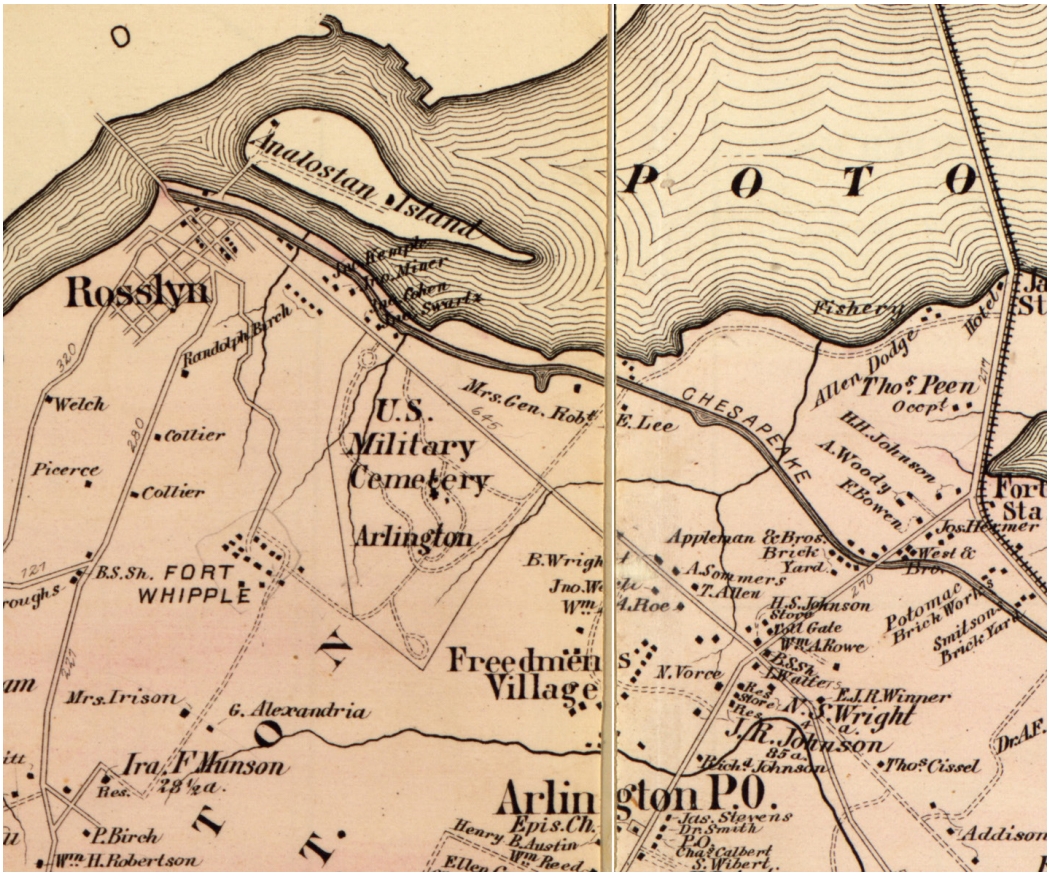


Figure 7: Detail of Alexandria County map, looking northeast, showing the location of the "Freedmen's Village," southwest of Arlington National Cemetery, 1864 (Source: Library of Congress, Control number: map53000779).

Figure 8: (right) Map of the "Freedmans Village near Arlington Heights, Va., July 10th, 1865. Genl. [ground] Plan No. 9.," from the Records of the Office of the Quartermaster General (Source: National Archives, Identifier: 305826).

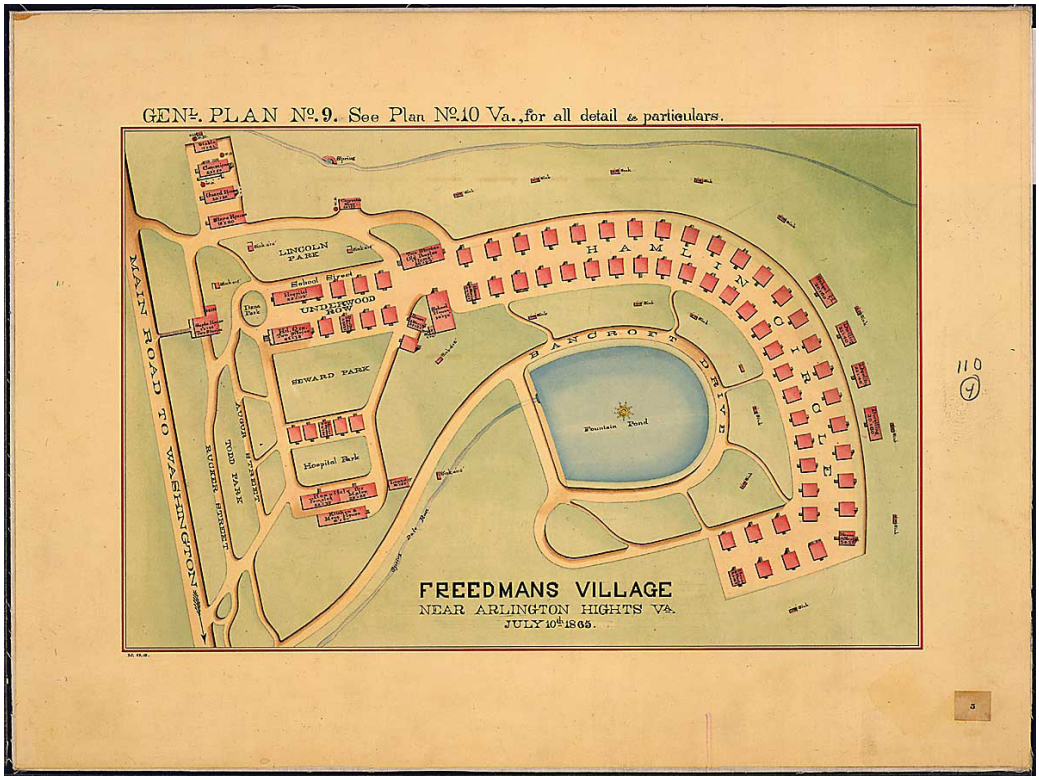


Figure 9: (below) Sketch by artist Alfred R. Waud of the Freedman's Village, April 1864 (Source: Library of Congress, Control number: 2004660337).



several individuals who had been enslaved by the Custis and Lee families. The whitewashed, one-and-a-half story clapboard duplexes evoked the Classical Revival style, "symbolically connecting America to the ancient democracy [Roman Empire] and its ideals through architectural style" (Bestebreurtje 2017: 55) (*see Figures 8 and 9*).

The greater village area was divided into roughly 50 farms, approximately 10 acres each, and farmed by freedpersons. Residents cleared the land and grew crops, establishing their lives and livelihoods within the village. While a corral and other structures were removed in 1864, usable structures from the Arlington House plantation were incorporated into the village. Within the larger complex of 50 farms, the axis of the future Memorial Avenue Corridor crossed three of these farmsteads (Earley 2004: 44).

Residents engaged in social and political activities through fraternal and mutual aid organizations as the Village became "the first great cultural and political meeting ground" produced by and for Black Americans (Steven Hahn, quoted in Bestebreurtje 2017: 61). Residents sought

educational opportunities to earn jobs and establish secure futures for themselves and their families. By this time, most adult males voted and paid taxes. By the late 1880s, over half of the families who lived at the village had resided there for at least 15 years.

The location of the village near Washington, D.C., allowed residents access to blue- and white-collar positions within the federal government, creating opportunities beyond agricultural labor (Bestebreurtje 2018: 338-339). The War Department, in tandem with northern religious and aid organizations, established institutions to provide residents with domestic housekeeping skills and vocational training (Bestebreurtje 2017: 56). Such training focused on education and employment beyond farming. Since Freedman's Village was first established near the military posts on the former plantation, some village residents earned wages as paid workers within the military posts. The Syphax family property was west of the village, also near the military complexes, and the family was granted passes to sell goods to United States Colored Troop soldiers. Over the decades, residents also worked on government farms surrounding Freedman's Village. Laborers earned 10 dollars per month, although they were obligated to contribute half of their earnings to the general fund to maintain the village (National Park Service, Freedman's Village, 2021).

The Freedmen's Bureau took over the village from the Department of War in 1865, responsible for collecting rent payments from village residents. Rents, which ranged from one to three dollars per month, were particularly contentious, as some residents scorned the Freedmen's Bureau policies and saw the sum as a hurdle in the movement towards self-sufficiency (National Park Service, Freedman's Village, 2021). Tensions persisted, and as the former plantation's land became increasingly desirable for development, threats mounted to close Freedman's Village and evict the residents. Faced with the closing of the village, residents bought their homes from the government, established a rent-to-own system for the land, and continued to expand community institutions. In spite of consistent threats, residents used their community institutions and knowledge of federal policies to successfully organize and stay in the village until the end of the 19th century (National Park Service, Freedman's Village, 2021).

Peaking at over 1,000 individuals, the population of the village fluctuated over the years. As of July 1867, there were 837 inhabitants living at Freedman's Village, including 619 individuals occupying residences; 83 individuals in the home for the indigent; 35 individuals at the hospital; and 100 individuals in the vicinity of the village (Arlington County Department of Community Planning, Housing and Development 2016: 5). Over the next two decades, additional homes were built, improvements were made, and a brick church was constructed. In 1888, the village population was 763, composed of 170 families. At this time, the village included 124 dwellings, three shops, two churches, and one school. Historian Lindsey Bestebreurtje writes that, "Though residents benefited from the overall central planning of the Village's buildings, layout, and services undertaken by the War Department, it was the freedmen themselves who spearheaded the development of a truly robust community in Freedman's Village" (Bestebreurtje 2018: 339).

The Freedman's Village existed for 40 years, a much longer time frame than many other contraband camps that disbanded after the Civil War. While village residents were successful in establishing community institutions and accessing education and employment opportunities, the community was not immune to the patterns of displacement and control in emerging Jim Crow society. Forces within the white community, including government agencies, land developers, and those seeking to limit Black political power, desired to gain control of the land and sought the closing of Freedman's Village.

In 1872, the Freedman's Bureau was abolished. By the 1880s, support for Reconstruction-era programs had declined; without the Bureau, the village faced federal opposition with no advocate. The War Department increased its effors to close the village by calling for Congressional action. It was declared unlawful for individuals to reside on a military installation; the village was disbanded, and its residents were evicted (Smith, Tooker, and Enscore 2014: 7-6; Earley 2004: 29; Moss 2009:

41). In 1888, residents petitioned the government for the right to remain in the village. John Syphax wrote a letter to the government, requesting a sum of $350 for each village homeowner to compensate the families for improvements made to the property. The Government ultimately compensated village residents based on the 1868 appraised value of structures within Freedman's Village (well below market value) and the contraband-fund tax collected during the Civil War, for a combined sum of $75,000.

One source notes that on December 7, 1887, residents were given 90 days to leave the Freedman's Village (Poole 2010: 282). Other sources indicate that the village did not close until circa 1900 (National Park Service, Freedman's Village, 2021; Arlington County Department of Community Planning, Housing and Development 2016: 10; Arlington National Cemetery website, Freedman's Village). While the precise date of closure is unclear, some of the residents remained in Arlington County and established the neighborhoods of Johnson's Hill, Hall's Hill, and Nauck—which still exist today under the names Arlington View, High View Park, and Green Valley, respectively (Arlington County Department of Community Planning, Housing and Development 2016: 10).

ESTABLISHMENT OF ARLINGTON NATIONAL CEMETERY

NOTE: The cemetery is adjacent to, but outside, the study area boundaries. This history is offered for context.

In January of 1864, the Federal government purchased the Arlington House plantation. As the Civil War progressed, cemeteries in Washington, D.C., and surroundings reached capacity and in May of 1864, the Army used available land along the northern border of the Arlington plantation to bury soldiers. The Arlington House plantation was deemed appropriate for burials, under the authority of Congressional legislation that authorized President Abraham Lincoln to purchase grounds for national cemeteries. Concurrently, Quartermaster General Montgomery Meigs sought a location for an official cemetery.

On June 15, 1864, Meigs recommended to Secretary of War Edwin M. Stanton that the plantation be used as a cemetery. Stanton approved the choice the same day, stipulating that no more than 200 acres of Arlington House and its grounds were to be used as a military cemetery. The cemetery was not to interfere with the existing Freedman's Village (Smith, Tooker, and Enscore 2014: 8-39).

Meigs believed Lee had dishonored the property by resigning from the U.S. Army and leading the Confederate forces. He thus sought to restore honor to the property through the development of the cemetery. To deter the possibility of the Lees returning to the property after the war, Meigs suggested locating the graves in close proximity to the Arlington House mansion. While most burials were initially placed at a distance from the mansion, in August of 1864, 26 bodies were buried along the perimeter of Arlington House plantation rose garden, within a few yards of the mansion (National Park Service, The Beginnings of Arlington National Cemetery, 2021). In April of 1866, Meigs ordered the construction of a tomb for unknown Civil War dead adjacent to the rose garden, also known as the south flower garden. Previously the area was a grove or naturalistic wild garden. Joining the other 15,000 Civil War casualties buried on the lands of the former Arlington House plantation, the tomb for the unknown Civil War dead included the remains of 2,111 unknown soldiers.

Over the next several years, the federal government developed the National Cemetery into a burial ground, a significant change from the working plantation landscape of the Custis and Lee years (Moss 2009: 37). In April of 1866, Meigs ordered the construction of a tomb for unknown Civil War dead in the rose garden. Joining the other 15,000 Civil War casualties buried on the lands of the former Arlington House plantation, the tomb for the unknown Civil War dead included the remains of 2,111 unknown soldiers (National Park Service, The Beginnings of Arlington National Cemetery, 2021).

Between 1864 and 1870, the Custis and Lee-era carriage drives winding around Arlington House were reestablished and regraded and by 1867,

according to a report on the conditions of the Arlington National Cemetery, the lawns, gardens, and slopes were gradually rehabilitated from wartime damage (Moss 2009: 36). Nearly all of the forests surrounding the cemetery were gone by this point (Moss 2009: 37). By 1894, another garden was located in the northern part of the lower terrace at the National Cemetery that served Fort Myer, a nearby army post. The future Memorial Avenue axis would cut through the vegetable garden's southern corner when constructed (Earley 2004: 28).

On May 30, 1868, the Grand Army of the Republic, a powerful association of Union veterans, organized the first widely observed Memorial Day services on the portico of Arlington House, to commemorate Civil War soldiers (Earley 2004: 28). For this and other events, Arlington National Cemetery was accessed from the Alexandria-Georgetown Turnpike, running north-south past where the cemetery Hemicycle is located today (*see Figure 10*). Memorial Day gatherings continued to grow over the years, with transportation to the cemetery a challenge from the outset.

George Washington Custis Lee sought to regain ownership of the former Lee plantation property in 1877; his dispute ultimately went to the Supreme Court in 1882, argued as the case of United States v. Lee (106 U.S. 196). The case was decided in favor of Custis Lee, who did not move back to the property, but rather sold the family home and surrounding 1,100-acre plantation back to the federal government for $150,000 (National Park Service, Whose Land? Claims at Arlington Estate, 2021). A Supreme Court decision the following year granted clear title of ownership of the National Cemetery property to the federal government (Moss 2009: 40). The cemetery grew in 1889, as Congress transferred 142 additional acres to the Arlington National Cemetery from surrounding lands; another 56 acres were added to the cemetery in 1897 (Earley 2004: 28).

Early Plans for a Memorial Bridge (1886 - 1900)

Beginning in 1851, the public grew increasingly interested in a bridge across the Potomac River, in the vicinity of today's Arlington Memorial Bridge, to provide an improved and direct river crossing. Some attribute the idea for the bridge to Andrew Jackson during his presidency. In 1851, as the cornerstone of the Capitol building extension was laid, then-Secretary of State Daniel Webster included reference to Jackson's idea in his speech: "Before us is the broad and beautiful river, separating two of the original thirteen States, which a late President [Andrew Jackson]... desired to span with arches of ever-enduring granite, symbolical of the firmly established union of the North and the South" (National Park Service, Arlington Memorial Bridge and Avenue, undated).

Washington, D.C., depended upon successful navigation of the Potomac River, and in 1857, civil engineer Alfred Landon Rives completed the first comprehensive study of the river around the city (Earley 2004: 27). Rives, who later was commissioned by the Secretary of the Interior to prepare designs and estimates for a bridge across the Potomac, believed that any river improvements were interdependent with bridge transportation across the river. Rives' study (and others) found that urbanization, runoff, and poor agricultural practices along the river had resulted in extensive silting, which impacted commercial ship traffic. As the government began regrading major streets in the core of Washington, D.C., the infrastructure projects unintentionally created runoff, adding to the silting (Earley 2004: 28).

On March 5, 1872, Congress authorized a plan for the permanent improvement of area harbors, which included the dumping of dredged material. Developed by the U.S. Army Corps of Engineers, the Reclamation Plan for the Potomac Flats was the first systematic effort to improve navigation of the Potomac River. Under the Army Chief of Engineers, U.S. Civil Engineers coordinated the work of private contractors. Between 1872 and 1911, the Potomac River was subject to extensive dredging, which reconfigured the waterfront to redress decades of silting (*see Figure 11*) (Earley and Fanning 2005: 29-30).

Initially, the goal of the silt dredging was to improve river navigation. Eventually, engineers began to plan for the reclamation of the mud flats as

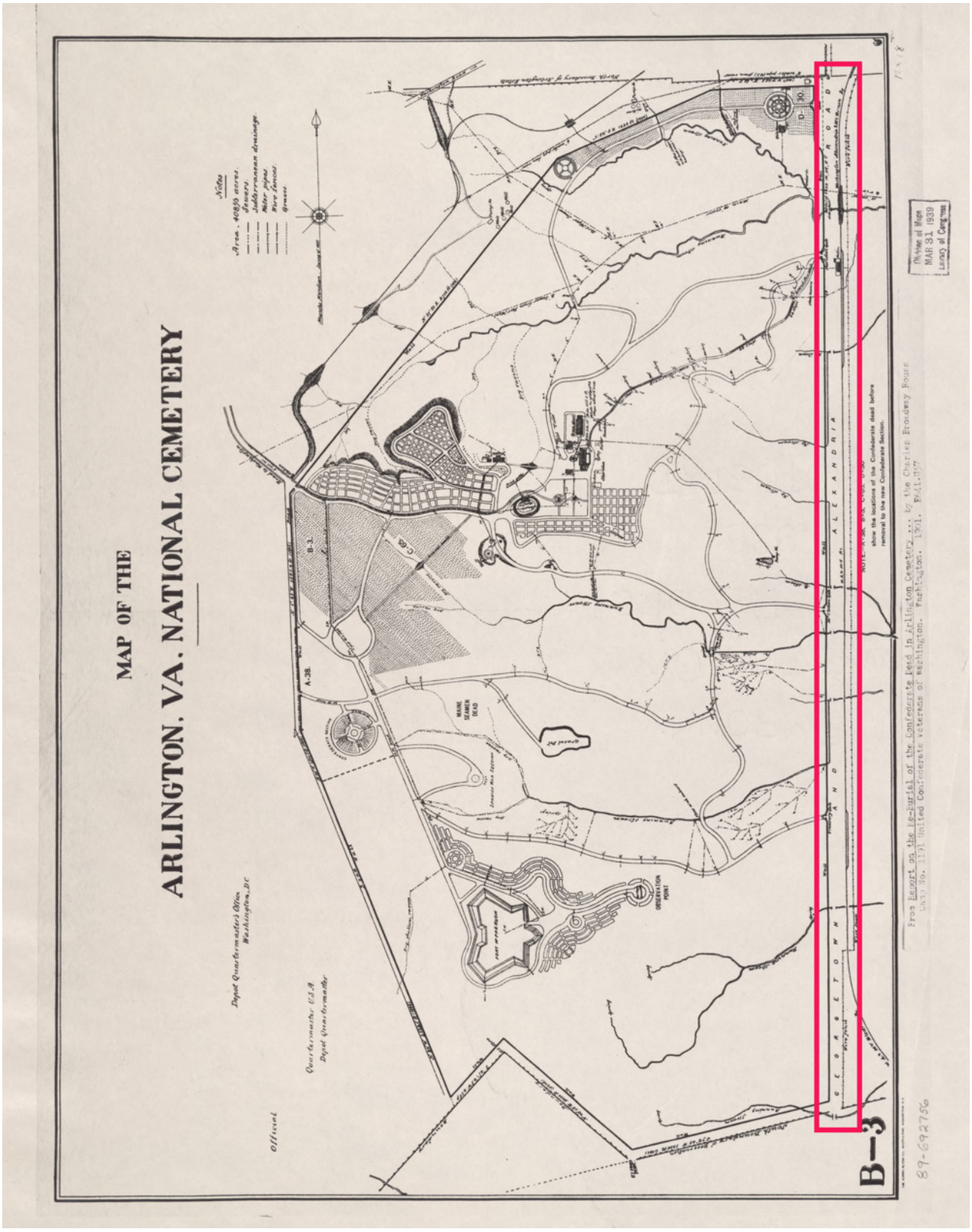


Figure 10: Map of Arlington National Cemetery with the Alexandria-Georgetown Turnpike within red rectangle, 1901. In the decades before Memorial Avenue was constructed, the turnpike offered access to Arlington National Cemetery. (Source: Library of Congress, Control number: 89692756).



Figure 11: Map of Washington and Georgetown Harbors showing visible accumulation of sediment below the Long Bridge in the Potomac River, 1882 (Source: Library of Congress, Call number: G3851. P55 1882.U17, Control number: 90685415).

usable land. Notable changes to the landscape of Washington, D.C., as part of this dredging process included the addition of fill at the western end of the National Mall, which formed West Potomac Park on the Washington, D.C., shoreline. Fill deposited along the western edge of the Washington Channel resulted in a new peninsula, which would eventually host East Potomac Park. The Tidal Basin, located between East and West Potomac Parks, was created to flush the waters of the Washington Channel (Earley and Fanning 2005: 30).

By early 1890, all of the reclaimed land had been filled above the level of high tide. In 1892, a training dike, consisting of dredged mud and rip rap located below water level, was built along the southwest side of the Virginia Channel, with the purpose of forcing the river into a narrow channel (*see Figure 20*). The training dike did not succeed in this function. However, the dike may have changed the configuration of the silted area accumulated below Analostan Island (also called Mason's Island and today called Theodore Roosevelt Island), which would later be used in the construction of Columbia Island (Earley and Fanning 2005: 30).

The Potomac Flats reclamation efforts resulted in the creation of 621 new acres of land for Washington, D.C., and 118 acres of tidal reservoir. In 1897, President Grover Cleveland signed legislation that reserved the new lands for park use. West and East Potomac Parks were transferred to the Office of Public Buildings and Grounds (OPBG) in 1909 and 1912, respectively, and the OPBG completed the parks' development in the 1920s (Earley and Fanning 2005: 30).

THE MEMORIAL BRIDGE AND POST CIVIL WAR RECONCILIATION

Meanwhile, Congress periodically received proposals in the mid- to late-19th century for the construction of a bridge over the Potomac River, although there was no immediate action (Earley 2004: 27). In 1885, the death of Ulysses S. Grant prompted a national discussion of a memorial commemorating Grant, who led the Union Army to victory in the Civil War as commanding general and acted as the nation's 18th president. Soon, the concept of the memorial came to include tributes to President Abraham Lincoln and post-Civil War reunification, in addition to Grant. On May 24, 1886, Congress passed a resolution directing the Secretary of War to "examine and report on the expediency of constructing a Government bridge" between the core of Washington, D.C., and Arlington, Virginia (KressCox 1986: 30). An anonymous author wrote of the "Grant Memorial Bridge" as a symbolic structure "over the river which separates the National Capital from Virginia, the great battlefield of the war which he [Grant] brought to a successful conclusion" (quoted in Kohler and Scott, eds. 2006).

The debates around the design for the memorial bridge were part of a larger conversation about how the events of the Civil War should be commemorated. Historian David Blight posits that were three primary schools of thought with respect to how the conflict was remembered. One conception, expressed in the politics of Reconstruction, included an emancipationist vision that sought full citizenship and Constitutional equality for Black Americans. A second conception of the Civil War was a white supremacist vision that sought white social and political domination, using terror and violence against non-white people. A third conception was a "reconciliationist" vision that

emphasized seeking common ground between the North and South to move past the Civil War. This vision focused on the commonalities between the North and South, abandoning sectionalism for the sake of unity, often overlooking enslavement as the cause of the Civil War and omitting the goals of emancipation. Blight concludes that "reconciliation overwhelmed the emancipationist vision in the national culture" (Blight 2001: 2).

President William McKinley included sectional reconciliation between the North and South as a policy in his inaugural address in 1897. The reconciliation movement framed the Civil War primarily as a fight between white Americans, downplaying the violence of the conflict, Black participation in the Civil War, and the failure to secure civil rights for formerly enslaved individuals.

In tandem with advocates of the Lost Cause—an ideology that claims that the principles of the Confederate States were just—Reconciliationists reshaped white Americans' public understanding and collective memory of the Civil War. Proponents of the Lost Cause published several articles in the new Southern Historical Society journal, founded by former Confederate general Jubal Early, which promoted a selective memory of the war. Early sought to vindicate the Lost Cause by communicating a pro-Confederacy history (National Park Service, Memorialization of Robert E. Lee and the Lost Cause, 2021). As author Eric Foner writes, "the Confederacy lost the war on the battlefield but won the war over memory" (Foner 2001).

These efforts by Reconciliationists and Lost Cause supporters undermined the potential realization of the social and political promises of racial equality and full citizenship after the Civil War. Historian Katie Hemphill notes that the Reconciliationist narrative obscured the causes of the Civil War and argued "that men on both sides of the war were equally correct and justified in their cause, [which] paved the way for white Southerners to retake control of state governments and regain power in national politics" (Interview with Katie Hemphill 2017). Historian Rayford Logan describes the ensuing adoption of systems of legal racial segregation and discrimination in the post-Reconstruction era as the "nadir of American race relations."

Politicians' adoption of a Reconciliationist perspective coincided with the push to create several memorials to the Civil War, including the symbolic memorial bridge spanning the Potomac River. Indeed, Reconciliationists and Lost Cause supporters manipulated the historical memory of the Civil War and its aftermath by promoting the installation of monuments and memorials, which publicly conveyed the subjects and themes deemed worthy of remembering and commemorating. The United Daughters of the Confederacy (UDC) was founded in 1894 for female descendants of Confederate Civil War soldiers "dedicated to the purpose of honoring the memory of its Confederate ancestors"; this national organization led efforts to commemorate the war and teach the message of the Lost Cause. Between 1895 and the 1920s, the UDC installed dozens of Confederate monuments across the South, including in courthouse squares, around state houses, and in urban parks, among other public locations (National Park Service, Memorialization of Robert E. Lee and the Lost Cause, 2021).

The hundreds of public monuments to the Confederate dead glossed over the war's devastation, and its failure to affirm full citizenship for Black Americans. Scholar Clint Smith writes that, "These monuments were built in an effort to reinforce white supremacy at a time when Black communities were being terrorized and Black social and political mobility impeded…Social and political backlash to Reconstruction-era attempts to build an integrated society was the backdrop against which the first monuments arose" (Smith 2021: 144). The statues conveyed a selective history of the Civil War.

These monuments and memorials to the Lost Cause were met with resistance, including by W.E.B. Du Bois and Frederick Douglass, who described monuments to Robert E. Lee as "bombastic laudation of the rebel chief" (quoted in Smith 2021: 132). These voices, however, were overwhelmed by the dominant push for national reconciliation.

Within this framework, the National Memorial Bridge Association formed in 1899, and Congress

appropriated $5,000 for additional study of the memorial bridge between the monumental core of Washington, D.C., and Arlington, Virginia. The Secretary of War organized a competition for the design of the memorial bridge and invited four engineers to prepare plans. Rather than framing the bridge as a memorial to Grant, the Secretary of War framed the bridge as "a Memorial to American patriotism," commemorating the reunification of the North and South following the Civil War (Kohler and Scott, eds. 2006).

After the assassination of President McKinley in 1901, the subject of the memorial bridge fully shifted from a commemoration of a United States Army general, a symbol of the North, to one dedicated to reconciliation between the North and the South (Kohler and Scott, eds. 2006). The bridge would become one of numerous public symbols and memorials introduced into the landscape in the post-Reconstruction era, imbued with symbolism of the reunification of the United States after the Civil War. The bridge would geographically and symbolically link two major Civil War-era symbols within the greater monumental landscape.

Engineer William H. Burr and architect Edward P. Casey submitted a plan for a memorial bridge across the Potomac River between Arlington Cemetery and 23rd Street NW (Earley 2004: 29). The centerpiece of the design was two Roman arches, concealing a steel bascule draw (*see Figure 12*). In April of 1900, the Secretary of War submitted William Burr and Edward P. Casey's plans for a memorial bridge with a bascule to Congress. No further action was taken at this time (Lee 2021: 8-93). Although critics of the Burr-Casey bridge design argued that it lacked the appropriate simplicity and dignity championed by the City Beautiful Movement, the design remained the preferred plan for the Memorial Bridge for the next 15 years.

THE FIRST MEMORIAL BRIDGE DESIGNS

Thomas W. Symons of the U.S. Army Corps of Engineers created the first bridge designs in 1886. The following year, collaborating with architects Paul J. Pelz and John Smithmeyer, Symons submitted a plan to Congress featuring a Romanesque-style bridge with a double-leaf draw span to honor Grant (*see Figures 13 and 14*). The design, based on the London Bridge, featured two hipped and conical roofed towers and a central double-leaf bascule. These drawings incorporated the title "Memorial Bridge in honor of General U.S. Grant" (Lee 2021: 8-92).

In 1890, Colonel Peter C. Hains prepared a second design for a bridge linking Arlington National Cemetery to Washington, D.C., which included a suspension bridge without a draw (Earley 2004: 28). In 1892, the Senate Committee on Public Buildings and Grounds requested that the Secretary of War provide estimates for the bridge construction. Major Davis of the Army Corps of Engineers proposed a suspension bridge similar to the 1890 Hains design, and in the following years, additional proposals, actions, and bills were presented to Congress regarding the design and development of a bridge across the Potomac River. All proposals were blocked at least in part because the central feature was a memorial to Grant, as some objected to a bridge dedicated solely to the leader of the Union Army (Lee 2021: 8-92; Kohler and Scott, eds. 2006). Pamela Scott writes in *Designing the Nation's Capital: The 1901 Plan for Washington, D.C.,* that, "Burnham and McKim were apparently unaware of how politically inflammatory a huge Grant Memorial Arch—an architectural type that historically recorded the conquest of enemies—had become when they proposed it" (Scott and Kohler, eds. 2006).

The City Beautiful Movement and Washington, D.C. (1901 - 1914)

In the late 1800s, the contextual landscape around the future Memorial Avenue Corridor saw several large-scale changes. As noted above, in 1897, Congress set aside lands for the future East and West Potomac Parks in Washington, D.C., reserving them for a public riverside park (Earley 2004: 28). Additionally, an act of Congress in 1900 gave the United States Department of Agriculture (USDA) approximately 400 acres of the former Arlington House plantation to establish an experimental farm called Arlington Experimental Farm. A small portion of the experimental farm extended into what

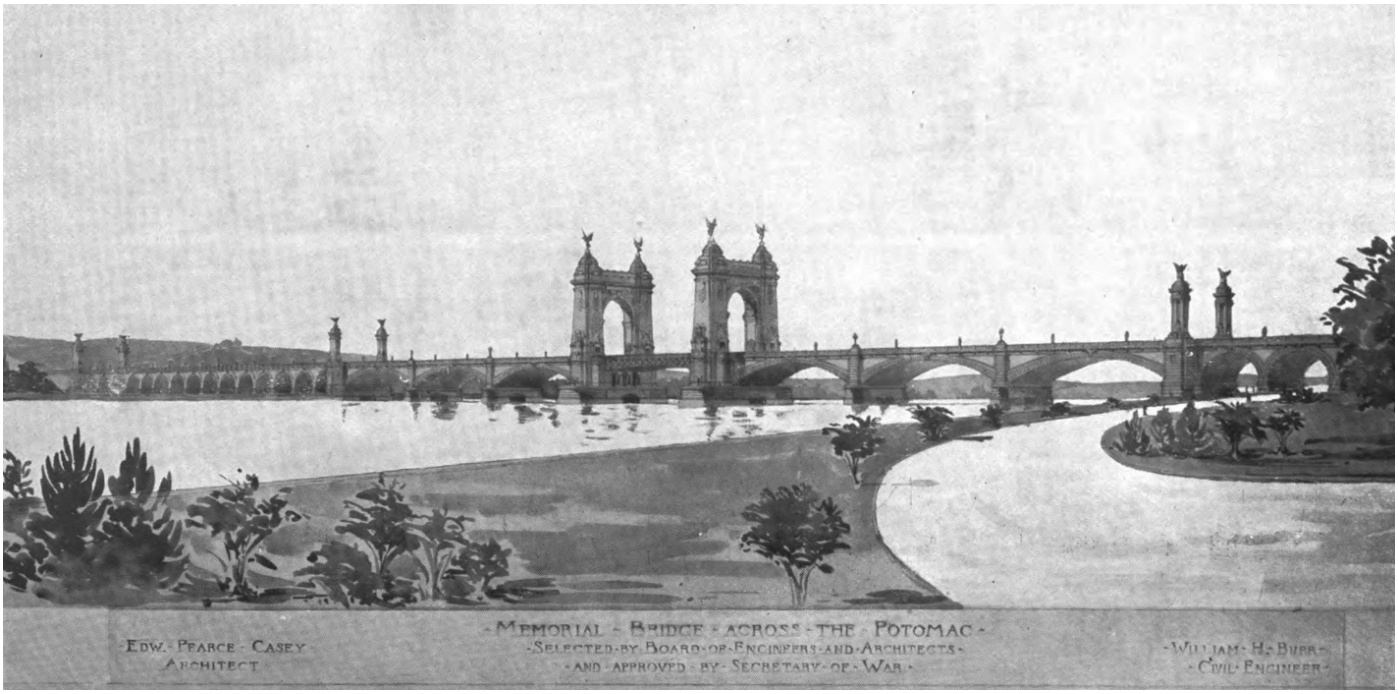


Figure 12: A 1901 drawing of the design by Edward P. Casey and William H. Burr for a memorial bridge over the Potomac River that was accepted by the Secretary of War but never constructed (Source: Committee on the District of Columbia. Proposed Memorial Bridge: A Hearing Before the Senate Committee on the District of Columbia. Senate. 56th Cong., 2d sess. Washington, D.C.: Government Printing Office, January 16, 1901, p. 50-51).

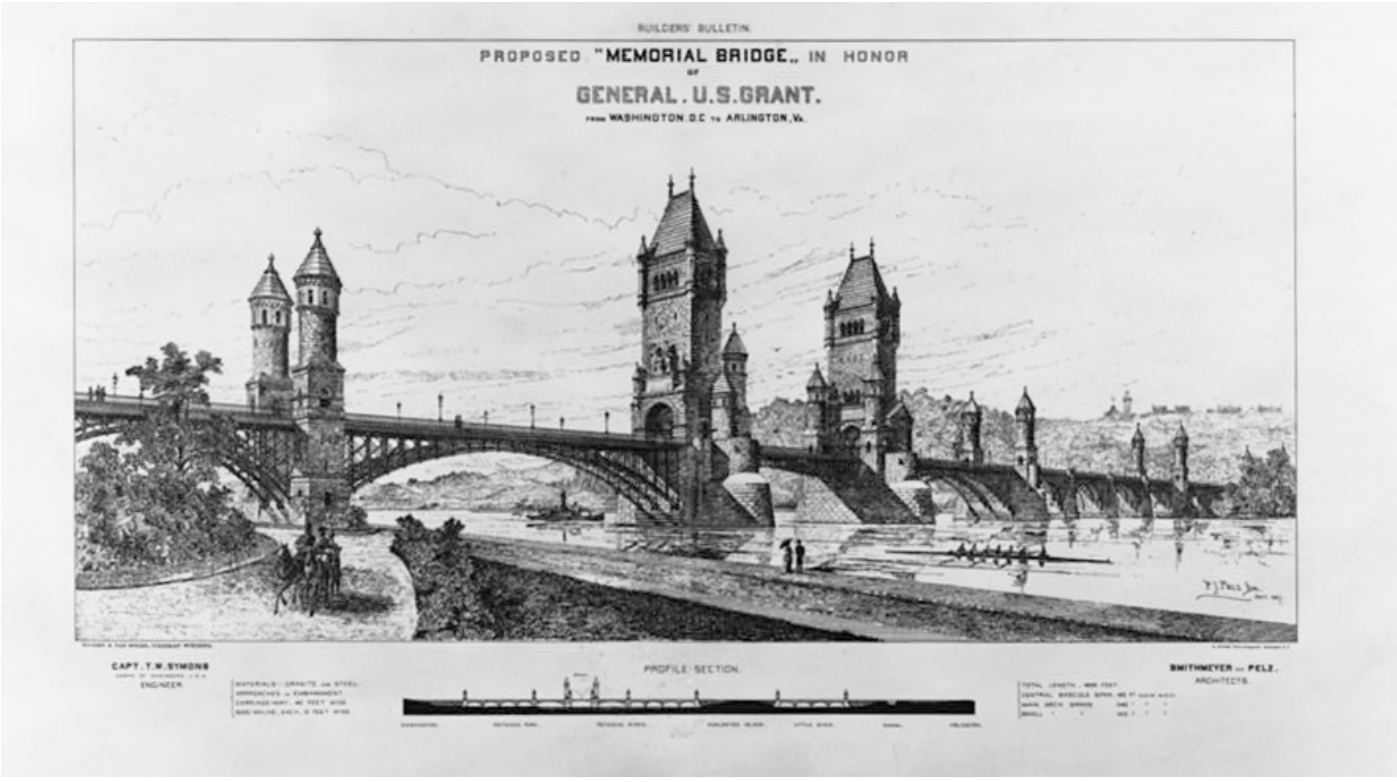


Figure 13: One of several designs created for the memorial bridge across the Potomac River, by Thomas W. Symons, Paul J. Pelz, and John Smithmeyer, 1886-1887 (Source: Library of Congress, Call number: ADE - UNIT 2815, no. 1 (B size) [P&P]).

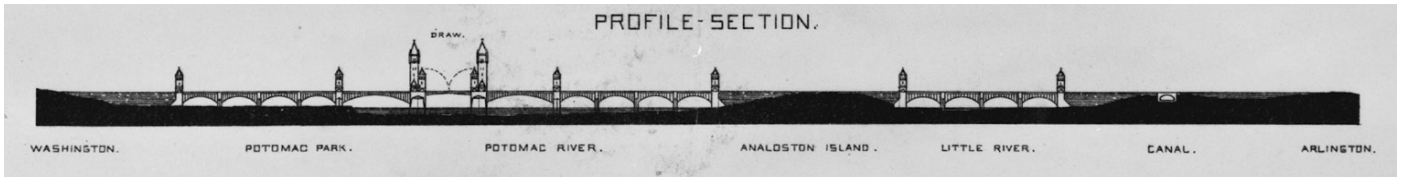


Figure 14: Detail of profile section of the memorial bridge across the Potomac River, by Thomas W. Symons, Paul J. Pelz, and John Smithmeyer, 1886-1887 (Source: Library of Congress, Call number: ADE - UNIT 2815, no. 1 (B size) [P&P]).



Figure 15: View of the Arlington Experimental Farm, on the southern bank of the Potomac River, with Arlington House visible between the trees in the background, October 1907 (Source: US Department of Agriculture Special Collections, Series VII.1, Photographs, Box 7.1/1, file "from I.1--IX B 4e [1]).



Figure 16: Aerial view of the Experimental Farm, covering the area that now includes the Pentagon and Ronald Reagan Washington National Airport with Arlington Memorial Bridge visible. Photo is dated 1919, but likely taken at a later date due to presence of Arlington Memorial Bridge and roadway configuration on Columbia Island (Source: Arlington Public Library).

would become the Memorial Avenue Corridor. The USDA engineered the land for improved drainage, removing the vegetation that had grown during the tenure of the Freedman's Village and plowing it for new crops and demonstration lawns (Lee 2021: 8-93) (***see Figure 15, Figure 16, Figure 17, and Figure 25***). The Arlington Experimental Farm operated until late 1940, when Congress directed the removal of Department of Agriculture activities from the property and transferred the land to the Secretary of War to build the Pentagon (Rasmussen and Wiser 1966: 30).

THE SENATE PARK COMMISSION

Held in Chicago in 1893, the World's Columbian Exposition fully announced the City Beautiful movement to the United States. The City Beautiful Movement was an urban planning philosophy that emphasized formal, classical architectural and landscape architecture treatments. At the 1893 World's Columbian Exposition, the architectural firm of McKim, Mead & White designed the Court of Honor. Based on the success of that project, the firm's leadership would subsequently become part of the McMillan Commission, the Arlington Memorial Bridge Commission, and the Commission of Fine Arts in Washington, D.C. McKim, Mead & White would also be the firm to design Arlington Memorial Bridge and its adjacent resources (Lee 2021: 8-92). The executed Memorial Avenue Corridor design would embody the Beaux-Arts principles of the City Beautiful Movement that were demonstrated at the World's Columbian Exposition. The United States Senate Park Commission began a comprehensive study of Washington, D.C.'s, park system in 1901. Founded in 1900 to commemorate the 100th anniversary of the capitol city, the Commission was heavily influenced by the City Beautiful Movement. The final plan of the Commission was named for Senator James McMillan of Michigan, who oversaw the study. Published in 1902, the McMillan Plan proposed redesigning much of downtown Washington and expanding Pierre L'Enfant's original

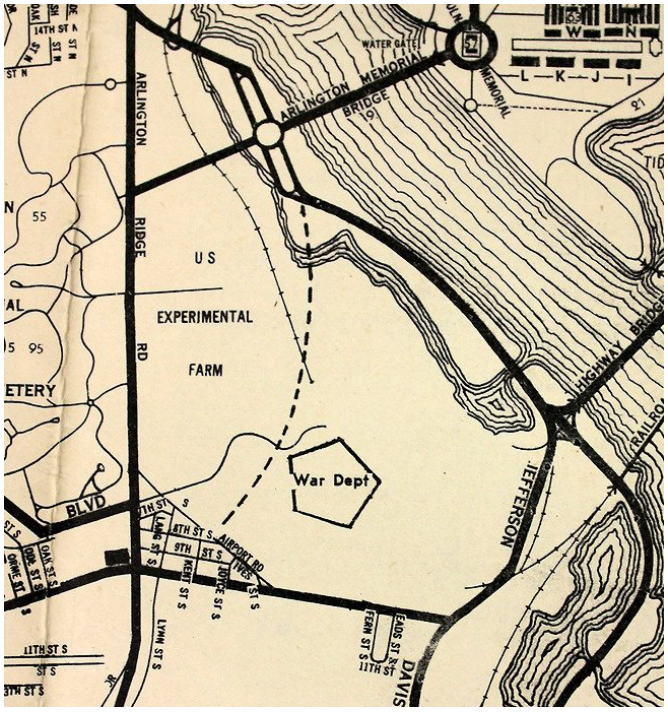


Figure 17: Detail of Arlington Experimental Farm location, 1942 (Source: L.B. Prince Co. Map of Washington, c. 1942).

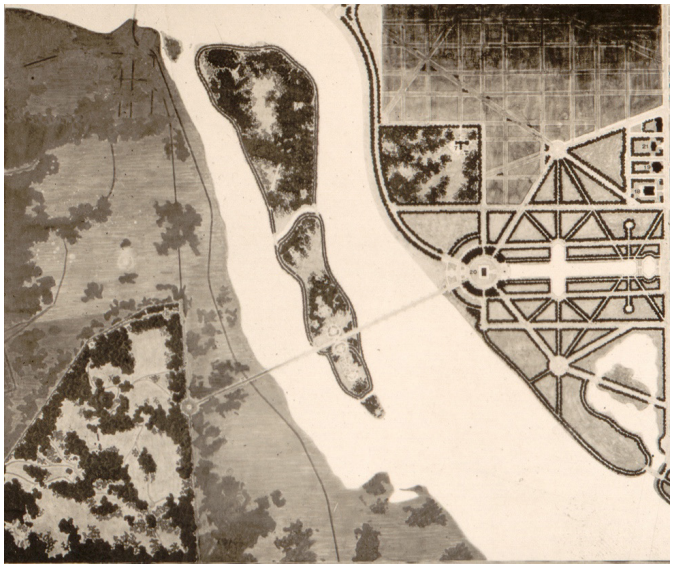


Figure 18: Detail of the 1901/1902 McMillan Plan design for the monumental core of Washington, D.C., including the Memorial Avenue Corridor, with the proposed Arlington Memorial Bridge spanning the Potomac River (Source: Library of Congress, Control number: 88690908).



Figure 19: Detail of 1902 "General Plan" of Senate Park Commission's proposal for the location of Arlington Memorial Bridge over the Potomac River from the Lincoln Memorial in Washington, D.C., to Arlington, Virginia (Source: Report of the Senate Park Commission. The Improvement of the Park System of the District of Columbia. United States Senate. Committee on the District of Columbia. 57th Cong., 1st sess. Washington, D.C.: U.S. Government Printing Office, 1902).

plan of the city. It also called for the creation of waterfront parks, parkways, an improved National Mall, and new monuments and vistas (Robinson and Associates 2016: 48; National Park Service, "The Mall Cultural Landscape," 2021).

An illustrious committee spearheaded the planning process, with key members that included Daniel Burnham, visionary of the World's Columbian Exposition; landscape architect Frederick Law Olmsted, Jr.; architect Charles F. McKim; sculptor Augustus Saint-Gaudens; and others. Together, the commission members advised the Senate Commission chaired by Senator James McMillan; McMillan's secretary, Charles Moore, acted as secretary (Leach and Barthold 1997: VIII.32). In June 1901, Burnham, McKim, Olmsted Jr., and Moore traveled to Europe for seven weeks to study precedents in park and city planning, including Andre LeNotre's work at Versailles as well as the urban forms of Rome (Joseph, Wheelock, and McLarty 1999: 15).

At its core, the charge of the Senate Park Commission was to restore and enhance the grandeur of Pierre L'Enfant's 1791 plan for the

District of Columbia. In the century since L'Enfant's design had dictated the early development of Washington, the city's development and population had exploded and it had endured a war—all of which had transformed the central core of the federal capital in ways that "marred the beauty and dignity of the national capital" (Moore 1902: 7). These departures from the original L'Enfant Plan were, according to the Commission, "to be regretted and, wherever possible, remedied" (Moore 1902: 10). With roots in the City Beautiful Movement, the McMillan Plan reinterpreted the spirit of L'Enfant's plan according to Beaux-Arts principles, establishing new axes and reinforcing existing ones as part of a comprehensive plan for the city.

The Senate Planning Commission published its recommendations in *The Improvement of the Park System of the District of Columbia*, which would guide the 20th century development of Washington, D.C. The recommendations, known as the McMillan Plan, used Pierre L'Enfant's 1791 plan as the basis for their designs, including the east-west "monumental core" that began on the east end at the United States Congress building and terminated at a planned memorial to President Abraham Lincoln. The Plan also included a low-profile monumental bridge that would link the planned Lincoln Memorial, a tribute to the President of the United States during the Civil War, to Arlington House, former home of Robert E. Lee, the Confederate general who led the army that fought against the United States government in order to maintain a separate Confederate government that would preserve the institution of slavery (Earley 2004: 29) (*see Figures 18 and 19*).

In the years after the publication of the McMillan Plan, design and development progressed within the monumental core of Washington, D.C.– the area broadly encompassing the landscapes of the U.S. Capitol, White House, the Federal Triangle, surrounding government offices, and the land between the Lincoln Memorial and Arlington National Cemetery. In 1910, Congress established the U.S. Commission of Fine Arts (CFA) under President Howard Taft to advise federal agencies on matters relating to design on public lands. The CFA, which addressed buildings, monuments, statues, fountains, coins and medals, and other entities on public lands, was one of the agencies that would oversee and implement the McMillan Plan's recommendations, including the development and construction of the memorial bridge spanning the Potomac River (Earley 2004: 29). To this day, the CFA continues to review design proposals for appropriateness within Washington, D.C.'s, monumental core.

THE MCMILLAN PLAN AND ARLINGTON MEMORIAL BRIDGE

In January 1901, McMillan reopened the question of the bridge design at Senate Park Commission hearings. Although by this time the memorialization of the bridge had shifted in focus from an individual Ulysses S. Grant tribute to "a Memorial to American patriotism," Senate Park Commission architect Daniel Burnham wrote in the report's "First Draft" about the symbolic nature of the Memorial Bridge:

> In honor of the great General [Grant] who led the armies of the Union to victory that meant the preservation of the Republic, and in memory of the brave soldiers who fought under him, what more appropriate site than one which holds vital relations on the one hand with the commander of the Revolutionary armies, and on the other hand with the last resting place of so many thousands of the brave men who gave their lives in battle for their country (Kohler and Scott, eds. 2006).

President William McKinley sought to reconcile and move beyond the sectionalism of the Civil War, in which individuals exclusively identified with the cultural, social, economic, and political interests of either the North or South of the United States. Upon McKinley's assassination in September 1901, discussion regarding the memorial site shifted from commemoration of the Union and Grant to reconciliation between the North and South. Meanwhile, as the concept for the bridge shifted, Congress authorized a different memorial to Grant in 1902; it was completed in 1924 and placed on the west side of the U.S. Capitol.

In 1913, Congress approved Henry Bacon's design for the Lincoln Memorial, to be placed at the west end of the National Mall according to the concept

laid out in the McMillan Plan (Earley 2004: 29). That same year, on March 4, Congress established the Arlington Memorial Bridge Commission (AMBC) to oversee the design, planning, construction, and reporting to Congress on the design of the memorial bridge crossing the Potomac River into Arlington, Virginia (Lee 2021: 8-94). A few years later, in 1916, the construction of Francis Scott Key Memorial Bridge was authorized and planned north of the proposed Arlington Memorial Bridge, connecting Georgetown in Washington, D.C., to Rosslyn, Virginia (Earley 2004: 29). Key Bridge opened to the public on January 17, 1924, effectively replacing the Alexandria Aqueduct as the means to cross the Potomac River at Georgetown. The two bridges existed side-by-side until 1933 when the Potomac Aqueduct was removed. Other changes in the contextual landscape included the completion of land reclamation southeast of the cultural landscape in 1911. This effort created East Potomac Park, extending the National Mall west of the Washington Monument by more than 4,000 feet.

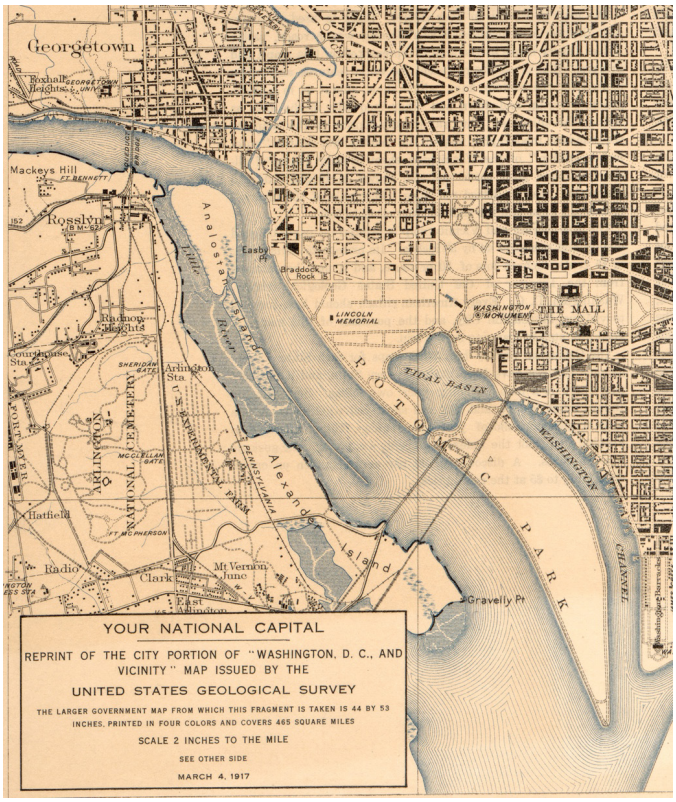


Figure 20: US Geological Survey plan of Washington, D.C., and Virginia, showing the 1892 "training dike" south of Analostan Island, 1917 (Source: Library of Congress, Control number: gm70006089).



Figure 21: Detail of map of port facilities around Washington, D.C., depicting the footprint of Columbia Island and the Boundary Channel, 1923 (Source: Library of Congress, Control number: 88690515).

Construction of the Memorial Avenue Corridor (1915 – 1937)

CONSTRUCTING COLUMBIA ISLAND

Between 1915 and 1927, the Army Corps of Engineers deposited dredged material from the Potomac River to the west of its main navigation channel. The resulting fill formed Columbia Island and the Boundary Channel, located between Columbia Island and the Virginia shoreline. This dredged material had built up beginning as early as 1892, when rip rap and other materials were deposited to construct a training dike south of Analoston Island (later called Mason's Island, and today called Theodore Roosevelt Island). Using derricks, engineers used the 1892 dike and newly constructed dikes and levees to create Columbia Island with hydraulic fill (Thomas 1963: 48) (*see Figure 20*).

In 1919, the Major General W.M. Black from the U.S. Army Corps of Engineers requested that the new landform be named Columbia Island, and the channel be called Boundary Run. In January 1920, the Geographic Board approved the naming of Columbia Island as a land feature separate from Analostan Island. Also at this time, the name Boundary Channel was adopted for the north-south waterway between the Columbia Island and the Virginia shoreline (Reservation 344, Reservation Files, National Capital Region).

In 1922, the landform of Columbia Island was an average of three feet in elevation at high tide; the Boundary Channel was approximately five feet deep and 50 feet wide. This same year, Columbia Island was added to the Washington, D.C., park system, managed by the Department of War (Earley and Fanning 2005: 33).

Also in 1922, the federal government proposed use of the island as a bathing beach, with public amenities to include a large pavilion, tennis courts, and baseball diamonds (Jones 2022: 85). The proposed public beach would be racially segregated, relegating Black swimmers to a 400-foot-wide section at the southern end of the island while the rest of the island would be reserved for use by white visitors (Jones 2022: 86). There is no documentation to suggest that the island was ever developed as a public beach.



Figure 22: Detail from photographic mosaic aerial map of Washington, D.C., with Columbia Island in the center and early construction of Arlington Memorial Bridge visible in the Potomac River between Columbia Island and Washington, D.C., shoreline, 1928 (Source: Library of Congress, Control number: 87693347).

By 1925, Columbia Island's elevation ranged between seven and 12 feet above mean low water. To accommodate the construction of Arlington Memorial Bridge, the Army Corps worked to further raise the elevation of Columbia Island (*see Figure 20*). The pending bridge construction required the reshaping of the island's contours to accommodate the caissons of the structure. Between 1925 and 1927, the Army Corps improved the flow of water between Analostan and Columbia Islands by removing the northern shoreline of Columbia Island, thus widening the channel between the two islands. Following this change, engineers constructed a 20-foot levee around the new outline of Columbia Island (Jones 2022: 179). Thereafter, U.S. Army Corps of Engineers resumed pumping hydraulic fill to create the Columbia Island landform.

Upon completion in 1927, Columbia Island was approximately 113 acres in area and had been filled to an average level of 20 feet above mean low water along the island's spine (*see Figure 22*). The island was characterized by a combination of fill and natural siltation, with voluntary vegetation that grew along the shorelines of Columbia Island, including willows (*Salix* spp.), cottonwoods (*Populus*

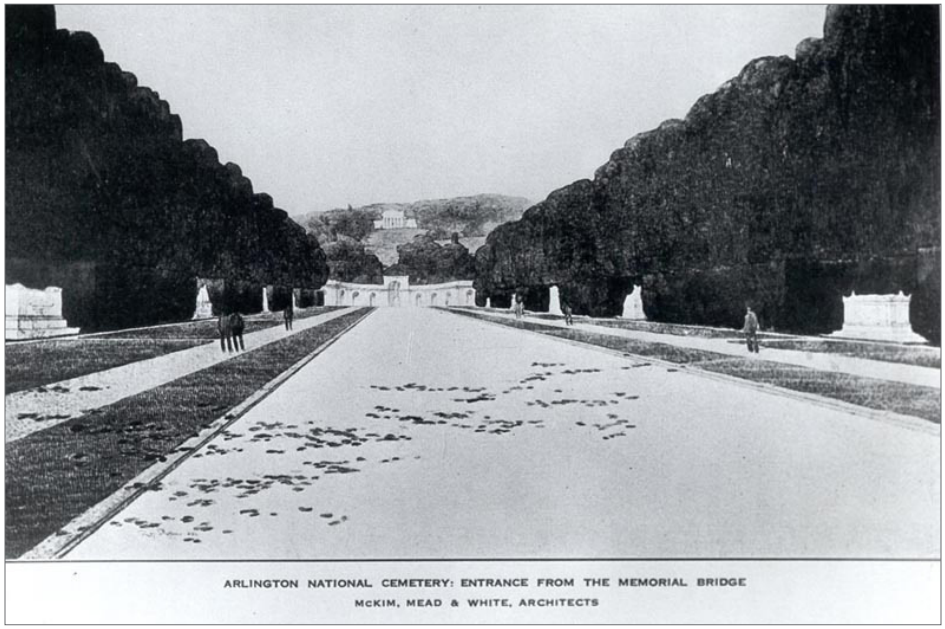


Figure 23: McKim, Mead and White perspective drawing of proposed Memorial Avenue entitled "Arlington National Cemetery: Entrance from the Memorial Memorial Bridge," c. 1929 (Source: National Park Service, Museum Resource Center (MRCE), Arlington National Cemetery folder, 5584-F).

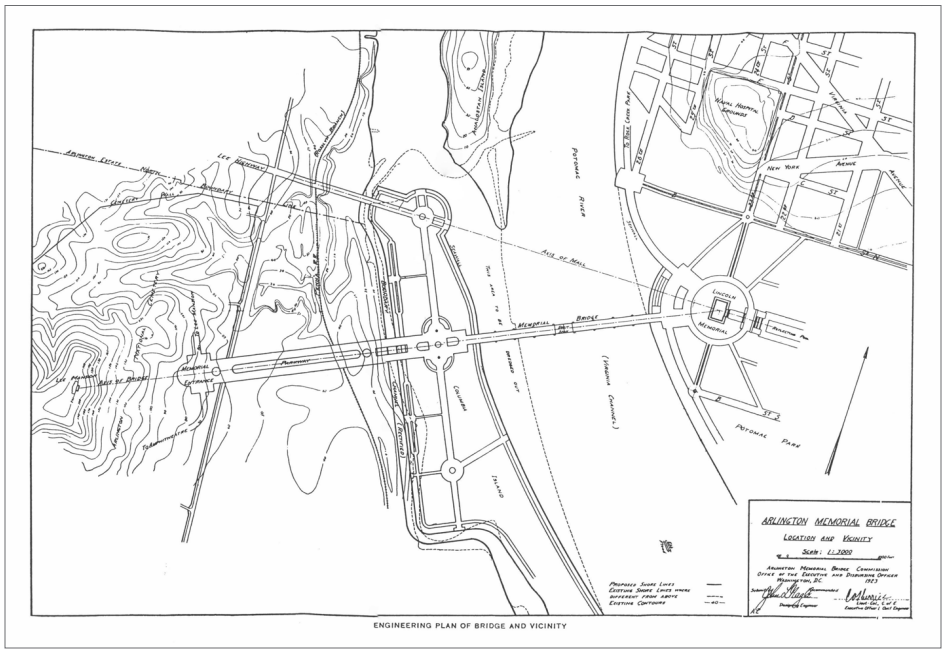


Figure 24: One of several drawings by architect William Mitchell Kendall presenting the initial conception for the Memorial Avenue Corridor including the treatment of Columbia Island, 1923 (Source: Report of the Arlington Memorial Bridge Commission 1924).

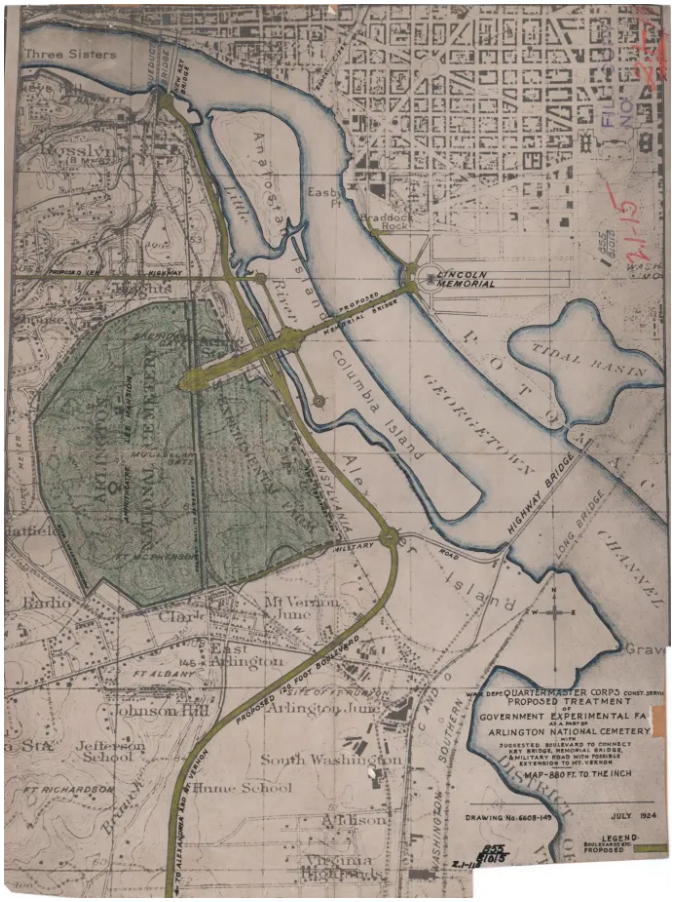


Figure 25: Proposed Treatment of Government Experimental Farm as Part of Arlington National Cemetery with proposed Memorial Bridge and Columbia Island features visible, July 1924 (Source: National Archives, Identifier: 305815).

sp.), red and silver maple (*Acer rubrum* and *saccharinum*), box elder (*Acer negundo*), American sycamore (*Platanus occidentalis*), and elm (*Ulmus* sp.) (Earley 2004: 29).

The north-south oriented Boundary Channel was located where a natural tidal stream had run through the mudflats near the Virginia shoreline. In place of that tidal stream, the channel was engineered to drain the adjacent slopes of the Virginia shore and the west side of the new island. Some of the water from Little River, the channel west of Theodore Roosevelt Island, was also carried through the Boundary Channel. Water flowed from the Potomac River into the Boundary Channel at the north end of the island and emptied into Columbia Lagoon at the south end. During incoming tide, the flow of water would reverse.

ARLINGTON MEMORIAL BRIDGE DESIGN

On November 11, 1921, a large traffic jam obstructed visitors on their way to the dedication ceremony for the Tomb of the Unknown Soldier in Arlington National Cemetery. The delays influenced the decision to fund and construct the memorial bridge to create additional transportation approaches across the Potomac River (Earley 2004: 30). The following year, just as the Lincoln Memorial structure was reaching completion and being



Figure 26: Memorial Bridge under construction, looking east across the Potomac River to the Lincoln Memorial and Washington Monument, circa 1928. Photographer: Harris & Ewing (Source: Library of Congress. Call number: LC-H25- 92572-A [P&P], Control number: 2016861895).

dedicated, Congress authorized appropriations, and the AMBC unanimously decided on a low-level bridge with a draw span constructed on a line from the Lincoln Memorial to Arlington House. The CFA voted to abandon the Burr-Casey design for Arlington Memorial Bridge, which had been the accepted design since the beginning of the century.

With respect to the bridge approaches and connections on the western end, Lieutenant Colonel C.O. Sherrill of the Corps of Engineers and the Executive Officer of the AMBC reported in a December meeting that: "The bridge is to start at the Lincoln Memorial and head toward the Lee Mansion, the bridge proper to terminate on Columbia Island, where there would be a round point, from which three roadways are to diverge, one north, to connect with the Lee Highway, one south to connect with the road to Mount Vernon, and one directly west to the Arlington National Cemetery" (CFA minutes, 18-19 Dec. 1922).

In March 1923, the Senate Park Commission selected the architectural firm of McKim, Mead & White to design the memorial bridge (Lee 2021: 80-96). Two months after selection, architect William Mitchell Kendall of McKim, Mead & White presented his initial design for the Memorial Avenue Corridor to the CFA. The plan included a design for the bridge and Memorial Avenue (*see Figure 23*), in addition to a design for Columbia Island. In the plans, Columbia Island included a continuation of the bridge axis and a cross axis of north/south roadways, all of which intersected at a plaza (Lee 2021: 8-96) (*see Figure 24 and Figure 25*). His plan was accepted and published in 1924 as "The Report of the Arlington Memorial Bridge Commission."

Also in 1924, Congress created the National Capital Park Commission to acquire lands for parks and playgrounds in the District of Columbia, Maryland, and Virginia (Earley 2004: 30). On April 26, 1924, House Bill 8916 was presented regarding the memorial bridge construction, noting "that the said Arlington Memorial Bridge Commission is hereby authorized to occupy such Government-owned lands as may be necessary for the bridge project authorized herein and on completion of the project to transfer to the park system under the Chief of Engineers, United States Army, all or such portions of such lands as the said commission may in its discretion decide to be necessary." The AMBC issued its report to Congress with specifics of bridge design and construction (Lee 2021: 8-98). That same year, the cemetery grounds were expanded to include portions of the adjacent experimental farm.

In 1926, Congress established the National Capital Park and Planning Commission (NCPPC) to



Figure 27: Memorial Bridge under construction, looking west across the Potomac River to Arlington National Cemetery, May 15, 1928 (Source: Library of Congress. Call number: LC-H2- B-2692 [P&P], Control number: 2016888795).

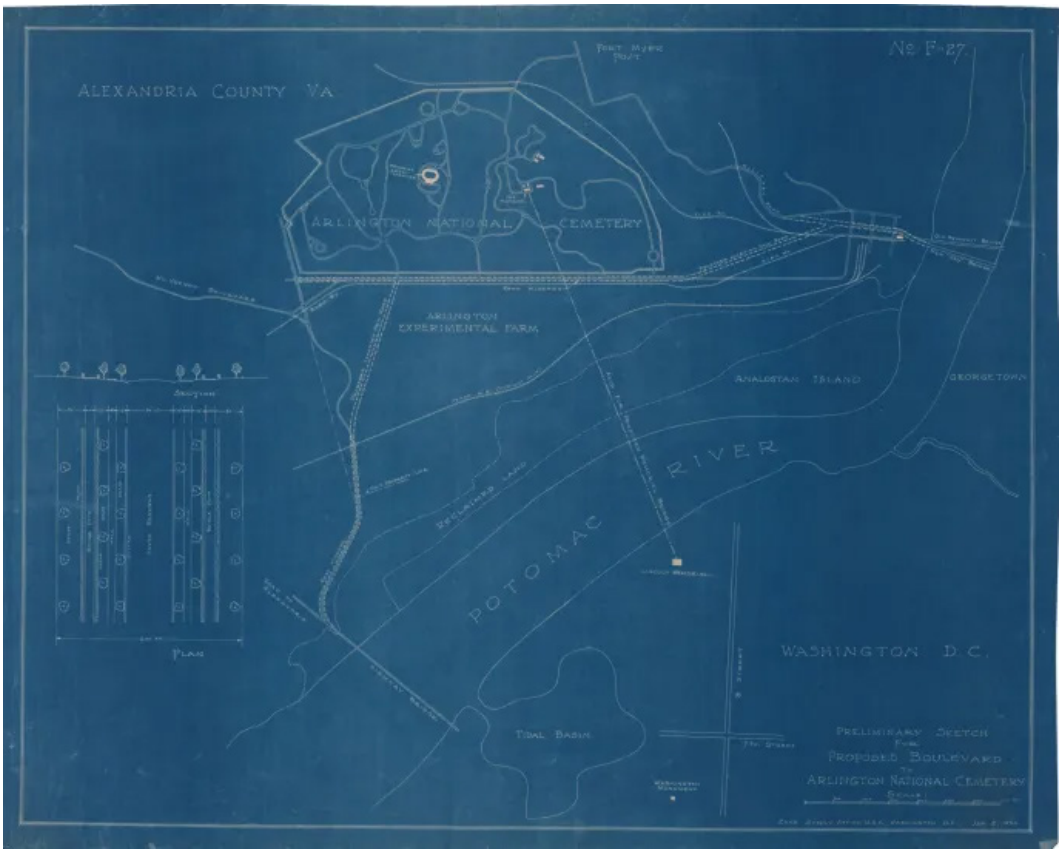


Figure 28: Architectural drawing of Arlington National Cemetery, including proposed bridge and avenue leading to the cemetery from the Lincoln Memorial, January 2, 1920 (Source: National Archives, Identifier: 2067635).

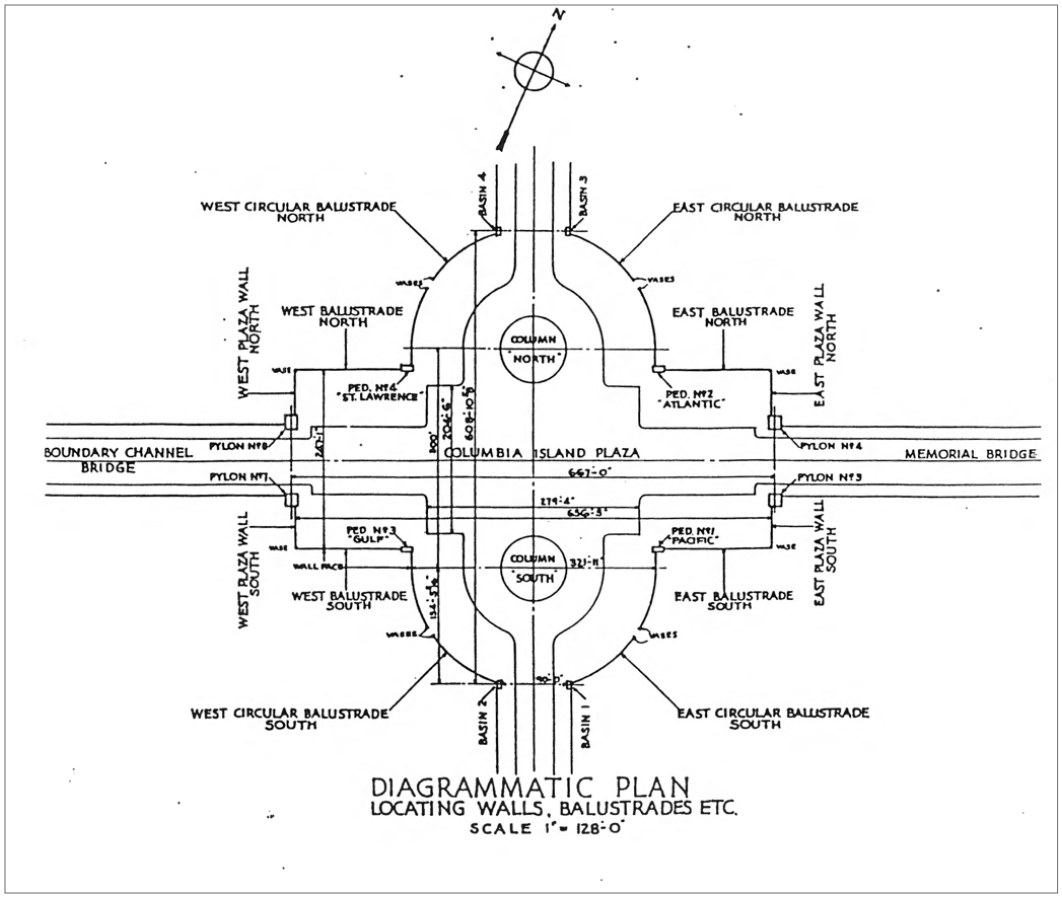


Figure 29: McKim, Mead & White Diagrammatic Plan for Columbia Island, 1930 (Source: Women in Military Service for America Memorial Foundation).



Figure 30: Memorial Avenue Corridor including the Columbia Island plan from the "Plan for the Development of Mount Vernon Memorial Parkway," 1930 (Source: National Archives, Identifier: 84786362).

replace the National Capital Park Commission. The purpose of the NCPPC was for "the comprehensive systematic, and continuous development of the park, parkway, and playground system of the National Capital." In order to accomplish this, the agency was "instructed to implement almost all of the McMillan Plan's park proposals" (Lee 2021: 8-99). (The NCPPC would ultimately be renamed the National Capital Planning Commission [NCPC] in 1952 [Earley 2004: 33].) On April 22, 1926, Congress passed an act making appropriations for the Executive Office and other offices, bureaus, boards, and commissions. This act included funds for the AMBC to continue development and construction of the Arlington Memorial Bridge (Lee 2021: 8-98).

That same year, a competition was held for the design and fabrication of the memorial bridge bascule span. The contract was awarded to the Phoenix Bridge Company in September of 1928, and work was completed in 1931 (*see Figures 26 and Figure 27*) (Lee 2021: 8-102). In addition to progress on the bascule span, laborers constructed the bridge plaza (where the Memorial Avenue Corridor cultural landscape segues into the Lincoln Memorial and related areas), the matching bridgehead of the parkway approach drive, and the seawall in Washington, D.C. between 1929 and 1931 (Earley 2004: 31).

MEMORIAL AVENUE CORRIDOR DEVELOPMENT

In 1921, the CFA accepted plans to redesign the grounds of Arlington National Cemetery, with the main goal to improve safety of visitors through the reconfiguration of roads and paths. The plans also sought to create a solemn and patriotic setting within the cemetery landscape (Moss 2009: 44) (*see Figure 28 and Figure 29*). This redesign process in the contextual landscape set the stage for a monumental avenue that would usher visitors from Washington, D.C. (and other points east) to the threshold of the national cemetery.

Beginning in 1928, the CFA considered designs for the Columbia Island plaza (what later became Memorial Circle), Memorial Avenue, and the National Cemetery entrance (Earley 2004: 31). The CFA debated numerous details associated with

the Memorial Avenue Corridor at its meetings in the early 1930s. Debates about the larger context for the Arlington Memorial Bridge included the treatment of the Columbia Island pylons, the design of roadways around Columbia Island, connections to surrounding roadways, lighting for the entire project, the equestrian sculptures, and the incorporation of statues in niches along Memorial Avenue.

The designs for the Columbia Island plaza (the Memorial Circle area) changed over time and occupied the CFA for many years. Early designs show the bridge roadway meeting at an ellipse at Columbia Island, where cross arms would extend north and south from the ellipse. West of that plaza, the bridge and road axis would continue as a grand avenue lined with hedges and formal rows of trees towards the National Cemetery, culminating in pylons, gates, and a hemicycle.

The elliptical plaza where these roadways would meet featured two columns, each 166 feet in height, topped by winged figures (*see Figure 29 and Figure 30*). Kendall recognized that the symbolic meaning of the bridge was the reunion of the United States following the Civil War and intended the columns to represent the North and South (KressCox 1985: 115). The ellipse would be outlined by a granite balustrade that would connect with the pylons at the ends of the two bridges. From the plaza, the cross-arms would extend out to the north and south, each ending in a circle at the north and south ends of the island; within each of these circles would be a small, circular Greek temple. Each circle was to connect with a roadway: the northern circle would link with Lee Highway (present-day Langston Boulevard), while the southern circle would connect to Mount Vernon Memorial Highway (Lee 2021: 8-106). In December of 1931, it was decided that the columns would not be built (KressCox 1985: 115).

The cross-axis for the circle on Columbia Island was never executed, and designs shifted dramatically over the years. By the time it was built, the design had been scaled back from three traffic circles and Greek temples to a single traffic circle connected with several roadways (Lee 2021: 8-106).

Meanwhile development moved ahead in the greater Memorial Avenue Corridor landscape. On May 23, 1928, Congress passed an act that authorized "the survey, construction, and maintenance of a memorial highway [Mount Vernon Memorial Highway] to connect Mount Vernon, in the State of Virginia, with the Arlington Memorial Bridge across the Potomac River at Washington" (HR 4625) (Lee 2021: 8-103). Landscape architect Gilmore Clarke and other practitioners were hired in 1929 to help guide the design and construction of Mount Vernon Memorial Highway (Earley 2004: 31). Between 1929 and 1932, the highway was constructed under the direction of the Bureau of Public Roads; it extended from the planned (but not yet built) Arlington Memorial Bridge across Columbia Island and the Virginia shore to Mount Vernon, the former plantation of President George Washington (Earley 2004: 31). It was the first modern highway constructed by the federal government. Since there was no established design for Columbia Island by the time the Mount Vernon Memorial Highway was completed in 1932, a "temporary connection" between the highway and bridge was constructed, which served as the only road intersection on Columbia Island for the next six years (Earley 2004: 56).

The Boundary Channel Bridge was constructed between 1929 and 1930, with the 35-foot-tall pylons installed in June of 1931 (Lee 2021: 8-102) (*see Figure 31*). The Boundary Channel Bridge was also designed by McKim, Mead & White, patterned to match the Arlington Memorial Bridge in the Neoclassical style. Built of reinforced concrete, the bridge consists of three arches: the two arches that currently span the George Washington Memorial Parkway on the east side each measure 50 feet wide, and the arch over Boundary Channel measures 100 feet wide. The Boundary Channel roadway is paved with Belgian block, laid in a fish-scale pattern. The bridge was constructed with broad sidewalks on either side, with large turned granite rails and balusters on either side of the walkways. There are pairs of granite pylons on both the east and west sides of the Boundary Channel Bridge. The pylons on the east side of the bridge have eight-foot-tall granite eagles atop them. The western pylons are unadorned (Nolin 1988: 2).

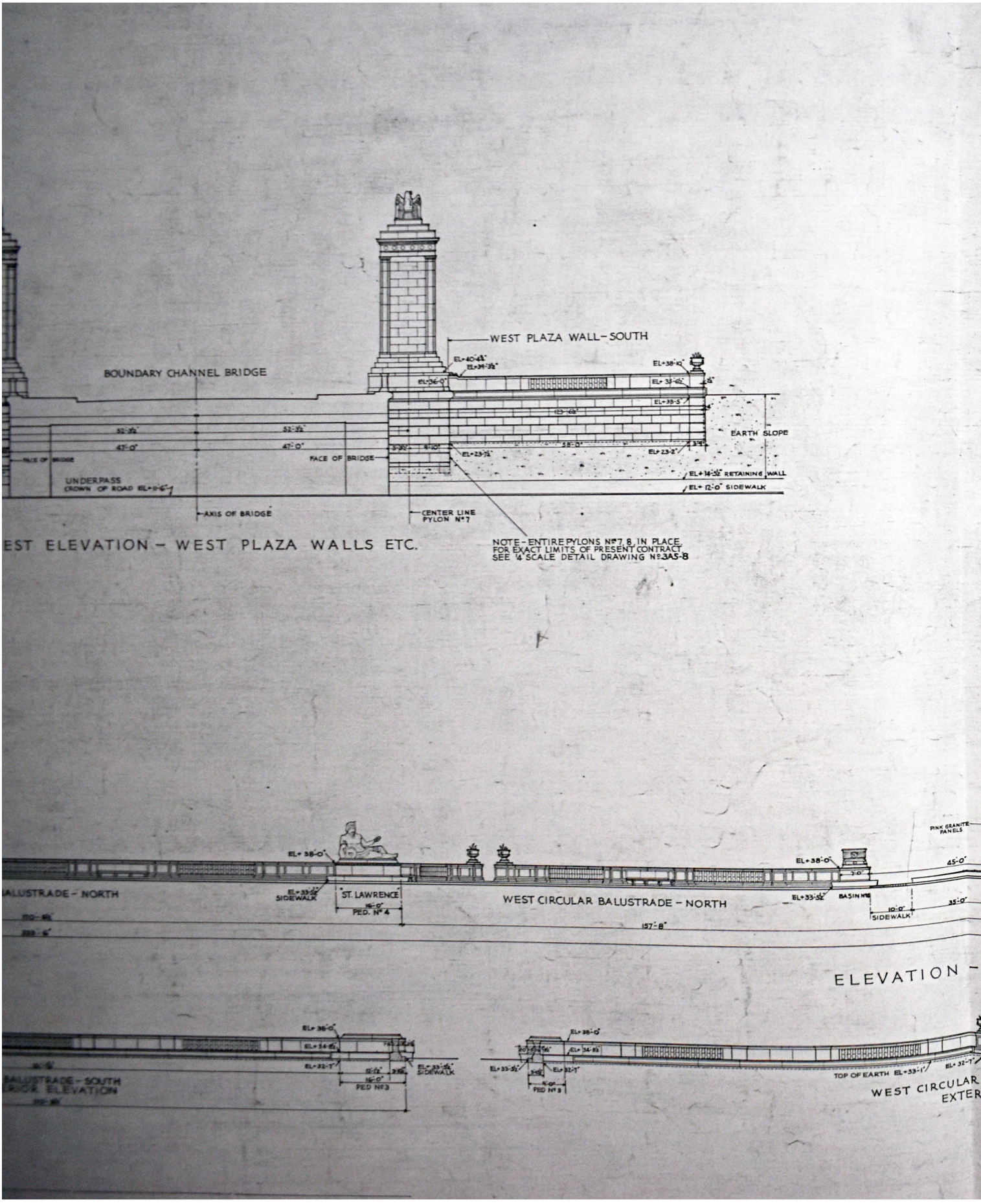


Figure 31: Construction of the Boundary Channel Bridge in 1930 (Source: National Archives, Identifier: 68152164).

The passage of the 1930 Capper Cramton Act (46 Stat. 482) authorized the creation of the George Washington Memorial Parkway (GWMP), which incorporated the Mount Vernon Memorial Highway. The northern sections of the GWMP were constructed from 1935 to 1965, while a final section, now referred to as the Clara Barton Parkway, was completed in 1970. GWMP ultimately extended from Mount Vernon on the Virginia side of the Potomac River, and Fort Washington on the Maryland side of the Potomac River, to Great Falls. The parkway became a unit of the National Park System pursuant to Executive Order 6166 of June 10, 1933, effective on August 10, 1933.

That same year, bids opened for the grading of Memorial Avenue from the Boundary Channel to the entrance of Arlington National Cemetery. The Warren F. Brenizer Company received the contract, and the project was completed the following March (Lee 2021: 8-102). With grading complete, construction of Memorial Avenue began in the summer of 1931 (Earley 2004: 59). By October, grading for the relocated Rosslyn Branch rail line was completed, and the underpass structure for the tracks completed in January. Laborers paved Memorial Avenue and installed temporary curbing, likely concrete, which was replaced with the planned granite likely around 1936 (Earley 2004: 32). Memorial Avenue initially intersected the Georgetown-Alexandria Road (previously Turnpike) at grade, and also intersected two smaller roads. One of the smaller roads led to the USDA Arlington Experimental Farm, while the other road, likely unpaved, led north from Memorial Avenue to a storage yard (and later, the site of Civilian Conservation Corps camp NP-8-VA) (Earley 2004: 60).

William Mitchell Kendall planned for grass panels on either side of Memorial Avenue, which would be framed by rows of deciduous trees approaching the cemetery entrance. His design called for elm trees (*Ulmus* sp.), possibly because they were used at the Lincoln Memorial and on the National Mall (Earley 2004: 61). Inside the rows of trees would be clipped hedges with eight or ten semicircular niches for the placement of sarcophagi and memorials. The hedges and rows of trees were placed in order to create a linear viewshed that framed Memorial


WEST PLAZA WALL – SOUTH
BOUNDARY CHANNEL BRIDGE
EARTH SLOPE
FACE OF BRIDGE
UNDERPASS
CROWN OF ROAD EL+11'-6"
AXIS OF BRIDGE
CENTER LINE
PYLON N°7
EST ELEVATION – WEST PLAZA WALLS ETC.
NOTE – ENTIRE PYLONS N°7 & IN PLACE
FOR EXACT LIMITS OF PRESENT CONTRACT
SEE ¼" SCALE DETAIL DRAWING N°.3A5-8
EL+38'-0"
EL+33'-5½"
SIDEWALK
ST. LAWRENCE
PED. N° 4
WEST CIRCULAR BALUSTRADE – NORTH
157'-8"
BASIN N°8
SIDEWALK
PINK GRANITE
PANELS
45'-0"
35'-0"
ELEVATION –
PED N°3
TOP OF EARTH EL+33'-1"
WEST CIRCULAR
EXTER

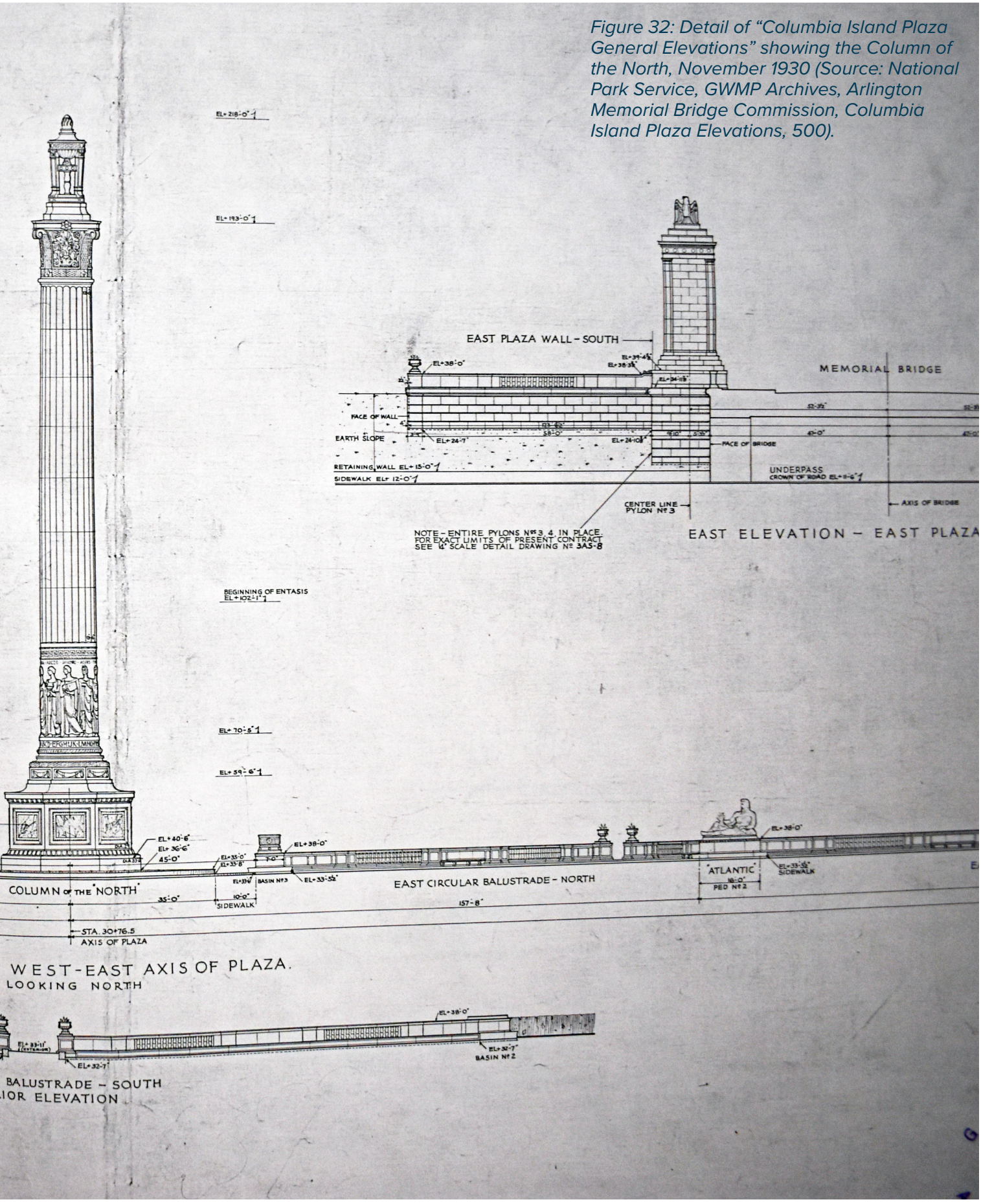


Figure 32: Detail of "Columbia Island Plaza General Elevations" showing the Column of the North, November 1930 (Source: National Park Service, GWMP Archives, Arlington Memorial Bridge Commission, Columbia Island Plaza Elevations, 500).



Figure 33: Funeral procession across Arlington Memorial Bridge with Lincoln Memorial in background, and Washington standard lampposts, paved sidewalks, and Belgian block roadway visible, February 25, 1936. Photographer: Harris & Ewing (Source: Library of Congress, Call number: LC-H2- B-9177 [P&P], Control number: 2016882095).

Avenue, directing the visitor's focus to the east along Arlington Memorial Bridge to the Lincoln Memorial, and to the west toward the Hemicycle at the entrance to Arlington National Cemetery and toward Arlington House, visible on the hill above the cemetery entrance. The Hemicycle, designed by McKim, Mead & White as part of the Arlington Memorial Bridge project and completed in 1931, is a semicircular stone retaining wall that marks the ceremonial entrance to the Arlington National Cemetery. Historically, it marked the western end of the Memorial Avenue Corridor, punctuating the linearity of the landscape. Today, the Hemicycle is outside the boundaries of the study area (and under separate management), but it remains associated with the GWMP-managed landscape as the western terminus of the corridor.

James Greenleaf became the consulting landscape architect for the AMBC in 1931, and presented his landscape plans to the CFA on August 5, 1931. (At this time, Greenleaf was also the landscape architect member of the CFA.) On Memorial Avenue, Greenleaf sought to replace Kendall's plan for holly hedges (*Ilex opaca*) along each side of avenue with concrete walls covered in ivy, out of concern that Kendall's proposed hedges would compete with the tree roots. While Kendall approved of this change, the Commission returned to the plan for the evergreen hedges the following year.

Meanwhile, Greenleaf developed a planting scheme for Columbia Island in the early 1930s. The plan presented a formal planting with rows of trees along the straight cross-axis and naturalistic plantings beyond. While this plan was approved by the CFA and AMBC, the plan for Columbia Island was never implemented (Earley 2004: 131).

The Arts of War statue pedestals were built on the east end of Memorial Bridge in 1931, although the equestrian statues would not be installed for another 20 years. The pedestals consisted of granite on a reinforced concrete foundation (Lee 2021: 7-18). Additionally, 16 low-relief and free-standing eagles designed by C. Paul Jennewein were carved on the pylons on Columbia Island (Earley 2004: 31).

OPENING ARLINGTON MEMORIAL BRIDGE

The 1932 *Annual Report of the Public Buildings Commission* claimed that the Arlington Memorial Bridge and its related features were 82 percent complete. The elements completed to that date included: the District of Columbia approaches, except for the placing of the equestrian statue groups; the bridge plaza and Watergate steps; and



Figure 34: President Hoover, trained as an engineer, at center of photograph, inspects Arlington Memorial Bridge as chairman of the Arlington Memorial Bridge Commission on January 22, 1931. Photographer: Harris & Ewing. (Source: Library of Congress, Call number: LC-H2- B-4418 [P&P], Control number: 2016879021).

Arlington Memorial Bridge itself, with the exception of permanent light fixtures (*see Figure 32*). Portions still under construction that warranted continued discussions into the following years included: the formal treatment of Columbia Island and the Virginia approaches; and Memorial Avenue and the entrance to Arlington National Cemetery (Lee 2021: 8-108).

Arlington Memorial Bridge was completed in early 1932, with the exception of the bridge lighting, which was installed by spring of that year. In January of 1932, granite blocks, called Belgian block or "durax," were laid in a fish-scale pattern on Arlington Memorial Bridge (Earley 2004: 32). Sidewalks along both sides of Arlington Memorial Bridge and the Boundary Channel Bridge were also paved with an exposed aggregate concrete that same year (Lee 2021: 7-49) (*see Figure 33*).

A news clip from January of 1932 features President Herbert Hoover, First Lady Lou Henry Hoover, and Vice President Charles Curtis crossing Arlington Memorial Bridge, several vehicles driving on the new bridge, and a demonstration of the draw bridge opening for river traffic (*see Figure 34*). The news anchor states, "This beautiful span connecting Arlington and the imposing Lincoln Memorial is ready for visitors who expect to make auto pilgrimages to the national shrines" (British Pathé News, "Hoovers Inspect Potomac–Span - President and First Lady accompany Vice President Curtis on opening of the Arlington Memorial Bridge." American Voiceover, 1932). The bridge, fully lit, opened to round-the-clock traffic on May 6, 1932.

EARLY PLANTING DESIGNS FOR THE MEMORIAL AVENUE CORRIDOR

The early 1930s marked a busy few years for the Memorial Avenue Corridor, including evolving (and at times, competing) designs and accelerating construction for the bridge and the monumental avenue. A series of administrative changes during this period also affected the cultural landscape and its context.

As noted previously, along Memorial Avenue, Kendall originally planned for rows of deciduous trees—specifically, elms (*Ulmus* sp.) —to frame the avenue. Inside these rows of trees, the planned hedges would be punctuated by a series of niches where memorials could be placed to create an "Avenue of Heroes" (Earley 2004: 61, 111). At a meeting of the CFA in October 1932, commission members debated the details of Kendall's design. Charles Moore argued to remove the planned niches in the hedges, claiming this would prevent unwelcome sculptures and memorials; he noted that the niches could be added later if necessary.

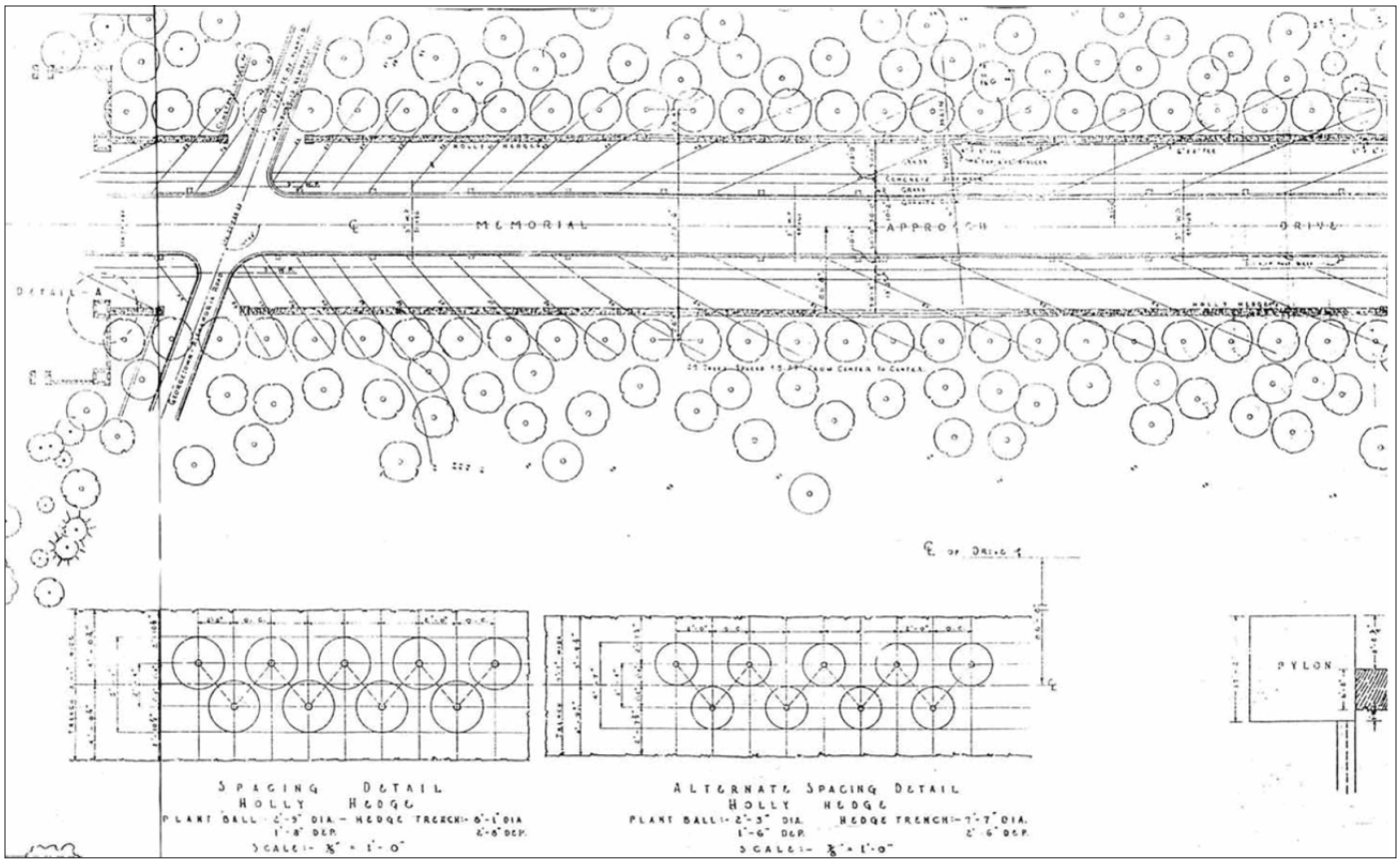


Figure 35: Planting plan for "Memorial Approach Drive," showing trees on each side of avenue, evenly spaced behind the holly hedges and more random spaced beyond, May 21, 1935. Diagram at bottom shows planting method for holly hedge (National Park Service, Electronic Technical Information Center [eTIC] 8-135).

Kendall submitted new design plans for the Columbia Island plaza in 1932, and again in 1933 (Earley 2004: 56). Each plan submitted by Kendall contained different elements and alterations from previous plans. The two 166-foot columns depicted previously were replaced by two pavilions surrounded by water basins. In the center of the pavilions were 18-foot gilded-bronze figures, one representing Liberty and the other Unity. Kendall envisioned rows of trees to be planted on the Columbia Island cross-axis arms, with trees also planned around the plaza and around the two planned circles at the ends of the cross axis.

Gilmore Clarke replaced Greenleaf as a member of the CFA in 1932, and became involved in designs for Columbia Island. Clarke expanded on the ideas of Kendall and Greenleaf, creating a new landscape report for the Columbia Island plaza by May of 1932 (Earley and Fanning 2005: 22). Clarke suggested closing the straight roadway across the plaza with movable posts and chains, requiring cars to go around the ends of the ellipse, creating a rotary-like traffic arrangement (Earley 2004: 57). Clarke submitted a revised plan for the Columbia Island plaza in January of 1933 that included two large

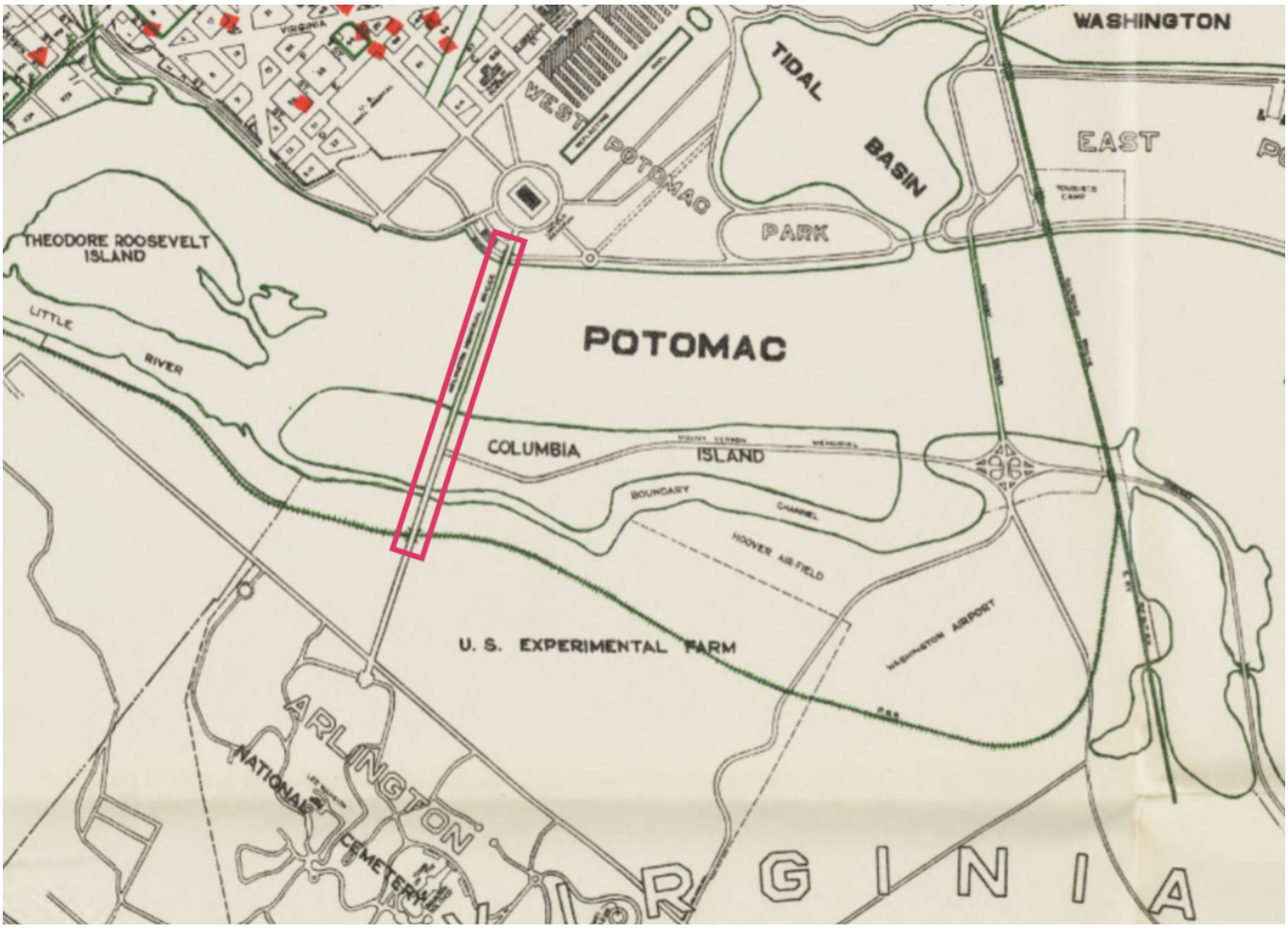


Figure 36: Detail of map of Washington, D.C., showing the configuration of the cultural landscape in 1935 (Source: Harvard University, Harvard Map Collection, G3851_E625_1935_S6_9302836301).

pools, and presented another plan in July of 1933. This latest plan retained Kendall's treatment for the Memorial Avenue axis, but added a single circle and fountain in lieu of the cross-axial ellipse and paired fountains. In this plan, the cross-axial roads to the north and south were depicted as parallel roadways separated by 200-foot-wide grass panels. The CFA and NCPPC approved this plan, though the CFA suggested the removal of the terminal circles (Earley and Fanning 2005: 38).

Ulysses S. Grant III, then-head of the Arlington Memorial Bridge Commission, opposed rows of trees of any kind for Columbia Island out of concern that they would block views. In spite of his opposition, Grant backed Greenleaf's suggestion to use oaks (*Quercus* sp.), rather than elms (*Ulmus* sp.), for Memorial Avenue and Columbia Island (Earley 2004: 61). Clarke acquiesced: in 1932, he specified white oaks (*Quercus alba*) for planting on Memorial Avenue, and red oaks (*Quercus borealis*) on Columbia Island.

On June 10, 1933, President Franklin D. Roosevelt signed Executive Order 6166, which reorganized federal government agencies. On July 28, 1933, after President Roosevelt issued an order consolidating all federally administered parks, monuments, and reservations under the jurisdiction of the NPS, the NPS assumed responsibility for the area encompassed by the Memorial Avenue Corridor cultural landscape. With this reorganization, the Arlington Memorial Bridge Commission, along with several other commissions, was abolished; the National Park Service (NPS) assumed its duties (Earley 2004: 32).

As these iterative plans for the corridor took shape, their implementation diverged when it came to plantings around the Columbia Island plaza (Memorial Circle) versus Memorial Avenue: rows of trees remained in Columbia Island plaza (Memorial Circle) plans through 1940, but ultimately were never realized. In contrast, the rows of trees remained in the Memorial Avenue plans and were planted in the mid-1930s.

In 1934, funds were approved for approximately 200 oak trees and the holly hedge on Memorial Avenue. A 1935 planting plan shows approximately 140 of the intended 200 white oaks marked for planting on both sides of Memorial Avenue, extending eastward from the Hemicycle to the railroad cut (now VA Highway 110) (*see Figure 35*). The planting plan shows that the plantings would be organized into a row of evenly spaced trees immediately behind the holly hedges along Memorial Avenue, with more randomly spaced trees moving away from the avenue to the north and south (Lee 2021: 7-50). The white oak trees were planted in the winter of 1935, and the American hollies in 1936.

In January 1934, Gilmore Clarke submitted a revised plan for Columbia Island plaza to the CFA; it featured a large single traffic circle rather than the cross-axial ellipse and paired fountains from earlier proposals. This was the first reference to a single circle for the Memorial Avenue Corridor's routing on Columbia Island. Clarke stated, "I have maintained the central rectangular treatment which Mr. Kendall has always insisted upon. In the center of the large circle a basin and fountain should be provided with possibly low sculptures for the center at the cross axis." The previously planned cross-axis arms were not included in the updated plan. Although the plan was approved, it was never implemented, due at least in part to budget constraints during the Great Depression (Earley 2004: 32; Nolin 1988: 4).

DEVELOPMENTS ON MEMORIAL AVENUE CORRIDOR IN THE LATE 1930S

Several other projects within the Memorial Avenue Corridor study area boundaries occurred in the 1930s (*see Figure 36*). Circa 1936, workers paved the sidewalks along Memorial Avenue and, as noted previously, landscapers planted the holly hedges (*Ilex opaca*) along both sides of Memorial Avenue (Lee 2021: 7-49; Earley 2004: 32). Laborers installed granite curbstones on the bridge axis roadway on Columbia Island between 1936 and 1937 (Lee 2021: 7-49). Additionally, in 1937, workers completed rough grading and drainage for the George Washington Memorial Parkway between the Arlington Memorial Bridge and the Francis Scott Key Bridge (Earley 2004: 32). Also, in March 1936, a major flood of the Potomac River resulted in water entering portions of the control and equipment rooms of Arlington Memorial Bridge, causing short circuits in the bridge's electrical system for the drawbridge section (Lee 2021: 8-111) (*see Figure 37*).

A Civilian Conservation Corps (CCC) camp (Camp NP-8-VA) was established on the north side of Memorial Avenue, close to the Boundary Channel, from November 14, 1934, through August 30, 1939 (*see Figures 38 and 39*). Designed for approximately 150 enrollees, the camp contained barracks, a headquarters and infirmary, a recreation hall, a mess hall, a bath house, and a garage. The buildings were arranged in straight lines parallel to the Boundary Channel. Upon discontinuation, the camp location later became a temporary camp for returning servicemen (HABS DC-858, 41). Enrollees from Camp NP-8-VA worked on projects on Theodore Roosevelt Island, Fort Bunker Hill, Fort Stevens, West Potomac Park, and Rock Creek Park in Washington, D.C.

Between October of 1934 and March of 1935, CCC enrollees worked on Columbia Island, contributing to planting and landscaping efforts, in addition to



Figure 37: Aerial photograph of Arlington Memorial Bridge with drawbridge raised, December 1930. Photographers: Harris and Ewing (Source: Library of Congress, Call number: LC-H2-B-4368 [P&P]).

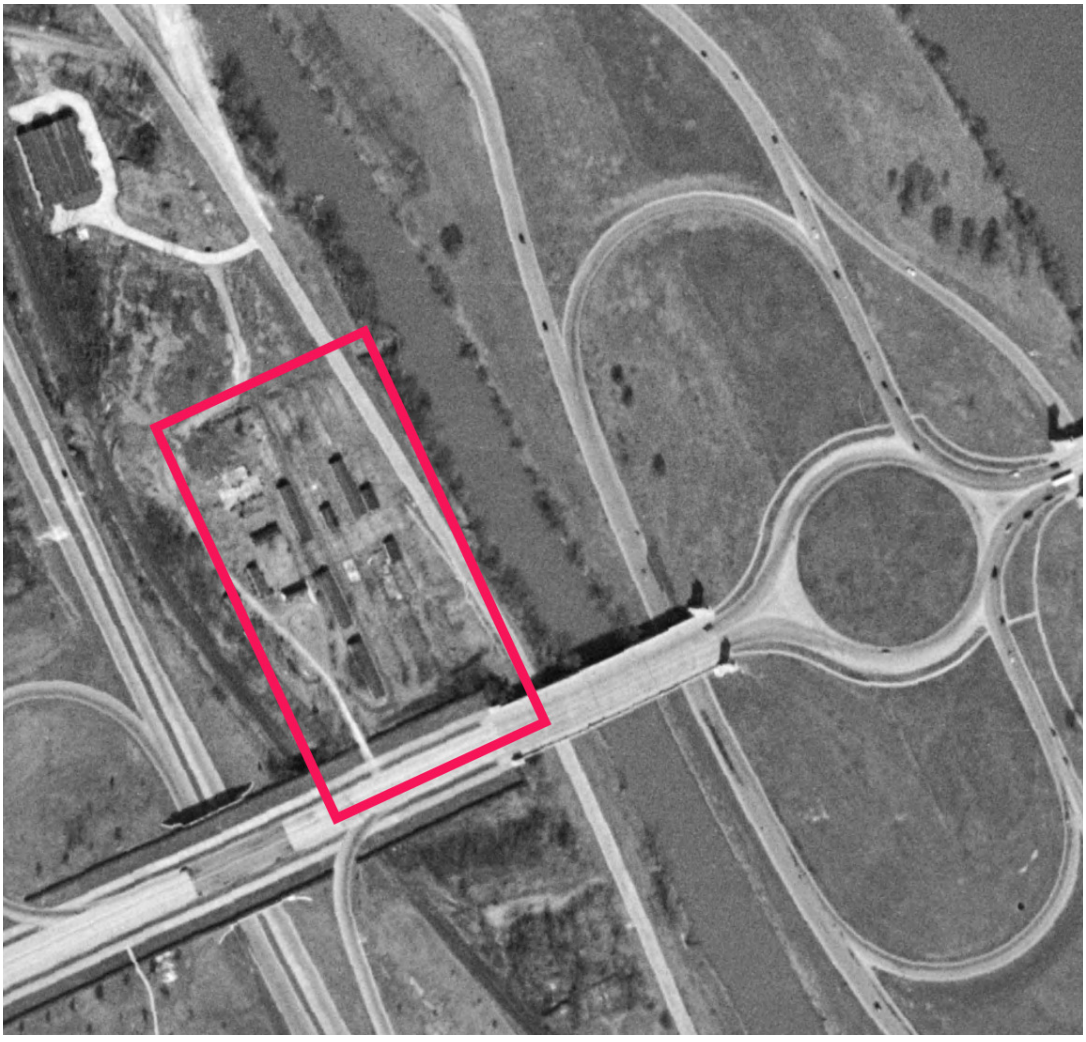
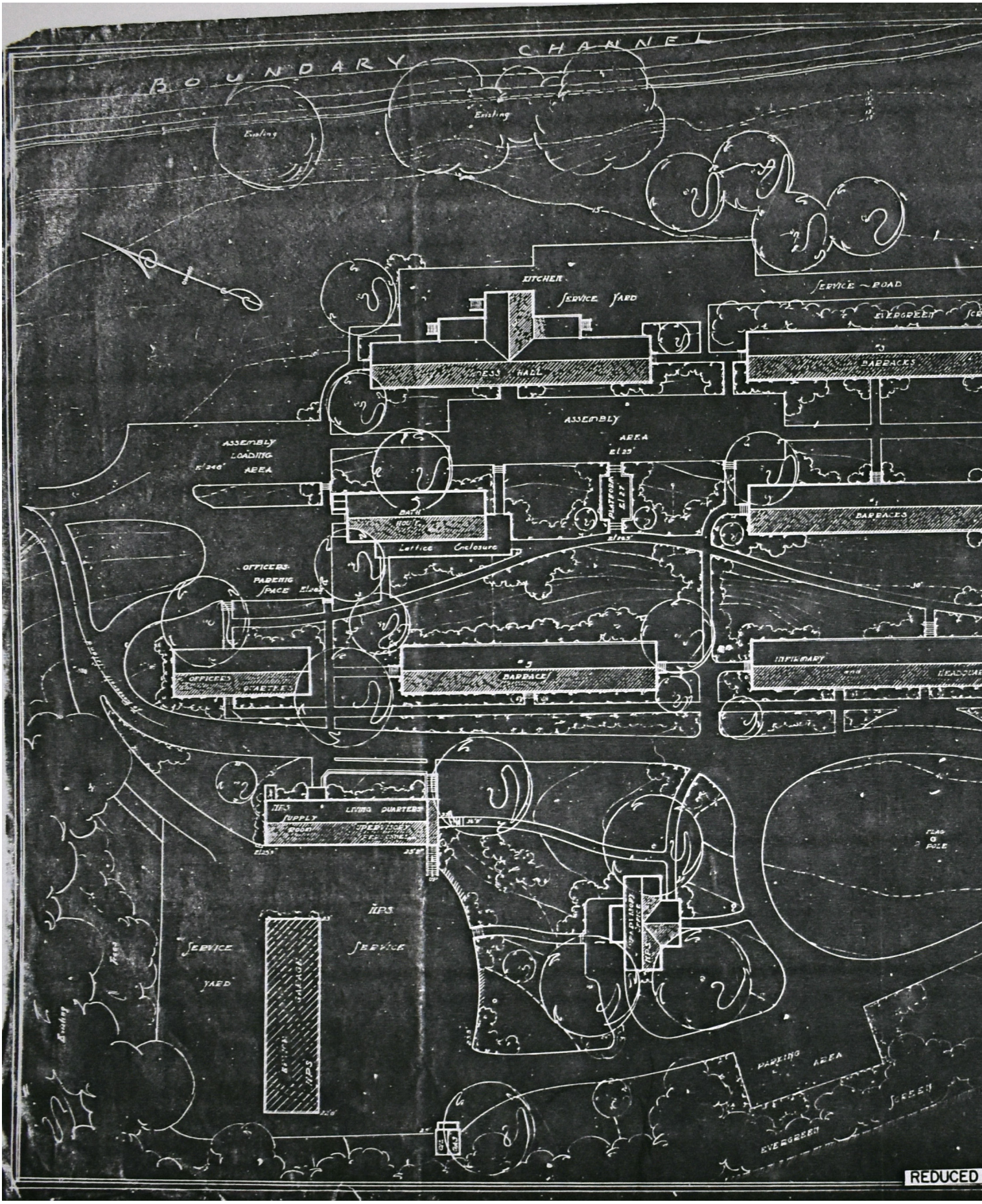


Figure 38: 1949 aerial depicting CCC facilities northwest of the Boundary Channel Bridge, with red rectangle. Since the aerial is from 1949, a different road configuration is visible on Columbia Island than was present during the time the CCC camp was occupied (Source: Historicaerials.com).


BOUNDARY CHANNEL
Existing
Existing
KITCHEN
SERVICE YARD
SERVICE ROAD
EVERGREEN
MESS HALL
BARRACKS
ASSEMBLY
AREA
El 25'
ASSEMBLY
LOADING
AREA
El 24.6'
BATH
HOUSE
PLATFORM
El 27'
Lattice Enclosure
BARRACKS
OFFICERS
PARKING
SPACE
El 26.5'
OFFICERS
QUARTERS
BARRACKS
INFIRMARY
and
HEADQUARTERS
NPS
LIVING QUARTERS
SUPPLY
ROOM
SERVICE
AREA
FLAG
&
POLE
NPS
SERVICE
YARD
NPS
SERVICE
PARKING
AREA
EVERGREEN
SCREEN
REDUCED

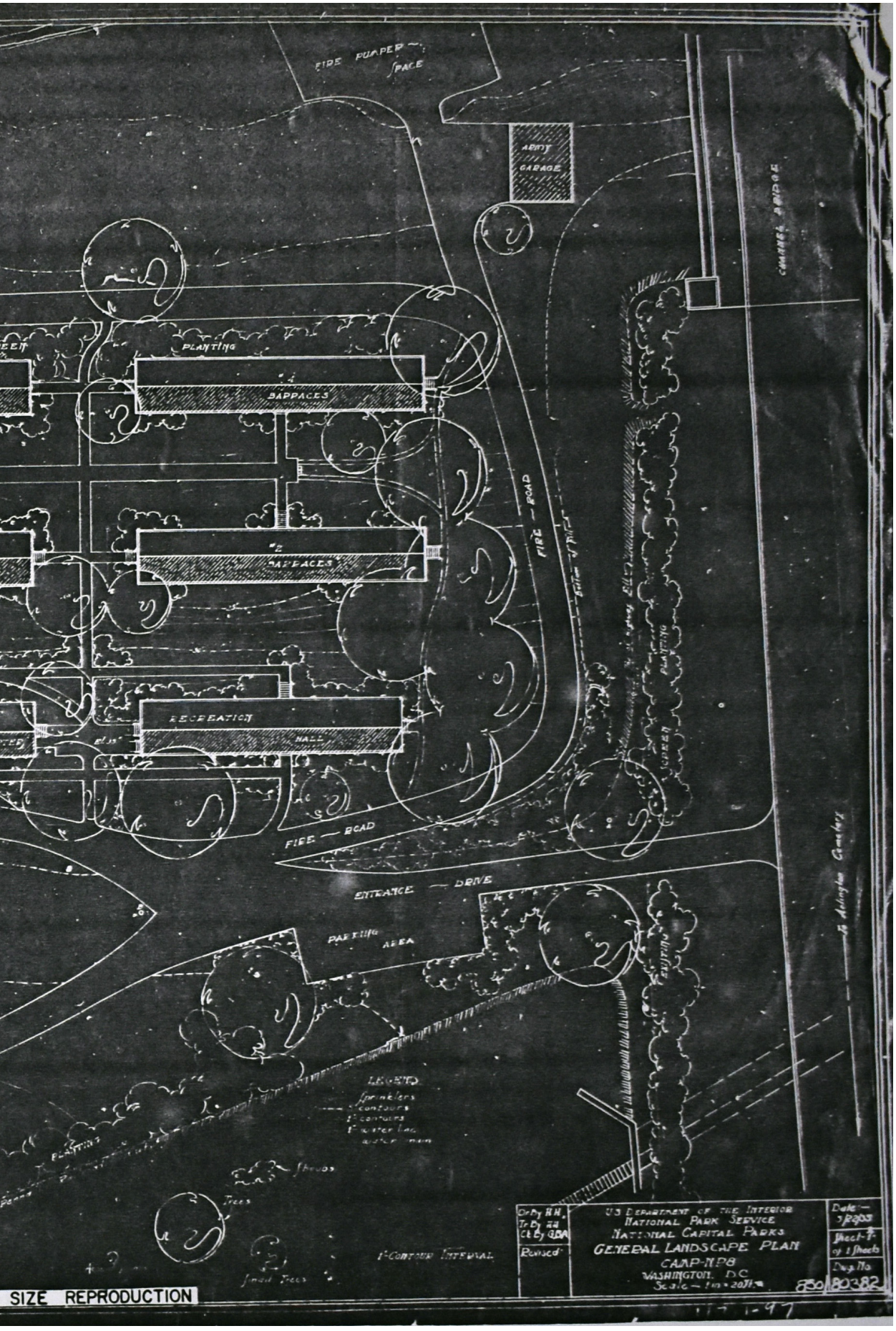


Figure 39: General Landscape Plan of CCC Camp NP8. (Source: National Park Service, GWMP Archives, Arlington Memorial Bridge Area, General Landscape Plan, Camp NP8, May 1935, GWMP Library 625)

erosion control and riverbank protection. Enrollees cleaned up debris, and cleared, graded, top-soiled, seeded, and sodded the open areas located between the Potomac River and Boundary Channel. Additionally, CCC crews created an eight-foot-wide bridle path on Columbia Island, beginning at Arlington Memorial Bridge and extending six miles downstream to Alexandria. A photograph, taken from Memorial Bridge on August 25, 1935, shows installation of rip rap and fill underway to the north of Memorial Bridge, led by CCC Camp NP-6-VA (based nearby at Fort Hunt in Alexandria) (HABS DC-858, 95) (*see Figures 40 and 41*).

THE CONTEXTUAL LANDSCAPE IN THE 1930S

As the Arlington Memorial Bridge neared completion, the context east of the study area boundaries saw various changes. On the east side of the Potomac River, the OPBPP hired laborers in 1932 to alter existing plantings and install new plantings west of the Lincoln Memorial. The scope of work included the removal and transplanting of 193 large American elm trees (*Ulmus americana*) and 15 white pines (*Pinus strobus*) on and around the bridge plaza and its approaches (Torkelson 2022: 63).

Within this same contextual landscape on the east side of the Potomac River, construction of the Watergate Steps was completed by June 1932 (Torkelson 2022: 61). Between 1935 and 1965, the NPS organized a series of summer concerts in the Watergate Steps area, with a floating barge and moorings serving as the stage (Lee 2021: 7-50).

In spring of 1932, work crews planted between 75 and 100 ornamental trees along Mount Vernon Memorial Highway, on the south end of Columbia Island, in accordance with the Wilbur Simonson planting plan for the highway; they included crabapples (*Malus* spp.) and pears (*Pyrus* sp.), and several flowering shrubs (of unknown species) (Earley and Fanning 2005: 26). The Office of Public Buildings and Public Parks (OPBPP) of the War Department received jurisdiction over Mount Vernon Memorial Highway this same year (Earley and Fanning 2005: 22). Simonson was the on-site landscape architect for the GWMP, responsible for the planting design of the parkway. Simonson



Figure 40: Aerial view of the Lincoln Memorial and the Arlington Memorial Bridge shows the completed landscaping in this vicinity, as of August 10, 1935. Photographer: Harris & Ewing from Goodyear airship Enterprise (Source: Library of Congress, Call number: LC-H2- B-8035 [P&P], Control number: 2016881340).



Figure 41: Fill and rip rap along the Potomac Riverbank on Columbia Island (now Lady Bird Johnson Park), looking north from Memorial Bridge, 1935 (Source: National Archives, Identifier: RG79-CCC).

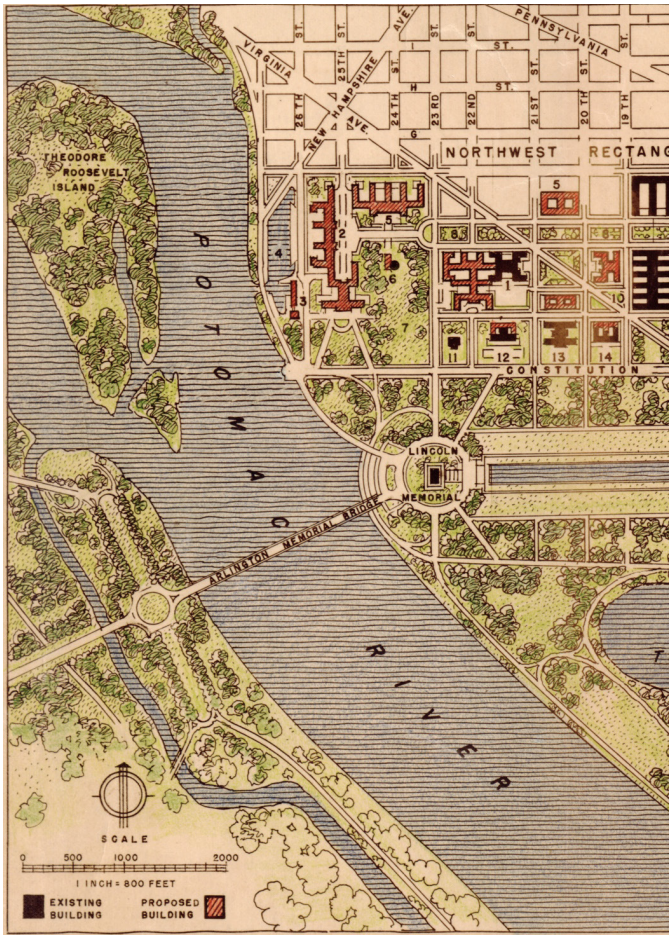


Figure 42: Detail of map depicting the development of the central area west and east of the Capitol--Washington D.C., created by the National Capital Park and Planning Commission, depicting the road configuration on Columbia Island, 1941 (Source: Library of Congress, Control number: 87694202).

"envisioned a landscape of varied character so that a traveler would experience a continuously changing sequence of distinct spaces" (Kelsch, et al. 2009: 15).

Wrought iron gates with the insignia of the United States armed forces were installed at the Arlington National Cemetery entrance in 1933 (Earley 2004: 32). The following April, the Public Works Administration approved funds for the completion of the National Cemetery entrance, including the ornamental gates, sidewalks, and small plantings (Lee 2021: 8-110).

Memorial Circle and Mid-Century Developments (1938 – 1963)

Based on Gilmore Clarke's 1934 plan for the Columbia Island plaza (Memorial Circle), the Bureau of Public Roads submitted its design for circulation around the island to the CFA in September of 1938. The revised plan featured a single traffic rotary at the center with a roadway north to connect with Lee Boulevard (name changed to Arlington Boulevard in 1952), and a roadway south to connect with Mount Vernon Highway (Earley and Fanning 2005: 23). The new design was approved by the CFA. Lee Boulevard was constructed in 1938. Gilmore Clarke, then-chairman of the CFA, described the plan for Columbia Island plaza as containing "a large circle in the center" with a roadway north to connect with the Lee Highway, present-day Langston Boulevard, and south to connect with the Mount Vernon Highway (CFA Minutes, January 1938).

Laborers installed Washington standard-style lampposts along Memorial Avenue and the Boundary Channel Bridge in the late 1930s (Earley 2004: 32). A plan from 1938 shows eight lampposts on the Boundary Channel Bridge, ten lampposts on Columbia Island, and 18 lampposts—nine on each side—along Memorial Avenue (Earley 2004: 63).

The first planned maintenance and repair work on Memorial Bridge occurred in 1939. At this time, workers repainted and repaved the draw span in kind; heated the west engine room; and cleaned and repointed the granite on the abutments on the Virginia side (Lee 2021: 8-11).



Figure 43: Aerial view of Pentagon construction from February 29, 1942, with Memorial Avenue; Memorial Circle and road configuration; and Arlington Memorial Bridge visible in background, upper left (Source: Department of Defense, VIRIN: 420301-D-ZZ999-833C).

The NPS submitted a new plan to the CFA for the Columbia Island landscape in December of 1939, which proposed roads south of the traffic rotary to replicate the parallel roads to the north. The new plan included planting masses of trees near the Arlington Memorial Bridge and Boundary Channel Bridge pylons (Earley and Fanning 2005: 23). Historically called Columbia Island Circle and Memorial Bridge Circle, the traffic rotary and roadway known today as Memorial Circle was constructed on Columbia Island in 1940. The four pylons constructed on either side of Columbia Island—at the west end of the Arlington Memorial Bridge and the east end of the Boundary Channel Bridge—were the only elements of the original design that were ever built (Earley and Fanning 2005: 23). In addition to the traffic circle, a cross-axis of parallel north-south roadways was constructed, in an effort to build Kendall's original cross-axes design on Columbia Island (***see Figure 42***). However, these cross-axis roads were only in place until 1941 before being modified.

1940S DEVELOPMENTS ON MEMORIAL AVENUE CORRIDOR

Significant changes to the roadways on Columbia Island took place in the early 1940s, when planning and construction began for the Pentagon as the new headquarters of the United States Department of Defense. Pentagon construction resulted in a network of new roadways, in addition to three new bridges constructed in the area over the following years (Earley and Fanning 2005: 24) (***see Figure 43, Figure 44, and Figure 45***). Also, between 1940 and 1943, the Army Corps of Engineers straightened the shorelines of the Boundary Channel (Earley and Fanning 2005: 24). Further changes to the roadways occurred on Columbia Island in 1943, when workers reconfigured the cross-axial roads as short, broad access road loops. At this time, work crews planted approximately 20 scarlet oak trees (*Quercus coccinea*) on the south side of Memorial Circle (Earley and Fanning 2005: 24).

In 1941, the construction of VA Highway 110 in Arlington, Virginia, to serve the Pentagon required the removal of sections of the young white oak trees (*Quercus alba*) and the holly hedges (*Ilex opaca*) along Memorial Avenue that had been planted in 1935 (Lee 2021: 7-50). The CFA and NCPPC argued against connections between VA Highway 110 and Memorial Avenue to preserve the linear road from excessive traffic, but the agencies were eventually overruled. The resulting road connections further interrupted the progression of white oaks and holly hedges, compounding the disruption to the cultural landscape from the

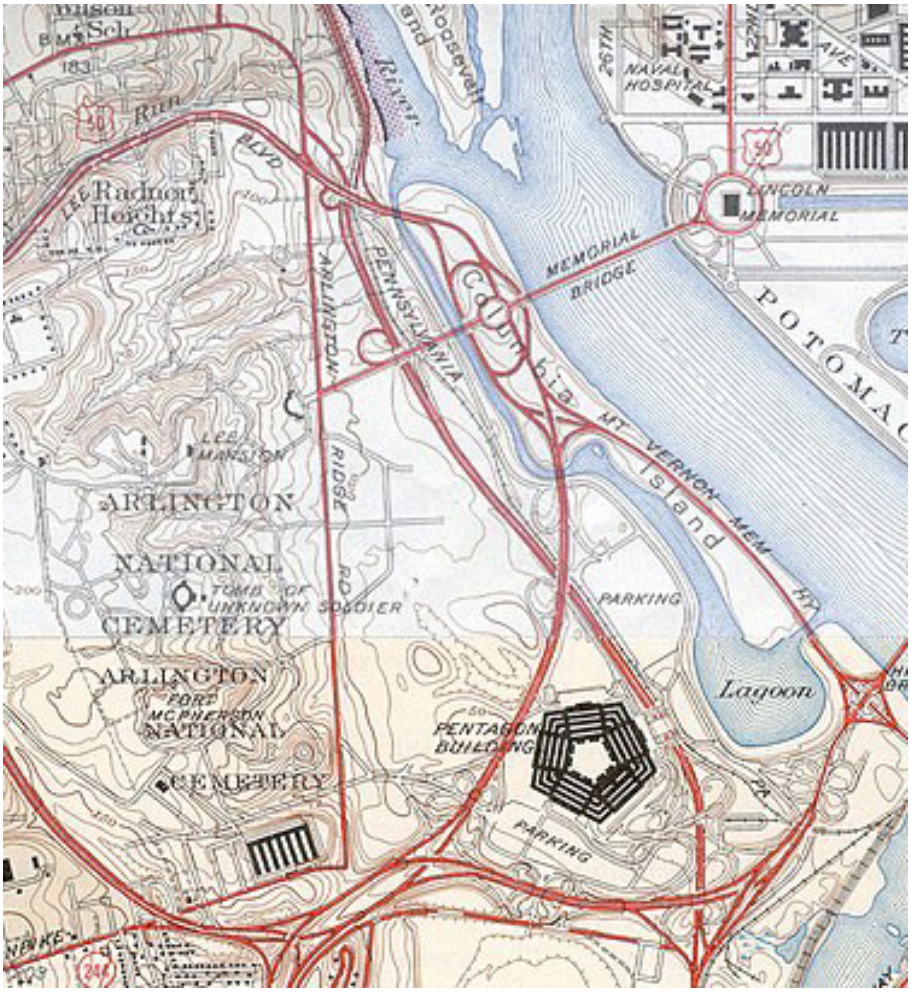


Figure 44: USGS topographic map of area surrounding the Pentagon with road configuration on Columbia Island and surroundings visible, 1945 (Source: USGS, Washington West, edition of 1945).



Figure 45: Aerial view of Columbia Island looking south, August 14, 1950, (National Park Service, MRCE, Abbie Rowe 1325-G, 1.10.)

introduction of the highway. VA Highway 110 is a four-lane road, traveling north/south, that travels underneath Memorial Avenue, west of the railroad.

Virginia State Bridge #5020 was constructed in 1945. The bridge carried Memorial Avenue over the Rosslyn Branch of the Pennsylvania Railroad. The grade-separation structure, which allows the Memorial Avenue Corridor to pass over the highway, was designed by architect Paul Cret. (Cret also designed the Independence Avenue bridge over the northern side of the Tidal Basin, in Washington, DC.) Today, the bridge spans VA Highway 110 (Richmond Highway, formerly Jefferson Davis Highway) (Lee 2021: 7-56).

Aerials from 1950 show the continuous hedge with no gaps—except where VA Highway 110 intersects with Memorial Avenue (Airviews of Columbia Island, August 14, 1950, 1325-G, 1.10, Abbie Rowe, Columbia Island, PH-6-PF-191, folder 1, MRCE, *see Figure 45*). The aerial photo indicates that the hedge on the south side of the avenue retained approximately 60 trees at this time, while the northern border featured fewer than 50 trees between VA Highway 110 and the Arlington National Cemetery gates.

In 1947, following the aforementioned changes to Memorial Avenue, Gilmore Clarke sought a restoration of Memorial Avenue, to include the reestablishment of the row of oak trees behind a continuous holly hedge. The Christopher Columbus Memorial Foundation gifted 188 white oaks to the United States for planting along Memorial Avenue. No planting plan has been located and it is unknown if or where these trees were planted (Earley 2004: 128).

THE CONTEXTUAL LANDSCAPE IN THE 1940S

In 1940, the Arlington Experimental Farm ceased operations, and by 1941, the property was transferred to the War Department as part of the National Defense Program. During World War II, as women entered the workforce in unprecedented numbers, the former site of the Arlington Experimental Farm was converted to a temporary housing complex for female civil servants and service members, known as Arlington Farms (Guyton 2011) (*see Figure 46 and Figure 47*). Arlington Farms was located on the south side



Figure 46: Residence halls on Arlington Farms, 1943 (Source: Library of Congress, Control number: 2018742278)



Figure 47: Arlington Farms residence halls with the Washington Monument visible in background left, June 1943 (Source: Library of Congress, Control number: 2017854144).

of Memorial Avenue and consisted of a complex, primarily residential in nature, that served women working at the Pentagon, the Navy Annex, and Arlington Hall Station, which was the Army's Signal Intelligence Service. The Arlington Farms complex was later demolished in the 1960s, and the site is now included within the boundaries of Arlington National Cemetery (Arlington Public Library 2019).

Other changes to the contextual landscape included the existence of a road around Arlington Cemetery by 1943, lessening the use of the old Georgetown-Alexandria Road (Arlington Ridge Road), which continued to carry traffic for the next two decades. Around this time, the Army constructed an extension to Fort Myer on the edge of Memorial Avenue, extending into the former Arlington Experimental Farm fields. This "Fort Myer South Post" was a small outpost with several barrack-like buildings. It was sited about 200 feet behind the holly hedges.

In 1945, NPS extended the CCC-era shoreline bridle path along Mount Vernon Memorial Highway from Arlington Memorial Bridge to Key Bridge (Earley and Fanning 2005: 24).

1950S DEVELOPMENTS ON MEMORIAL AVENUE CORRIDOR

A study of 1950 aerial photographs completed for the Memorial Avenue Corridor Cultural Landscape Inventory (completed in 2004, with condition assessment updates in 2009 and 2015) suggests that in the western portion of Memorial Avenue, west of where the corridor passes over VA Highway 110, the number of trees that framed the avenue has remained fairly consistent over the decades since the 1930s, at approximately 100 trees. Despite this consistency in the *count* of trees, the aerials suggest that there have been periodic gaps in the tree borders at different locations, and that replanting has also occurred over time (Earley 2004: 77-78).

In 1951, the NPS installed the two sets of allegorical equestrian statues on Memorial Bridge and the approach to Rock Creek and Potomac Parkways. "Valor" and "Sacrifice," together called *The Arts of War*, were installed on the eastern side of Arlington Memorial Bridge. Complementing Freidlander's 1929 equestrian figures, James Earle Fraser designed equestrian sculptures to be installed north of the Watergate Steps, on the approach to Rock Creek and Potomac Parkways. These sculptures were "Music and Harvest," and "Aspiration and Literature," and collectively called *The Arts of Peace* (Lee 2021: 8-122). All statues were cast in bronze (rather than granite), and gold gilded, which the CFA approved in 1939. As bronze was a scarce metal during World War II, this decision had delayed their fabrication and installation. The statues adhered to the original Friedlander design and were cast at the Fonderia Battaglia in Milan, Italy, and a formal dedication occurred in September of 1951 (Earley 2004: 33; Lee 2021: 7-19).

In 1951, the Belgian block (or "durax") roadbed of Arlington Memorial Bridge (installed in 1932) was removed and replaced with an asphalt surface. The Belgian block centerline was retained at this time during this project, but later removed in 1985 (Earley 2004: 33).

EARLY 1960S DEVELOPMENTS ON MEMORIAL AVENUE CORRIDOR

Around 1960, laborers installed modern cobra-head lampposts around Memorial Circle and elsewhere on Columbia Island (Earley 2004: 34). In 1960, rail service ceased on the old Rosslyn branch of the Pennsylvania Railroad that crossed beneath Memorial Avenue (Earley 2004: 33). From 1960 to 1964, the Theodore Roosevelt Bridge was built between Washington, D.C., and Arlington County, Virginia, crossing Theodore Roosevelt Island to the north of Memorial Bridge (Earley 2004: 34).

On February 28, 1961, the draw span on Arlington Memorial Bridge opened for the last time. By this time, commercial river traffic had significantly decreased. Commercial barges and personal vessels could travel below the closed draw span of the bridge, and newer bridges across the Potomac River were no longer being built with draw spans. Once it was out of operation, the NPS took the opportunity to perform some necessary maintenance work on the bridge over the following years (Lee 2021: 7-24). The work, completed in 1965, included the addition of a new sidewalk surface along the bridge. At this time, an exposed-

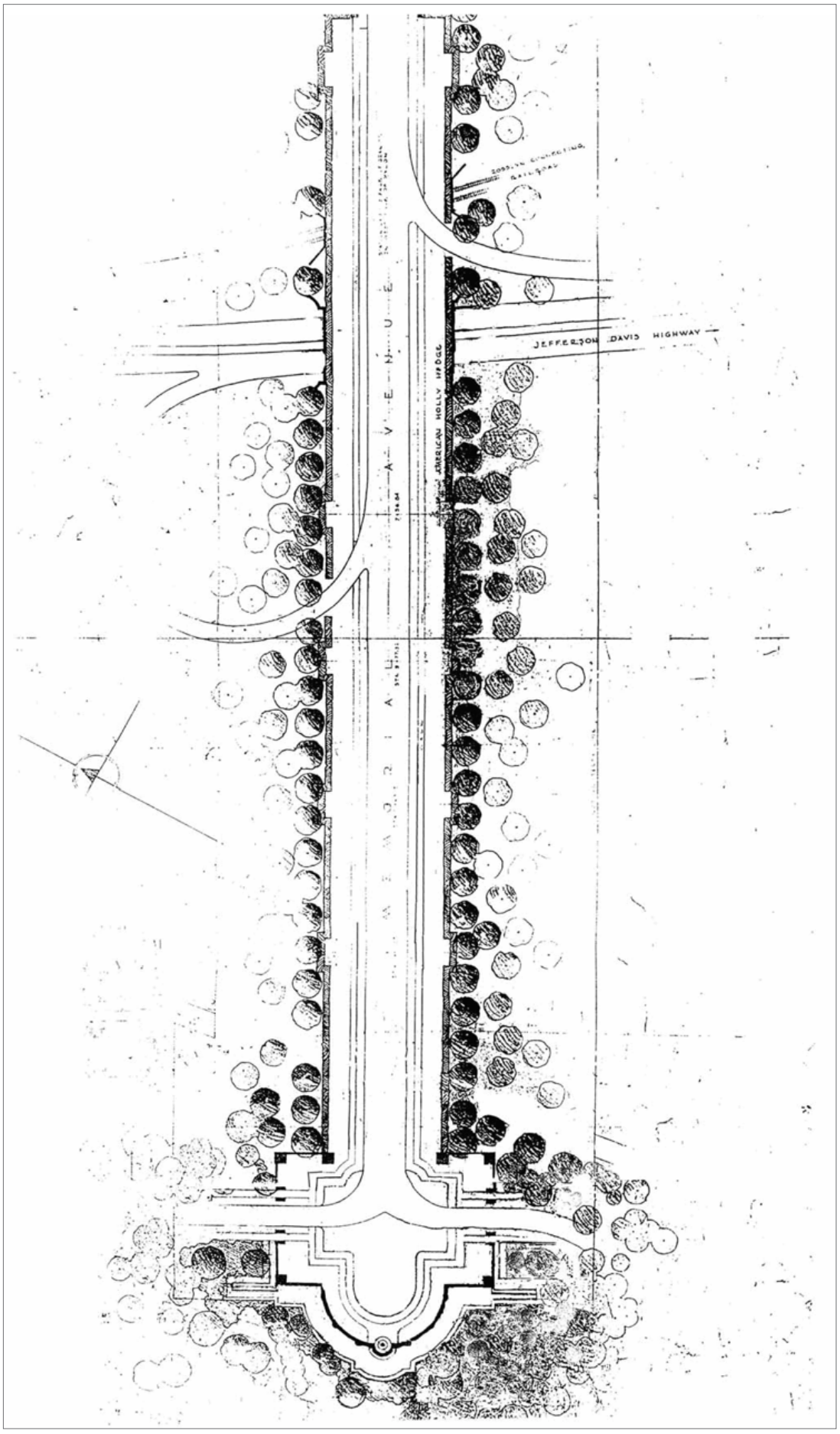


Figure 48: Memorial Avenue Planting Plan, depicting niches within the holly hedges, June 3, 1960 (Source: National Park Service, eTIC 855_81100A).

aggregate compound was poured in approximately four foot-square sections; this style saw widespread use during the period. The exposed aggregate replaced an exposed-pebble-finish concrete, which had been intended to match in texture and color the paving surrounding the Lincoln Memorial (Lee 2021: 8-113). The sidewalks around the Lincoln Memorial were altered over the years and were no longer an exposed-pebble-finish. The draw span on Arlington Memorial Bridge was permanently deactivated a few years later, in 1965 (Lee 2021: 7-24).

In 1963, a survey map completed in 1963 of the trees along Memorial Avenue indicated slightly fewer trees than were visible in the 1950 aerials, and an overall smaller number than the 200 trees funded for planting in 1935 (Arlington Farms Area and Horse Show July 17, 1963, NPS 850/80836). Behind the first row of white oak (*Quercus alba*) trees, many trees on both sides of the avenue in the 1963 survey were consistent with the locations in the 1950 aerials.

Hundreds of burials for servicemen and women have traveled along Memorial Avenue to Arlington National Cemetery. This tradition continued throughout the 20th century and up to the present day, and includes several important processions. On November 25, 1963, President John F. Kennedy's funeral procession crossed Arlington Memorial Bridge to Arlington National Cemetery. He remains just the second president buried at Arlington National Cemetery, joining William Howard Taft.

THE CONTEXTUAL LANDSCAPE IN THE EARLY 1960S

The NPS created a planting plan, developed in 1959 and revised in 1960, that depicted the location of future memorials, including in the area outside the CLR study boundaries, near the Hemicycle at the entrance to Arlington National Cemetery (*see Figure 48*). According to the planting plan, memorials were to be located in rectangular niches within the holly hedges (*Ilex opaca*), which would be created within the hedge on a case-by-case basis, at the time of memorial installation. The CFA accepted the plan in October of 1959, thereafter, adopting the 1960 revisions (Earley 2004: 78).

Upon approval of space for commemorative works along Memorial Avenue in 1959, Congress authorized a memorial to Admiral Richard Evelyn Byrd, which was commissioned by the National Geographic Society and sculpted by Felix de Weldon. Byrd was an American naval officer and explorer of Antarctica and is buried in Arlington National Cemetery. Installed and dedicated on Memorial Avenue in 1961, this was the first memorial approved on the corridor, further realizing the original intention of the avenue's commemorative purpose (Earley 2004: 34). The memorial marks Byrd's achievements and features an eight-foot bronze figure of Byrd, mid-stride, atop a marble base, wearing a parka and winter boots. The memorial is located on the north side of Memorial Avenue, between the Hemicycle and the VA Highway 110 exit ramp. In 1988, the memorial was moved slightly to the west to be in alignment with the newly constructed Arlington National Cemetery Welcome Center on the south side of Memorial Avenue. The hedges around the memorial were replanted in a rectangular form to articulate the new niche where the statue was reinstalled.

Following a land transfer between the Department of the Interior and Department of Defense in 1963, the land north of Memorial Avenue was developed into the Arlington Farms and Horse Show grounds (Earley 2004: 34).

Changes to the Memorial Avenue Corridor (1964 – 1979)

Around 1965, consulting engineers Hazelet & Erdal inspected Arlington Memorial Bridge and reported deterioration of both structural and non-structural elements, largely due to moisture. Repair work took place over the next few years and included the first repaving of sidewalks, replacing the original exposed-pebble-finish concrete with an exposed-aggregate compound (Earley 2004: 34).

By 1964, a ramp connected southbound GWMP to the south side of Memorial Avenue, merging with an existing lane from the northbound side of VA Highway 110. Other new roadways on Columbia Island included a spur road from Mount Vernon Memorial Highway that passed through the span

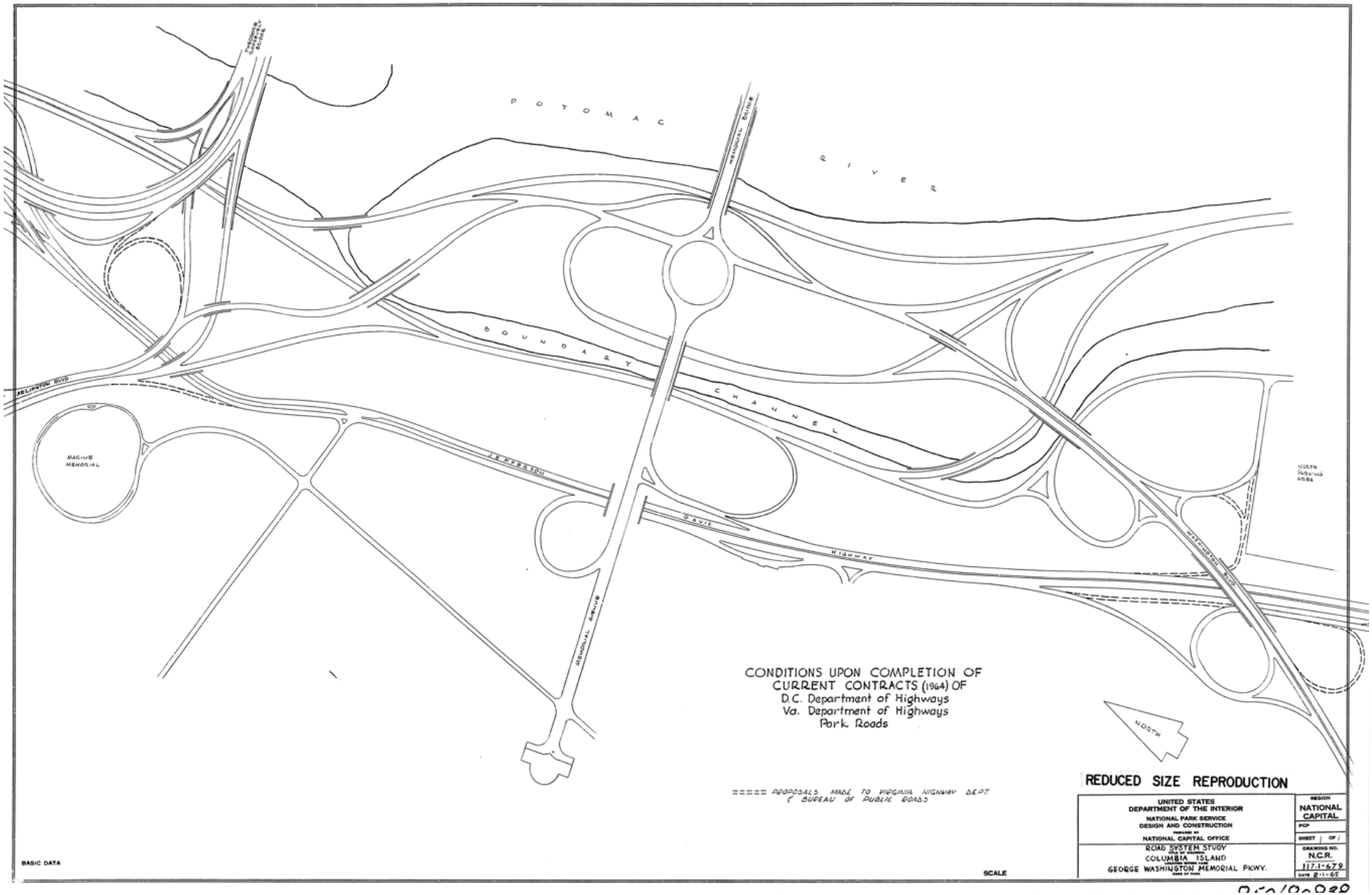

POTOMAC
RIVER
MEMORIAL BRIDGE
BOUNDARY
CHANNEL
ARLINGTON BLVD
MARINE MEMORIAL
JEFFERSON
DAVIS
HIGHWAY
MEMORIAL AVENUE
WASHINGTON BLVD
NORTH
CONDITIONS UPON COMPLETION OF
CURRENT CONTRACTS (1964) OF
D.C. Department of Highways
Va. Department of Highways
Park Roads
PROPOSALS MADE TO VIRGINIA HIGHWAY DEPT.
& BUREAU OF PUBLIC ROADS
REDUCED SIZE REPRODUCTION
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DESIGN AND CONSTRUCTION
PREPARED BY
NATIONAL CAPITAL OFFICE
ROAD SYSTEM STUDY
COLUMBIA ISLAND
GEORGE WASHINGTON MEMORIAL PKWY.
REGION
NATIONAL CAPITAL
PCP
SHEET 1 OF 1
DRAWING NO.
N.C.R.
117.1-679
DATE 2-1-65
BASIC DATA
SCALE

Figure 49: (opposite) Conditions Upon Completion of Current Contracts, 1964 (Source: National Park Service, eTIC 850_80838).



Figure 50: (right) Aerial image of Memorial Avenue, Memorial Circle, and Arlington Memorial Bridge, showing minimal vegetation around Memorial Circle, May 1961. (Source: National Archives, Identifier: 68152220).

in the Memorial Bridge abutment, and additional connectivity from southbound GWMP. A small road to the west of VA Highway 110 that had originally connected Memorial Avenue to the Arlington Experimental Farm location and connected to points south was still in operation in 1964, and likely closed around 1968 when the cemetery expanded (Earley 2004: 79) (*see Figure 49*). Between 1968 and 1975, Arlington National Cemetery expanded to include Fort Myer's South Post, from Memorial Drive to the present location of the cemetery's maintenance facilities.

A second memorial was dedicated on Memorial Avenue in July of 1965, after being approved by Congress in October of 1964. The memorial is located on the south side of Memorial Avenue, between the Boundary Channel Bridge and present-day metro rail, within the boundaries of the cultural landscape. Theo Alice Ruggles Kitson sculpted the memorial, which honors the veterans of the Spanish-American War and related actions of the Philippine Insurrection and China Relief Expedition (1898-1902). The memorial was nicknamed "the Hiker" (Lee 2021: 7-59). The memorial features an eight-foot-tall bronze figure, representing the common soldier of the Spanish-American War, atop a granite plinth with a cruciform bronze plaque. The soldier, dressed in hat, tunic, and trouser uniform, holds a rifle across his thighs. The hedges around the memorial were replanted after the statue was installed, creating a curved niche.

EDWARD DURELL STONE PLANTING PLAN

The Beautification Program initiated by First Lady Claudia "Lady Bird" Johnson was a broad mandate of environmental improvements, conservation efforts, and condition enhancements to redress the urban environment. The urban planning initiative sought to improve society through an array of landscape interventions, including planting trees and flowers in highly visited areas and introducing recreational equipment, benches, trash receptacles, and other amenities. The program sought to protect waterfront views through land and easement acquisition; preserve historic sites and initiate historic preservation codes; and address air and water pollution in Washington, D.C. (Jones 2022: 107).

The Beautification Program officially lasted from 1964 through 1968, although programming continued into the early 1970s. As the initiative was being conceived, Secretary of the Interior

PLANT LIST

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE KEY	CAL.	HT.	SPR.	BALL	COUNTY PER AREA
DECIDUOUS TREES								1 2 3 4 5 6 7
16	ACER RUBRUM	RED MAPLE	A	2½"-3"	4-16'	8-10'	B&B	8 5 3
212	ACER SACCHARUM	SUGAR MAPLE	A	2½"-3"	4-16'	8-10'	B&B	89 47 7 33 33 23
74	ACER SACCHARUM	SUGAR MAPLE	B	3½"-4"	8-20'	10-12'	B&B	7 30 6 5 4
44	FAGUS SYLVATICA	EUROPEAN BEECH	C	6"-7"	20-24'	6-18'	B&B	2 8 5 3 8 9 6
16	NYSSA SYLVATICA	TUPELO	A	2½"-3"	14-16'	8'	B&B	8 2 6
20	QUERCUS ALBA	WHITE OAK	B	3½"-4"	14-16'	10-12'	B&B	5 2
48	QUERCUS ALBA	WHITE OAK	C	6"-7"	20-22'	8'	B&B	3 12 5 20
125	QUERCUS COCCINEA	SCARLET OAK	A	2½"-3"	12-14'	8-10'	B&B	40 10 2 3 62
79	QUERCUS COCCINEA	SCARLET OAK	B	3½"-4"	14-16'	10-12'	B&B	9 7 0 43
30	QUERCUS PALUSTRIS	WILLOW OAK	A	2½"-3"	12-14'	8-10'	B&B	10 8 12
25	QUERCUS PALUSTRIS	WILLOW OAK	B	3½"-4"	14-16'	10-12'	B&B	2 8 7
33	SALIX BABYLONICA	WEEPING WILLOW	B	3½"-4"	14-16'	12-14'	B&B	5 6 8 15 11 2 10
32	SALIX BABYLONICA	WEEPING WILLOW	C	6"-7"	20-24'	16-20'	B&B	0 3 2 1 1 6 3
EVERGREEN TREES								
205	PINUS STROBUS	WHITE PINE	(1)		10-12'	8-10'	B&B	43 8 66 7 11 3 17
490	PINUS STROBUS	WHITE PINE	(2)		12-14'	8-12'	B&B	85 35 72 29 27 67 35
266	PINUS STROBUS	WHITE PINE	(3)		14-16'	10-12'	B&B	48 8 68 8 11 32 16
114	PINUS STROBUS	WHITE PINE	(4)		16-18'	10-14'	B&B	21 14 34 7 5 7 16
77	PINUS SYLVESTRIS	SCOTS PINE	(1)		10-12'	8-10'	B&B	10 3 21 8 15
88	PINUS SYLVESTRIS	SCOTS PINE	(2)		12-14'	8-12'	B&B	47 20 52 87 7 45
85	PINUS SYLVESTRIS	SCOTS PINE	(3)		14-16'	10-12'	B&B	10 15 21 8 7 16
35	PINUS SYLVESTRIS	SCOTS PINE	(4)		16-18'	10-14'	B&B	6 9 12 10
72	TSUGA CANADENSIS	CANADIAN HEMLOCK	(2)		12-14'	10-12'	B&B	22 17 6
FLOWERING TREES								
288	CORNUS FLORIDA	FLOWERING DOGWOOD	S		8-10'	6-8'	B&B	89 66 61 126 46 20
1457	CORNUS FLORIDA	FLOWERING DOGWOOD	M		10-12'	8-10'	B&B	144 308 112 375 275 242
407	CORNUS FLORIDA	FLOWERING DOGWOOD	L		12-14'	10-12'	B&B	45 84 30 109 78 61

GENERAL NOTES (THESE NOTES APPLY TO ALL DRAWINGS)

1. ACCURACY OF EXISTING VEGETATION AND TOPOGRAPHY IS NOT GUARANTEED
2. ALL DISCREPANCIES SHALL BE REPORTED TO THE CONTRACTING OFFICER OR SUPERVISING LANDSCAPE ARCHITECT
3. PROPOSED PLANTING SHALL BE STAKED IN FIELD AND ALL LOCATIONS SHALL BE VERIFIED BY CONTRACTING OFFICER OR SUPERVISING LANDSCAPE ARCHITECT
4. PROPOSED PLANTING IS IDENTIFIED ON PLANS AS TO SPECIES AND VARIETY AND GRYED AS TO SIZE. (SEE PLANT LIST)
5. ALL TREES EXCEPT FAGUS SYLVATICA, GLEDITSIA AMA (6"ø CAL) AND SALIX BABYLONICA, SHALL HAVE THEIR CENTRAL LEADER TO THE TOP.
6. ALL PINUS STROBUS SHALL BE PULLED TO THE BASE.

EDWARD D. STONE, JR. & ASSOCIATES
SITE PLANNERS & LANDSCAPE ARCHITECTS
2400 E. OAKLAND PARK BLVD. FORT LAUDERDALE, FLA.

DESCRIPTION OF REVISION

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON PLANNING AND SERVICE CENTER

COLUMBIA ISLAND — WASHINGTON D.C.

PLANTING DETAILS

LEGEND
EVERGREEN TREES
DECIDUOUS TREES
EXISTING TREES
EXISTING WOODS

GENERAL NOTE:
SLOPE PLANTING DETAIL
TREE PLANTING DETAIL
TREE BRACING DETAILS

Figure 51: Columbia Island planting plan (page 3) by Edward Durell Stone, with plant list, 1968 (Source: National Park Service, eTIC 835_41000).

Stewart Udall suggested that Johnson's program might utilize Washington, D.C., as the pilot city and national model for beautification efforts. In 1965, Johnson formed the *First Lady's Committee for a More Beautiful National Capital*, composed of planners, architects, politicians and their spouses, and private citizens, including local philanthropists Mary Lasker and Laurance Rockefeller, and the Assistant Regional Director of National Capital Parks, Nash Castro (Earley and Fanning 2005: 50). Lady Bird Johnson promoted the efforts through speaking engagements, press conferences, and interviews (Earley and Fanning 2005: 49).

The committee focused on Columbia Island as one of its target sites for beautification efforts. Before the redesign implemented by the Beautification Program, Memorial Circle had minimal vegetation (***see Figure 50***). The rotary itself was primarily an open area of mowed grass, while the shoreline of Columbia Island had native willows (*Salix* spp.) and cottonwood trees (*Populus* spp.).

In April 1967, Lady Bird Johnson visited Columbia Island with Mary Lasker and Nash Castro. The Beautification Program's vision for the project on Columbia Island included planting over 1,000,000 daffodil (*Narcissus* spp.) bulbs in mass drifts and planting 1,000 flowering dogwoods (*Cornus florida*) throughout Columbia Island. Lasker provided $65,000 toward the planting efforts (Earley and Fanning 2005: 94).

The committee engaged landscape architect Edward Durell Stone, Jr., to design a master planting plan for trees across Columbia Island, spanning the cultural landscape study area and the greater contextual landscape. Stone, Jr., founded Edward D. Stone, Jr. and Associates (EDSA), in 1960. Based in Fort Lauderdale, Florida, the firm became one of the most prominent planning and landscape architecture firms in the world. Stone, Jr. was appointed to the Presidential Commission of Fine Arts by Richard M. Nixon in 1971, reappointed by President Gerald R. Ford in 1976 and again in 1980 by President Jimmy Carter, serving from 1971 through 1985.

Stone worked with horticulturist Charles A. Lewis, whose role was to design the island's planting beds. Stone and Lewis completed an existing conditions assessment of the island in September 1967, which included notes for the removal of some trees along the shorelines, and thereafter began the planting plan. NCPC approved the preliminary Stone plan in July 1967, with the comprehensive plan completed in 1968 (Earley 2004: 35) (***see Figures 51 and 52***).

Deciduous trees in the Stone planting plan included red maple (*Acer rubrum*), sugar maple (*Acer saccharum*), European beech (*Fagus sylvatica*), tupelo (*Nyssa sylvatica*), white oak (*Quercus alba*), scarlet oak (*Quercus coccinea*), willow oak (*Quercus phellos*), and weeping willow (*Salix babylonica*). Evergreen trees in the planting plan included white pine (*Pinus strobus*), Scots pine (*Pinus sylvestris*), and Canadian hemlock (*Tsuga canadensis*). Flowering dogwood (*Cornus florida*) were the only flowering trees included in the plan.

Stone's plan spanned Columbia Island and included evergreens and dogwoods planted around the edge of the deciduous tree clusters (Earley and Fanning 2005: 94). The plan called for stands of single tree species across the island in informal groupings. In addition to dogwoods, the Stone planting plan called for eight kinds of deciduous trees, specifying almost 300 sugar maples, a small number of red maples, approximately 50 European beeches, a small number of black tupelos, approximately 80 white oaks, 200 scarlet oaks, 50 willow oaks, 80 weeping willows, almost 1,000 white pines (planted in four different sizes), approximately 400 Scotch pines in different sizes, and 70 hemlocks.

Around Memorial Circle, a large massing to the north of the circle was comprised of sugar maples and a massing on the south of the circle was comprised of scarlet oaks, which eventually merged with white oaks. Framing the pylons on the west side of Memorial Circle were hundreds of white pines, with a smaller number of white pines framing the pylons on the east side of Memorial Circle. The plan depicted dogwoods around Memorial Circle, in addition to approximately 20 white and scarlet oaks interspersed with the pines (Earley and Fanning 2005: 94-95).

Implementation of the Stone planting plan was carried out in phases according to funding

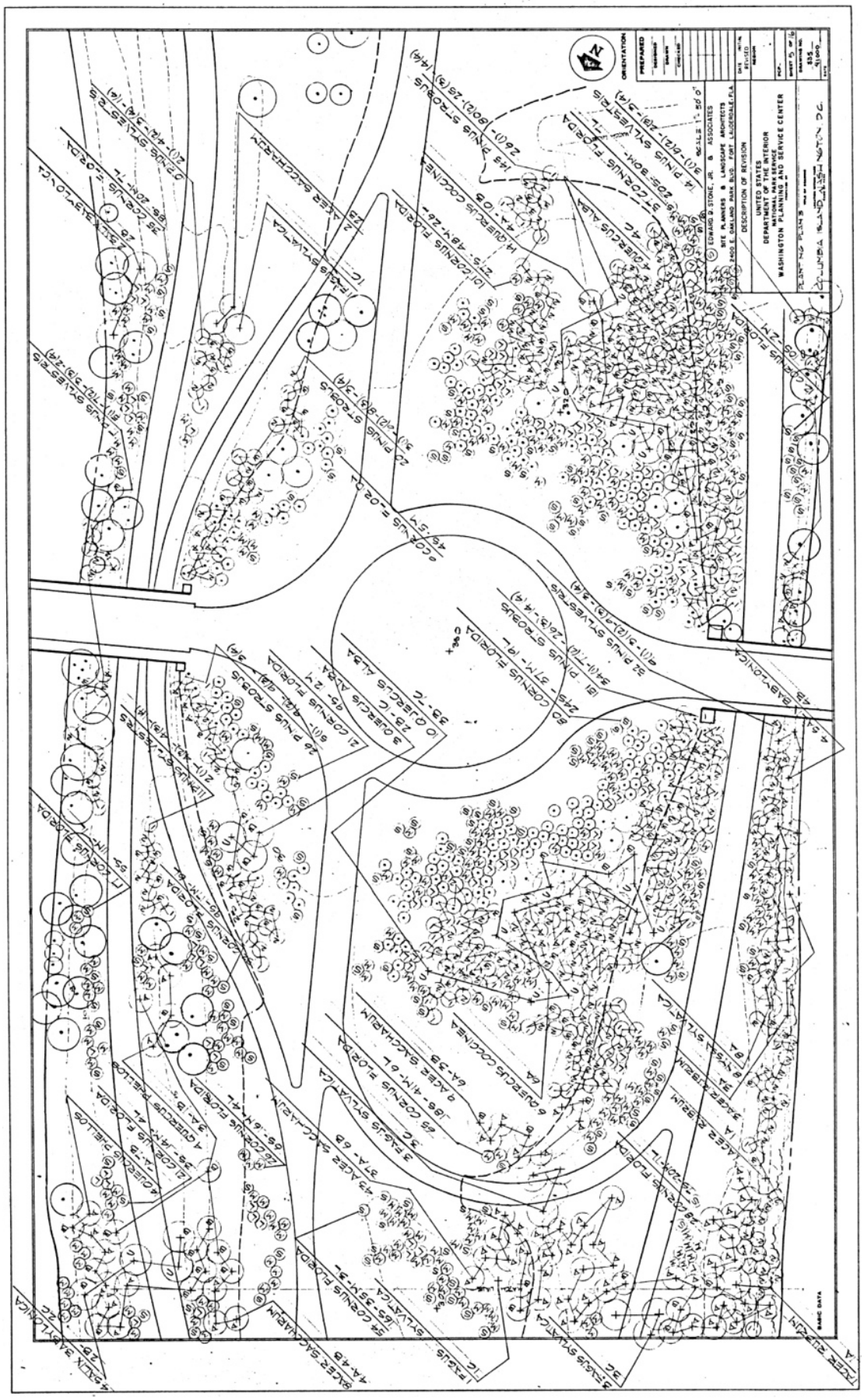


Figure 52: Columbia Island planting plan (page 6) by Edward Durell Stone, Jr., with planting plan for Memorial Circle, 1968 (Source: National Park Service, eTIC 835_41000).

availability; the first phase focused on the area immediately around Memorial Circle, and later phases moved beyond the circle. Funded by Lasker, the planting of the first 800,000 daffodil bulbs on Columbia Island began in October of 1967. These were placed in beds along roadways throughout Columbia Island, including Memorial Circle, that would not be affected by later tree plantings and were planted to bloom throughout the season. The planting efforts were completed by NPS staff, assisted by the National Capital Area Federation of Garden Clubs.

The first phases of tree planting took place in spring 1968 when the NPS planted approximately one dozen white pine trees alongside each of the four pylons around Memorial Circle. Workers also planted 18 scarlet and white oak trees, an unspecified number of daffodils, and approximately 200 dogwood trees around the outside of Memorial Circle. Philanthropist Mary Lasker paid for all of the dogwoods on Columbia Island at this time and was heavily involved with design decisions. Lasker requested that the dogwoods be located no closer than 15 feet and no further than 100 feet from the roadway for the enjoyment of drivers (Earley and Fanning 2005: 118). Lewis prepared additional flower beds throughout Columbia Island and in the fall of 1968, between 150,000 and 200,000 more daffodils were planted. The brought the total number of daffodils across Columbia Island to 1,000,000 (Lee 2021: 7-45; Earley and Fanning 2005: 24).

On November 12, 1968, in a ceremony on Columbia Island that marked the official conclusion of the Beautification Program, Secretary of the Interior Stewart Udall announced that the island would be renamed Lady Bird Johnson Park (Earley and Fanning 2005: 25). NPS Director George B. Hartzog, Jr. led the effort to rename Columbia Island in honor of Lady Bird Johnson's contributions to beautification in Washington, D.C., and the particular impact they had on Columbia Island's landscape. In a letter to the Executive Secretary of Domestic Geographic Names, Hertzog wrote, "while persons should not as a general rule, be so honored during their lifetime, this is an unusual situation in which an exception is justified" (Reservation 344, Reservation Files, National Capital Region). The renaming of the island as "Lady Bird Johnson Park" was approved by Secretary Udall. The name was changed to Lady Bird Johnson Park through a Secretarial Order on November 4, 1968, and a commemorative plaque was installed on the east side of Memorial Circle.

Between 1969 and 1971, approximately 2,500 more dogwoods were funded by Mary Lasker and added in phased plantings across Lady Bird Johnson Park (Columbia Island), including around Memorial Circle (Earley and Fanning 2005: 52, 96). Funding was only available for the dogwoods and not the planned massings of deciduous trees that would have shaded the dogwoods. Planted in full sun, many of the dogwoods died. With the exception of white pines and scarlet oaks planted in 1968, no additional deciduous or evergreen trees were planted until 1977, when agency funds became available (Earley and Fanning 2005: 96)

In 1971, a Daffodil Task Force was established to evaluate the daffodil plantings in Lady Bird Johnson Park (Columbia Island). Recommendations included focusing future plantings on larger yellow varieties since they were more visible than smaller flowers and white daffodils (Earley and Fanning 2005: 52).

Stone divided his planting plan for Columbia Island into phases since funding was not available to complete the entire planting plan in a single season. While the first phase focused on Memorial Circle, the later phases focused on providing shade for the dogwoods that would be planted throughout the island.

1970S DEVELOPMENTS ON MEMORIAL AVENUE CORRIDOR

In 1972, *The Arts of War* statues on Memorial Bridge were sandblasted, brush-plated with gold, and coated with lacquer (Lee 2021: 7-19). Later in the 1980s, workers removed lacquer from the statues on Memorial Bridge and replaced it with a wax finish (Lee 2021: 7-19).

Congress authorized a third military-themed memorial on Memorial Avenue in September of 1972. Dedicated on Memorial Day of 1974, the Seabees Memorial was sculpted by Felix de Weldon and architect Anthony Harrer (Lee 2021:

7-56). (Felix de Weldon also sculpted the nearby U.S. Marine Corps War Memorial, dedicated in 1954.) The Seabees Memorial is located on the north side of Memorial Avenue, directly across from "the Hiker" memorial, between the Boundary Channel Bridge and the metro line.

The monument was commissioned by the Seabee Memorial Association and commemorated the members of the Naval Construction Battalions (CBs) during war and peace times. The focus of the memorial is a 9-foot bronze Seabee figure with a helmet interacting with a three-foot child, both atop a black granite base. Behind the Seabee and child are three free-standing walls that form a U-shape around the central figures. The wall behind the figures stands 13½ feet tall and includes a bronze relief sculptural tableau of Seabees working in various trades. On either side of the figures are two 13½-foot tall walls with gilded inscriptions and smaller bronze plaques on the sides depicting Seabees. The three walls of the memorial create a different configuration than the two earlier memorials dedicated to individuals. The three freestanding walls create their own rectangular niche for the memorial, with hedges on either side of the walls.

A "Repair of Bridge and Approaches" project in 1976 had several components, including addressing cracks in the Arlington Memorial Bridge concrete elements and repairing sidewalk surfaces. Rusted portions of the bascule truss and trunnion posts were sandblasted and painted. With the bascule permanently fixed in place, compressible seals were inserted into the gaps formed by the joints. Additionally, a barrier was installed to prevent birds from roosting on bridge truss members (Lee 2021: 8-113).

In 1977, deciduous and evergreen trees were planted around Memorial Circle among the dogwoods—rather than behind, as depicted in the Stone planting plan, where they would have mitigated impacts from direct sun. The phased planting of deciduous and evergreen trees was implemented in numbered phases according to the Stone planting plan (Earley and Fanning 2005: 96). Additional deciduous trees were planted in 1978.

When the Washington Metropolitan Area Transit Authority (WMATA, also referred to as the Metro) extended one of its lines to Huntington, Virginia in 1977, the agency opened a station for Arlington National Cemetery at Memorial Avenue. The metro rail lines run under Memorial Avenue, following the right-of-way of the old southern branch of the Pennsylvania Railroad. The addition of the Metro station altered the boundaries of the cultural landscape, as NPS transferred land to the Metro for an escalator on the north and south sides of the avenue, two elevator structures on the north side of Memorial Avenue (situated within the holly hedge [*Ilex opaca*] line), and related small-scale features such as street-level lighting for the Metro stop. WMATA has an easement agreement with the NPS for the Arlington Cemetery Metro Station located below and accessed from Memorial Avenue (Lee 2021: 7-53). As part of this Metro construction project, WMATA planted red oaks (*Quercus borealis*) and pin oaks (*Quercus palustris*) behind the holly hedge in the vicinity of the Metro stop (*see Figure 53*).

The Huntington Route Landscape Planting Plan signed in 1975 depicted the planned plantings on Memorial Avenue around the metro station. On the north side of Memorial Drive, west of the metro rail lines, were six Northern red oak (*Quercus borealis*) trees evenly spaced in two rows of three trees each beyond the holly hedge. There was also one pin oak (*Quercus palustris*) north of the second row. There were also two flowering dogwoods (*Cornus florida*) and an American holly (*Ilex opaca*) depicted within the east side of this tree cluster. On the east side of the metro rails were eight Northern red oak (*Quercus borealis*) trees, two rows of four evenly spaced trees beyond the holly hedge. There was also one willow oak (*Quercus phellos*) located just north of the two rows of trees. Two Yoshino cherry (*Prunus yedoensis*) trees and holly plants were depicted along the western extent of this tree cluster.

On the south side of Memorial Avenue, between the VA Highway 110 off ramp and the metro line were four red oak (*Quercus borealis*) trees, interspersed with hollies and dogwoods. Within this narrow stretch of land, three of the four trees were depicted roughly in a row, oriented north-south,

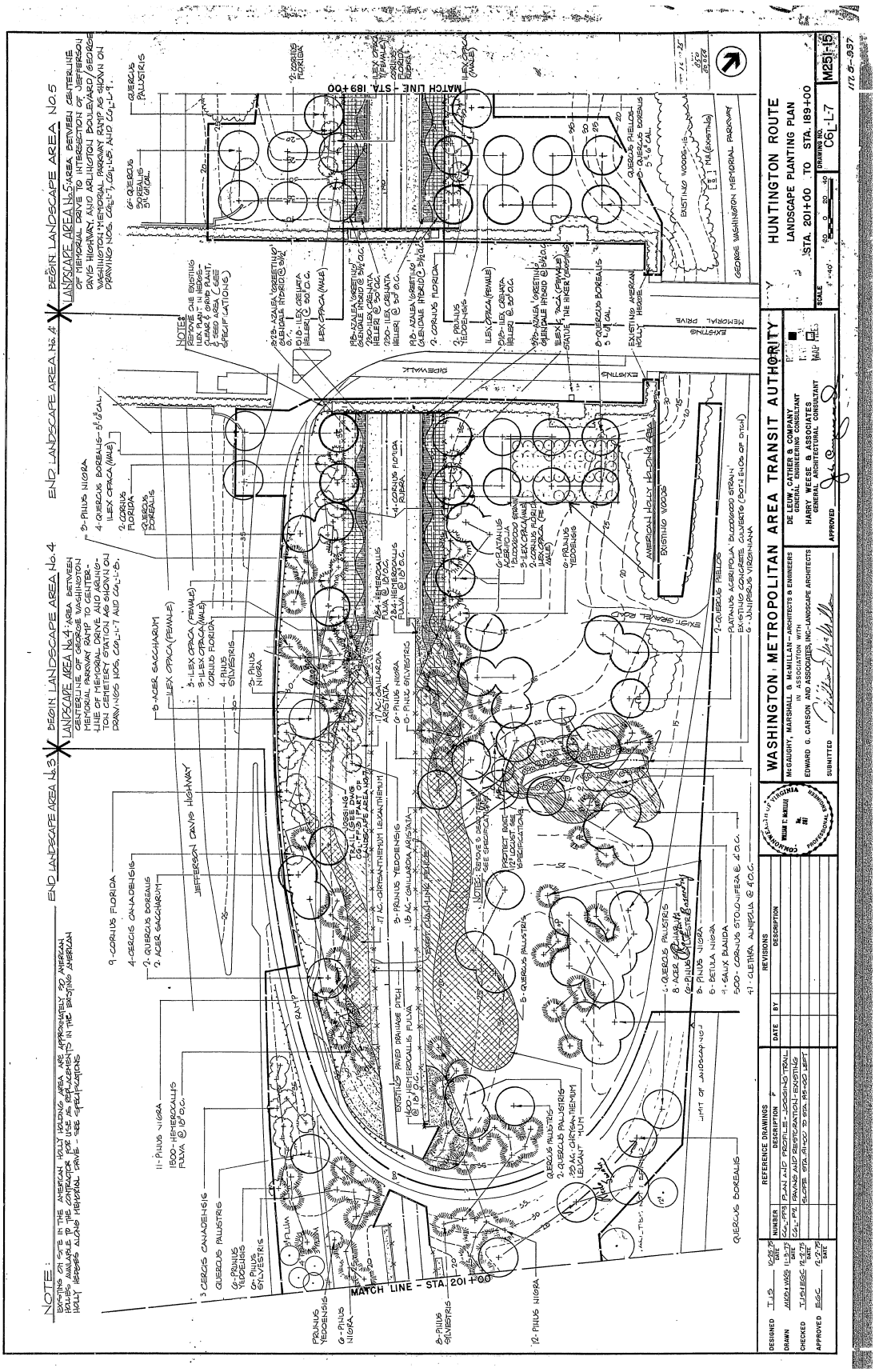


Figure 53: Planting plan around the Arlington National Cemetery metro station from the Huntington Route Landscape Planting Plan series, Washington Metro Area Transit Authority, 1975 (Source: National Park Service, eTIC 850 80064 1975 1976).

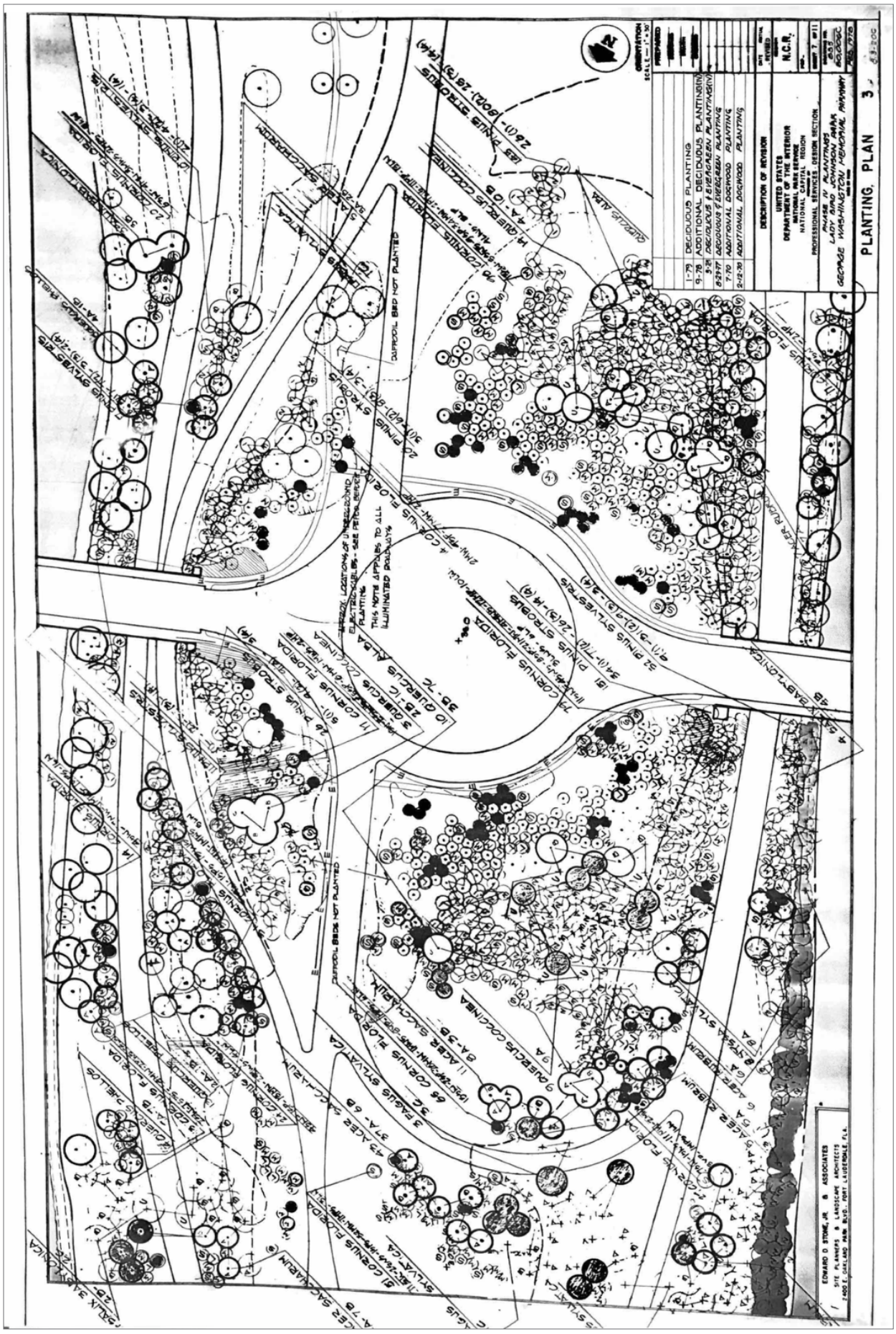

PLANTING PLAN 3
LADY BIRD JOHNSON PARK
GEORGE WASHINGTON MEMORIAL PARKWAY
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL REGION
PROFESSIONAL SERVICES DESIGN SECTION
DESCRIPTION OF REVISION
DECIDUOUS PLANTING
ADDITIONAL DECIDUOUS PLANTING
DECIDUOUS & EVERGREEN PLANTING
ADDITIONAL DOGWOOD PLANTING
ADDITIONAL DOGWOOD PLANTING
EDWARD D STONE, JR. & ASSOCIATES
SITE PLANNERS & LANDSCAPE ARCHITECTS
2400 E. OAKLAND PARK BLVD. FORT LAUDERDALE, FLA.

Figure 54: (opposite) February 1978, Phase IV planting plan of Memorial Circle. The detail map depicts existing pink flowering dogwoods with shaded circles, and existing white flowering dogwoods with white circles (with a dot rather than a plus in the center) with a thick black border (Source: National Park Service, GWMP Archives).



Figure 55: (right) 1979 aerial of Memorial depicting trees planted to date (Source: Historicaerials.com).

with the fourth tree to the west side of the furthest south tree. Further south along this narrow section of land along the off ramp outside of the cultural landscape boundaries were three black pine (*Pinus nigra*) and additional hollies, dogwoods, and further south four Scots pine (*Pinus sylvestris*) and three sugar maples (*Acer saccharum*). There were two red oak trees on the west side of the highway off ramp, just south of Memorial Avenue and the holly hedge, in alignment with two of the trees on the east side of the ramp.

On the east side of the metro rail line south of the holly hedges were eight red oaks (*Quercus borealis*) trees arranged in two rows of four evenly spaced trees. Further south just beyond the cultural landscape boundaries were several other trees, none of which are arranged in rows but more naturalistic in their design, including six London plane (*Platanus acerifolia*) trees, three hollies, two flowering dogwood trees, two willow oaks (*Quercus phellos*), and six Eastern red cedars (*Juniperus virginiana*). Several other trees were planted further south (ETIC 850-80064).

LADY BIRD JOHNSON PARK (COLUMBIA ISLAND) PLANTINGS IN THE 1970S

Beginning in the mid-1970s, the NPS undertook phased plantings of deciduous and evergreen trees in Lady Bird Johnson Park (Columbia Island)—spanning the cultural landscape and its broader context throughout Columbia Island. Plantings included red maple (*Acer rubrum*), white oak (*Quercus alba*), scarlet oak (*Quercus coccinea*), white pine (*Pinus strobus*), and flowering dogwood (*Cornus florida*) (Earley 2004: 35). These plantings were consistent with the Stone planting plan, which was implemented in numbered phases, from Phase I to Phases V/VI.[2]

The plantings completed during each phase were noted on the phased drawings' cover sheets and/or

2. The cover sheets/title blocks for the phased drawings present some conflicting information; our research for this CLR has not resolved these discrepancies, although they do not impinge on our overall documentation and analysis. To document these inconsistencies: the cover sheets and detail sheets from the Phases IV and V plans all share the same date (February 1978); and there is a cover sheet for Phase IV, but no detail sheets (the cover sheet also has a February 1978 date). The National Capital Region (NCR) Office of Professional Services standard was to use the original approved plans and update accordingly with actions and a revision date.

detail sheets, according to the following sequence (*see Figure 54*):

February 12, 1970: Additional dogwood planting

July 1970: Additional dogwood planting

August 29, 1977: Deciduous and evergreen planting

[May or March – illegible] 1978: Deciduous and evergreen planting (IV)

September 1978: Additional deciduous planting (IV)

January 1979: Deciduous planting (V)

In addition, the Phase IV detail sheet of Memorial Circle includes a list of handwritten additions:

10 AS (A)

5 AS (B)

8 SB

4 QP (A)

1 QP (B)

It is assumed that AS stands for *Acer saccharum* (sugar maple); SB for *Salix babylonica* (weeping willow); and QP for *Quercus phellos* (willow oak). The letter in parentheses indicates the size of tree, with A smaller than B[3]. There is a note that one AS was rejected on 9/11/1979.

In 1979, a study was completed to assess the survival rate of these successive plantings and to consider replacements that were better suited to the area; such a study was consistent with the phased implementation of the Stone plan, as the lapses between phases allowed for designers to assess the success to date. The planting plan was updated to add more white pines (*Pinus strobus*) and dogwoods. Many of the previously planted dogwoods had died due to sun scorch, damage from mowing, and a combination of inappropriate soils, pests, and disease. Since dogwoods were a

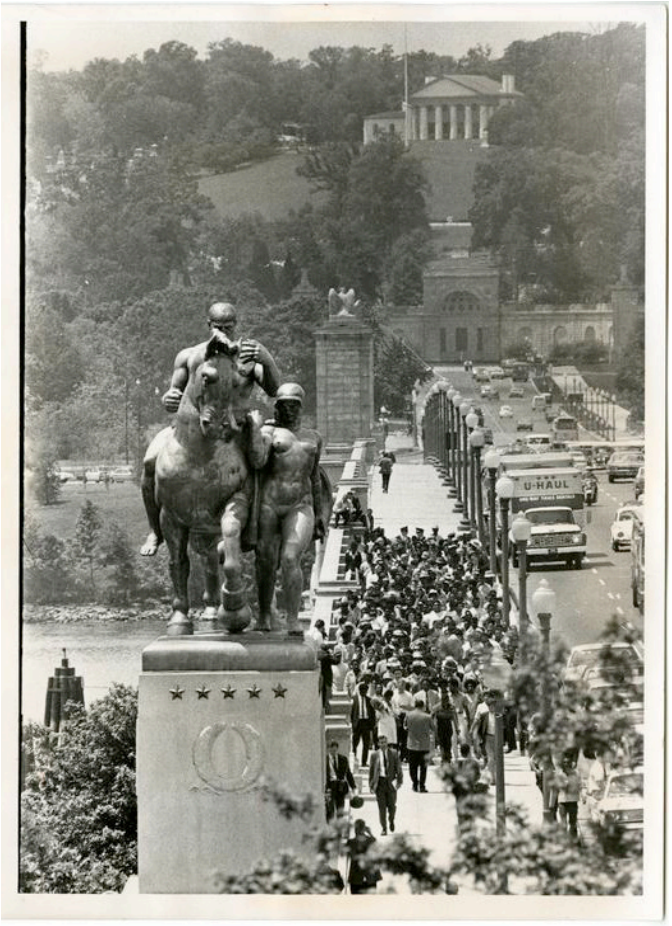


Figure 56: Southern contingent of the Poor People's Campaign crossing Arlington Memorial Bridge after visiting President Kennedy's gravesite at Arlington National Cemetery, 1968 (Source: Reprinted with permission of the DC Public Library, Star Collection at Washington Post).

3. The labels for size vary by tree type, with the size of deciduous trees indicated by A, B, or C; the size of evergreen trees indicated by 1, 2, 3, or 4; and the size of flowering trees indicated by S, M, or L for small, medium, or large.

central feature in Stone's plans, designers decided at this time to modify the arrangement of Stone's designated tree types in order to ensure the long-term survival of the dogwood trees. To protect those dogwoods from sun scorch, the NPS planted deciduous and evergreen trees among, rather than behind, the dogwoods.

The revised plans also included flowerbeds adjacent to the pylons at the entrance to Arlington Memorial Bridge on the east side of Memorial Circle indicated by hatch marks (Earley and Fanning 2005: 61) (*see Figure 54*). These planting beds have hosted a range of flower types since they were installed, including tulips (*Tulipa* spp.), daffodils (*Narcissus* spp.), and canna lilies (*Cannaceae* spp.). Research completed for this CLR was not able to determine what was originally planted in the beds.

These changes to the tree configurations and the flowerbeds were documented in Phase V of the Stone planting plan (Earley and Fanning 2004: 25, 61, 96). Both the Phase V and Phase VI cover sheets indicated that trees were to be planted in January 1979. The 1979 planting of deciduous trees marked the last documented phase in which E.D. Stone, Jr. and his firm were directly associated with the plantings around Memorial Circle and greater Lady Bird Johnson Park (Columbia Island). It is not clear not what percentage of the plan was completed by 1979 (*see Figure 55*).

THE CONTEXTUAL LANDSCAPE FROM THE MID-1960S THROUGH 1970S

Outside of the study area boundaries, work crews planted the area around the Hemicycle in 1964 with Carmine crabapple (*Malus x atrosanguinea*), Arnold crabapple (*Malus arnoldiana*), azaleas (*Rhododendron* sp.), flowering bulbs, and annuals. The increased vehicular traffic entering Arlington National Cemetery prompted the Army to limit private automobile access through the main cemetery gates in 1964 (Earley 2004: 34). Visitors were directed to a temporary parking lot on the south side of Memorial Avenue outside of the cultural landscape boundaries. The main change in circulation on Memorial Avenue has been the redirection of traffic away from the main cemetery gates to parking areas established over the last 50 years.

The old Georgetown-Alexandria Road (by then known as Arlington Ridge Road) closed in the 1960s, having supported traffic since 1793, when it was incorporated as the Georgetown-Alexandria Turnpike. Arlington Ridge Road traveled north-south along the eastern side of Arlington National Cemetery, intersecting with Memorial Avenue east of the Hemicycle. Arlington Ridge Road provided direct access to Memorial Avenue for vehicular traffic. A small southern portion of the road remained in use until the construction of the Welcome Center and parking area began in 1986, but in the northern portion of the road, hollies were planted by 1972. The cemetery's roads were also redesigned at this time (Earley 2004: 79).

In 1977, a memorial to the 101st Airborne Division was installed within the contextual landscape; it was placed on the north side of Memorial Avenue, with the Admiral Byrd memorial to the east and the Hemicycle to the west. The memorial commemorated the division's service in World War II and Vietnam. Bernhard Zuckerman was the sculptor and Harold J. Schaller, one of America's foremost memorial designers at the time, was the architect; Peacock Memorials fabricated the monument (Lee 2021: 7-63). The central focus of the memorial is a bronze sculpture of a seven-foot "Screaming Eagle" atop a granite plinth with the unit's patch. The plinth is inscribed with the following quote from Major General William C. Lee: "The 101st has no history… but it has a rendezvous with destiny." On the north side of the plinth is a low wall creating a half-circle around the sculpture and creating a curved niche, behind which the hedges are planted.

In 1978, Arlington Boulevard was rebuilt between the Route 50 overpass and the north loop road, taking traffic from Memorial Circle to an exit leading south (Earley and Fanning 2005: 25).

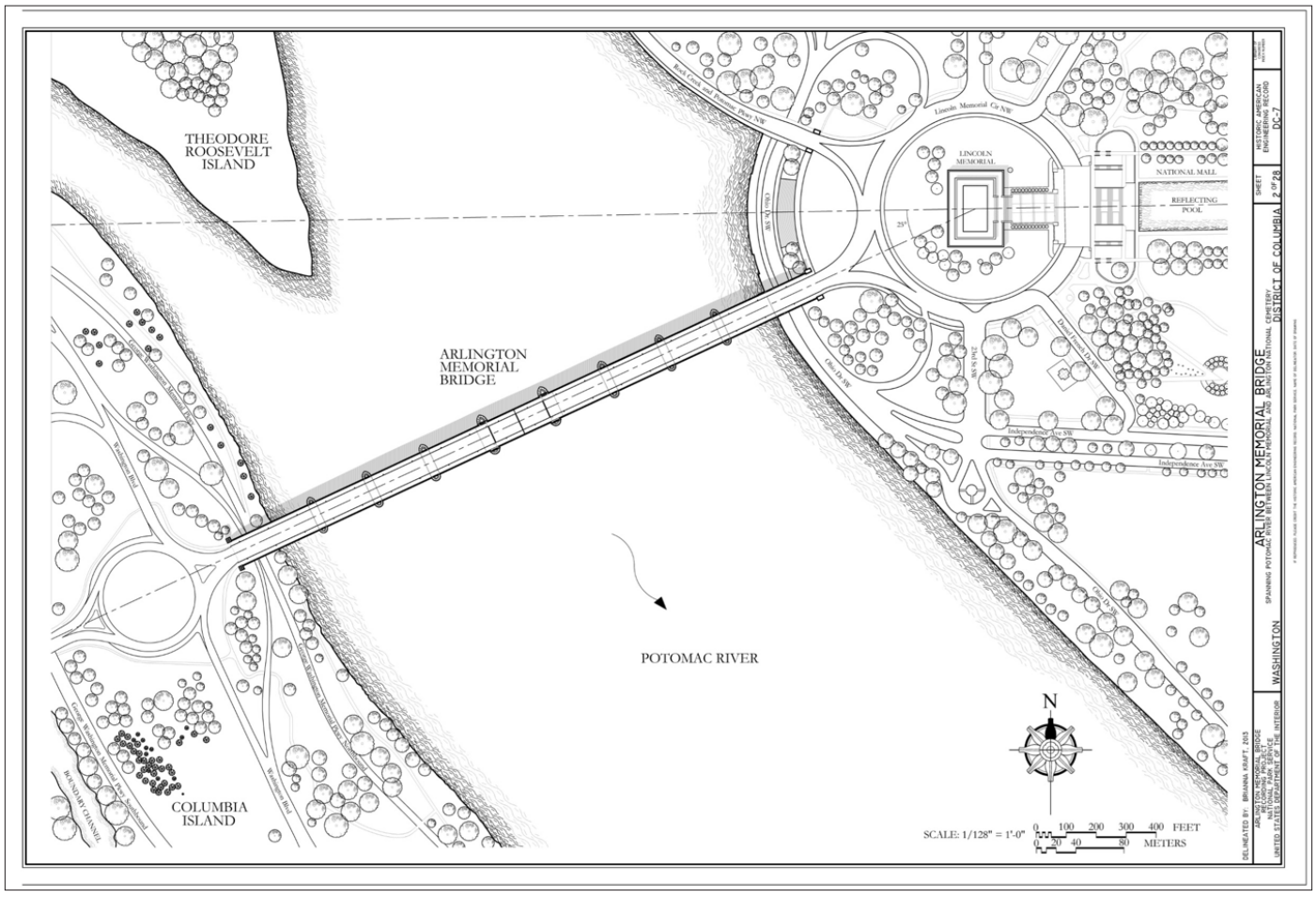
Poor People's Campaign

On May 22, 1968, the Southern contingent of the Poor People's Campaign crossed Arlington Memorial Bridge to Resurrection City, a protest camp that convened on the National Mall in Washington, D.C. for six weeks (*see Figure 56*).



Figure 57: (left) Historic American Engineering Recording aerial photograph looking north across Arlington Memorial Bridge, c. 1986-1988. Photographer: Jet T. Lowe (Source: Library of Congress, Call number: Historic American Engineering Record (HAER) No. DC-7/ HAER, DC, WASH, 563-).

Figure 58: (below) 2013 site plan from Historic American Engineering Record documentation (Source: Library of Congress, Call number:HAER DC-7).



The Poor People's Campaign was a political campaign, organized by the Southern Christian Leadership Conference, that sought economic justice and security for impoverished Americans and impacted communities. (A modern iteration of the Poor People's Campaign, led by Bishop William J. Barber II, continues the work of the 1968 campaign.) Photo documentation from the *Washington Star* newspaper depicts Arlington County Fire Department providing drinking water for the mules of the mule train at "the old property yard of the National Park Service on the Virginia end of Memorial Bridge" (DC Public Library, Washington Star Photograph Collection). The mule train originated in Marks, Mississippi, traveling to Washington, D.C.

The Memorial Avenue Corridor in the Late 20th Century (1980 – 1999)

1980S DEVELOPMENTS ON MEMORIAL AVENUE CORRIDOR

The Arlington Memorial Bridge and Related Features National Register nomination was listed in the National Register on April 4, 1980 (NRHP# 80000346). The 1980 nomination describes the four military memorials that were installed along Memorial Avenue as of that year, but the narrative does not address the contributing vegetation. The following year, on May 18, 1981, the Mount Vernon Memorial Highway was listed in the National Register (NRHP# 81000079); it is part of the vehicular circulation on Lady Bird Johnson Park (Columbia Island), traveling beneath Arlington Memorial Bridge. This nomination includes a portion of the George Washington Memorial Parkway beginning on the south side of Memorial Circle.

Arlington Memorial Bridge was repaired a few years later, in 1985. Project components included: removing the 1951 asphalt pavement in order to inspect the concrete deck; installing an impermeable barrier on the bridge deck and approach road; laying new asphalt; removing the Belgian block ("durax") median; repaving the bridge sidewalks using a similar exposed pebble aggregate; and widening the sidewalks around Memorial Circle, from six feet to nine feet; and adding curb cuts. The bascule span's fascia was repainted (Earley 2004: 81). Also in 1985, the Federal Aviation Administration installed a unique "Guidance Light System" on the four Potomac River bridges, including Arlington Memorial Bridge. The light system flashes on the bridge when visibility is limited, providing reference points for pilots landing at Ronald Reagan Washington National Airport from the north (Lee 2021: 7-26). The light system continues to operate (reference in Lee 2021: 7-26, footnote xxiii).

Between 1986 and 1988, the NPS's Heritage Documentation Program produced Historic American Engineering Record (HAER) documentation for Arlington Memorial Bridge and the Boundary Channel Bridge (*see Figure 57 and Figure 58*). As part of that documentation, HAER staff produced a historical report and large-format photographs for the two bridges (HAER DC-7; HAER DC-7B). Between 2013 and 2014, GWMP sponsored a second phase of documentation for Arlington Memorial Bridge that updated the historical narrative, added measured drawings, and new photographs. Additional documentation was completed in 2018 for Arlington Memorial Bridge, including a virtual tour, 3D modeling, and a story map.

Minor changes to the pedestrian walkways around the Memorial Circle, especially at road crossings, were made in the late 1980s, following a safety study. The original lampposts on Memorial Avenue were replaced with Washington standard duplicates in 1986. It is likely that at this time, sodium bulbs were replaced by incandescent bulbs (Lee 2021: 7-38). In 1990, eight Cobra-style lampposts around Memorial Circle—likely installed around 1960—were replaced with Washington standard lights (Earley and Fanning 2005: 26). In 2013, all of the lamppost bulbs throughout the Memorial Avenue Corridor were replaced with light-emitting diode bulbs to reduce energy consumption (Lee 2021: 7-38).

The NPS undertook a "floral enhancement" project for Mount Vernon Memorial Highway between 1987 and 1989. A total of 200,000 daffodils (*Narcissus* spp.) were planted in existing beds to replace bulbs

located in Lady Bird Johnson Park (Columbia Island) between Ronald Reagan Washington National Airport and Arlington Memorial Bridge; this included portions of beds within the cultural landscape (Earley and Fanning 2005: 26). Also, around this time, flower beds were removed from Memorial Circle, as it was determined that they looked unattractive after blooming. The composition of beds has changed over time, with the number of beds reduced and spacing altered (Earley and Fanning 2005: 62).

By 1989, less than half and possibly less than one quarter of the trees specified in the Stone plan had been planted. The dogwoods were an exception (Earley and Fanning 2005: 26).

THE CONTEXTUAL LANDSCAPE IN THE 1980S

Between 1986 and 1988, the Department of the Army constructed the Arlington National Cemetery Welcome Center (originally called the Visitor Center) and parking garage near the entrance to the cemetery. The Welcome Center is located on the south side of Memorial Avenue, southwest of the cultural landscape. As many as two dozen white oak trees (*Quercus alba*) were removed or did not survive the construction of the Welcome Center. Approximately 25 white oak trees (*Quercus alba)* were then planted in connection with the project around the Welcome Center on Memorial Avenue (Lee 2021: 7-50).

1990S DEVELOPMENTS ON MEMORIAL AVENUE CORRIDOR

During the 1990s, approximately 500 more deciduous and evergreen trees were planted on Lady Bird Johnson Park (Columbia Island), spanning the cultural landscape and its broader context. In recent decades, some species from the Stone planting plan have been substituted and other species have been added to the landscape for ecological and horticultural reasons. These plantings have been adjusted to be better adapted to growing conditions, pests, and management practices on the island. While these plantings do not adhere to the original Stone plantings, they include suitable substitutions and alterations based on the local ecology, and they continue to adhere to the overall spatial structure of the Stone plan.

Substitutions to the Stone planting plan include the following:

- Hemlock (*Conium maculatum*) and Scotch pines (*Pinus sylvestris*) have been replaced by Virginia pines (*Pinus virginiana*);
- White pines (*Pinus strobus*) have been replaced by American hollies (*Ilex opaca*) where shade was too deep for the pines;
- Swamp white oak (*Quercus bicolor*) have been used instead of white oak (*Quercus alba*);
- American beeches (*Fagus grandifolia*) have been substituted for European beeches (*Fagus sylvatica*);
- Dogwood (*Cornus florida*) plantings have been adapted to ensure better survival rates by planting them among deciduous and evergreen trees, rather than in front of, to avoid direct sunlight and sun scorch.

Species that have been added include green ashes (*Fraxinus pennsylvanica Marsh*.), pin oaks (*Quercus palustris*), silver maples (*Acer saccharinum*), and eastern red cedars (*Juniperus virginiana*). The composition of the daffodil beds has changed over the years, with the overall number reduced. Flower beds within Memorial Circle were removed, and replacement cycles are based on assessments over the years (Earley and Fanning 2005: 62).

An irregularly shaped planting bed is visible on the northeast side of Memorial Circle, within the loop connector road that curves off of S. Arlington Boulevard, in aerials dating back to at least 1999. This area is depicted as unplanted in the 1968 Stone planting plan.

In 1999, another 400 trees were approved for planting throughout Lady Bird Johnson Park (Columbia Island), in addition to 2,000 dogwoods for replanting. The 400 trees included sugar maples and white pines, in addition to substitutions for Stone's original plan (Earley and Fanning 2005: 97).

Between 1999 and 2004, work crews replaced in-kind approximately two dozen existing white oaks along Memorial Avenue.

THE CONTEXTUAL LANDSCAPE IN THE 1990S

In 1990, the American Armored Forces Memorial was installed in the contextual landscape on Memorial Avenue and dedicated on Armistice Day of 1991. The memorial is located on the south side of Memorial Avenue, with the Hemicycle to the west and the Arlington National Cemetery Welcome Center to the east, and directly across from the 101st Airborne memorial. This memorial commemorates the service of all American armored forces, from the introduction of the first tanks in World War I to the use of armor in recent conflict (Lee 2021: 7-66). Harold Schaller designed the memorial, with Fred B. Raines as architect and H. K. Peacock Memorials as fabricators. The Armored Forces Memorial is a semicircular light grey granite wall, measuring 41 feet across and 18½ feet tall, with a polished black granite panel in the center measuring 10 feet wide and seven feet tall. The granite panel is etched with military scenes. The granite wall creates a curvilinear space, and the hedges were replanted around the wall after the memorial was installed, creating a curved niche.

A five-year renovation planting plan for George Washington Memorial Parkway began in 1995, and included replanting of additional daffodils in Lady Bird Johnson Park (Columbia Island) (Earley and Fanning 2005: 26).

The George Washington Memorial Parkway (NRHP# 95000605) was listed in the National Register on June 2, 1995; its southern boundary is located just south of where the Parkway passes beneath Memorial Avenue, in Lady Bird Johnson Park (Columbia Island). Located within the viewshed of the cultural landscape, George Washington Memorial Parkway is an important part of the vehicular circulation on Lady Bird Johnson Park (Columbia Island).

In 1996, the Secretary of the Army transferred 0.17 acres of land within Arlington National Cemetery, an area known as the Old Administrative Building site, to the Secretary of the Interior. The site had been part of the original reservation of Arlington National Cemetery. As part of the property exchange, the Department of the Interior transferred 2.43 acres associated with the Arlington National Cemetery Welcome Center along Memorial Avenue to the Secretary of the Army (PL 104-201 Sec. 2821).

Between 1996 and 1998, the Women in Military Service for America Memorial (WIMSA) was constructed at the Hemicycle at the entrance to Arlington National Cemetery (Lee 2021: 7-67), outside the study area boundaries for this CLR. Work crews installed little leaf linden (*Tilia cordata*) and other plantings in the plaza of the Hemicycle in connection with the installation of the memorial in 1998 (Earley 2004: 36).

Memorial Avenue Corridor in the Early 2000s (2000 – 2010)

Aerials from the 2000s depict new plantings on the north and south sides of Memorial Circle. A cluster of new trees were planted north of Memorial Circle around 2000, with younger plantings, likely dogwoods, just north of the traffic rotary. Additionally, clusters of trees were planted to the south side of Memorial Avenue around 2000.

Between 2000 and 2001, various changes were made to walkway alignments, pedestrian crossway markings, and other signage in the vicinity of Memorial Circle (Robert Peccia & Associates 1998). Walks that approached roadways at acute or oblique angles were slightly re-aligned at right angles to the roadway and moved further away from the circle roadway on the northeast and southeast sides; since this is where pedestrians cross South Arlington Boulevard, the alterations were designed to provide pedestrians a better view of oncoming traffic. For these changes to walkways, new walkways were installed to match the existing ones. Concrete curb cuts were added and improved (Earley 2004: 113).

The NPS and the Federal Highway Administration (FHWA) undertook a rehabilitation project for the Boundary Channel Bridge and Memorial Avenue between 2001 and 2002. Workers removed the roadway blocks, curbs, and sidewalk of the Boundary Channel Bridge in order to add an impervious membrane over the bridge deck. The pattern of the reinstalled Belgian roadway blocks approximated the original pattern, but was slightly

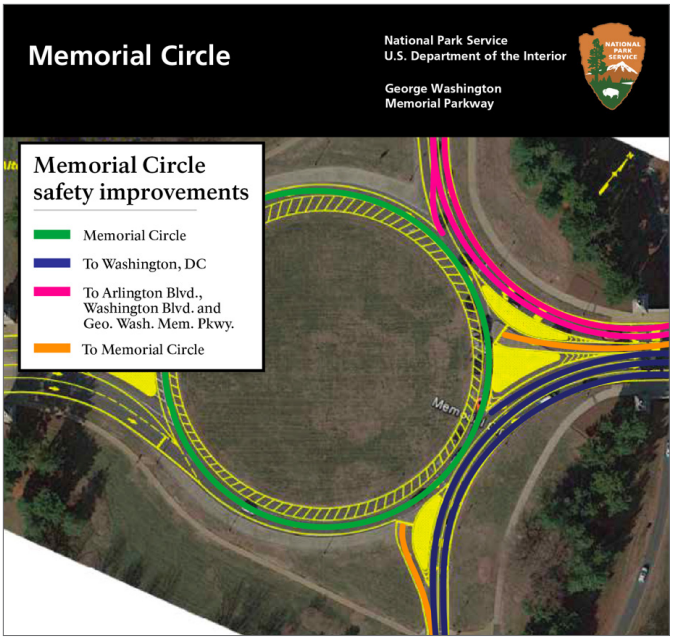


Figure 59: Diagram depicting the Memorial Circle Safety Improvements (Source: National Park Service).

different due to greater distance between blocks and more mortar. New granite curbs were added. Additionally, workers paved Memorial Avenue with new asphalt in 2002, leaving the Belgian block centerline intact (Lee 2021: 7-48).

At the time of the NPS and FHWA project, the NPS established an agreement with Arlington County to provide a conduit under Memorial Avenue for Arlington County's later upgrades to the Potomac Interceptor Sewer around 2010. The project was located west of the Arlington National Cemetery Welcome Center on Memorial Avenue, west of the cultural landscape (Arlington County Board Agenda, September 25, 2010).

The Commemorative Works Act of 1986 established the National Capital Memorial Advisory Commission (NCMA) as the regulatory authority for the approval and construction of commemorative works near the National Mall and on federal land in the National Capital Region. The Commemorative Works Act has been amended in 1991, 1994, 2002, 2003, and 2009. Each memorial installed on Memorial Avenue after 1986 was approved under the Commemorative Works Act, meeting the criteria approved by the NCMA.

When the Commemorative Works Act was amended in 2003, Title II was named the Commemorative Works Clarification and Revision Act of 2003, which included the addition of a zone called the "Reserve" that encompassed the National Mall from the Capitol to the Lincoln Memorial, and from the White House to the Jefferson Memorial. Section 202 of the act prohibits new commemorative works or visitors' centers within the Reserve. The Reserve is a zone located within what is designated as Area 1. While located outside of the Reserve, the Memorial Avenue Corridor cultural landscape is located primarily within Area 1 and a small section of Area 2 of the Commemorative Areas as defined by the CFA, the National Capital Memorial Advisory Commission, the National Capital Planning Commission, and the NPS (PL 108-126). The amendment modified which works qualify for installation in Area 1 and Area 2, allowing for the memorialization of lesser conflicts, which had previously been barred. The amendment also relaxed slightly the standard for issuing a construction permit for commemorative works. With the open-ended potential for the addition of memorials on Memorial Avenue, any amendments to the Commemorative Works Act may impact what may be installed.

Memorial Circle safety improvements completed in 2006 and 2007 reduced the number of lanes around the traffic rotary. Along the north and south sides of Memorial Circle, the outermost travel lanes were replaced with concrete shoulder lanes. The concrete lanes were converted to Belgian block several years later during rehabilitation work completed circa 2020.

THE CONTEXTUAL LANDSCAPE IN THE EARLY 2000S

The most recent memorial installed on Memorial Avenue is the 4th Infantry Division Memorial, which was installed in 2000 and dedicated the following July (Lee 2021: 7-60; 4th Infantry Division website, 2022). While Congress authorized legislation for the monument in 1935, it was not until 1999 that the CFA approved a design by Emory Kirkwood and Associates Architects for a memorial on Memorial Avenue in the contextual landscape. The 4th Infantry Division Memorial is located

on the south side of Memorial Avenue, east of the driveway leading to the Arlington Memorial Cemetery Welcome Center parking garage. The memorial features a bronze diamond shape, measuring nine and one-half feet from corner-to-corner, representative of the 4th Division's shoulder insignia, which bears a geometric motif of four ivy leaves arranged in a symmetrical cross pattern. The diamond stands within a low marble base. There is ivy at the base planted in soil from various 4th Division battlefields. The holly hedges were replanted after the memorial installation, creating a rectangular niche.

Between 2004 and 2006, traffic lanes through the Watergate Plaza and approach to the Arlington Memorial Bridge were realigned, with changes to traffic patterns and new crosswalks (Lee 2021: 8-115).

Recent Improvements to the Memorial Avenue Corridor (2011 – 2022)

In 2012, the spur of the Mount Vernon Trail on the southeast side of Memorial Circle, connecting that trail with Memorial Circle pedestrian circulation, was rerouted and paved with asphalt. The asphalt paving introduced a new material type where the Memorial Circle pedestrian walkway and trail meet. At the time of report completion, there are plans to widen the Mount Vernon Trail to 12 feet.

Arlington National Cemetery Historic District was listed in the National Register on April 11, 2014 (NRHP# 14000146). The nomination includes the military cemetery, Arlington House, Memorial Drive, the Hemicycle, and Arlington Memorial Bridge as contributing resources.

Significant changes occurred to the landscape between 2018 and 2020. First, the NPS completed a Memorial Circle Safety Improvements Environmental Assessment with the purpose of assessing alternatives to improve transportation safety around and near Memorial Circle. The NPS executed a "Finding of No Significant Impact" in 2019 and executed a Section 106 Memorandum of Agreement. Safety measures added in 2020 to Memorial Circle included higher visibility crosswalks, new signage and rapid flashing beacons, clearer lane markings, lane reductions, and repaved road surfaces (*see Figure 59*). As part of this same project, a road segment on the north side of Memorial Circle that connected South Arlington Boulevard and South Washington Boulevard was closed to vehicular traffic (National Park Service, Memorial Circle Safety Improvements Environmental Assessment 2018; Friends of Mount Vernon Trail 2020).

Additionally, from 2018 through 2020, the NPS and FHWA completed a large-scale rehabilitation of Arlington Memorial Bridge. On April 24, 2013, the Federal Lands Bridge Office, an arm of the FHWA, completed an inspection and reported that the bridge needed significant repair work. A 2016 Environmental Assessment (EA) for the planned Arlington Memorial Bridge Rehabilitation Project identified the preferred alternative as Alternative 1B, which called for the bascule span of the bridge to be replaced with a new span comprised of variable depth steel girders (National Park Service Environmental Assessment, The Arlington Memorial Bridge Rehabilitation 2016: ii). NPS executed a Section 106 Programmatic Agreement for the Arlington Memorial Bridge Rehabilitation project in 2017.

During the Arlington Memorial Bridge Rehabilitation Project, the bridge balustrades, lampposts, granite curbs, and steel fascia underwent preservation maintenance, repair, and rehabilitation. The concrete bridge deck was replaced with a concrete/polymer deck and overlay to minimize water intrusion, and the exposed aggregate sidewalks were also replaced with an exposed aggregate concrete/polymer concrete sidewalk designed to minimize water intrusion. An improved drainage system was also installed (Lee 2021: 8-118).

In addition to the aforementioned non-structural bridge improvements, rehabilitation efforts also focused on the concrete arch spans, bridge piers, expansion joints, and bearings. Repairs to Arlington Memorial Bridge's 10 reinforced concrete arch spans included filling cracks with epoxy, patching concrete spalling with concrete repair compound, and replacing the concrete edge beams. Repairs

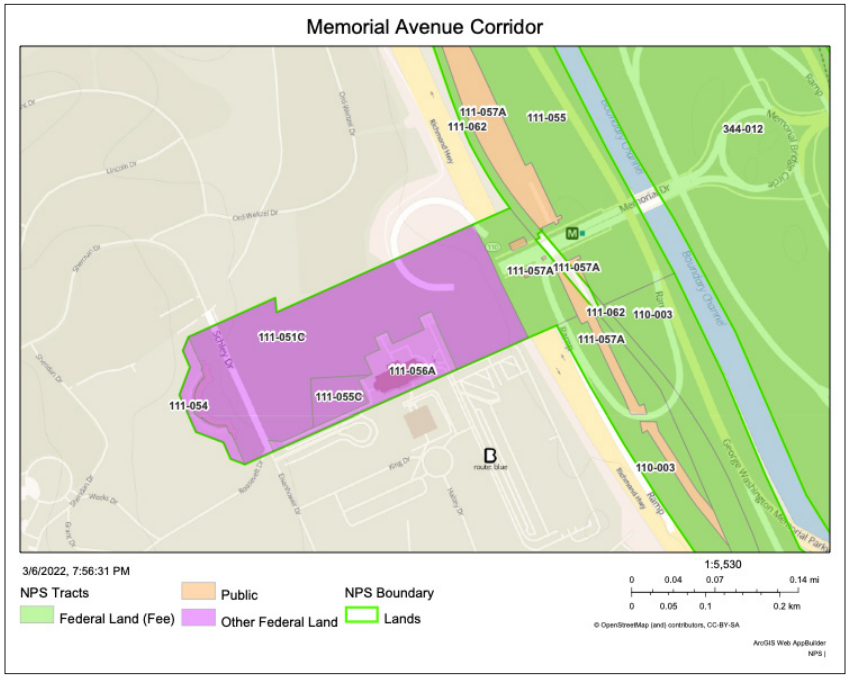


Figure 60: Map depicting current land ownership on west side of Memorial Avenue Corridor. The Department of the Army manages the land depicted in purple on the west side of VA Highway 110 (Source: National Park Service).

to the concrete piers below water included filling cracks using epoxy suitable for underwater applications and placing scour countermeasures such as stone (riprap) on the river bottom around the piers. The bridge's expansion joints were replaced to minimize water intrusion and allow for expansion and contraction due to changes in temperature. The bridge bearings were also replaced (Lee 2021: 8-118).

An area to the south of Memorial Circle, between southbound S Washington Boulevard and northbound Washington Boulevard, was used as a temporary staging area for the Arlington Memorial Bridge Rehabilitation Project; this staging area was located just south of the cultural landscape boundary. The staging area was located between clusters of trees, outside of the boundaries of the study area. Following the completion of the project, the open area is undergoing restoration.

In 2019, the Department of the Interior transferred 16.09 acres of land to the Department of the Army (Senate Bill 1152, 2019). The land transferred included the westernmost portion of Memorial Avenue, from the Hemicycle to the western side of the VA Highway 110 overpass (see purple section in *Figure 60*). The bill also transferred administrative jurisdiction over approximately 1.04 acres of land within Arlington National Cemetery near Arlington House (the Robert E. Lee Memorial) from the Secretary of the Army to the Secretary of the Interior. While previous studies of the Memorial Avenue Corridor have included the entire length of Memorial Avenue, ending at the Hemicycle, this CLR's study area does not include the section between the VA Highway 110 overpass and the Hemicycle, which is no longer managed by the NPS. Outside of the cultural landscape, in July 2021, Lee Highway was renamed Langston Boulevard in Arlington County.

One of the mitigation measures identified in the 2017 Programmatic Agreement for the Arlington Memorial Bridge rehabilitation project was a potential National Historic Landmark nomination. In 2022, an updated National Register of Historic Places nomination for the Arlington Memorial Bridge and Related Features Historic District is in progress at the time of this CLR's preparation.

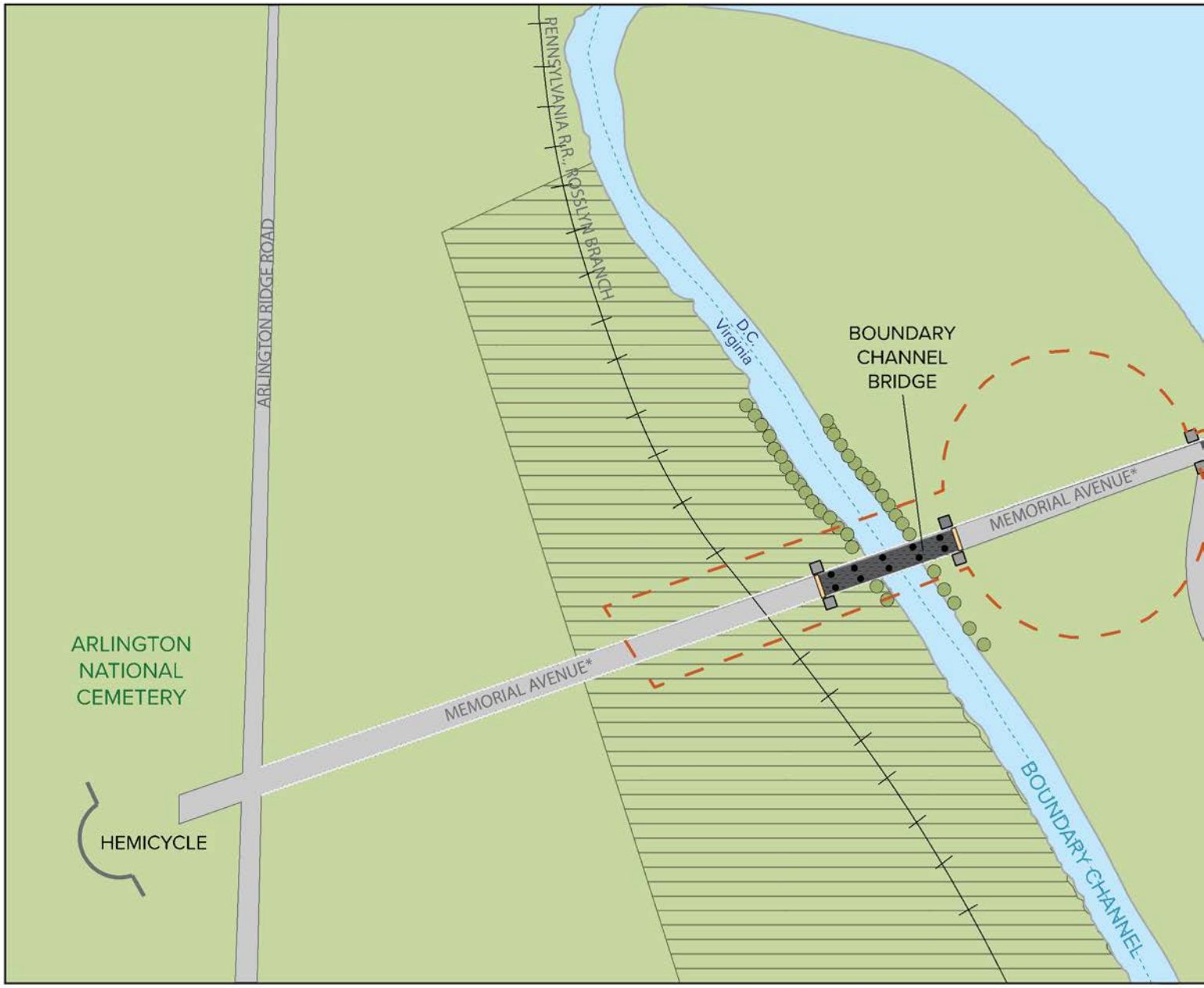
Recent work on the Boundary Channel includes the Potomac River Boundary Channel Restoration Project, which entailed the removal of non-native invasive vines and woody plants along the Boundary Channel. Native shrubs and trees were planted after the removal of invasives. The project spanned the cultural landscape and its broader context, stretching along the Boundary Channel from the north end of Lady Bird Johnson

Park (Columbia Island) to where Washington Boulevard crosses the Boundary Channel (U.S. Fish and Wildlife Service, National Park Service, and District of Columbia Department of Energy and Environment 2019). Native shrubs and trees were planted along the Boundary Channel in fall of 2023.

A *Memorial Avenue Holly Hedge Assessment and Treatment Plan* completed in 2021 provided an analysis of the health of the holly hedges (*Ilex opaca*) on either side of Memorial Avenue, within the study area. The plan assessed the holly hedges from the west side of the VA Highway 110 to the west end of the Boundary Channel Bridge, an area that is entirely within the cultural landscape. The report concluded that the "holly hedge and turf panels along Memorial Avenue are in poor condition, with approximately 25 percent of the holly hedge recommended for replacement due to dead and declining trees, and all of the turf recommended for replacement due to substantial broadleaf herbaceous invasive species present" (Straughan Environmental 2021: 16). A total of 146 hollies were planted in 2022.

Over a century after the McMillan Plan was established, the Memorial Avenue Corridor cultural landscape continues to function in its original role as a designed link between significant monuments in the nation's federal city and the neighboring Commonwealth of Virginia. The cultural landscape, including its engineering, architectural, landscape, sculptural, and statuary features, is an integral component of the Neoclassical designed landscape of Washington, D.C.'s monumental core, and is itself a major civic monument. The Memorial Avenue Corridor has connective and commemorative purposes, existing as both a transportation route across the Potomac River and as memorial to military service and a symbolic reunion of the North and South following the Civil War.

Period Plans



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

1932 Period Plan

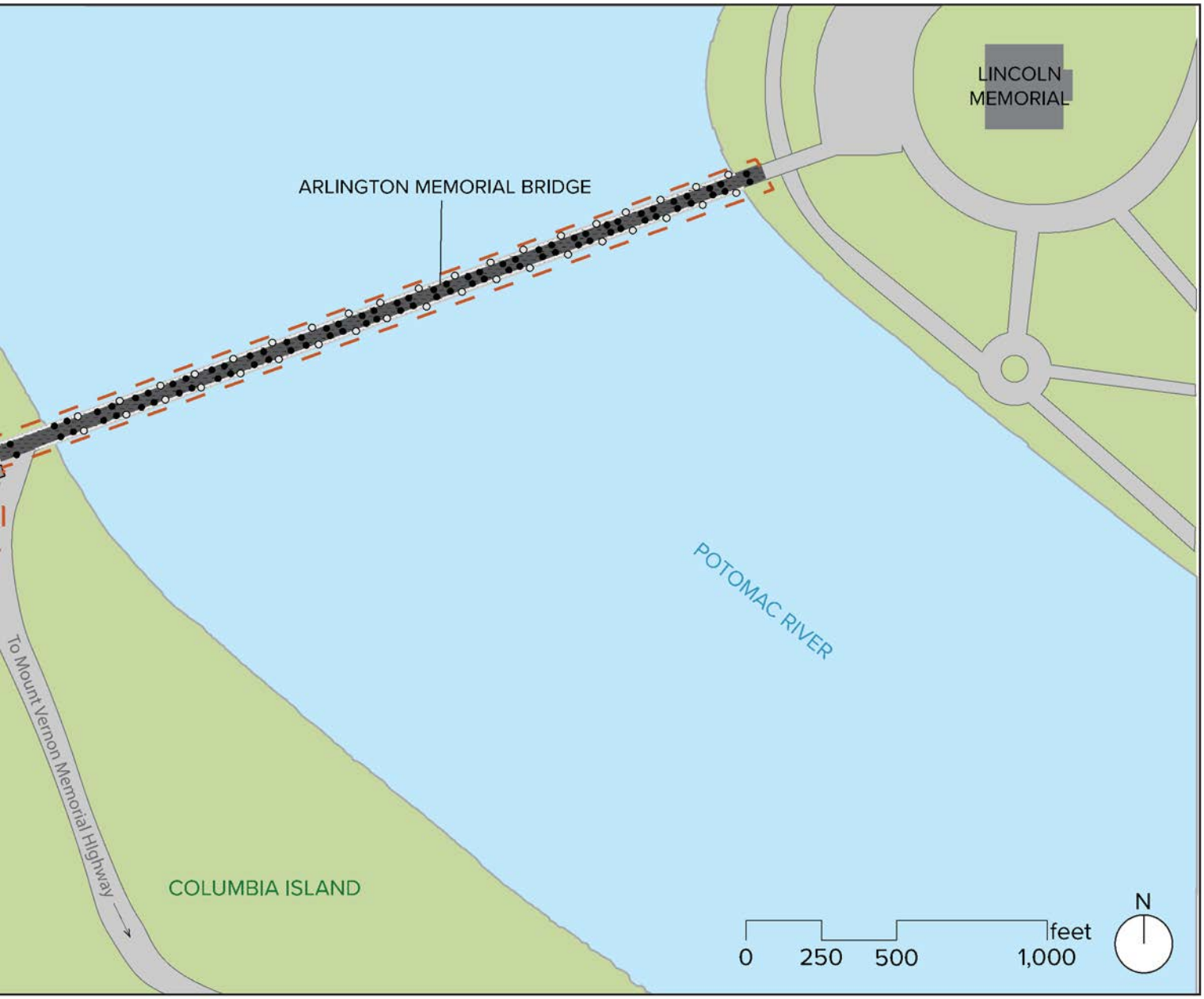
Marking the completion of Arlington Memorial Bridge, the Boundary Channel Bridge, and Memorial Avenue

SOURCES

1. "1930_Arlington Memorial Bridge with landscape on VA side_NARA"
2. "1930 Boundary Channel Bridge Construction_NARA"
3. "1932_Map of Public Buildings and Public Parks in DC_LIbrary of Congress"
4. "GWMP_Memorial Avenue Corridor_2016"

LEGEND

- Cultural Landscape Boundary
- Water
- Arlington Experimental Farm *(Approximate extents)*
- Building / Structure
- Pylon (Structure)
- Railroad
- Road **Concrete*
- Belgian B
- Sidewalk
- Volunteer cottonwo sycamore
- Inlet Grat
- Granite H
- Lamppos



e paving

lock Roadway

r Deciduous Trees (willows, ods, maples, box elder, e, and elm)

e (Historic)

eader Block

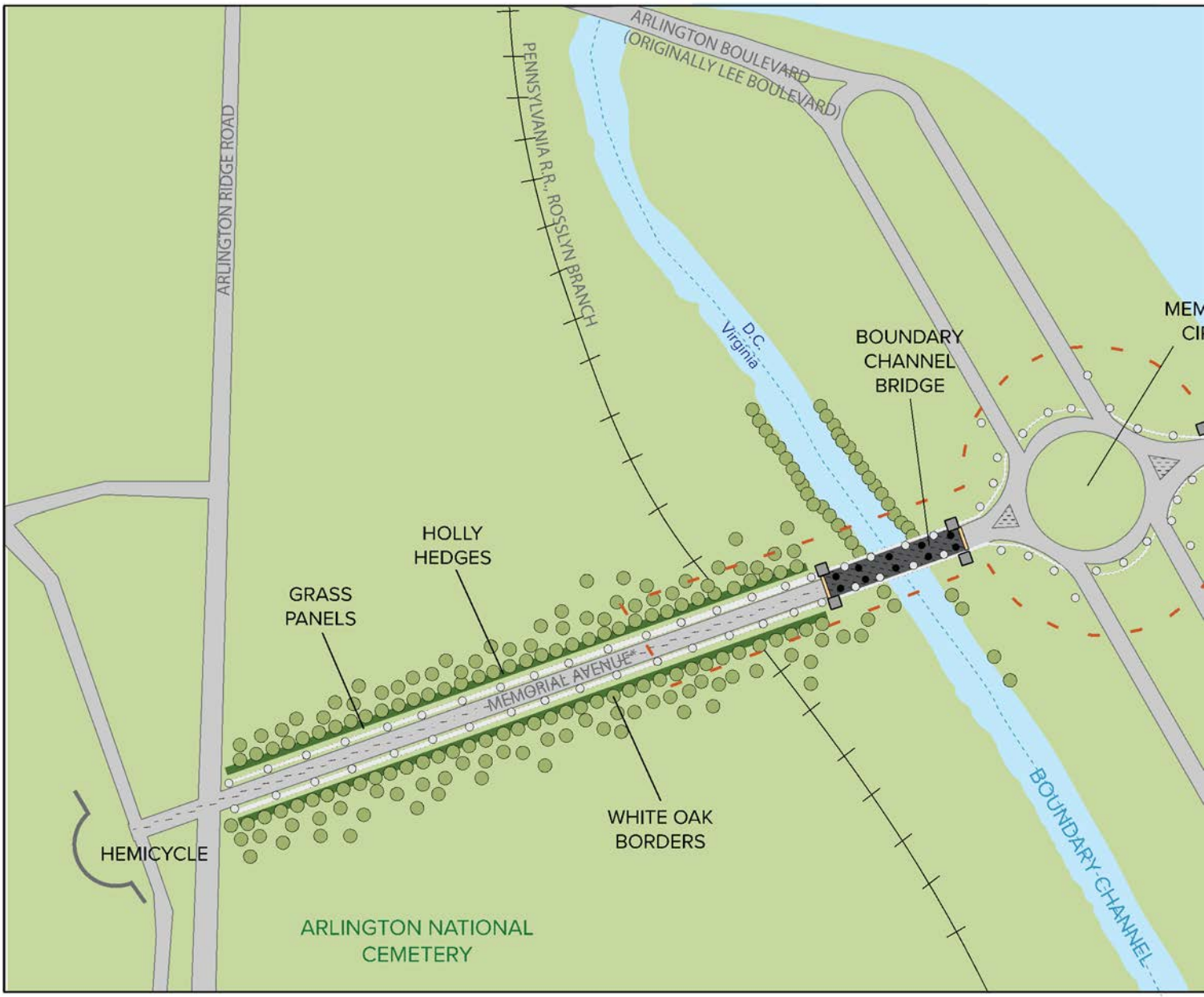
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DRAWN BY
Ruth Penberthy / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator
September 2023

NOTES
1. Small scale features and vegetation are scaled-up for legibility.
2. Vegetation location speculated from historic photographs. Features as drawn are not representative of scale or of individual tree plantings, but representative of general location and density of vegetation.

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DRAWING #4



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

1940 Period Plan

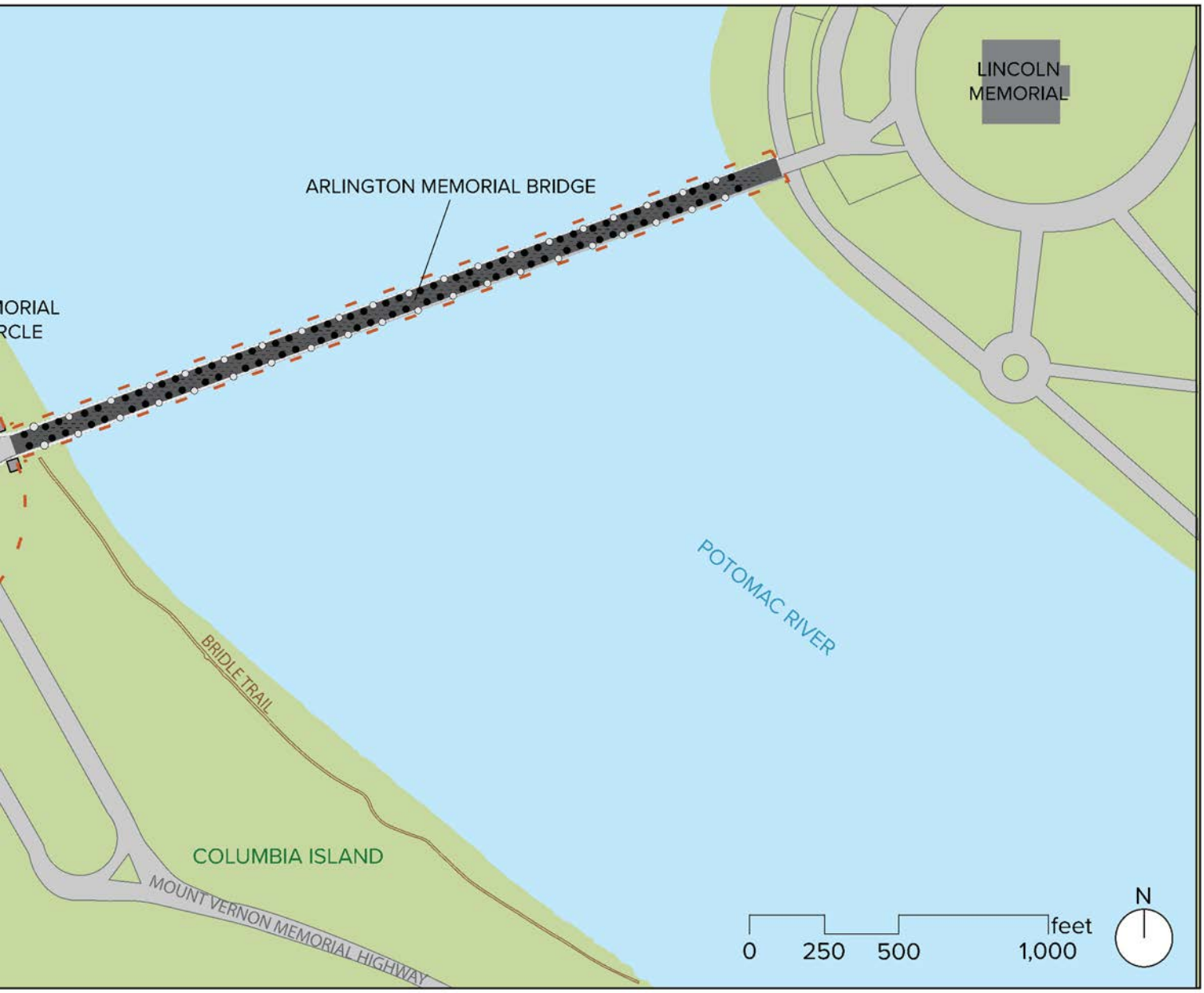
Marking the completion of Memorial Circle and roads on Columbia Island

SOURCES

1. "1930_Arlington Memorial Bridge with landscape on VA side_NARA"
2. "1930 Boundary Channel Bridge Construc tion_NARA"
3. "1932_Map of Public Buildings and Public Parks in DC_LIbrary of Congress"
4. "GWMP_Memorial Avenue Corridor 2016"

LEGEND

- Cultural Landscape Boundary
- Water
- Building / Structure
- Pylon (Structure)
- Railroad
- Road
  **Concrete paving*
- Belgian Block Surface
- Sidewalk
- Bridle Trai
- Volunteer cottonwoo sycamore,
- Grass
- Holly Hed
- Granite He
- Inlet Grate
- Lamppost



Deciduous Trees (willows,
ods, maples, box elder,
and elm)

ge

eader Block
(Historic)

DRAWN BY

Ruth Penberthy / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator
September 2023

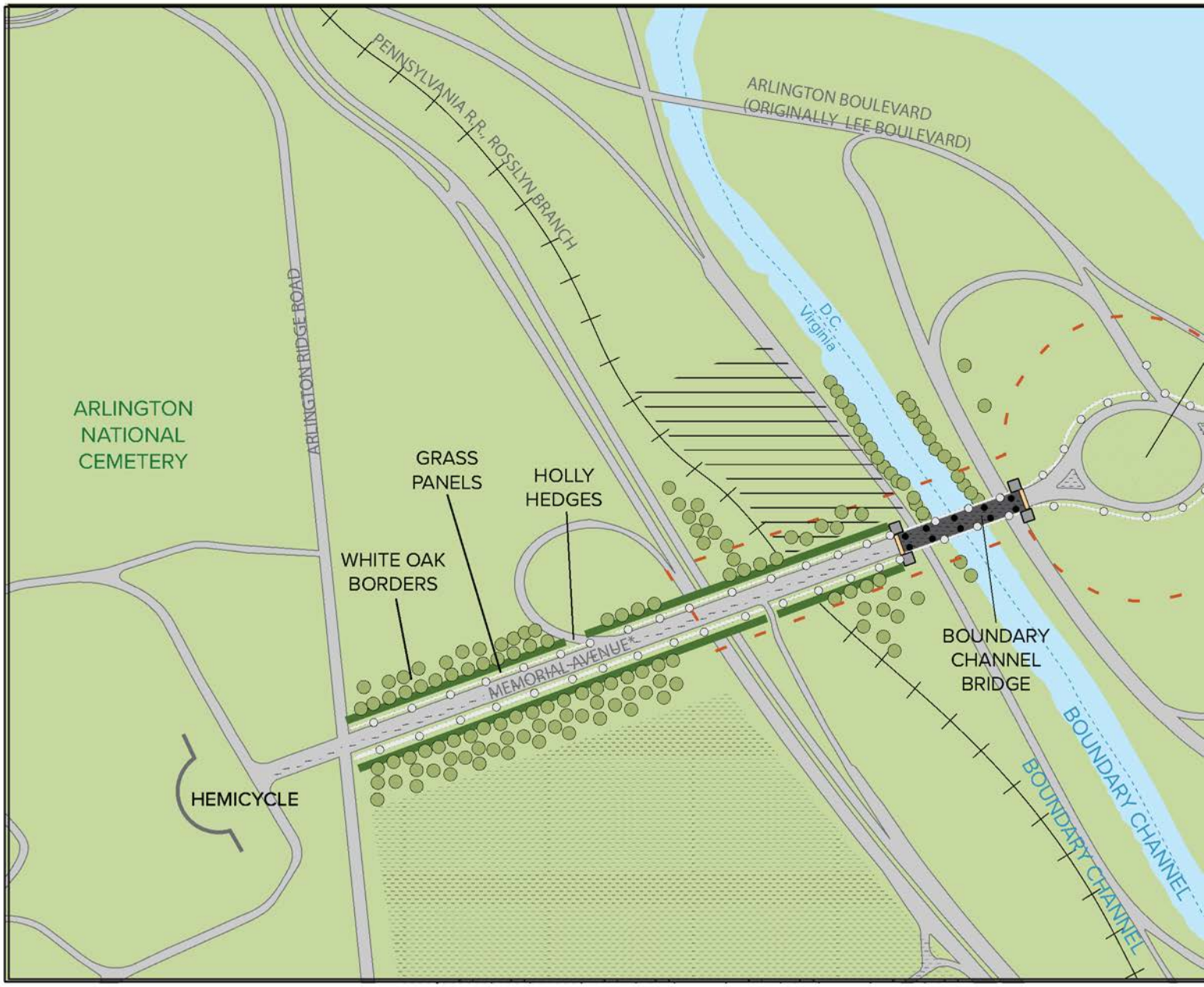
NOTES

1. Canopy approximated from historical aerial imagery and planting plan "Memorial Approach Drive," dated May 21, 1935
2. Small-scale features and vegetation are scaled-up for legibility.
3. Vegetation location speculated from historic photographs. Features as drawn are not representative of scale or of individual tree plantings, but representative of general location and density of vegetation.

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DRAWING #5



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

1943 Period Plan

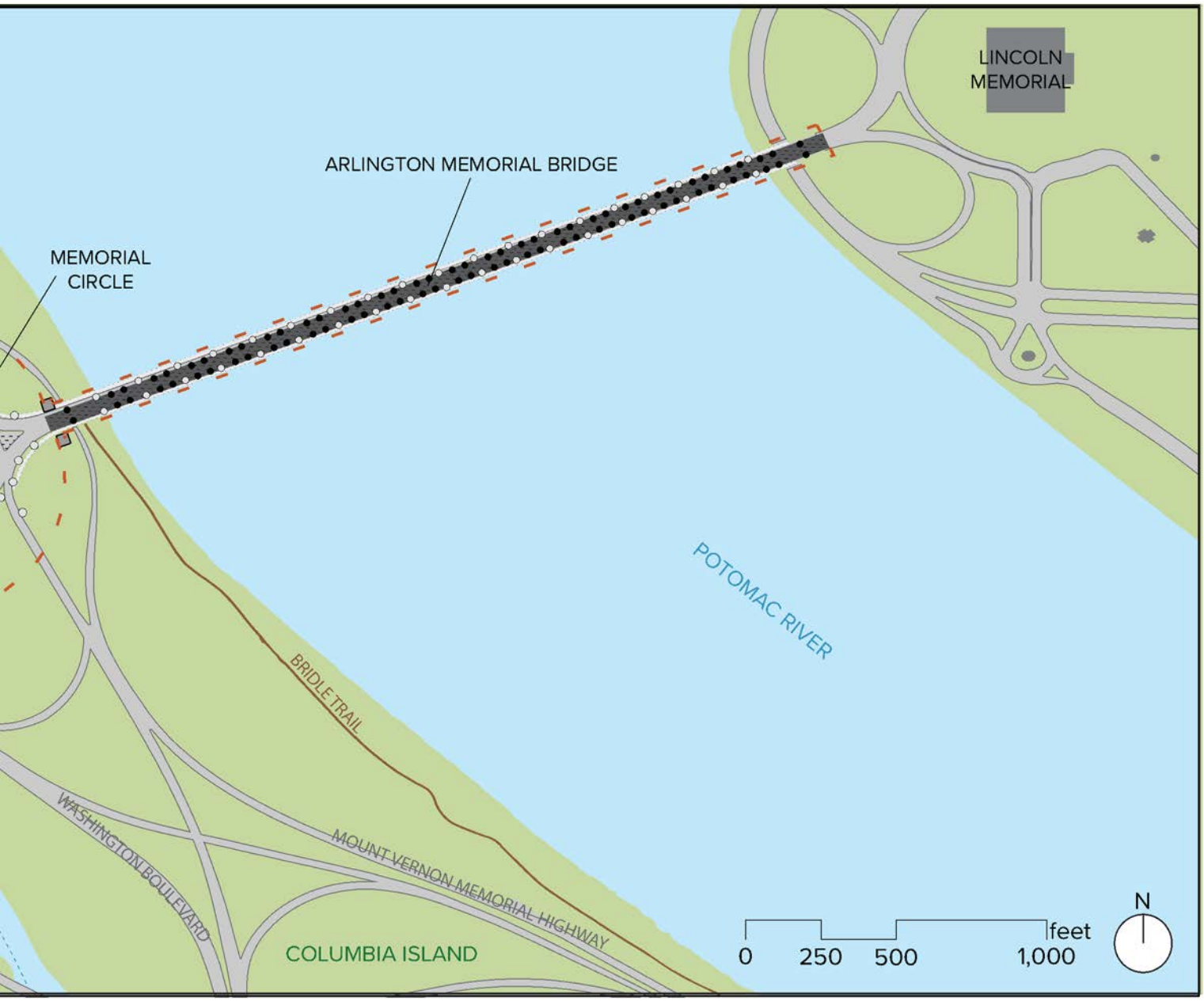
Marking the completion of new road systems on Columbia Island, following the construction of the Pentagon

SOURCES

1. 1949 aerial image (Historicaerials.com)
2. "1930 Boundary Channel Bridge Construction_NARA"
3. "1932_Map of Public Buildings and Public Parks in DC_LIbrary of Congress"
4. "GWMP_Memorial Avenue Corridor_2016"
5. "General Landscape Plan, CCC Camp NP8, 1935"

LEGEND

- Cultural Landscape Boundary
- Water
- Arlington Farms Complex *(Extent unknown)*
- CCC Camp *(Extent unknown)*
- Building / Structure
- Pylon (Structure)
- Railroad
- Road
- *Concre
- Belgian
- Sidewall
- Bridle Tr
- Trees
- Grass
- Holly He
- Granite
- Inlet Gra
- Lamppo



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DRAWN BY

Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator
September 2023

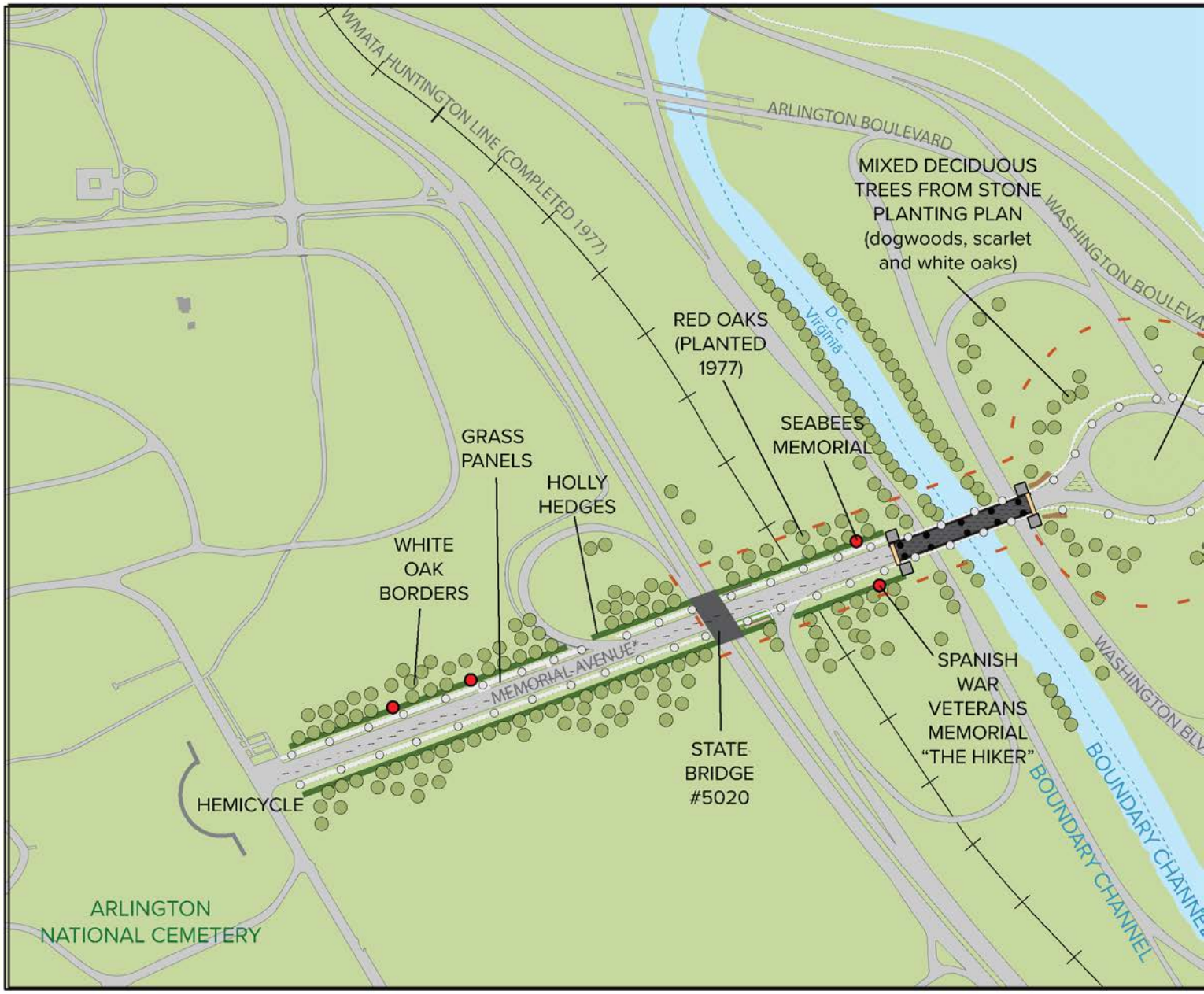
NOTES

1. Canopy approximated from historical aerial imagery.
2. Small-scale features and vegetation are scaled-up for legibility.
3. Vegetation location speculated from historic photographs. Features as drawn are not representative of scale or of individual tree plantings, but representative of general location and density of vegetation.

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DRAWING #6



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

1968-79 Period Plan

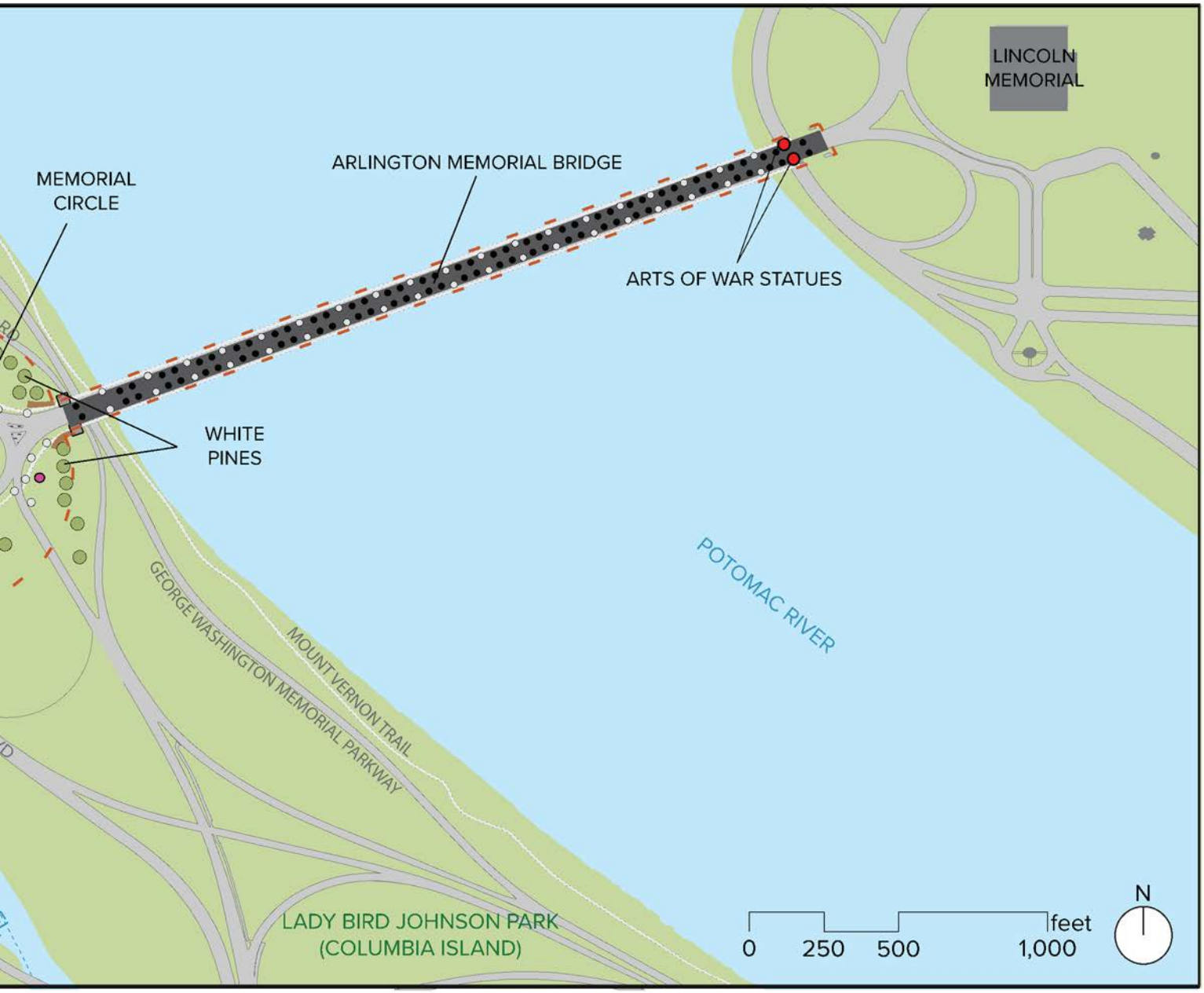
Marking the phased plantings around Memorial Circle associated with the Edward Durell Stone, Jr. planting plan

SOURCES

1. 1979 aerial image (Historicaerials.com)
2. 1960 Memorial Avenue planting plan (ETIC 855_81100A)
3. 1968-1979 Edward Durell Stone, Jr. planting plans (GWMP Archives)

LEGEND

- Cultural Landscape Boundary
- Water
- Building / Structure
- Pylon (Structure)
- Memorial (Structure)
- WMATA Metro Line
- Road
  **Concrete paving*
- Belgian Block Roadway
- Sidewa
- Trees
- Grass
- Hedge
- Planting
- Granite
- Inlet Gra
- Lamppo
- Lady Bir



lk

Bed

Header Block

ate (Historic)

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rd Johnson Memorial Plaque

DRAWN BY

Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator
September 2023

NOTES

1. Canopy approximated from 1979 aerial imagery.
2. Small-scale features and vegetation are scaled-up for legibility.
3. Vegetation location speculated from historic photographs. Features as drawn are not representative of scale or of individual tree plantings, but representative of general location and density of vegetation.

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DRAWING #7

Analysis + Evaluation

Summary of Integrity

PERIOD OF SIGNIFICANCE: 1901 - 1979

Integrity is the ability of a property to convey its historic significance. National Register of Historic Places Bulletin 16A defines historic integrity as "the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's prehistoric or historic period." The U.S. Secretary of the Interior defines seven aspects or qualities of integrity: location, design, setting, materials, workmanship, feeling, and association.

In order to retain historic integrity, a property must possess several, and usually most, of these seven aspects. Evaluating historic integrity involves first determining the historic significance of a property, and then identifying the existing features that contribute to our ability to recognize and understand this significance. Character-defining features are those distinctive features or qualities that make a property unique. They are the individual parts that make the whole place special and worthy of our recognition as a historic property.

The Memorial Avenue Corridor cultural landscape maintains integrity in location, setting, design, workmanship, materials, feeling, and association with respect to the period of significance (1901-1979). The integrity of setting and materials are slightly diminished due to urban development outside of the cultural landscape boundaries, as well as changes in vegetation and paving materials within those boundaries. Nevertheless, the Memorial Avenue Corridor conveys its historic significance based on the character-defining features associated with each of the seven aspects of integrity.

LOCATION

Location is the place where the cultural landscape was constructed or the landscape where the historic event occurred. The Memorial Avenue Corridor cultural landscape has maintained its current position since its construction, spanning the Potomac River and approaching the entrance to Arlington National Cemetery. Its most significant features, including all structures, the Boundary Channel, and main circulation features are all in their original locations. The cultural landscape continues to occupy its historic location and thus maintains integrity of location.

SETTING

Setting is the physical environment of the cultural landscape. The setting of the Memorial Avenue Corridor maintains integrity on account of the intact views and vistas, spatial organization, topography, and natural systems. The formal corridor extends the east-west axis of the L'Enfant and McMillan Plans from the historic center of Washington, D.C.; according to this site plan, the setting spans both sides of the Potomac River and the Boundary Channel. The landscape's relationship to the surrounding features of the monumental core of the capital city has not changed, and directed and designed views—to the Lincoln Memorial, to Arlington National Cemetery and Arlington House, and to other monuments—contribute to the setting. The architectural and landscape features within the corridor complement the monumental core of Washington, D.C.

Urban development in the Rosslyn neighborhood to the north and around the Pentagon to the south slightly diminishes the integrity of setting. Despite

some changes due to development and heavy commuter traffic within the cultural landscape, the character of the Memorial Avenue Corridor is similar to during the historic period, retaining the overall integrity of setting.

DESIGN

Design is the combination of elements that create the form, plan, space, structure, and style of a property. The overall organization of the Memorial Avenue Corridor cultural landscape is the same as during the period of significance, based on the intact spatial relationship of the corridor's key elements, including Arlington Memorial Bridge, Memorial Circle, and Memorial Avenue.

The formal design of the Memorial Avenue Corridor cultural landscape embodies the Beaux-Arts principles of the City Beautiful Movement, as expressed in the corridor plan designed by architect William Kendall in 1923. The corridor design blends with and complements the design aesthetic of Washington, D.C.'s, monumental core, as articulated in the McMillan Plan. Arlington Memorial Bridge, a multi-span, masonry, steel, and stone-arch symmetrical bridge serving vehicular and pedestrian traffic, is a masterpiece of Neoclassical architecture.

Memorial Circle was subject to several landscape designs for the corridor. In 1968, landscape architect Edward D. Stone, Jr. created a planting plan for Memorial Circle. Since its conception, the Stone plan has been implemented in Memorial Circle in phases based on available funding. In the decades since the period of significance, the National Park Service has reinterpreted the Stone planting plan with important changes to the original design, including the addition of species not specified in the original plan.

The last known phase of the Stone planting plan dates to 1979. In 1979, the NPS reassessed Stone's plan, evaluating the survival rate of the plantings and making modifications and suggesting substitutions for ecological and horticultural reasons. Since then, the National Park Service has continued to plant trees around Memorial Circle following modifications of the original Stone planting plan based on evaluations.

Since 1961, memorials have been installed within niches along Memorial Avenue. As the corridor was originally conceived as "an avenue of heroes," these additions to the landscape adhere to and more fully realize the original design plan for the corridor.

Changes made during the period of significance altered the design of the landscape, but were significant in their own right. These alterations included the addition of road networks accessing Memorial Avenue, changes to the white oak borders, and modifications to the road networks on Lady Bird Johnson Park (Columbia Island).

The Memorial Avenue Corridor retains much of its historic design integrity, as the site and its structures reflect the original concept and implementation, integrating the principles of the City Beautiful Movement into a functional and commemorative transportation corridor.

MATERIALS

Materials are the physical elements that were combined or deposited during a distinct period of time in a particular pattern or configuration to form a historic property. While there have been limited changes and losses in materials within the cultural landscape, the materials of the Memorial Avenue Corridor overall retain a high degree of integrity.

Since its initial construction, most materials found within the cultural landscape have been repaired or replaced in-kind. These include curbing, some lampposts, and sections of the stone façade of Arlington Memorial Bridge's concrete arch spans. The limited material substitutions in the landscape include the removal of the original Belgian block paving on Arlington Memorial Bridge, which was replaced in 1951 with smooth asphalt. Some sidewalk paving materials around Memorial Circle postdate the period of significance. Changes to vegetative materials include the removal of segments of the white oak (*Quercus alba*) tree border on Memorial Avenue. Additionally, substitutions to the 1968 Edward Durell Stone, Jr., planting plan for Memorial Circle have been made since the end of the period of significance for ecological and horticultural reasons; new species

have been added that were not identified in the original planting plan.

Recent rehabilitation work on Arlington Memorial Bridge completed between 2018 and 2020 included the replacement of the concrete bridge deck; resurfacing the bridge travel lanes; replacement of the concrete sidewalks and refitting of granite curbs; and other non-structural improvements. These updates and alterations avoided impacts to the significant architectural features and materials of the bridge.

While individual features have been repaired, stabilized, and replaced over the decades, none of this work has changed the overall integrity of the landscape with regards to materials. Overall, the Memorial Avenue Corridor cultural landscape retains integrity of materials.

WORKMANSHIP

Workmanship is the physical evidence of the crafts of a particular culture or people during a given period. The workmanship exhibited in the cultural landscape retains a high degree of integrity. The structures, statues, memorials, and circulation features within the Memorial Avenue Corridor all demonstrate the quality of workmanship within the landscape. Although some materials have changed, most replacements have been made in-kind and continue to reflect the historic workmanship. The corridor, an example of the Beaux-Arts principles of the City Beautiful Movement expressed in the McMillan Plan, exhibits classical forms and treatments that represent their periods of construction.

FEELING

Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. The Memorial Avenue Corridor is the formal, designed extension of the McMillan Plan from the monumental core of Washington, D.C., across the Potomac River into Arlington, Virginia.

The classical forms and treatments found in the cultural landscape—including Arlington Memorial Bridge, the Boundary Channel Bridge, the bridge pylons, vegetation along Memorial Avenue, and *The Arts of War* statues (among other features)—contribute to the feeling of a grand and formal entrance to Arlington National Cemetery and a gateway to the capital city.

In addition to the individual features, the directed views towards Lincoln Memorial, Arlington House, the Capitol dome, and other landmarks also contribute to the integrity of feeling. The continuity in land uses, including commemoration and transportation, and use as a ceremonial space, also contribute to the feeling of the corridor.

An increase in commuter traffic and modern development within the viewshed may slightly impact the feeling of the landscape, but the overall integrity of feeling remains high due to the classical forms and treatments within the nationally significant commemorative cultural landscape.

ASSOCIATION

Association is the direct link between an important historic event or person and a cultural landscape. Through its monumental architecture and memorials devoted to military service and history, the Memorial Avenue Corridor retains integrity of association as a commemorative symbol of national unity.

The cultural landscape was conceived as a physical and symbolic connection between the Lincoln Memorial and Arlington House, to commemorate the reconciliation of the North and the South following the sectional rift of the Civil War. The architectural and sculptural elements of the landscape carry out these associations and contribute to its significance as a memorial to the reunification of the United States.

The cultural landscape also retains association with United States military history. Conceived as an "avenue of heroes," Memorial Avenue retains association with military history through statues dedicated to armed units and actions. Within the study area, the United Spanish War Veterans Memorial (also called "The Hiker") (1965) and the Seabees Memorial (1974) create a direct association with American military history. Additionally, the gilded bronze equestrian sculptures on the east side of Arlington Memorial Bridge, called "Sacrifice"

and “Valor,” and collectively known as *The Arts of War*, symbolize the defensive strength of the nation.

Memorial Avenue itself connects Washington, D.C., to Arlington National Cemetery, the burial ground of many servicemen and women. Though also used as a commuter thoroughfare, the corridor continues to function as a formal route to Arlington National Cemetery and a gateway to the capital city.

Analysis + Evaluation of Landscape Characteristics

Documenting existing conditions and analyzing and evaluating natural and human-made historic resources is critical in the development of a strategy for their management and treatment. This chapter presents an evaluation of the historic significance of the Memorial Avenue Corridor cultural landscape and a comparative analysis of historic and existing landscape conditions. The objective of this analysis is to identify the specific features associated with the period of significance and assess to what degree they continue to convey their historic significance.

Cultural landscape analysis involves two primary activities: evaluating historic significance and assessing historic integrity. Both use criteria determined by the National Register of Historic Places, which has developed nationally recognized methods for evaluating the significance and integrity of historic buildings and landscapes. The evaluation of historic significance identifies the important historic associations of the property, as well as its architectural, archeological, and social values. The property's significance is tied to the period(s) of significance in which its important contributions were made and the broader historic contexts (historic context themes) within which the activities that occurred on the property may be placed.

This section of the CLR inventories the existing conditions of the Memorial Avenue Corridor using a combination of photographs, narrative description, and plan-view graphics. This inventory organizes the site features by landscape characteristics, which are the broad patterns, systems, and feature categories that compose the cultural landscape. Landscape characteristics are the "tangible and intangible aspects of an inventory unit which have either influenced the history of the development of the landscape, or are products of its development" (Page, Gilbert, and Dolan 1998: 139). The NPS identifies 13 landscape characteristics. These landscape characteristics are defined as follows:

- **Natural Systems and Features**: Natural aspects that often influence the development and resultant form of a landscape.
- **Spatial Organization**: Arrangement of elements creating the ground, vertical, and overhead planes that define and create spaces.
- **Land Use**: Organization, form, and shape of the landscape in response to land use.
- **Cultural Traditions**: Practices that influence land use, patterns of division, building forms, and the use of materials.
- **Cluster Arrangement**: The location of buildings and structures in the landscape.
- **Circulation**: Spaces, features, and materials that constitute systems of movement.
- **Topography**: Three-dimensional configuration of the landscape surface, characterized by features and orientation.
- **Vegetation**: Indigenous or introduced trees, shrubs, vines, ground covers, and herbaceous materials.
- **Buildings and Structures**: Three dimensional constructs such as houses, barns, garages, stables, bridges, and memorials.
- **Views and Vistas**: Features that create or allow a range of vision, which can be natural or designed and controlled.
- **Constructed Water Features**: The built features and elements that utilize water for aesthetic or utilitarian functions.
- **Small-Scale Features**: Elements that provide detail and diversity combined with function and aesthetics.
- **Archeological Sites**: Sites containing surface and subsurface remnants related to historic or prehistoric land use.

While most sites contain several of the 13 characteristics, not all are necessarily present in one landscape. In total, the Memorial Avenue Corridor cultural landscape contains 11 of the 13 landscape characteristics. These are: Natural Systems and Features, Land Use, Topography, Spatial Organization, Views/Vistas, Cultural Traditions, Buildings/Structures, Circulation, Constructed Water Features, Vegetation, and Small-scale Features. There are no archeological sites within the cultural landscape boundaries. These characteristics align with those identified in the 2004 CLI for the Memorial Avenue Corridor, with one exception: that CLI does not include an analysis of the cultural traditions associated with the landscape. This report addresses cultural traditions associated with funeral processions and public demonstrations.

The comparative analysis explores the similarities and differences between historic and existing landscape conditions. Through this comparison, the CLR builds an understanding of how much the historic site today reflects its character and appearance during the period of significance (1901-1979). To aid in this assessment, landscape features are categorized based on their contribution to the historic character of the landscape during the period of significance. These categories are:

- Contributing
- Non-contributing
- Non-contributing but compatible
- Undetermined

Resources that retain integrity and are associated with the period of significance of the Memorial Avenue Corridor cultural landscape (1901-1979) are referred to as “contributing” features. Contributing landscape features survive from the period of significance and continue to reflect their historic appearance and function. Resources that originated after the period of significance and do not relate to the site’s significant historic contexts are identified as “non-contributing.” Non-contributing landscape features include those added to the site since the period of significance, or those that no longer retain enough physical integrity to convey their historic appearance or function. Resources that originated after the period of significance but relate to the site’s significant historic contexts are identified as “non-contributing but compatible.” Undetermined features include those whose age cannot be determined or whose contribution to the historic landscape is unknown.

Each section of the comparative analysis concludes with an inventory of resources. This information is summarized in the tables at the end of each landscape characteristic, which lists each of the features described in this chapter. The table conveys the names for inventoried landscape features through time, identifies which features contribute to the significance of the landscape, and lists dates of origin for each feature, if known.

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Number Resource Name
1 Arlington Memorial Bridge
2 Memorial Circle [rotary + turf]
3 Memorial Avenue
4 The Arts of War statues [one pair]
5 Memorial Circle pylons [two pairs]
6 Lady Bird Johnson memorial plaque
7 Boundary Channel Bridge
8 Boundary Channel pylons [one pair]
9 Spanish War Veterans Memorial ("The Hiker")
10 Seabees Memorial
11 WMATA elevators / escalators
12 State Bridge #5020
13 Arlington National Cemetery (ANC) Welcome Center
14 ANC Administration Building
15 ANC Parking Deck
16 Women in Military Service for America Memorial (located at the Hemicycle)
THEODORE ROOSEVELT BRIDGE (I-66)
MOUNT VERNON TRAIL
S ARLINGTON BLVD
WASHINGTON BLVD
WMATA (METRO BLUE LINE)
VA-110 / RICHMOND HIGHWAY
HEMICYCLE
BOUNDARY CHANNEL
S WASHINGTON BLVD
LADY BIRD JOHN
(COLUMBIA I
ARLINGTON NATIONAL CEMETERY
VA-110 / RICHMOND HIGHWAY
0 500 1,000 2,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Glossary of Key Features

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Building / Structure
- Memorial (Structure)
- Circulation - Road
- Circulation - Sidewalk
- Vegetation

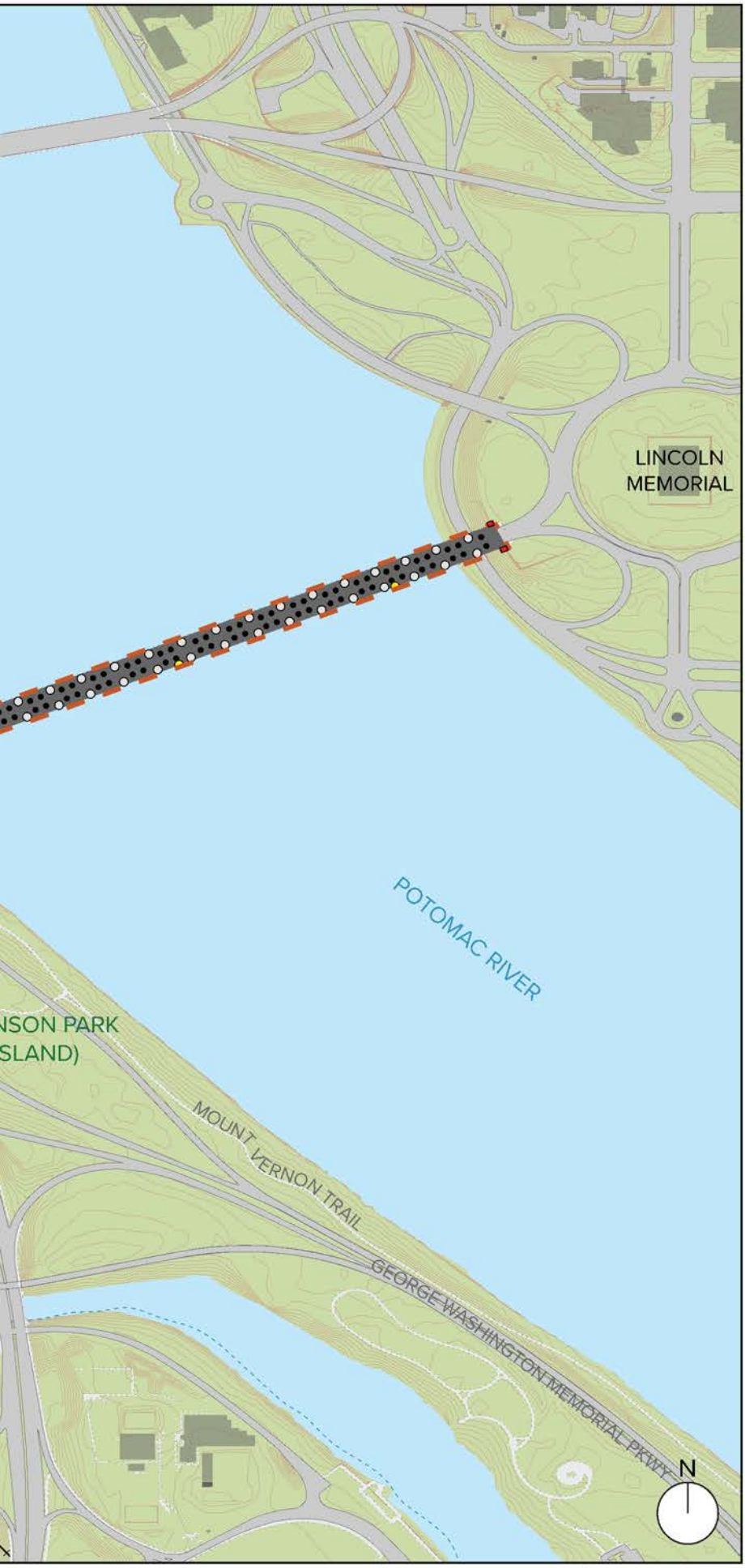
NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #8


THEODORE ROOSEVELT BRIDGE (I-66)
GEORGE WASHINGTON MEMORIAL PKWY
WMATA (METRO BLUE LINE)
VA-110 / RICHMOND HIGHWAY
S ARLINGTON BLVD
MOUNT VERNON TRAIL
WASHINGTON BLVD
D.C.
Virginia
BELGIAN BLOCK CENTERLINE
[METRO PLATFORMS BELOW GRADE]
BOUNDARY CHANNEL
S WASHINGTON BLVD
LADY BIRD JOHN
(COLUMBIA I
ARLINGTON NATIONAL CEMETERY
VA-110 / RICHMOND HIGHWAY
0
500
1,000
2,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Existing Conditions (Overall)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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LEGEND

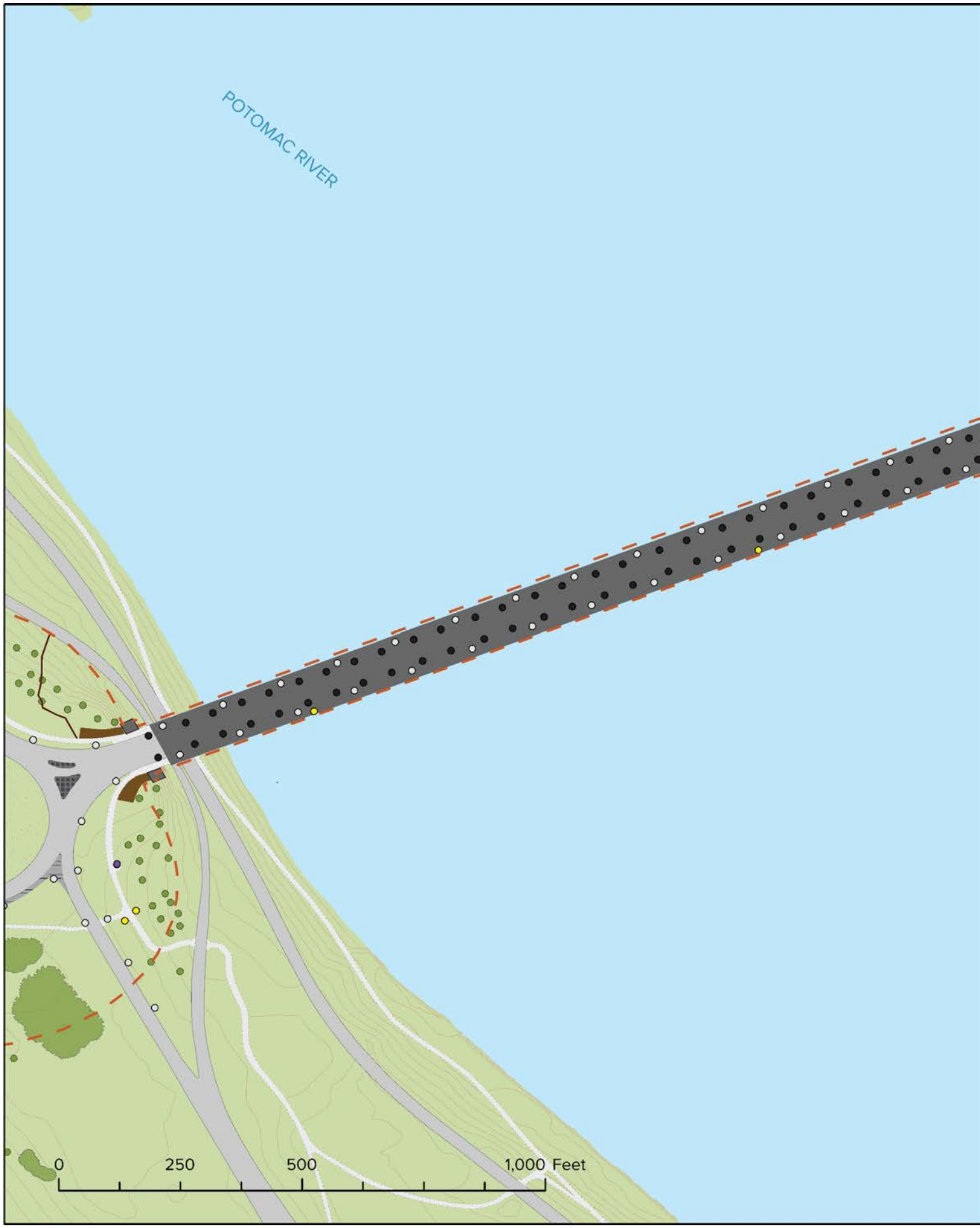
- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Building / Structure
- *Arts of War* Sculpture (Structure)
- Memorial (Structure)
- Pylon (Structure)
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail
- Vegetation - Trees / Shrubs *(refer to detail maps)*
- Vegetation - Turf
- Vegetation - Holly Hedge
- Vegetation - Planting Bed
- Lady Bird Johnson Memorial Plaque
- Lamppost
- Lamppost Missing
- Inlet Grate (Historic)
- Inlet Grate (Non-Historic)
- Granite Header Block
- Signage
- Fire Hydrant

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #9


POTOMAC RIVER
0
250
500
1,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Existing Conditions (East)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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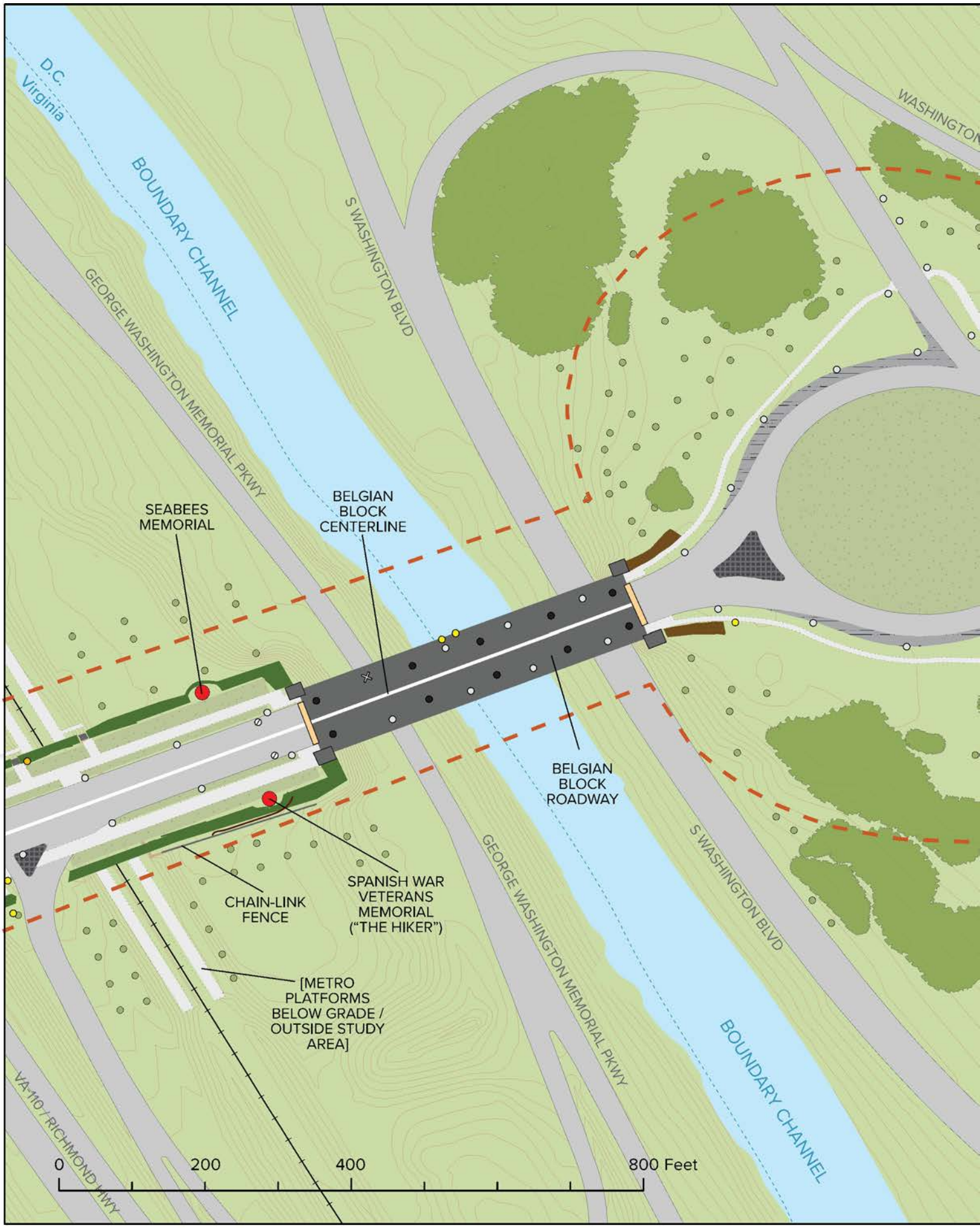
- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Building / Structure
- *Arts of War* Statues (Structure)
- Pylon (Structure)
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail
- Circulation - Belgian Block Shoulder Lane
- Circulation - Belgian Block Traffic Island
- Vegetation - Trees / Shrubs
- Vegetation - Turf
- Vegetation - Planting Bed
- Lady Bird Johnson Memorial Plaque
- Lamppost
- Inlet Grate (Historic)
- Signage

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #10


D.C.
Virginia
BOUNDARY CHANNEL
S WASHINGTON BLVD
WASHINGTON
GEORGE WASHINGTON MEMORIAL PKWY
SEABEES MEMORIAL
BELGIAN BLOCK CENTERLINE
BELGIAN BLOCK ROADWAY
CHAIN-LINK FENCE
SPANISH WAR VETERANS MEMORIAL ("THE HIKER")
[METRO PLATFORMS BELOW GRADE / OUTSIDE STUDY AREA]
VA-110 / RICHMOND HWY
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Existing Conditions (Circle Area)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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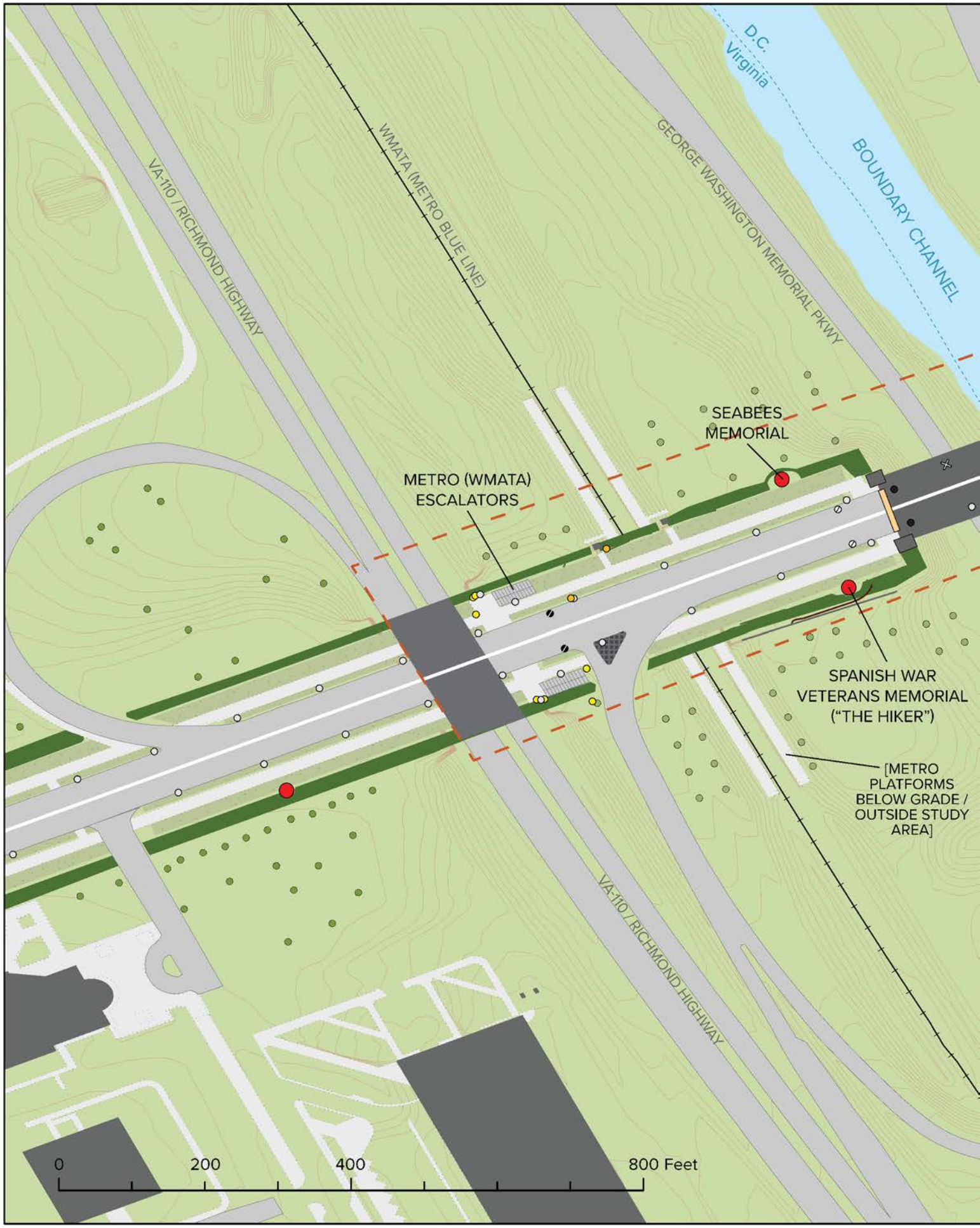
- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Building / Structure
- Memorial (Structure)
- Pylon (Structure)
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Belgian Block Shoulder Lane
- Circulation - Belgian Block Traffic Island
- Circulation - Social Trail
- Vegetation - Trees / Shrubs
- Vegetation - Turf
- Vegetation - Planting Bed
- Granite Header Block
- Lady Bird Johnson Memorial Plaque
- Lamppost
- Missing Lamppost
- Inlet Grate (Historic)
- Inlet Grate (Non-Historic)
- Signage
- Fire Hydrant

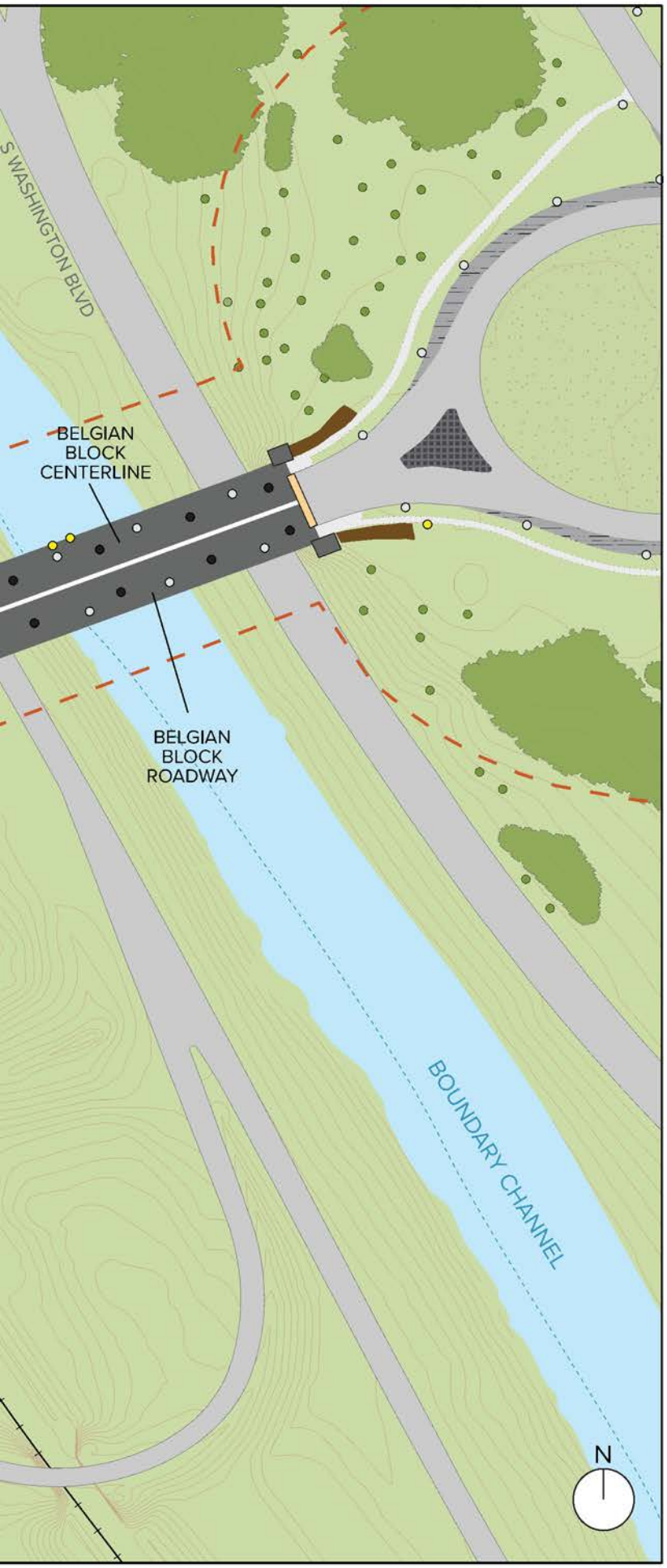
NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #11


D.C.
Virginia
BOUNDARY CHANNEL
WMATA (METRO BLUE LINE)
VA-110 / RICHMOND HIGHWAY
GEORGE WASHINGTON MEMORIAL PKWY
SEABEES MEMORIAL
METRO (WMATA) ESCALATORS
SPANISH WAR VETERANS MEMORIAL ("THE HIKER")
[METRO PLATFORMS BELOW GRADE / OUTSIDE STUDY AREA]
VA-110 / RICHMOND HIGHWAY
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Existing Conditions (West)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Metro (WMATA) Line
- Water
- Building / Structure
- Memorial (Structure)
- Pylon (Structure)
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail
- Circulation - Belgian Block Shoulder Lane
- Circulation - Belgian Block Traffic Island
- Circulation - Belgian Block Centerline
- Vegetation - Trees / Shrubs
- Vegetation - Turf
- Vegetation - Planting Bed
- Granite Header Block
- Lamppost
- Missing Lamppost
- Inlet Grate (Historic)
- Inlet Grate (Non-Historic)
- Signage
- Fire Hydrant

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #12

Natural Systems and Features

Natural systems and features are the natural aspects that have influenced the development and physical form of a landscape. Within the Memorial Avenue Corridor, the geomorphology related to the meeting of the Coastal Plain and Piedmont geological provinces, soil types, the humid subtropical climate, and the Potomac River watershed all influenced the design and development of the cultural landscape.

HISTORIC AND EXISTING CONDITIONS

GEOMORPHOLOGY

The contiguous United States are divided into physiographic provinces according to their geomorphology, which refers to the physical features and processes of landforms, and their relation to geologic structures. Washington, D.C., sits on the Fall Line (or Fall Zone) of the Potomac River, which constitutes the boundary of two major geological provinces: the Piedmont and the Coastal Plain. The northwestern side of Washington, D.C., is part of the Piedmont province, while the southeastern side (not associated with the city's quadrants) of the city is part of the Coastal Plain province. The location of the Memorial Avenue Corridor is at the western edge of the Atlantic Coastal Plain physiographic province near the Fall Line, which divides the Coastal Plain from the Piedmont to the west.

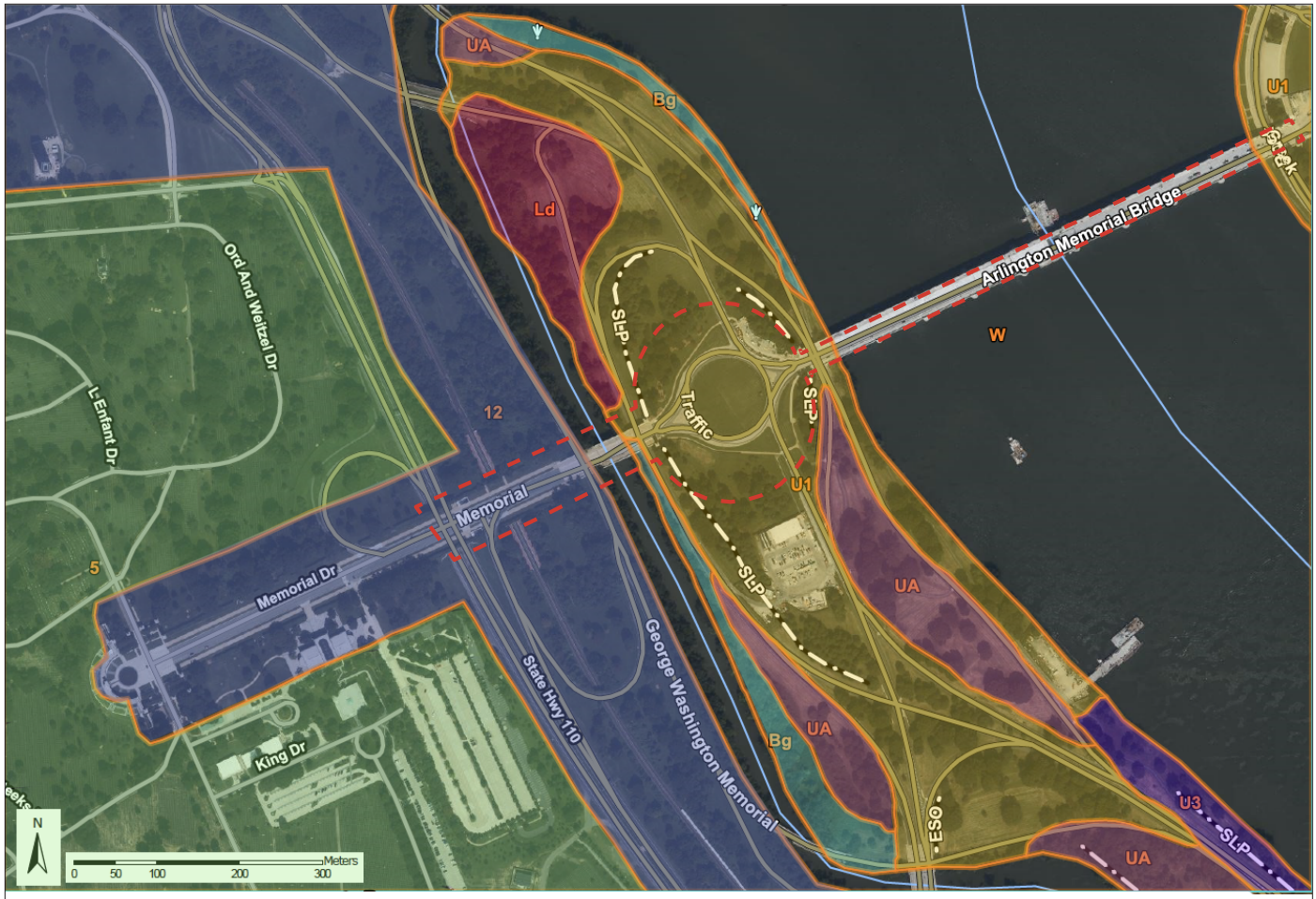
The Atlantic Coastal Plain extends from the state of New York to Mexico and consists of primarily flat terrain, ranging from sea level at the coastline to approximately 300 feet in elevation in Maryland. The province extends east from the Fall Line to the Atlantic Ocean and continues for 75 miles to the east as the submerged continental shelf.

The Coastal Plain consists of younger, largely unlithified deposits of gravel, sand, mud, and shells that have been and continue to be eroded by the Potomac and other rivers. Deposition occurred intermittently during periods of higher sea level over the past 100 million years, which resulted in a wedge-shaped sequence of soft sediment deposits more than 7,900 feet thick at the Atlantic Coast. This wedge of sedimentary rocks and deposits continues to this day and forms the province. The sedimentary deposits include cobbles, gravel, sand, silt, and clay that grow thicker further inland. The deposits have been impacted by fluctuating sea levels and the continual erosion from waves along the coastline. Sediments have been eroded and redeposited over vast periods of time, becoming smooth and rounded. In Washington, D.C., the thin inland edge of the Coastal Plain province overlaps the Piedmont bedrock.

The Piedmont Plateau province lies to the west of the Coastal Plain, encompassing the area west of the Fall Line to the Blue Ridge Mountains. Here, the sedimentary rock of the Atlantic Coastal Plain intersects with the harder, more durable metamorphic rocks to the west, forming an area of ridges, waterfalls, and rapids (Withington and Coulter 1964).

The Piedmont Plateau comprises considerably older and relatively erosion-resistant high-grade metamorphic rocks and igneous intrusions, including schists, phyllites, slates, gneisses, and gabbros, from the Ordovician through Devonian Age. At that time, the area was covered by a tall, ancient mountain range. Erosion gradually reformed the masses of rock into low rounded mountains. The eastward-sloping Piedmont formed through a combination of folding, faulting, metamorphism, uplift, and erosion. The result is a landscape of gently rolling hills in the east, starting at 200 feet in elevation and gradually becoming steeper toward the western edge of the province, where they reach 1,000 feet in elevation.

The Piedmont rocks in and near Washington, D.C., are crystalline metamorphic rocks that are quite



Existing Conditions - Soils

- 12: Urban land - Udorthents complex, 2 to 15% slopes
- 5: Arlington National Cemetery
- U1: Udorthents
- Bg: Bibb sandy loam
- UA: Udifluvents, sandy
- Ld: Lindside loam
- U3: Udorthents, sandy
- Cultural Landscape Boundary

Figure 61: Soil map of the Memorial Avenue Corridor and surrounding landscape. Note: The "SLP" annotation in the graphic refers to "Short steep slope," typically greater than 15 to 25 percent in a map unit less than 15 percent (Source: USDA Web Soil Survey).



Figure 62: Aerial of Arlington Memorial Bridge (in lower center of photograph), spanning the Potomac River between Arlington, Virginia (on the left bank) and Washington, D.C. (on the right bank), 1930 (Source: National Archives, Identifier: 68152178).

hard and resist weathering. These crystalline rocks can be seen most easily in valleys where the soil cover has been stripped away by erosion. Most of the crystalline rocks on the uplands were deposited about 550-600 million years ago; over the ages, they have weathered to saprolite, a porous, spongy, red-brown clay-rich material, as much as 200 feet thick. The final product of weathering, seen near the surface throughout much of the Piedmont, is a sticky clay, generally having a reddish color.

SOILS

The Memorial Avenue Corridor cultural landscape includes different soil types described and identified by the National Cooperative Soil Survey. The soils within the study area are primarily classified as Urban land-Udorthents and U1: Udorthents by the USDA Web Soil Survey.

Within Arlington, Virginia, along Memorial Avenue, the soils are Urban land – Udorthents complex, 2 to 15 percent slopes. Within Lady Bird Johnson Park (Columbia Island), the soils are primarily Udorthents (Memorial Circle and surroundings), with the shoreline including Bibb sandy loam, Lindside loam, and Udifluvents, sandy (*see Figure 61*). Please note, Washington, D.C., and Virginia use different soil classification labels. The central portion of the cultural landscape within Lady Bird Johnson Park (Columbia Island) is constructed atop a manmade landform composed of materials dredged from the Potomac River. Thus the soils on Lady Bird Johnson Park are entirely composed of several types of fill with no uniformity. Horticulturist Charles A. Lewis determined that the island's soil was "stratified in layers of sand, clay, gravel and soil – the soil layer being extremely shallow" (Lewis to Nash Castro, letter, July 21, 1967, Beautification files, Cultural Landscapes Program files, NCR, quoted in Earley and Fanning 2005: 70). Since soils were not naturally formed and lack uniformity, the environment they create for vegetation is variable. As a result, some vegetation, such as daffodils, have struggled due to the quality of soil.

The Geologic Map of George Washington Memorial Parkway (northern section) includes the Memorial Avenue Corridor cultural landscape. The map depicts the surficial geologic units of Lady Bird Johnson Park (Columbia Island) as "terrace deposits," with a narrow stretch of "disturbed ground and artificial fill" along the Arlington, Virginia, shoreline, with "low-level fluvial and estuarine deposits" along Memorial Avenue.



Figure 63: Aerial view of the Potomac River between Washington, D.C. (on the left), and Arlington, Virginia (on the right), with Arlington Memorial Bridge the middle of the three visible bridges, 1991 (Source: National Archives, Identifier: 6471514).

HUMID SUBTROPICAL CLIMATE ZONE

Washington, D.C., is located in the humid subtropical climate zone, according to the Koppen climate classification system. Annual precipitation in Washington, D.C., averages approximately 43.7 inches per year, with almost half of the rain coming in the summer months. Climate change "refers to long-term changes in global temperature, precipitation, wind patterns, and other aspects of climate" (Washington, D.C., Department of Energy and Environment 2021). According to the D.C. Department of Energy and Environment, in recent years, Washington, D.C., has experienced extreme weather, including heat waves and snowstorms, higher tides caused by rising sea level, heavy rains and flooding, warmer average temperatures, and two to three times as many dangerously hot days. Climate change impacts people, property, and cultural and natural resources.

Climate scientists project that these changes will continue and anticipate more frequent and more intense impacts, including rising temperatures, heatwaves, and dangerously hot days; more intense and unpredictable storms; and sea level rise and storm surges (D.C. Department of Energy and Environment 2021).

HYDROLOGY

Although it is located immediately outside the study area boundary and is not managed by the NPS, the Potomac River is an important hydrological system of the Memorial Avenue Corridor (*see Figures 62 and 63*). Arlington Memorial Bridge (within the cultural landscape) spans the Potomac River, which is the boundary between Washington, D.C., and Virginia. The Potomac River is 405 miles long, flowing from the Potomac Highlands into the Chesapeake Bay. The Potomac watershed includes portions of Maryland, Pennsylvania, Virginia, West Virginia, and Washington, D.C. The Potomac River feeds the Boundary Channel, which is managed by the NPS. A portion of the Boundary Channel, a constructed water feature, is located within the project boundaries (please see Constructed Water Features section for discussion of the Boundary Channel).

Flood risk maps produced by the Federal Emergency Management Agency (FEMA) of the cultural landscape and surrounding lands depict portions of the cultural landscape classified as Zone AE, considered a Special Flood Hazard Area (SFHA) and at high risk for flooding. SFHAs are defined as an area that will be inundated by a flood event

having a 1-percent chance of being equaled or exceeded in any given year, which is also referred to as a 100-year flood or a base flood.

At the east side of Arlington Memorial Bridge, the flood risk along the shoreline of the Potomac River is classified as high risk (*see Figure 64*). Designated as Zone AE, an SFHA, this high risk flood area is signified by blue shading. There are also portions of land outside of the cultural landscape boundary on the east side of the bridge that are considered moderate flood risk. These areas, shaded orange, are between the limits of the 100-year flood and the 0.2-percent-annual-chance, or a 500-year flood event.

The shorelines of Lady Bird Johnson Park are also within the Zone AE SFHA (*see Figure 65*). There are also portions of the island slightly further inland that are considered at moderate risk for flooding. Memorial Circle itself is at low risk for flooding. The west side of the Boundary Channel, the shoreline of Arlington, Virginia, also falls within Zone AE, followed by a portion of land at moderate risk for flooding.

The west end of the cultural landscape along Memorial Avenue has minimal flood hazard (*see Figure 66*). Clear/unshaded areas of the map are considered at low risk for flooding, which are higher than the elevation of the 0.2-percent-annual-chance flood.

The hydrology impacted the shoreline vegetation along Lady Bird Johnson Park (Columbia Island). Volunteer vegetation that sprouted after the island was constructed included sycamores (*Platanus occidentalis*), red maples (*Acer rubrum*), silver maples (*Acer saccharinum*), and box elders (*Acer negundo*), elms (*Ulmus* sp.), cottonwoods (*Populus deltoides*), and willow trees (*Salix* spp.), (Earley and Fanning 2005: 34).

EVALUATION

While the National Park Service does not manage the soils, hydrology, geomorphology, or regional climate, these natural systems and features influenced the physical development of the Memorial Avenue cultural landscape. The natural systems and features are character-defining features of the landscape.

Figure 64: (Opposite) FEMA National Flood Hazard Layer FIRMette of the eastern portion of Arlington Memorial Bridge with special flood hazard area depicted in blue (Source: FEMA Flood Map Service Center).

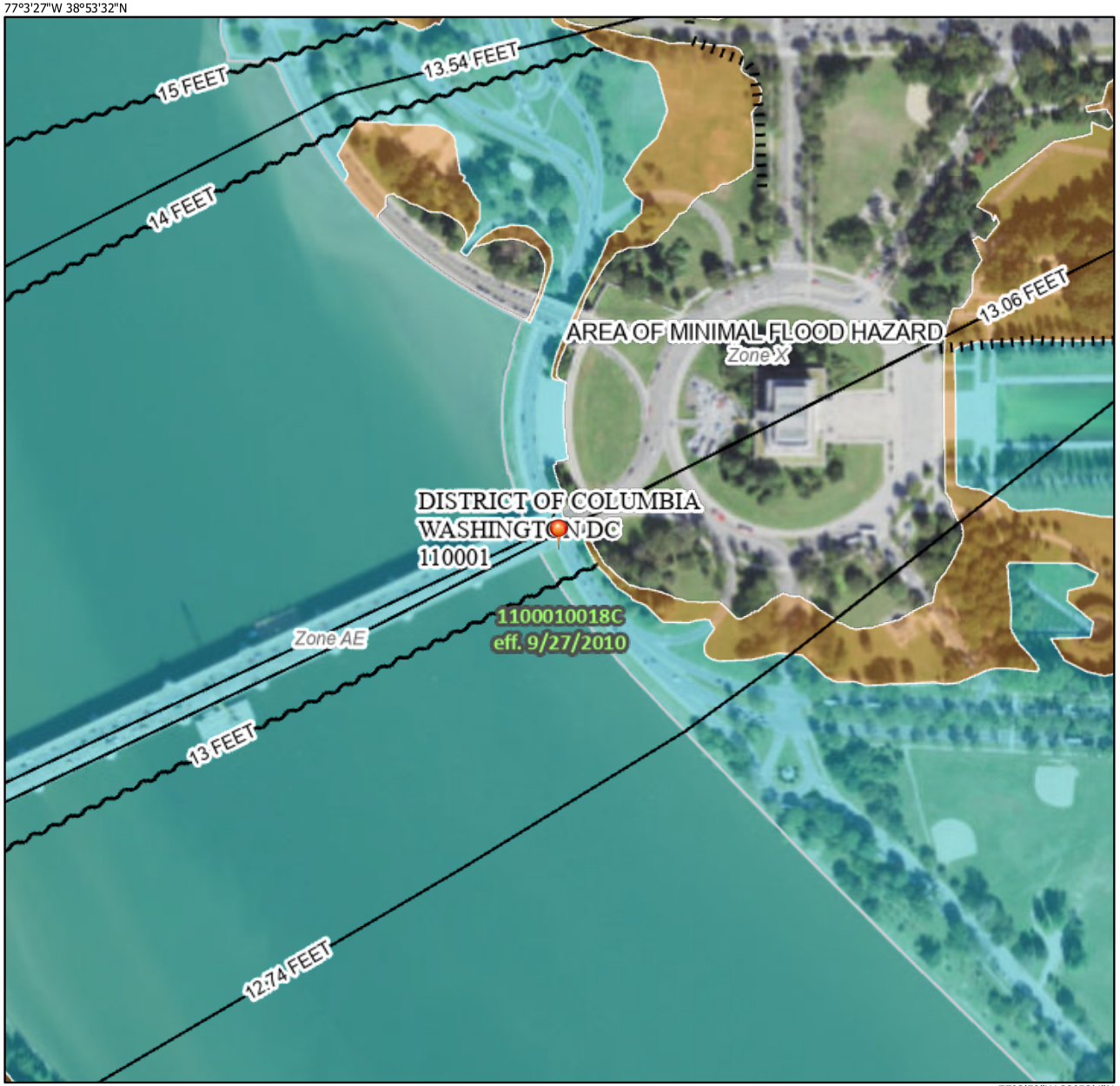
Figure 65: (Page 166) FEMA National Flood Hazard Layer FIRMette of Lady Bird Johnson Park with special flood hazard area depicted in blue (Source: FEMA Flood Map Service Center).

Figure 66: (Page 167) FEMA National Flood Hazard Layer FIRMette of Memorial Avenue (Source: FEMA Flood Map Service Center).

National Flood Hazard Layer FIRMette

FEMA

77°3'27"W 38°53'32"N



77°2'50"W 38°53'4"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

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National Flood Hazard Layer FIRMette

FEMA



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

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National Flood Hazard Layer FIRMette

FEMA

77°4'23"W 38°53'12"N



77°3'46"W 38°52'44"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

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NATURAL SYSTEMS + FEATURES - CHARACTER-DEFINING FEATURES

Feature Description	Date Established	Contributing Status
Geomorphology	N/A	N/A
Soils	N/A	N/A
Regional climate	N/A	N/A
Hydrology	N/A	N/A

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Land Use

Early habitation and land use within the greater Washington, D.C. area included occupation and subsistence by groups during the Paleo-Indian, Archaic, and Woodland periods. As human habitation of the region evolved into semi-permanent settlements during the Archaic period, groups camped along the Potomac and Anacostia Rivers (as they are known today), using the land for hunting, fishing, and gathering plants. During the Woodland Period, from 1200 BCE to 1600 CE, groups including the Nacotchtank people cultivated the land. In the late 14th and early 15th centuries, Algonquian speaking people settled in the greater Potomac River Valley area and continued farming and fishing the waters of the Potomac and the Anacostia Rivers.

In the decades after English colonizer Captain John Smith explored the region in 1608, English colonizers claimed the lands that Smith explored. As tracts of land were granted to colonizers, including part of the area that would become the Memorial Avenue Corridor, the land was used to farm. By the mid-17th century, plantations worked by enslaved laborers developed across the Potomac region as tobacco became an important cash crop.

In 1802, George Washington Parke (GWP) Custis inherited his father's properties that would become part of the Arlington House plantation (Moss 2009: 30). Within the working plantation, Custis' enslaved laborers established a large market garden on the plantation that provided fruits and vegetables to nearby urban centers (Moss 2009: 30; Hanna 2001: 29). When GWP Custis died in October 1857, his daughter, Mary Custis Lee (wife of Robert E. Lee, future Confederate general in the Civil War), inherited and moved into the Arlington House plantation.

When the Lees fled the Arlington House plantation in 1861 at the onset of the Civil War, the United States Army crossed the Potomac River and encamped around the Lee family's former home, converting it from a plantation into a military stronghold. The Arlington House plantation was used during the four-and-a-half-year period of the Civil War to house and train Union soldiers (Moss 2009: 34).

In 1863, the Department of the Army established a Freedman's Village, with the central street and main area located on the southeastern portion of Arlington House plantation, west of the Alexandria-Georgetown Turnpike. Within the larger complex of approximately 50 farms that were farmed by freedpersons, the axis of the future Memorial Avenue Corridor crossed three of these farmsteads (Earley 2004: 44).

The following year, William Henry Christman and William H. McKinney were the first military servicemen to be buried at Arlington National Cemetery, one month before the cemetery was officially founded on the former Lee plantation. This established the cemetery land use just outside of the cultural landscape study area. Funeral processions likely passed through the cultural landscape.

Beginning in 1900, an experimental farm managed by the United States Department of Agriculture (USDA) was located on the former Arlington House plantation, including a small portion within the Memorial Avenue Corridor. This period of USDA use revived the agricultural functions of the landscape that were originally established by Indigenous groups during the Woodland Period. The Arlington Experimental Farm produced new crops and managed demonstration lawns until 1940.

These early land uses, including subsistence, agricultural production, military use, and the experimental farm took place on the western extent of the study area. Throughout the pre-colonial and colonial periods, the eastern extent of the Arlington Memorial Corridor, including Columbia Island and the eastern end of Arlington Memorial Bridge, was not useable land. Rather, those areas were part of the Potomac River until the late 19th century, when

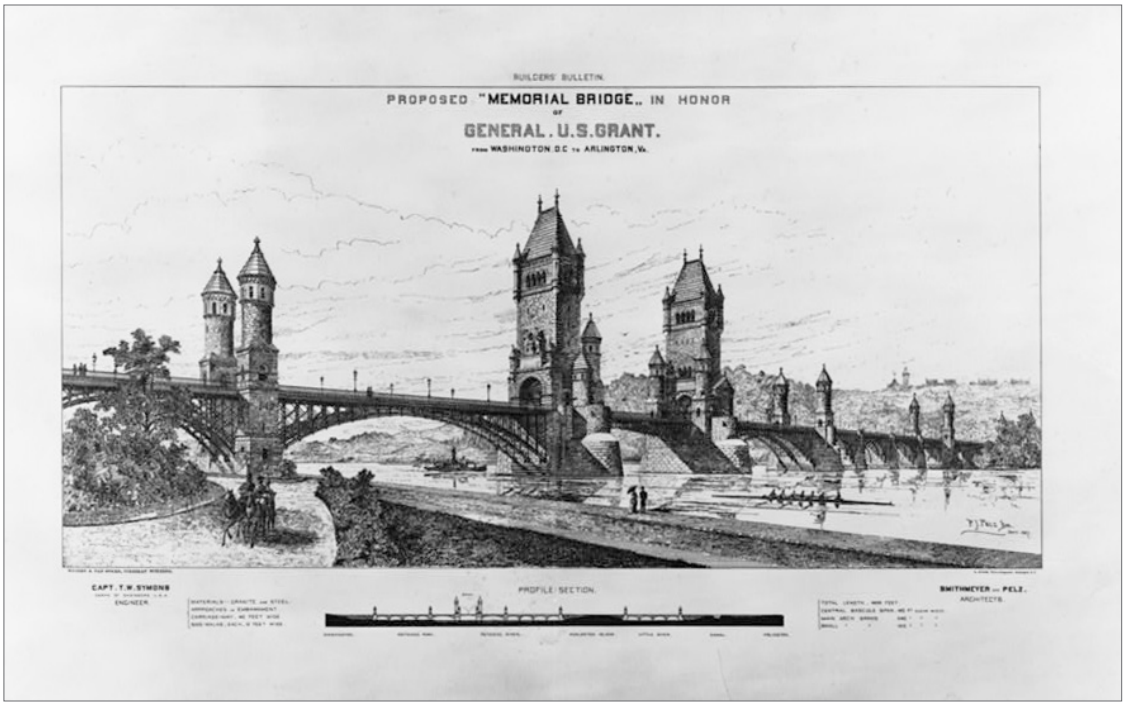


Figure 67: One of several designs created for the "memorial bridge" across the Potomac River, by Thomas W. Symons, Paul J. Pelz, and John Smithmeyer, 1886-1887 (Source: Library of Congress, Call number: ADE - UNIT 2815, no. 1 [B size] [P&P]).

the land in these areas began to be reclaimed and reconfigured. There are thus no land uses for the eastern extent of the cultural landscape until the development of Arlington Memorial Bridge and its surroundings.

In May of 1886, Congress passed a resolution supporting the construction of a bridge connecting the monumental core of Washington, D.C., with Arlington, Virginia, on the west side of the Potomac River. As part of the McMillan Plan's recommendations for the city of Washington, D.C., the bridge and surrounding environs were envisioned as a commemorative space and as a transportation corridor. Recreational opportunities were also incorporated into the landscape when bridle trails were completed in the early 1930s.

The early land uses of subsistence farming, agricultural production, and military use are no longer present within the landscape. The cemetery use at Arlington National Cemetery remains extant, but is outside of the boundaries of the cultural landscape. The study area's primary extant land uses—commemoration, transportation, and recreation—have remained intact since the period of significance.

COMMEMORATION

Historic Conditions

The Memorial Avenue Corridor is a commemorative landscape that venerates the reunification of the North and South – the United States and the Confederacy – following the Civil War, through landscape features that include monumental architecture and memorials. The study area was constructed as a commemorative symbol of national unity, physically connecting the Lincoln Memorial with Arlington House, The Robert E. Lee Memorial – two major Civil War-era symbols at either end (and just outside) the cultural landscape.

The concept of a bridge in the area of today's Arlington Memorial Bridge was introduced as early as the 1850s; the first design specifically for a memorial bridge was drafted in 1886 (*see Figure 67*). Initially conceived as a memorial to General/President Ulysses S. Grant, the bridge idea stalled until it was reframed in 1899 as "a Memorial to American patriotism, 'commemorating the reunification of the North and South following the Civil War'" (Kohler and Scott, eds. 2006). That same year, the National Memorial Bridge Association was formed. After the assassination of President McKinley in 1901, the subject of the memorial bridge fully shifted from a commemoration of the



Figure 68: The Seabees Memorial along the north side of Memorial Avenue (Urban Heritage Project 2022).



Figure 70: Vehicles and pedestrians cross Arlington Memorial Bridge to Lady Bird Johnson Park, undated (Source: National Park Service, George Washington Memorial Parkway website).

preservation of the United States to one dedicated to reconciliation between the North and the South. This was part of a larger trend toward reconciliation as race relations reached a nadir.

The Commission of Fine Arts determined that "the proposed Arlington Memorial Bridge would be a 'memorial to those who have died in the military service of the country'" (Arlington Memorial Bridge Commission Report 1932: 32). Further, the corridor of Memorial Avenue was conceived as an "avenue of heroes," functioning as a ceremonial and commemorative entrance to Arlington National Cemetery with memorials to United States military actions and history. Of the seven memorials placed along Memorial Avenue, two are located within the study area. The two memorials within the boundaries of the CLR are: the United Spanish War Veterans Memorial (also called "The Hiker") (1965), and the Seabees Memorial (1974).

Additionally, the renaming of Columbia Island to Lady Bird Johnson Park in 1968 commemorated First Lady Claudia "Lady Bird" Johnson's Beautification Program efforts in Washington, D.C. The Beautification Program was an urban design initiative, spearheaded by the First Lady, that sought to improve the overall health of society through design interventions in the landscape, including planting flowers, shrubs, and trees, and installing recreational equipment and other amenities. Memorial Circle and the greater Lady Bird Johnson Park (Columbia Island) landscape in particular served as model sites for landscape improvements. On November 12, 1968, Interior Secretary Udall announced the name change at a ceremony held at the Department of the Interior; that ceremony also marked the official end of the First Lady's Beautification Program (Earley and Fanning 2005: 52). A plaque was installed that same year on the southeast side of Memorial Circle in honor of the beautification efforts at the site. The renaming bolstered the commemorative use introduced to the cultural landscape at the beginning of the period of significance.

Existing Conditions

Today, the Memorial Avenue Corridor continues to connect the Lincoln Memorial in Washington, D.C.,



Figure 69: The Mount Vernon Trail where it intersects with the sidewalks around Memorial Circle, preserving the recreational land use within the cultural landscape (Urban Heritage Project 2022).

to the entrance of Arlington National Cemetery and Arlington House, The Robert E. Lee Memorial. As such, the commemorative landscape remains intact.

Memorial Avenue continues to function as an "avenue of heroes," creating the formal entrance to Arlington National Cemetery, considered the nation's most hallowed ground. Monuments remain in place along the corridor, commemorating country's military actions and history; two of the seven extant memorials are located within the study area: the United Spanish War Veterans Memorial (also called "The Hiker") (1965), and the Seabees Memorial (1974) (*see Figure 68*).

The commemorative association with First Lady, Lady Bird Johnson also remains intact. The renaming of Columbia Island to Lady Bird Johnson Park in 1968 retains the connection to the First Lady's Beautification Project efforts within the landscape. Additionally, the commemorative plaque added in 1968 remains on the southeast side of Memorial Circle honoring the First Lady's beautification efforts.

Commemoration remains intact as a contributing land use within the Memorial Avenue Corridor.

TRANSPORTATION

Historic Conditions

The Memorial Avenue Corridor was conceived as a ceremonial transportation route, opening to the public in 1932. Upon construction, the corridor connected Washington, D.C., and Arlington, Virginia, carrying vehicular and pedestrian traffic across the Potomac River, to and from Arlington National Cemetery. Memorial Circle connected the corridor to several other roadways, extending the transportation use.

Existing Conditions

As during the period of significance, the Memorial Avenue Corridor continues to serve as a major commuter artery between Arlington, Virginia, and Washington, D.C., passing through Lady Bird Johnson Park (Columbia Island) and around Memorial Circle (*see Figure 69*). The cultural landscape's transportation use also continues to provide access to Arlington National Cemetery. Transportation is a contributing land use within the study area.

RECREATION

Historic Conditions

The landscape had several historic recreational land uses. The Boundary Channel was established with the creation of Columbia Island (later, Lady Bird Johnson Park) between 1915 and 1927. In addition to its practical purposes (draining the adjacent slopes), the Boundary Channel was also created as a destination for recreational boating and picnicking.

The construction of the Mount Vernon Memorial Highway produced additional recreational uses. A 1931 plan featured bridle trails to the east and west sides of the Memorial Highway. Ultimately, the CCC constructed the bridle path on the east side of the road, running north from Mount Vernon to Arlington Memorial Bridge.

In 1945, the bridle path on the east side of the road was extended north of Memorial Circle and Arlington Memorial Bridge on the Virginia shore, connecting with George Washington Memorial Parkway around Key Bridge.

In the early 1970s, the National Park Service constructed a multi-use recreational trail between Mount Vernon and Arlington Memorial Bridge. Known as the Mount Vernon Trail, the 18-mile route followed the alignment of the historic bridle path within Lady Bird Johnson Park (Columbia Island), located between the George Washington Memorial Parkway and the Potomac River shoreline (*see Figure 70*). The portion of the trail between Arlington Memorial Bridge and Alexandria was paved in 1979.

Existing Conditions

The Mount Vernon Trail remains extant. On the southeast side of Memorial Circle, the sidewalk connects with an access path to the trail. This recreational use maintains integrity and is a contributing feature within the Memorial Avenue Corridor.

EVALUATION

The cultural landscape has been used for commemoration, transportation, and recreation since the period of significance; those land uses remain intact and are contributing features. The Memorial Avenue Corridor retains integrity with respect to land use.

LAND USE - CHARACTER-DEFINING FEATURES

Feature Description	*Date Established*	*Contributing Status*
Commemoration	1932	Contributing
Transportation	1932	Contributing
Recreation	c. 1930s; c. 1972	Contributing

Topography

Along the Memorial Avenue Corridor, the topography was engineered for the planned roadways; some of the land within the cultural landscape is human-made. Overall, the cultural landscape corridor has a fairly uniform elevation along its length, rising gently toward the west. The high point within the landscape is around Memorial Circle, at 35 feet in elevation; the bridgeheads of Arlington Memorial Bridge and the Boundary Channel Bridge have an elevation of about 30 feet.

MULTIPLE GRADES TRANSECTING THE PRIMARY CORRIDOR

Historic Conditions

During the period of significance, the land surrounding the study area included multiple grades. While the study area itself was primarily constructed at one grade along the linear axis of Memorial Avenue—an axis that included the Boundary Channel Bridge, Memorial Circle, and Arlington Memorial Bridge—the surrounding contextual landscape included features (typically, circulation elements) that traveled below and intersected with the Memorial Avenue Corridor at a lower grade. Sloping roads and paths mediated these different grades, connecting the Memorial Avenue axis with its surrounding topography.

On the western edge of the Memorial Avenue Corridor study area, VA Highway 110, originally referred to as the "Heavy Duty Road," was constructed in the early 1940s at a lower grade below Memorial Avenue. Exit ramps from VA Highway 110 and later the George Washington Memorial Parkway merged outside the study area boundary at a lower grade and sloped upwards to meet Memorial Avenue (originally, the exit ramp only served VA Highway 110). Just east of the VA Highway 110 underpass, Memorial Avenue traveled over a Washington Metropolitan Area Transit Authority (WMATA/Metro) line, constructed in 1977; that line travels roughly north-south at a lower grade, approximately following the alignment of the former railroad.

The George Washington Memorial Parkway was constructed in stages between 1930 and 1970. The southbound George Washington Memorial Parkway traveled beneath the Boundary Channel Bridge bridgeheads, in Arlington, Virginia.

Around Memorial Circle, a system of roadways was developed in the early 1940s in tandem with the construction of the Pentagon complex located south of the study area. On the west side of Columbia Island (later, Lady Bird Johnson Park), southbound S Washington Boulevard traveled beneath the east bridgeheads of the Boundary Channel Bridge. On the east side of Columbia Island, northbound Washington Boulevard, northbound George Washington Memorial Parkway, and the Mount Vernon Trail traveled beneath the west side of the Arlington Memorial Bridge bridgeheads. Thus, a short distance outside of the cultural landscape boundaries, several roadways crossed beneath the unified grade of the study area axis. These roadways were part of the larger network of circulation features that linked the topographies of the cultural landscape and its surrounding context.

Existing Conditions

While the features within the study area proceed along a relatively flat and uninterrupted grade, the features around the Memorial Avenue Corridor extend across several planes. The Potomac River and Boundary Channel are located at lower grades within the study area (traveling beneath the bridges). Several circulation features are also located at lower grades, passing below Memorial Avenue and bridge pylons of Arlington Memorial Bridge and the Boundary Channel Bridge.

As during the period of significance, the Memorial Avenue roadway includes several overpasses that allow VA Highway 110, the George Washington

Memorial Parkway, and the Metro line to transect the corridor at a lower grade (*see Figures 71 and 72*). Today, just east of the VA Highway 110 underpass location, Memorial Avenue travels over the Metro railway, which travels roughly north-south at a lower grade. These cuts below grade for the VA Highway 110 and the Metro alignment underpasses are significant features of the landscape's topography that date to the period of significance.

Additionally, sections of the road system on Lady Bird Johnson Park (Columbia Island) travel beneath the study area. The topography of the island surrounding the study area corridor has been altered since the road and bridge first opened to traffic in the 1930s. Roadways in Lady Bird Johnson Park and in Arlington, Virginia, pass through spans in the bridge abutments. These roadways that travel beneath the bridgeheads have an elevation of about ten feet. These topographical changes date to the period of significance. Access ramps and changes in elevation allow for changes in grade between the roadways.

These multiple grades within the landscape date to the period of significance and are contributing topographical features.

GRADING TO ACCOMMODATE ROADWAYS

Historic Conditions

The human-made Columbia Island (later, Lady Bird Johnson Park) was created between approximately 1915 and 1927, and graded over time to accommodate the various roadways that traverse the island.

Between 1931 and 1932, the Bureau of Public Roads (BPR) constructed Mount Vernon Memorial Highway on Columbia Island, which has since been incorporated into the section of the George Washington Memorial Parkway traveling south from Arlington Memorial Bridge. The BPR was responsible for grading and paving the parkway and related roads on Columbia Island.

Memorial Circle was constructed in 1940. When ground broke on the Pentagon complex in 1941, a network of new roads and parking areas was



Figure 71: Southbound George Washington Memorial Parkway, looking south from the Boundary Channel Bridge (Urban Heritage Project 2022).



Figure 72: View showing VA Highway 110, which connects with Memorial Avenue, traveling beneath Memorial Avenue on the west side of the study area (Urban Heritage Project 2022).



Figure 73: Flat topography of Memorial Avenue (Urban Heritage Project 2022).



Figure 74: View from the north side of Memorial Circle, demonstrating the flat topography of the grassy Memorial Circle and its roadway (Urban Heritage Project 2022).

planned for Columbia Island, in the greater area surrounding Memorial Circle. In 1941, the Bureau of Public Roads prepared a document for the NPS, CFA, and NCPPC entitled "A Revised Highway Plan for War Department Buildings." The plan suggested retaining Memorial Circle as constructed and included plans for grading changes to accommodate the new roads. This work was completed during the early 1940s.

Columbia Island (later, Lady Bird Johnson Park), a human-made feature, was graded to accommodate the roadways that traverse the landform. Outside of Memorial Circle, roads that travel at different grades have varied topography and travel beneath the roadways within the study area.

Existing Conditions

There have been no significant changes to the grading of roadways since the period of significance. The grading for the roadways on Lady Bird Johnson Park (Columbia Island) has not been altered and continues to be visible on the landscape. This is a contributing feature.

FLAT TOPOGRAPHY OF MEMORIAL AVENUE ROADWAY

Historic Conditions

Grading for the construction of Memorial Avenue began in 1930. Memorial Avenue follows a mostly natural profile and was graded only moderately when the road was constructed, creating a relatively flat roadway.

Existing Conditions

The topography of the Memorial Avenue roadway is flat and has not been altered since its construction during the period of significance (*see Figure 73*). The flat topography of the Memorial Avenue roadway is a contributing topographic feature.

FLAT TOPOGRAPHY OF MEMORIAL CIRCLE

Historic Conditions

The 1930 Annual Report of the Director of Public Buildings and Public Parks of the National Capital contained an aerial photograph looking towards the Lincoln Memorial, with the following written under the image: The Columbia Island Plaza will be built up to the grade of the bridge and fill the gap which



Figure 75: The steep slopes outside of Memorial Circle lead to roadways on other grades (Urban Heritage Project 2022).

is seen between the long span and short boundary channel span.

In preparation for the creation of Memorial Circle in 1940, the area around the circle was graded for cross-axial roads on either side of the circle. Memorial Circle itself was established as a traffic rotary and central grassy circle at an elevation of 35 feet, making it the highest point in the cultural landscape (positioned a few feet higher than the bridgeheads of Arlington Memorial Bridge and the Boundary Channel Bridge, which have elevations of approximately 30 feet). Memorial Circle was created as a flat feature, allowing visibility for traffic across and around the rotary.

Existing Conditions

As during the period of significance, the topography of Memorial Circle and its immediate surroundings is flat, allowing for visibility across and around the circle (*see Figure 74*). The flat topography of Memorial Circle is a contributing feature.

SLOPES AROUND MEMORIAL CIRCLE, OUTSIDE OF ROADWAY

Historic Conditions

As cross-axial roads were planned for Columbia Island (later, Lady Bird Johnson Park), land to the north and south of Memorial Circle was graded in the 1930s to a level of approximately 20 to 25 feet.

In 1940, Memorial Circle was constructed in lieu of the cross-axial roads at an elevation of 35 feet. Over the following years, as the road network on Columbia Island was reworked in tandem with the development of the Pentagon complex, the land outside of Memorial Circle was further altered and graded. The land sloped steeply down to the Boundary Channel on the west side of Columbia Island and down to the Potomac River on the east side of Columbia Island. The slopes reached other circulation features that traveled beneath the bridgeheads on both sides of the islands.

Existing Conditions

Outside of Memorial Circle, the topography of Lady Bird Johnson Park (Columbia Island) remains sloped down to the roadways that travel near the Boundary Channel on the west side of the island and down to the Potomac River on the east (*see Figure 75*).

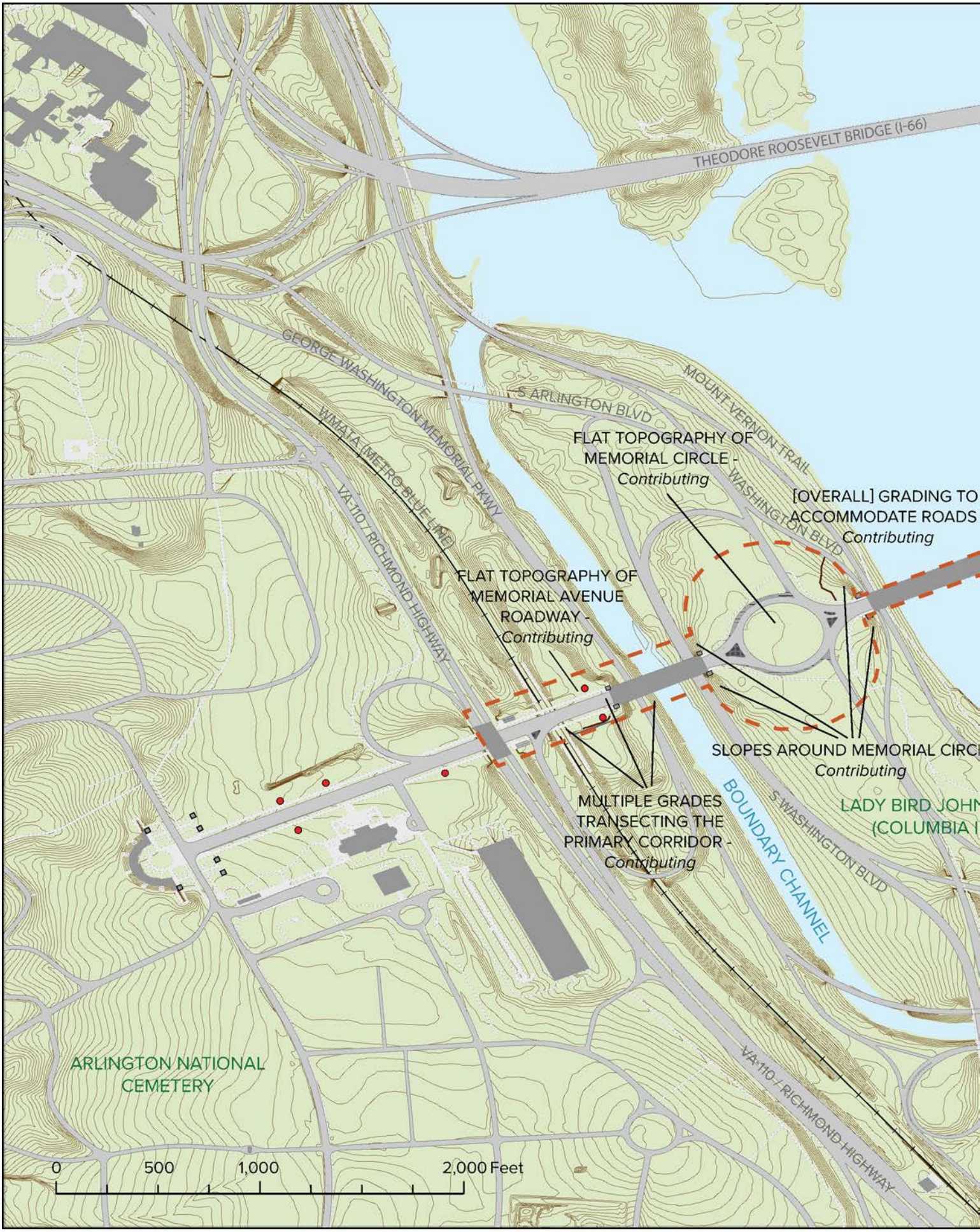
To the north and south of Memorial Circle are slight variations in grade with the land at 20 to 25 feet in elevation.

EVALUATION

The topography of the Memorial Avenue Corridor is consistent with the period of significance and contributes to the historic integrity of the cultural landscape. The site's overall topography reflects that of the period of significance and helps define the character of the linear axis of the Memorial Avenue Corridor. The multiple grades outside the cultural landscape; grading to accommodate roadways; the flat topography of the Memorial Avenue roadway and of Memorial Circle; and the slopes surrounding Memorial Circle date to the period of significance and contribute to the design, setting, and feeling of the cultural landscape.

TOPOGRAPHY - CHARACTER-DEFINING FEATURES

Feature Description	*Date Established*	*Contributing Status*
Multiple grades transecting the primary corridor	1926-1965	Contributing
Grading to accommodate roadways	1926-1965	Contributing
Flat topography of Memorial Avenue roadway	1931-1932	Contributing
Flat topography of Memorial Circle	1940	Contributing
Slopes around Memorial Circle, outside of roadway	c. 1940	Contributing


THEODORE ROOSEVELT BRIDGE (I-66)
GEORGE WASHINGTON MEMORIAL PKWY
S ARLINGTON BLVD
MOUNT VERNON TRAIL
WASHINGTON BLVD
WMATA (METRO) BLUE LINE
VA-110 / RICHMOND HIGHWAY
FLAT TOPOGRAPHY OF MEMORIAL CIRCLE - Contributing
[OVERALL] GRADING TO ACCOMMODATE ROADS - Contributing
FLAT TOPOGRAPHY OF MEMORIAL AVENUE ROADWAY - Contributing
SLOPES AROUND MEMORIAL CIRCL Contributing
MULTIPLE GRADES TRANSECTING THE PRIMARY CORRIDOR - Contributing
BOUNDARY CHANNEL
S WASHINGTON BLVD
LADY BIRD JOHN (COLUMBIA I
ARLINGTON NATIONAL CEMETERY
VA-110 / RICHMOND HIGHWAY
0
500
1,000
2,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Topography (Overall)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Building / Structure
- *Arts of War* (Structure)
- Memorial (Structure)
- Pylon (Structure)
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

Weitzman School of Design
University of Pennsylvania
Urban Heritage Project
Department of Historic Preservation | PennPraxis
www.cultural-landscapes.org

DRAWING #13

Spatial Organization

The Memorial Avenue Corridor was designed as a cohesive formal landscape, extending from the entrance to Arlington Memorial Bridge on the east side of the Potomac River and continuing along Memorial Avenue to Arlington National Cemetery, on the west side. The corridor thus extends the monumental core of the nation's capital across the Potomac River, creating a linear axis between the Lincoln Memorial in Washington, D.C., and the entrance to Arlington National Cemetery on the west side of the Potomac River. Although the westernmost portion of this historic corridor is no longer managed by the National Park Service, and is outside the boundaries of this CLR, it nevertheless relates to the spatial organization of the study area in both its historic and existing conditions.

AXIAL RELATIONSHIP BETWEEN THE LINCOLN MEMORIAL AND ARLINGTON HOUSE

Historic Conditions

Laid out as part of the McMillan Plan, the linear composition of the Memorial Avenue Corridor was envisioned as part of the larger civic design for the nation's capital. The cultural landscape was planned on an axis connecting the Lincoln Memorial in Washington, D.C., with Arlington House in Arlington, Virginia (*see Figures 76 and 77*). While the corridor was deliberately placed askew from the linearity of the National Mall, in order to connect the two monuments at its termini, it had its own distinct axis that dictated the spatial organization of the corridor.

Existing Conditions

The axial relationship between the Lincoln Memorial and Arlington House remains strong and readily legible in the landscape and has not

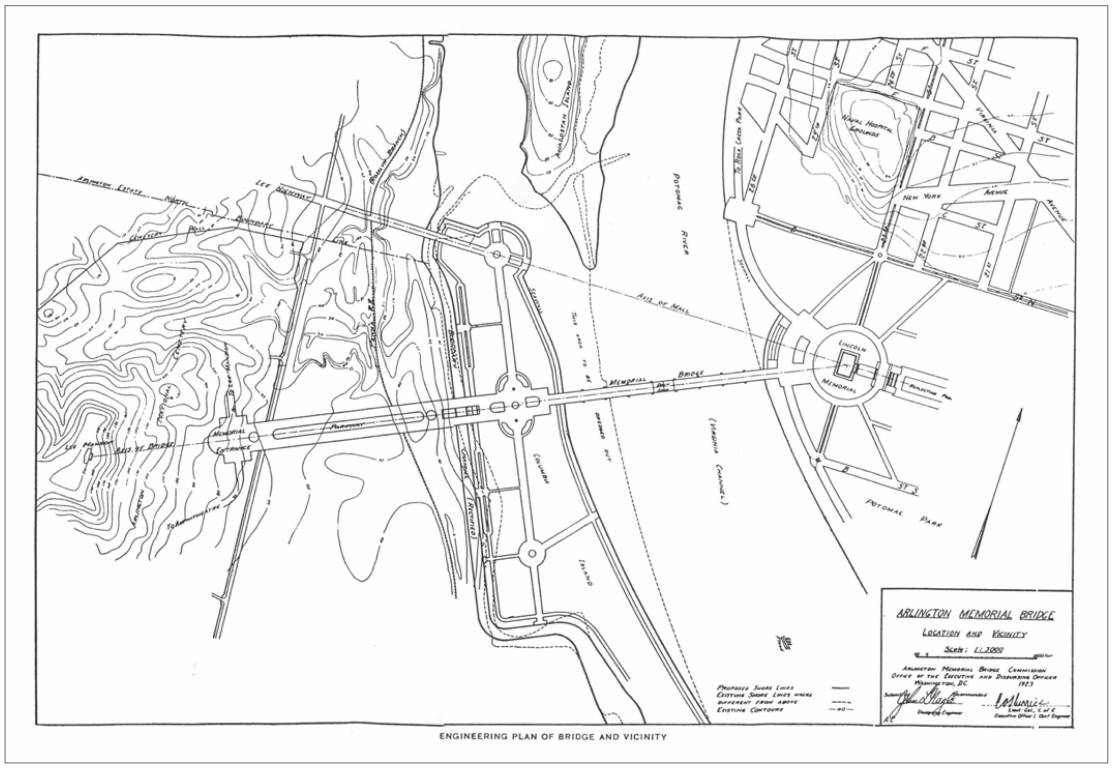


Figure 76: One of several drawings by architect William Mitchell Kendall presenting the initial concept for the Memorial Avenue Corridor, 1923. The drawing depicts the axial relationships between Arlington National Cemetery at the western terminus of the corridor and the Lincoln Memorial at the eastern terminus of the corridor (Source: Report of the Arlington Memorial Bridge Commission 1924).



Figure 77: Aerial depicting the axial relationship of Arlington National Cemetery and Lincoln Memorial, in a photograph taken between 1933 and 1936 (Source: National Archives, Identifier: 183515114).



Figure 78: View from Arlington House, The Robert E. Lee Memorial, towards the Lincoln Memorial, depicting the axis of the Memorial Avenue Corridor, including the entrance to Arlington Cemetery, the Memorial Avenue roadway, and Arlington Memorial Bridge (Urban Heritage Project 2022).

changed since the period of significance (*see Figures 78 and 79*). The linear corridor creates the experience of progression along the entire route. This element of the historic design's spatial organization retains integrity and is a contributing feature of the landscape.

MEMORIAL CIRCLE AS ROTARY FEATURE TO SUBDIVIDE THE CORRIDOR

Historic Conditions

Memorial Circle was designed to break up the layout of the otherwise-linear corridor. Columbia Island (later, Lady Bird Johnson Park) was created between approximately 1915 and 1927; initial designs for its roadways were quite elaborate. However, Memorial Circle was ultimately constructed in 1940 as a simple rotary to direct traffic between Arlington Memorial Bridge and Memorial Avenue; its circular footprint marked the primary deviation in the axiality of the landscape (*see Figure 80*). (Refer to the Circulation discussion for additional information about Memorial Circle as a roadway.)

Existing Conditions

Memorial Circle remains in place as a monumental rotary feature in the otherwise linear corridor (*see Figures 79 and 81*). The contributing feature retains its historic design and spatial organization, established during the period of significance, and contributes to the significance of the landscape.

OVERALL SYMMETRY OF THE MEMORIAL AVENUE CORRIDOR, ACROSS THE AVENUE AXIS

Historic Conditions

As constructed and maintained during the period of significance, the site plan of the Memorial Avenue Corridor was symmetrical overall, reflected across the east-west axis of the roadway itself, as well as across the north-south axis through Memorial Circle (*see Figure 76*).



Figure 79: Aerial image depicting the axis between the Hemicycle at the entrance to Arlington Memorial Cemetery at lower left and the Lincoln Memorial at upper right. Memorial Circle is located in the center of the image, to the west of the Potomac River (Source: Google Earth).



Figure 80: Aerial depicting Memorial Circle dividing otherwise linear Memorial Avenue Corridor, 1950 (Source: National Park Service, MRCE).



Figure 81: View looking east across Memorial Circle and Lady Bird Johnson Park (Columbia Island), undated (Source: National Park Service).

Existing Conditions

Today, the overall symmetry of the Memorial Avenue Corridor is identical to its configuration during the period of significance. The historic configuration of the corridor's two axes remains consistent and retains integrity as a contributing feature of the cultural landscape's spatial organization (*see Figure 79*).

CONNECTIONS TO NETWORK OF ROADS AND TRAILS WITHIN LADY BIRD JOHNSON PARK (COLUMBIA ISLAND)

Historic Conditions

Early road development on Columbia Island (later, Lady Bird Johnson Park) took place when the Mount Vernon Memorial Parkway (later incorporated into the George Washington Memorial Parkway) opened in 1932, traveling south from Arlington Memorial Bridge. By the summer of 1937, the Bureau of Public Roads (BPR) had graded the section of the George Washington Memorial Parkway extending north from Columbia Island.

When the Pentagon complex was developed south of the study area in the early 1940s, a new system of roadways was established on Columbia Island (later, Lady Bird Johnson Park) to serve the new complex. The resulting road connections included access routes to Washington Boulevard, Arlington Boulevard, and the George Washington Memorial Parkway, all of which altered the spatial

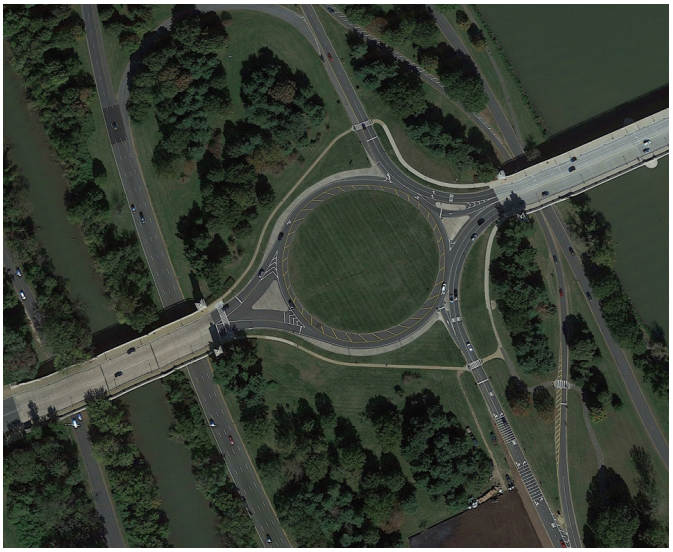


Figure 82: Aerial view of Memorial Circle and surrounding roadways (Columbia Island) roadways (Source: Google Earth).

organization of the cultural landscape (*see Figures 80 and 81*). These road connections subdivided the landscape around Memorial Circle, transecting other features such as the bridle trail and the Mount Vernon Trail.

Existing Conditions

As during the period of significance, the network of road and trail connections within Lady Bird Johnson Park (Columbia Island) continues to subdivide the landscape around Memorial Circle (*see Figure 82*). These road and trail features underscore the landscape's function as a transportation corridor; therefore, their presence does not detract from the historic spatial organization of the cultural landscape.

CONNECTIONS BETWEEN MEMORIAL AVENUE AND OTHER TRANSPORTATION CORRIDORS

Historic Conditions

Memorial Avenue was originally envisioned as an uninterrupted linear corridor approaching the entrance to Arlington National Cemetery. However, changes in the contextual landscape in the 1940s resulted in new roadways, including the construction of an off-ramp from VA Highway 110 that intersected with Memorial Avenue. Additional roads and railways were constructed passing beneath Memorial Avenue as part of the larger transportation networks in Arlington, Virginia. The completion of the metro rail line in 1977 added an additional circulation feature that traveled below the avenue, perpendicular to the organization of the corridor.

No longer a single linear corridor, the spatial organization of the avenue changed during the period of significance to include several circulation features that ran perpendicular to the avenue, connecting to the transportation corridors of the greater region.

Existing Conditions

The historic connections that link the spatial organization of Memorial Avenue to its broader transportation context remain intact. The off-ramp for VA Highway 110 and southbound George Washington Memorial Parkway intersects with Memorial Avenue on the west end of the study area, interrupting the linear corridor (*see Figures 83 and 84*). These features maintain the spatial organization that was established during the period of significance.

EVALUATION

Aerial photographs, maps, and plans document the spatial organization of the landscape over time. The spatial organization of the Memorial Avenue Corridor retains a high degree of integrity and is still apparent in the landscape. The historic linear composition is characterized by the axis connecting the Lincoln Memorial in Washington, D.C., with Arlington House, in Arlington, Virginia.

Memorial Circle, meanwhile, remains the contrasting organizing feature it was designed to be. The overall spatial organization of the site has not changed and is consistent with the period of significance. While some elements of the road system changed during the period of significance, the extant road configuration is akin to the historic conditions, and the overall spatial organization retains integrity.

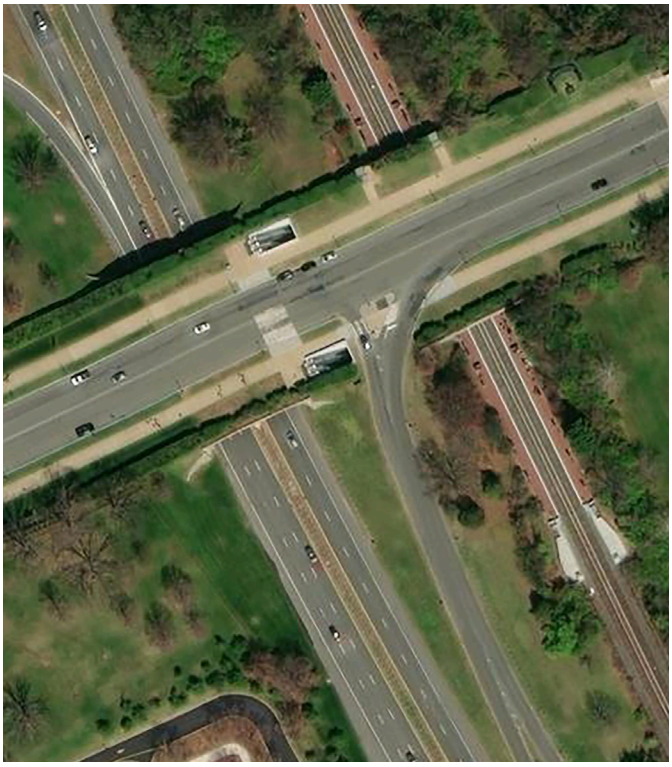


Figure 83: Memorial Avenue including the intersection where the VA Highway 110 and the George Washington Memorial Parkway off-ramp intersects the avenue from the south (Source: Open Data DC).



Figure 84: View of VA Highway 110 and the George Washington Memorial Parkway off-ramp on left before it intersects with Memorial Avenue, with VA Highway 110 visible on right side (Urban Heritage Project 2022).

SPATIAL ORGANIZATION - CHARACTER-DEFINING FEATURES

Feature Description	*Date Established*	*Contributing Status*
Axial relationship between the Lincoln Memorial and Arlington House	1901	Contributing
Memorial Circle as rotary feature to subdivide corridor	1940	Contributing
Overall symmetry of the Memorial Avenue Corridor, across the avenue axis	1926-1940	Contributing
Connections to network of roads and trails within Lady Bird Johnson Park (Columbia Island)	c. 1940 (road network within Lady Bird Johnson Park) c. 1972 (Mount Vernon Trail)	Contributing
Connections between Memorial Avenue and other transportation corridors	1941 (VA Highway 110); 1930-1932 (George Washington Memorial Parkway)	Contributing

Constructed Water Features

Early designs for the Memorial Avenue Corridor included constructed water features on Columbia Island (later, Lady Bird Johnson Park). Commission of Fine Arts landscape architect Gilmore Clarke presented a plan in January of 1933 for the Columbia Island plaza (in the vicinity of what is now Memorial Circle) that included two large circular pools. A revised Clarke plan from July of 1933 included a single circle and fountain in place of the paired fountain bases. These features were never constructed.

There is one constructed water feature within the Memorial Avenue Corridor. The Boundary Channel was created when the human-made island of Lady Bird Johnson Park, originally called Columbia Island, was constructed within the Potomac River between c. 1915 and 1927.

BOUNDARY CHANNEL

Historic and Existing Conditions

In the 19th century, prior to the formation of Columbia Island (later, Lady Bird Johnson Park), a natural tidal stream ran through the mudflats near the Virginia shoreline. Between approximately 1915 and 1927, the Boundary Channel was created where the tidal stream had flowed; it was constructed in tandem with the creation of Columbia Island. The north-south channel was a means to drain the adjacent slopes of the Virginia shore and the west side of the new island; some of the water from Little River, the channel west of Theodore Roosevelt Island, was also carried through the Boundary Channel (*see Figure 85*). Water flowed from the Potomac River into the Boundary Channel at the north end of the island and emptied into Columbia Lagoon at the south end. During incoming tide, the flow of water would reverse. In addition to its role in managing the flow of water, planners also envisioned the Boundary Channel as a destination for boating and picnicking.

Engineers widened the channel between Analostan and Columbia Islands between 1925 and 1927. The northern shoreline of Columbia Island was cut away to improve the water flow and offset the area of the Arlington Memorial Bridge's piers. These alterations impacted how the water fed into the Boundary Channel.

In the decades since its construction, silt deposition has changed the Boundary Channel. In 1936, the Boundary Channel was measured at 100 to 200 feet wide; in 2013, it was measured at 100 feet wide (with some variation). In 1936, the Boundary Channel was four to six feet deep; today, the water depth is often very shallow (*see Figure 86*).

Today, the Boundary Channel remains in place, transecting the Memorial Avenue roadway (which passes over the water feature via the Boundary Channel Bridge) (*see Figures 86 and 87*). The recent Potomac River Boundary Channel Restoration Project addressed various conditions issues with the water feature, and included the removal of non-native invasive vines and woody plants along the Boundary Channel and the planting of native shrubs and trees. The restoration project included a portion of this CLR's study area; its scope also extended outside the boundaries of the cultural landscape to include the north end of Lady Bird Johnson Park (Columbia Island), where Washington Boulevard crosses the Boundary Channel.

EVALUATION

The Boundary Channel, a constructed water feature established between approximately 1915 and 1927, is a contributing feature within the Memorial Avenue Corridor cultural landscape.



Figure 85: View of the Boundary Channel, looking north from the Boundary Channel Bridge, June 8, 1952. Photographer: John P. Wymer (Source: DC History Center WY 3825.55).



Figure 86: The Boundary Channel looking north, June 2022 (Urban Heritage Project 2022).

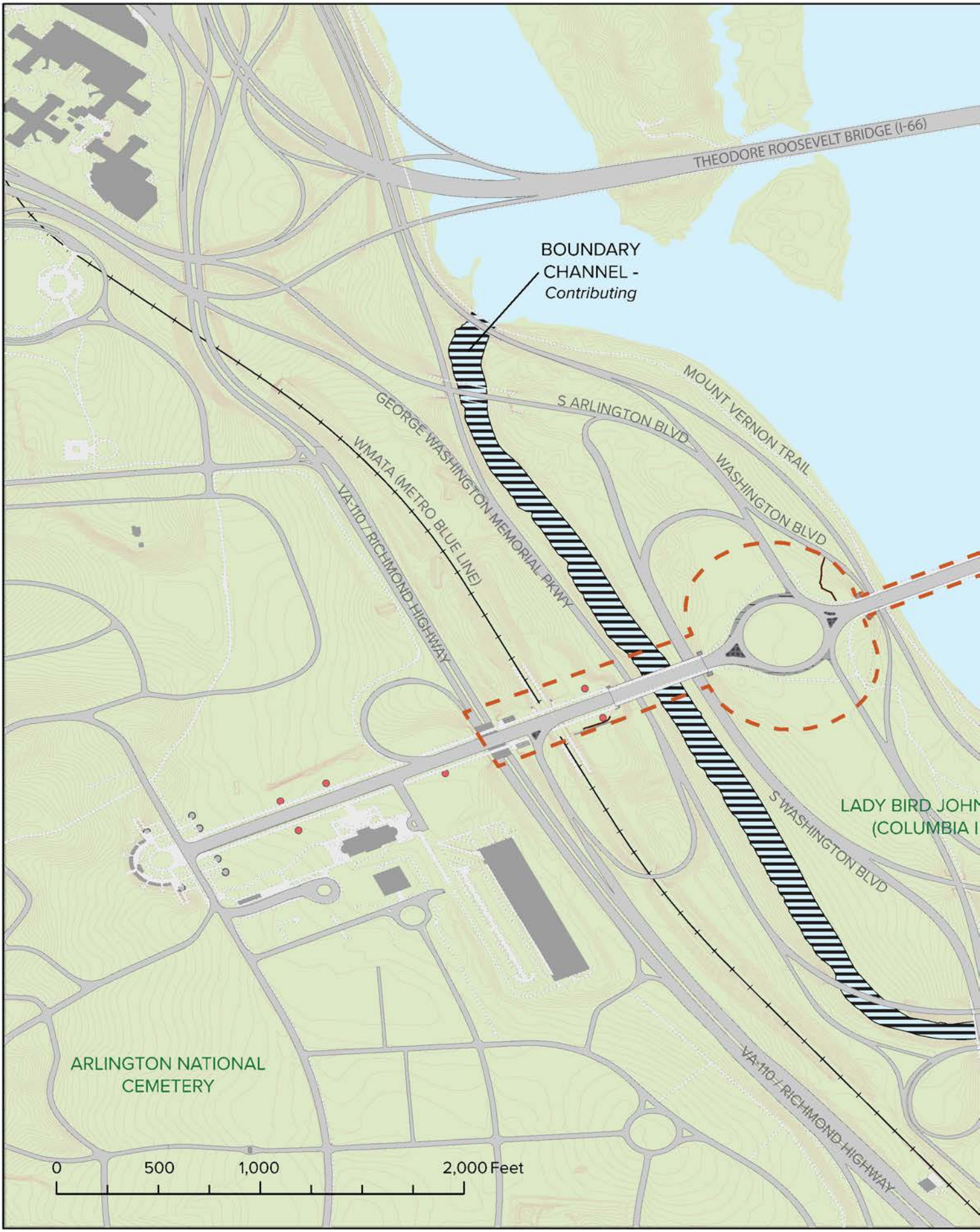


Figure 87: The Boundary Channel looking south, March 2022 (Urban Heritage Project 2022).

CONSTRUCTED WATER FEATURES - CHARACTER-DEFINING FEATURES

Feature Description	Date Established	Contributing Status
Boundary Channel	c. 1915 - 1927	Contributing

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BOUNDARY CHANNEL - Contributing
MOUNT VERNON TRAIL
S ARLINGTON BLVD
GEORGE WASHINGTON MEMORIAL PKWY
WASHINGTON BLVD
WMATA (METRO BLUE LINE)
VA-110 / RICHMOND HIGHWAY
LADY BIRD JOHN
(COLUMBIA I
S WASHINGTON BLVD
ARLINGTON NATIONAL CEMETERY
VA-110 / RICHMOND HIGHWAY
0
500
1,000
2,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Constructed Water Features

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Building / Structure
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail

Landscape Characteristic Features

- Constructed Water Feature

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #14

Views and Vistas

Designed as part of the McMillan Plan recommendations, the Memorial Avenue Corridor was planned with particular focus on the surrounding views of the Lincoln Memorial to the east/northeast and Arlington House and surrounding Arlington National Cemetery to the west/southwest. Arlington Memorial Bridge was intentionally designed with a low profile to preserve and highlight the views between the city's monumental core and Arlington National Cemetery. In addition to the designed and directed views that focus on the corridor termini, there are other, more expansive views towards the Potomac River and surrounding areas.

Figure 88: View from Arlington National Cemetery across Memorial Bridge to Lincoln Memorial, c. 1920-c. 1950. Photographer: Theodor Horydczak (Source: Library of Congress, Control number: 2019680862).



DIRECTED VIEWS TO LINCOLN MEMORIAL

Historic Conditions

The Memorial Avenue Corridor was designed to direct views towards the two termini of the linear axis. To the east/northeast, views were designed to focus on the Lincoln Memorial on the east side of the Potomac River in Washington, D.C. Arlington Memorial Bridge is on axis with the Lincoln Memorial, which dominates views while traveling across east the bridge (*see Figure 88*). The linearity of the bridge, and the avenue overall, enhances the dominance of the views towards the memorial and creates the eastern terminus of the viewshed.

Existing Conditions

As during the period of significance, views along the Memorial Avenue Corridor are directed towards the Lincoln Memorial, the eastern/northeastern terminus of the axis (*see Figures 89 and 90*). These views have not changed and contribute to the integrity of the cultural landscape.

DIRECTED VIEWS TO THE HEMICYCLE, ARLINGTON NATIONAL CEMETERY, AND ARLINGTON HOUSE

Historic Conditions

Within the axial composition of the cultural landscape, views to the west/southwest along the corridor were designed to be directed to the Hemicycle at the entrance of Arlington National Cemetery, the western terminus of the corridor (*see Figures 91 and 92*). Arlington House, The Robert E. Lee Memorial was also designed to be visible from the cultural landscape, on view at a higher elevation on the hillside above the Hemicycle. The McMillan Commission intentionally created the Memorial Avenue Corridor axis to skew slightly from the National Mall to create the axis with Arlington House. The ceremonial entrance for the cemetery



Figure 89: View across Memorial Circle and Arlington Memorial Bridge to Lincoln Memorial on the east side of the Potomac River, undated (Source: National Park Service).



Figure 90: View toward Lincoln Memorial from Arlington Memorial Bridge, with the Washington Monument also visible (Urban Heritage Project 2022).

was defined by the Memorial Avenue design. The pylons on Lady Bird Johnson Park (Columbia Island) and the holly hedges (*Ilex opaca*) and white oak trees (*Quercus alba*) along Memorial Avenue enhance the linearity of the corridor.

Existing Conditions

The cultural landscape retains its historic views toward the Hemicycle, Arlington National Cemetery, and Arlington House, The Robert E. Lee Memorial (*see Figure 93*). Although these features are located outside the boundaries of the study area, they remain in place as consistent focal points at the western/southwestern terminus of Memorial Avenue. The corridor terminus and view have not been substantially altered since the period of significance. While there have been changes made outside of the study area with the addition of the Arlington National Cemetery Welcome Center and associated parking areas (constructed in 1988), these features are screened by their spatial organization and surrounding vegetation in order to preserve the directed views toward the western terminus. The directed views retain integrity to the



Figure 91: Memorial Avenue with entrance to Arlington National Cemetery in background, c. 1920-1950. Photographer: Theodor Horydczak (Source: Library of Congress, Control number: 2019681762).



Figure 92: View down Arlington Memorial Bridge, with Memorial Avenue, the Hemicycle, and Arlington House in the background, c. 1986-1988 (Source: Library of Congress, Call number: HAER No. DC-7/HAER, DC, WASH, 563-).



Figure 93: View west/ southwest toward the Hemicycle at the entrance to Arlington National Cemetery with Arlington House, The Robert E. Lee Memorial visible on the hill in the background (Urban Heritage Project 2022).

period of significance and are a contributing feature of the cultural landscape.

VIEWS OF VARIOUS WASHINGTON, D.C., LANDMARKS

Historic Conditions

Historically, views east from the corridor included views of the United States Capitol dome (completed in 1866) and the Washington Monument, which was completed on the National Mall in 1884 (*see Figure 94*). In its 1924 report, the Arlington Memorial Bridge Commission expressed its intention for views along the corridor toward these Washington, D.C. landmarks, stating, "From this point a superb view of the bridge, the Lincoln Memorial, the Washington Monument, and the Capitol will be enjoyed by the traveler entering the Nation's Capital over this route." Both the Capitol and the Washington Monument would have been visible during the entirety of the period of significance. In addition to these buildings, other Washington, D.C., landmarks were constructed later during the period of significance and would have been visible from the cultural landscape, including the Jefferson Memorial, completed in 1943, and the Kennedy Center, constructed in 1971.

Existing Conditions

From various points along the Memorial Avenue route, the cultural landscape retains views toward the United States Capitol and the Washington Monument, both of which are located due east of the Lincoln Memorial (*see Figure 95*). Since the axis of the Memorial Avenue Corridor is askew from the National Mall, these buildings are visible from various locations within the study area, including Memorial Circle and Arlington Memorial Bridge. These conditions are consistent with the designed character of the landscape during the period of significance.

The Jefferson Memorial, Kennedy Center, and other landmarks constructed during the later years of the period of significance remain visible from the Memorial Avenue Corridor. While there has been more recent construction (post-dating the period of significance) that is visible from the



Figure 94: View from Arlington National Cemetery across Memorial Bridge to Lincoln Memorial and beyond, with the Washington Monument visible, c. 1930-c. 1950. Photographer: Theodor Horydczak (Source: Library of Congress, Control number: 2019680903).



Figure 95: Photograph of Arlington Memorial Bridge with Lincoln Memorial, Washington Monument, and the Capitol dome in the background, undated (Source: Urban Heritage Project 2022).

cultural landscape, views to the Capitol dome, Washington Monument, and other federal city landmarks maintain integrity and are contribute to the Memorial Avenue Corridor cultural landscape.

VIEWS OF GREEN PARKLAND ALONG BOTH SIDES OF THE POTOMAC RIVER

Historic Conditions

During the period of significance, green parkland on both the east and west sides of the Potomac River was visible from the cultural landscape. The land surrounding the Arlington Memorial Bridge terminus in Washington, D.C., was developed as West Potomac Park, managed by the NPS. On the east side of the bridge, meanwhile, Columbia Island was constructed between 1915 and 1927, and was also visible from the cultural landscape. These views enhanced the Memorial Avenue Corridor's associations with the monumental core and public spaces of Washington, D.C. and Virginia. During the period of significance, the green spaces on either side of the Potomac River would have been visible from multiple locations throughout the cultural landscape.

Existing Conditions

The shoreline of Lady Bird Johnson Park (Columbia Island) and the east side of the Potomac River remain visible from the cultural landscape (*see Figures 96 and 97*). These views contribute to the Memorial Avenue Corridor cultural landscape.

VIEWS TO THE POTOMAC RIVER

Historic Conditions

Views of the Potomac River were integral to the design of the Memorial Avenue Corridor. The Potomac River is the boundary between Washington, D.C., and Virginia. During the Civil War, the river constituted the boundary between the North (represented by Washington, D.C. as the federal city) and the South (represented by Virginia, which seceded as part of the Confederacy). When the Memorial Avenue Corridor was designed and constructed in the early 20th century, the views to the Potomac River symbolically reoriented the waterway as a unifying feature, spanned by the Arlington Memorial Bridge. Upon construction of the bridge, the cultural landscape's views to the north and south were dominated by the Potomac River.

Existing Conditions

There are views to the Potomac River from locations throughout the cultural landscape, particularly from Arlington Memorial Bridge and from the east side of Lady Bird Johnson Park (Columbia Island) (*see Figures 98 and 99*). Arlington Memorial Bridge carries the roadway across the Potomac River, providing 360-degree views of the river.

VIEWS OF ROSSLYN SKYLINE

Historic Conditions

The Rosslyn neighborhood of Arlington, Virginia, located to the north of Arlington National Cemetery, developed beginning in the 1960s and 1970s and continued to grow in the following decades. Prior to the development of high rise commercial and residential towers, the Rosslyn area was the industrial center of Arlington County characterized by lower density development. During the period of significance, some early highrise buildings were likely visible from the cultural landscape.

Existing Conditions

Today, views to the north of the cultural landscape include the skyline of the Rosslyn neighborhood in Arlington, Virginia (*see Figure 100*). The Rosslyn neighborhood, which includes dense clusters of tall buildings. The thirteen tallest buildings in Rosslyn were built after 1980, with the majority constructed between 2002 and 2017. The tallest building in Rosslyn, Central Tower Place, was constructed in 2017, and the second tallest building known as CEB Tower was constructed in 2013. The views of the Rosslyn skyline, dominated by construction that post-dates the period of significance, are non-contributing.



Figure 96: View of green parkland along Lady Bird Johnson Park (Columbia Island) shoreline, on the west side of Arlington Memorial Bridge (Urban Heritage Project 2022).



Figure 97: View of green parkland in East Potomac Park, on the east side of Arlington Memorial Bridge (Urban Heritage Project 2022).



Figure 98: View looking north from Arlington Memorial Bridge toward the Potomac River (Urban Heritage Project 2022).



Figure 99: View looking south from Arlington Memorial Bridge toward the Potomac River (Urban Heritage Project 2022).



Figure 100: View from Arlington Memorial Bridge towards the Rosslyn skyline to the northwest (Urban Heritage Project 2022).



Figure 101: View from the VA Highway 110 off-ramp on south side of Memorial Avenue, looking southwest, showing the screening of hedges along the bridge over the highway (Urban Heritage Project 2022).



Figure 102: View from the VA Highway 110 off-ramp on the south side of Memorial Avenue, looking south/southeast, with the highway visible on the right (Urban Heritage Project 2022).

VIEWS OF VIRGINIA HIGHWAY 110 FROM MEMORIAL AVENUE

Historic Conditions

VA Highway 110 was constructed as part of the network of roads associated with the development of the Pentagon site in the early 1940s. Upon construction, the highway was deliberately screened by the hedges planted along Memorial Avenue. However, the thoroughfare likely remained visible from the off-ramp that accesses Memorial Avenue. These views to VA Highway 110 from Memorial Avenue were not intentionally designed as part of the original McKim, Mead & White plans, which envisioned Memorial Avenue as an uninterrupted linear corridor.

Existing Conditions

VA Highway 110, which tunnels beneath Memorial Avenue, remains partially screened from visitors to the landscape. The holly hedge and oak tree borders along the avenue were designed to create a sense of enclosure along Memorial Avenue (*see Figure 101*). This enclosure is disrupted where the VA Highway 110 off-ramp intersects with Memorial Avenue (*see Figure 102*). From this intersection, VA Highway 110 is visible to pedestrians and vehicles. The highway is also visible in areas where the holly hedge has deteriorated and thinned, resulting in gaps that offer views to the roadway below. These are non-contributing views.

EVALUATION

The site's views and vistas are paramount to the original design and current experience of the cultural landscape as a formal corridor. Intact historic views available from the Memorial Avenue Corridor include those to the Lincoln Memorial; to the Hemicycle, Arlington National Cemetery, and Arlington House; to green parkland along both sides of the Potomac River; to the Potomac River itself; and to the Capitol dome, Washington Monument, and other Washington, D.C., landmarks. In particular, the views toward the corridor termini—the Lincoln Memorial and the Hemicycle/Arlington House—retain their integrity and contribute to the historic integrity of the landscape.

Construction outside the study area boundaries, particularly in the Roslyn neighborhood to the north, postdate the period of significance; these views are non-contributing.

Views to the VA Highway 110 highway are also non-contributing, as the historic designs for the corridor deliberately screened these vistas. The poor condition of certain sections of the holly hedge has resulted in unintended views of the highway. However, they do not substantially degrade the historic integrity of the cultural landscape's views and vistas.

VIEWS AND VISTAS - CHARACTER-DEFINING FEATURES

Feature Description	Date Established	Contributing Status
Directed views to Lincoln Memorial	N/A	Contributing
Directed views to the Hemicycle, Arlington National Cemetery, and Arlington House	N/A	Contributing
Views of various Washington, D.C., landmarks	N/A	Contributing
Views to the Potomac River	N/A	Contributing
Views of green parkland along both sides of the Potomac River	N/A	Contributing
Views of Rosslyn skyline	N/A	Non-contributing
View of VA Highway 110 from Memorial Avenue	N/A	Non-contributing

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THEODORE ROOSEVELT BRIDGE (I-66)
GEORGE WASHINGTON MEMORIAL PKWY
WMATA (METRO BLUE LINE)
VA-110 / RICHMOND HIGHWAY
S ARLINGTON BLVD
MOUNT VERNON TRAIL
WASHINGTON BLVD
D.C.
Virginia
A
B
1
BOUNDARY CHANNEL
S WASHINGTON BLVD
LADY BIRD JOHN
(COLUMBIA I
ARLINGTON NATIONAL
CEMETERY
VA-110 / RICHMOND HIGHWAY
0
500
1,000
2,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Views and Vistas (Overall)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Building / Structure
- *Arts of War* Sculpture (Structure)
- Memorial (Structure)
- Pylon (Structure)
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail

Landscape Characteristic Features

- Contributing View / Vista
  Refer to Drawing #15b for corresponding photograph
- Non-Contributing View / Vista
  Refer to Drawing #15b for corresponding photograph

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #15a



A Directed Views to the Hemicycle, Arlington National Cemetery, and Arlington House



B Directed Views to the Lincoln Memorial



D Views of the Potomac River, Looking South



E Views of the Potomac River, Looking North



G Views of Parkland along the Potomac River, Looking East



H Views of Rosslyn Skyline





C Views of Various Washington, D.C., Landmarks





F Views of Parkland along the Potomac River, Looking Southwest





I Views of Highway VA-110 from Memorial Avenue

Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Views and Vistas (Overall)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
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4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

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DRAWING #15b

Cultural Traditions

The Memorial Avenue Corridor is integrated into the fabric and traditions of the monumental core of Washington, D.C., and the lives of its residents. While the landscape is traversed everyday by individuals commuting, biking, running, and walking, the landscape also has particular cultural traditions that were established during the period of significance. These traditions are associated with the connection to Arlington National Cemetery and funerals that process along Memorial Avenue, and the use of the commemorative space for public demonstrations.

FUNERAL PROCESSIONS TO ARLINGTON NATIONAL CEMETERY

Historic Conditions

The Memorial Avenue Corridor has a historic use as a ceremonial space. With Arlington National Cemetery in operation by May 1864, the corridor hosted funeral processions traveling between Washington, D.C., and the national cemetery (*see Figure 103*). The first funeral procession crossed Arlington Memorial Bridge the day after the bridge opened to the public in January of 1932.

This tradition continued into the 20th century, and was reinforced by several key processions during the period of significance. In 1958, a procession traveled Memorial Avenue, culminating in the reburial of the World War II and Korean War unknown soldiers in Arlington National Cemetery. On June 19, 1963, civil rights leader Medgar Evers was buried at Arlington National Cemetery, with more than 25,000 individuals watching the procession. Later that year, on November 25, 1963, the funeral procession for President John F. Kennedy crossed Arlington Memorial Bridge and continued along Memorial Avenue, ending at Arlington National Cemetery. Hundreds of other burials for servicemen and women have maintained this tradition, routing their ceremonies through the study area.

Existing Conditions

Today, the cultural tradition continues, as the Memorial Avenue Corridor retains its role in the somber and significant progressions toward Arlington National Cemetery. The cemetery is the final resting place for nearly 400,000 active-duty service members, veterans, and their families, with 27 to 30 services each weekday, and six to eight services on Saturdays (Arlington National Cemetery website). Larger funeral processions often queue up on Memorial Avenue prior to approaching the interment site. For smaller processions, individuals arrive by way of the avenue and proceed to the Administration Building. Stephen VanHoven, Horticulture Chief for Arlington Memorial Cemetery, noted that it is important in the cemetery's view that Memorial Avenue maintain its funerary style (conversation with Stephen VanHoven on June 15, 2023). Most of these burial services approach the cemetery via the study area along Memorial Avenue. Funeral processions are a contributing cultural tradition within the landscape.

PUBLIC DEMONSTRATIONS

Historic Conditions

The Memorial Avenue Corridor has historically been associated with the cultural tradition of public demonstration, as various demonstrations and parades have used the symbolism of the avenue to bolster their cultural message (*see Figures 104 and 105*). Protests against the Vietnam War crossed Arlington Memorial Bridge, including the March on the Pentagon that took place on October 21, 1967 (*see Figure 106*). For that event, a rally took place at the Lincoln Memorial, and approximately 50,000 individuals proceed to march to the Pentagon via Memorial Avenue. The well-known photographs of protesters putting flowers in paratrooper's rifles were taken at this protest.



Figure 103: (above) Funeral procession across Arlington Memorial Bridge with Lincoln Memorial in background, February 25, 1936 (Source: Library of Congress, Control number 2016882095).

Figure 104: (right) The southern contingent of the Poor People's Campaign crosses Arlington Memorial Bridge after visiting President Kennedy's gravesite at Arlington National Cemetery, June 23, 1968 (Source: DC Public Library, The People's Archive, Washington Star Photograph Collection, Star_B890_F021_008.tif).

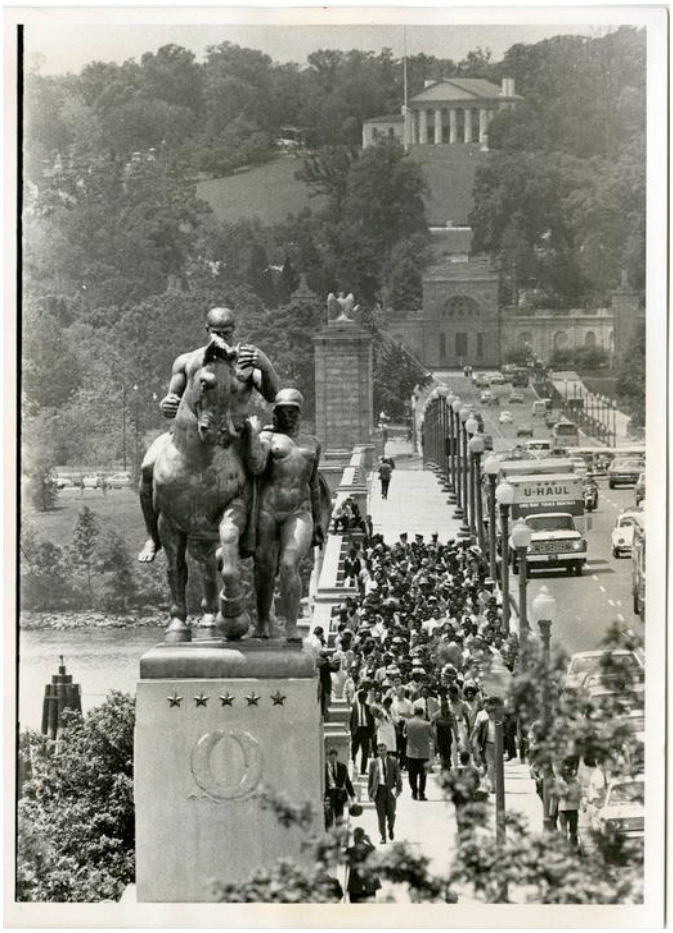




Figure 105: Parade honoring General Jonathan Wainwright, September 10, 1945 (Source: DC Public Library, The People's Archive, Historic Image Collection, dcpl_hic_006189.tif).



Figure 106: Pittsburgh Veterans for Peace at the March on the Pentagon cross Arlington Memorial Bridge, October 1967. (Source: National Archives, Identifier: 192604. Title: Public Reactions: The March on the Pentagon, 10/21/1967 Creator: President (1963-1969: Johnson).



Figure 107: Protesters marching through the Memorial Avenue Corridor with the Lincoln Memorial in the background, June 7, 2020. Photographer: Jay Westcott (Source: arlnow.com).

Existing Conditions

In more recent decades, the "Rolling Thunder First Amendment Demonstration Run" took place over Memorial Day Weekend from 1988 to 2018. For those recurring events, motorcycle riders rallied around the Pentagon before traveling a designated route across Arlington Memorial Bridge, through the cultural landscape; they ended at the National Mall in Washington, D.C. The event was a demonstration to bring awareness and accountability for prisoners of war (POWs) and those missing in action (MIAs). As of 2018, the event drew approximately 500,000 participants. The Rolling Thunder Memorial Day weekend events changed in 2022, and the tradition no longer includes a crossing over Arlington Memorial Bridge.

Other public demonstrations included a Desert Storm victory parade in 1991, in which troops marched over Arlington Memorial Bridge in honor of Allied forces' liberation of Kuwait. In 2009, demonstrators marched to protest the Iraq War. In 2020, marchers called for justice for George Floyd after his murder by police (*see Figure 107*).

Today, public demonstrations are permitted in the study area, as outlined in the May 27, 2022, George Washington Memorial Parkway Superintendent's Compendium. The tradition is maintained within the designated area of Memorial Avenue, east of VA Highway 110, and are limited to a maximum of 25 people (Superintendent's Compendium, 36 CFR 2.51, approved May 27, 2022).

EVALUATION

The cultural traditions associated with the Memorial Avenue Corridor, including funeral processions to Arlington National Cemetery and public demonstrations, are contributing elements of the cultural landscape. The landscape thus retains integrity with respect to cultural traditions.

CULTURAL TRADITIONS - CHARACTER-DEFINING FEATURES

Feature Description	*Date Established*	*Contributing Status*
Funeral processions to Arlington National Cemetery	c. 1860s	Contributing
Public demonstrations	Varied	Contributing

Buildings and Structures

Prior to the colonization of the area that today encompasses the city of Washington, D.C., indigenous peoples inhabited the region for thousands of years. Indigenous groups used the greater area for farming and hunting, and established settlements along the waterways known today as the Potomac and Anacostia Rivers. Structures to support these activities may have existed in the area. Buildings and structures within the surrounding landscape prior to the period of significance may have included buildings associated with the Freedman's Village; buildings to support the Arlington Experimental Farm (1900 to c. 1930s); and temporary Civilian Conservation Corps buildings.

Today, the Memorial Avenue Corridor is primarily an example of functional monumental architecture that is interwoven into the daily transportation needs of Washington, D.C., and surrounds. Within the corridor are several structures, many of which were part of the McKim, Mead & White designs for the landscape, including the central Arlington Memorial Bridge and the Boundary Channel Bridge. The Memorial Circle pylons and *The Arts of War* statues are part of the monumental design and included within the study area boundaries for this CLR. Additionally, later additions such as the Seabees Memorial and Spanish War Memorial on Memorial Avenue complement the overall corridor design.

ARLINGTON MEMORIAL BRIDGE

Historic Conditions

Arlington Memorial Bridge is a central component of the Memorial Avenue Corridor, spanning the Potomac River on an axis drawn between the Lincoln Memorial in Washington, D.C., and Arlington House in Virginia. The bridge connects the shoreline of Washington, D.C., around the Watergate Steps and the Lincoln Memorial, with Lady Bird Johnson Park (Columbia Island), which is also part of Washington, D.C.

The concept for a bridge linking both sides of the Potomac River dates back to the early 19th century when President Andrew Jackson promoted the idea. However, it was the death of United States General/President Ulysses S. Grant in 1885 that led to more serious discussion for a "memorial" bridge in the vicinity.

In May of 1886, Congress passed a resolution supporting a bridge between the monumental core of Washington, D.C., and Arlington, Virginia. The first bridge design was created by Thomas W. Symons of the Army Corps of Engineers. The following year, Symons collaborated with architect Paul J. Pelz and submitted a design to Congress of a Romanesque-style bridge to honor Grant. The bridge featured hipped and conical roofed towers and a central double-leaf bascule. The drawings presented to Congress used the words "Memorial Bridge" (Lee 2021: 8-92).

Col. Peter C. Hains prepared a second design that same year for a bridge connecting Washington, D.C., with Arlington National Cemetery. The design included a suspension bridge without a draw (Earley 2004: 28).

The Senate Committee on Public Buildings and Grounds requested that the Secretary of War provide an estimate for the bridge construction. Major Davis of the Army Corps of Engineers proposed a suspension bridge similar to the 1890 Hains design. In the following years, additional proposals, actions, and bills were presented to Congress regarding the development and design of a bridge across the Potomac (Lee 2021: 8-92).

In 1901, the Senate Park Commission was appointed by Michigan Senator James McMillan to guide the 20th-century development of Washington, D.C. The Senate Planning Commission published its recommendations in *The Improvement of the Park System of the District of Columbia*, also known as the McMillan Plan. The plan used Pierre L'Enfant's 1791 plan as the basis for its designs, including the

"monumental core" that terminated at a planned memorial to President Abraham Lincoln. The plan, prepared by Daniel H. Burnham, Charles F. McKim, Augustus Saint-Gaudens, and Frederick Law Olmsted, Jr., also included a low-profile monumental bridge that would link the Lincoln Memorial to Arlington House, a symbol of the Confederacy (Earley 2004: 29).

The Arlington Memorial Bridge Commission (AMBC) was established on March 4, 1913, with the purpose of overseeing the design, planning, construction, and reporting to Congress of a bridge crossing the Potomac River to Arlington, Virginia. It wasn't until June of 1922 that appropriations were finally authorized for the AMBC. The commission unanimously decided on a low-level bridge with a draw span, to be constructed on a line from the Lincoln Memorial to the former Arlington House plantation.

Lieutenant Colonel C.O. Sherrill of the Corps of Engineers and the Executive Officer of the Arlington Memorial Bridge Commission reported in a December 1922 meeting that: "The bridge is to start at the Lincoln Memorial and head toward the Lee Mansion, the bridge proper to terminate on Columbia Island, where there would be a round point, from which three roadways are to diverge, one north, to connect with the Lee Highway, one south to connect with the road to Mount Vernon, and one directly west to the Arlington National Cemetery" (CFA minutes, 18-19 Dec. 1922).

In March of 1923, the Senate Park Commission selected the architectural firm of McKim, Mead & White to design the memorial bridge (Lee 2021: 80-96). Two months later, William Mitchell Kendall of McKim, Mead & White presented to the Commission of Fine Arts his initial design for a low-profile draw bridge, with a center bascule span to allow for the passage of ships. Construction on Arlington Memorial Bridge began in 1926, and the structure opened to the public in 1932.

Upon completion, the low-profile, Neoclassical, symmetrical, multi-span bridge included nine broad arches and a steel double-leaf bascule span in the center (***see Figures 108, 109, and 110***). The bridge approaches on both sides included four smaller masonry-arch spans over roadways along



Figure 108: Aerial view of Arlington Memorial Bridge, August 10, 1935. Photographers: Harris and Ewing, from Goodyear airship Enterprise (Source: Library of Congress, Control number: 2016881340).



Figure 109: Arlington Memorial Bridge from the east side of the Potomac River. June 3, 1934. Photographers: Harris and Ewing (Source: Library of Congress, Control number: 2016880112).



Figure 110: Arlington Memorial Bridge with the Washington Monument and Lincoln Memorial on the left and bridge pylons to the right, c. 1920-c. 1950. Photographer: Theodor Horydczak (Source: Library of Congress, Control number: 2019681882).



Figure 111: West end of Memorial Bridge, c. 1938-39, with Belgian block roadway (Source: NPS/NCR: National Capital Parks, 2.12-42/11).



Figure 112: Bison head detail. (Photographer: Tim Evanson, 2013; Source: Wikimedia Commons).

the riverbanks. The span lengths of the arches increased progressively from the shore to the center, with the arches measuring 166 feet at the shore and the central bascule span arch measuring 184 feet. Likewise, the arches gently rose from the shore to center, following a parabolic vertical curve, measuring 34 feet above the mean low water level at the shorelines, and measuring 45 feet from mean low water level at the center bridge arch. As with the arches, all piers were similar in design, but varied slightly in dimension to maintain the bridge's aesthetic proportions.

The superstructure spanning the river was supported by bridge abutments on each shore, with three piers per side, in addition to two abutments between the masonry and bascule spans. The two mid-river abutments bore the loads of the bascule span and adjacent masonry span.

The substructure of Arlington Memorial Bridge was constructed with reinforced concrete, faced with a light-colored ashlar granite from the Mount Airy Quarry in North Carolina, with a bush-hammered finish. The piers and central bridge abutment had bas-relief eagles in 12-foot discs on either side, designed by American sculptor C. Paul Jennewein. Additionally, each masonry arch keystone exhibited a bison head of varied heights to suit each arch, designed by Alexander Phimister Proctor.

Upon completion, Arlington Memorial Bridge measured 2,138 feet in length from the equestrian sculptures on the east end of the bridge to the

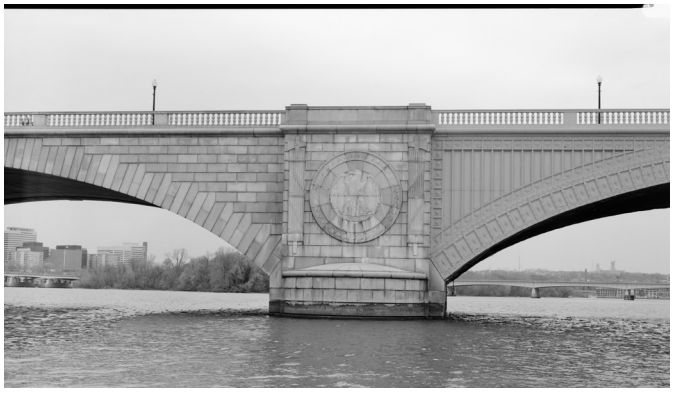


Figure 113: The bridge was accented with raised details such as this eagle carving, c. 1986-1988 ((Source: Library of Congress, Call number: HAER No. DC-7/HAER, DC, WASH, 563-).

pylons at the west bridge end (this figure is recorded in the 1986 HAER documentation, while the 1980 National Register nomination records the bridge length as 2,163 feet). The six-lane Belgian-block roadway measured 60 feet wide; together with the flanking 15-foot sidewalks (including the curbing and balustrade), the entire structure measured 90 feet wide (*see Figure 111*).

The Arlington Memorial Bridge bascule span was originally constructed with a two-piece steel fascia on each side that enclosed the span's steel truss structure. The bascule span repeated the arch form of the bridge. Rather than using the ashlar granite of the remainder of the bridge, it was decorated with ribs, coffers, and raised details that complemented the masonry arches (*see Figures 112 and 113*). Except for two small, recessed guard cabins that were integrated into the north-side balustrade, no portion of the bascule structure or mechanism was visible above the deck when the span was closed.

Due to decreased shipping traffic on the Potomac River and the construction of new bridges on the river that didn't have draw spans (thus rendering shipping traffic impossible), the decision was made to permanently close the drawbridge in 1965.

More detailed information on the history, construction, and materials of the Arlington Memorial Bridge is available in the 2014 addendum to the 1986 Arlington Memorial Bridge Report (HAER DC-7), produced by the Historic American Engineering Record, and in the updated Arlington Memorial Bridge and Related Features Historic District (Additional Documentation and Boundary Increase, 2021) National Register nomination.

Existing Conditions

Since the end of the period of significance, several changes have been made to Arlington Memorial Bridge (*see Figure 114*). In June of 1985, the Federal Aviation Administration installed a unique "Guidance Light System" on four Potomac River bridges, including Arlington Memorial Bridge, to provide reference points for pilots on landing approach to Ronald Reagan Washington National Airport from the north, where they are required to closely follow the river's path. The strobe lights on the bridges are normally off, but flash as needed

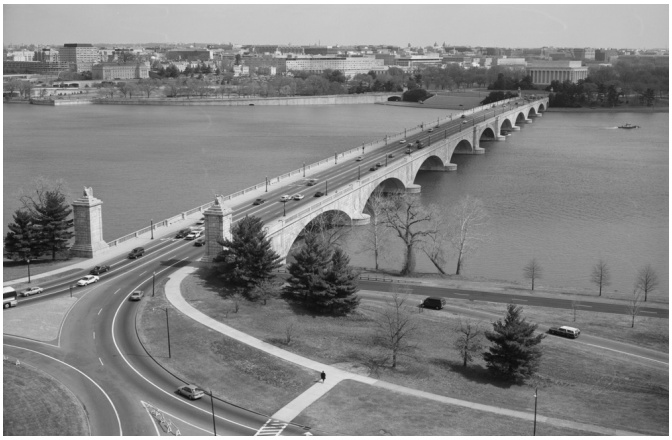


Figure 114: Arlington Memorial Bridge, c. 1986-1888 (Source: Library of Congress, Call number: HAER No. DC-7/HAER, DC, WASH, 563-).



Figure 115: Arlington Memorial Bridge during construction, fall 2019, with Arlington House visible in the background. Photographer: Liz Macro (Source: National Park Service).



Figure 116: Arlington Memorial Bridge, from the midway point where the bascule span was located. (Urban Heritage Project 2022).

when visibility is limited, so this system remains energized.

Major changes to the bridge occurred between 2018 and 2020. An inspection of the bridge's deck in 2013 identified areas in the roadway where the concrete deck of the masonry spans and piers had deteriorated. It was determined that a complete rehabilitation or replacement of the bridge would be required, with rehabilitation the choice to extend the lifespan of the bridge. It was determined that the project would have an adverse effect on the bridge's integrity due to the decision to remove the bridge's bascule span and replace it with a fixed width span as part of the project.

The NPS and Federal Highway Administration completed an Environmental Assessment in 2016 for the rehabilitation of Arlington Memorial Bridge. The NPS, in cooperation with the Federal Highway Administration, identified Alternative 1B: Replace the Bascule Span with a New Span Comprised of Variable Depth Steel Girders, as the Preferred Alternative for the rehabilitation and repair of the Arlington Memorial Bridge.

From 2018 to 2020, Arlington Memorial Bridge Rehabilitation Project implemented the selected proposal from the Environmental Assessment (*see Figure 115*). During the project, the concrete arch spans and bridge piers were rehabilitated, and the bridge expansion joints and bearing were replaced. Cracks within the ten reinforced concrete arch spans were filled with epoxy, and concrete spalling was patched with a concrete repair compound. The concrete piers below ground were repaired using epoxy suitable for underwater applications and by placing scour countermeasures such as stone (riprap) on the river bottom around the piers (Lee 2021: 8-118).

During this time, several non-structural changes were made to the bridge components, including preservation maintenance, repair, and rehabilitation of the bridge balustrades, lampposts, granite curbs, and steel fascia. The concrete bridge deck was replaced with a concrete/polymer deck and overlay to minimize water intrusion, and the travel lanes were resurfaced. An improved drainage system was also installed.

The project also included the removal of the bascule span, which had been out of operation since the 1960s (*see Figure 116*). The bascule span was replaced with a variable-depth steel girder fixed span. This required removal of bascule counterweights and housing. These efforts sought to maintain the appearance of the original architectural fabric.

Thus, although the bascule span itself was removed, the project included removal, conservation treatments, and replacement of bridge bascule center span facades, as well as the preservation of internally-housed operating rooms, machinery, and equipment. The operating machinery remains intact, but not energized. The machinery, located on the lowest floor of Abutments 2 and 3, resembles that found in many bascule bridges, but its controls and operating procedure differed in several respects to suit the uniqueness of this bridge.

Despite the adverse effect of the bascule span's removal on the bridge's integrity, the rehabilitation work on Arlington Memorial Bridge supported the continued structural integrity of the bridge and maintains its historic use connecting Washington, D.C., and Arlington, Virginia.

The closure of the drawbridge in 1961, and removal of draw span mechanism in 2018-2020, detracts from the bridge's integrity, but the number of other features that are intact outweighs the changes so that the bridge still retains a high degree of integrity. While there have been several changes to Arlington Memorial Bridge since the period of significance, the use and character-defining features retain integrity.

BOUNDARY CHANNEL BRIDGE (ARLINGTON MEMORIAL BRIDGE: BOUNDARY CHANNEL EXTENSION)

Historic Conditions

The Boundary Channel Bridge (officially called Arlington Memorial Bridge: Boundary Channel Extension) carries the Memorial Avenue roadway across the Boundary Channel between Lady Bird Johnson Park (Columbia Island) and the Arlington,



Figure 117: The Boundary Channel Bridge during construction, 1930 (Source: National Archives, Identifier: 68152164).

Virginia, shore. The Boundary Channel Bridge also carries the corridor over southbound Washington Boulevard and the southbound George Washington Memorial Parkway, which are at a lower grade beneath the bridge on Lady Bird Johnson Park (Columbia Island).

Built in 1929-1931, architect William Mitchell Kendall of McKim, Mead & White designed the Boundary Channel Bridge as a classical Beaux-Arts structure, complementing Arlington Memorial Bridge (***see Figure 117***). The Boundary Channel Bridge was constructed as a three-arched bridge composed of reinforced concrete, faced with North Carolina granite. The central semicircular arch was 100 feet in width, spanning the Boundary Channel. The bridge included 50-foot segmental-arched openings on the east and west sides of the bridge.

The Boundary Channel Bridge complemented Arlington Memorial Bridge in its design elements, including balustrades, benches, lampposts, and bison keystones in the central arch.

Granite balusters supported molded granite rails on either side of the Boundary Channel Bridge. Like Arlington Memorial Bridge, there were built-in benches along the length of the bridge. A pair of 35-foot-tall granite pylons marked the east end of the bridge, while two low pylons with minimal sculptural decoration marked the west end of the bridge. The keystones of the two bridge side arches were unornamented in design, while the keystones of the main arch are each carved with a buffalo head, designed by A. Phiminster Proctor. The Boundary Channel Bridge, like Arlington Memorial Bridge, exhibited wide sidewalks for pedestrian use.

Existing Conditions

Today, the Boundary Channel Bridge retains integrity and is a contributing feature within the cultural landscape (***see Figures 118 and 119***). The 50-foot segmental-arched opening on the east side of the bridge spans two lanes of Washington Boulevard in Lady Bird Johnson Park (Columbia Island), while the 50-foot segmental-arched opening on the west side crosses over the two-lane George Washington Memorial Parkway on the Virginia side.

In 2001-2002, in an effort to address moisture damage to the bridge, workers removed the



Figure 118: Boundary Channel Bridge, Historic American Engineering Record documentation, c. 1986-1988 (Source: Library of Congress, Call number: HAER No. DC-7/HAER, DC, WASH, 563-).



Figure 119: The Boundary Channel Bridge, looking west towards Arlington National Cemetery (Urban Heritage Project 2022).



Figure 120: The Boundary Channel Bridge and its balustrade (Urban Heritage Project 2022).

Belgian block roadway, curbs and sidewalks to install an impervious membrane over the bridge deck; these features were subsequently re-laid (*see Figure 120*). While the Belgian blocks were re-laid with a greater space between the blocks than the original configuration, the bridge continues to communicate its historic appearance.

STATE BRIDGE #5020

Historic Conditions

State Bridge #5020 was constructed in 1945 to carry Memorial Avenue over the Rosslyn Branch of the Pennsylvania Railroad. The bridge was built as two-span concrete bridge measuring 60 feet in length. The bridge was designed to blend into the roadway. Architect Paul Cret designed the grade-separation structure for the bridge and tunnel, which is rusticated to give the appearance of stone.

VA Highway 110, originally called the “Heavy-Duty Road” and later called Jefferson Davis Highway or Richmond Highway, was constructed as part of the road complex serving the Pentagon in the early 1940s. State Bridge #5020 crossed over the north-south road.

Existing Conditions

Today, State Bridge #5020 spans VA Highway 110 (*see Figure 121*). The 1997 Virginia Department of Historic Resources reconnaissance survey form describes the bridge as follows: “This is a sixty foot, two-span concrete Rigid-frame…with a holly hedge serving as railings. The bridge is designed to disappear into the landscaping of Memorial Avenue. The sides of the bridge are rusticated to give the appearance of stone.”

The bridge represents an adaptation of the original corridor design that was necessary for the Arlington Memorial Bridge to remain accessible to vehicles as the greater traffic patterns changed on Columbia Island (Lady Bird Johnson Park) in the early 1940s. State Bridge #5020 is a contributing feature of the cultural landscape.



Figure 121: State Bridge #5020 over VA Highway 110 (Urban Heritage Project 2022).

PYLONS AT ARLINGTON MEMORIAL BRIDGE AND THE BOUNDARY CHANNEL BRIDGE

Historic Conditions

By October 1929, four identical 35-foot-tall granite pylons were added to the east and west sides of Memorial Circle to mark the ends of the two bridges: one pair of pylons was constructed at the western entrance to Arlington Memorial Bridge, and the other pair at the eastern entrance to the Boundary Channel Bridge. The pylons were simple granite structures on stepped bases, ornamented with corner pilasters and stepped pyramidal tops. Each pylon featured a bas-relief sculpture of a laurel wreath (*see Figure 113*). Two smaller pylons, with minimal sculptural decoration, were also constructed at the west end of the Boundary Channel Bridge in Virginia. Architect William Kendall designed the Memorial Circle pylons.

In 1932, eight-foot sculpted granite eagles were installed atop the four larger pylons. The sculptor, C. Paul Jennewein, designed the eagles and the wreath sculptures atop the pylons.

Existing Conditions

The four pylons on the east and west sides of Memorial Circle retain integrity to the period of significance and have not been altered since installation (*see Figures 122, 123, 124, 125, and 126*). The two unadorned pylons on the west side of the Boundary Channel Bridge also have not changed since installation (*see Figure 127*). All six of the pylons are contributing resources.

"SACRIFICE" – *THE ARTS OF WAR* STATUE

Historic Conditions

The 1923 Kendall design for the Arlington Memorial Bridge included pylons at both ends of Arlington Memorial Bridge (similar to those that would eventually be constructed on either side of Memorial Circle). The design was changed shortly thereafter, replacing the pylons at the east bridgehead of Arlington Memorial Bridge with pedestals upon which statues would be placed. Sculptor Leo Friedlander created drawings of equestrian sculpture groups for the bridge entrance that were approved in 1929.

The statue pedestals were built by 1931, after extensive debate about how to integrate the pedestals into the bridge design and avoid competing with the Lincoln Memorial. As built, the pedestals were shorter and simpler than originally planned for design and budgetary reasons.

The pedestals were constructed of Mount Airy North Carolina granite on a reinforced concrete foundation that extended below grade to create a small access space below the statues. A bullnosed base and a paneled dado, designed to visually continue the bridge and parkway balustrades, were set against the concrete foundation. The pedestal shaft supporting the statue rose ten feet in height,



Figure 122: Arlington Memorial Bridge, with pylon visible at left, 1953 (Source: National Archives, Identifier: 169143208).



Figure 123: Pylons on east side of Memorial Circle, entering Arlington Memorial Bridge (Urban Heritage Project 2022).



Figure 124: Memorial Bridge pylons, Historic American Engineering Record documentation, c. 1986-1988 (Source: Library of Congress, Call number: HAER No. DC-7/ HAER, DC, WASH, 563-).



Figure 125: Pylons visible on either side of Memorial Circle, Historic American Engineering Record documentation, c. 1986-1988 (Source: Library of Congress, Call number: HAER No. DC-7/HAER, DC, WASH, 563-).



Figure 126: Memorial Circle pylon detail, undated. Photographer: Emily Zivot (Source: National Park Service).



Figure 127: The smaller, unadorned pylons on the west side of the Boundary Channel Bridge (Urban Heritage Project 2022).

eleven inches above the dado and sitting directly on the concrete foundation.

It was decided in 1938 to cast the statues in bronze rather in granite, though this was delayed on account of World War II. Ultimately, the statues were cast and gilded at foundries in Italy as a gift to the people of the United States. In 1951, twenty years after the construction of the pedestals, the sculptures were transported by barge up the Potomac River and placed on their pedestals.

Friedlander's sculptures, called "Sacrifice" and "Valor" (collectively called *The Arts of War*), marked the entrance to Arlington Memorial Bridge and symbolized the defensive strength of the nation. Similar equestrian groupings—"Music and Harvest" and "Aspiration and Literature," collectively known as *The Arts of Peace*—marked the approach to Rock Creek and Potomac Parkway. Each of the statues is of a horse and rider being led by a standing figure.

Upon completion, "Sacrifice" included three figures: a warrior, representing Mars, the god of war, mounted on a horse; a woman partially covered in drapery; and a child (supported by the woman), representing the nation's sacrifice to war. "Sacrifice" measured 17 feet tall, including the pedestal, and was set atop a rectangular bronze base with a carved top. The base was supported by channel sections that were connected to the key frame. Tension rods spanning between the walls of the base were positioned below the channels. A laurel wreath was carved on the front elevation of the statue. The inscription below the wreath read: SACRIFICE/LEO FRIEDLANDER SCULPTOR/ CAST IN BRONZE FLORENCE 1950/A GIFT FROM THE PEOPLE OF ITALY/TO THE PEOPLE OF THE UNITED STATES OF AMERICA.

The statue was cast at the Fonderia Marinelli in Florence in 36 sections, which were welded together using the oxygen-acetylene process. Inside of the statue, the key frame was made up of vertical and diagonal angles connected by plates. The frame was bolted to the granite of the pedestal. The statue was regilded in 1971.



Figure 128: Sacrifice statue on north side of the entrance to Arlington Memorial Bridge (Urban Heritage Project 2022).

Existing Conditions

The "Sacrifice" statue, located on the north side of the roadway at the east entrance to Arlington Memorial Bridge, has not been moved or altered since installation in 1951 (*see Figure 128*). The equestrian statue retains high integrity. Within the statue, small, nonferrous metal patches are bolted to the structure (presumably part of earlier repairs). There are remnants of earlier wood ladders extending up into the statue. During the 1980s, workers removed lacquer from the "Sacrifice" and replaced it with a wax finish. (Refer to the Cultural Resources Inventory System - Historic Structures [CRIS-HS] record for the most recent condition assessment documentation.)

"VALOR" – *THE ARTS OF WAR* STATUE

Historic Conditions

The statue pair were first created by Friedlander in 1913-1916, during his time at the American Academy in Rome. James Goode in The Outdoor Sculpture of Washington, DC described "Valor" as an "equestrian group with rider and woman figure holding a shield. The rider here symbolizes national manhood, while the female figure walking with a determined stride, (is) symbolic of the indomitable



Figure 129: Valor statue on the south side of the entrance to Arlington Memorial Bridge (Urban Heritage Project 2022).

spirit of the American citizen" (Goode 1974, quoted in Lee 2021: 7-19). The female was located north of the male rider, carrying the shield behind her. A panel in the rear of the horse opened to provide access to the interior of the 17-foot-tall statue.

The statue was installed atop a rectangular bronze base with a curved top, reinforced with interior metal plates. The statue pieces were cast at the Fonderia Battaglia in Milan and welded together into larger sections using an oxygen-acetylene process; the sections were then bolted together. The pieces were supported by perforated plates that sit on the granite of the pedestal shaft. The plates were connected by bolted metal tabs.

An oak wreath was added to the front elevation of the statue. The inscription below the wreath read: VALOR/LEO FRIEDLANDER SCULPTOR/CAST IN BRONZE MILAN 1950/A GIFT FROM THE PEOPLE OF ITALY/TO THE PEOPLE OF THE UNITED STATES OF AMERICA.

A space beneath the statue was accessed through a concrete shaft below a metal panel in the pavement to the north of the statue. The shaft dropped down and opened to the reinforced concrete foundation of the pedestal. An opening in the foundation's west wall provided access to a space that extends north, beneath the bridge, to the foundation of Sacrifice. The statue was regilded in 1971.

Existing Conditions

The "Valor" statue remains located on the south side of the roadway, across the street from the "Sacrifice" statues at the east entrance to Arlington Memorial Bridge. It has not been moved or altered since installation in 1951, and retains a high degree of integrity (*see Figure 129*). During the 1980s, workers removed lacquer from the "Valor" and replaced it with a wax finish. (Refer to the Cultural Resources Inventory System - Historic Structures [CRIS-HS] record for the most recent condition assessment documentation.)

SEABEES MEMORIAL

Historic Conditions

On September 18, 1972, Congress authorized the installation of the Seabees Memorial on Memorial Avenue, commemorating the members of Naval Construction Battalions (CBs) during times of war and peace. The memorial was installed on the north side of Memorial Avenue, at the west end of the Boundary Channel Bridge. The structure was dedicated on May 27, 1974. Commissioned by the Seabee Memorial Association, the memorial was designed by architect Anthony Harrar and sculpted by Felix de Weldon.

The central element of the Seabees Memorial was a nine-foot-tall standing bronze figure of a Seabee greeting a three-foot-tall child, on a base of polished Swedish black granite. The central figures were located atop a bronze base, resting on a granite base pedestal. A back wall and steles formed a U-shape around the central figures within the memorial. On the back wall behind the Seabee and child, a sculptural bronze-relief tableau depicted Seabees working at their various trades. Refer to Appendix B for the memorial inscription.

The sculpture featured freestanding steles on either side of the central figures. The steles were composed of 13½-foot tall, seven-foot-wide panels of black granite, with gilded inscriptions on either side and smaller bronze plaques on the sides



Figure 130: The Seabees Memorial, located on the north side of Memorial Avenue (Urban Heritage Project 2022).

with images of Seabees. The three free-standing walls created their own rectangular niche for the memorial, with hedges on either side of the far walls.

At the time of report production, a condition assessment for the Seabees Memorial found major structural issues with the memorial. Emergency stabilization measures were positioned around the memorial and NPS is seeking funding jointly with the Seabees Association to correct the issues and update inscriptions.

Existing Conditions

The Seabees Memorial, located on the north side of Memorial Avenue, has not been altered or moved since installation (*see Figures 130 and 131*). The memorial is a contributing feature of the cultural landscape, carrying out the original design of the "avenue of heroes."

Due to panel failure, the Seabees Memorial was scheduled for stabilization and rehabilitation work at the time of the report's writing. Refer to the Cultural Resources Inventory System - Historic Structures (CRIS-HS) record for most the recent condition assessment documentation.

SPANISH WAR VETERANS MEMORIAL ("THE HIKER")

Historic Conditions

The Spanish War Veterans Memorial, also called "The Hiker," was the second statue to be installed within a niche on Memorial Avenue. On October 2, 1964, Congress approved the placement of the bronze figural statue, which commemorated the Spanish-American War of 1898 and two related military actions, the Philippine Insurrection and the China Relief Expedition (1898-1902). The memorial was installed on the south side of Memorial Avenue, just west of the Boundary Channel Bridge. (It is opposite the Seabees Memorial, located on the north side of the avenue.) The hedges around the memorial were replanted after the statue was installed, creating a curved niche.

Designed by Theo Alice Ruggles Kitson, the memorial consisted of an eight-foot-tall bronze soldier, dressed in hat, tunic, and trousers, standing at ease, and holding a rifle across his thighs. The statue was positioned atop a four-foot square granite plinth, which tapered outward slightly from top to bottom. The plinth bore a cruciform bronze plaque with a bas-relief depicting the Army and Navy coming to the aid of Spanish colonists in the





Figure 131: (Above left and right) Details of the Seabees Memorial (Urban Heritage Project 2022).



Figure 132: (Left) The Spanish War Veterans Memorial (Urban Heritage Project 2022).

Spanish-American War. Refer to Appendix B for the memorial inscription.

Existing Conditions

The Spanish War Veterans Memorial, also called "The Hiker," has not been altered or moved since installation; it remains in place on the south side of Memorial Avenue (*see Figure 132*). The memorial is a contributing feature of the cultural landscape. (Refer to the Cultural Resources Inventory System - Historic Structures [CRIS-HS] record for the most recent condition assessment documentation.)

CHAIN-LINK FENCE

Existing Conditions

Hidden from view from Memorial Avenue behind the holly hedges, the fence separates the roadway from a several acre field located south of Memorial Avenue behind the Spanish War Veterans Memorial. The fence is approximately seven feet tall and 130 feet in length. The chain-link fence is incompatible with the character of the landscape; however, because it is obscured by the hedges, it does not visibly detract from the landscape.

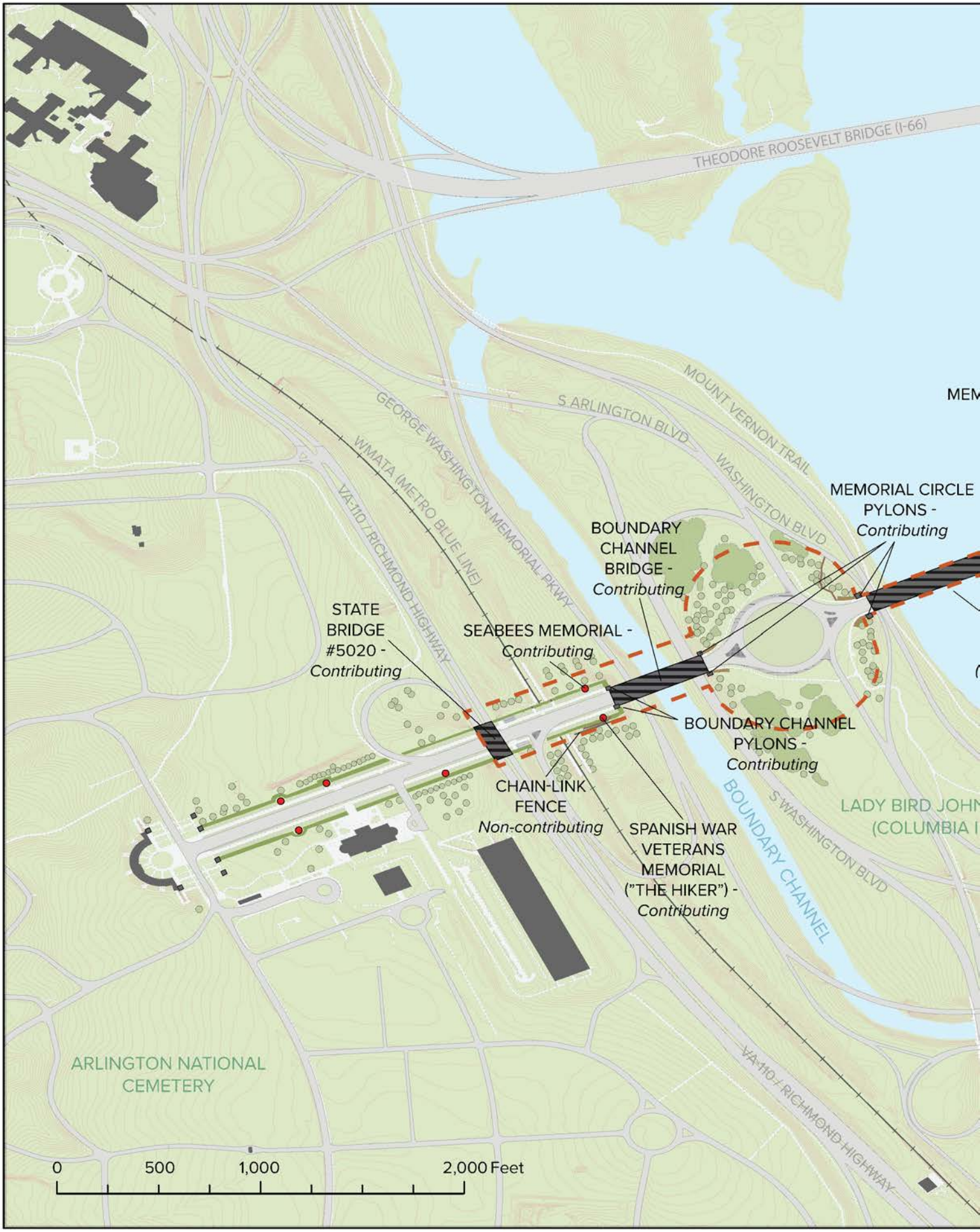
Although the date of installation of the fence is unknown, it was added after the period of significance and is a non-contributing resource.

EVALUATION

The buildings and structures—including the bridges, pylons, statues, and memorials—within the Memorial Avenue Corridor are all important features within the cultural landscape. With the one exception of the chain-link fence, all of the buildings and structures within the study area are contributing features, constructed during the period of significance and retaining integrity to that period.

BUILDINGS AND STRUCTURES - CHARACTER-DEFINING FEATURES

Feature Description	*Date Established*	*Contributing Status*
Arlington Memorial Bridge	1926-1932	Contributing
Boundary Channel Bridge (Arlington Memorial Bridge: Boundary Channel Extension)	1929-1931	Contributing
State Bridge #5020	1945	Contributing
Pylons at Arlington Memorial Bridge and the Boundary Channel Bridge	1929-1930 (eagles in place 1932)	Contributing
“Sacrifice”– The Arts of War statue	1951 (pedestal constructed 1931)	Contributing
“Valor” – The Arts of War statue	1951 (pedestal constructed 1931)	Contributing
Seabees Memorial	1974	Contributing
Spanish War Veterans Memorial (“The Hiker”)	1965	Contributing
Chain-link fence	Post period of significance	Non-contributing


THEODORE ROOSEVELT BRIDGE (I-66)
MOUNT VERNON TRAIL
S ARLINGTON BLVD
GEORGE WASHINGTON MEMORIAL PKWY
WMATA (METRO BLUE LINE)
VA-110 / RICHMOND HIGHWAY
WASHINGTON BLVD
MEMORIAL CIRCLE PYLONS - Contributing
BOUNDARY CHANNEL BRIDGE - Contributing
STATE BRIDGE #5020 - Contributing
SEABEES MEMORIAL - Contributing
BOUNDARY CHANNEL PYLONS - Contributing
CHAIN-LINK FENCE Non-contributing
SPANISH WAR VETERANS MEMORIAL ("THE HIKER") - Contributing
BOUNDARY CHANNEL
S WASHINGTON BLVD
LADY BIRD JOHN
(COLUMBIA I
ARLINGTON NATIONAL CEMETERY
VA-110 / RICHMOND HIGHWAY
0
500
1,000
2,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Buildings and Structures (Overall)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail
- Vegetation

Landscape Characteristic Features

- Building
- Bridge (Structure)
- *Arts of War* Statues (Structure)
- Memorial (Structure)
- Pylon (Structure)

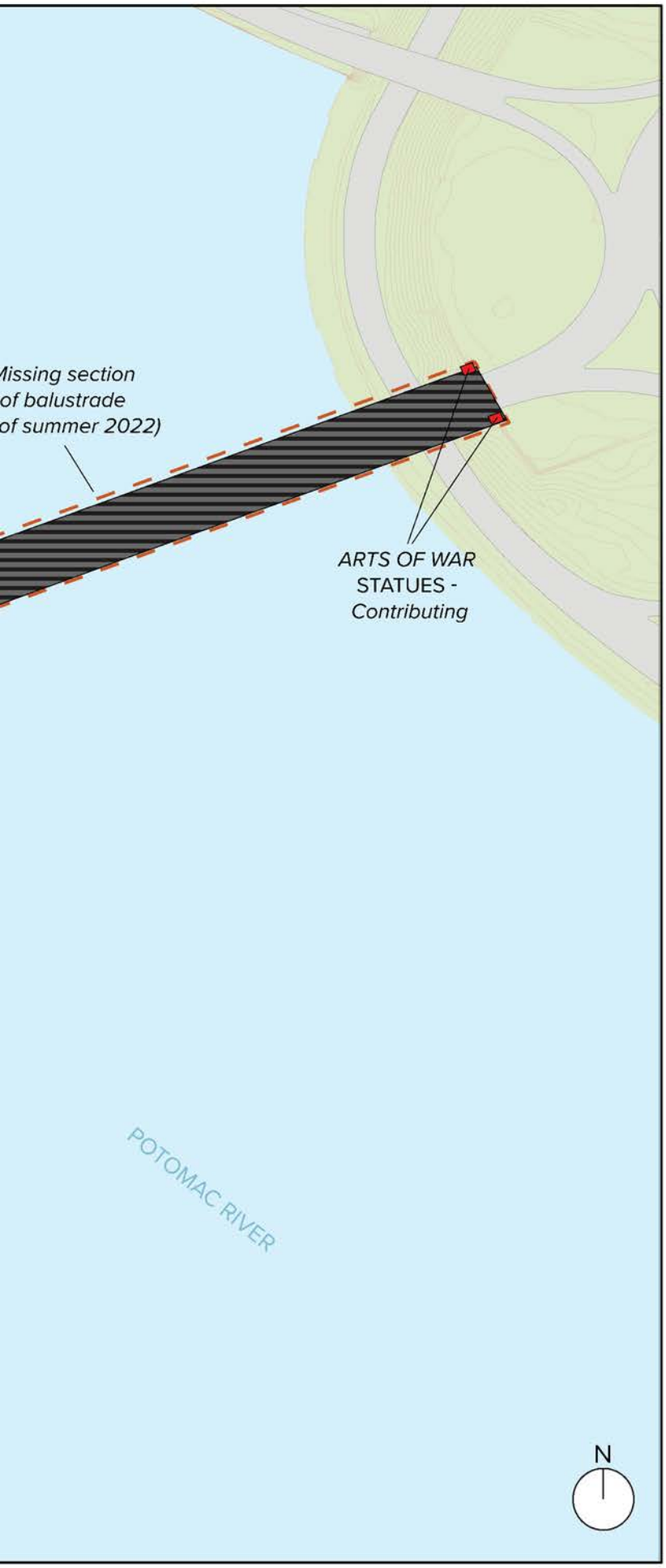
NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #16


POTOMAC RIVER
ARLINGTON
MEMORIAL BRIDGE -
Contributing
MEMORIAL CIRCLE
PYLONS -
Contributing
Missing section
of balustrade
(as of summer 2023)
MOUNT VERNON TRAIL
0
250
500
1,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Buildings and Structures (East)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail
- Vegetation

Landscape Characteristic Features

- Bridge (Structure)
- *Arts of War* Statue (Structure)
- Pylon (Structure)

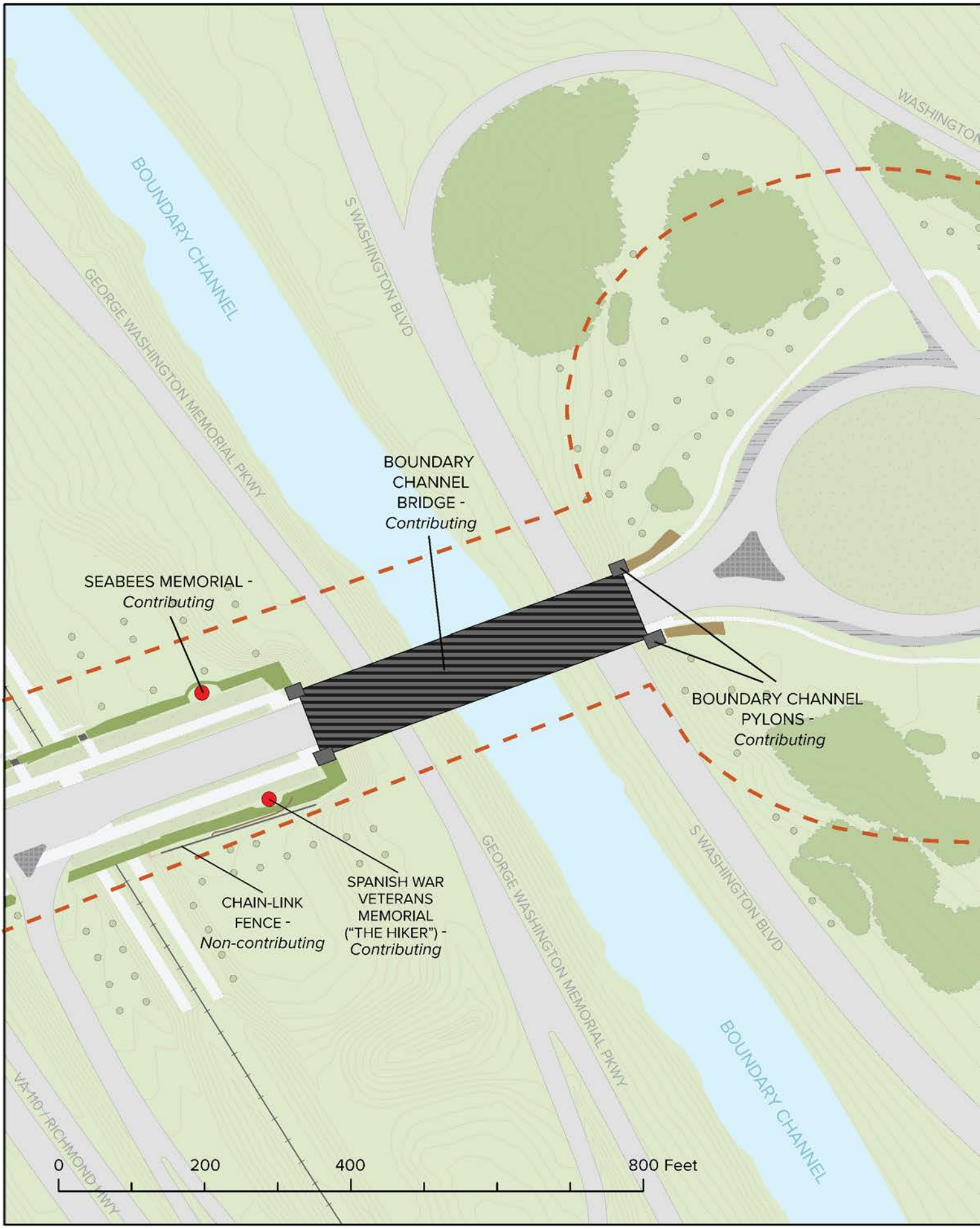
NOTES

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2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #17


BOUNDARY CHANNEL
S WASHINGTON BLVD
GEORGE WASHINGTON MEMORIAL PKWY
BOUNDARY CHANNEL BRIDGE - Contributing
SEABEES MEMORIAL - Contributing
BOUNDARY CHANNEL PYLONS - Contributing
CHAIN-LINK FENCE - Non-contributing
SPANISH WAR VETERANS MEMORIAL ("THE HIKER") - Contributing
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Buildings and Structures (Circle Area)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail
- Vegetation

Landscape Characteristic Features

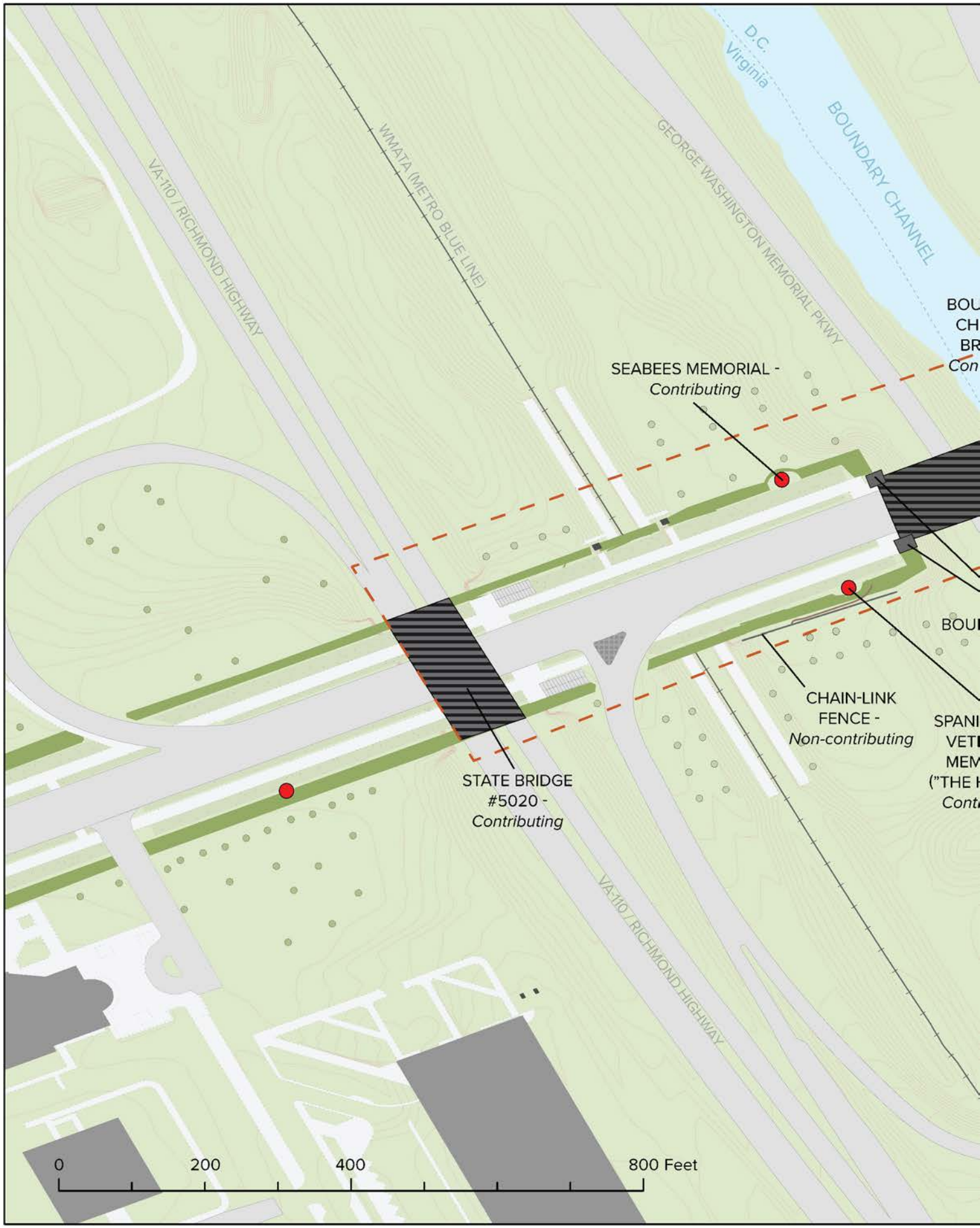
- Bridge (Structure)
- Pylon (Structure)
- Memorial (Structure)

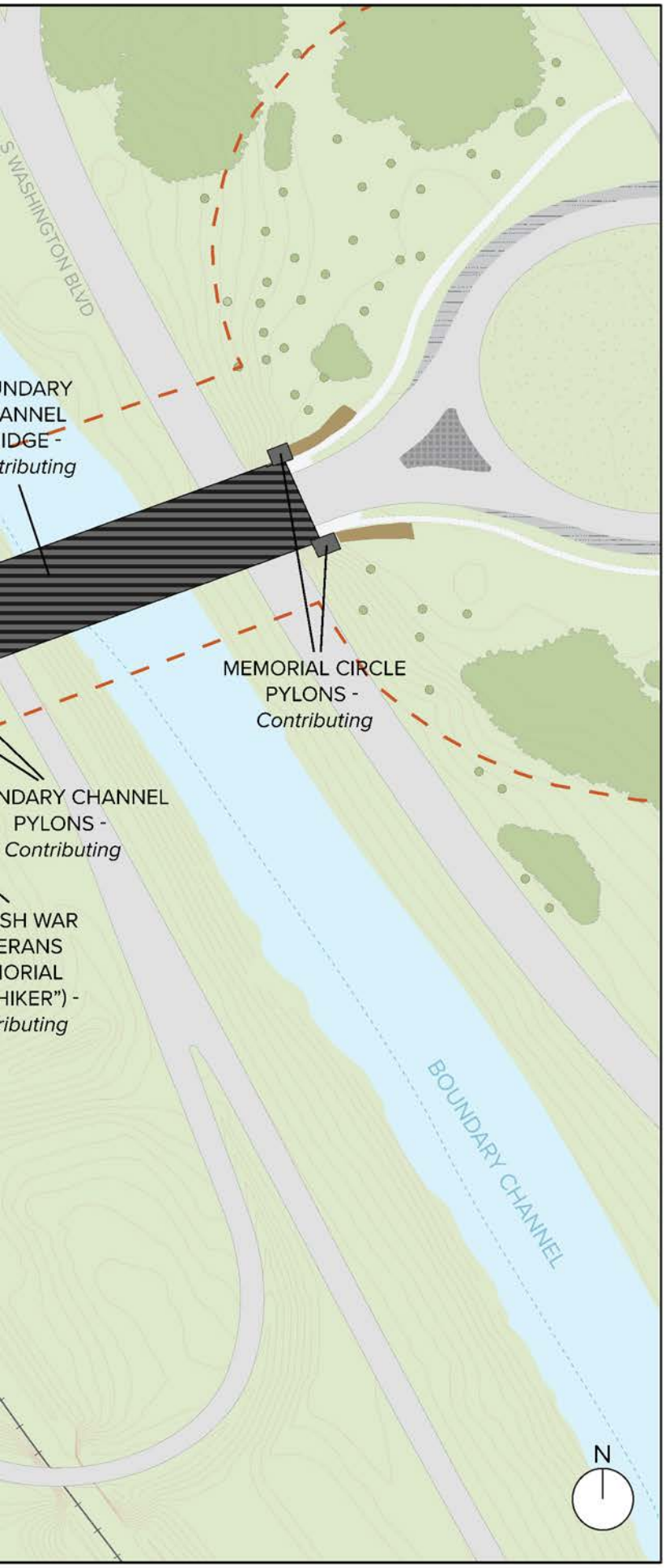
NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #18


D.C.
Virginia
BOUNDARY CHANNEL
WMATA (METRO BLUE LINE)
GEORGE WASHINGTON MEMORIAL PKWY
VA-110 / RICHMOND HIGHWAY
SEABEES MEMORIAL -
Contributing
CHAIN-LINK
FENCE -
Non-contributing
STATE BRIDGE
#5020 -
Contributing
VA-110 / RICHMOND HIGHWAY
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Buildings and Structures (West)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail
- Vegetation

Landscape Characteristic Features

- Bridge (Structure)
- Building / Structure
- Memorial (Structure)
- Pylon (Structure)

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #19

Circulation



Figure 133: Memorial Avenue roadway on the right, photographed sometime between 1920 and 1950. Photographer: Theodor Horydczak (Source: Library of Congress, Call Number: 2019681762).

As a major transportation route connecting the monumental core of Washington, D.C., with Arlington, Virginia, circulation through the Memorial Avenue Corridor is essential to the cultural landscape. The corridor is an axial roadway that crosses the Potomac River by way of Arlington Memorial Bridge, becomes a traffic rotary on Lady Bird Johnson Park (Columbia Island), and then resumes its axial character as it proceeds west as the Boundary Channel Bridge and Memorial Avenue.

The corridor functions as the formal entrance to Arlington National Cemetery and, in the other direction, a gateway to Washington, D.C., the nation's capital. Historically, circulation through Columbia Island (later, Lady Bird Johnson Park) was the most contested section of the original corridor design. The design included an elaborate cross-axis, connecting to highways to the north and south, which was never constructed. Rather, Memorial Circle was constructed as a simplified traffic rotary in 1940. Soon after, the construction of the Pentagon nearby resulted in limited alterations to the circulation patterns.

Sidewalks for pedestrian use line both sides of the bridges, the avenue, and the outer edge of Memorial Circle. The multi-use Mount Vernon Trail and "social" trails also pass through the corridor.

MEMORIAL AVENUE ROADWAY

Historic Conditions

Envisioned as part of the McMillan Plan's recommendations, the Memorial Avenue roadway continued the axis of Arlington Memorial Bridge and functioned as the formal and ceremonial entrance to Arlington National Cemetery (*see Figure 133*). At the western end of the avenue, the Hemicycle marked the terminus of the roadway.

The Memorial Avenue roadway was constructed in 1930-1932 with a width of 60 feet, edged on both



Figure 134: Memorial Avenue roadway with Belgian block centerline (Urban Heritage Project 2022).

sides by curbing (refer to Small-Scale Features for discussion of the curbing features). Memorial Avenue was originally paved with a light-colored bituminous concrete, which remained in place at least through the 1940s. By 1935, the avenue included a Belgian block or "durax" centerline, complementing the Belgian block paving of Arlington Memorial Bridge and the Boundary Channel Bridge.

Existing Conditions

The Memorial Avenue roadway maintains its historic dimensions at 60 feet wide. Originally paved with a light-colored bituminous concrete, Memorial Avenue was later covered with asphalt, and repaved with asphalt in 2002 with a one-foot-wide Belgian block centerline running down the center of the avenue (***see Figures 134 and 135***). The overall configuration of Memorial Avenue has not changed since the period of significance and is a contributing feature.



Figure 135: Aerial view of the Memorial Avenue roadway, outside of the cultural landscape study area, 1994 (Source: Library of Congress, Call number: HAER VA-30).

MEMORIAL CIRCLE

Historic Conditions

Early McKim, Mead & White designs for the Memorial Avenue Corridor included plans for what would become Memorial Circle. The Memorial Circle area was originally envisioned by architect William Kendall (of McKim, Mead & White) as an elaborate, elliptical paved plaza at the western end of Arlington Memorial Bridge. According to Kendall's plan, circulation features would include

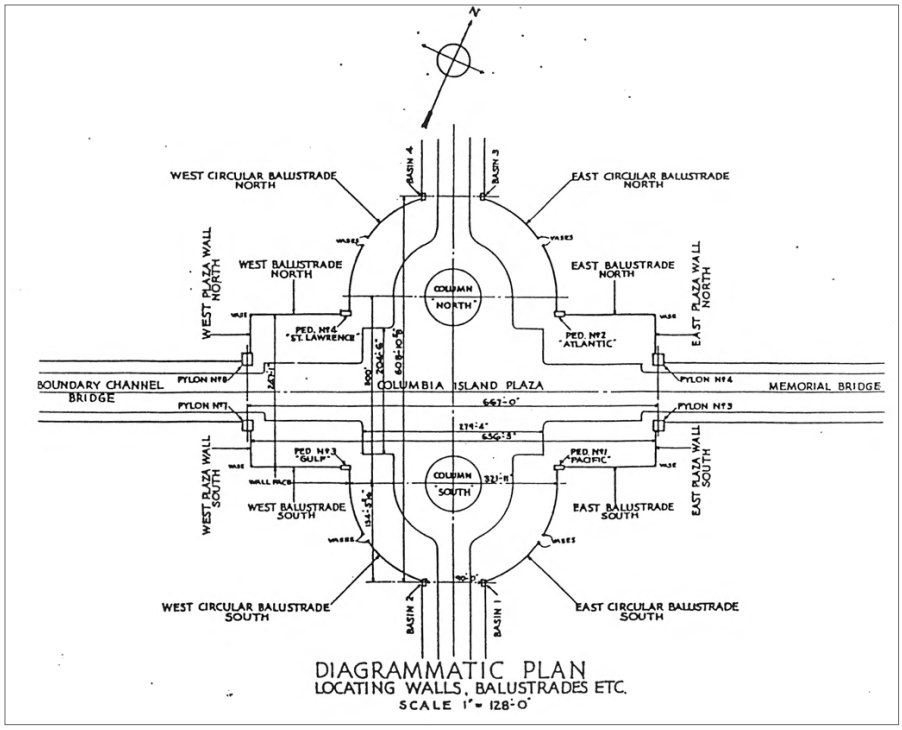


Figure 136: Early diagrammatic plan for Columbia Island, with an early rendition of traffic patterns at what would become Memorial Circle, 1930 (Source: Women in Military Service for America Memorial Foundation).

axial roads extending north and south from the elliptical central plaza, ending at circular roadways (*see Figure 136*). However, Kendall's design was never implemented.

In January 1933, landscape architect Gilmore Clarke submitted a revised plan to the CFA. Believing that the road configuration in Kendall's plan would not be suitable for use by modern vehicular traffic, which required more gentle curves, Clarke presented an updated plan for the plaza. The next plan that Clarke presented included Kendall's linear treatment for the axis of Memorial Avenue and added a single circle rather than a cross-axial ellipse. The CFA and NCPPC approved of the plan, which included parallel roads to the north and south separated by 200-foot-wide grass panels.

Following the 1933 transfer of jurisdiction from the War Department to the National Park Service (NPS), development of Columbia Island, including its circulation features, was administered by the NPS, in tandem with the CFA, the NCPPC, and other agencies.

Designs for the Memorial Circle area were modified and ultimately simplified throughout the 1930s. The Bureau of Public Roads (BPR) submitted its design for Columbia Island's circulation to the CFA in September of 1938. This design was based on concepts from Gilmore Clarke's 1934 plan for Memorial Circle and featured a single traffic rotary at the center. A roadway to the north connected with Lee Boulevard (constructed in 1938, and renamed Arlington Boulevard in 1952), and a roadway to the south connected with Mount Vernon Highway (Earley and Fanning 2005: 23). The CFA approved the 1938 design.

As construction on the George Washington Memorial Parkway moved forward in the late 1930s, road construction on the north side of Columbia Island also began. In 1938, parallel roads to the north and south were constructed, in lieu of cross-axial roads. The parallel roads were part of the construction of George Washington Memorial Parkway; the roads were approximately 800 feet long and were separated by a 200-foot-wide grass panel.

In 1938, the CFA approved a BPR design for a rotary circle at the Columbia Island plaza. In December 1939, the NPS presented a plan for two parallel roadways to the south of the circle, similar to the ones to the north. By early 1940, Memorial Circle had been constructed, with a diameter of approximately 400 feet, including the roadway and

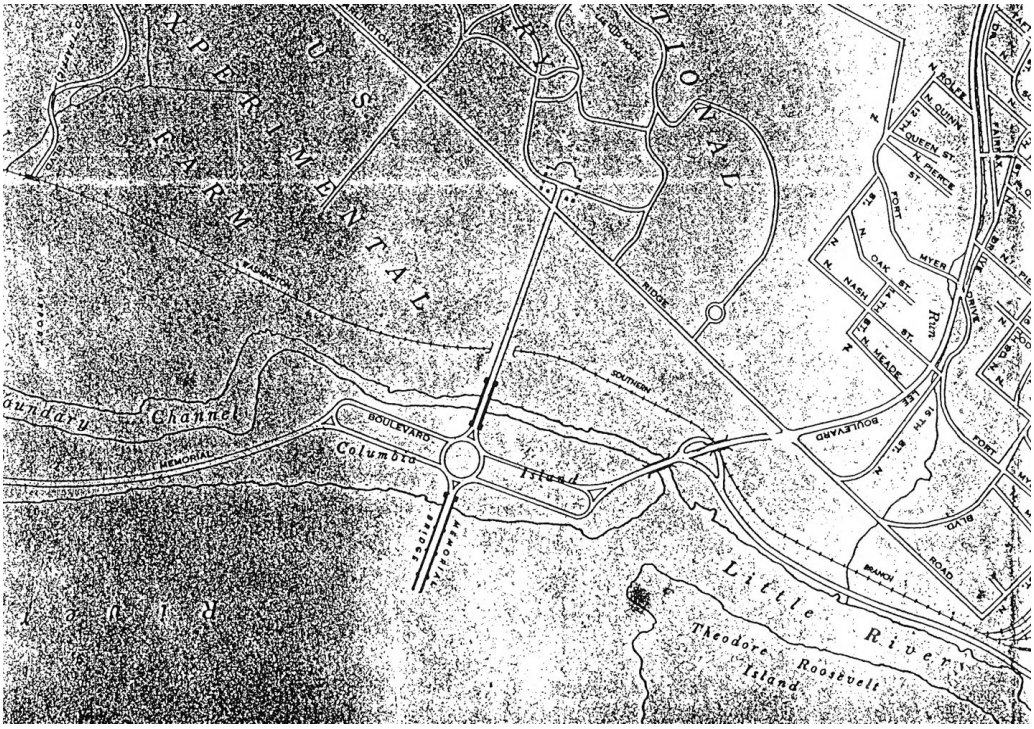


Figure 137: Arlington County map, depicting the construction of Memorial Circle, 1940 (Source: Library of Congress).



Figure 138: 1949 aerial of Memorial Circle and surrounding roadways, showing as-built conditions (Source: Historicaerials.com).

grassy lawn circle at its center (***see Figure 137***). The traffic rotary connected Arlington Memorial Bridge with Memorial Avenue. Traffic islands on the east and west sides of Memorial Circle were also completed at this time.

The cross-axis roads were only in place on Columbia Island a brief time; in 1941, significant changes to the roadways began as planning and construction for the Pentagon moved ahead. The new headquarters of the United States Department of Defense was located south of the study area, and required a network of new roadways in Columbia Island and the surrounding area (***see Figure 138***). These new roads were constructed beginning around 1941 and continuing through 1943 (Earley and Fanning 2005: 24).

Existing Conditions

As during the period of significance, Memorial Circle itself remains a traffic rotary with an open space at its center. Today, the paved roadway is one driving lane wide on the north and south sides of the circle; the east and west sides of Memorial Circle include access to other roads.

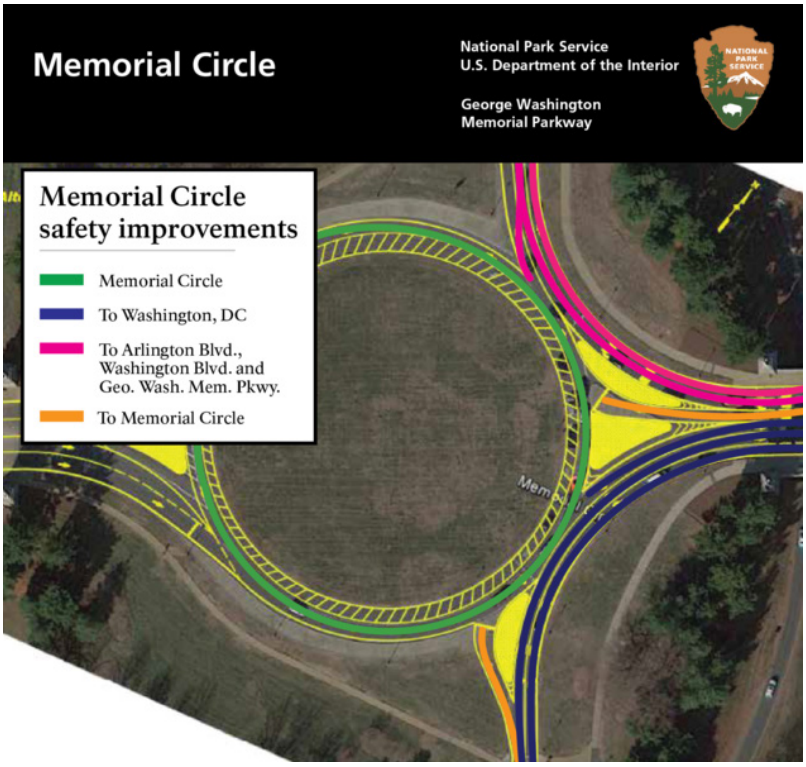


Figure 139: Diagram depicting new lane markings around Memorial Circle, 2020 (Source: NP Gallery, Asset ID: 934bb6fd-e621-4516-874b-d8d366d87216).

Traffic traveling east from Arlington National Cemetery, and from VA Highway 110 along Memorial Avenue, is directed to the south side of Memorial Circle. Traffic traveling west from Arlington Memorial Bridge either continues around the circle to Memorial Avenue, or enters the circle and immediately exits, heading north via S Arlington Boulevard. Traffic traveling from the south can either continue along the east side of Memorial Circle or enter Memorial Circle briefly and then connect with Arlington Memorial Bridge into Washington, D.C.

There have been alterations to the roadway traffic patterns in recent years. In 2018, the NPS completed a Memorial Circle Safety Improvements Environmental Assessment, with the purpose of assessing alternatives to improve transportation safety around and near Memorial Circle. The NPS executed a "Finding of No Significant Impact" in 2019. In 2020, new safety measures around Memorial Circle included higher visibility crosswalks, delineator flex posts, new traffic islands, new signage and rapid flashing beacons, clearer lane markings, lane reductions, and repaved road surfaces (*see Figure 139*). As part of this same project, a road segment on the north side of Memorial Circle that connected South Arlington Boulevard and South Washington Boulevard was closed to vehicular traffic (National Park Service, Memorial Circle Safety Improvements Environmental Assessment 2018; Friends of Mount Vernon Trail 2020).

The current configuration of Memorial Circle dates to the period of significance and is a contributing feature of the corridor.

SIDEWALKS ON ARLINGTON MEMORIAL BRIDGE AND BOUNDARY CHANNEL BRIDGE

Historic Conditions

In 1932, sidewalks were paved along both the north and south sides of Arlington Memorial Bridge (*see Figure 140*) and the Boundary Channel Bridge. For both bridges, the broad sidewalks stretched 12 feet wide between the roadway curbing and the bridge balustrades and consisted of an exposed aggregate pavement.

In 1965, the sidewalks on Arlington Memorial Bridge were repaved, resulting in pavement of a slightly different color than the walks on the Boundary Channel Bridge and different than the original bridge design.



Figure 140: Sidewalk on Arlington Memorial Bridge, 1952 (Source: DC History Center, WY 3830.55).



Figure 141: Arlington Memorial Bridge sidewalk, looking west/southwest from the bridge (Urban Heritage Project 2022).



Figure 142: Arlington Memorial Bridge sidewalk, with Lincoln Memorial in background (Urban Heritage Project 2022).

Existing Conditions

The sidewalks on Arlington Memorial Bridge and the Boundary Channel Bridge have not changed substantially since the period of significance. The sidewalks measure 12 feet wide, scored into four-foot squares, with three squares across the width of the sidewalk. The size of the aggregate differs across the bridges, though all of the aggregate measures three-quarters of an inch or less (*see sidewalk type S1 on Drawings #22 and #24*).

On Arlington Memorial Bridge, the sidewalks were repaved in 1985, resulting in pavements with a slightly different color from the original material and from the sidewalks on the Boundary Channel Bridge. The exposed aggregate sidewalks along Arlington Memorial Bridge were replaced during the 2018-2020 bridge rehabilitation project with an exposed aggregate concrete/polymer concrete sidewalk designed to minimize water intrusion (*see Figures 141, 142, and 143*).

On the Boundary Channel Bridge, the sidewalks were replaced in c. 2004 with a larger aggregate than the original (*see Figure 144*). The aggregate is currently as large as three quarters of an inch. The color of the Boundary Channel Bridge sidewalk is close to the original color, and is slightly darker than the lighter toned sidewalks of Memorial Avenue (*see Figure 144, and sidewalk type S1 on Drawings #22 and #24*).

SIDEWALKS ON MEMORIAL AVENUE

Historic Conditions

Sidewalks on either side of Memorial Avenue were part of the original McKim, Mead & White design for the avenue (*see Figure 145*). The Memorial Avenue sidewalks were paved in c. 1936. The sidewalks lined the north and south sides of Memorial Avenue, buffered on either side by a grass panel (*see Figures 146 and 147*). The pavement was described in an early drawing as “reinforced concrete, scrubbed surface, exposed aggregate” (NPS 2E6-126). The drawing did not specify the size of the aggregate. The sidewalks were repaved in c. 1965, resulting in a slightly different color pavement than the original sidewalks.

Existing Conditions

The sidewalks along Memorial Avenue have not been substantially altered since the period of significance, with the exception of curb cuts added in c. 1985 (*see Figure 148*). The sidewalks were also repaved at this time, likely changing the color of the sidewalks. The Memorial Avenue sidewalks today are a tan color with an exposed aggregate (*see sidewalk type S1 on Drawings #22 and #24*). Where the curb cuts are located, the paving is gray in tone, compared to the tan sidewalks. As during the period of significance, the avenue sidewalks are 15 feet wide and scored into five-foot squares, with three squares across the width of the sidewalk.

On the east side of Memorial Avenue, the sidewalk connects with the Boundary Channel Bridge sidewalk. The grass panels end where the Memorial Avenue sidewalk meets the Boundary Channel Bridge (*see Figure 147 and Drawings #24 and #26*). The sidewalks along Memorial Avenue are contributing circulation features.

BELGIAN BLOCK CENTERLINE ON MEMORIAL AVENUE

Historic Conditions

The roadway lanes of Memorial Avenue were originally paved with a light-colored bituminous concrete, separated by a one-foot-wide centerline composed of Belgian block. The centerline was part of the original design and in place by 1935. The centerline was three Belgian blocks wide, creating a visual division between the two lanes of traffic on Memorial Avenue (although the blocks did not protrude above the roadway). The centerline extended along the full length of the avenue to the entrance of Arlington National Cemetery.

Existing Conditions

As during the period of significance, Memorial Avenue has a Belgian block centerline that runs down the middle of the avenue, dividing the traffic lanes (*see Figure 134*). The centerline dividing the two directions of traffic is a one-foot-wide strip, created by laying three rows of Belgian block side by side. This historic element has been retained,



Figure 143: Arlington Memorial Bridge sidewalk (Urban Heritage Project 2022).



Figure 144: Boundary Channel Bridge sidewalk (Urban Heritage Project 2022).

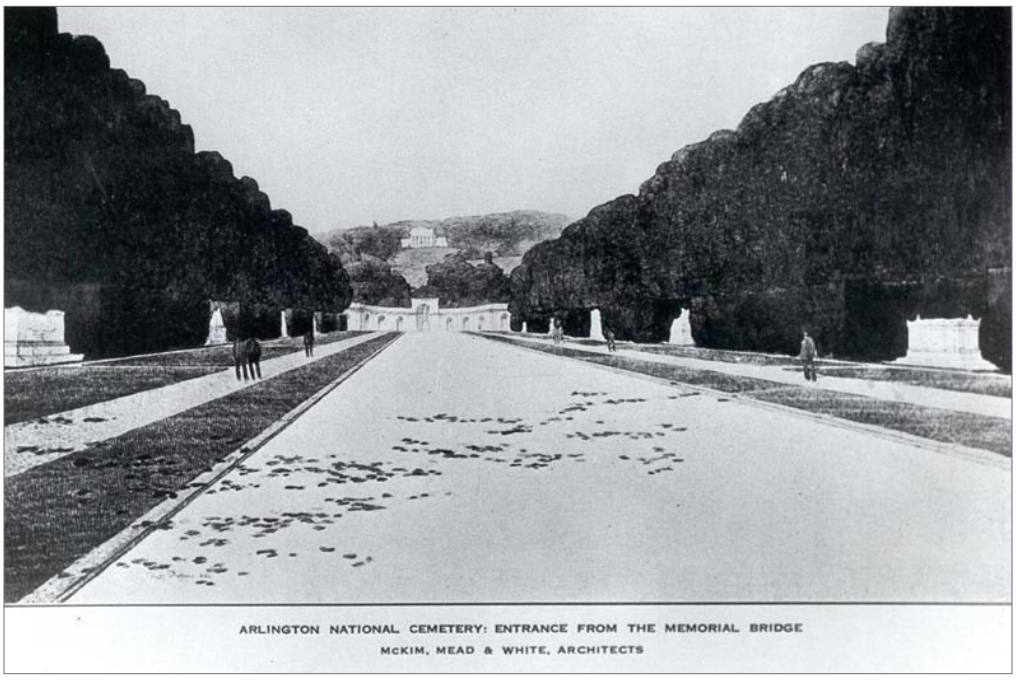


Figure 145: McKim, Mead & White perspective drawing of proposed Memorial Avenue entitled "Arlington National Cemetery: Entrance from the Memorial Bridge," with planned sidewalks and associated grass panels visible on either side of the roadway, c. 1929 (Source: National Park Service, MRCE, Arlington National Cemetery, 5584-F).



Figure 146: Memorial Avenue sidewalks visible on left side of image with entrance to Arlington National Cemetery in background, c. 1920-c. 1950. Photographer: Theodor Horydczak (Source: Library of Congress, Call number: 2019681762).



Figure 147: Sidewalk along Memorial Avenue where it connects with the Boundary Channel Bridge sidewalk (Urban Heritage Project 2022).

although the use of a different mortar than during the period of significance has slightly changed its appearance on Memorial Avenue. The centerline is a contributing feature.

BELGIAN BLOCK TRAFFIC ISLAND ON MEMORIAL AVENUE

Historic Conditions

A triangular traffic island paved in Belgian block was placed at the off-ramp of the George Washington Memorial Parkway and VA Highway 110, separating traffic going to and from Memorial Avenue. While not visible in 1960 aerial photographs, the traffic island is depicted on a 1964 map of "Conditions Upon Completion of Current Contracts (1964)" as a roughly triangular traffic island at the intersection of Memorial Avenue and the VA Highway 110/George Washington Memorial Parkway off-ramp, consistent with the current footprint and location.

Existing Conditions

In c. 1985, the traffic island was altered to create an accessible path through the island, creating two smaller traffic islands separated by a walkway on grade (*see Figures 149 and 150*). While the traffic island has been altered with the addition of the curb cut, the original form of the traffic island is still legible and maintains integrity.

BELGIAN BLOCK TRAFFIC ISLANDS ON EAST AND WEST SIDES OF MEMORIAL CIRCLE

Historic Conditions

Traffic islands on the east and west sides of the Memorial Circle rotary are visible in 1940s photographs (*see Figure 151*). They were roughly triangular in shape and were finished with Belgian block.

On the west side of Memorial Circle, the traffic island pointed towards the center of the Boundary Channel Bridge roadway. The island directed traffic heading east from the Boundary Channel Bridge onto the Memorial Circle roadway, and vehicles



Figure 148: Gray curb cut and tan sidewalk along south side of Memorial Avenue (Urban Heritage Project 2022).



Figure 149: Traffic island with accessible crossing where VA Highway 110/George Washington Memorial Parkway off-ramp intersects with Memorial Avenue (Urban Heritage Project 2022).

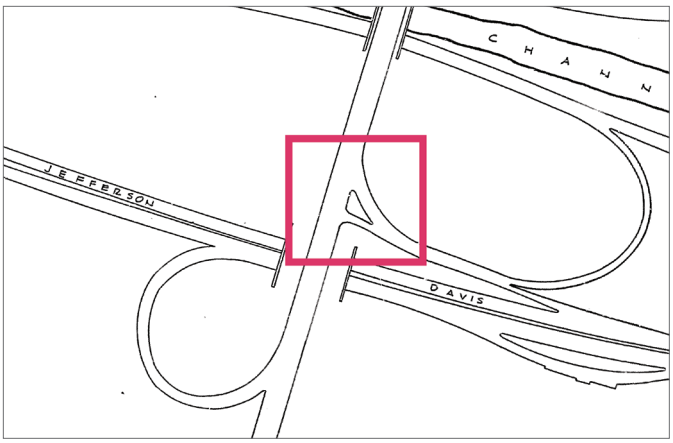


Figure 150: Detail of intersection of VA Highway 110 off-ramp with Memorial Avenue, 1964 (Source: National Park Service, eTIC GWMP 85080838).

heading west from Memorial Circle to the Boundary Channel Bridge.

On the east side of Memorial Circle, the traffic island pointed towards the center of the Arlington Memorial Bridge roadway. Traffic heading west from Arlington Memorial Bridge was directed to the north side of the traffic islands, while traffic from the west was directed to the south side of the traffic island onto Arlington Memorial Bridge.

Existing Conditions

While historically there were two traffic islands around Memorial Avenue, one on the east side and one on the west side, today there are three, one on the west side and two traffic islands on the east side.

As during the period of significance, on the west side of Memorial Circle is a Belgian block traffic island, a modified triangle in shape, with the top point of the triangle pointing towards the center of the Boundary Channel Bridge roadway to the west. Traffic heading east from the Boundary Channel Bridge is directed to the south side of the traffic island onto the Memorial Circle roadway. Traffic from Memorial Circle heading west travels along the north side of the traffic island, directed onto the Boundary Channel Bridge.

On the east side of Memorial Circle are two traffic islands directing traffic exiting and entering

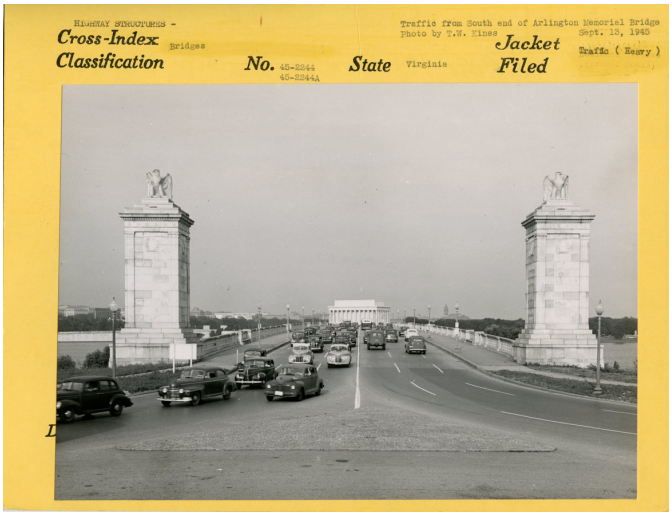


Figure 151: Belgian block traffic island on east side of Memorial Circle, 1945 (Source: National Archives, Identifier: 169143953).



Figure 152: Belgian block traffic island on west side of Memorial Circle (Urban Heritage Project 2022).

Arlington Memorial Bridge. Prior to early 2021, there was only one traffic island on the east side of Memorial Circle. This traffic island was a modified triangle, like the island on the west side of the circle, which pointed towards the middle of Arlington Memorial Bridge.

During the rehabilitation work associated with Memorial Circle safety improvements, the traffic island on the east of Memorial Circle was altered in size and shape, creating two smaller traffic islands that change the traffic patterns on the northeast side of Memorial Circle (*see Drawing #23*). The larger island is a modified triangle, while the smaller island is irregularly shaped, located just north of the triangular island, separated by one lane of traffic. The smaller traffic island is elongated with rounded edges on the east and west side sides.

The traffic patterns changed in tandem with the changes in traffic islands on the east side of Memorial Circle. Traffic exiting Arlington Memorial Bridge and entering Memorial Circle with the intention of traveling around Memorial Circle to points west are directed to travel between the two traffic islands, while traffic intending to travel north via S Arlington Boulevard are directed to two lanes of traffic north of the smaller traffic islands.

The traffic island on the west side of Memorial Circle retains integrity and is a contributing feature (*see Figure 152*). The traffic island on the east side has been altered in size and shape and is now subdivided into two smaller islands. While the islands continue to direct traffic as they did during the period of significance, their design and workmanship have been altered. Thus, these two smaller traffic islands on the east side of Memorial Circle are non-contributing but compatible.

BELGIAN BLOCK ROADWAY SURFACE ON BOUNDARY CHANNEL BRIDGE

Historic Conditions

Upon construction in 1929-1931, the Boundary Channel Bridge was surfaced with Belgian block, 3½-inch-square granite block. The block was laid in an interlocking pattern described by several names—fish-scale, fan, and tulip.

Existing Conditions

Unlike Arlington Memorial Bridge, the Boundary Channel Bridge has retained its historic granite block surface. However, its appearance has changed slightly since the period of significance. During repair work in 2002, the Belgian block was temporarily removed so that an impervious membrane could be laid over the bridge deck to prevent water damage to the structure. Although the original blocks were eventually re-laid in their original fan-shaped pattern, the spacing between the blocks was altered; there is now greater distance between blocks, and a much heavier use of mortar between the blocks (*see Figure 153*). (Refer to the Small-Scale Features section for discussion of the granite header stones that mark both ends of the Durax roadway.) While there have been some changes, overall the Belgian block roadway surface retains integrity and contributes to the cultural landscape.



Figure 153: Detail of fan-shaped pattern of Belgian block roadway on the Boundary Channel Bridge (Urban Heritage Project 2022).

VIRGINIA HIGHWAY 110 AND THE GEORGE WASHINGTON MEMORIAL PARKWAY OFF-RAMP

Historic Conditions

An off-ramp from VA Highway 110 to access the south side of Memorial Avenue was constructed in c. 1941. In 1964, as part of other road construction in the area, an off-ramp from George Washington Memorial Parkway was constructed that connected with the existing VA Highway 110 off-ramp onto Memorial Avenue. Following construction, traffic exiting VA Highway 110 and traffic from George Washington Memorial Parkway merged onto a shared off-ramp accessing Memorial Avenue. Around this time, it appears that the off-ramp intersection with Memorial Avenue may have been widened slightly to accommodate left turns, allowing traffic to either make a right or a left onto Memorial Avenue.

Existing Conditions

The combined off-ramp from VA Highway 110 and the George Washington Memorial Parkway remain in place, approaching Memorial Avenue from the south. The off-ramp maintains integrity to the period of significance and continues to serve its original function as a circulation feature.

ARLINGTON BOULEVARD AND WASHINGTON BOULEVARD WITHIN LADY BIRD JOHNSON PARK (COLUMBIA ISLAND)

Historic Conditions

A network of new roads was constructed on Columbia Island (later, Lady Bird Johnson Park) to access the Pentagon complex in the late 1930s and early 1940s. These roads included Arlington Boulevard (originally called Lee Boulevard), constructed in 1938, and Washington Boulevard, completed in the early 1940s. These roads traverse Lady Bird Johnson Park as broad sweeping routes that intersect with other roads connecting through the region.

Southbound Washington Boulevard traveled beneath the Boundary Channel Bridge bridgehead



Figure 154: Belgian block shoulder lane between the Memorial Circle roadway and adjacent grass panel (Urban Heritage Project 2022).

on the west side of Lady Bird Johnson Park, while northbound Washington Boulevard traveled beneath the Arlington Memorial Bridge bridgehead. Both Washington Boulevard and Arlington Boulevard directed vehicular traffic north and south along the island and connected to other road networks.

Existing Conditions

As during the period of significance, the study area includes sections of Arlington Boulevard and Washington Boulevard within Lady Bird Johnson Park (Columbia Island). The roads are in their original locations and serve their same purpose, connecting these thoroughfares to surrounding roadways. As during the period of significance, southbound Washington Boulevard travels beneath the Boundary Channel Bridge bridgehead on the west side of Lady Bird Johnson Park, while northbound Washington Boulevard travels beneath the Arlington Memorial Bridge bridgehead.

SHOULDER LANES ON NORTH AND SOUTH SIDES OF MEMORIAL CIRCLE, BETWEEN THE ROAD AND GRASS PANELS

Existing Conditions

Prior to 2006, the roadway around Memorial Circle was three lanes wide on the north and south sides of the circle. In late 2006, tapered shoulder lanes were added in the outermost lane around the rotary, reducing the roadway to one driving lane on the north and south sides. The shoulder lanes are a safety measure, reducing the number of vehicle travel lanes. Their design maintains the historic character of the traffic circle.

When they were first installed, the shoulder lanes were paved with concrete. During a 2020 rehabilitation project at Memorial Circle, the lanes were paved with Belgian block, complementing the other Belgian block features in the landscape (*see Figures 154 and 155*). Because they post-date the period of significance but are otherwise consistent with the circulation function of the roadway, the shoulder lanes are non-contributing but compatible.

SIDEWALKS AROUND MEMORIAL CIRCLE

Historic Conditions

Dating to c. 1940, the sidewalks around Memorial Circle were constructed to connect the sidewalks of the Boundary Channel Bridge with the sidewalks of Arlington Memorial Bridge (*see Figure 151*). The sidewalks around Memorial Circle appear to have been constructed roughly following the shape of rotary, separated from the roadways by a grass panel several feet wide. Pedestrians walking around Memorial Circle were required to cross the Washington Boulevard and Arlington Boulevard vehicular roadways within Lady Bird Johnson Park (Columbia Island). The sidewalk on the southeast side of Memorial Circle connected with the bridle trail located along the Potomac River shoreline (*see Figure 156*).

These sidewalks around the circle were paved later than the sidewalks on Arlington Memorial Bridge, the Boundary Channel Bridge, and Memorial Avenue. The paving details of the original Memorial Circle sidewalks are unknown.

Existing Conditions

The sidewalks around Memorial Circle continue to carry pedestrians from Arlington Memorial Bridge and points east to the Boundary Channel Bridge and Memorial Avenue to the west, in addition to connecting pedestrians to the multi-use Mount Vernon Trail.

In the late 1980s, changes were made to the sidewalks around Memorial Circle following a safety study (Bellomo-McGee, September 1986). Additional changes were made to the sidewalk alignments and pedestrian crossings in 2000-2001, following additional studies (Robert Peccia & Assoc., 1998). Sidewalks that approached roadways at acute or oblique angles were slightly re-aligned at right angles. This moved the sidewalks further away from the roadway on the circle's northeast and southeast sides, improving visibility between pedestrians and vehicular traffic. Also in 2000-2001, concrete curb cuts were added and improved (Earley 2004: 113).



Figure 155: Belgian block shoulder lane between Memorial Circle roadway and adjacent grass panel (Urban Heritage Project 2022).



Figure 156: 1949 aerial of Memorial Circle showing sidewalks around Memorial Circle connecting with the Boundary Channel Bridge sidewalks on the left and Arlington Memorial Bridge sidewalks on the right. The pedestrian connection to the bridle trail is visible on the right-hand side of the aerial traveling south away from Memorial Circle (Source: Historicaerials.com).



Figure 157: Sidewalk around Memorial Circle, approaching the intersection with S Arlington Boulevard from the north side (Urban Heritage Project 2022).

In 2012, the spur of the Mount Vernon Trail on the southeast side of Memorial Circle was rerouted and paved with asphalt. The asphalt paving introduced a new material type where the Memorial Circle pedestrian walkway and trail meet.

In 2019, the temporary implementation of the Memorial Circle safety improvements added a crosswalk on the west side of Memorial Avenue between Memorial circle and the Boundary Channel Bridge.

Today, the sidewalks around Memorial Circle do not follow the circular form of the roadway, but rather are set back from the roadway (by grass) at varying distances (***see Drawings #23 and #24***). The sidewalks more closely follow the circular roadway on the west side of Memorial Circle, while on the east side, the sidewalks move away from the circle, directing pedestrians to crosswalks at Arlington Boulevard and Washington Boulevard to safely cross the roads further from the circle. Upon crossing Arlington Boulevard and Washington Boulevard, the sidewalks then travel along the Memorial Circle roadway to connect with the sidewalks on Arlington Memorial Bridge.

The widths of the sidewalks around Memorial Circle vary, as do the colors of pavement, and the scoring of the pavement (***see Figures 157, 158, 159, 161, and 162, and Drawing #24***). As noted, these sidewalks vary in distance from the roadway, separated by a grass panel.

The sidewalks on the north and south sides of Memorial Circle, west of the intersections with S Arlington Boulevard, are narrower than the sidewalks on the east side of the circle; these walks are a light tan color (***see Figure 148, and sidewalk type S3 on Drawing #24***).

The sidewalk on the northeast side of Memorial Circle, east of the S Arlington Boulevard intersection near the entrance to the Arlington Memorial Bridge, is wider than the sidewalks on the west side of the circle and is scored into two squares across the width of the sidewalk. This portion of the sidewalk is off-white in color, lighter than the surrounding sidewalk sections (***see Figure 159 and refer to Drawing #24 for sidewalk type S1).*** These sidewalks more closely resemble the sidewalks on Arlington Memorial Bridge, the Boundary Channel Bridge, and Memorial Avenue.

On the southeast side of Memorial Circle, east of the S Arlington Boulevard intersection, the sidewalk is the same width as on the northeast side and are also scored into two squares across the width of the sidewalk (***see sidewalk type S1 on Drawing #24***). The section of sidewalk traveling south from the Lady Bird Johnson memorial plaque is narrower than the northern portion of the sidewalk. The pavement is tan with a large, exposed aggregate (***see S3 on Drawing #24***).

There is a Belgian block perimeter along the outside of the sidewalk on the southeast side of Memorial Circle (***see Figure 160***). The Belgian block perimeter is three blocks wide and overgrown with grass, but clearly visible between the sidewalk and curved pavement where the Lady Bird Johnson



Figure 158: Sidewalk around Memorial Circle, approaching Arlington Memorial Bridge from the northeast side (Urban Heritage Project 2022).



Figure 159: Sidewalk around Memorial Circle, approaching Arlington Memorial Bridge from the southeast side (Urban Heritage Project 2022).



Figure 160: Sidewalk materials along Memorial Circle near the Lady Bird Johnson memorial plaque, and Belgian block visible on right side of sidewalk (Urban Heritage Project 2022).



Figure 161: Sidewalks on southeast side of Memorial Circle at the intersection with the Mount Vernon Trail. The walks in this area feature an amalgam of paving materials (Urban Heritage Project 2022).

memorial plaque is located. It is unknown when this feature was added.

The sidewalks on the southeast side of Memorial Circle, at the intersection of the pedestrian path and the access trail for the Mount Vernon Trail, are an amalgam of various paving types (***see Figures 161 and 162***). The sidewalk materials include: asphalt from Mount Vernon Trail from the south (***see sidewalk type S4 on Drawings #22 and #24***); a dark tan exposed aggregate paving from the west that roughly matches the paving of Arlington Memorial Bridge, the Boundary Channel Bridge, and Memorial Avenue (***see sidewalk type S1 on Drawings #22 and #24***); and a white/beige exposed aggregate paving from the north (***see sidewalk type S3 on Drawings #22 and #24***). The portion of Mount Vernon Trail that accesses Memorial Circle from the south was realigned and repaved c. 2012.

On the southwest side of Memorial Circle, there is one section of sidewalk that is lighter in color than the rest of the sidewalks in this area (***see S3, Drawings #22 and #24***). This section of sidewalk matches the Memorial Circle sidewalks west of S Arlington Boulevard, described in the paragraph above. The entire sidewalk is scored as single-width squares.

The sidewalks around Memorial Circle vary in color, width, and material from their historic condition. They have been altered since the period of significance with the addition of new materials and sidewalk realignment on the east side of the circle in 2001/2002. These changes post-date the period of the significance. The 2004 CLI evaluated this trail as Undetermined in contributing status, but this CLR has evaluated the trail as a non-contributing but compatible feature.

SOCIAL TRAILS

Existing Conditions

There are social trails in Lady Bird Johnson Park (Columbia Island), notably on the northeast side of the Memorial Circle, connecting the Memorial Circle sidewalk to the Mount Vernon Trail along the Potomac River (***see Figure 163***). This social trail does not alter the legibility of the overall landscape design. There are also social trails among the holly hedges (*Ilex opaca*) on Memorial Avenue, including behind the Seabees Memorial and Spanish War Veterans Memorial. The social trails are non-contributing features within the cultural landscape.



Figure 162: Sidewalks on southeast side of Memorial Circle at the intersection with the Mount Vernon Trail. The walks in this area feature an amalgam of paving materials (Urban Heritage Project 2022).



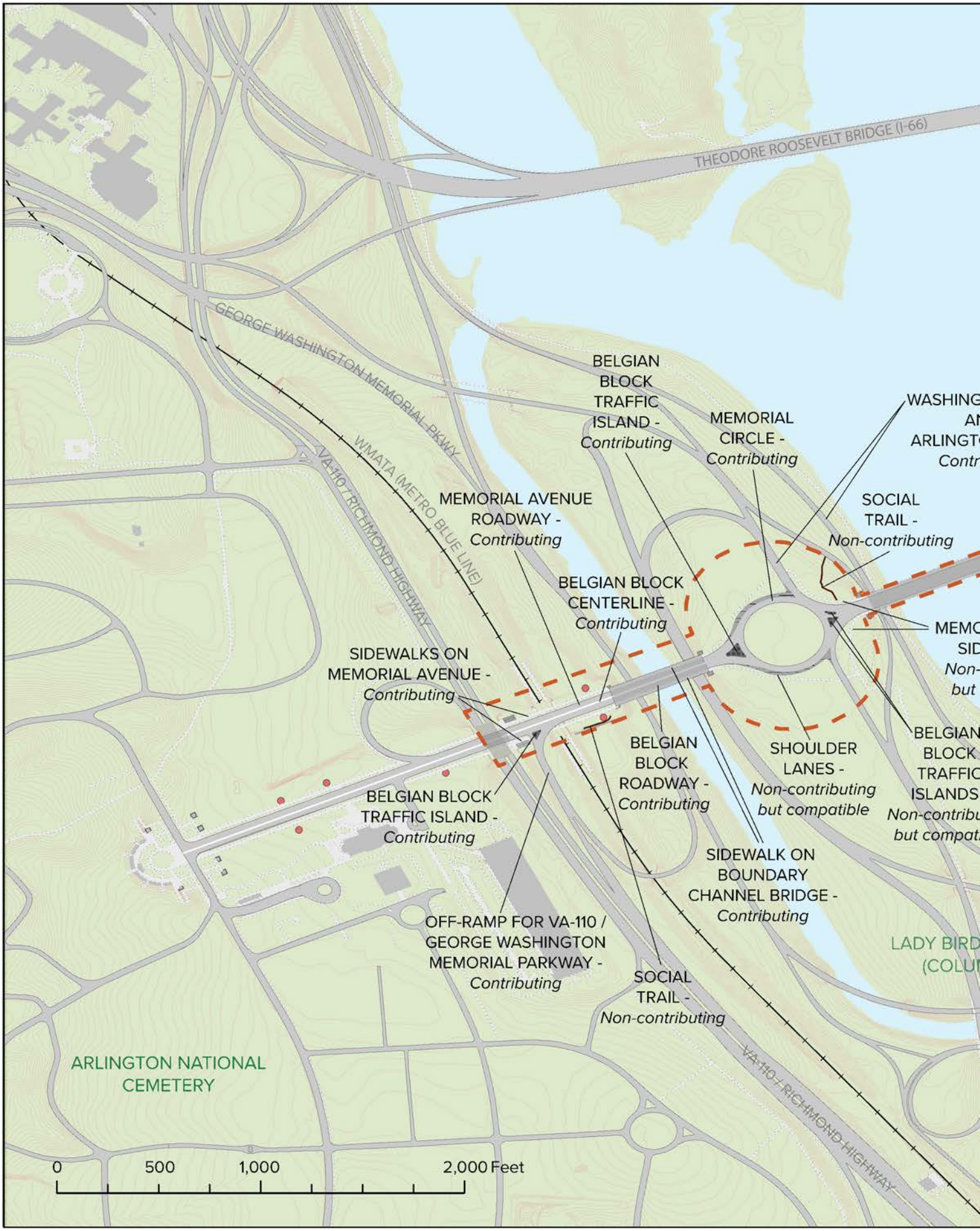
Figure 163: Social trail from Memorial Circle sidewalk on the northeast side of the circle near the northern Arlington Memorial Bridge pylon, leading through the pine trees to the Washington Boulevard (Urban Heritage Project 2022).

EVALUATION

The circulation features at the Memorial Avenue Corridor facilitate vehicular and pedestrian movement within and around the study area. The major circulation features—including the avenue roadway, Memorial Circle, bridge and avenue sidewalks, and road centerlines—retain integrity and are contributing. Minor circulation features have been altered or added since the period of significance, and are non-contributing; these include: social trails; recent paving additions to the sidewalks on the southeast side of Memorial Circle; the addition of shoulder lanes. The traffic island on the east side of Memorial Avenue was transformed into two traffic islands during the Memorial Circle safety improvements. The two smaller traffic islands are non-contributing but compatible. The cultural landscape retains its integrity with respect to circulation features.

CIRCULATION - CHARACTER-DEFINING FEATURES

Feature Description	*Date Established*	*Contributing Status*
Memorial Avenue roadway	1930-1932	Contributing
Memorial Circle	1940	Contributing
Sidewalk on Arlington Memorial Bridge and Boundary Channel Bridge	1932	Contributing
Sidewalks on Memorial Avenue	c. 1936	Contributing
Belgian block centerline on Memorial Avenue	1935	Contributing
Belgian block traffic island on Memorial Avenue	c. 1964	Contributing
Belgian block traffic island on west side of Memorial Circle (count: 1)	1940	Contributing
Belgian block roadway surface on Boundary Channel Bridge	1929-1931	Contributing
Off-ramp for VA Highway 110 and the George Washington Memorial Parkway	c. 1941 (VA Highway 110); c. 1964 (George Washington Memorial Parkway)	Contributing
Arlington Boulevard and Washington Boulevard within Lady Bird Johnson Park (Columbia Island)	Arlington Boulevard: 1938 Washington Boulevard: early 1940s	Contributing
Belgian block traffic islands on east side of Memorial Circle (count: 2)	2020	Non-contributing - Compatible
Shoulder lanes on north and south sides of Memorial Circle, between the road and grass panels	c. 2006	Non-contributing - Compatible
Sidewalks around Memorial Circle	c. 1940, c. 2001-2002, c. 2012	Non-contributing - Compatible
Social trails	Post period of significance	Non-contributing


THEODORE ROOSEVELT BRIDGE (I-66)
GEORGE WASHINGTON MEMORIAL PKWY
WMATA (METRO BLUE LINE)
VA-110 / RICHMOND HIGHWAY
BELGIAN BLOCK TRAFFIC ISLAND - Contributing
MEMORIAL CIRCLE - Contributing
WASHING AN ARLINGT Contr
MEMORIAL AVENUE ROADWAY - Contributing
SOCIAL TRAIL - Non-contributing
BELGIAN BLOCK CENTERLINE - Contributing
MEMO SID Non- but
SIDEWALKS ON MEMORIAL AVENUE - Contributing
BELGIAN BLOCK ROADWAY - Contributing
SHOULDER LANES - Non-contributing but compatible
BELGIAN BLOCK TRAFFIC ISLANDS Non-contribu but compat
BELGIAN BLOCK TRAFFIC ISLAND - Contributing
SIDEWALK ON BOUNDARY CHANNEL BRIDGE - Contributing
OFF-RAMP FOR VA-110 / GEORGE WASHINGTON MEMORIAL PARKWAY - Contributing
SOCIAL TRAIL - Non-contributing
LADY BIRD (COLU
ARLINGTON NATIONAL CEMETERY
VA-110 / RICHMOND HIGHWAY
0
500
1,000
2,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Circulation (Overall)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

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ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Building / Structure
- Memorial (Structure)
- Arts of War Statues (Structure)
- Pylon (Structure)

Landscape Characteristic Features

- Circulation - Road
- Circulation - Centerline
- Circulation - Belgian Block Shoulder Lane
- Circulation - Belgian Block Traffic Island
- Circulation - Sidewalk
- Circulation - Social Trail

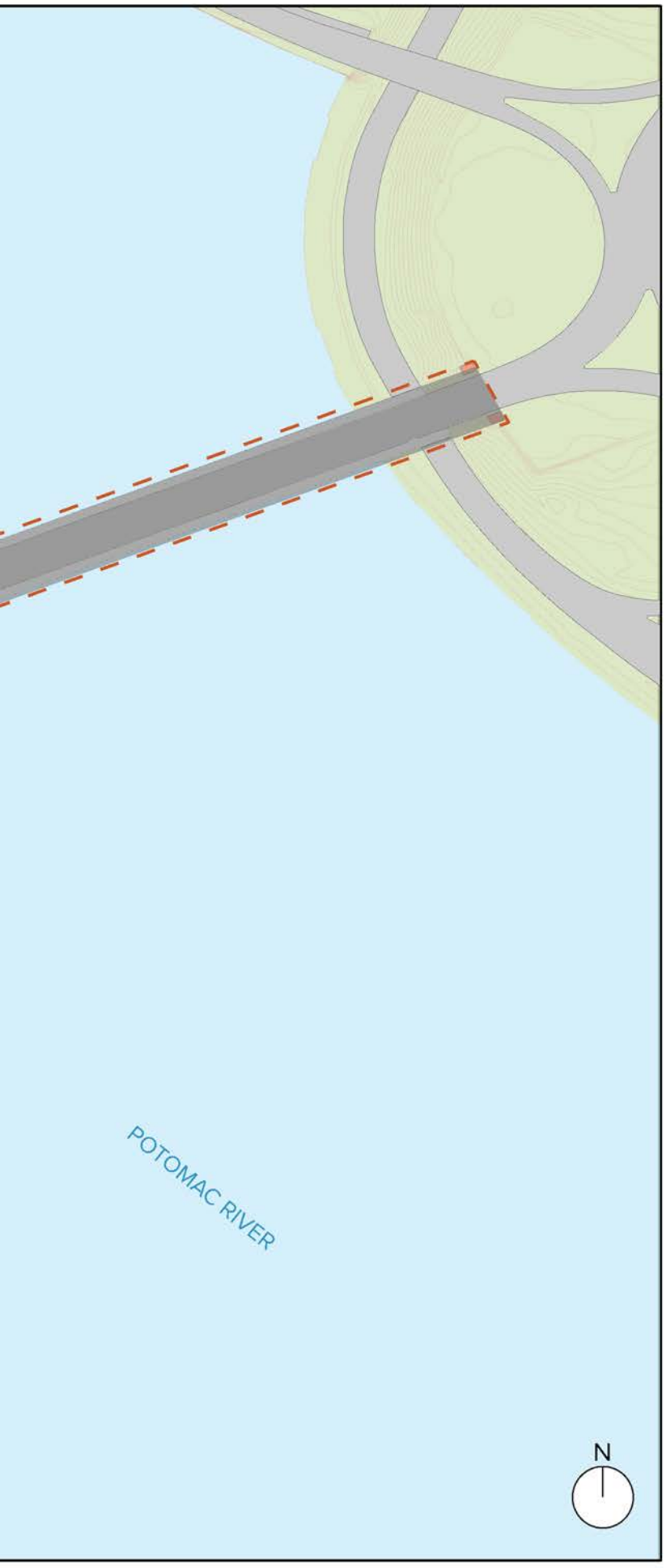
NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #20


POTOMAC RIVER
MEMORIAL CIRCLE - Contributing
SOCIAL TRAIL- Non-contributing
SIDEWALKS ON ARLINGTON MEMORIAL BRIDGE - Contributing
BELGIAN BLOCK TRAFFIC ISLANDS AT MEMORIAL CIRCLE - Non-contributing - Compatible
SHOULDER LANES- Non-contributing - Compatible
SIDEWALKS AROUND MEMORIAL CIRCLE - Non-contributing - Compatible
ARLINGTON BLVD AND WASHINGTON BLVD - Contributing
0
250
500
1,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Circulation (East)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Vegetation
- Building / Structure
- Arts of War Statues (Structure)
- Pylon (Structure)

Landscape Characteristic Features

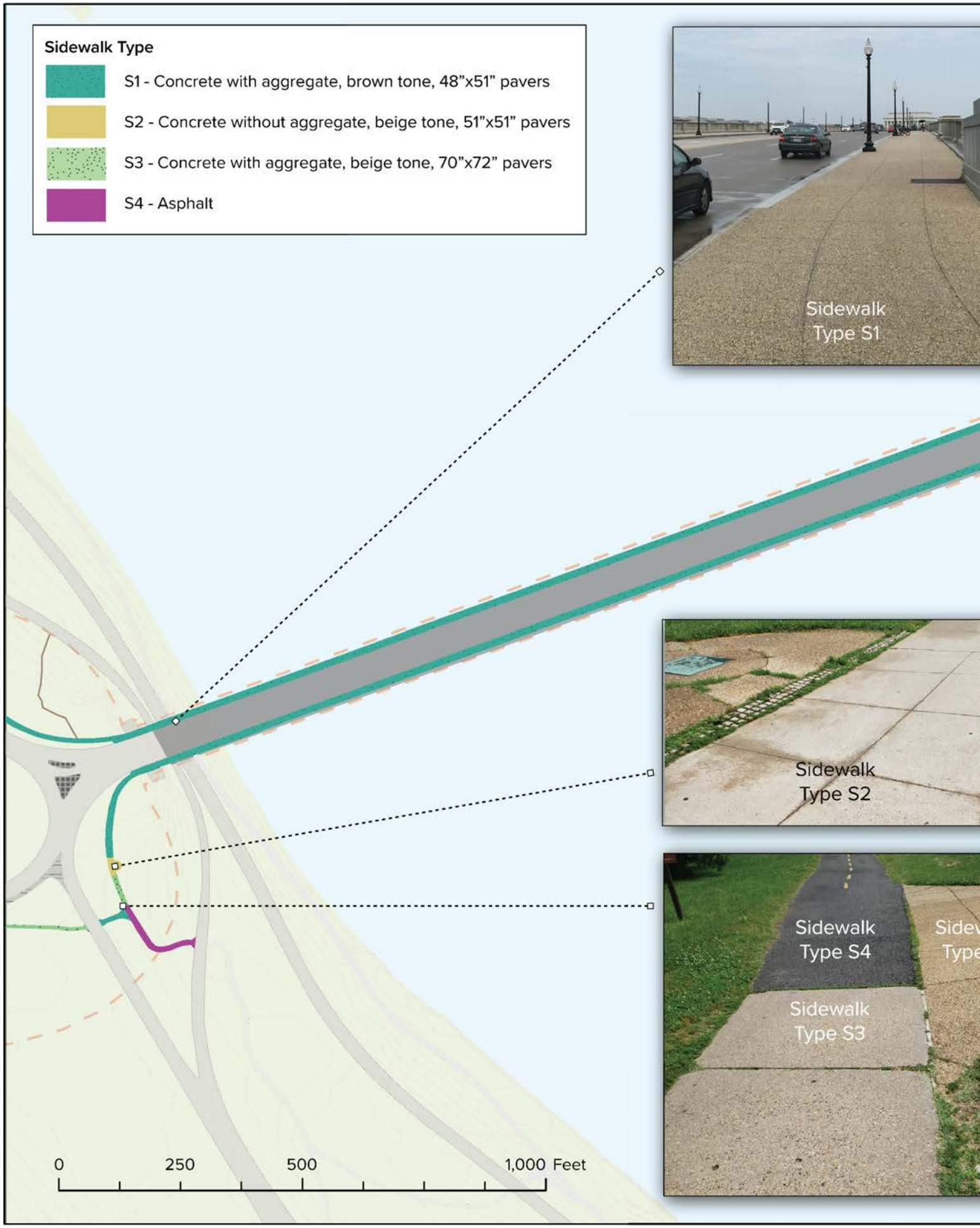
- Circulation - Road
- Circulation - Shoulder Lane
- Circulation - Traffic Island
- Circulation - Sidewalk
- Circulation - Social Trail

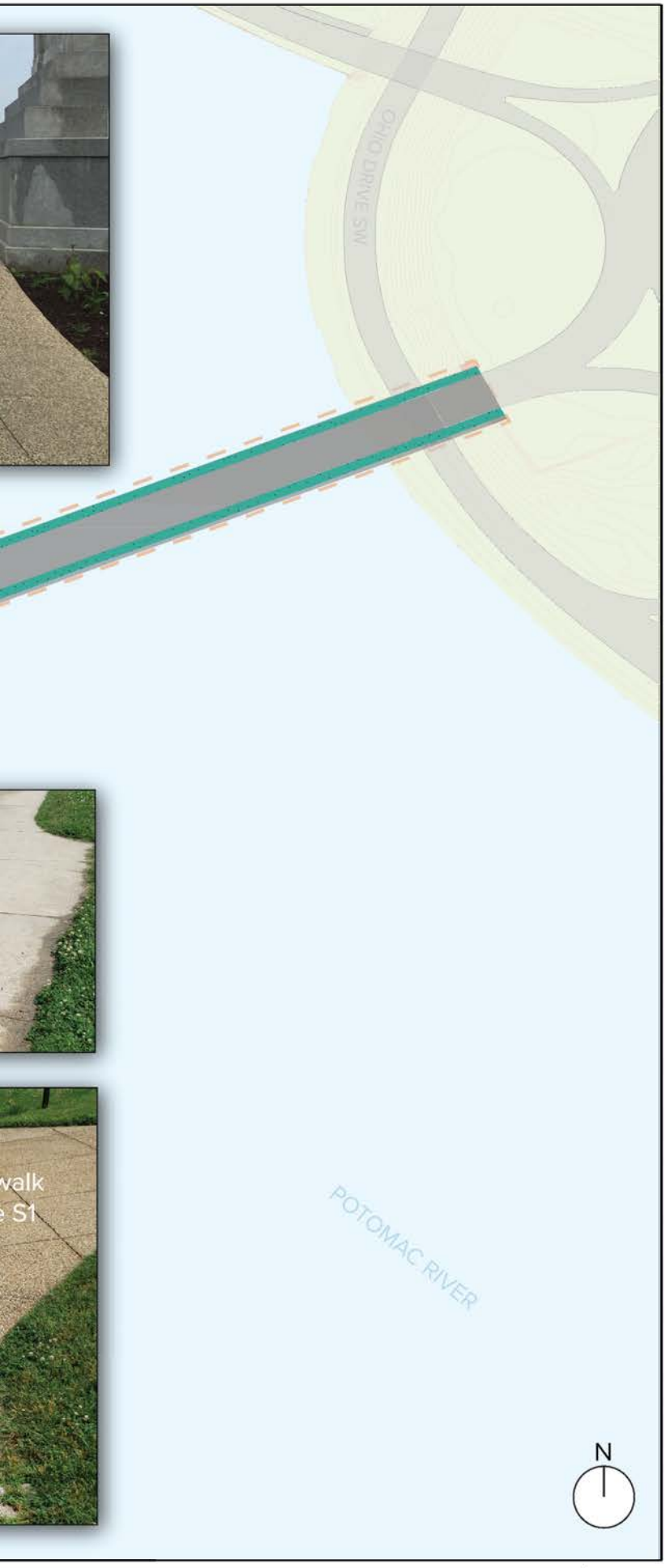
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DRAWING #21


Sidewalk Type
S1 - Concrete with aggregate, brown tone, 48”x51” pavers
S2 - Concrete without aggregate, beige tone, 51”x51” pavers
S3 - Concrete with aggregate, beige tone, 70”x72” pavers
S4 - Asphalt
Sidewalk Type S1
Sidewalk Type S2
Sidewalk Type S4
Sidewalk Type S3
0
250
500
1,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Circulation - Sidewalk Finishes (East)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Building / Structure

Landscape Characteristic Features

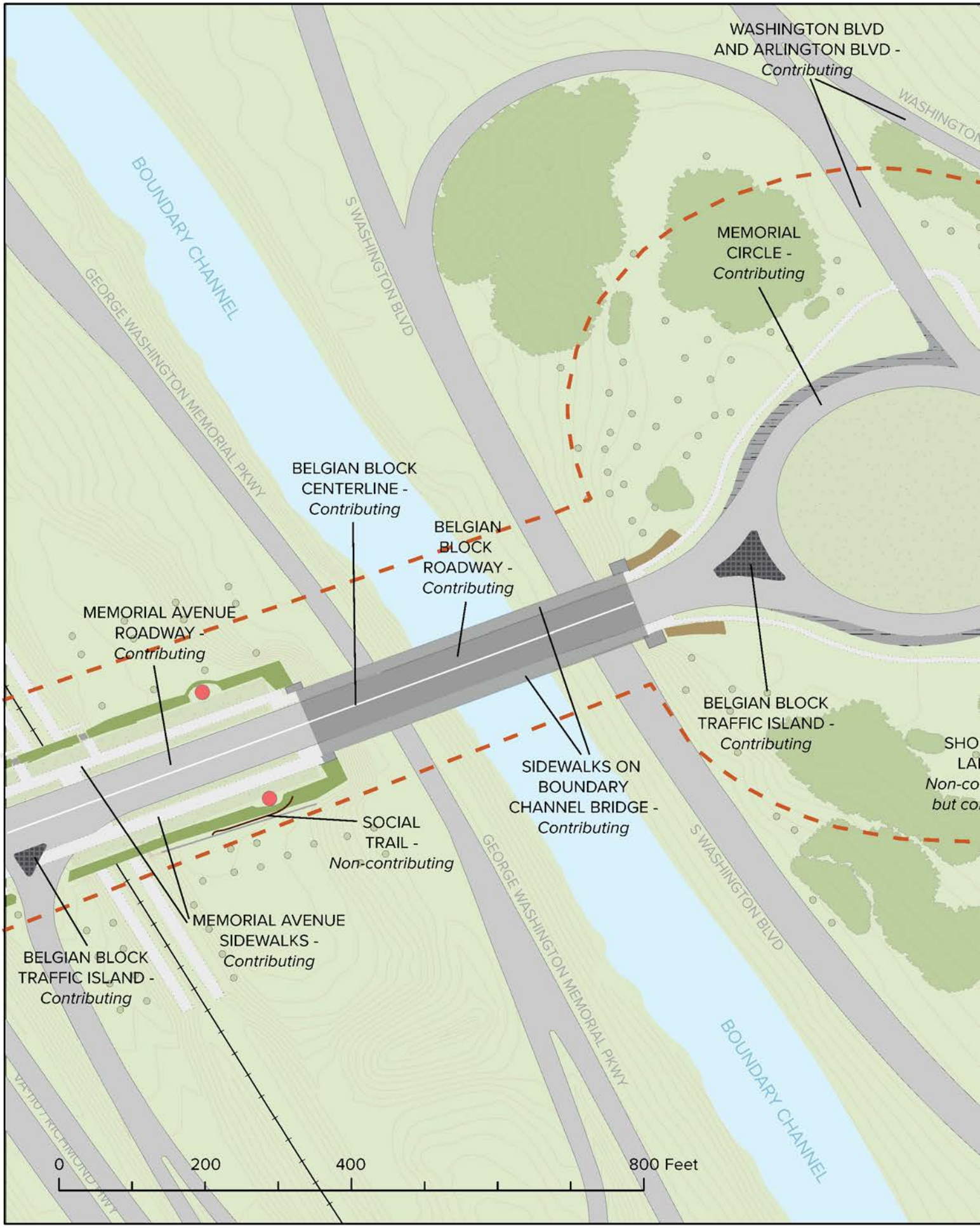
- Circulation - Road
- Circulation - Belgian Block Shoulder Lane
- Circulation - Belgian Block Traffic Island
- Circulation - Social Trail

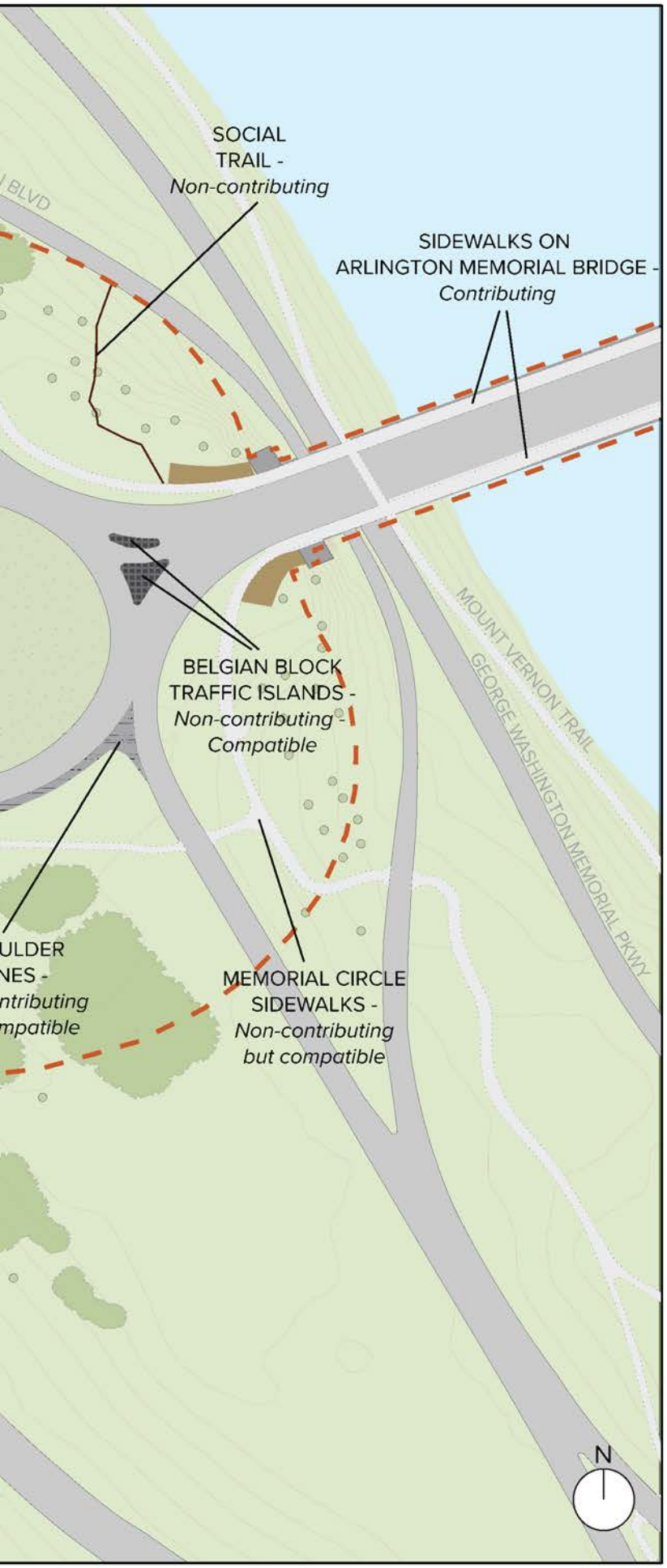
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DRAWING #22


WASHINGTON BLVD AND ARLINGTON BLVD - Contributing
WASHINGTON
BOUNDARY CHANNEL
S WASHINGTON BLVD
GEORGE WASHINGTON MEMORIAL PKWY
MEMORIAL CIRCLE - Contributing
BELGIAN BLOCK CENTERLINE - Contributing
BELGIAN BLOCK ROADWAY - Contributing
MEMORIAL AVENUE ROADWAY - Contributing
BELGIAN BLOCK TRAFFIC ISLAND - Contributing
SIDEWALKS ON BOUNDARY CHANNEL BRIDGE - Contributing
SOCIAL TRAIL - Non-contributing
MEMORIAL AVENUE SIDEWALKS - Contributing
BELGIAN BLOCK TRAFFIC ISLAND - Contributing
S WASHINGTON BLVD
GEORGE WASHINGTON MEMORIAL PKWY
BOUNDARY CHANNEL
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Circulation (Circle Area)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

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ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Vegetation
- Memorial (Structure)
- Pylon (Structure)

Landscape Characteristic Features

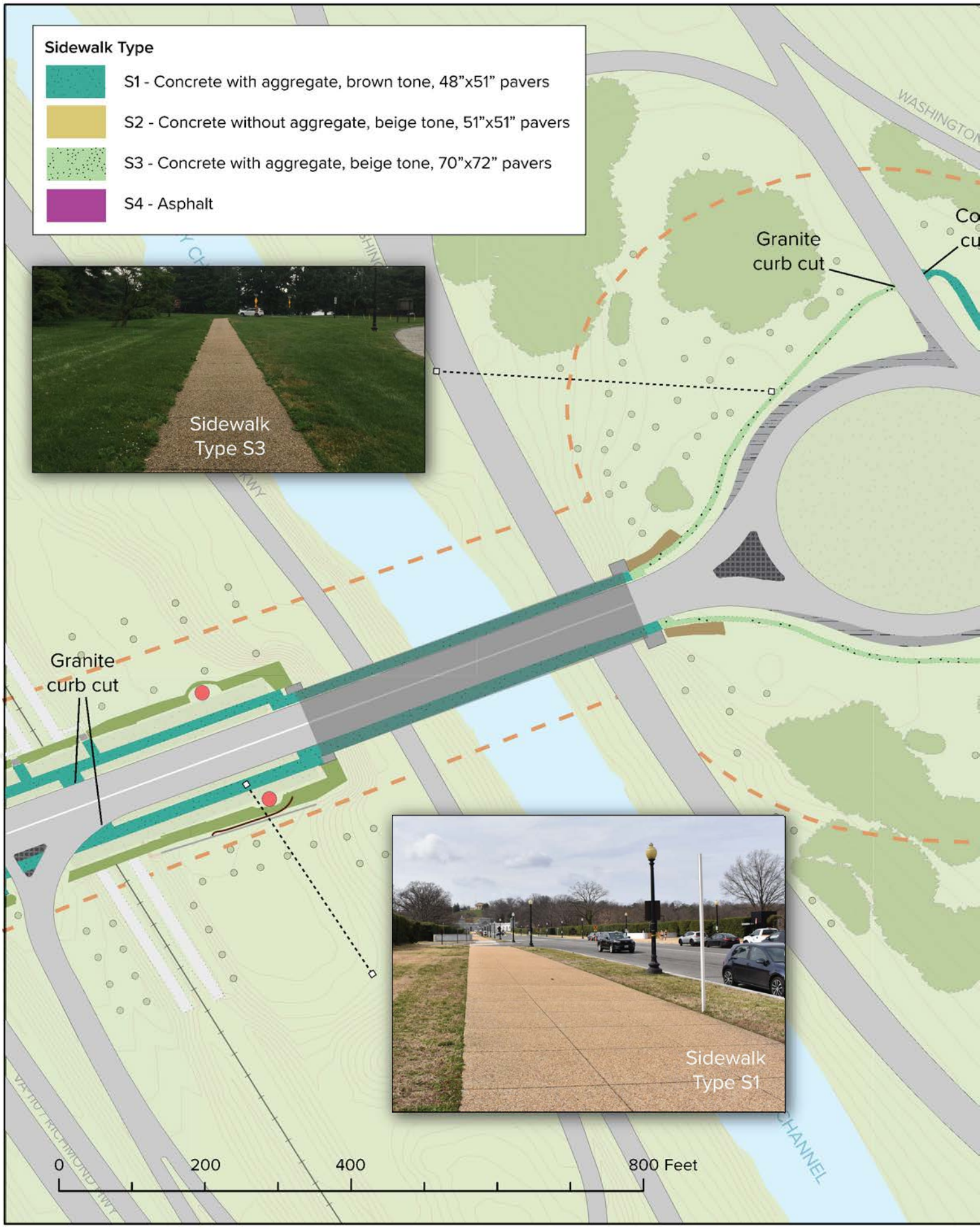
- Circulation - Road
- Circulation - Centerline
- Circulation - Belgian Block Shoulder Lane
- Circulation - Belgian Block Traffic Island
- Circulation - Sidewalk
- Circulation - Social Trail

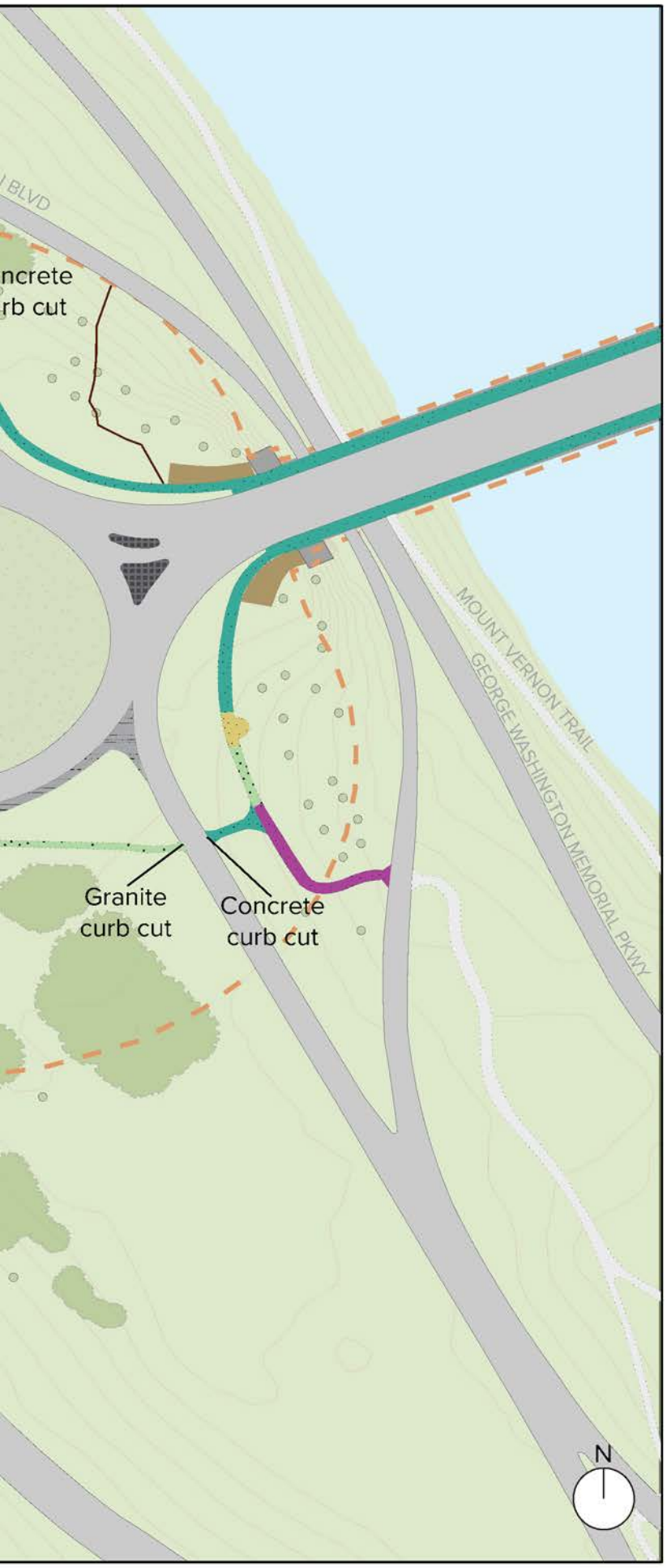
NOTES

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DRAWING #23


Sidewalk Type
S1 - Concrete with aggregate, brown tone, 48”x51” pavers
S2 - Concrete without aggregate, beige tone, 51”x51” pavers
S3 - Concrete with aggregate, beige tone, 70”x72” pavers
S4 - Asphalt
Granite curb cut
Sidewalk Type S3
Granite curb cut
Sidewalk Type S1
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Circulation - Sidewalk Finishes (Circle Area)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Vegetation
- Memorial (Structure)
- Pylon (Structure)

Landscape Characteristic Features

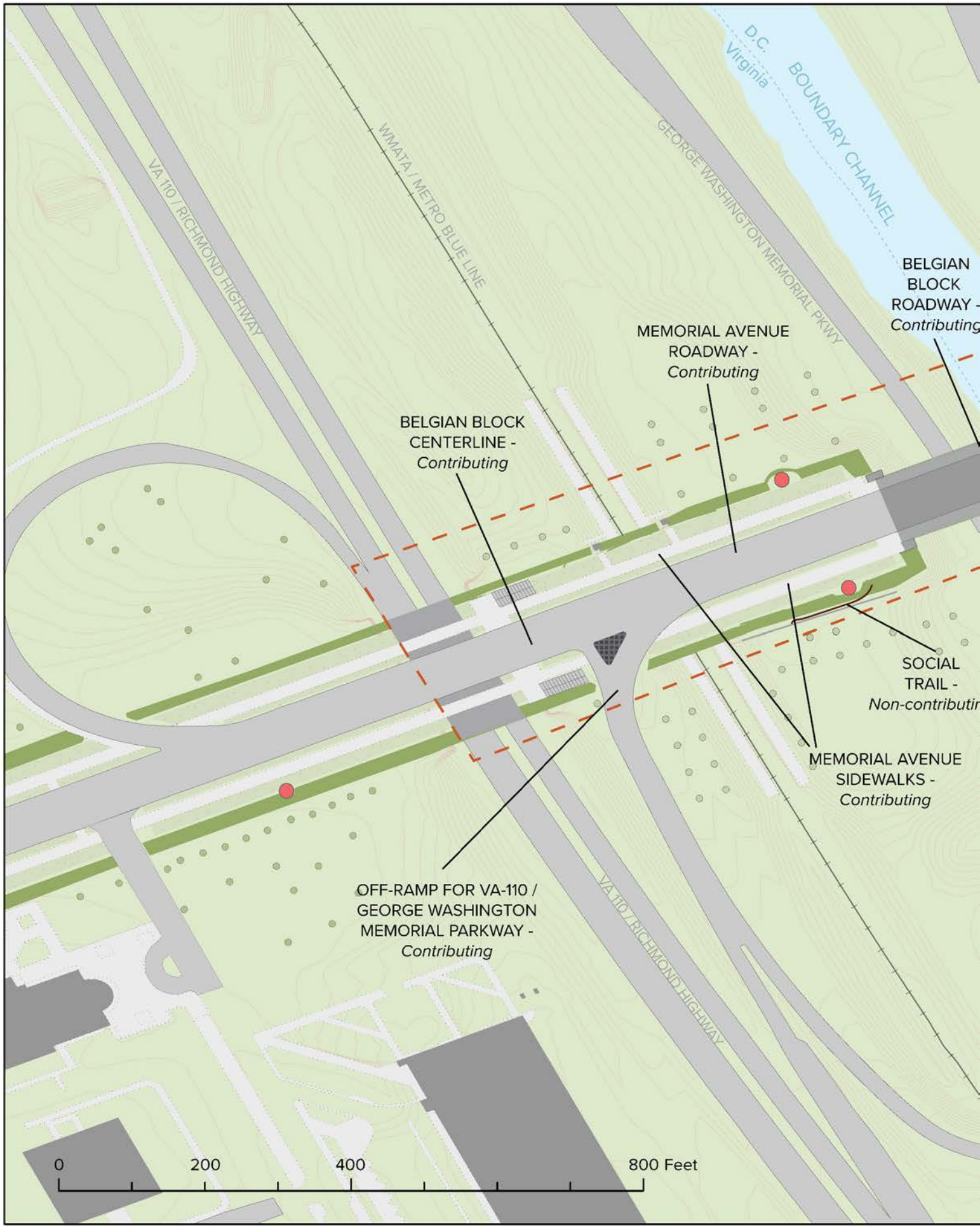
- Circulation - Road
- Circulation - Centerline
- Circulation - Belgian Block Shoulder Lane
- Circulation - Belgian Block Traffic Island
- Circulation - Social Trail

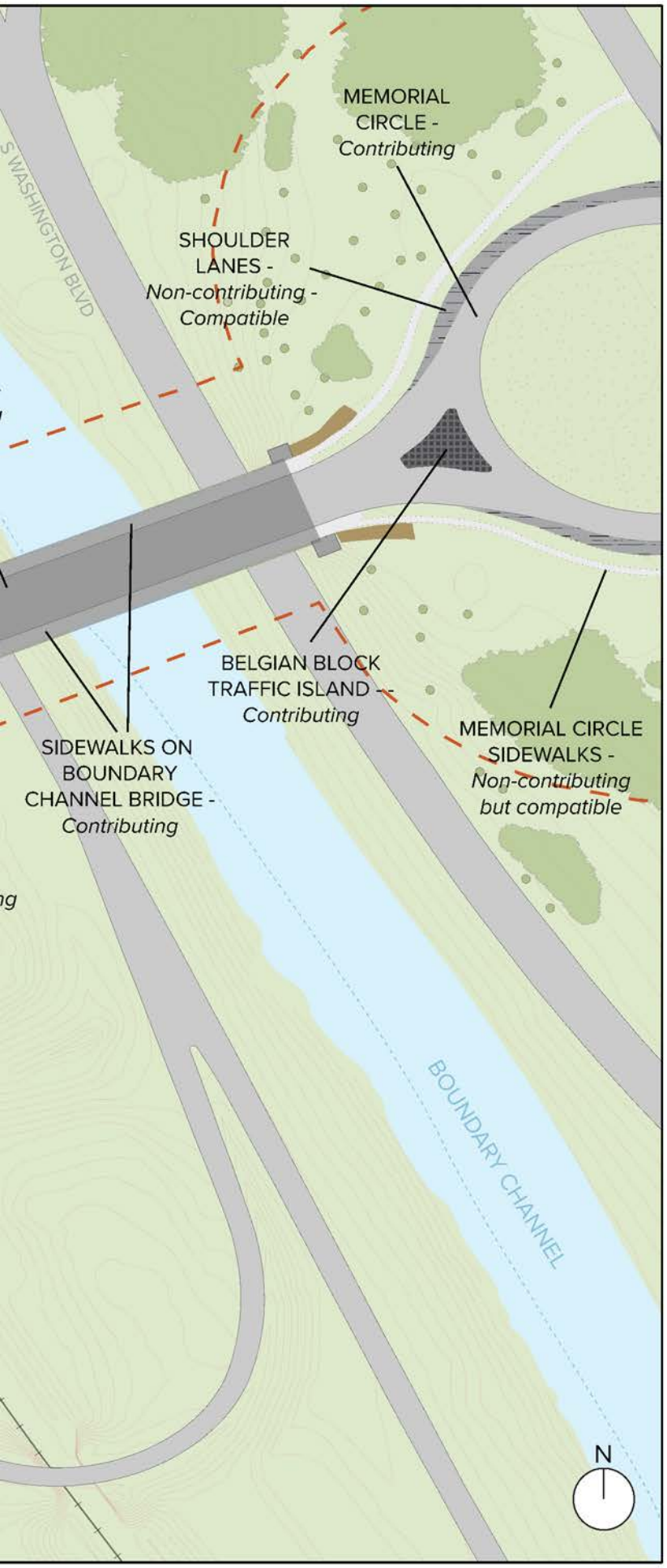
NOTES

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DRAWING #24


D.C.
Virginia
BOUNDARY CHANNEL
WMATA / METRO BLUE LINE
GEORGE WASHINGTON MEMORIAL PKWY
VA 110 / RICHMOND HIGHWAY
BELGIAN BLOCK ROADWAY - Contributing
MEMORIAL AVENUE ROADWAY - Contributing
BELGIAN BLOCK CENTERLINE - Contributing
SOCIAL TRAIL - Non-contributing
MEMORIAL AVENUE SIDEWALKS - Contributing
OFF-RAMP FOR VA-110 / GEORGE WASHINGTON MEMORIAL PARKWAY - Contributing
VA 110 / RICHMOND HIGHWAY
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Circulation (West)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Vegetation
- Building / Structure
- Memorial (Structure)
- Pylon (Structure)

Landscape Characteristic Features

- Circulation - Road
- Circulation - Belgian Block Centerline
- Circulation - Belgian Block Shoulder Lane
- Circulation - Belgian Block Traffic Island
- Circulation - Sidewalk
- Circulation - Social Trail

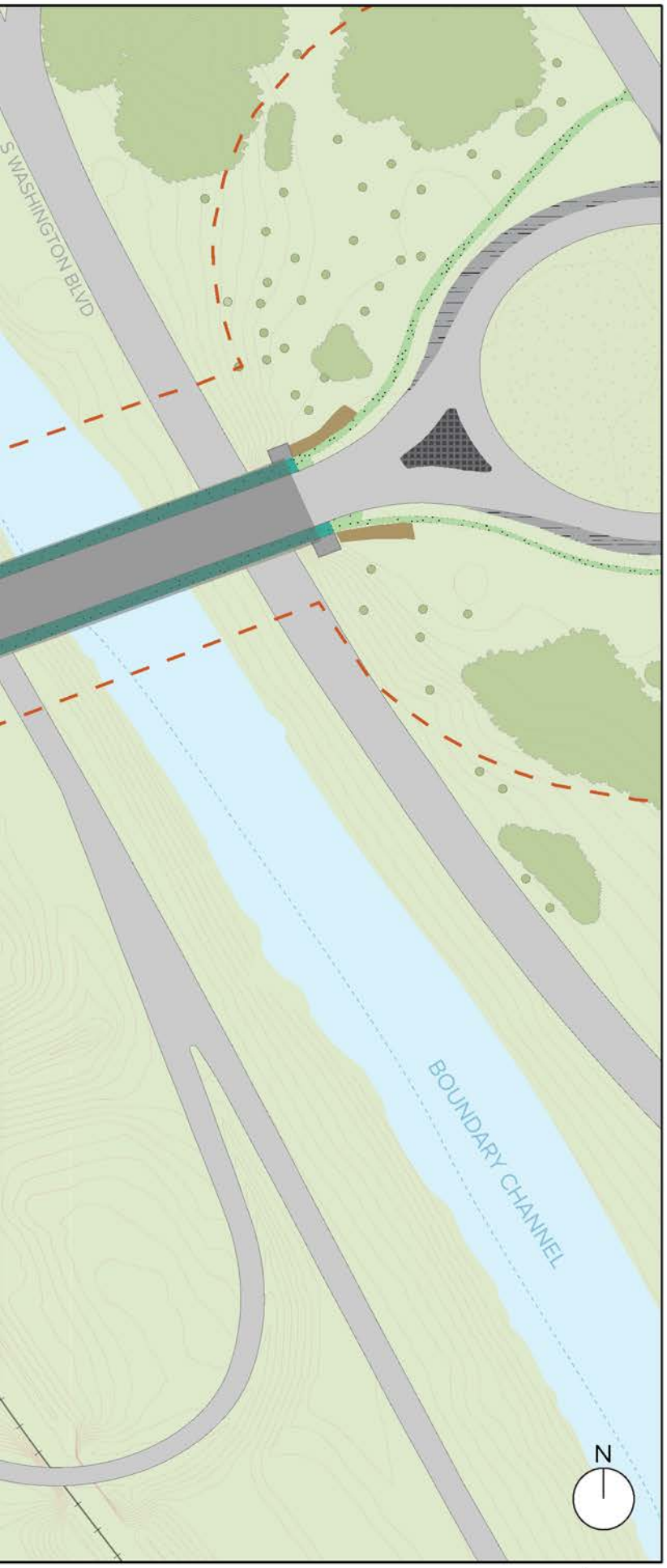
NOTES

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2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #25


Sidewalk Type
S1 - Concrete with aggregate, brown tone, 48”x51” pavers
S3 - Concrete with aggregate, beige tone, 70”x72” pavers
D.C.
Virginia
BOUNDARY CHANNEL
Sidewalk Type S1
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Circulation - Sidewalk Finishes (West)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Vegetation
- Building / Structure
- Memorial (Structure)

Landscape Characteristic Features

- Circulation - Road
- Circulation - Belgian Block Traffic Island
- Circulation - Belgian Block Shoulder Lane
- Circulation - Sidewalk
- Circulation - Social Trail

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #26

Vegetation

Cultural vegetation[1] was essential to the original designs for the Memorial Avenue Corridor in the 20th century, with the planting of white oak (*Quercus alba*) trees and holly hedges (*Ilex opaca*) along Memorial Avenue central to the amplification of the linear corridor. Changes to the linear vegetation features occurred during the period of significance with the construction of roads and the addition of the Arlington Memorial Cemetery Metro station.

No major changes occurred within the Columbia Island (later, Lady Bird Johnson Park) section of the corridor until the late 1960s saw the approval and implementation of the 1968 Edward Durell Stone, Jr., planting plan. The Stone planting plan was part of First Lady, Lady Bird Johnson's Beautification Program, which sought to impact the overall health of society through interventions in the landscape. The program's goals included decreasing pollution, increasing access to recreation, improving mental health, and creating cleaner water. Washington, D.C., was chosen as the pilot city for the Beautification Program's nationwide park rehabilitation and landscape improvements and Memorial Circle and the greater Lady Bird Johnson Park (Columbia Island) landscape were model sites.

Around Memorial Circle, the Stone plan called for dense vegetation to the north and south of the traffic rotary, in addition to tree massings around the pylons at either side of the island. Trees would be planted to frame the pylons on either side of Memorial Circle by creating large massings at the bridgeheads. Prominent in Stone's plan were informal tree massings of a limited number of tree species. The plan called for smaller flowering trees to be massed around the traffic rotary, foregrounding the edges of primarily deciduous tree massings to the north and south. Stone's plan sought to create a fullness of flowering from the prominent daffodils and dogwoods near the vehicle and pedestrian circulation features. Memorial Circle itself would remain a grass circle.

The first stage of the phased planting plan concentrated on the area around Memorial Circle. Scarlet and white oaks (*Quercus coccinea* and *alba*) and dogwoods (*Cornus florida*) were planted around the outside of Memorial Circle. Also at this time, approximately one dozen white pines (*Pinus strobus*) were planted near each of the four pylons around the circle. As funds permitted, additional planting according to the Stone plan was carried out across the island in subsequent years. The last known phase of the Stone planting plan dates to 1979. In 1979, the NPS reassessed Stone's plan, evaluating the survival rate of the plantings and making modifications based on the findings.

In the decades since those modifications to the Stone plan, the National Park Service has continued to plant trees around Memorial Circle, reinterpreting the Stone planting plan to incorporate more suitable specimens.

1935 Memorial Avenue Planting Plan

The primary features of the original 1935 planting plan for Memorial Avenue included holly hedges, a white oak tree border, and turf panels along the length of the avenue. The historic and existing conditions of these three features are described below.

1. Defined by the US National Vegetation Classification, cultural vegetation is defined as "vegetation with a distinctive structure, composition, and development determined by regular human activity."

HOLLY HEDGES (*ILEX OPACA*) ALONG FULL EXTENT OF MEMORIAL AVENUE

Historic Conditions

In tandem with a row of white oaks (*Quercus alba*) trees, holly hedges (*Ilex opaca*) were planted along the length of Memorial Avenue in 1936 to frame the approach to the entrance of Arlington National Cemetery (Earley 2004: 61-62). The 1935 planting design stipulated that the hedges should be cultivated to a height of approximately 8 feet and a width of 6 feet, 8 inches (per planting) (*see Figure 164*). A 1935 planting plan for "Memorial Approach Drive" includes a diagram for how the holly hedges were intended to be planted (*see Figure 170*). The diagram shows that the holly hedges were to be staggered in two rows to create a hedge massing.

Segments of holly hedge (and several of the white oaks) were removed when the VA Highway 110 underpass and off-ramp were constructed in 1941. Replacements were added by 1950, planted on the outer edges of the grade separation structure.

An NPS planting plan from 1959, updated in 1960, depicted the location of future memorials along the avenue, realizing William Kendall's original vision for the corridor (*see Figure 165, and refer to Figure 23 on page 83*). These memorials were to be located in rectangular and rounded niches within the holly hedges. The niches would be created within the hedge on a case-by-case basis, as each memorial was installed. In 1965 and 1974, two memorials were installed within the study area according to this plan, altering the configuration of the holly hedges by creating the memorial niches.

When the Metro extended one of its rail lines to Huntington, Virginia, a new station opened at Arlington National Cemetery in 1977. The new station was located below Memorial Avenue, with elevators and escalators on the street grade accessing along the station at a lower grade. The construction of two elevator shafts on the north side of Memorial Avenue disrupted the holly hedges immediately adjacent to the Metro entrances.

Existing Conditions

According to the original design for Memorial Avenue, the holly hedges (*Ilex opaca*) were to be 8 feet in height and 6 feet, 8 inches wide; the established, healthy holly hedges have achieved these approximate proportions. There are sections of healthy holly hedge on the north side of

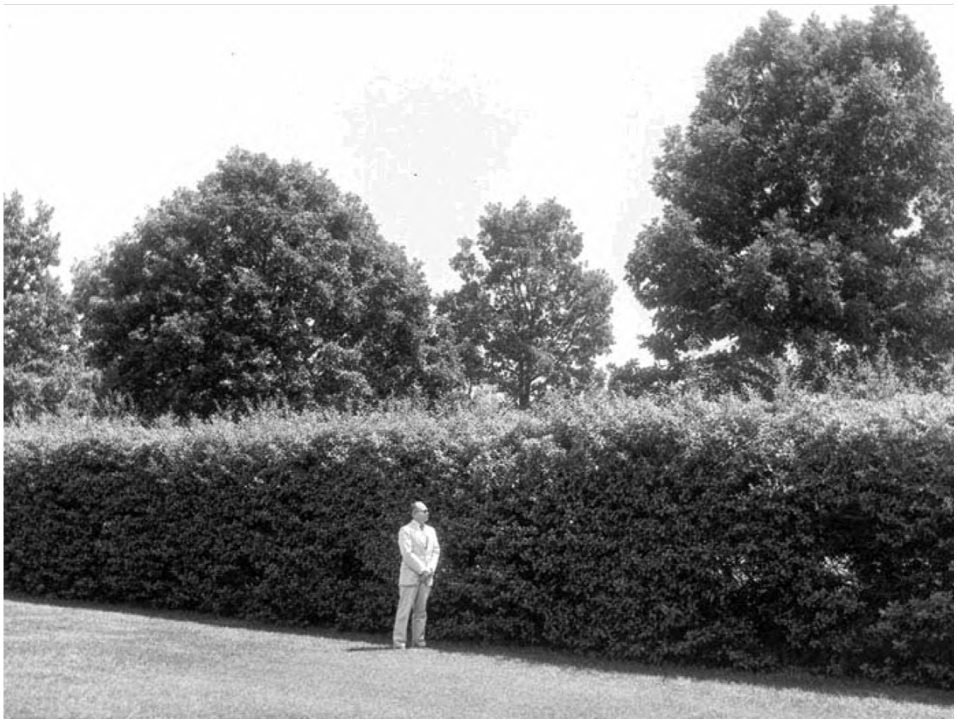


Figure 164: Photo marked "Study for Memorials," shows height of holly hedges as of August 3, 1950 (Source: National Park Service, MRCE, Arlington National Cemetery folder, Abbie Rowe, 5584-A).

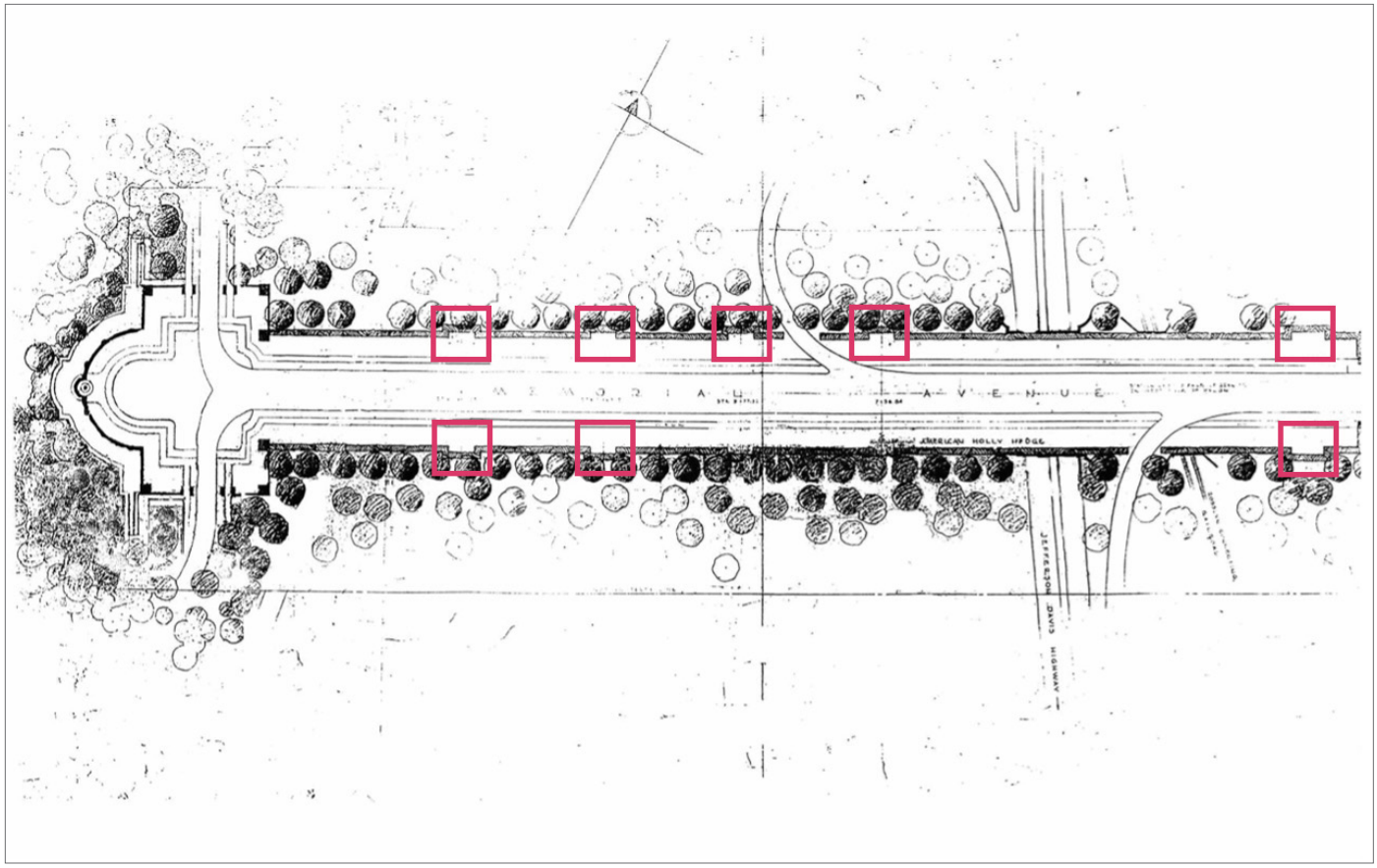


Figure 165: Memorial Avenue Planting Plan, depicting niches within the holly hedges, June 3, 1960 (Source: National Park Service, eTIC 855_81100A).



Figure 166: Holly hedges (Ilex opaca) visible on right side of photograph, on far side of grass panel near the Seabees Memorial (Urban Heritage Project 2022).



Figure 167: Newly planted holly hedges (Ilex opaca) near "The Hiker" monument on Memorial Avenue (Urban Heritage Project 2022).

Memorial Avenue at the western end of the study area that meet these proportions. Additionally, the holly hedges around the Seabees Memorial on the north side of Memorial Avenue appear to be healthy (*see Figure 166*). The depth of the holly hedge varies along the length of Memorial Avenue within the study area.

Large sections of the holly hedges within the study area appear to be in poorer health, with disruptions in the hedge rather than a continuous facade. Particularly, the holly hedges located along the avenue over the VA Highway 110 underpass and above the Metro tunnel underpass are unhealthy, presumably due to more limited root space and exposure to drying winds and sun. The 2021 Memorial Avenue Holly Hedge Assessment and Treatment Plan assessed the holly hedges within the CLR study area and provided an analysis of the health of the holly hedges (*Ilex opaca*) on either side of Memorial Avenue. The report concluded that the "holly hedge and turf panels along Memorial Avenue are in poor condition, with approximately 25 percent of the holly hedge recommended for replacement due to dead and declining trees, and all of the turf recommended for replacement due to substantial broadleaf herbaceous invasive species present" (Straughan Environmental 2021: 16).

Elsewhere in the study area, recent replacements of the holly hedge were visible at the time of the CLR survey (June 2022), particularly around the Spanish War Veterans Memorial (*see Figures 167, 168, and 169*). Replacement of hedges throughout the study area is ongoing, as required by hedge condition.

Although there have been several impacts to the holly hedges, the holly hedges are significant contributing features that express the original design for Memorial Avenue.

WHITE OAKS (*QUERCUS ALBA*) ALONG MEMORIAL AVENUE

Historic Conditions

A white oak (*Quercus alba*) tree border was planted along the length of Memorial Avenue to frame the axial composition of the corridor and focus views. In tandem with the line of holly hedges (*Ilex opaca*), planted in front of the trees, the white oaks created a formal edge along the avenue, before segueing to a more naturalistic design beyond those edges.

The trees were planted along Memorial Avenue in 1935. (Lee 2021: 7-50). As depicted in the 1935 planting plan, the white oak border consisted of



Figure 168: Newly planted holly hedges (Ilex opaca) on the right behind "The Hiker," with more established holly hedges on the left (Urban Heritage Project 2022).



Figure 169: Newly planted holly hedges (Ilex opaca) on the left and more established holly hedges on the right (Urban Heritage Project 2022).

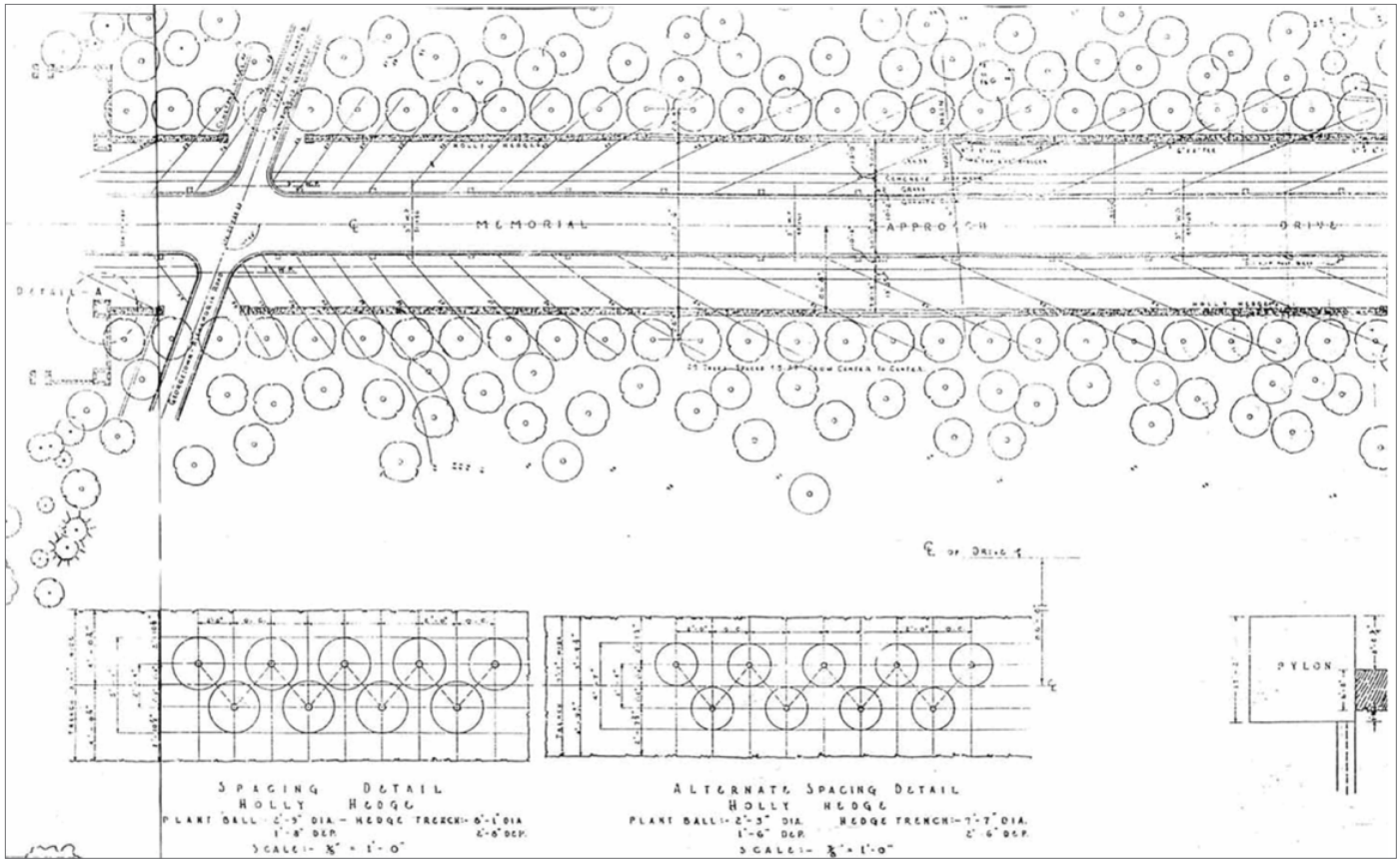


Figure 170: A 1935 planting plan for "Memorial Approach Drive," showing trees on each side of the avenue; they are evenly spaced behind the holly hedges and more randomly spaced beyond. Diagram at bottom shows the staggered planting method for holly hedge (Source: National Park Service, eTIC 8-135).



Figure 171: Aerial of Memorial Avenue and Memorial Circle as of August 14, 1950, depicting a single row of trees along Memorial Avenue, with others scattered on avenue's south (at left) and north (at right) sides. (Source: National Park Service, MRCE, Columbia Island folder 1, Abbie Rowe, 1325-G).



Figure 172: Mature white oaks (Quercus alba) along Memorial Avenue, visible on the far left and far right of the photograph, behind the holly hedges. This photograph captures areas of the contextual landscape that are located outside of the study area boundaries, but speaks to the historic conditions of the corridor as a whole (Urban Heritage Project 2022).

a row of evenly spaced trees along the avenue, with more randomly spaced trees further to the north and south (***see Figure 170***). While 200 trees had been approved for planting, the 1935 plan depicts approximately 140 white oak trees along Memorial Avenue between the Hemicycle and the rail line associated with the Rosslyn branch of the Pennsylvania Railroad. (The westernmost portions of this historic plan extend outside the boundaries of the CLR, including the Hemicycle.)

In 1941, the construction of VA Highway 110 required the removal of several trees (and portions of the holly hedges) for the necessary road cut and side slopes. The precise number of trees removed is unknown. An aerial photograph from 1950 suggests that a little over 100 trees remained in place on both sides of Memorial Avenue between the highway intersection and Arlington National Cemetery (***see Figure 171***). (Most of that land between the highway and the cemetery falls outside the boundaries of this CLR, but offers important context for the understanding of the cultural landscape's historic conditions as a unified corridor.)

In 1963, NPS completed a tree survey along Memorial Avenue to the Boundary Channel Bridge (which includes Memorial Avenue within the study area and the contextual landscape west of the study area). This survey recorded slightly fewer trees than were visible in the 1950 aerial photograph; the extant trees were certainly fewer in number than the 200 trees originally approved and funded in 1935 (Arlington Farms Area and Horse Show July 17, 1963, NPS 850/80836). The 1963 survey indicated that many of the dispersed white oak trees behind the row of white oaks along Memorial Avenue were consistent with the trees visible in the 1950 aerials.

In the 1970s, WMATA planted red oaks (*Quercus borealis*) and pin oaks (*Quercus palustris*) on the eastern end of Memorial Avenue, around the new metro station in the area between the VA Highway 110 overpass and the Boundary Channel Bridge. (See below for further discussion of those features.) This marked a departure from the use of white oaks (*Quercus alba*) that had characterized the avenue's tree plantings to that point.

Existing Conditions

As established during the period of significance, oak trees line the north and south borders of the corridor, behind the holly hedges along Memorial Avenue (***see Figure 172***). Aerial photographs and tree surveys from the period of significance suggest that the total number of trees along Memorial Avenue has remained generally consistent since 1950, although individual trees have been replaced due to poor tree health, and the tree species have changed on the east end of Memorial Avenue (within the study area).

Most of the original white pines are located on land now managed by the Department of the Army; there are no original white oak trees on GWMP-managed land at the eastern end of Memorial Avenue.



Figure 173: Turf panels along Memorial Avenue in 1947, with sidewalks visible on the far left of the photograph. Photographer: H.H. West (Source: University of California, Los Angeles Library, Department of Special Collections. Local Identifier: uclamss_1998_2370_005).

However, there are two younger white oaks within the study area boundaries: in the field enclosed by the chain-link fence on the south side of the avenue, two white oak trees appear to be planted more recently than the red oaks around them. It is unclear when these white oaks were planted.

TURF PANELS ALONG FULL EXTENT OF MEMORIAL AVENUE

Historic Conditions

As part of the original Memorial Avenue design, grass panels were installed along the length of the avenue, between the Hemicycle and the Boundary Channel Bridge. The rectangular grass panels, acting as a buffer between the sidewalks and the holly hedges, contributed to the linearity of the avenue and framed the roadway (***see Figure 173***). Between the roadway and sidewalk, the grass panels were approximately 10 feet wide, while the panels between the sidewalk and holly hedge (Ilex opaca) were approximately 20 feet wide.

In the 1970s, the addition of the Metro escalators impacted the grass panels. The escalators on the north and south sides of the avenue disrupted the grass panels between the sidewalk and holly hedges; concrete pads replaced the entire width of grass panels in those areas.

Existing Conditions

The grass panels along Memorial Avenue are managed as turf and retain their historic

Figure 174: Grass panels along the Memorial Avenue sidewalk within the cultural landscape (Urban Heritage Project 2022).



configuration and character, with rectangular stretches of turf located on the north and south sides of the avenue between the sidewalk and roadway and between the sidewalk and holly hedges (*see Figure 174*). As during the historic period, the turf panel between the road and sidewalk is approximately 10 feet wide and the turf panel between the sidewalk and hedge is approximately 20 feet wide.

The turf panels run the length of Memorial Avenue within the study area, interrupted only by the concrete pads at the Metro entrance on the north side (altered during the period of significance) and curb cuts for crosswalks (added after the period of significance). As during the period of significance, the turf panel located between the roadway and sidewalk is approximately 10 feet wide, while the panel between the sidewalk and holly hedges is approximately 20 feet wide. The condition of the turf varies between the study area, managed by NPS, and the property associated with Arlington National Cemetery, managed by the Department of the Army.

While there have been minor changes to the Memorial Avenue turf panels, they continue to express the linearity of the Memorial Avenue Corridor and contribute to the integrity of the cultural landscape.

1940 Memorial Circle Planting Plan

OPEN LAWN AT MEMORIAL CIRCLE

Historic Conditions

On Columbia Island, the area now known as Memorial Circle was originally planned by architect William Kendall as an elaborate, elliptical paved plaza with various architectural features including a pair of monumental columns. Identical axial roads extending north and south from the plaza would be lined with formal allées of trees, surrounded by a rolling landscape of lawns and scattered trees.

In the early 1930s, James Greenleaf, consulting landscape architect for the Arlington Memorial Bridge Commission, developed a new landscape plan for Columbia Island. Greenleaf, echoing Kendall's wishes, included formal allees of trees to be planted along the cross-axis roads and naturalistic plantings beyond the central area.

As plans for the Columbia Island plaza gradually simplified, later iterations created by landscape architect Gilmore Clarke included a single circle and parallel roads to the north and south separated by 200-foot-wide grass panels.

Memorial Circle was constructed on Columbia Island (later, Lady Bird Johnson Park) in 1940 as a simple circle measuring 300 feet in diameter. (Refer to the Spatial Organization and Circulation sections for the planning history of Memorial Circle.) Within the rotary roadway, the only vegetation was mowed grass, covering the entirety of the circle (*see Figure 175*). This vegetation pattern remained consistent throughout the period of significance.

Existing Conditions

Memorial Circle retains its mowed grass lawn, which is managed as turf and has been consistent since its initial construction in 1940 (*see Figures 176 and 177*). The turf of Memorial Circle retains integrity to the period of significance and is a contributing feature of the cultural landscape.



Figure 175: Aerial view of Columbia Island including the grassy Memorial Circle in the center, 1950 (Source: National Park Service, MRCE).



Figure 176: Memorial Circle in background, looking towards the Boundary Channel Bridge (Urban Heritage Project 2022).



Figure 177: Memorial Circle, looking towards Arlington Memorial Bridge (Urban Heritage Project 2022).

1968 Edward Durell Stone, Jr., Planting Plan

DECIDUOUS TREES AROUND MEMORIAL CIRCLE

Historic Conditions

Until the late 1960s, the portion of Columbia Island (later, Lady Bird Johnson Park) within the study area had minimal vegetation other than the native willows (*Salix* spp.) and cottonwoods (*Populus* spp.) growing along the shoreline. Memorial Circle and its immediate context remained open, with areas of mowed grass.

As part of Lady Bird Johnson's Beautification Program, landscape architect Edward Durell Stone, Jr., designed a planting plan for Columbia Island, including Memorial Circle. The preliminary Stone plan, approved by NCPC in July 1967, called for approximately 5,000 new trees across the island. The comprehensive plan was completed in 1968 (Earley 2004: 35; Earley and Fanning 2005: 94) (*see Figure 178*).

Stone's plan included the following plantings:

- Deciduous trees:
  - Red maple (*Acer rubrum*)
  - Sugar maple (*Acer saccharum*)
  - European beech (*Fagus sylvatica*)
  - Tupelo (*Nyssa sylvatica*)
  - White oak (*Quercus alba*)
  - Scarlet oak (*Quercus coccinea*)
  - Willow oak (*Quercus phellos*)
  - Weeping willow (*Salix babylonica*)
- Evergreen trees:
  - White pine (*Pinus strobus*)
  - Scots pine (*Pinus sylvestris*)
  - Canadian hemlock (*Tsuga canadensis*)
- Flower trees:
  - Flowering dogwood (*Cornus florida*)

The 1968 plan called for white and scarlet oak trees (*Quercus alba* and *Quercus coccinea*) to be interspersed with the white pines around Memorial Circle. In front of the oaks, closer to the traffic circle, groupings of flowering dogwood trees would be planted (Earley and Fanning 2005: 95).

Funding did not permit Stone to implement the entire planting plan immediately. Thus, the original planting plan was divided into phases; daffodils (*Narcissus* spp.) were planted around Columbia Island beginning in 1967, and the first major phase of tree plantings began in 1968. This first phase of tree plantings focused on Memorial Circle, and included 209 dogwoods (*Cornus florida*), 38 white pines (*Pinus strobus*) (near the pylons), and 18 scarlet and white oak trees (*Quercus coccinea* and *alba*).

After the initial 1968 efforts, there were no additional deciduous or evergreen trees planted until c. 1977. Between 1969 and 1971, approximately 2,700 more dogwoods (*Cornus florida*) were added in phased plantings across Columbia Island (renamed Lady Bird Johnson Park by this time), including at Memorial Circle.

Beginning in the mid-1970s, new plantings—including deciduous, evergreen, and flowering trees—were added as funding permitted, consistent with the Stone planting plan (Phases I through V/VI). Plantings between 1977 and 1979 included red maple (*Acer rubrum*), white oak (*Quercus alba*), scarlet oak (*Quercus coccinea*), white pine (*Pinus strobus*), and flowering dogwood (*Cornus florida*) (Earley 2004: 35) (*see Figures 179 and 180*). These plantings helped establish the outlines of Stone's intended design, later to be filled in.

In 1979, a study assessed the survival rate of the planting phases, and considered replacements that were better suited to the area. The study found that many dogwoods—a central feature of Stone's design—had died as a result of sun scorch, damage from mowing, and a combination of inappropriate soils, pests, and disease. Following the study, the planting plan was updated to add more white pines (*Pinus strobus*) and dogwoods (*Cornus florida*) to replace the many lost dogwoods. To protect the dogwoods, the planting plans were altered to place new deciduous and evergreen trees among, rather than behind, the dogwoods to mitigate impacts from direct sun.

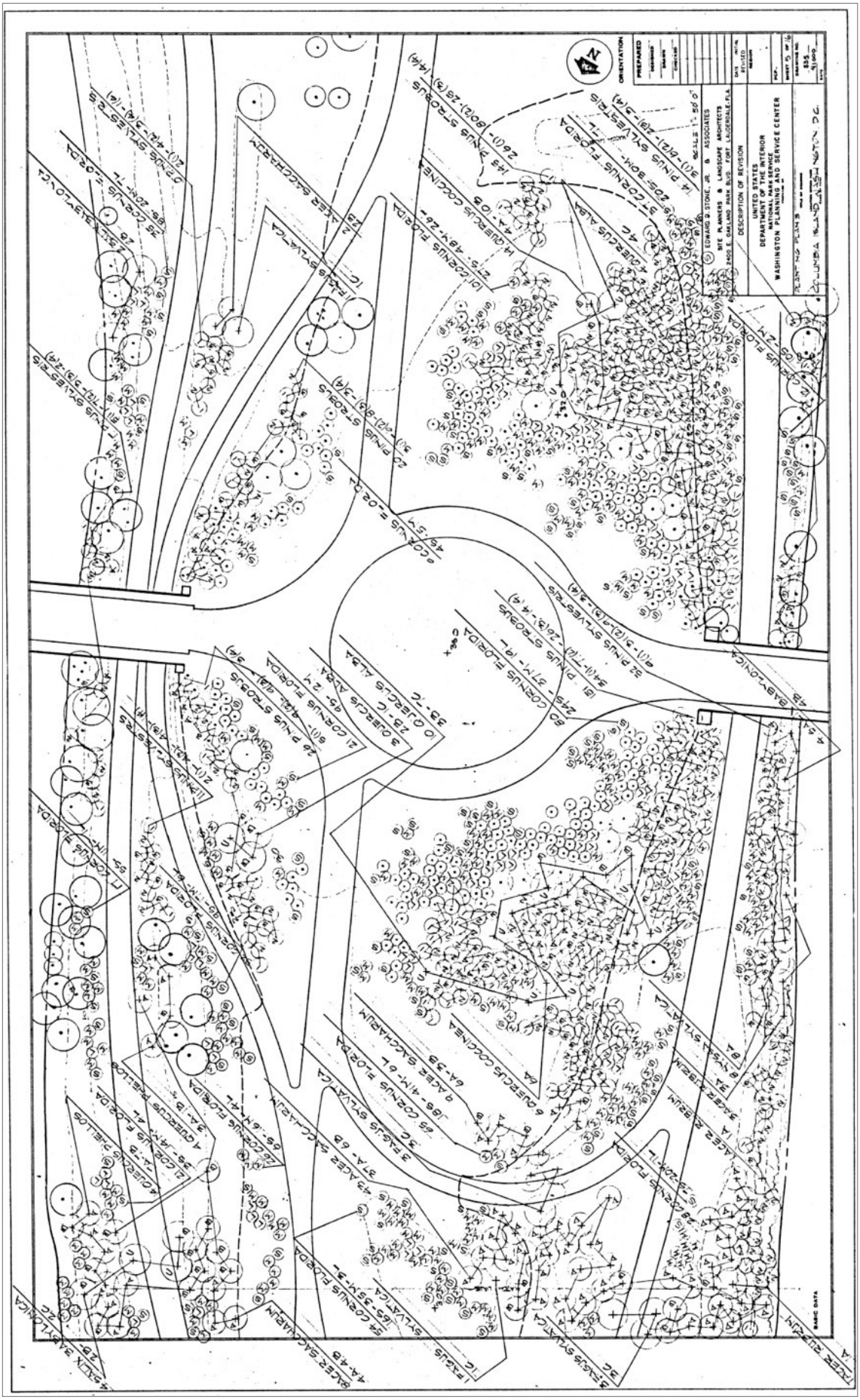


Figure 178: Columbia Island planting plan (page 6) by Edward Durell Stone, Jr., with planting plan for Memorial Circle, 1968 (Source: National Park Service, eTIC 835_41000).

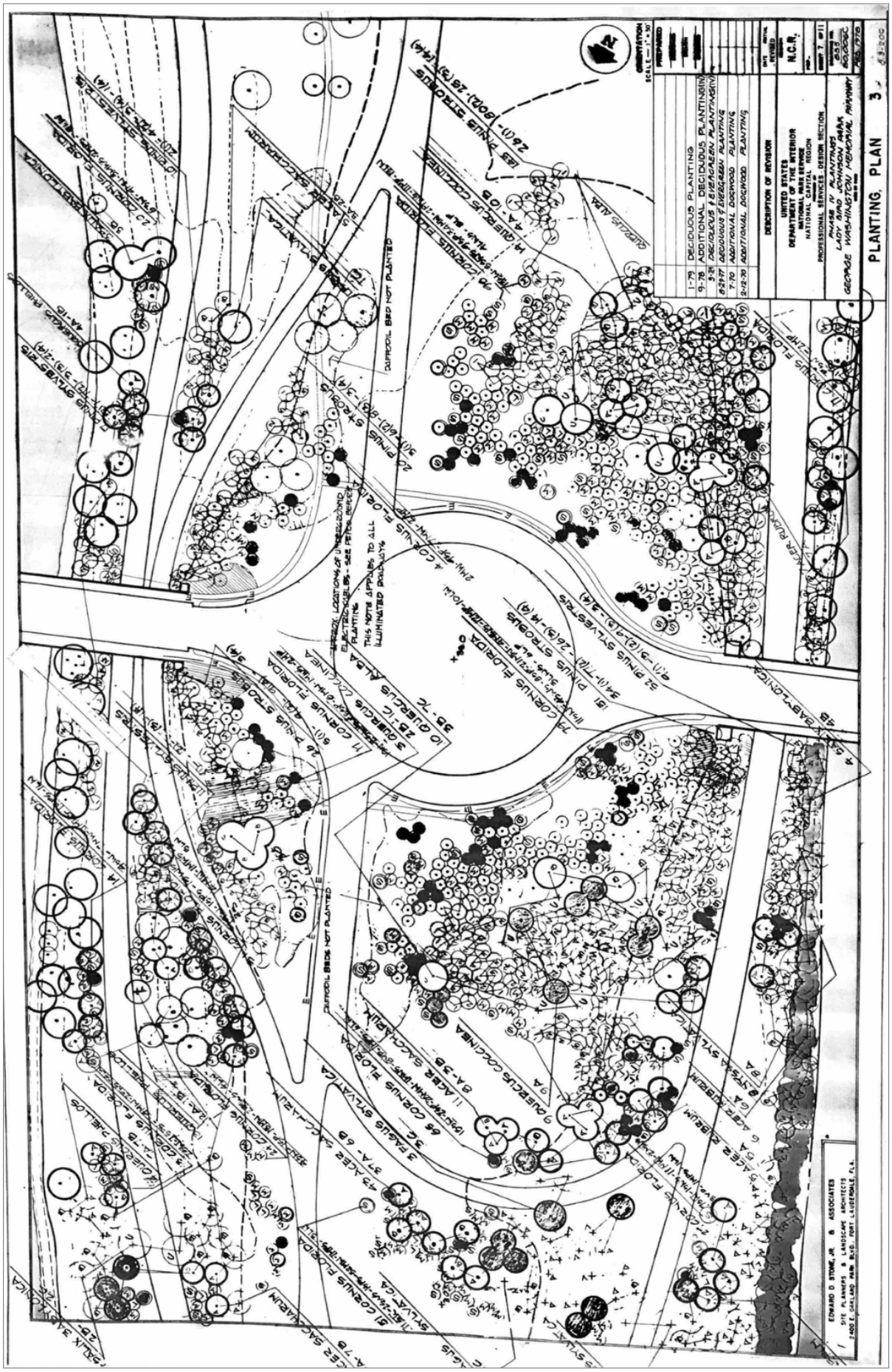


Figure 179: February 1978, Phase IV planting plan of Memorial Circle. The detail map depicts existing pink flowering dogwoods with shaded circles, and existing white flowering dogwoods with white circles (with a dot rather than a plus in the center) with a thick black border (Source: National Park Service, GWMP Archives).



Figure 180: 1979 Aerial showing extent of plantings around Memorial Circle by the end of the period of significance (Source: Historicaerials.com).

These changes to the tree configurations were documented in Phase V of the Stone planting plan (Earley and Fanning 2004: 25, 61, 96). The cover sheets for both the Phase V and Phase VI, the last known revisions to the Stone planting plan, indicated that trees were to be planted in Spring 1979, which is the last documented planting phase linked with Edward D. Stone, Jr. & Associates' plans for Lady Bird Johnson Park (Columbia Island). Please note the cover sheets from the Phases V and VI plans share the same date (February 1978).

Existing Conditions

After the period of significance, deciduous and evergreen trees—including red maples (*Acer rubrum*), white oaks (*Quercus alba*), scarlet oaks (*Quercus coccinea*), flowering dogwoods (*Cornus florida*), and white pines (*Pinus strobus*)—continued to be planted in Lady Bird Johnson Park (Columbia Island) (Earley 2004: 35). The palette of later plantings was consistent with the palette established by Edward Durell Stone, Jr. and his firm, with clusters of canopy trees foregrounded by clusters and individual plantings of dogwoods. The placement of these later plantings could generally be considered a reinterpretation of the Stone planting plan (rather than implementation of the plan itself); however, the dogwoods were an exception, as they were privately funded and



Figure 181: . Mature deciduous trees surrounding Memorial Circle (Urban Heritage Project 2022).



Figure 182: Young dogwoods in the foreground of mature deciduous trees around Memorial Circle (Urban Heritage Project 2022).



Figure 183: Mature deciduous trees around Memorial Circle (Urban Heritage Project 2022).

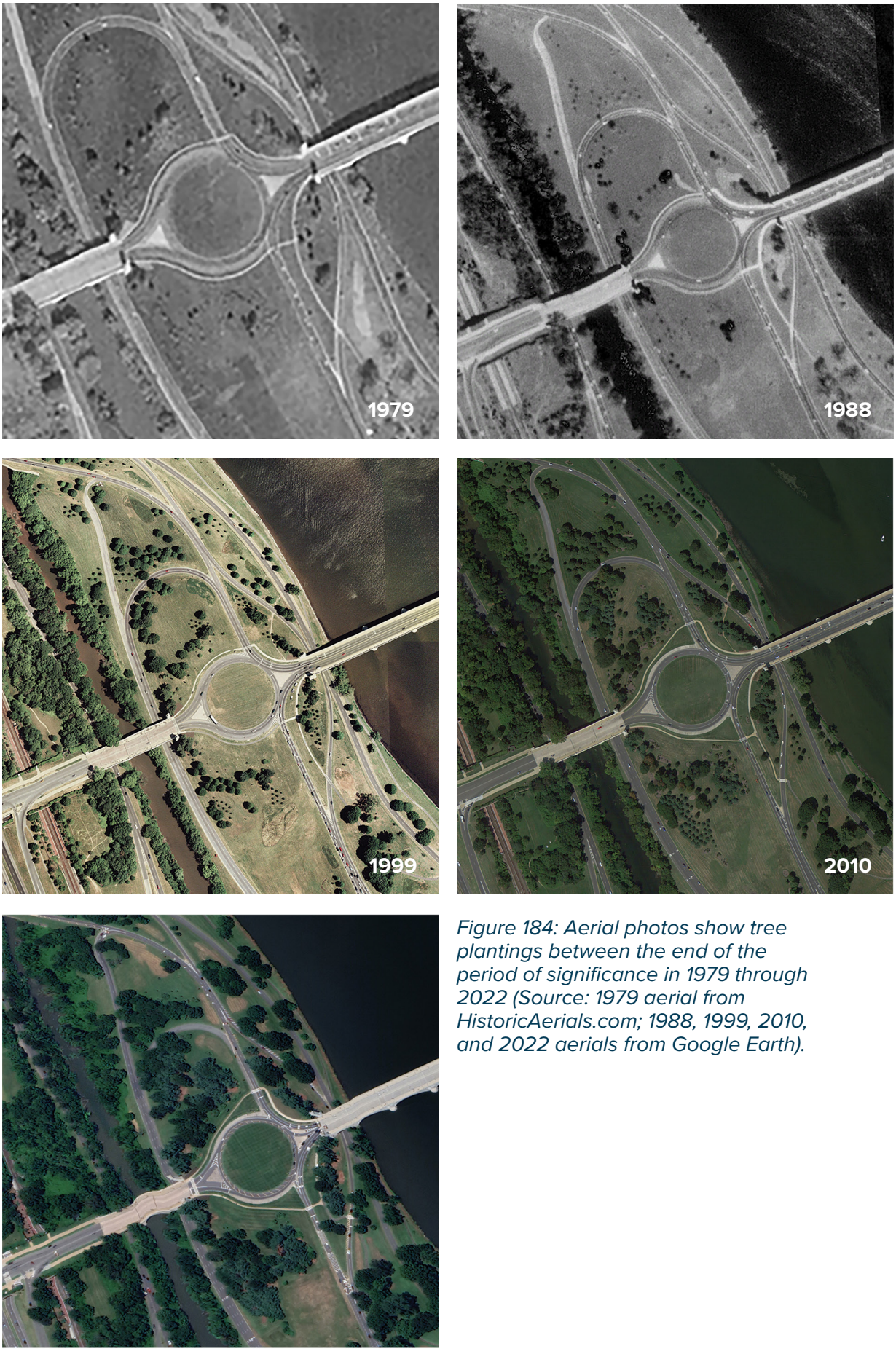


Figure 184: Aerial photos show tree plantings between the end of the period of significance in 1979 through 2022 (Source: 1979 aerial from HistoricAerials.com; 1988, 1999, 2010, and 2022 aerials from Google Earth).

planted according to the original plans (Earley and Fanning 2005: 26, 62).

New plantings across Lady Bird Johnson Park (Columbia Island) between 1979 and 1989 consisted primarily of sugar maples (*Acer saccharum*). During the 1980s, in addition to the recently planted sugar maples, the most prevalent deciduous species across the island were scarlet oaks (*Quercus coccinea*) and flowering dogwoods (*Cornus florida*). (White pines were also prevalent; see the next section for that discussion.)

By 1989, less than half and possibly less than one quarter of the trees specified in the Stone plan had been planted across Lady Bird Johnson Park; the dogwoods were most faithful to the original plans (Earley and Fanning 2005: 26, 62).

NPS staff resumed planting trees in the 1990s, when approximately 500 more deciduous (and evergreen) trees were planted across Lady Bird Johnson Park (Earley and Fanning 2005: 97). The majority of these trees were sugar maples (*Acer saccharum*) and white pines (*Pinus strobus*) (Earley and Fanning 2005: 27).

In 1999, 400 new trees and 2,000 replacement dogwood trees (*Cornus florida*) from the Stone plan were approved for planting across the island, including within the study area around Memorial Circle (Earley and Fanning 2005: 27). Several of the new tree species were not included in the original Stone plan, such as green ash (*Fraxinus pennsylvanica*), pin oaks (*Quercus palustris*), and silver maples (*Acer saccharinum*). These substitutions were more ecologically and horticulturally suitable to the area (Earley and Fanning 2005: 97). The substitutions promoted ecological health of the Memorial Circle vegetation while adhering to Stone's original design concepts, with the trees planted within the original cluster locations. These plantings followed the overall Stone design spatial structure, typified by canopy trees to the north and south of Memorial Circle, with dogwoods closer to the traffic rotary.

The 400 new trees included sugar maples (*Acer saccharum*), American elms (*Ulmus americana*) (which was not included on Stone's original planting plan list of species), and white pines (*Pinus strobus*), among other species. The substitutions included:

- Swamp white oak (*Quercus bicolor*) rather than regular white oak, because of the swamp white oak was better at becoming established;
- American beech (*Fagus grandiflora*), rather than European beech (*Fagus sylvatica*);
- Northern red oaks (*Quercus borealis borealis*), rather than scarlet oaks (*Quercus coccinea*);
- American hollies (*Ilex opaca*), rather than white pines in shaded locations; and
- Virginia pines (*Pinus virginiana*), rather than hemlocks (*Tsuga canadensis*)

Today, in the areas north and south of Memorial Circle, masses of deciduous plantings that post-date the period of significance are interspersed with older plantings established during the period of significance (***see Figures 181, 182, and 183***). Although this CLR did not include a tree inventory to determine how many Stone-era trees are extant within the study area boundaries, many of the scarlet (*Quercus coccinea*) and white oak (*Quercus alba*) trees planted north and south of Memorial Circle during the period of significance are still present. Aerial photographs (***see Figure 184***) show the evolution of plantings around Memorial Circle since the period of significance:

- A **1979** aerial depicts trees located on the north side of the Memorial Circle traffic rotary, as well as on the south side of the Arlington Boulevard loop road, all of which date to the period of significance. Scattered deciduous trees are visible on the south side of the circle also dating to the historic period.
- Similar to the 1979 aerial, a **1988** aerial depicts small clusters of trees on the north side of Memorial Circle that roughly follow an arced shape, mirroring the shape of the traffic rotary. There is a line of deciduous trees on the west side of the green space north of Memorial Circle, running roughly north-south along South Washington Boulevard. There are also trees on the south side of the Arlington Boulevard loop connector road. Scattered trees are also visible north of the loop road. On the south side of Memorial Circle, trees are primarily visible

southwest of the circle, on the east side of S Washington Boulevard. Many of the new tree plantings during the 1980s were sugar maples, with white pines (*Pinus strobus*), scarlet oaks (*Quercus coccinea*), and flowering dogwoods (*Cornus florida*) also prevalent at this time.

- An aerial photograph taken in **1999** shows some new tree plantings on the north side of Memorial Circle. Since these are located between the established plantings and the traffic circle, they are likely dogwoods. In addition, a smaller group of new trees was planted by this point north of the circle, interspersed with the established trees. These new plantings likely included sugar maples and white pines, which were planted by NPS in 1990s across Lady Bird Johnson Park. On the south side of Memorial Circle, two new groupings of trees were planted by this time to the south of the established trees.
- Several new clusters of trees were planted on the north and south sides of Memorial Circle over the following decade, visible in a **2010** aerial photograph. Many of these trees were planted on the south side of the circle, located further south than the established trees. Scattered around the established trees on the north side, with a cluster further north within the loop road, tree plantings from this time period filled in some of the open space between established tree plantings north of the circle. The aerials depict the filling out of the trees on the north and south sides of Memorial Circle over the decades, consistent with the Stone planting design of foregrounded dogwoods trees around the traffic rotary and canopy trees to the north and south of the circle.

New deciduous plantings that post-date the period of significance are interspersed with those planted during the period of significance. As of 2023, dozens of large deciduous trees (including scarlet and white oaks, and white pines) provide a backdrop for the younger (primarily replacement) dogwoods that are visible from Memorial Circle (*see Figure 189*). When viewed from the circle, these plantings extend into the distance as groupings and as individual specimens. The older plantings that date to the period of significance are interspersed with groups of younger plantings; when in leaf, they form large patches of almost-continuous canopy (which was among Stone's intentions). While some of the deciduous tree species that post-date the period of significance depart from those listed on the original Stone plan, they include suitable substitutions and alterations based on the local ecology; moreover, they sustain the design intent in visual and spatial terms.

North of Memorial Circle, tree masses occupy the area between the sidewalk and the closed Arlington Boulevard connecting road. On the south side of Memorial Circle, there are fewer groupings of trees than on the north, and those trees that exist are separated from the sidewalks by a more expansive lawn compared with the north side. Part of the lawn on the south side of Memorial Avenue was used for construction staging during the 2018-2020 Arlington Memorial Bridge Rehabilitation Project. This area does not have any trees, and was undergoing meadow restoration at the time of survey in June 2022. By summer of 2023, the meadow restoration area was no longer discernible. West of the former staging area are younger trees.

Over the decades, many of the flowering dogwood (*Cornus florida*) trees around the traffic rotary have been replaced in-kind and deciduous trees have been planted in phases to the north and south of Memorial Circle. The deciduous trees are contributing vegetation features that retain integrity to the spatial relationships established in the Stone planting plan. The design functions and layout of the original plan remain generally intact and retain integrity.

WHITE PINES (*PINUS STROBUS*) IN MEMORIAL CIRCLE AREA, OUTSIDE OF THE ROADWAY

Historic Conditions

The design for the Columbia Island (now Lady Bird Johnson Park) section of the Memorial Avenue Corridor was contested from the start, including disputes regarding the vegetation in this area. James L. Greenleaf, landscape architect for the Arlington Memorial Bridge Commission, developed a planting scheme in c. 1930 for the island; it included formal plantings along the intended



Figure 185: White pines (Pinus strobus) next to Memorial Circle pylons at the entrance to Arlington Memorial Bridge (Urban Heritage Project 2022).



Figure 186: White pines (Pinus strobus) next to Memorial Circle pylons north of the entrance to Arlington Memorial Bridge (Urban Heritage Project 2022).

straight cross-axis and naturalistic plantings beyond. This plan was never implemented. Due to disagreements about the appropriate design for Columbia Island, as well as the United States' involvement in World War II, there was minimal momentum on the island's design, even after Memorial Circle was completed in 1940.

Finally, in 1968, landscape architect Edward Durell Stone, Jr., completed a planting plan for Columbia Island as part of Lady Bird Johnson's Beautification Program. (No plantings on Columbia Island were undertaken until this plan was approved.) The 1968 Stone plan placed groups of white pine trees (*Pinus strobus*) around the Memorial Circle pylons. During the first phase of tree planting in 1968, 38 white pines were planted, with approximately one dozen white pines planted around each of the four pylons (Earley 2004: 131).

Existing Conditions

The white pines (*Pinus strobus*) planted around the Memorial Circle pylons retain integrity to the period of significance (***see Figures 185 and 186***). Dating to the first Lady Bird Johnson Park (Columbia Island) plantings in 1968, the white pines are located around all four Memorial Circle pylons and frame views along the corridor. The white pines complement the evergreens across the Potomac River in Washington, D.C., planted on the east side of Arlington Memorial Bridge and Lincoln Memorial. The white pines retain integrity and are contributing features.

FLOWER BEDS AT MEMORIAL CIRCLE PYLONS

Historic Conditions

In 1979, flower beds were installed at the base of the Memorial Circle pylons, at the east and west sides of Lady Bird Johnson Park (Columbia Island). No information has been discovered as to what types of plantings were present when the flower beds were first established.

The flower beds are not depicted in the 1968 Stone planting plan drawings. A later drawing for the Phase IV planting plan (the plan has a February 1978 date in the title block, but also includes annotations from January 1979) depicted flower beds on the east side of Memorial Circle at the bridge pylons. Per the drawing key, the outlined, hatched forms indicated "existing bulbs planting beds," suggesting that the flower beds had already been installed at an unknown date (and with



Figure 187: View of plantings in flower beds at the base of the Memorial Circle pylons (Urban Heritage Project 2022).



Figure 188: Plantings in flower beds at base of Memorial Circle pylons, at entrance to Arlington Memorial Bridge (Urban Heritage Project 2022).

unspecified plantings). The same drawing does not depict any flower beds on the west side of Memorial Circle at the bridge pylons.

Existing Conditions

The flower beds remain in place at the base of the Memorial Circle pylons, on the east and west sides of Lady Bird Johnson Park (Columbia Island) (*see Figures 187 and 188*). The flower beds are approximately the same size and location as when added in in 1979, as depicted in the planting plan. The flower beds retain integrity to the period of significance. Within the flower beds, canna lilies and summer annuals are planted each year. The significance of the planting palette within the beds is undetermined, as research to date has not been able to determine the historic plantings.

Mid-1970s Metro Plantings

RED OAKS (*QUERCUS BOREALIS*) AND PIN OAKS (*QUERCUS PALUSTRIS*) PLANTED BY WMATA

Historic Conditions

The construction of Metro facilities in 1977 disrupted the holly hedges and white oak trees along

Memorial Avenue. Following construction of the Metro station, WMATA planted red oaks (*Quercus borealis*) and pin oaks (*Quercus palustris*) behind the holly hedge on Memorial Avenue in the area west of the Boundary Channel Bridge (***see Figure 189***). After this point, there were no original white oak trees on Memorial Avenue around the Metro facilities.

The WMATA Huntington Route Landscape Planting Plan signed in 1975 depicted where trees were to be planted following construction of the metro station. Unlike the 1935 planting plan with its first formal row of trees and naturalistic approach behind the first row, the trees in the 1975 plan are lined up in even ranks behind the hedge on either side of Memorial Avenue. The WMATA plan used red oaks (*Quercus borealis*) and pin oaks (Quercus palustris), straying from the original 1935 plan for white oaks along Memorial Avenue. It is unknown why the species of oak was changed.

On the north side of Memorial Drive were six Northern red oak (*Quercus borealis*) trees evenly spaced in two rows of three trees each beyond the holly hedge, located west of the metro rail lines. Other plantings included one pin oak (*Quercus palustris*) north of the red oaks and flowering dogwoods (*Cornus florida*) and American holly (*Ilex opaca*).

East of the metro rails on the north side of Memorial Drive were eight Northern red oak (*Quercus borealis*) trees, two rows of four evenly spaced trees beyond the holly hedge. There is also one willow oak (*Quercus phellos*) located just north of the two rows of trees. Other plantings included two Yoshino cherry (*Prunus yedoensis*) trees and holly plants were depicted along the western extent of this tree cluster.

On the south side of Memorial Avenue, between the VA Highway 110 off ramp and the metro line were four red oak (*Quercus borealis*) trees, interspersed with hollies and dogwoods. Three of the four trees were depicted roughly in a row, oriented north-south, with the fourth tree to the west side of the furthest south tree. Ther were two red oak trees on the west side of the highway off ramp, just south of Memorial Avenue and the holly hedge, in alignment with two of the trees on the east side of the ramp.

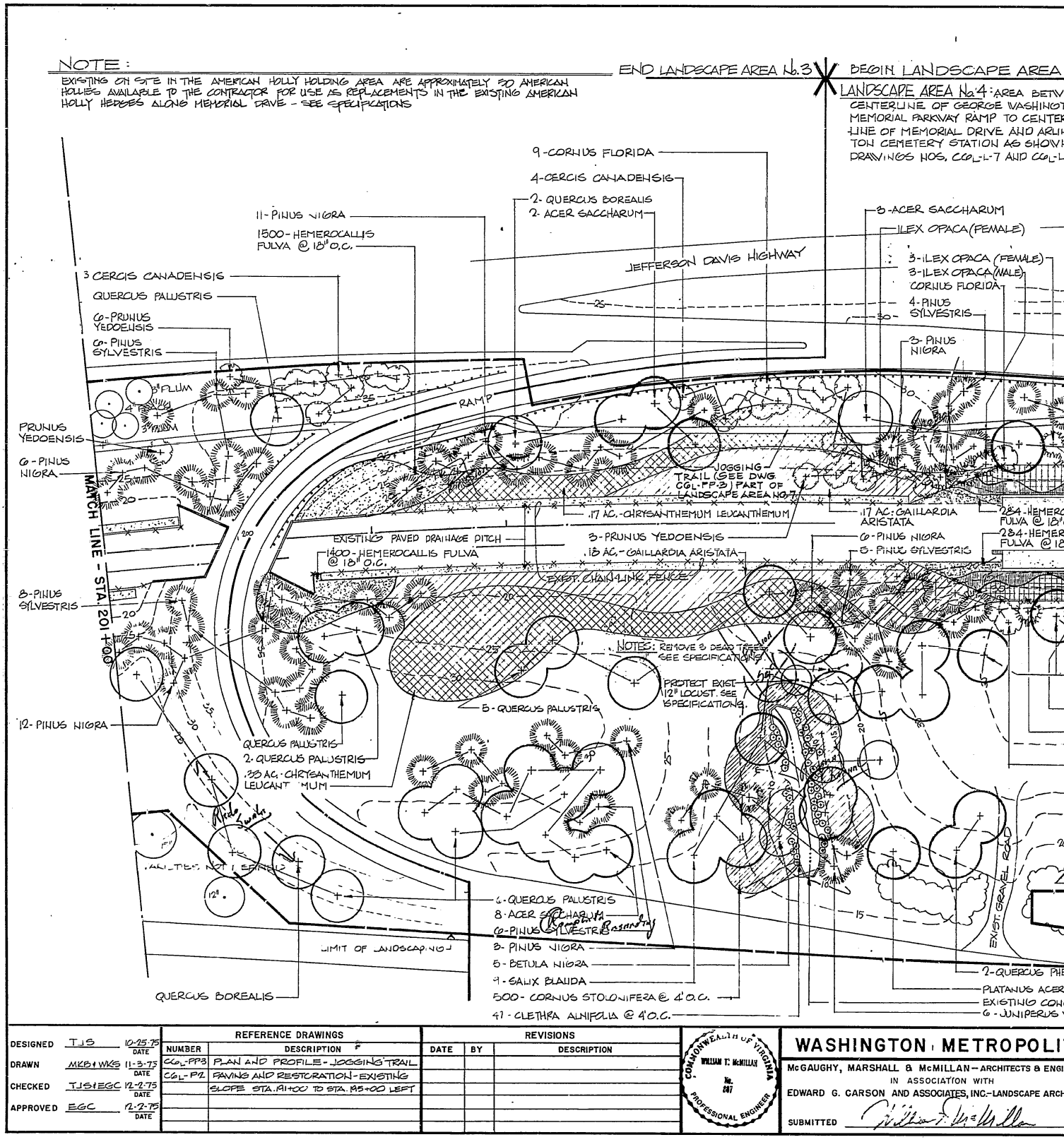
On the east side of the metro rail line south of the holly hedges were eight red oaks (*Quercus borealis*) trees arranged in two rows of four evenly spaced trees. Further south just beyond the cultural landscape boundaries are several other trees, none of which are arranged in rows but more naturalistic in their design (ETIC 850-80064).

Existing Conditions

The oak trees planted behind the holly hedge in the late 1970s on the north and south sides of Memorial Avenue in the vicinity of the metro stop remain in place. While the 1975 plan indicates primarily red oak trees, the trees around the metro station today include both red oaks and pin oaks.

Behind the holly hedge on the north side of the avenue, pin oaks are planted in two parallel lines, as indicated in the 1975 plan. There are other trees including a mulberry, with vines and invasives species covering many of the trees. Behind the holly hedge on the south side of the avenue is a row of red oaks.

Although they were planted during the period of significance, the red and pin oak trees do not follow the 1935 planting design that called for one formal row of trees followed by a more naturalistic design. In contrast, these trees are lined up evenly behind the holly hedge. Based on their deviations from the historic planting intent, these trees are considered non-contributing but compatible features in the cultural landscape.


NOTE:
EXISTING ON SITE IN THE AMERICAN HOLLY HOLDING AREA ARE APPROXIMATELY 30 AMERICAN HOLLIES AVAILABLE TO THE CONTRACTOR FOR USE AS REPLACEMENTS IN THE EXISTING AMERICAN HOLLY HEDGES ALONG MEMORIAL DRIVE - SEE SPECIFICATIONS
END LANDSCAPE AREA No.3
BEGIN LANDSCAPE AREA
LANDSCAPE AREA No.4: AREA BETW
CENTERLINE OF GEORGE WASHINGT
MEMORIAL PARKWAY RAMP TO CENTER
LINE OF MEMORIAL DRIVE AND ARLI
TON CEMETERY STATION AS SHOWN
DRAWINGS NOS, CGL-L-7 AND CGL-L
9-CORNUS FLORIDA
4-CERCIS CANADENSIS
2-QUERCUS BOREALIS
2-ACER SACCHARUM
11-PINUS NIGRA
1500-HEMEROCALLIS FULVA @ 18" O.C.
3-ACER SACCHARUM
ILEX OPACA (FEMALE)
JEFFERSON DAVIS HIGHWAY
3-ILEX OPACA (FEMALE)
3-ILEX OPACA (MALE)
CORNUS FLORIDA
4-PINUS SYLVESTRIS
3 CERCIS CANADENSIS
QUERCUS PALUSTRIS
6-PRUNUS YEDOENSIS
6-PINUS SYLVESTRIS
3-PINUS NIGRA
RAMP
PRUNUS YEDOENSIS
6-PINUS NIGRA
JOGGING TRAIL (SEE DWG CGL-PP-3) PART OF LANDSCAPE AREA No.7
.17 AC.-CHRYSANTHEMUM LEUCANTHEMUM
.17 AC.-GAILLARDIA ARISTATA
284-HEMEROCALLIS FULVA @ 18"
MATCH LINE - STA. 201+00
EXISTING PAVED DRAINAGE PITCH
1400-HEMEROCALLIS FULVA @ 18" O.C.
3-PRUNUS YEDOENSIS
.15 AC.-GAILLARDIA ARISTATA
6-PINUS NIGRA
5-PINUS SYLVESTRIS
EXIST. CHAIN-LINK FENCE
8-PINUS SYLVESTRIS
NOTES: REMOVE 8 DEAD TREES SEE SPECIFICATIONS
PROTECT EXIST 12" LOCUST. SEE SPECIFICATIONS.
5-QUERCUS PALUSTRIS
12-PINUS NIGRA
QUERCUS PALUSTRIS
2-QUERCUS PALUSTRIS
.33 AC.-CHRYSANTHEMUM LEUCANTHEMUM
EXIST. GRAVEL ROAD
6-QUERCUS PALUSTRIS
8-ACER SACCHARUM
6-PINUS SYLVESTRIS
3-PINUS NIGRA
5-BETULA NIGRA
9-SALIX BLAUDA
500-CORNUS STOLONIFERA @ 4' O.C.
47-CLETHRA ALNIFOLIA @ 4' O.C.
LIMIT OF LANDSCAPING
QUERCUS BOREALIS
2-QUERCUS PHE
PLATANUS ACER
EXISTING CON
6-JUNIPERUS
DESIGNED TJS 10-25-75
DRAWN MKB+WKS 11-3-75
CHECKED TJS+EGC 12-2-75
APPROVED EGC 12-2-75
REFERENCE DRAWINGS
NUMBER DESCRIPTION
CGL-PP3 PLAN AND PROFILE - JOGGING TRAIL
CGL-P12 PAVING AND RESTORATION - EXISTING SLOPE STA. 191+00 TO STA. 195+00 LEFT
REVISIONS
DATE BY DESCRIPTION
COMMONWEALTH OF VIRGINIA
WILLIAM T. McMILLAN
No. 287
PROFESSIONAL ENGINEER
WASHINGTON METROPOLI
McGAUGHY, MARSHALL & McMILLAN - ARCHITECTS & ENGI
IN ASSOCIATION WITH
EDWARD G. CARSON AND ASSOCIATES, INC.-LANDSCAPE ARCH
SUBMITTED

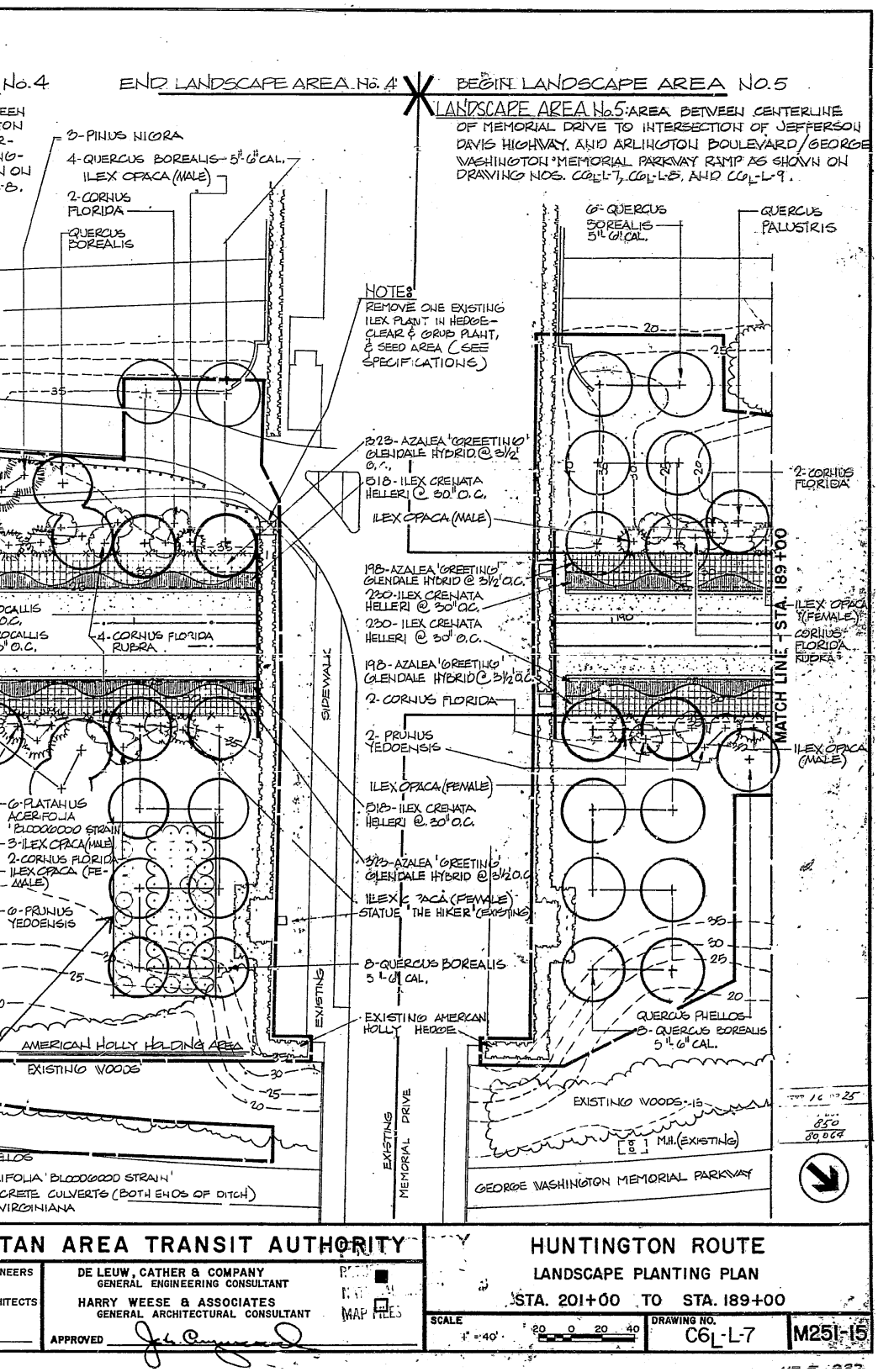


Figure 189: Planting plan around the Arlington National Cemetery metro station from the Huntington Route Landscape Planting Plan series, Washington Metro Area Transit Authority, 1975 (Source: National Park Service, eTIC 850 80064 1975 1976).

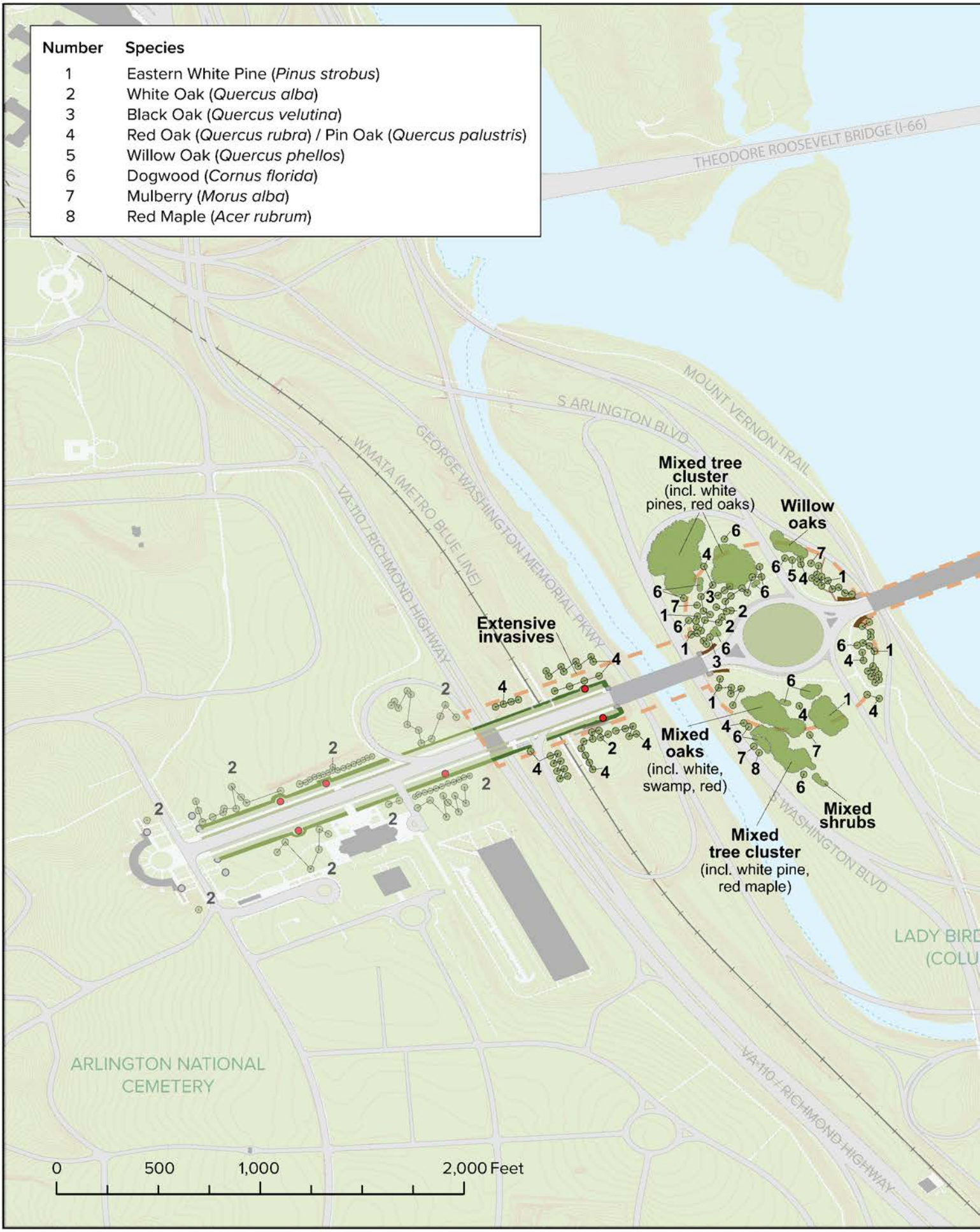
EVALUATION

Much of the vegetation planted during the period of significance contributes to the cultural landscape. This includes the holly hedge and turf borders along Memorial Avenue, both of which adhere to the original corridor design despite alterations to individual plantings. Additional contributing vegetation features include: the white oaks located south of Memorial Avenue; the white pine trees around the Memorial Circle pylons; the open turf lawn at Memorial Circle; the flower beds at the Memorial Circle pylons; and the deciduous trees, dogwood trees, and white pines on the north and south sides of Memorial Circle that were planted during the period of significance in accordance with the Stone planting plan.

The red oaks and pin oaks planted in the 1970s do not follow the original planting design and are considered non-contributing but compatible features.

VEGETATION - CHARACTER-DEFINING FEATURES

Feature Description	*Date Established*	*Contributing Status*
Holly hedges (*Ilex opaca*) along full extent of Memorial Avenue	1936; 1942; 1959; 2021-present	Contributing
White oaks (*Quercus alba*) along Memorial Avenue	1935	Contributing
Turf panels along full extent of Memorial Avenue	1930s	Contributing
White pines (*Pinus strobus*) in Memorial Circle area, outside of the roadway	1968	Contributing
Open turf lawn at Memorial Circle	1940	Contributing
Flower beds at Memorial Circle pylons	1979	Contributing
Deciduous trees around Memorial Circle	1968	Contributing
Red oaks (*Quercus borealis*) and pin oaks (*Quercus palustris*) planted by WMATA	Late 1970s	Non-contributing - Compatible


Number Species
1 Eastern White Pine (Pinus strobus)
2 White Oak (Quercus alba)
3 Black Oak (Quercus velutina)
4 Red Oak (Quercus rubra) / Pin Oak (Quercus palustris)
5 Willow Oak (Quercus phellos)
6 Dogwood (Cornus florida)
7 Mulberry (Morus alba)
8 Red Maple (Acer rubrum)
THEODORE ROOSEVELT BRIDGE (I-66)
MOUNT VERNON TRAIL
S ARLINGTON BLVD
GEORGE WASHINGTON MEMORIAL PKWY
WMATA (METRO BLUE LINE)
VA-110 / RICHMOND HIGHWAY
Mixed tree cluster (incl. white pines, red oaks)
Willow oaks
Extensive invasives
Mixed oaks (incl. white, swamp, red)
Mixed shrubs
Mixed tree cluster (incl. white pine, red maple)
S WASHINGTON BLVD
LADY BIRD
(COLU
ARLINGTON NATIONAL CEMETERY
VA-110 / RICHMOND HIGHWAY
0 500 1,000 2,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Vegetation (Overall)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Building / Structure
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail

Landscape Characteristic Features

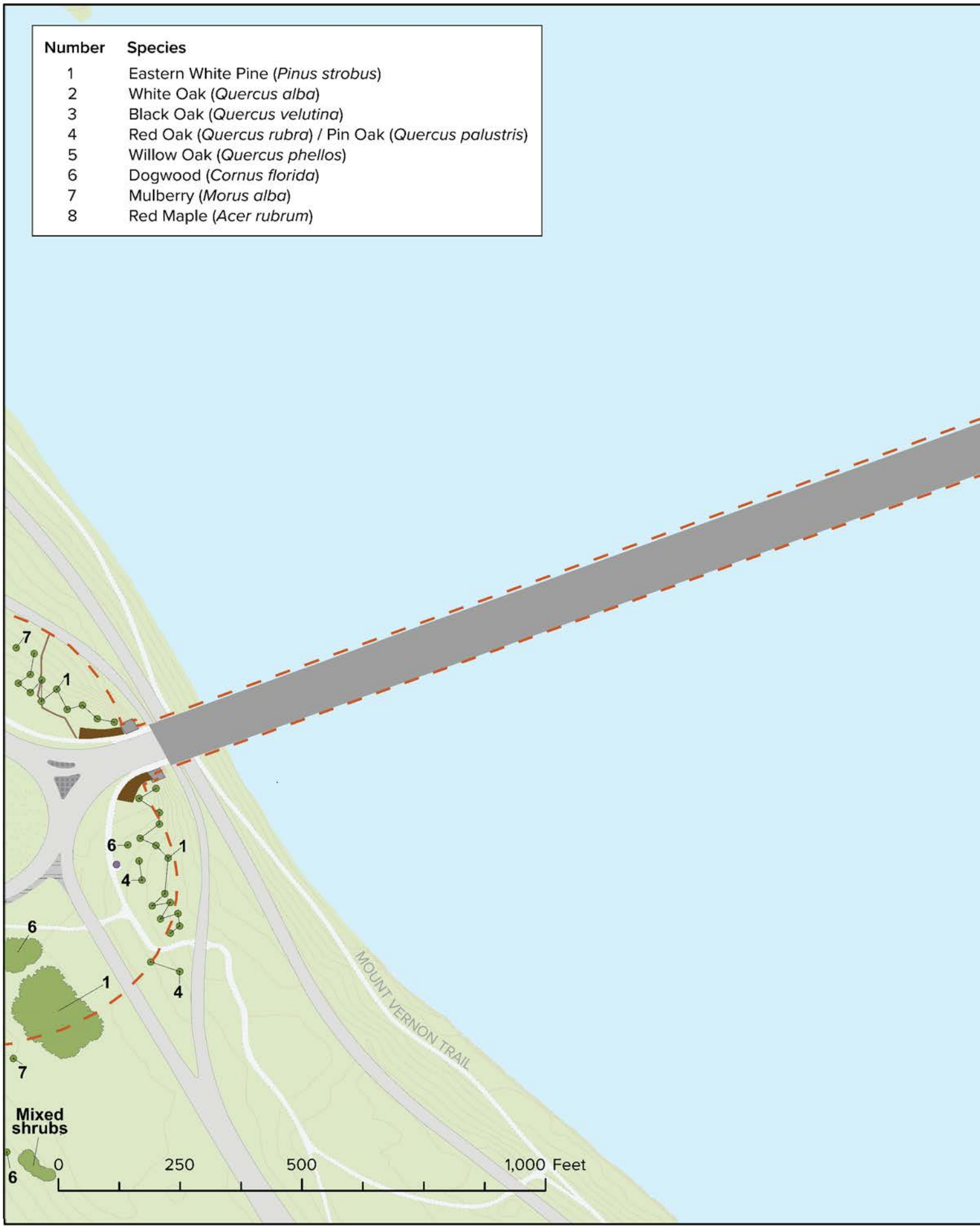
- Vegetation - Trees / Shrubs
- Vegetation - Turf
- Vegetation - Holly Hedge
- Vegetation - Planting Bed

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #27


Number Species
1 Eastern White Pine (Pinus strobus)
2 White Oak (Quercus alba)
3 Black Oak (Quercus velutina)
4 Red Oak (Quercus rubra) / Pin Oak (Quercus palustris)
5 Willow Oak (Quercus phellos)
6 Dogwood (Cornus florida)
7 Mulberry (Morus alba)
8 Red Maple (Acer rubrum)
MOUNT VERNON TRAIL
Mixed shrubs
0
250
500
1,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Vegetation (East)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Building / Structure
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail

Landscape Characteristic Features

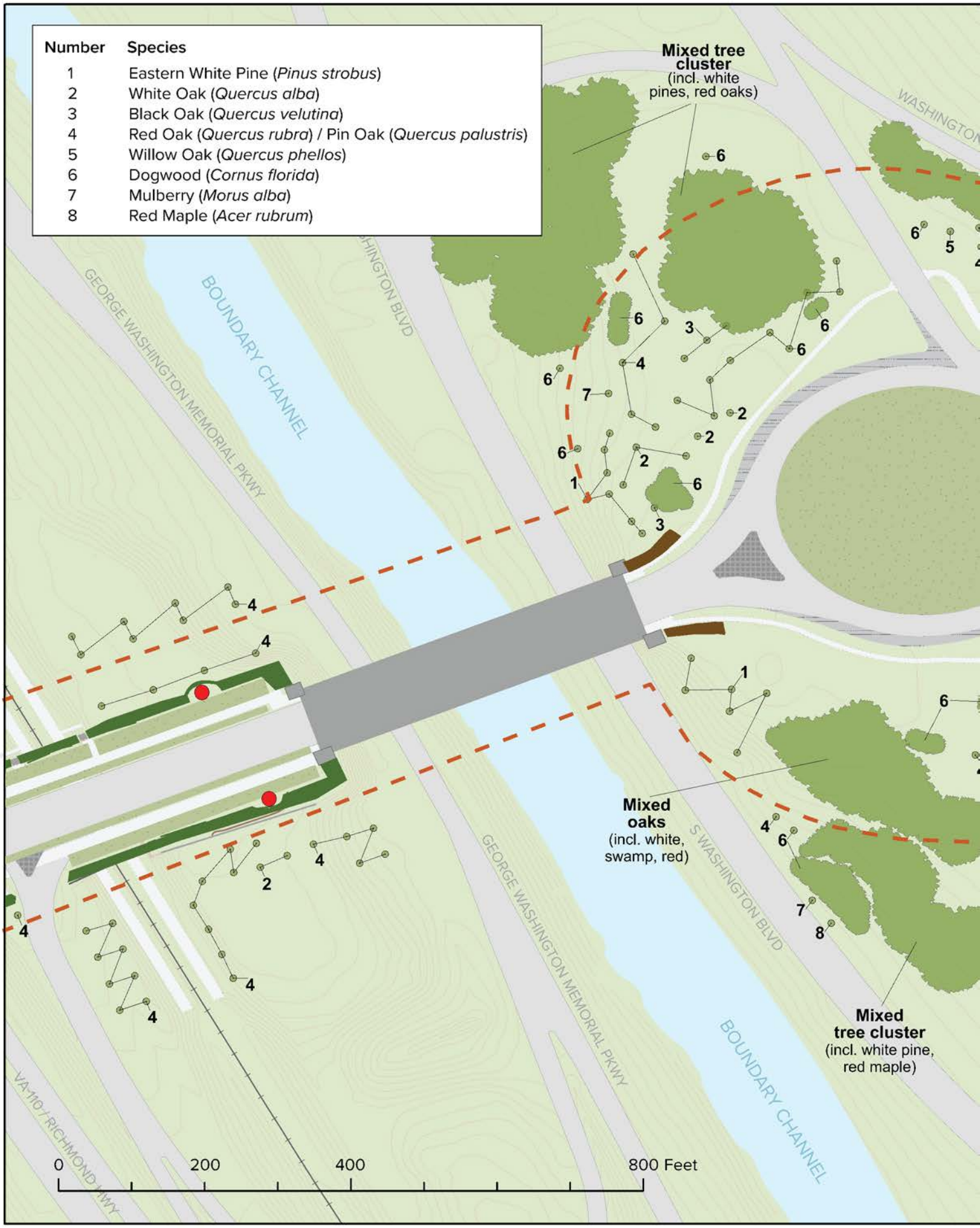
- Vegetation - Trees / Shrubs - *Contributing, except for red oaks / pin oaks (which are Non-contributing - Compatible)*
- Vegetation - Turf - *Contributing*
- Vegetation - Planting Bed - *Contributing*

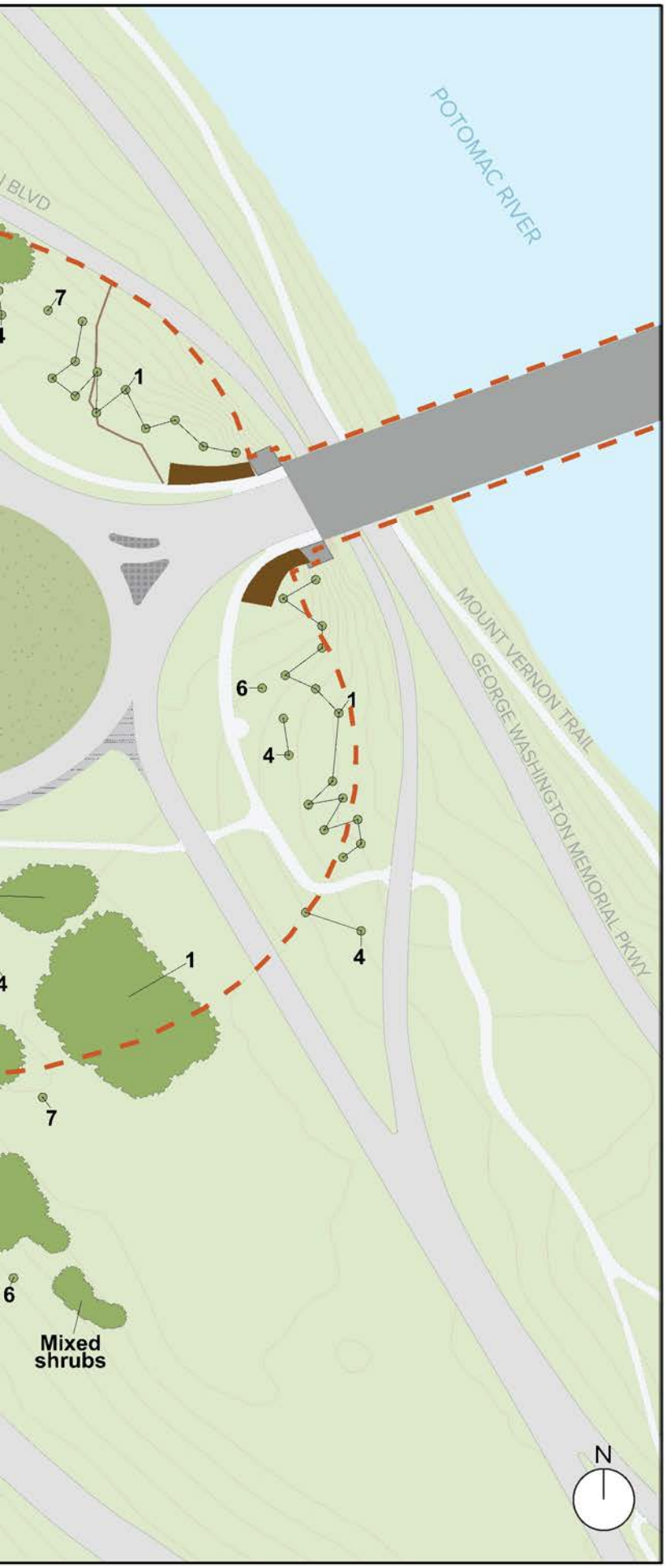
NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #28


Number Species
1 Eastern White Pine (Pinus strobus)
2 White Oak (Quercus alba)
3 Black Oak (Quercus velutina)
4 Red Oak (Quercus rubra) / Pin Oak (Quercus palustris)
5 Willow Oak (Quercus phellos)
6 Dogwood (Cornus florida)
7 Mulberry (Morus alba)
8 Red Maple (Acer rubrum)
Mixed tree cluster (incl. white pines, red oaks)
Mixed oaks (incl. white, swamp, red)
Mixed tree cluster (incl. white pine, red maple)
BOUNDARY CHANNEL
GEORGE WASHINGTON MEMORIAL PKWY
S WASHINGTON BLVD
VA-110 / RICHMOND HWY
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Vegetation (Circle Area)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Memorial (Structure)
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail

Landscape Characteristic Features - Evaluation

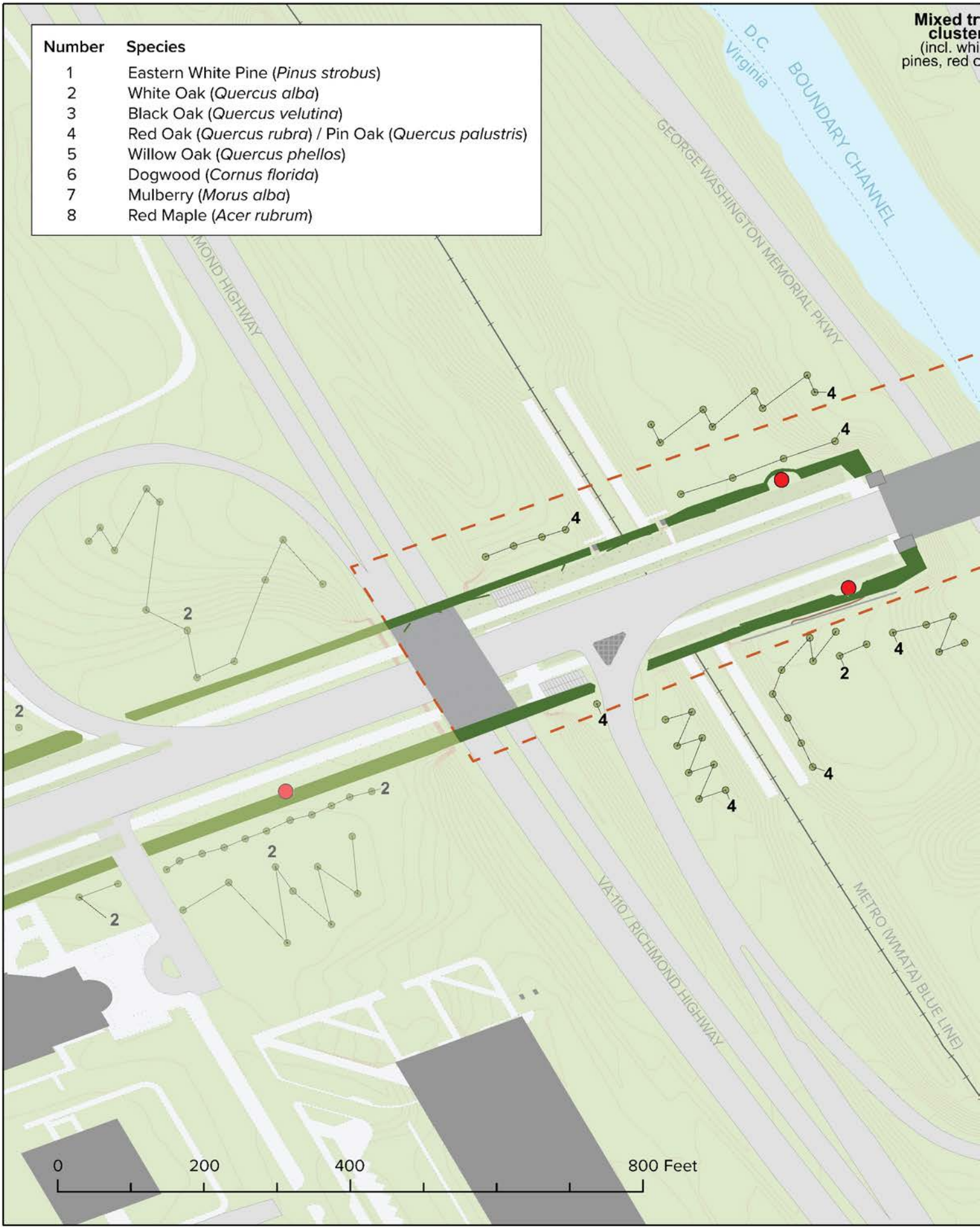
- Vegetation - Trees / Shrubs - *Contributing, except for red oaks / pin oaks (which are Non-contributing - Compatible)*
- Vegetation - Turf - *Contributing*
- Vegetation - Holly Hedge - *Contributing*
- Vegetation - Planting Bed - *Contributing*

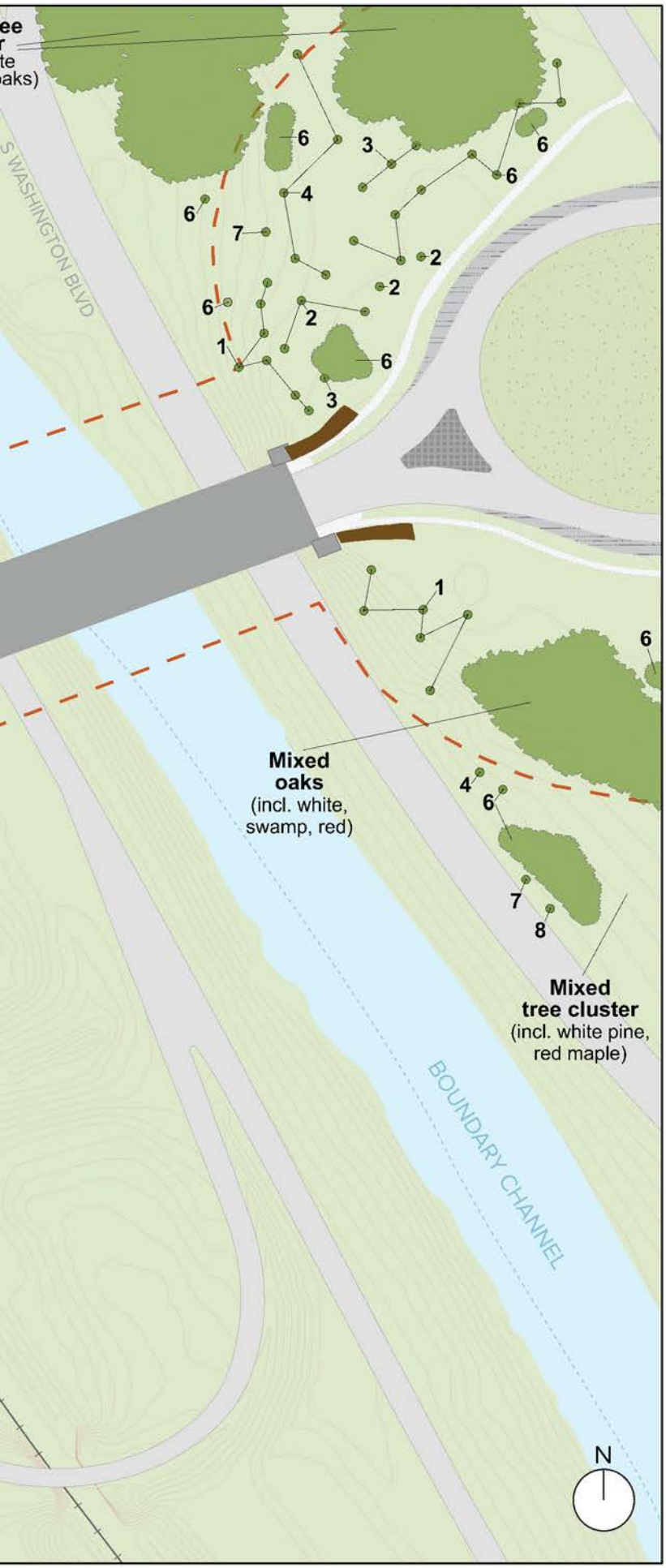
NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #29


Number Species
1 Eastern White Pine (Pinus strobus)
2 White Oak (Quercus alba)
3 Black Oak (Quercus velutina)
4 Red Oak (Quercus rubra) / Pin Oak (Quercus palustris)
5 Willow Oak (Quercus phellos)
6 Dogwood (Cornus florida)
7 Mulberry (Morus alba)
8 Red Maple (Acer rubrum)
Mixed tr
cluste
(incl. whi
pines, red c
D.C.
Virginia
BOUNDARY CHANNEL
GEORGE WASHINGTON MEMORIAL PKWY
MOND HIGHWAY
VA-110 / RICHMOND HIGHWAY
METRO (WMATA) BLUE LINE)
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Vegetation (West)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Building / Structure
- Memorial (Structure)
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail

Landscape Characteristic Features - Evaluation

- Vegetation - Trees / Shrubs - *Contributing, except for red oaks/pin oaks (which are Non-contributing - Compatible)*
- Vegetation - Turf - *Contributing*
- Vegetation - Holly Hedge - *Contributing*
- Vegetation - Planting Bed - *Contributing*

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #30

Small-Scale Features

There is little documentation of any small-scale features that existed within the cultural landscape prior to the period of significance. Small-scale features within the Memorial Avenue Corridor historically pertained to infrastructure and the safe movement of vehicles and pedestrians through the corridor, including lampposts, drainage features, and curbing. While many of these small-scale features remain, they are extant alongside more recent small-scale features such as signage, fire hydrants, traffic controls, and updated drainage features—all of which were added after the period of significance.



Figure 190: Arlington Memorial Bridge with Washington standard lamppost on sidewalk, 1953 (Source: DC History Center, WY 3830.55).

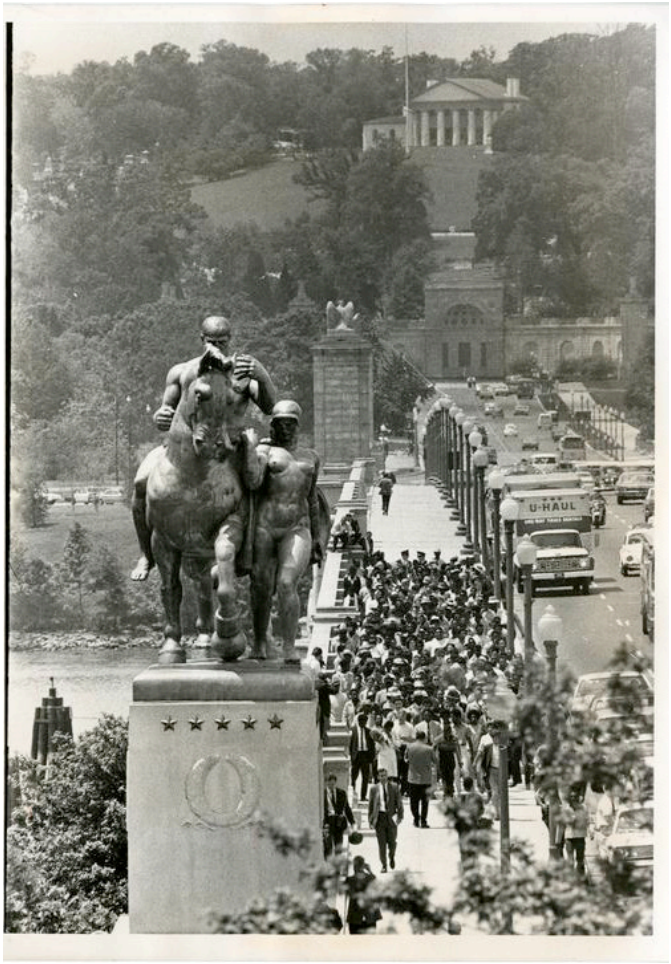


Figure 191: Marchers cross Arlington Memorial Bridge after visiting President Kennedy's gravesite at Arlington National Cemetery with lampposts visible along length of bridge, 1968 (Source: Washington Post Company).

LAMPPOSTS – WASHINGTON STANDARDS

Historic Conditions

When Arlington Memorial Bridge opened to traffic in early 1932, there was no lighting in place on the structure. While McKim, Mead & White had proposed 15-foot bronze standard lampposts for both Arlington Memorial Bridge and the Boundary Channel Bridge, these were never built or installed. Instead, Washington standard lampposts were added to the bridge in 1932 as temporary features that ultimately remained in place. Washington standard lampposts were designed by Francis Millet circa 1913, though the design underwent some modifications over the years. A 1938 plan notes that 36 lamps atop No.17-type posts were "in operation" on Arlington Memorial Bridge at this time (NPS Branch of Engineering, Jan. 8, 1938, 3E8-1, National Archives RG 79) (Earley 2004: 119).

Lampposts were installed on Memorial Avenue in approximately 1938 (*see Figures 190 and 191*). As they had done for the bridges along the avenue, McKim, Mead & White designed lampposts for the roadway; however, like Arlington Memorial Bridge, Washington standards were installed instead. The 1938 lighting plan for Memorial Avenue noted 32 lampposts for Memorial Avenue and eight for the Boundary Channel Bridge. In 1938, only 18



Figure 192: Lamppost on Arlington Memorial Bridge (Urban Heritage Project 2022).

lampposts were installed on Memorial Avenue (nine on each side). The plan suggests that rather than lined symmetrically along the avenue, the posts were staggered (NPS Branch of Engineering, Jan. 8, 1938, 3E8-1, National Archives RG 79).

On Columbia Island (later, Lady Bird Johnson Park), the straight roadway between Arlington Memorial Bridge and the Boundary Channel Bridge received metal lampposts with "teardrop" globes in 1932. Since Memorial Circle was not yet constructed, the lampposts lined the straight roadway across the island. By 1938, these lampposts had been replaced by Washington standards.

When Memorial Circle was completed in 1940, Washington standards were placed around the rotary (Photo: 886A/46, NPS-NCR). In the late 1950s, the Washington standards were replaced with steel lampposts with pendant globes (Photo: MRCE: Columbia Island, PH-6, PF-19, folder 1, Memorial Circle looking up Columbia Island, 9060-13F, Oct. 12, 1967).

Existing Conditions

Today, there are Washington standard lampposts throughout the Memorial Avenue Corridor. Today, there are 40 lampposts on Arlington Memorial Bridge; four of which were added in the section of the bascule span after it was no longer in operation.

During the 2018-2020 Arlington Memorial Bridge Rehabilitation Project, each lamppost was removed, repainted, and reset, with upgraded lighting system installed within conduits in each bridge arch span (***see Figures 192 and 193***). The Washington standards on Arlington Memorial Bridge are spaced at slightly different intervals in order to line up with each bridge span. Since the span widths decrease in size slightly from the center of the bridge to the shoreline, the distances between lampposts also vary, ranging from 110 feet apart at the center of the bridge to 102 feet apart at the shoreline. There are two lampposts per span, and an additional lamppost at each end of the bridge.

There are four Washington standard lampposts on either side of the Boundary Channel Bridge (***see Figure 194).*** The distance between the lampposts on the outer sides of the bridge is 88 feet, while the distance between posts is 75 feet at the two posts closest to the center of the bridge. At the time of CLR survey in 2022-2023, one lamppost was missing on the north side of the bridge (leaving 7 extant lampposts).

The 1950s steel lampposts with pendant globes around Memorial Circle were removed in 1990 and replaced by Washington standards around the circle (GWMP files) (***see Figure 195***). Today, there are 16 Washington standard replica lampposts around Memorial Circle.



Figure 193: Lampposts along Arlington Memorial Bridge sidewalks (Urban Heritage Project 2022).



Figure 194: Lamppost (with missing globe) on the Boundary Channel Bridge sidewalk (Urban Heritage Project 2022).



Figure 195: Lampposts around Memorial Circle (Urban Heritage Project 2022).

Additional Washington standard lampposts are also evenly spaced on Memorial Avenue, both within the study area (***see Figure 196***) and further west along Memorial Avenue, outside the boundaries of this CLR.

All of the lampposts that are part of the Memorial Avenue Corridor are cast metal painted black. The lampposts on Arlington Memorial Bridge and Memorial Avenue were recorded in the List of Classified Structures as 16 feet in height (Earley 2004: 120). Each lamppost is mounted on a square block of granite; these bases are described in the original drawings as 2 feet 2 inches on each side, and set flush with the grade of the sidewalk. Despite some changes in location and style, the lampposts contribute to the cultural landscape. The Washington standard lampposts were added to Memorial Circle in 1990, after the period of significance. These lampposts complement the remainder of the lampposts within the cultural landscape and are non-contributing but compatible.

GRANITE AND CONCRETE CURBING

Historic Conditions

Granite curbing for Arlington Memorial Bridge and the Boundary Channel Bridge was added during bridge construction (***see Figures 197 and 198***). The curbstones for Arlington Memorial Bridge, the Boundary Channel Bridge, and Memorial Avenue were 12 inches wide and 8 inches high (***see C1 in Drawings #33 and #35***). They had a rounded nose at the exposed edge. The curbstones generally differed in length, however, as specified on one of the drawings for Memorial Avenue; no curbstone was to be under nine feet or over ten feet in length (McKim, Mead & White: Cemetery Approach-Plan showing location of Lamp Post Bases and Niches, 6/29/31, 7A5-72A). A drawing of curbstones (called "roadway blocks") for the two bridges described the blocks as sawed Concord (New Hampshire) granite, six to ten feet in length (McKim, Mead & White: 10/26/31, 1A5-53). The granite curbs for the various sections of the project may have come from different quarries.

Around Memorial Circle, granite curbs with various profiles were installed in 1940 (***see C2, Drawing***



Figure 196: Lampposts along Memorial Avenue (Urban Heritage Project 2022).

#35). The design for Memorial Circle was not part of the original Kendall plan, and thus did not match the profiles of the rest of the Memorial Avenue curbing.

Although the original designs for Memorial Avenue called for granite curbs, concrete curbs were installed at first instead, circa 1933. By 1940, the concrete curbs had been replaced by granite curbs, as intended. The granite curbs may have been installed as early as the winter of 1936/37, when granite curbstones were installed on the bridge axis roadway on Columbia Island (later, Lady Bird Johnson Park) (*see C1, Drawing #37*).

Existing Conditions

As of 2021, the draft National Register nomination for the Arlington Memorial Bridge and Related Features Historic District reported that "about ninety percent of the original curbstones along the corridor [were] still in place" (Lee 2021: 7-49). Fieldwork for this CLR confirmed those general conditions.

The draft nomination also records that almost every curbstone along Arlington Memorial Bridge and the Boundary Channel Bridge appears to be original (*see Figure 199 and Drawings #33 and 35*). During the 2018-2020 Arlington Memorial Bridge Rehabilitation Project, the granite curbing along the bridge was removed for the replacement of the bridge decks and sidewalks. The curbs were thereafter reset, and some broken sections were replaced in-kind.

The curbing around Memorial Circle, installed in 1940, remains in place. The curbing is low-profile and executed in granite (*see Figures 201, and refer to C2 in Drawing #35*). The Memorial Circle curbing is distinct from the curbing elsewhere in the study area in its height and varied profiles, but the curbing is consistent with the historic condition and contributes to the significance of the landscape. When sections of the curbing around the circle have been damaged, they have been repaired or replaced in-kind. The curbing on the Belgian block shoulder lanes around Memorial Circle is granite, measuring 6 inches wide with a beveled edge (*see C3 in Drawing #35*).

Curbing along the east side of S Arlington Boulevard to the southeast of Memorial Circle consists of a low profile concrete curb (*see C5 in Drawings #33 and #35*). It is unknown when this curbing was added.

There are a few areas on Memorial Avenue within the study area where the granite curbstones have been replaced. These include the intersection of the avenue with the VA Highway 110/George Washington Memorial Parkway off-ramp, where the concrete curbing measures 7 inches wide (*see C4 in Drawings #35 and #37*). It is unknown when this curbing was installed, but it may date to the off-ramp construction c. 1941.

Additionally, some curb cuts at crosswalks within the study area were added c. 1985, after the period



Figure 197: Boy Scouts riding bikes over Arlington Memorial Bridge, with bridge decking and granite curbing visible, 1937 (Source: Library of Congress, Control number: 2016871930).



Figure 198: Arlington Memorial Bridge granite curbing along the road edge, at the center of photograph (Urban Heritage Project 2022).



Figure 199: Granite curbing along the Boundary Channel Bridge (Urban Heritage Project 2022).



Figure 200: Granite curbing on Memorial Avenue at a curb cut (Urban Heritage Project 2022).



Figure 201: Assorted curbing around Memorial Circle, visible on either side of the roadway (Urban Heritage Project 2022).



Figure 202: Arlington Memorial Bridge looking towards the Lincoln Memorial with inlet grate visible in lower left, c. 1930 to 1950. Photographer Theodor Horydczak (Source: Library of Congress, Control number: 2019672803).



Figure 203: Typical McKim, Mead & White-designed cast iron inlet grate on Memorial Avenue (Urban Heritage Project 2022).



Figure 204: Inlet grate on east end of Memorial Avenue. The non-historic grates with this design post-date the period of siginificance (Urban Heritage Project 2022).

of significance, and feature different curbing (*see Figure 200*).

While there have been some new additions, the granite curbing retains integrity to the period of significance and is a contributing feature.

Since the dates of installation of the concrete curbing are unknown, the contributing status for that feature is Undetermined. The curb cuts that post-date the period of significance are non-contributing, but compatible.

STORM DRAIN INLET GRATES

Historic Conditions

Cast iron grates were installed along Arlington Memorial Bridge, the Boundary Channel Bridge, and Memorial Avenue, likely at the time of their original construction (*see Figure 202*). The original drainage features within the cultural landscape were designed by McKim, Mead & White. A drawing noted that the frame for the catch basin grate was cast iron and the grate itself was “semi steel” (AMBC: 6E7-4). The McKim, Mead, and White inlet grates are character-defining features.

Existing Conditions

The cast iron inlets along the Memorial Avenue Corridor include the historic grates designed for the corridor by McKim, Mead & White (*see Figure 203*), in addition to newer iterations (*see Figure 204*). The original cast iron inlet grates are recognizable based on their slightly convex profile and 11 openings (spanning nearly the full width of the grate, these openings are rounded at each end). The newer grates can be identified based on their gridded openings; it is unknown when these newer grates were added but postdate the period of significance.

Today, the Memorial Avenue roadways within NPS jurisdiction includes four total inlet grates, two on either side of the avenue, all of which are the newer variety. Along the Boundary Channel Bridge are 12 total inlet grates, all of which are the original McKim, Mead, and White design. Arlington Memorial Bridge has 80 total inlets, with 40 inlets on each side.

Thirty of these grates exhibit the convex shape, while the other 10 have the same frame, but the grate is flat.

GRANITE HEADER STONES AT EITHER END OF THE BOUNDARY CHANNEL BRIDGE

Historic Conditions

Rectangular granite header stones were installed on the Boundary Channel Bridge, most likely during the bridge's initial construction between 1929 and 1931. The header stones marked the ends of the Belgian block roadway.

Existing Conditions

The original granite header stones that delineate the Boundary Channel Bridge's Belgian block roadway surface are in place and maintain integrity (*see Figures 205 and 206*). During maintenance work completed on the Boundary Channel Bridge in 2001-2002, they were removed and reinstalled. The granite header stones are contributing features.

LADY BIRD JOHNSON MEMORIAL PLAQUE

Historic Conditions

On the southeast side of Memorial Circle, a bronze memorial plaque to First Lady Claudia "Lady Bird" Johnson was installed in 1968. The plaque was approximately two square feet wide, and was placed within a concrete apron that curves off of the sidewalk between Memorial Circle and Washington Boulevard; the apron was bordered by Belgian block. The plaque had raised lettering and a plain raised border, with the following inscription: "Lady Bird Johnson Park/The dogwood and daffodil plantings on this island are dedicated to President and Mrs. Lyndon B. Johnson who challenged America to make more beautiful the environment of all its citizens/1968."

Existing Conditions

The Lady Bird Johnson memorial plaque, located on the southeast side of Memorial Circle, has not



Figure 205: Granite header stone at edge of the Belgian block section of the Boundary Channel Bridge (Urban Heritage Project 2022).



Figure 206: Granite header stones on the Boundary Channel Bridge demarcate the end of the Belgian block section (Urban Heritage Project 2022).



Figure 207: Lady Bird Johnson Memorial plaque on the southeast side of Memorial Circle (Urban Heritage Project 2022).



Figure 208: Lady Bird Johnson Memorial plaque (Urban Heritage Project 2022).

changed since installation and is a contributing small-scale feature (*see Figures 207 and 208*).

DRAINAGE AND UTILITY FEATURES

Historic and Existing Conditions

There are metal drainage and utility features embedded in the grass around Memorial Circle (*see Figure 209*), as well as metal utility covers along the Boundary Channel Bridge and Arlington Memorial Bridge (*see Figure 210*). It is unknown when these features were added to the landscape. They do not contribute to the significance of the landscape.

FIRE HYDRANTS

Historic and Existing Conditions

There are two fire hydrants on Memorial Avenue within the study area boundary (*see Figure 211*). It is unknown when these features were added to the landscape. They do not contribute to the significance of the cultural landscape.

BARRICADES AND OTHER VEHICULAR CONTROLS

Historic and Existing Conditions

There are barricades and other vehicular controls within the cultural landscape to direct traffic (*see Figure 212*). At the time of survey in June 2022, stanchions were located on the northeast side of Memorial Circle, near the pedestrian crosswalk where the circle meets S Arlington Boulevard (*see Figure 213*). The stanchions narrow the vehicle lanes for pedestrian safety. Additionally, at the time of survey, concrete and plastic barricades were in place as part of a pilot effort to block vehicular access to the loop road connecting Arlington Boulevard and Washington Boulevard north of Memorial Circle. This road is entirely blocked off to traffic at present.

These features do not contribute to the significance of the landscape.

SIGNAGE – WAYSIDES AND REGULATORY

Historic and Existing Conditions

Directional and regulatory traffic signs are present on Arlington Memorial Bridge, Memorial Circle, and on Memorial Avenue. There are several "no parking" signs attached to the historic lampposts along Memorial Avenue, the Boundary Channel Bridge, and around Memorial Circle. There are also signs noting the speed limit on Arlington Memorial Bridge.

There are several regulatory signs around Memorial Circle. There is a large cluster of signs on the northeast side of Memorial Circle as vehicles exit Arlington Memorial Bridge and head north on S Arlington Boulevard to assist drivers in navigating the complex road system (*see Figure 214*). There are reflective directional signs within Memorial Circle to direct traffic around the circle. There are smaller directional signs for pedestrians around Memorial Circle (*see Figure 215*).

There are NPS waysides on Memorial Bridge (count: 3), the Boundary Channel Bridge (count: 2), and Memorial Avenue (count: 3); the most



Figure 209: Drainage and utility features in grass on northeast side of Memorial Circle (Urban Heritage Project 2022).



Figure 210: Metal utility cover on the Boundary Channel Bridge (Urban Heritage Project 2022).



Figure 211: Fire hydrant on left of photograph, adjacent to the Metro elevator on the north side of Memorial Avenue (Urban Heritage Project 2022).

recent waysides address the 2018-2020 Arlington Memorial Bridge rehabilitation project (*see Figure 216*).

EVALUATION

Small-scale features in the cultural landscape pertain to infrastructure and navigation through the corridor. The small-scale features that date to the period of significance and contribute to the landscape include: the lampposts, granite curbing, granite header stones, cast iron inlet grates, and the Lady Bird Johnson memorial plaque. Additions to the landscape that postdate the period of significance and are considered non-contributing include signage and vehicular controls. Although research for this CLR has not been able to determine when the fire hydrants, draining, and other utility features were installed, they do not contribute to the significance of the landscape. The Memorial Avenue Corridor cultural landscape retains integrity with respect to small-scale features.

SMALL-SCALE FEATURES - CHARACTER-DEFINING FEATURES

Feature Description	*Date Established*	*Contributing Status*
Lampposts on Arlington Memorial Bridge, Boundary Channel Bridge, and Memorial Avenue	1932, 1938	Contributing
Granite curbing	1932; 1940	Contributing
Storm drain inlet grates (McKim, Mead, and White design), Boundary Channel Bridge and Arlington Memorial Bridge	1930s	Contributing
Granite header stones	c. 1931	Contributing
Lady Bird Johnson Memorial plaque	1968	Contributing
Concrete curb cuts	c. 1985	Non-contributing - Compatible
Lampposts around Memorial Circle	1990	Non-contributing - Compatible
Storm drain inlet grates (gridded metal design), Memorial Avenue	After period of significance	Non-contributing
Utility features	Undetermined	Non-contributing
Fire hydrants	Undetermined	Non-contributing
Barricades and other vehicular controls	Varied; c. 2000-present	Non-contributing
Signage – waysides and regulatory	Varied; c. 2000-2020	Non-contributing
Concrete curbing	Undetermined	Undetermined



Figure 212: Traffic delineator posts demarcate the lanes on the west side of Memorial Circle as vehicles enter Arlington Memorial Bridge (Urban Heritage Project 2022).



Figure 213: Traffic delineator posts near the pedestrian crosswalk where the circle meets S Arlington Boulevard on the north side of Memorial Circle (Urban Heritage Project 2022).



Figure 214: Cluster of directional signs at pedestrian crosswalk north of Memorial Circle, crossing over northbound S Arlington Boulevard (Urban Heritage Project 2022).

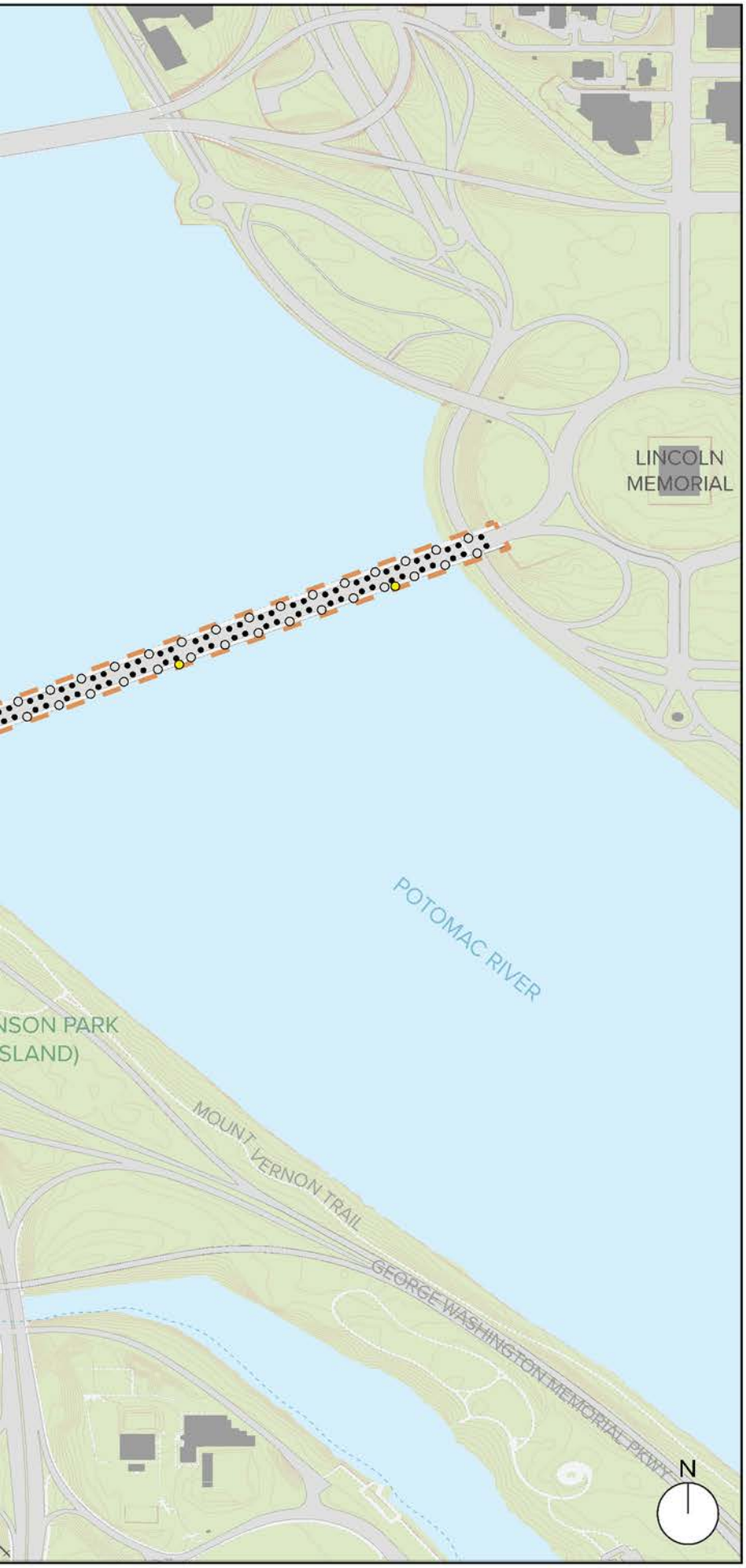


Figure 215: Directional sign for pedestrians, located along Memorial Circle sidewalk (Urban Heritage Project 2022).



Figure 216: Wayside exhibit on Arlington Memorial Bridge, interpreting the rehabilitation of the bridge completed in 2018-2020 (Urban Heritage Project 2022).


THEODORE ROOSEVELT BRIDGE (I-66)
MOUNT VERNON TRAIL
S ARLINGTON BLVD
WASHINGTON BLVD
GEORGE WASHINGTON MEMORIAL PKWY
WMATA (METRO BLUE LINE)
VA-110 / RICHMOND HIGHWAY
D.C.
Virginia
BOUNDARY CHANNEL
S WASHINGTON BLVD
LADY BIRD JOHN
(COLUMBIA I
ARLINGTON NATIONAL
CEMETERY
VA-110 / RICHMOND HIGHWAY
0
500
1,000
2,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Small-Scale Features (Overall)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Building / Structure
- Memorial (Structure)
- Vegetation

Landscape Characteristic Features

- Lady Bird Johnson Memorial Plaque - *Contributing*
- Granite Header Block - *Contributing*
- Lamppost - *Contributing*
- Lamppost Missing
- Inlet Grate (Historic) - *Contributing*
- Inlet Grate (Non-Historic) - *Non-contributing*
- Fire Hydrant - *Non-contributing*
- Signage - *Non-contributing*

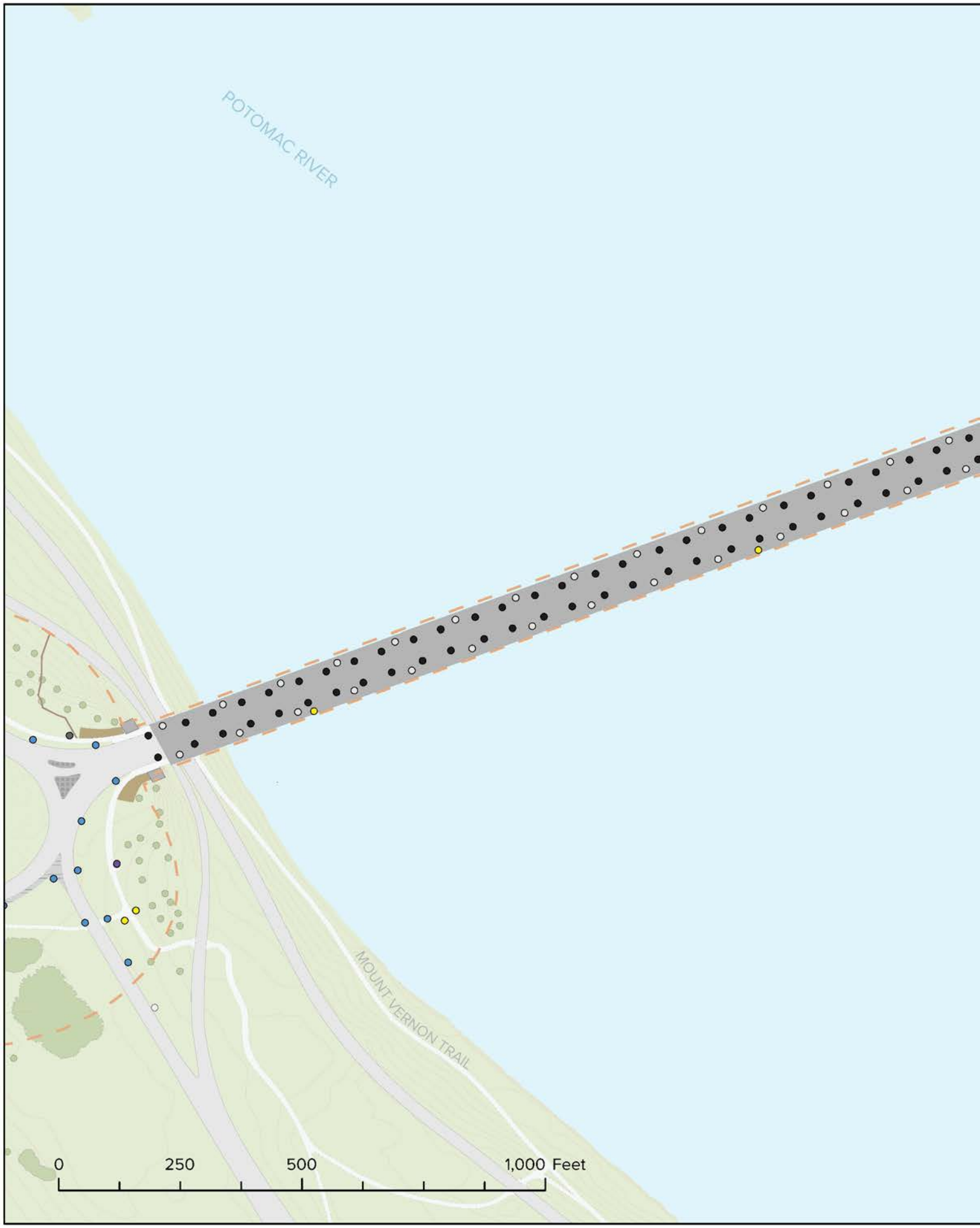
NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #31


POTOMAC RIVER
MOUNT VERNON TRAIL
0
250
500
1,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Small-Scale Features (East)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail
- Vegetation

Landscape Characteristic Features - Evaluation

- Lady Bird Johnson Memorial Plaque - *Contributing*
- Lamppost - *Contributing*
- Lamppost - *Non-contributing*
- Storm Drain Inlet Grate (Historic) - *Contributing*
- Signage - *Non-contributing*

NOTES

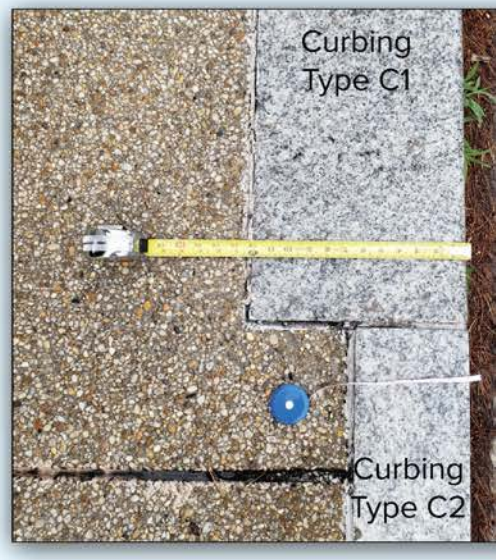
1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

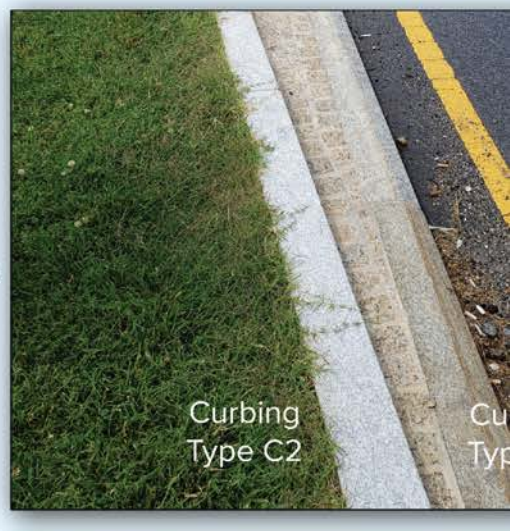
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DRAWING #32

Curbing Type

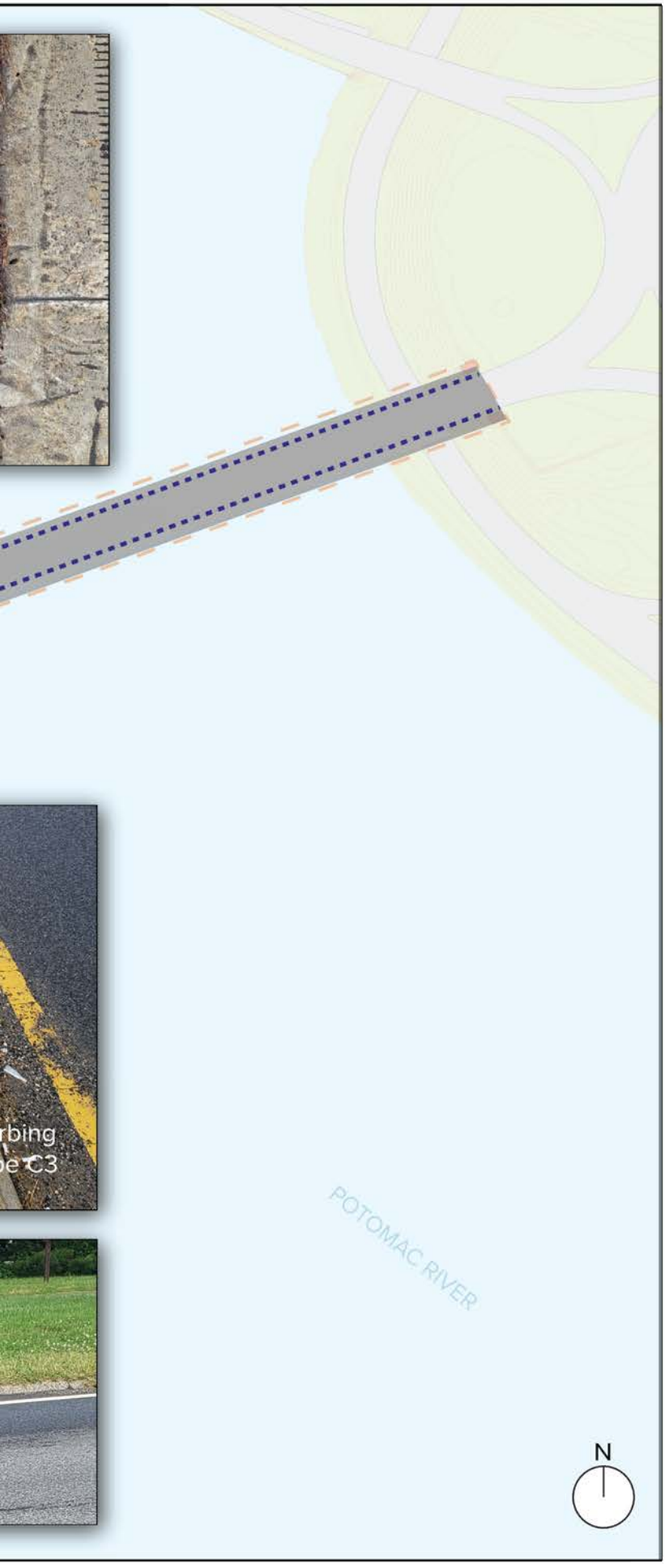
- C1 - Granite blocks, 12” wide, square edge - *Contributing*
- C2 - Granite blocks, 6“ wide, square edge - *Contributing*
- C3 - Granite, 6” wide, beveled edge - *Contributing*
- C4 - Concrete, 7” wide, quarter-round profile - *Undetermined*
- C5 - Concrete, low profile - *Undetermined*







0 250 500 1,000 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Small-Scale Features - Curbing (East)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Building / Structure

Landscape Characteristic Features

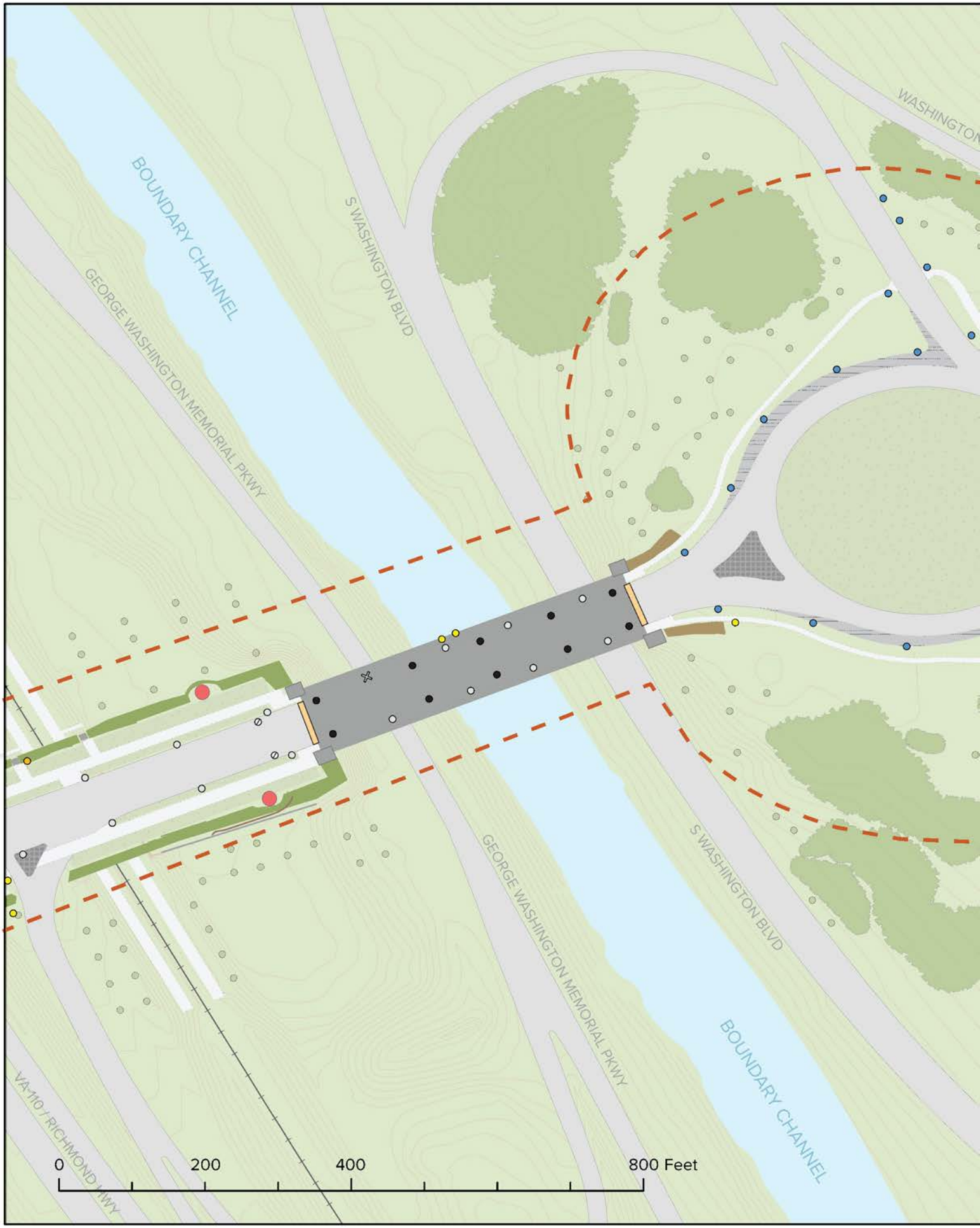
- Circulation - Road
- Circulation - Belgian Block Shoulder Lane
- Circulation - Belgian Block Traffic Island
- Circulation - Sidewalk
- Circulation - Social Trail

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #33


BOUNDARY CHANNEL
S WASHINGTON BLVD
GEORGE WASHINGTON MEMORIAL PKWY
WASHINGTON
S WASHINGTON BLVD
GEORGE WASHINGTON MEMORIAL PKWY
BOUNDARY CHANNEL
VA-110 / RICHMOND HWY
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Small-Scale Features (Circle Area)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Memorial (Structure)
- Pylon (Structure)
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail
- Vegetation

Landscape Characteristic Features - Evaluation

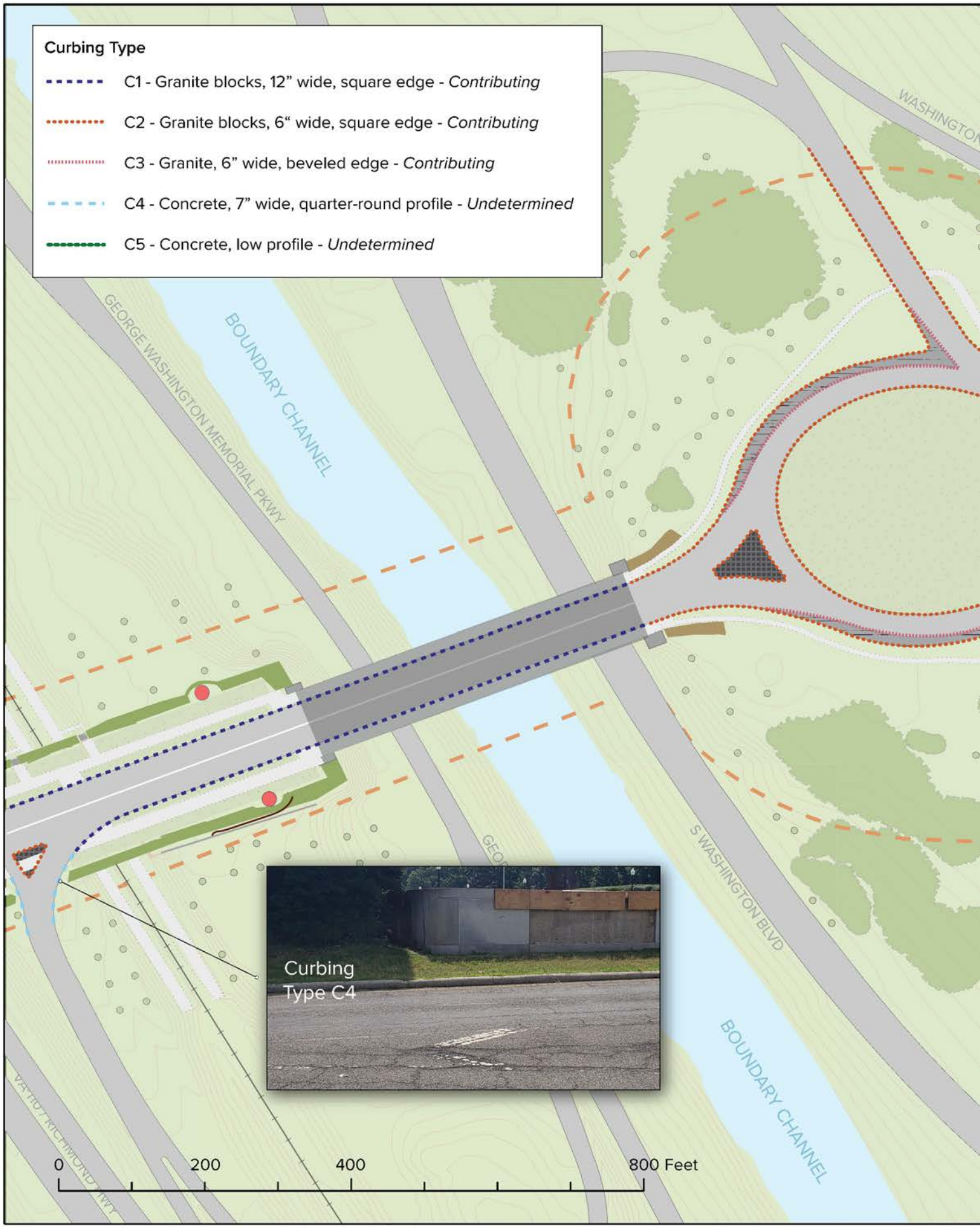
- Lady Bird Johnson Memorial Plaque - *Contributing*
- Lamppost - *Contributing*
- Lamppost - *Non-Contributing*
- Missing Lamppost
- Inlet Grate (Historic) - *Contributing*
- Inlet Grate (Non-Historic) - *Non-Contributing*
- Signage - *Non-contributing*

NOTES

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2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #34


Curbing Type
C1 - Granite blocks, 12” wide, square edge - Contributing
C2 - Granite blocks, 6“ wide, square edge - Contributing
C3 - Granite, 6” wide, beveled edge - Contributing
C4 - Concrete, 7” wide, quarter-round profile - Undetermined
C5 - Concrete, low profile - Undetermined
WASHINGTON
GEORGE WASHINGTON MEMORIAL PKWY
BOUNDARY CHANNEL
S WASHINGTON BLVD
BOUNDARY CHANNEL
Curbing Type C4
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Small-Scale Features - Curbing (Circle Area)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Vegetation
- Memorial (Structure)
- Pylon (Structure)

Landscape Characteristic Features

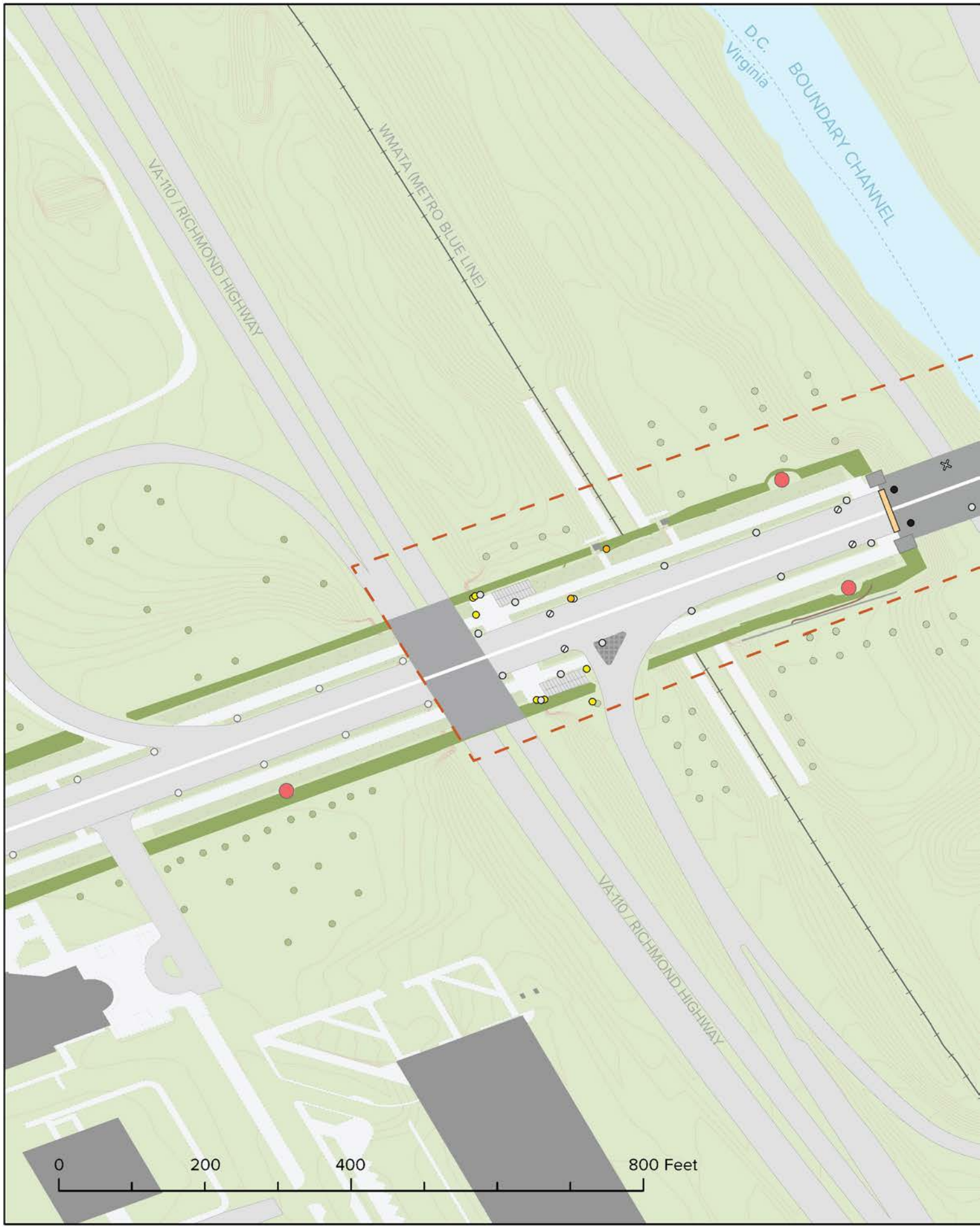
- Circulation - Road
- Circulation - Belgian Block Centerline
- Circulation - Belgian Block Shoulder Lane
- Circulation - Belgian Block Traffic Island
- Circulation - Sidewalk
- Circulation - Social Trail

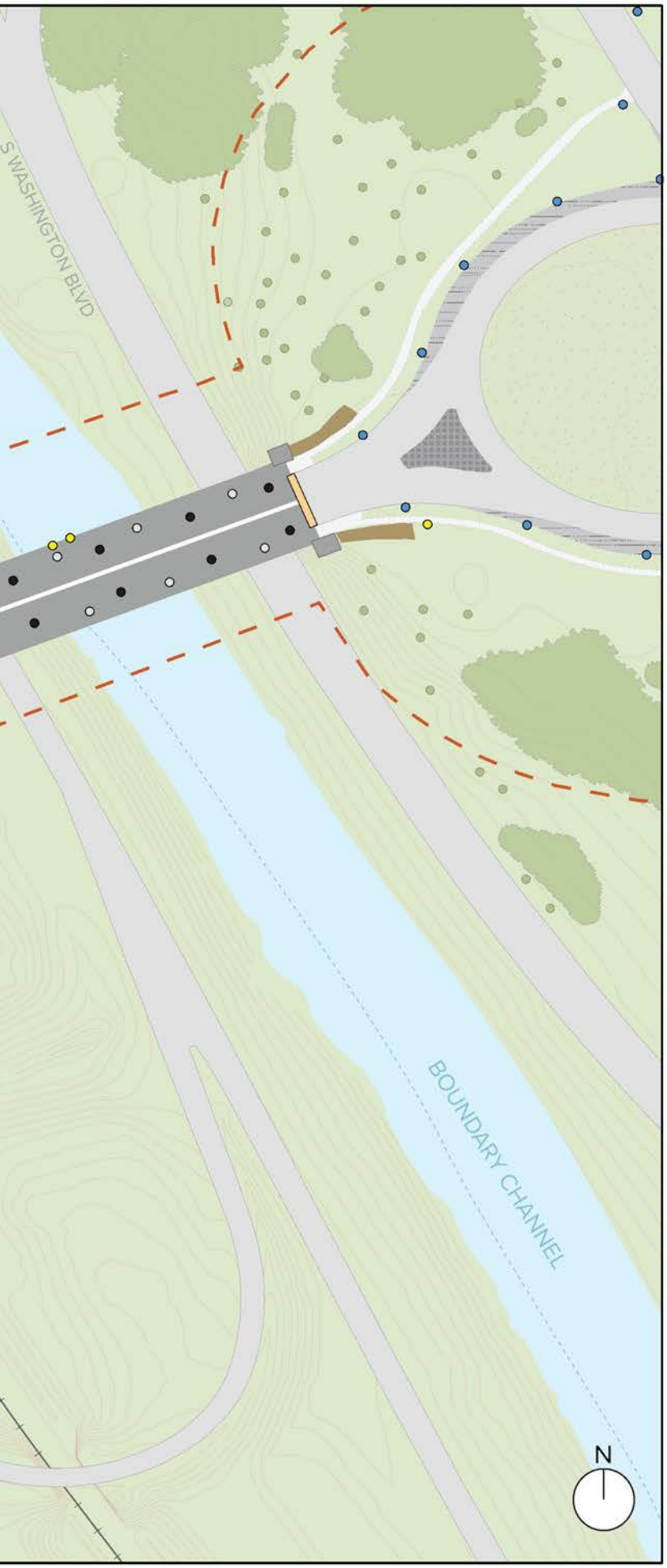
NOTES

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DRAWING #35


D.C.
Virginia
BOUNDARY CHANNEL
WMATA (METRO BLUE LINE)
VA-110 / RICHMOND HIGHWAY
VA-110 / RICHMOND HIGHWAY
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Small-Scale Features (West)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

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LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Circulation - Road
- Circulation - Sidewalk
- Circulation - Social Trail
- Vegetation

Landscape Characteristic Features - Evaluation

- Lady Bird Johnson Memorial Plaque - *Contributing*
- Granite Header Block - *Contributing*
- Lamppost - *Contributing*
- Lamppost - *Non-contributing*
- Missing Lamppost
- Inlet Grate (Historic) - *Contributing*
- Inlet Grate (Non-Historic) - *Non-contributing*
- Fire Hydrant - *Non-contributing*
- Signage - *Non-contributing*

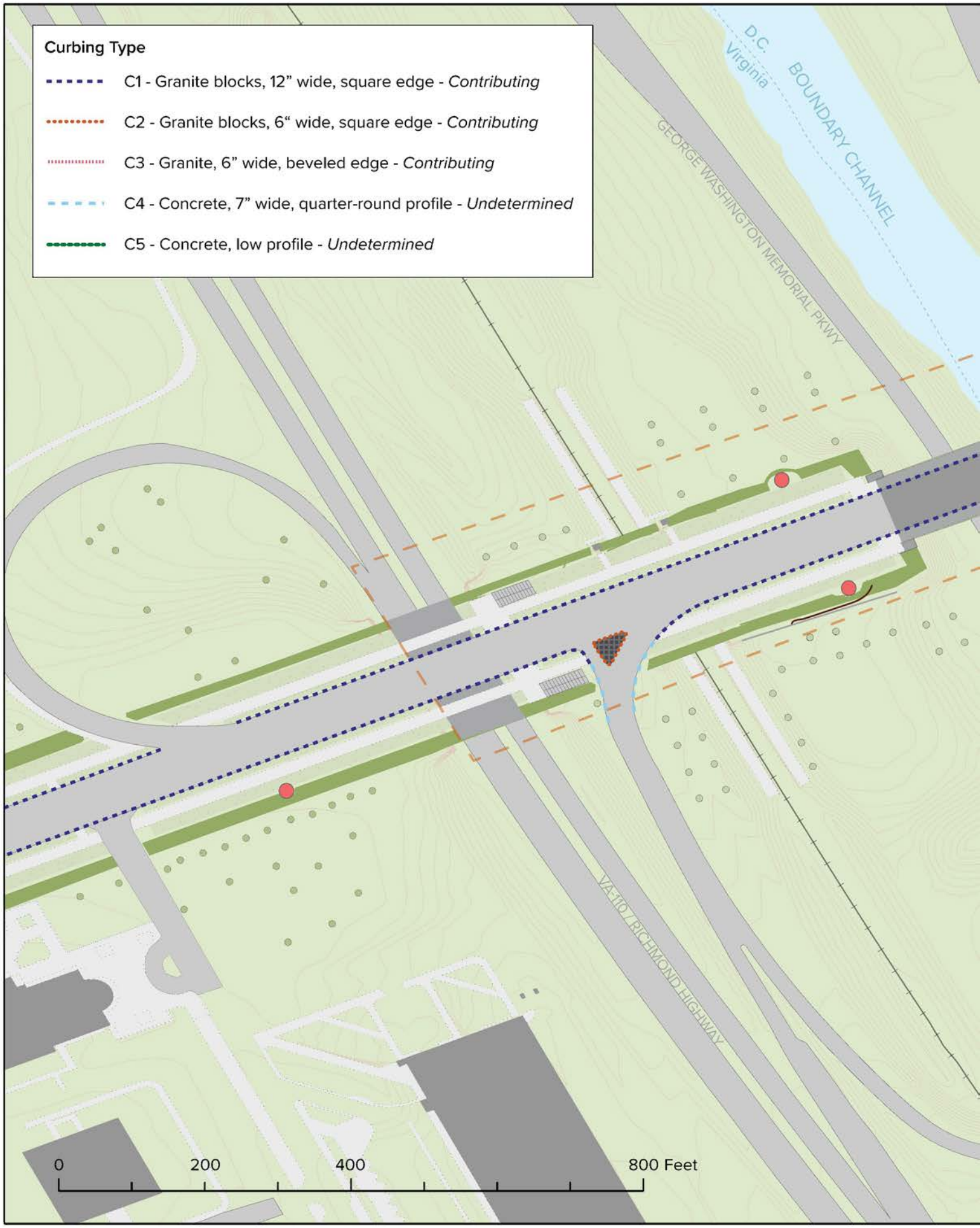
NOTES

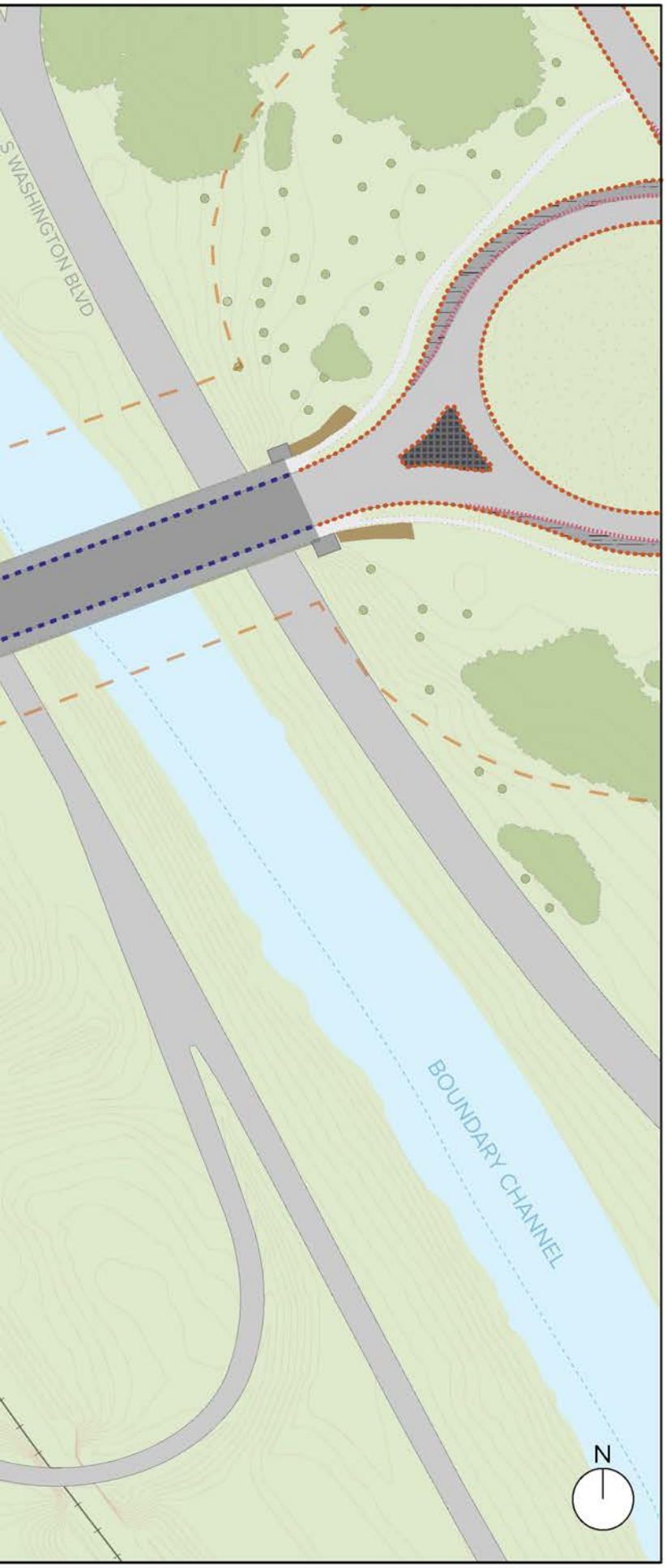
1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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DRAWING #36


Curbing Type
C1 - Granite blocks, 12” wide, square edge - Contributing
C2 - Granite blocks, 6“ wide, square edge - Contributing
C3 - Granite, 6” wide, beveled edge - Contributing
C4 - Concrete, 7” wide, quarter-round profile - Undetermined
C5 - Concrete, low profile - Undetermined
D.C.
Virginia
BOUNDARY CHANNEL
GEORGE WASHINGTON MEMORIAL PKWY
VA-110 / RICHMOND HIGHWAY
0
200
400
800 Feet



Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Small-Scale Features - Curbing Types (West)

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Vegetation
- Building / Structure
- Memorial (Structure)

Landscape Characteristic Features

- Circulation - Road
- Circulation - Belgian Block Centerline
- Circulation - Belgian Block Shoulder Lane
- Circulation - Belgian Block Traffic Island
- Circulation - Sidewalk
- Circulation - Social Trail

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

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PART 2: TREATMENT RECOMMENDATIONS

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Introduction

This chapter presents a treatment strategy for the long-term preservation and management of the Memorial Avenue Corridor cultural landscape based on the research, inventory, and analysis conducted for Part 1 of this Cultural Landscape Report.

According to National Park Service policy, the cultural landscape report serves as the primary supporting document guiding the treatment of a cultural landscape and is required before major interventions. Treatment is the collective set of actions taken within a cultural landscape, intended to ensure the protection and preservation of the resources and characteristics that contribute to its historic character. Treatment guidance may range from broad guidelines and principles to specific tasks. The overall goal of treatment is to provide a basis for the sound stewardship of the cultural landscape according to the National Park Service's *Cultural Resource Management Guidelines* (1997) and the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1996).

The treatment recommendations that follow for the Memorial Avenue Corridor were developed through discussion and collaboration with park staff and resource specialists, and were refined based on a treatment workshop convened in September 2023.

Treatment Framework

Enabling Legislation

The Memorial Avenue Corridor is a non-legislated park site located within the boundaries of and managed by George Washington Memorial Parkway (GWMP); the site encompasses Arlington Memorial Bridge, Memorial Circle and surroundings, and the portion of Memorial Avenue managed by the NPS. George Washington Memorial Parkway was established by Congress on May 29, 1930, through Public Law 71-284, also known as the Capper-Cramton Act, which authorized "the acquisition, establishment, and development of the George Washington Memorial Parkway along the Potomac from Mount Vernon and Fort Washington to the Great Falls, and...the acquisition of lands in the District of Columbia and the States of Maryland and Virginia requisite to the comprehensive park, parkway, and playground system of the National Capital." The George Washington Memorial Parkway was designated a unit of the National Park Service in 1933; it was developed as a scenic parkway to help preserve the Potomac River Gorge and shoreline while serving as a memorial to George Washington, the first president of the United States.

Based on its enabling legislation, the mission of GWMP is to develop, manage, and preserve the park, parkway, and playground system of the National Capital area; protect and preserve a wide variety of individual cultural, natural, recreational, and scenic resources throughout the parkway; and promote opportunities for the public to learn about and experience parkway resources.

The 2014 Foundation Document for GWMP states that, "The parkway runs along the Potomac River through two states—Virginia and Maryland—as well as the District of Columbia, protecting the landscape and natural shoreline of the river while offering magnificent scenic vistas of Washington, D.C., and the Great Falls of the Potomac. Along its route, the parkway also connects several important historic sites, memorials, and scenic and recreation areas in the Washington, D.C., metropolitan area." The Foundation Document recognizes that, "The Arlington Memorial Bridge and Memorial Avenue provide a ceremonial gateway to Arlington National Cemetery and symbolically and physically link the once-divided North and South in their alignment between the Lincoln Memorial and Arlington House, The Robert E. Lee Memorial."

Definition of Policies, Guidelines, and Standards

The treatment and use of the Memorial Avenue Corridor cultural landscape must be considered within a framework of applicable laws, agreements, and policies. These mandates govern a wide range of management issues, including the preservation, protection, and interpretation of the Memorial Avenue Corridor's cultural resources. Key laws, regulations, and functional requirements that apply to the recommended treatments include the following:

Treatment of the cultural landscape is subject to the **National Park Service Organic Act (1916)**, which established the National Park Service and defines its purpose "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations" (16 USC 1).

The **National Historic Preservation Act (1966)**, as amended, protects buildings, sites, districts, structures, and objects that have significant scientific, historic, or cultural value. Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of their undertakings on properties listed, or potentially

eligible for listing, in the National Register of Historic Places. All actions affecting a park's cultural resources must comply with this law, which is implemented through 36 CFR 800.

In addition to those core preservation laws, the **National Capital Planning Act of 1952** outlines the functions of the National Capital Planning Commission, which includes the development of a Comprehensive Plan, review of Federal and District proposed projects, review of District zoning amendments, and review of Federal and District Capital Improvements Program (40 USC §8701 et seq.). The National Capital Planning Act establishes the National Capital Planning Commission as the central planning agency in the Washington, DC region. The purpose of the agency is to coordinate the developmental activities of the Federal and District government so that the activities conform to general objectives.

Executive Order 11593, Protection and Enhancement of the Cultural Environment (1971), mandates that "the Federal Government shall provide leadership in preserving, restoring, and maintaining the historic and cultural environment of the Nation."

The landscape is subject to the **Architectural Barriers Act (ABA) of 1968** and should take into consideration the August 2023 final ruling on the Public Right-of-Way Accessibility Guidelines (PROWAG) under the ABA. The PROWAG guidelines apply to new construction and to alterations and additions of existing pedestrian facilities. These facilities include sidewalks and streets, crosswalks, curb ramps, on-street parking, and other components of public rights-of-way. The guidelines cover the minimum scoping and technical requirements for these spaces and elements in the public right-of-way. The guidelines also address accessible pedestrian signals, curb ramps and blended transitions, detectable warning surfaces, crosswalks at roundabouts, on-street parking, transit stops, and street furniture.

The **Commemorative Works Act (1986, amended several times)** guides the process for establishing memorials in the nation's Capital and ensures the formal design review of any new memorials within the designated area. The Memorial Avenue corridor is included within Area 1 of the CWA boundaries.

The **National Park Service Resources Management Guidelines (NPS-28) (1998)** provides guidance on management and landscape preservation, including biotic systems, which are defined as plant and animal communities associated with human settlement and use. NPS-28 directs management of specimen vegetation—such as trees, shrubs, and orchards—to ensure health and vigor and, if appropriate, provide for propagation of the next generation, especially for rare plants or those unavailable in commerce. For natural systems, NPS-28 calls for managing landscape patterns to allow for natural dynamics. Exotic plant species, which are often found in cultural landscapes, should be monitored and controlled to avoid spreading and disrupting adjacent natural plant communities. In addition to biotic systems, NPS-28 states that historic circulation features are to be rehabilitated to accommodate health and safety codes in ways that minimize impact on historic character.

Arlington National Cemetery develops periodic master plans, and the National Park Services provides comment on them–particularly with respect to mutual management interests. The most recent ***Arlington National Cemetery Real Property Master Plan*** **was drafted in 2022.**

Finally, Arlington County has a **Comprehensive Plan** that is reviewed every five years; although the county does not have jurisdiction over the federal lands within the study area, this comprehensive plan is still an important consideration within the CLR's overall treatment framework based on adjacent lands and partnerships. The purpose of the plan is to guide development of the County through the provision of high standards of public services and facilities. Goals and objectives incorporated into the plan include smart growth policies, mixed-use development, mixed-income housing, neighborhood conservation and commercial preservation. The Master Transportation Plan included in the Comprehensive Plan is intended to facilitate high quality transportation services, move more people without more traffic, and promote safety (Arlington County 2011).

Summary of Park Management Objectives and Goals

The mission of the George Washington Memorial Parkway (GWMP) is to "create and sustain an engaged organization that works collaboratively with stakeholders/partners to provide transformative experiences and conserve this urban national park for current and future generations" (George Washington Memorial Parkway Priorities and Actions Handbook, 2nd Edition 2022-2025).

Furthermore, the GWMP vision is to "lead the NPS in fostering stewardship, building community, and providing premier recreation, learning, and adventure in an urban area" (George Washington Memorial Parkway Priorities and Actions Handbook, 2nd Edition 2022-2025). The George Washington Memorial Parkway's Priorities and Actions Handbook, 2nd Edition, 2022-2025, summarizes the park's core values and the park's emphasis areas. The emphasis areas are:

- "Your Voice Matters," with the goal of empowering employee voices;
- Robust workforce, with the goal of fostering a work environment where employees thrive;
- Stewardship, with the goal of seeking out and considering input from divisions and partners on decisions that will impact the park; and
- Partnerships, with the goal of embracing collaboration, trust, and open communication with partners to achieve shared goals.

The GWMP Foundation Document records the fundamental resources and values of GWMP as:

- The parkway driving experience;
- Transportation infrastructure;
- Vistas and views;
- Memorialization and celebration of American ideals;
- Recreational opportunities;
- Potomac River shorelines and gorge;
- Great Falls Park, including the Patowmack Canal; and
- Arlington Memorial Bridge/Memorial Avenue Corridor.

Summary of Stakeholder Interviews

In order to gain a range of perspectives on the Memorial Avenue Corridor cultural landscape, the project team interviewed several stakeholders. These engagement conversations were held virtually over Zoom with representatives from Arlington County Planning Department, Arlington National Cemetery (ANC), Washington Metropolitan Area Transit Authority (WMATA), and the National Park Service (NPS).

Across the stakeholder interviews, several themes emerged, including cultural landscape management, cultural landscape maintenance, and transportation and connectivity.

Stakeholders Interviewed:

- Lorrin Farris – Historic Preservation Planner, Arlington County Planning Department
- Mark Dennis – Transportation Planner, Arlington County Planning Department
- David Patton – Transportation Planner, Arlington County Planning Department
- Caitlin Smith – Cultural Resources Program Manager, Arlington National Cemetery
- Stephen Van Hoven – Horticulture Chief, Arlington National Cemetery
- Jeff Winstel – Architectural Historian, Washington Metropolitan Area Transit Authority (WMATA)
- Brent Steury – Natural Resources Program Manager, GWMP, National Park Service
- Joshua Hartley – Deputy Chief of Maintenance, Acting, GWMP, National Park Service

CULTURAL LANDSCAPE MANAGEMENT

Conversation participants expressed the desire for continuity and consistency in aesthetics across Memorial Avenue, noting the current difference in character of vegetation between the Arlington National Cemetery and NPS land jurisdictions. Engagement between the agencies over the last few years has increased, with monthly meetings between leadership. While Memoranda

of Understanding (MOUs) and Memoranda of Agreement (MOAs) are in place between the two agencies, there is generally no collaboration on maintenance activities or crossing of funding streams as it relates to the ongoing management of the Memorial Avenue Corridor.

After the land transfer was completed in 2019, in which the western portion of Memorial Avenue was transferred to ANC under the direction of the Secretary of the Army, significant funds were directed towards plans and implementation of landscape improvements for the westernmost portion of the avenue. In the first year following the land transfer, ANC replaced an estimated 100-150 hollies on the north and south sides of the avenue, developed a restorative pruning strategy, re-sodded the turf, and installed an irrigation system. Although ANC has a programmatic agreement with the Virginia Department of Historic Resources and the Advisory Council on Historic Preservation, the agreement does not cover more recent land acquisitions. There is no policy on these recently acquired lands.

Interviewees raised the issue of competing experiences and interests along Memorial Avenue. As currently laid out, the avenue must serve simultaneously as an ANC staff entrance, visitor security, visitor entrance, bus drop-off and turn-around, and location for individuals arriving for funerals. With so many needs and high-traffic uses, the original formal, ceremonial character of the cemetery entrance is being chipped away by the presence of heavy traffic and visitor and security infrastructure.

ANC updates its master plan every five years (most recently in 2022). The current master plan considers how the entryway, which sets the tone for the cemetery, is connected to Memorial Avenue. Currently, the Welcome Center experiences extremely high levels of visitation; it serves as a safety checkpoint for visitors, a museum space, and a gift shop. Located outside of the project boundaries, future ANC projects will likely include the reconfiguration of the Welcome Center area with additional vehicle lanes into the parking garage. In the future, there may be a screening center separate from Welcome Center, allowing the Welcome Center to focus more on interpretation.

CULTURAL LANDSCAPE MAINTENANCE

Within the study area boundaries, maintenance on the Memorial Avenue Corridor is conducted with a combination of contractors and in-house staff. Contractors mow the Memorial Circle turf, in addition to the turf panels along Memorial Avenue within the GWMP-managed boundaries. Turf is maintained at 3-4 inches and mowed once per week. Contractors also maintain the planting beds at the bridge pylons.

In cases of damaged tree limbs, in-house maintenance crews address light pruning on dogwoods and pine trees within the cultural landscape. (There is no proactive arboriculture treatment of vegetation at present.) Maintenance staff do not address weeding or mulching of the beds.

In the past, maintenance of holly hedges was contracted out, but has been conducted by NPS crews for the past few years. Tree crews use a bucket truck to trim the holly hedges before Memorial Day and Veterans Day. Recent replantings of holly hedges within NPS property along Memorial Avenue have been completed by WMATA contractors as part of an MOA. These replacements have had mixed success; GWMP is currently working with working with WMATA to replace declining, dead, or missing hollies in the hedge, as per the terms of an existing Memorandum of Agreement.

Additionally, in-house NPS road crews attend to periodic drainage cleaning and preventative maintenance efforts, such as removing invasives like mulberry and pokeberries and vines. Maintenance crew members also spend significant time removing trash, especially after major events. (Volunteers supplement these clean-up efforts.) The same maintenance scope of work has been passed down many years, and does not include the dogwoods or other features within the landscape.

When a tree dies and/or falls, official protocol calls for a member of the maintenance team to communicate the location of the tree (including

its GPS coordinates) to resource management. Resource management and maintenance should then coordinate in tree replacement. However, this protocol is not formal or enforced; at times, this has resulted in the removal of a tree, with no formal record of its removal.

There is no formal maintenance coordination between GWMP and ANC, although the agencies have shared specifications for vegetation. There has been discussion of allowing NPS to tap into ANC's irrigation system, but no timeline has yet been proposed.

GWMP manages over 1,000 plant species, including 50 threatened and endangered species; no threatened and endangered species are located within the project area. Staffing levels have dropped in recent years, presenting challenges in keeping up with invasives. GWMP has worked with Casey Trees to clear out exotics along the Boundary Channel on the DC side and replant the area with native trees.

TRANSPORTATION AND CONNECTIVITY

As a major convergence of regional road systems, the roads surrounding Memorial Circle and Memorial Avenue experience high levels of traffic. There are challenges for pedestrians and cyclists within the major roadway network of the Memorial Avenue area. While the roads are signed like a parkway, they function like a highway: as vehicles travel at high speeds, they create a potentially dangerous environment for cyclists and pedestrians.

Located along the west side of VA Highway 110, immediately outside of the CLR boundaries, a forthcoming multi-use Arlington County trail project will terminate at Memorial Avenue, contributing to the vision of a regional trail system. The Arlington Memorial Trail will connect Memorial Avenue to the Columbia Pike/Joyce Street interchange, using Virginia Department of Transportation (VDOT) property as the right-of-way.[1] The trail will be just under one mile in length; it will offer an additional connection to the Arlington National Cemetery Metro Station and is intended to provide some relief from the nearby Mount Vernon Trail. The Arlington County planning team is working with FHWA in coordination with the National Park Service, National Capital Planning Commission, Arlington National Cemetery, and the Commission on Fine Arts to develop the trail. Additionally, the county is working closely with Eastern Federal Lands to complete an analysis of the site and design options. The trail will intersect with Memorial Avenue immediately west of VA Highway 110 and will likely impact the holly hedges and oak trees on Memorial Avenue within ANC-managed land. Planners are working to ensure that the trail alignment will minimize tree removal. As of fall 2023, the trail is in the early design phase, with the ground-breaking anticipated for 2025.

Conversation participants also emphasized future changes and challenges due to the forthcoming Crystal City headquarters for Amazon.com. With an anticipated 25,000 employees based in at "HQ2", the Amazon project will add new transportation pressures and challenges. To mitigate these impacts, the county and state have made commitments to make the region more cyclist- and pedestrian-friendly. These projects may impact the western end of the study area, based on new trail connections parallel to VA Highway 110.

1. For more on the proposed trail, refer to https://www.arlingtonva.us/Government/Projects/Project-Types/Transportation-Projects/Arlington-Memorial-Trail

Landscape Character Areas

The Memorial Avenue Corridor cultural landscape includes the sequence of designed landscapes linking Lincoln Memorial in Washington, D.C., to Arlington House in Arlington, Virginia. The cultural landscape boundaries comprise approximately 22 acres extending from the eastern side of Arlington Memorial Bridge to west side of where Memorial Avenue crosses over VA Highway 110.

For the purpose of the treatment recommendations, landscape character areas are used to further define the sections within the study area. Landscape character areas are places that contain similar physical characteristics, qualities, attributes, and/or associated cultural landscape resources. Within the Memorial Avenue Corridor cultural landscape are following three landscape character areas:

ARLINGTON MEMORIAL BRIDGE

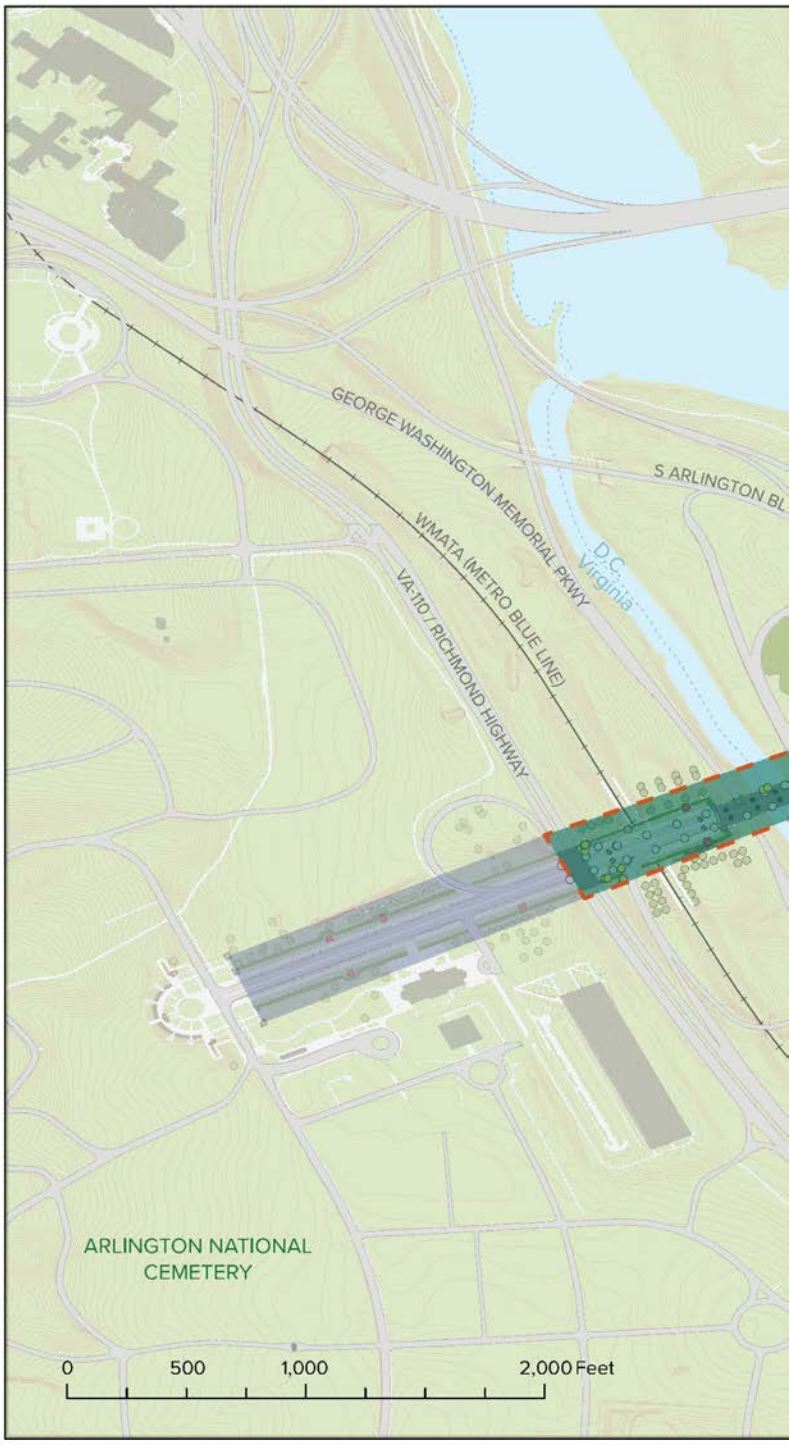
The Arlington Memorial Bridge area encompasses the eastern portion of the landscape including all of Arlington Memorial Bridge from the *Arts of War* statues on the east side of the bridge to the pylons on the west side of the bridge.

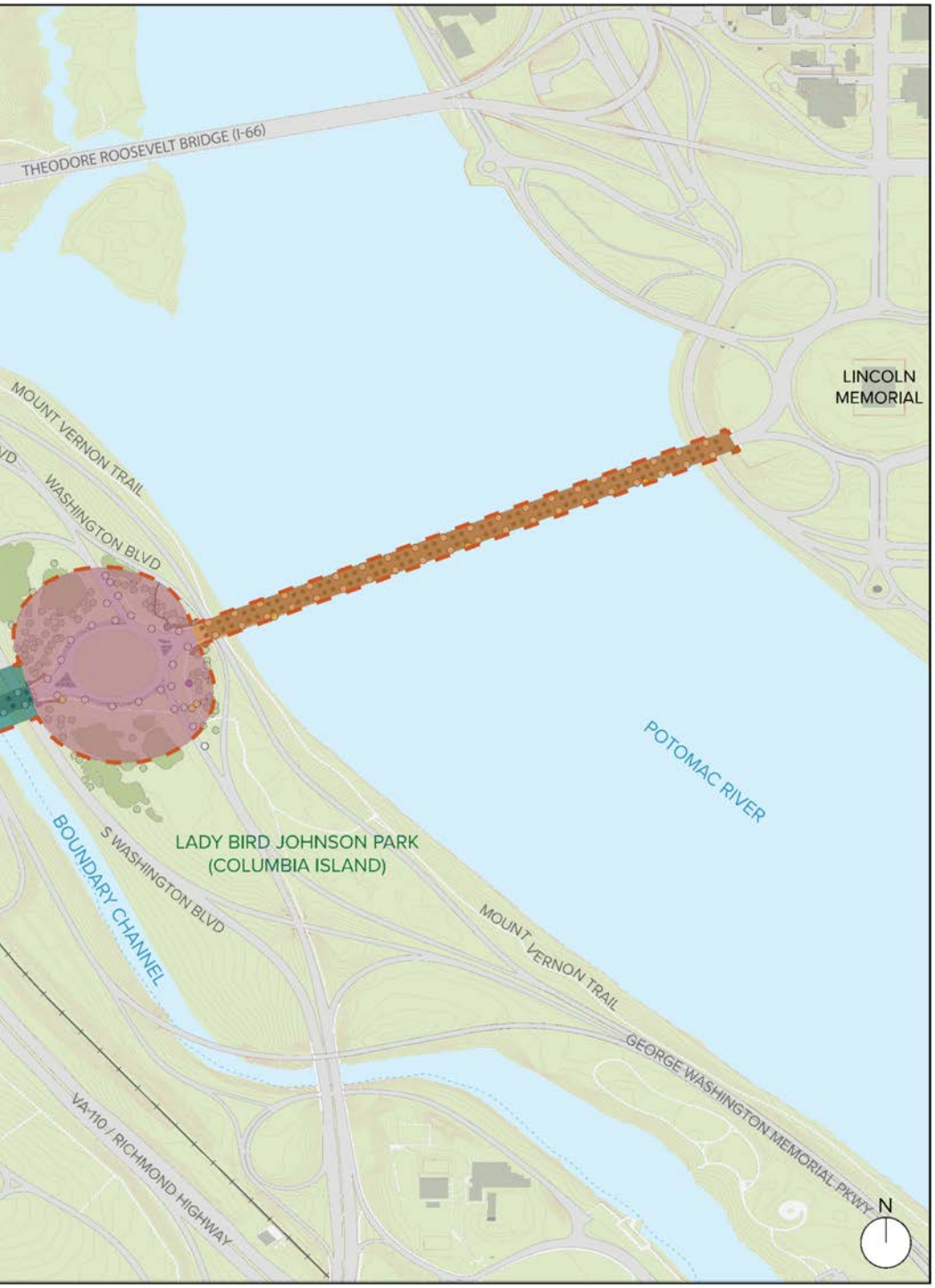
MEMORIAL CIRCLE

The second landscape character area encompasses Memorial Circle and surroundings. This area extends from the pylons on the west side of Arlington Memorial Bridge to the pylons on the east side of the Boundary Channel Bridge. This landscape area includes some land and associated landscape features to the north and south of the Memorial Circle traffic rotary to adhere to the draft National Register of Historic Places nomination update.

MEMORIAL AVENUE

Lastly, the Memorial Avenue area encompasses the western portion of the cultural landscape. This landscape character area includes the east side of the Boundary Channel Bridge heading west along Memorial Avenue to include all land managed by the National Park Service. The western boundary is on the west side of VA Highway 110.





Memorial Avenue Corridor Cultural Landscape Report

George Washington Memorial Parkway

Landscape Character Areas

SOURCES

1. Open data DC, https://opendata.dc.gov/, accessed Sept. 2022
2. Field survey and data collection, 2022
3. Commonwealth of Virginia, DC GIS, Maxar, Microsoft (base imagery)
4. NPS Geospatial data

DRAWN BY

Ruth Penberthy / Chen Mao / Meg Frisbie / Molly Lester, University of Pennsylvania
ArcGIS Pro, Adobe Illustrator, 2023

LEGEND

- Cultural Landscape Boundary
- Topography (2ft intervals)
- Water
- Metro (WMATA) Line
- Sidewalk

CHARACTER AREAS

- Arlington Memorial Bridge
- Memorial Circle
- Memorial Avenue
- Memorial Avenue - ANC property (outside the study area boundaries)

NOTES

1. All features shown in approximate scale and locations
2. Vegetation locations, scale, and quantities are approximated from fieldwork and aerial photography

Weitzman School of Design
University of Pennsylvania
Urban Heritage Project
Department of Historic Preservation | PennPraxis
www.cultural-landscapes.org

DRAWING #38

SWOT Analysis

A SWOT analysis (assessing Strengths, Weakness, Opportunities, Threats) is a strategic planning tool that helps identify key internal (strengths / weaknesses) and external (opportunities / threats) influences for a specific park or system of parks. It provides the space for NPS representatives and their partners to evaluate current and future contexts for park planning.

The analysis on the following pages was completed in 2023 by the authors of this CLR. (The bullet points within each quadrant of the diagram are not arranged in priority order).

SITEWIDE	
STRENGTHS	**WEAKNESSES**
• The Memorial Avenue Corridor is a high-profile site and major element of the monumental core of Washington, D.C. • The original corridor design is still legible in the landscape • Major views are intact, particularly reciprocal views to Arlington House/the Hemicycle/Arlington National Cemetery (ANC) and to the Lincoln Memorial • Historic views likely to remain intact since surrounding land is managed by NPS (no development threats in immediate surroundings) • Spatial organization intact • Recent rehabilitation of the Arlington Memorial Bridge has resulted in good physical integrity of the bridge in addition to extensive recent documentation including an updated National Register draft, new waysides, and digital sources available to the public • Extensive documentation over the years due to the high-profile nature of the site, including access to original design documents • Corridor is accessible to the public by way of public transportation and bike share, in addition to by private vehicle/tour bus • Corridor integrated into surrounding road and trail networks of Washington, D.C., and northern Virginia • Connections and proximity to other NPS sites and D.C. landmarks	• The configuration is subdivided administratively. There are challenges in land management resulting from multiple agencies with different missions and different constraints managing portions of Memorial Avenue • Large volumes of high-speed traffic traveling through the corridor (using the parkway as a highway) resulting in safety concerns for pedestrians, cyclists, and vehicles • Difficulty for pedestrians and cyclists trying to cross from north to south on either side of Arlington Memorial Bridge and in approaching Arlington Memorial Bridge from Memorial Circle • Noise impacts from surrounding air travel • Competing needs and experiences on Memorial Avenue (visitor drop off to ANC, security check point, staff entrance into ANC, etc.) resulting in clutter • Aesthetics of holly hedges and turf are not standardized along the avenue between ANC and NPS jurisdictions • Twin sets of sculptures (Arts of War, Arts of Peace) are managed by different NPS units • Some elements of the original landscape design, such as the holly hedges, are in decline or missing portions • Memorial Avenue Corridor is part of a larger park unit, thus not the only focus • Lack of a consistent landscape maintenance guidance document and contract language to monitor completed work
OPPORTUNITIES	**THREATS**
• Opportunities for collaboration across agencies to share resources and ideas • Possibilities for additional connections to other multi-modal trails and nearby nodes • Opportunity for safety improvements for cyclists and pedestrians • ANC updates its master plan every five years; opportunity for input on future plans	• Portions of Lady Bird Johnson Park (Columbia Island) and the east end of Memorial Bridge are located within Special Flood Hazard Areas (SFHA), with high risk for flooding. • Local traffic likely to increase in the future with development of Amazon.com headquarters in nearby Crystal City • Climate change impacts on vegetation, water, and building materials • Emissions from idling cars and busses on Memorial Avenue, which may cause impacts to vegetation and discoloration and/or other impacts to historic structures

ARLINGTON MEMORIAL BRIDGE AREA (TO MEMORIAL CIRCLE PYLONS)	
STRENGTHS	**WEAKNESSES**
• Arlington Memorial Bridge recently underwent a massive rehabilitation • Extensive documentation of bridge plans, construction, and history, including historic photographs • Intact views to Arlington House/Hemicycle/ANC and to the Lincoln Memorial • Recently added waysides on south side of Arlington Memorial Bridge • Major road connection and formal grand entry into Washington, D.C., from northern Virginia with open surroundings views of the Potomac River and D.C. landmarks • Built-in benches along bridge inviting pedestrians/cyclists to linger • Wide enough sidewalks to accommodate pedestrians/cyclists	• Exposed; no shade for pedestrians/cyclists • No safe way for pedestrians/cyclists to cross from north to south side of Arlington Memorial Bridge on either end of the bridge • Can be difficult for vehicles moving at high speeds to navigate complicated road networks on both sides of the bridge
OPPORTUNITIES	**THREATS**
• Formalize recently added waysides on the bridge; potentially add new waysides on the north side of the bridge • Opportunities for increased pedestrian/cyclist safety	• East end of bridge located within Special Flood Hazard Areas (SFHA), with high risk for flooding. • Impacts to structure (balustrades) from vehicles collisions • Local traffic likely to increase with development of Amazon.com headquarters in nearby Crystal City

MEMORIAL CIRCLE AREA (TO BOUNDARY CHANNEL PYLONS)	
STRENGTHS	**WEAKNESSES**
• The Stone planting plan and legacy of Lady Bird Johnson's Beautification Program are evident around Memorial Circle • Recent Memorial Circle safety improvements have led to traffic calming efforts, lane shifts, and increased safety of pedestrians/cyclists interventions around the rotary (through the introduction of the flashing crossing lights, lane reductions, lane shifts, etc.) • Connection to several major roadways and the Mount Vernon Trail • Shade trees in proximity to pedestrian/cyclist walks	• Memorial Circle turf currently mowed once per week by contractors • Heavy traffic at high speeds navigating a complicated road network resulting in safety concerns • No safe way for pedestrians/cyclists to cross between the north and south on the eastern end of Memorial Circle • Difficult for pedestrians/cyclists to cross S Arlington Boulevard on the northern and southern sides of Memorial Circle (despite crosswalks and flashing beacons with passive detection present) • Difficult for pedestrians/cyclists to cross between the north and south on the western end of Memorial Circle (despite a crosswalk present) • Lots of cluttered signage in one point for drivers to read upon exiting Memorial Circle on the northeast side • Circuitous pedestrian/cyclist connection between the southeast side of Memorial Circle and the Mount Vernon Trail (resulting in a well-established social trail on the northeast side of Memorial Circle)
OPPORTUNITIES	**THREATS**
• Opportunity for increased shade around Memorial Circle by introducing tree canopy closer to the traffic rotary in moving the forested edge closer to the circle • Opportunity to create more formal trail connections for pedestrians/cyclists around Memorial Circle • Opportunity to establish native grasses and meadows on the outer periphery of Memorial Circle to reduce mowing needs and test new conditions to improve ecological resilience • Opportunity to increase safety at existing crossings and create additional crossings for pedestrians/cyclists	• Lady Bird Johnson Park (Columbia Island) located within Special Flood Hazard Areas (SFHA), with high risk for flooding • Increased traffic in the future from the development of the Amazon.com headquarters

MEMORIAL AVENUE	
STRENGTHS	**WEAKNESSES**
• Historic design of Memorial Avenue including vehicle circulation, pedestrian circulation, turf panels, holly hedges, and oak trees readily legible in the landscape • Direct connection to ANC, the largest tourist site in the county (info from Arlington County Planning Department) • Accessible by public transportation and bike share • Intact views to Arlington House/Hemicycle/ANC and to the Lincoln Memorial • Serves as formal entrance to ANC for funerals and visitors • Recent interpretive waysides have been installed along the avenue	• Memorial Avenue must meet several needs and purposes (security check point, staff entrance into ANC, visitor entrance, bus drop off, funeral access point). With competing experiences and needs on the avenue, what was designed to be a formal entrance is now cluttered (on both NPS- and ANC-managed land) • Beyond the ANC, the avenue lacks major activity, with no food options or additional activities to draw visitors • Holly hedges are not consistent in appearance across the avenue and are maintained by different agencies to different standards. Within NPS jurisdiction, some established holly hedges are not regularly pruned, while recent holly plantings are not filled out to fulfill the original design, with several hedges in decline or missing. • Turf along the avenue is not consistent in appearance between NPS and ANC jurisdiction • Lack of turf management and poor soil health (within NPS jurisdiction, patches of invasive grasses and non-desirables including carpet grass [*Arthraxon hispidus*], Creeping Charlie [*Glechoma hederacea*], and clover [*Trifolium* sp.] among others are within the turf) • Presence of several native and non-native invasive species within the holly hedge and oak trees, particularly north of the metro escalators • Uncomfortable for pedestrians/cyclists to cross Memorial Ave (despite existing crosswalks) • Occasional social trails
OPPORTUNITIES	**THREATS**
• Opportunity to promote health of vegetation and maintain consistent aesthetic appearance across the avenue in coordination with ANC. For example, NPS tapping into ANC irrigation. • Opportunity to consider additional memorials along the avenue • Future impacts from implementation of the ANC master plan, particicularly with respect to the holly hedge and oak allée (note: comprises both an opportunity and a threat to this character area)	• Conflicting activities along Memorial Avenue leads to clutter of the original design • Impacts from car emissions and idling busses along the avenue • Adverse impacts from new WMATA canopies at Metro escalators, interfering with significant sightlines • Future impacts from implementation of the ANC master plan, particicularly with respect to the holly hedge and oak allée (note: comprises both an opportunity and a threat to this character area)

Principles and Assumptions

This CLR's treatment recommendations rest on the following principles and assumptions:

1. The treatment strategy for the Memorial Avenue Corridor should **preserve the historic significance** of the landscape, responding to the **full extent of the corridor** even as it acknowledges the realities of fragmented public ownership along the avenue today.

2. Treatment should **preserve the corridor's axis**, and the **viewshed connections and significant vistas** that were foundational to its design and ongoing function.

3. The CLR treatment recommendations should recognize that **the corridor comprises distinct character areas**, with shared characteristics but **specific condition challenges and treatment opportunities in each area**.

4. The corridor has **substantial vehicle traffic** traveling alongside—and at times in conflict with—**pedestrians and cyclists**. The treatment recommendations should balance these nuances of speed, scale, and experience within the landscape.

5. The planting plans within the corridor represent several **generations of horticultural design and implementation** (and some of the designs were never fully realized). This results in **varying tolerances for change**, and the treatment recommendations should respond to those differences in landscape character, integrity, and condition.

6. Any future treatment will take place in a warming climate, and will require a balance between **historic integrity and adaptation for climate resilience**. The CLR should allow for more resilient plantings, flood planning, and other climate-responsive measures. This includes consideration for resilient plantings and flood planning, as Lady Bird Johnson Park (Columbia Island) and the east side of Arlington Memorial Bridge are located within Special Flood Hazard Areas (SFHA), with high risk for flooding.

Treatment Philosophy

For cultural landscapes, a treatment philosophy defines an overall goal of enhancing historic character and perpetuating those characteristics and features that convey historic significance based on the landscape's historic integrity, park policies and planning, natural resource protection, park operations, and other resource management issues.

The Secretary of the Interior is responsible for establishing professional standards on the preservation of cultural resources listed in or eligible for listing in the National Register of Historic Places. The *Secretary of the Interior's Standards for the Treatment of Historic Properties*, revised in 1992, were codified as 36 CFR Part 68 in the 12 July 1995 Federal Register (Vol. 60, No. 133). The standards identify four primary treatment approaches: preservation, rehabilitation, restoration, and reconstruction. Each treatment ranges by level of physical intervention and includes specific guidelines and standards as described below.

Preservation is the act or process of applying measures necessary to sustain the existing form, integrity, and materials of a historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the on-going maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Rehabilitation is the act or process of making possible a compatible use of a property through repair, alterations, and additions while preserving those portions or features that convey its historical, cultural, or architectural values.

Restoration is the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other historic periods in its history and reconstruction of missing features from the restoration period. The

limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make the property functional is appropriate within a restoration project.

Reconstruction is the act or process of depicting, by means of new construction, the form, features, and details of a non-surviving site, landscape, building, or objects for the purpose of replicating its appearance at a specific period of time in its historic location.

Selected Treatment Approaches

This CLR recommends **preservation** as the primary treatment for Arlington Memorial Bridge and **rehabilitation** as the primary treatment for the Memorial Circle and Memorial Avenue character areas.

PRESERVATION

The recommended treatment of preservation for Arlington Memorial Bridge will retain the existing form and aesthetic of the historic bridge, as rehabilitated in 2018-20. The treatment calls for on-going maintenance and repair of the historic materials and character-defining features of the bridge, including the sidewalk paving, light fixtures, balustrades, and inlet grates. As repairs and replacements are necessary, this CLR recommends replacement in-kind of these historic features.

Arlington Memorial Bridge, an important engineering and architectural feature, underwent a large-scale rehabilitation from 2018 to 2020. The rehabilitation included the removal of the functionally obsolete bascule at the center of the bridge, which was replaced with fixed steel girders. During the rehabilitation, several non-structural updates took place including preservation maintenance, repair, and rehabilitation of numerous features. Additionally, the concrete bridge deck was replaced with a concrete polymer deck and overlay to minimize water intrusion. The exposed aggregate sidewalks were also replaced with an exposed aggregate concrete/polymer concrete sidewalk designed to minimize water intrusion. An improved drainage system was also installed. Structural updates to the bridge focused on the concrete arch spans, bridge piers, expansion joints, and bearings. Despite the improvements made to address water intrusion, infiltration continues to occur as of 2024; an ongoing project (PMIS 241547 component H) will engage an architecture/engineering firm with an envelope specialty to examine and perform testing to determine the source of the issue and provide recommendations for repairs. This CLR suggests preservation of Arlington Memorial Bridge based on the 2018-2020 rehabilitation conditions and the proposed treatments to address water intrusion.

According to the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, preservation treatment actions must conform to the following standards:

1. A property will be used as it was historically or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.
2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. The existing condition of historic features will be evaluated to determine the appropriate level

of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

REHABILITATION

The recommended treatment of rehabilitation for Memorial Circle and for Memorial Avenue provides the flexibility needed to preserve the historic resources and enhance the historic character of the circle and avenue, while improving site conditions and climate resilience.

Rehabilitation allows for Memorial Circle to maintain its function as a major traffic rotary and preserve significant views and vistas, while improving the experience for cyclists and pedestrians. The treatment further allows for flexibility in vegetation and current conditions to consider hardiness and climate resilience.

A treatment approach of rehabilitation on Memorial Avenue allows the NPS to maintain character-defining features and accommodate the needs of the busy roadway. The treatment addresses fragmented ownership between the cultural landscape and its associated context, emphasizing coordination among agencies along the avenue to standardize the maintenance practices and vegetation character throughout Memorial Avenue. While the oak border should be retained as canopy trees, rehabilitation allows for replanting the red oaks and pin oaks around the metro station; as white oaks (*Quercus alba*) have demonstrated difficulty establishing, it is appropriate to replant the red oaks and pin oaks with swamp white oaks (*Quercus bicolor*). Additionally, rehabilitation allows for additional monuments to be added along the avenue as appropriate.

According to the Secretary of the Interior's *Standards for the Treatment of Historic Properties*, rehabilitation treatment actions must conform to the following standards:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be supported by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic

materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

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Treatment Recommendations: Policies + Partnerships

Policies

GWMP

- Develop a tree replacement plan for Memorial Avenue and Memorial Circle.
- Strengthen coordination between resource management staff on projects relating to the cultural landscape, including tree and holly plantings and replacements on Memorial Avenue and around Memorial Circle. Collaborate between park divisions for future planning of cultural landscape implementation projects.
- With respect to any encampments established by unhoused individuals: continue to work internally with the "Heart of the Park" program[2] and the organization Path Forward to address health, safety and shelter needs of persons experiencing homelessness within the landscape. Mitigation policies should emphasize this kind of partnership-building, rather than physical landscape treatments (e.g. tree removal) that would damage the landscape's character.
- Incorporate the U.S. Access Board's final August 2023 ruling on the Public Right-of-Way Accessibility Guidelines (PROWAG) under the Architectural Barriers Act (ABA) into all future projects. The guidelines apply to new construction and alterations and additions to existing pedestrian facilities, including sidewalks and streets, crosswalks, curb ramps, on-street parking, and other components of public rights-of-way. All pedestrian facilities should be made accessible under PROWAG.

GWMP and NAMA

- Coordinate with NAMA for routine maintenance of the *Arts of War* and *Arts of Peace* sculpture groupings, so the associated sculptures remain in compatible condition.
- Currently, at the east end of the bridge, there are no crosswalks or other means for pedestrians and cyclists to get from the north side of the bridge to the south side of the bridge safely. Connections for pedestrians and cyclists between the Lincoln Memorial, Watergate Steps, and Arlington Memorial Bridge

2. The "Heart of the Park" program goals are:
   - Mitigate impacts of encampments on Park resources by clearing the sites of trash, debris and hazardous waste;
   - Utilize professional hazardous clean-up crews to reduce employee exposure to hazardous materials and blood-borne pathogens;
   - Compassionately eliminate homeless encampments on park land by providing access to emergency services and shelters for disadvantaged individuals;
   - Develop partnerships with non-profit humanitarian associations and groups who can provide outreach services for those who are able to relocate and accept services rendered; and
   - Provide resources to law enforcement in an effort to minimize their role.

(Heart of the Park, GWMP Office of Safety, Health and Wellness, June 2020)

should be enhanced for connectivity and safety.

- The *NAMA Multimodal Strategic Implementation Plan* (March 2022) "[analyzed] the needs of all roadway users, including pedestrians, cyclists, transit, and micromobility users, to produce conceptual design options that can be implemented" around the National Mall.[3] As GWMP was not involved in the preparation of that plan, this CLR recommends that GWMP coordinate with NAMA and NCRO staff to review the recommendations, update the recommendations to expand to GWMP-managed land (as appropriate), strategize on funding requests, and pursue implementation.

3. Stakeholder feedback on potential improvements to the Lincoln Memorial Circle area (one of the five focus locations of the study) recommended the following:

- Install a signalized intersection across the Arlington Memorial Bridge to provide pedestrians/cyclists a designated time to cross the bridge safely;
- Improve the pedestrian/cyclist connections leading up to the crossing at Arlington Memorial Bridge; and
- Improve pedestrian/cyclist travel by designing roadways that decrease the speeds of motorized vehicles.

The plan includes the following potential projects around Lincoln Memorial:

- Redesign and improve pedestrian/cyclist connections to the Arlington Memorial Bridge within the Lincoln Memorial Circle.
- At Arlington Memorial Bridge, investigate application for pavement wayfinding (eastbound), investigate feasibility of installing advance pedestrian crossing signs, and replacing rumble strips.
- Lincoln Memorial Circle (East and South) are identified as proposed permitted e-scooter parking locations. At Lincoln Memorial Circle East, the proposal includes a VVM kiosk bike rack. At Lincoln Memorial Circle South, the proposal includes two bike racks.
- At Parkway Drive, restripe crosswalk markings according to DDOT standards, replace rumble strips, and install pedestrian signs and crossing signs for eastbound and westbound traffic (Note: re-striping has been completed).
- Perform a study to install signals, signage, and pavement markings that improve pedestrian/cyclist crossings.

The study has been completed but major projects have yet to move into design phases or be implemented.

Partnerships + Contracts

Arlington National Cemetery

- Develop a comprehensive maintenance and planning partnership with Arlington National Cemetery, with the shared objective of unifying the conditions along Memorial Avenue, preserving the character-defining features on both ANC- and GWMP-managed land, and maintaining the corridor's significance holistically. Ideally, coordinated maintenance tasks/systems would include:
  - Documentation (cultural landscape planning, etc.)
  - Irrigation systems (this is a priority, for the sake of the corridor's historic character, significant features, and horticultural health)
  - Hedge / Tree / Turf standards and management
  - Circulation / Cemetery entrance access
  - Preservation of the holly hedges, turf panels, memorial niches, and oak allées
  - Preservation of significant views and vistas
  - Coordination around maintenance of existing memorials and planning for new memorials on the avenue
- Regularize the trimming height/character of the holly hedges and turf along the avenue, coordinating with ANC to establish a consistent maintenance regimen and vegetation character.

Arlington County

- Coordinate with Arlington County on the planned Arlington Memorial Trail to minimize impacts to the holly hedges and oak trees just west of VA Highway 110 on Memorial Avenue.[4]
- Coordinate with the county to improve connections to other area trails.

Metro (WMATA)

- Work in partnership with WMATA to coordinate on future Arlington Cemetery metro station projects including condition assessment surveys and projects impacting station facilities, platforms, signage, and small-scale features to mitigate impacts to the corridor viewshed and significant features.
- As WMATA replaces the lighting fixtures around the Metro entrances, coordinate to install fixtures compatible with the historic lampposts in that area.

4. As of January 2024, existing planning documents are located at https://www.arlingtonva.us/Government/Projects/Project-Types/Transportation-Projects/Arlington-Memorial-Trail

Virginia Department of Transportation / District Department of Transportation

- Coordinate mobility/traffic concerns around the Memorial Circle rotary and surrounding road networks. Coordination should seek to improve safety for pedestrians/cyclists particularly on the northeast and southeast sides of Memorial Circle where the crosswalks are located, as well as in consideration of pedestrian crossings on Arlington Memorial Bridge.
- Coordinate on signage for motorists to easily interpret the traffic patterns around Memorial Circle and along Memorial Avenue.
- Coordinate on future road projects, such as closing lanes to vehicle traffic or restriping lanes.

Contractors

- GWMP should review the maintenance contracts and update as necessary to reflect current needs and implement this CLR's treatment recommendations.
  - Include mapping for bed treatment, tree replacement, pruning directives, annual, and regular maintenance activities.
- Contractors should create mulch basins around the trees and ensure that they are appropriately pruned and maintained.
- Contractors should maintain the overall configuration of the planting beds at the base of the Memorial Circle pylons and continue to plant flowers to add visual interest and color year-round (see Memorial Circle treatment recommendations).
- Contractors currently mow the area around Memorial Circle weekly. As areas near the tree line are converted to meadows (see Physical Treatment Recommendations below), work with contractors to scale back mowing cycles.

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Treatment Recommendations: Physical Treatment

Statement of Desired Landscape Character

Treatment of the overall Memorial Avenue Corridor cultural landscape should prioritize the viewshed connections and significant vistas throughout the landscape. The CLR's recommendations seek to strengthen the overall spatial relationships within the corridor, and the associated views and circulation functions. The physical treatment recommendations acknowledge the needs of existing and anticipated vehicle traffic while seeking to enhance the experience for pedestrians/cyclists who encounter the cultural landscape at a slower speed and a smaller scale.

Within this framework, the recommendations emphasize **new opportunities to reinforce plantings of shade trees** aligned with the historic planting plans, to **improve the growing conditions for existing vegetation** and **mitigate the impacts of climate change**. They recommend **new memorial gestures amidst the holly hedges** that fulfill the original purpose of the avenue even as they offer a solution to longstanding vegetation issues. Finally, the priorities and recommendations seek to **evolve toward meadows on the outer extents of Lady Bird Johnson Park (Columbia Island)** for maintenance and ecological reasons.[5]

To achieve this holistic effect within the cultural landscape overall, each landscape character area has specific priorities for desired character and treatment, and a defined treatment approach to fulfill that character.

5. This statement of desired landscape character, and the CLR recommendations that follow, proposes meadow conditions on the outer extents of the study area, as the Memorial Avenue corridor segues into the broader Lady Bird Johnson Park (Columbia Island). It does not propose meadow conditions within Memorial Circle itself. However, the CLR team did explore the possibility of transitioning the turf within Memorial Circle to meadow conditions for greater ecolocial resilience; refer to Appendix A for additional information about that possibility.

Arlington Memorial Bridge area (to Memorial Circle pylons)

Treatment approach: Preservation

Desired character / treatment priorities: Overall, the existing conditions will be maintained on Arlington Memorial Bridge, maintaining the current functions and preserving significant features.

- **Protect significant viewsheds around Arlington Memorial Bridge.** Significant viewsheds include views of the Lincoln Memorial and views of Arlington House/Arlington National Cemetery/the Hemicycle, which were central to the original corridor design. Other important views include those of various Washington, D.C., landmarks, to the Potomac River, and views of green parkland along both sides of the river. Maintaining these views should be prioritized.
- **Consult with NAMA staff on the safety improvement projects outlined in the *NAMA Multimodal Strategic Implementation Plan* (2022)** at the east end of Arlington Memorial Bridge (see Policies recommendations above).
- **Confirm the interpretation strategy for this character area**.
  - Make the existing waysides on the south side of the bridge permanent (which may require installing new bases).
  - Install additional waysides on the north side of the bridge (up to 3, to complement the existing waysides on the south side of the bridge). Wayside placement should not block the built-in balustrade benches or obstruct pedestrian/cyclist movement. The existing panels focus on the corridor's commemorative roots, association with postbellum Reconstruction, and the recent rehabilitation of the bridge. New panels might explore other aspects of the corridor's history and design, including: McKim, Mead, and White's design; Edward Durell Stone, Jr.'s planting plan; the dredging of the Potomac River/creation of Columbia Island; the changing context of the Potomac River; etc.
- **Implement appropriate conservation treatments for the *Arts of War* sculptures** (coordinating with NAMA; see Policies recommendations above).
- **Repair damaged or missing balustrades/benches on the bridge** and clean these features on a regular schedule. Adhere to the cyclical maintenance procedures based on FHWA/contractor recommendations.
- **Retain and maintain the historic inlet grates along the bridge**. Clear grates of debris on a regular basis.
- **Retain and maintain the existing sidewalk paving**; as necessary, replace in-kind.
- **Repair or replace broken light fixtures in-kind.** Coordinate with NAMA and ANC to ensure consistent ligthing conditions (including color, brightness, and appearance) throughout the corridor.



Figure 217: Directed view along Memorial Avenue towards the Lincoln Memorial. (Urban Heritage Project 2022)



Figure 218: Directed view along Memorial Avenue towards the Arlington House and Arlington National Cemetery. (Urban Heritage Project 2022)



Figure 219: East side of Arlington Memorial Bridge, where there are no pedestrian crossings. (Urban Heritage Project 2022)



Figure 220: Wayside affixed to wooden bases on the south side of Arlington Memorial Bridge. (Urban Heritage Project 2022)



Figure 221: Arts of War sculptures on east side of Arlington Memorial Bridge. (Urban Heritage Project 2022)



Figure 222: Missing balusters on Arlington Memorial Bridge during summer of 2022. (Urban Heritage Project 2022)

Memorial Circle area (to Boundary Channel pylons)

Treatment approach: Rehabilitation

Desired character / treatment priorities: Although Memorial Circle's roadway needs to maintain its current function as a traffic rotary that redirects a substantial number of vehicles to other adjacent roads, the cultural landscape should be rehabilitated to improve the pedestrian/cyclist experience. Additionally, the character area should recognize the precedent and design of the Stone planting plan, while improving the growing conditions for significant vegetation. Current conditions and maintenance practices should be adjusted to address the impacts of climate change, balance traffic safety and mobility, and create spaces to accommodate the increasing public demand for memorialization—while, of course, retaining overall landscape character and satisfying operational needs (such as emergency helicopter landing).[6]

In keeping with the desired landscape character, the treatment recommendations for Memorial Circle emphasize rehabilitation, but recognize that the implementation of that approach will be a long-term process: initially, the treatment approach focuses on the preservation of the circle's overall spatial structure and other aspects of integrity; in the medium/longer term, the treatment tasks should shift toward rehabilitation. This shift over time acknowledges the changing contexts that may compel the park to introduce or alter landscape functions within this high-profile, high-traffic corridor. By adopting rehabilitation as the long-term treatment approach, the park will maintain the flexibility and adaptability that is necessary to achieve the desired landscape character for the Memorial Circle area.

The rationale for these incremental rehabilitation recommendations is that the park should progressively address issues that currently exist, are expected to become more intense over time, and can be addressed by gradual, longer-to-implement adaptations within the physical landscape. Rehabilitation can: increase ecological performance/biodiversity/climate resilience by varying species and composition of the plantings within the framework of the historic planting plan; reduce the cost and climate impact of vegetation maintenance; create safer multimodal mobility around the circle (for pedestrians, cyclists, and motorists); introduce alternative pedestrian/cyclist crossings, extending the design work already underway around Lincoln Memorial/Arlington Memorial Bridge/Memorial Avenue; and increase visual friction to safely decrease speed.

Within the circle, the protection of views is key. The turf would be maintained.

In the outer Memorial Circle character area (beyond the existing sidewalks), a greater tolerance for change presents opportunities to replace lawn with appropriate herbaceous meadow plantings that would be more ecologically resilient and less resource-intensive than the existing turf. These meadow grasses would have a feathered edge, tapering from a height of 1-2 feet at the sidewalk edge to a height of 3-4 feet closer to the tree groupings from the Stone plan.

Additionally, the Memorial Circle area should be considered as a future site of temporary commemorative works. Temporary installations—appropriately scaled and placed around the verges of the circle (and perhaps within the circle itself on rare occasions)—would offer opportunities to reflect on the cultural significance of Memorial Avenue, the formal design context of the entire DC-Virginia monumental core, and the American public's increasingly divergent perspectives on aspects of U.S. history formerly regarded as "settled." This proposal draws support from the popular and critical success of the recent "Beyond Granite" initiative, in which temporary interpretive art installations were placed in several locations on the National

6. At times (e.g. July 4 commemoration planning), Memorial Circle has been a designated emergency landing location for U.S. Park Police helicopters. We do not consider this CLR's recommendations to be inherently incompatible with that hypothetical use, but U.S. Park Police should be involved in consultations for these temporary installations.

Mall in 2023.[7] The planning process for such installations would consider whether pedestrian/cyclist access to the interior of Memorial Circle is desirable; at present, the circle is technically accessible but dangerous to reach. Future installations might encourage or deter such access, and make road safety interventions accordingly.

Details of this scheme would have to be carefully designed, and they go beyond this CLR's level of detail. The process of contemplating, designing, and implementing these changes will take time and intensive public engagement; therefore, we offer the treatment tasks and guidelines below as a framework for subsequent planning efforts, but expect a phased approach to achieve them. Despite the work needed to realize this, it would yield considerable benefits in terms of ecological resilience/biodiversity, reduced maintenance costs, enhanced public safety, and safekeeping for the significance of the corridor.

WITHIN MEMORIAL CIRCLE

- **Maintain the existing turf lawn.**
- **Create a design and engagement process (working with a university partner and local stakeholder groups) to explore different possible versions of temporary public art/commemorative installations.** McKim, Mead and White's original designs for the corridor offer precedent for such a feature; although those designs, like the Stone-era planting plans, were never fully implemented, they offer an opportunity to marry the current corridor needs (namely, the need to calm the current "slingshot effect" of vehicles speeding around the circle) with the original design intent for Memorial Avenue, which offered a focal point to slow down and see.
  - Include transportation planners in the design process, so that the temporary public art/commemorative installation aligns with and enhances traffic-calming initiatives.
  - As part of the design process, establish whether pedestrian/cyclist access to the circle (and any associated public art/installations) is desirable, and if so, how it might be achieved safely.
  - If the circle remains designated as an emergency helipad, the design process should respond to those conditions (e.g. by maintaining a flat and open area).

OUTER MEMORIAL CIRCLE

- **Introduce new tree plantings around the periphery of Memorial Circle**, bringing the forested edge closer to the sidewalks and roadway, in keeping with the Stone planting plan's desired density. (See the diagram of desired conditions on pages 374-5.) This rehabilitative approach would introduce more shade to the outer edge of the circle in order to 1) shield significant but vulnerable existing trees (e.g. *Cornus florida* trees that were significant features within Stone's design, are vulnerable in high sun exposure, and require partial shade to thrive); 2) maintain the intended screening effect from Stone's plan; 3) make pedestrians and cyclists more comfortable as they navigate around the circle; 4) relieve some of the burden that the extensive existing lawns cause for mowing capacity and climate change impacts.
  - New tree plantings should be spatially and structurally similar to those in the Stone-era planting

7. The Beyond Granite: Pulling Together initiative was a contemporary art exhibition on the National Mall curated by the non-profit Monument Lab in collaboration with the Trust for the National Mall, the National Capital Planning Commission, and the National Park Service. The exhibition featured installations by six contemporary artists in placed from August to September of 2023, and was the first curated outdoor art exhibition in the Mall's history (Beyond Granite: Pulling Together Exhibition Guide, https://data.monumentlab.com/uploads/monument-lab/originals/0fa4ffb1-42d9-417b-8d6c-8ae9c348aa07.pdf)



Figure 224: Memorial Circle turf with Lincoln Memorial in the distance. (Urban Heritage Project 2022)



Figure 223: Memorial Circle with the Arlington National Cemetery Hemicycle in the distance. (Urban Heritage Project 2022)

plans, but should prioritize hardiness and climate resilience.

  - New trees should prioritize canopy trees, with minimal understory.
  - New tree plantings should be organized in a scattered layout, in keeping with Stone's landscape plans, which massed the trees in clusters.[8] The edges (progressing inward toward Memorial Circle, and outward, toward the rest of Lady Bird Johnson Park/Columbia Island) should extend gradually in both directions. Plantings should avoid hard edges and strict geometries in the tree canopy.
  - Trees should not be planted between the circle's sidewalks and the rotary; this area should be kept open for safety and pedestrian/cyclist sightlines.
  - Mulch tree rings (or mulch islands, in cases of grouped trees) should be added around new tree plantings and maintained around existing trees as a buffer during mowing. All mulch rings/islands should be curvilinear, naturalistic, and varied in footprint. Organic mulch should be used.
  - As the meadow conditions are established and mowing intensity decreases in the coming years, the mulch beds around the trees can be removed.
  - As existing dogwoods die, they may be replaced in the same locations with spatially and structurally similar species.

- **In the area outside the existing sidewalks, transition turf to native grasses/meadow** (tapering up, from 1-2 feet at the sidewalk edge to 3-4 feet as the meadow approaches the tree canopy). This feathered-edge condition will help to achieve the desired naturalistic character outside the circle, as the study area transitions to the rest of the Lady Bird Johnson Park (Columbia Island).
  - A transition toward meadow would relieve the current mowing burden in this area and improve the outer circle's climate change impacts. The benefits of meadows include increased water absorption, water conservation, wildlife habitat, and long-term cost savings. Properly timed mowing and invasive species control are the two crucial elements for long-term maintenance practices for meadows.
  - The existing grass species could be allowed to grow naturally, with appropriate adjustments in the mowing schedule. In the longer term, and in consultation with natural resource management and the staff horticulturist, test an appropriate seed mix of warm-season grasses (these might include *Bouteloua curtipendula* [Sideoats Grama]; *Eragrostis spectabilis* [Purple Lovegrass]; *Sporobolus clandestinus* [Rough Dropseed]; *Schizachryrium scoparium* [Little Bluestem]; etc.). (Note: The park's definition of native may need to be expanded to include areas outside immediate area.) Consider incorporating a cover crop while the meadow is establishing, to begin the transition away from turf.
  - Any invasive species should be removed before adding native seed, ideally in early spring or fall.
  - Create an appropriate protocol for establishing and maintaining the meadow; follow guidance on meadow establishment, such as *Mid-Atlantic Native Meadows: Guidelines for Planting, Preparation, Design, Installation, and Maintenance*. Meadow conditions typically take three years to establish, so maintenance practices should allow sufficient time for the landscape to transition.
  - Transitioning the outer circle to a meadow will require reducing the current mowing regime (e.g. just 1-2 times per year).
  - Extant daffodil beds/drifts can be retained; they are not incompatible with the proposed meadows.
  - Include a public engagement component in the project (on-site and virtual), to share why the park is transitioning the lawn to native grasses and educate the public about the natural process.

- **Rehabilitate existing non-contributing sidewalks around Memorial Circle to ensure consistent materials and dimensions throughout the corridor.** There are currently several material types in the

8. In a May 2004 site visit to Lady Bird Johnson Park, landscape architect Edward D. Stone, Jr. noted that there were more specimen trees and fewer massings than he expected (Notes from site visit with Edward D. Stone, Jr., to Lady Bird Johnson Park, May 19, 2004).

sidewalk surrounding Memorial Circle, particularly on the southeast side of the circle where the sidewalk intersects with the Mount Vernon Trail.

  - As replacement becomes necessary, replace incompatible materials (including concrete and asphalt) with concrete aggregate, consistent in paver size, aggregate mix, and tone with the historic sidewalks on Arlington Memorial Bridge and along the western part of the avenue.
  - Because the sidewalks on the north and south sides of Memorial Circle have already been altered from their historic layouts, the outer circle has a higher tolerance for change for additional paths in these areas. If sidewalk footprints need to be altered and/or widened, make new sidewalks compatible with the historic walks (as noted above) and do not route the sidewalks too close to the tree massings.
  - A limited number of benches could be added along the outer edge of the sidewalks, to support the landscape's recreational use. Consult with a historical landscape architect to determine appropriate intervals and bench designs.

- **Encourage more trail(s) and trail connections around Memorial Circle**, as long as they do not encroach on the legibility of the original Stone planting plan and roadway plan.
  - On the southeast side of Memorial Circle is a paved trail connection from the Memorial Circle sidewalk to Mount Vernon Trail; no such connection exists on the northeast side of the circle. (In lieu of a formal trail connection, a social trail is well-established in this area.) In consultation with transportation planners and a historical landscape architect, establish a formal, accessible connection to the Mount Vernon Trail in this area, so that pedestrians/cyclists do not have to make unnecessary crossings or establish new social trails.
  - In consultation with transportation planners, continue to explore additional crossings at the west end of Arlington Memorial Bridge that would allow for pedestrians/cyclists to cross from north to south and vice versa.
- **Maintain the existing Belgian block surfaces around Memorial Circle**, including the shoulder lanes and traffic islands.
- **Make permanent the Memorial Circle safety improvements added in 2018-2020**, including the lane reductions designed to calm traffic around the pedestrian crosswalks. (Refer to the Policies/Partnerships recommendations above for additional safety improvements.) Any future improvements should adhere to the following guidelines:
  - Minimize the removal of any historic granite curbing. If curb alignments are necessary for safety improvements, re-use existing curbing wherever possible.
  - Evaluate whether the sidewalks around Memorial Circle should be replaced with wider sidewalks (in the same locations).
    - If replacement occurs, replace incompatible materials with concrete aggregate consistent in paver size, aggregate mix, and tone with historic sidewalks on Arlington Memorial Bridge and Memorial Avenue (*see Drawing #22 on pages 258-59, Drawing #24 on pages 262-63, and Drawing #26 on pages 266-67*).
  - If traffic lanes are to be removed from use, replace asphalt with Belgian block (consistent in form and color with existing Belgian block on the avenue). As lanes are resurfaced with Belgian block, consider removing any associated vertical delineator posts, if safety conditions allow. For any resurfacing projects, existing curb alignments should be maintained wherever possible; where realignment is necessary, historic curbing should be incorporated into the new alignment. Stormwater inlet grates should be retained in their historic locations wherever possible.
  - If loop roads are decommissioned (e.g. the connector road north of Memorial Circle), return to

green space and plant with meadow, consistent with the overall treatment recommendations for this character area.

  - Add a Rectangular Rapid Flashing Beacon at the crosswalk on the west side of the circle (between Memorial Circle and the Boundary Channel Bridge), consistent with other crossings in the corridor.

- **Maintain the planting beds at the base of the Memorial Circle pylons with flowering plants.** The planting beds should be maintained within the current footprints. Contractors and/or NPS staff should continue to plant flowers (not trees or shrubs) to add visual interest and color year-round. Flowers planted in recent years have typically been annuals, and have included tulips (*Tulipa* sp.) and canna (*Cannova* 'red shades'). This CLR recommends a spring-fall blend of annuals and perennials, such as: [spring] tulips (*Tulipa* sp.), for which species are preferable to hybrids; [summer-fall] canna (*Cannova* sp.); and [summer-fall] black-eyed susans (*Rudbeckia Goldsturm*).
- **Mulch around the dogwoods** with organic material (e.g. shredded leaf mulch), in order to preserve and sustain the Stone-era dogwoods, which are vulnerable to damage from mowing. Cover the base of the tree with an approximately 3-inch layer of organic mulch extending to the dripline of the canopy, leaving approximately 3 inches of mulch-free area surrounding the trunk so the root flare at the base of the trunk is still exposed to the air. For younger trees, the mulch ring should be approximately 3 feet wide. Inorganic mulch (e.g. lava rock) should not be used.
- **Conserve, clean, and maintain the Memorial Circle pylons.** Monitor the pylons annually, take updated photographs, record conditions, and clean as necessary, including removing any biogrowth and vegetation growing on the structures.
- **Install additional signs to orient pedestrians/cyclists** and offer wayfinding information (e.g. travel distances to significant features).
  - New signs should be small in profile, similar to the existing pedestrian-scale signage around Memorial Circle.
  - Avoid cluttering of signs that will be difficult for vehicle drivers to comprehend.
- **Maintain the existing Lady Bird Johnson plaque** and surrounding concrete apron on the southeast side of Memorial Circle.
  - Monitor the plaque annually, take updated photographs, record conditions, and conserve/maintain as necessary, including removing any vegetation growing around the plaque.
  - Additional small-scale features in this area would be appropriate if they support the historic land uses. For example, a bench, small interpretive panel, and/or drinking fountain would be appropriate. Consult with a historical landscape architect before adding any features.



Figure 225: Typical vegetation around Memorial Circle, with traffic rotary visible at left in photograph. (Urban Heritage Project 2022)



Figure 226: Typical vegetation around Memorial Circle with Belgian block shoulder lane visible on right side. (Urban Heritage Project 2022)



Figure 227: Pedestrian crossing on northeast side of Memorial Circle with signage and vertical traffic delineators. (Urban Heritage Project 2022)



Figure 228: Crosswalk on the east side of the Boundary Channel Bridge, at the Memorial Circle rotary. (Urban Heritage Project 2022)



Figure 229: Social trail on the northeast side of Memorial Circle, which leads to the Mount Vernon Trail. (Urban Heritage Project 2022)



Figure 230: Sidewalks with various paving types on the southeast side of Memorial Circle. (Urban Heritage Project 2022)



Figure 231: Flowering beds at the base of the Memorial Circle pylons in March 2022. (Urban Heritage Project 2022)



Figure 232: Tulips in the planting beds as of summer 2022. (Urban Heritage Project 2022)



Figure 233: Cluster of dogwoods around Memorial Circle. (Urban Heritage Project 2022)



Figure 234: Belgian block shoulder lane around Memorial Circle. (Urban Heritage Project 2022)



Figure 235: Memorial Circle pylons on west side of the traffic rotary. (Urban Heritage Project 2022)



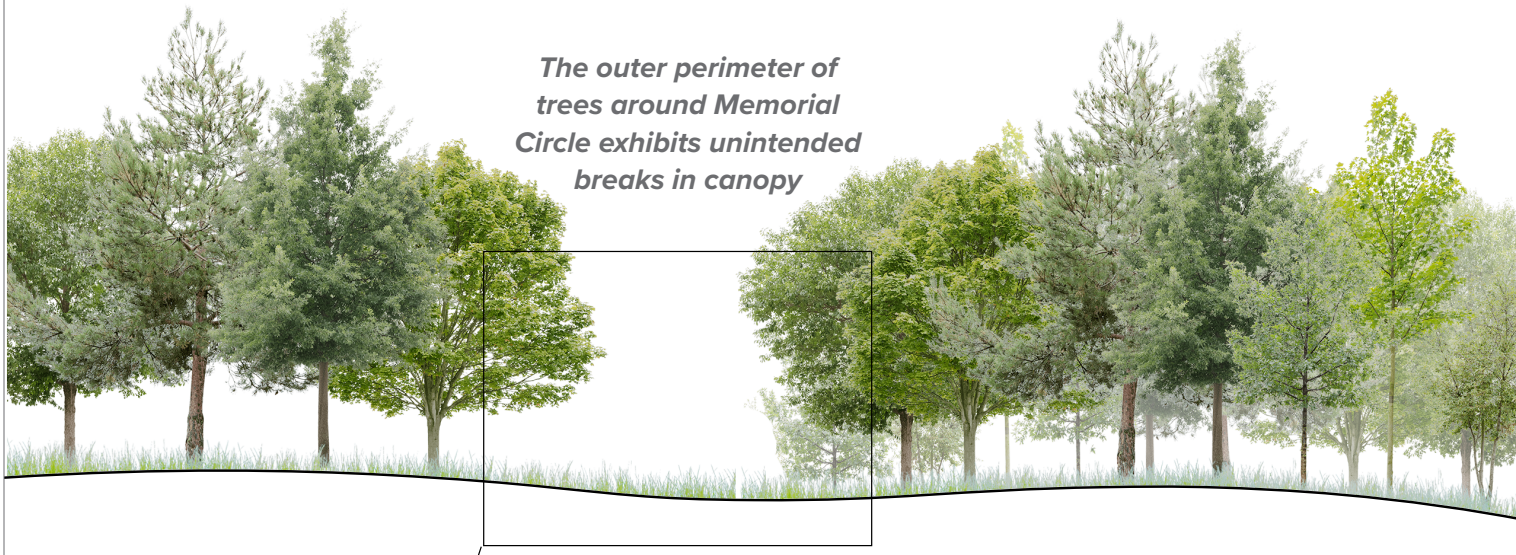
Figure 236: Existing signage around Memorial Circle with mileage to surrounding destinations. (Urban Heritage Project 2022)

Desired Landscape Character: Memorial Circle Character Area

Existing conditions noted in ***gray italics***

Recommended conditions noted in **blue bold**

EXISTING CONDITIONS



RECOMMENDED CONDITIONS

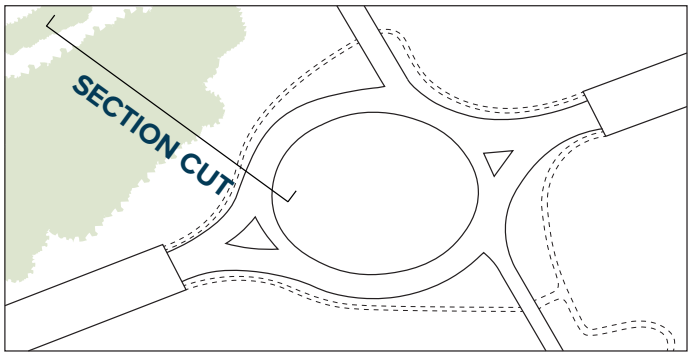


Gaps in the outer perimeter of trees should be filled with new plantings, in keeping with the existing palette of character-defining trees established by the Stone planting plan. Turf in and around these tree groupings should be transitioned to meadow grasses and maintained at a height of 3-4 feet.

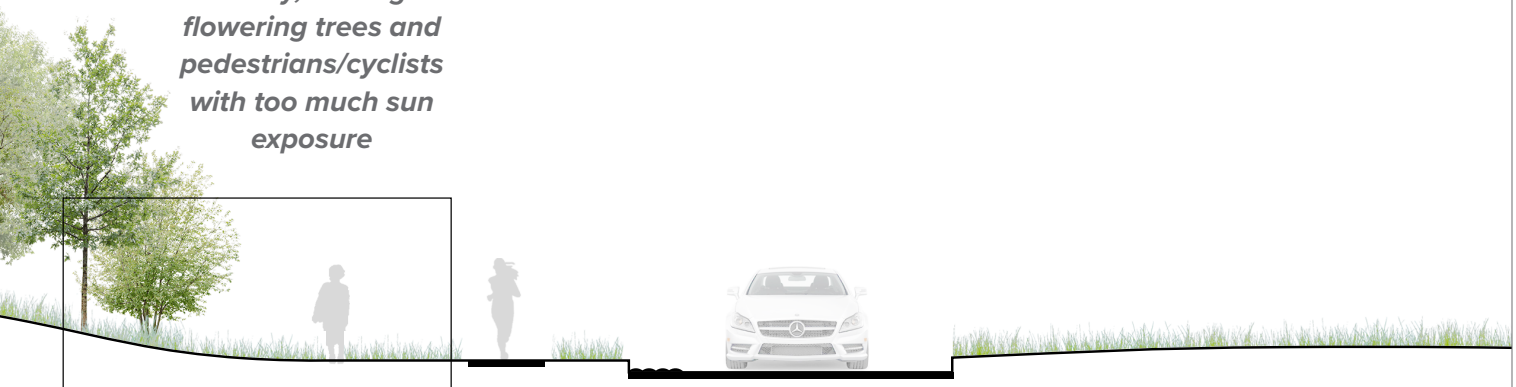
RECOMMENDED



New tree planting flowering trees to *for scale*). Outside to native grasses. tapering up in hei



The circumferential tree line is set too far back from the rotary, leaving flowering trees and pedestrians/cyclists with too much sun exposure



O CONDITIONS



gs should be introduced around Memorial Circle, feathering the edge with bring the forested edge closer to the sidewalks and roadway (*silhouette of person* e the existing sidewalk, the turf in and around the trees should be transitioned These meadow conditions should be maintained with a feathered-edge effect, ght from 1-2 feet at the sidewalk edge to 3-4 feet near the tree groupings.

Memorial Avenue area

Treatment approach: Rehabilitation

Desired character / treatment priorities: The desired effect is consistency along Memorial Avenue, regardless of agency ownership. The significance of the cultural landscape should be the first consideration; the varied jurisdiction/ownership of the Avenue should not be discernible. Currently, there are aesthetic differences along Memorial Avenue, including the holly hedges and turf that differ in height and character between the portions of the avenue managed by the Department of the Army and the National Park Service. Other more minor differences exist, such as the light fixtures around the metro stations on Memorial Avenue differ from the other lighting within the corridor.

If ANC, GWMP, and WMATA each retain their existing lands, this would mean that the treatment approach should prioritize coordination between the agencies, regularizing the horticulture and maintenance practices throughout Memorial Avenue.

The historic designs for the corridor anticipated several memorial niches within the hedges; six total niches, two within the cultural landscape boundaries, have been created to date. Additional memorials may be introduced along the avenue if they reinforce the original design. These memorials, subject to the Commemorative Works Act, could have the beneficial effect of 1) compensating for failing hedges in strategic locations; and 2) enhancing the pedestrian/cycling experience by reducing the intervals/scale between memorials.

- **Coordinate hedge trimming and turf panel mowing with Arlington National Cemetery**, so that the hedges are consistent in appearance throughout the greater corridor.
  - Coordination could include developing an inter-agency agreement (IAA) and/or hiring the same landscape management company to maintain the full extent of the corridor.
- Due to the shallow depth of soil and vehicle exhaust, among other factors, Memorial Avenue is a stressful environment for the holly hedges to thrive. For consistency and health of the holly hedges along Memorial Avenue, **continue implementing the *Memorial Avenue Holly Hedge Assessment and Treatment Plan*** (developed as mitigation for Arlington Cemetery Metrorail Station entrance canopy project), completed by Straughan Environmental in March 2021. Adopt the recommendations in the report to address the health of the holly hedges. Major recommendations include the following:
  - Develop a comprehensive management plan and record-keeping;
  - Replace gaps in holly hedge; and
  - Treat and remove invasive species.
- If horticulturists determine that the holly hedges cannot thrive over the highway (due to soil health, exhaust from highway vehicles, etc.), **be strategic about making compatible architectural interventions to replace limited sections of the failing hedge**. A new memorial wall could be introduced, provided it is compatible with the historic design intent of the hedges' niches and maintains the same scale and screening effect as the adjacent hollies. Any new memorials would be subject to the Commemorative Works Act.
- **Maintain the oaks as canopy trees in the same positions along Memorial Avenue.**
  - Maintain the current arrangement of the oak rows behind the hedges and the scattered placement beyond.
  - Replant as necessary with white oaks (based on ecological considerations, appropriate subsitutions for the existing white oaks [*Quercus alba*] may include other tree species with similar canopy and



Figure 237: Recently planted holly hedges on Memorial Avenue. (Urban Heritage Project 2022)



Figure 238: Holly hedges with varied conditions on north side of Memorial Avenue. (Urban Heritage Project 2022)



Figure 239: Social trail behind the Spanish War Veterans Memorial. (Urban Heritage Project 2022)



Figure 240: Oak trees and holly hedges on south side of Memorial Avenue with metro elevator visible. (Urban Heritage Project 2022)



Figure 241: Car approaching Memorial Avenue from the VA Highway 110 off-ramp. (Urban Heritage Project 2022)



Figure 242: Vegetation growing on the Boundary Channel Bridge. (Urban Heritage Project 2022)

structural characteristics, e.g. swamp white oak, *Quercus bicolor*).

  - Remove invasives from the oaks around the metro station elevators/escalators.
  - Consider and minimize impacts to the holly hedges and oak trees from the planned Arlington Memorial Trail, which will intersect with Memorial Avenue (see Partnerships for additional information).
- **The lawn behind the Spanish War Veterans Memorial may be reformed as a forest cover**, leaving a space for the oak allée to remain legible. Work with a horticulturist to determine the appropriate tree planting plan and tree species for the forest cover.
- **Eliminate the social trail through the holly hedges behind the Spanish War Veterans Memorial.**
  - As the lawn behind the memorial is rehabilitated as forest cover (see above), the use of this social trail may decline.
  - If trail conditions persist, reinforce the existing fence by eliminating gaps and maintaining holly hedges.
- There is limited visibility for drivers approaching the south side of Memorial Avenue from the VA Highway 110 off-ramp. **Install a motion-activated Rectangular Rapid Flashing Beacon at the unsignalized crossing on the south side of the avenue**, where the off-ramp intersects with the avenue, to warn vehicles of crossing pedestrian and cyclists.
- **Clean and conserve the Boundary Channel Bridge pylons and balustrades.** Remove invasives and clean biotic material/pollution.
- **Remove invasive vegetation** around the memorials and hedges and along the Boundary Channel.
- **Maintain the existing Memorial Avenue sidewalks.**
- **Maintain the Belgian block centerline and road surfaces along Memorial Avenue**.
  - Replace any deteriorated portions of the centerline with matching Belgian block.
  - Remove existing incompatible asphalt patches and replace with Belgian block.
- **Clean and conserve the Seabees Memorial and the Spanish War Veterans Memorial**, under the direction of an architectural conservator.
  - Complete the scheduled rehabilitation (PMIS 335022) for the Seabees Memorial to address loose/failing panels.
- **Preserve and maintain the Belgian block roadway surface for the Boundary Channel Bridge.** Replace deteriorated or missing blocks in-kind as necessary.
- **Rehabilitate the crosswalks on Memorial Avenue.**
  - Repaint the crosswalks as necessary.
  - Consult with transportation planners about treatments to increase the visibility of pedestrians/cyclists, including the addition of motion-activated Rectangular Rapid Flashing Beacons along Memorial Avenue.
  - Consider reducing the speed limit along Memorial Avenue.
- **Preserve and maintain the historic small-scale features**, including the inlet grates.
  - Replace in-kind as necessary.
  - Clear inlet grates of debris on a regular basis.
- **Formalize the existing "temporary" interpretive signage** around the Metro entrances and on the

Boundary Channel Bridge as permanent features (this may require installing additional new bases).

- **Formalize the placement of temporary waysides and signage near the Metro exits.** Add others as needed to highlight other aspects of the cultural landscape's history (e.g. former Arlington House plantation, agricultural lands, Civilian Conservation Corps camp, Alexandria canal, railroad, etc.).



Figure 243: Vegetation along the Boundary Channel. (Urban Heritage Project 2022)



Figure 244: Memorial Avenue sidewalk. (Urban Heritage Project 2022)



Figure 245: Belgian block roadway on Boundary Channel Bridge. (Urban Heritage Project 2022)



Figure 246: Incompatible asphalt patch on portion of Belgian block centerline on Memorial Avenue. (Urban Heritage Project 2022)



Figure 247: Spanish War Veterans Memorial. (Urban Heritage Project 2022)



Figure 248: Deteriorated crosswalk at the off-ramp from VA Highway 110. (Urban Heritage Project 2022)



Figure 249: Historic inlet grates along the Boundary Channel Bridge. (Urban Heritage Project 2022)



Figure 250: Non-contributing inlet grate on Memorial Avenue.. (Urban Heritage Project 2022)



Figure 251: Wayside on Memorial Avenue near metro entrance. (Urban Heritage Project 2022)

Areas for Further Study

- **Conduct a study to design additional vehicle traffic calming and safety measures throughout the corridor, particularly around crosswalks** (e.g. speed cushions, rumble strips, etc); consider reducing the overall speed limit within the corridor. The study should also consider the speed limit around/ approaching Memorial Circle.
- **Study additional pedestrian/cylist safety improvements on and around Arlington Memorial Bridge,** such as a mid-bridge crossing for the improved safety and overall experience of pedestrians/cyclists.

RELATED LANDSCAPES

- **Conduct an archaeological / ethnographic study of the historic cemetery** associated with the Freedmen's Village; coordinate with ongoing Arlington House (ARHO) descendant community efforts. As appropriate (based on sensitive information), develop related interpretation for visitors.
- **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.

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APPENDIX A: MEADOW ALTERNATIVE FOR MEMORIAL CIRCLE

The CLR project team evaluated the possibility of converting all of Memorial Circle (including the lawn within the rotary) from turf to meadow. The final treatment recommendations (presented beginning on page 366) excluded the circle itself from the meadow treatment, retaining turf within the rotary and limiting the meadow transition to the area outside the existing sidewalks and near the tree groupings. This appendix documents the alternative that was explored and ultimately rejected.

Memorial Circle area (to Boundary Channel pylons)

Treatment approach: Rehabilitation

Desired character / treatment priorities: Although Memorial Circle's roadway needs to maintain its current function as a traffic rotary that redirects a substantial number of vehicles to other adjacent roads, the cultural landscape should be rehabilitated to improve the pedestrian/cyclist experience. Additionally, the character area should recognize the precedent and design of the Stone planting plan, while improving the growing conditions for significant vegetation. Current conditions and maintenance practices should be adjusted to address the impacts of climate change, balance traffic safety and mobility, and create spaces to accommodate the increasing public demand for memorialization—while, of course, retaining overall landscape character and satisfying operational needs (such as emergency helicopter landing).[1]

In keeping with the desired landscape character, the treatment recommendations for Memorial Circle emphasize rehabilitation, but recognize that the implementation of that approach will be a long-term process: initially, the treatment approach focuses on the preservation of the circle's overall spatial structure and other aspects of integrity; in the medium/longer term, the treatment tasks should shift toward rehabilitation. This shift over time acknowledges the changing contexts that may compel the park to introduce or alter landscape functions within this high-profile, high-traffic corridor. By adopting rehabilitation as the long-term treatment approach, the park will maintain the flexibility and adaptability that is necessary to achieve the desired landscape character for the Memorial Circle area.

The rationale for these incremental rehabilitation recommendations is that the park should progressively address issues that currently exist, are expected to become more intense over time, and can be addressed by gradual, longer-to-implement adaptations within the physical landscape. Rehabilitation can: increase ecological performance/biodiversity/climate resilience by varying species and composition of the plantings within the framework of the historic planting plan; reduce the cost and climate impact of vegetation maintenance; create safer multimodal mobility around the circle (for pedestrians, cyclists, and motorists); introduce alternative pedestrian/cyclist crossings, extending the design work already underway around Lincoln Memorial/Arlington Memorial Bridge/Memorial Avenue; increase visual friction to safely decrease speed; and add interpretive installations/experiences around or within the circle (temporary memorials, for example) to reinforce the historic intent and expression of the corridor.

Across the entire Memorial Circle character area, opportunities to replace lawn with appropriate herbaceous, meadow plantings can be achieved without compromising the views and vistas so important to the overall design. Within the circle, the protection of views is more important, and the plantings would thus be maintained at a height of perhaps 1-2 feet; on the areas outside the circle, herbaceous species would remain at this same height adjacent to the roadway, and be allowed to reach 3-4 feet closer to tree groupings from the Stone plan.

1. At times (e.g. July 4 commemoration planning), Memorial Circle has been a designated emergency landing location for U.S. Park Police helicopters. We do not consider this CLR's recommendations to be inherently incompatible with that hypothetical use.

Details of this scheme would have to be carefully designed, and they go beyond this CLR's level of detail. The process of contemplating, designing, and implementing these changes will take time and intensive public engagement; therefore, we offer the treatment tasks and guidelines that follow as a framework for subsequent planning efforts, but address a phased approach to achieve them. Despite the work needed to realize this, it would yield considerable benefits in terms of ecological resilience/biodiversity, reduced maintenance costs, enhanced public safety, and safekeeping for the significance of the corridor.

Additionally, the Memorial Circle area could one day be imagined as a site of temporary commemorative works. Temporary installations—appropriately scaled and placed around the verges of the circle (and perhaps within the circle itself on rare occasions)—would offer opportunities to reflect on the cultural significance of Memorial Avenue, the formal design context of the entire DC-Virginia monumental core, and the American public's increasingly divergent perspectives on aspects of U.S. history formerly regarded as "settled." This proposal draws support from the popular and critical success of the recent "Beyond Granite" initiative, in which temporary interpretive art installations were placed in several locations on the National Mall in 2023.[2] The planning process for such installations would consider whether pedestrian/cyclist access to the interior of Memorial Circle is desirable; at present, the circle is technically accessible but dangerous to reach. Future installations might encourage or deter such access, and make road safety interventions accordingly.

WITHIN MEMORIAL CIRCLE

- **Create a landscape with greater ecological resilience: transition Memorial Circle's turf to a meadow of native grasses and other non-woody species**; the seed mix should be selected and maintained to preserve the lawn's low profile (perhaps 1-2 feet), but would relieve the current mowing burden and improve the circle's climate change impacts. The benefits of meadows include increased water absorption, water conservation, wildlife habitat, and long-term cost savings. Properly timed mowing and invasive species control are the two crucial elements for long-term maintenance practices for meadows.
  - Work with natural resource management and the staff horticulturist to select an appropriate seed mix of warm-season grasses (these might include *Bouteloua curtipendula* [Sideoats Grama]; *Eragrostis spectabilis* [Purple Lovegrass]; *Sporobolus clandestinus* [Rough Dropseed]; *Schizachryrium scoparium* [Little Bluestem]; etc.). Consider incorporating a cover crop while the meadow is establishing, to begin the transition away from turf.
  - Any invasive species should be removed before adding native seed, ideally in early spring or fall.
  - Create an appropriate protocol for establishing and maintaining the meadow; follow guidance on meadow establishment, such as *Mid-Atlantic Native Meadows: Guidelines for Planting, Preparation, Design, Installation, and Maintenance*. Meadow conditions typically take three years to establish, so maintenance practices should allow sufficient time for the landscape to transition.
  - Transitioning the circle to a meadow will require reducing the current mowing regime (e.g. just 1-2 times per year). The grasses within and immediately surrounding Memorial Circle should be maintained at an approximate height of 1-2 feet (see the diagrams on pages 392-93).
  - Include a public engagement component in the project (on-site and virtual), to share why the park is

2. The Beyond Granite: Pulling Together initiative was a contemporary art exhibition on the National Mall curated by the non-profit Monument Lab in collaboration with the Trust for the National Mall, the National Capital Planning Commission, and the National Park Service. The exhibition featured installations by six contemporary artists in placed from August to September of 2023, and was the first curated outdoor art exhibition in the Mall's history (Beyond Granite: Pulling Together Exhibition Guide, https://data.monumentlab.com/uploads/monument-lab/originals/0fa4ffb1-42d9-417b-8d6c-8ae9c348aa07.pdf)

transitioning the lawn to native grasses and educate the public about the natural process.

- **Create a design and engagement process (working with a university partner and local stakeholder groups) to explore different possible versions of temporary public art/commemorative installations.** McKim, Mead and White's original designs for the corridor offer precedent for such a feature; although those designs, like the Stone-era planting plans, were never fully implemented, they offer an opportunity to marry the current corridor needs (namely, the need to calm the current "slingshot effect" of vehicles speeding around the circle) with the original design intent for Memorial Avenue, which offered a focal point to slow down and see.
  - Include transportation planners in the design process, so that the temporary public art/commemorative installation aligns with and enhances traffic-calming initiatives.
  - As part of the design process, establish whether pedestrian/cyclist access to the circle (and any associated public art/installations) is desirable, and if so, how it might be achieved safely.
  - If the circle remains designated as an emergency helipad, the design process should respond to those conditions (e.g. by maintaining a flat and open area).

OUTER MEMORIAL CIRCLE

- **Introduce new tree plantings around the periphery of Memorial Circle**, bringing the forested edge closer to the sidewalks and roadway, in keeping with the Stone planting plan's desired density. (See the diagram of desired conditions on pages 392-93.) This rehabilitative approach would introduce more shade to the outer edge of the circle in order to 1) shield significant but vulnerable existing trees (e.g. *Cornus florida* trees that were significant features within Stone's design, are vulnerable in high sun exposure, and require partial shade to thrive); 2) maintain the intended screening effect from Stone's plan; 3) make pedestrians and cyclists more comfortable as they navigate around the circle; 4) relieve some of the burden that the extensive existing lawns cause for mowing capacity and climate change impacts.
  - New tree plantings should be spatially and structurally similar to those in the Stone-era planting plans, but should prioritize hardiness and climate resilience.
  - New trees should prioritize canopy trees, with minimal understory.
  - New tree plantings should be organized in a scattered layout, in keeping with Stone's landscape plans, which massed the trees in clusters.[3] The edges (progressing inward toward Memorial Circle, and outward, toward the rest of Lady Bird Johnson Park/Columbia Island) should extend gradually in both directions. Plantings should avoid hard edges and strict geometries in the tree canopy.
  - Trees should not be planted between the circle's sidewalks and the rotary; this area should be kept open for safety and pedestrian/cyclist sightlines.
  - Mulch tree rings (or mulch islands, in cases of grouped trees) should be added around new tree plantings and maintained around existing trees as a buffer during mowing. All mulch rings/islands should be curvilinear, naturalistic, and varied in footprint. Organic mulch should be used.
  - As the meadow conditions are established and mowing intensity decreases in the coming years, the mulch beds around the trees can be removed.
  - As existing dogwoods die, they may be replaced in the same locations with spatially and structurally similar species.
- **In the area outside the existing sidewalks, transition turf to native grasses/meadow** (tapering up, from

3. In a May 2004 site visit to Lady Bird Johnson Park, landscape architect Edward D. Stone, Jr. noted that there were more specimen trees and fewer massings than he expected (Notes from site visit with Edward D. Stone, Jr., to Lady Bird Johnson Park, May 19, 2004).

1-2 feet at the sidewalk edge to 3-4 feet as the meadow approaches the tree canopy). This feathered-edge condition will help to achieve the desired naturalistic character outside the circle, as the study area transitions to the rest of the Lady Bird Johnson Park (Columbia Island).

  - A meadow seed mix would relieve the current mowing burden in this area and improve the outer circle's climate change impacts. The benefits of meadows include increased water absorption, water conservation, wildlife habitat, and long-term cost savings. Properly timed mowing and invasive species control are the two crucial elements for long-term maintenance practices for meadows.
  - Work with natural resource management and the staff horticulturist to select an appropriate seed mix of warm-season grasses (these might include *Bouteloua curtipendula* [Sideoats Grama]; *Eragrostis spectabilis* [Purple Lovegrass]; *Sporobolus clandestinus* [Rough Dropseed]; *Schizachryrium scoparium* [Little Bluestem]; etc.). Consider incorporating a cover crop while the meadow is establishing, to begin the transition away from turf.
  - Any invasive species should be removed before adding native seed, ideally in early spring or fall.
  - Create an appropriate protocol for establishing and maintaining the meadow; follow guidance on meadow establishment, such as *Mid-Atlantic Native Meadows: Guidelines for Planting, Preparation, Design, Installation, and Maintenance*. Meadow conditions typically take three years to establish, so maintenance practices should allow sufficient time for the landscape to transition.
  - Transitioning the outer circle to a meadow will require reducing the current mowing regime (e.g. just 1-2 times per year).
  - Extant daffodil beds/drifts can be retained; they are not incompatible with the proposed meadows.
  - Include a public engagement component in the project (on-site and virtual), to share why the park is transitioning the lawn to native grasses and educate the public about the natural process.

- **Rehabilitate existing non-contributing sidewalks around Memorial Circle to ensure consistent materials and dimensions throughout the corridor.** There are currently several material types in the sidewalk surrounding Memorial Circle, particularly on the southeast side of the circle where the sidewalk intersects with the Mount Vernon Trail.
  - As replacement becomes necessary, replace incompatible materials (including concrete and asphalt) with concrete aggregate, consistent in paver size, aggregate mix, and tone with the historic sidewalks on Arlington Memorial Bridge and along the western part of the avenue.
  - Because the sidewalks on the north and south sides of Memorial Circle have already been altered from their historic layouts, the outer circle has a higher tolerance for change for additional paths in these areas. If sidewalk footprints need to be altered and/or widened, make new sidewalks compatible with the historic walks (as noted above) and do not route the sidewalks too close to the tree massings.
- **Encourage more trail(s) and trail connections around Memorial Circle**, as long as they do not encroach on the legibility of the original Stone planting plan and roadway plan.
  - On the southeast side of Memorial Circle is a paved trail connection from the Memorial Circle sidewalk to Mount Vernon Trail; no such connection exists on the northeast side of the circle. (In lieu of a formal trail connection, a social trail is well-established in this area.) In consultation with transportation planners and a historical landscape architect, establish a formal, accessible connection to the Mount Vernon Trail in this area, so that pedestrians/cyclists do not have to make unnecessary crossings or establish new social trails.
  - In consultation with transportation planners, continue to explore additional crossings at the west end of Arlington Memorial Bridge that would allow for pedestrians/cyclists to cross from north to south

and vice versa.

- **Maintain the existing Belgian block surfaces around Memorial Circle**, including the shoulder lanes and traffic islands.
- **Make permanent the Memorial Circle safety improvements added in 2018-2020**, including the lane reductions designed to calm traffic around the pedestrian crosswalks. (Refer to the Policies/Partnerships recommendations above for additional safety improvements.) Any future improvements should adhere to the following guidelines:
  - Minimize the removal of any historic granite curbing. If curb alignments are necessary for safety improvements, re-use existing curbing wherever possible.
  - Evaluate whether the sidewalks around Memorial Circle should be replaced with wider sidewalks (in the same locations).
    - If replacement occurs, replace incompatible materials with concrete aggregate consistent in paver size, aggregate mix, and tone with historic sidewalks on Arlington Memorial Bridge and Memorial Avenue (*see Drawing #22 on pages 258-59, Drawing #24 on pages 262-63, and Drawing #26 on pages 266-67*).
  - If traffic lanes are to be removed from use, replace asphalt with Belgian block (consistent in form and color with existing Belgian block on the avenue). As lanes are resurfaced with Belgian block, consider removing any associated vertical delineator posts, if safety conditions allow. For any resurfacing projects, existing curb alignments should be maintained wherever possible; where realignment is necessary, historic curbing should be incorporated into the new alignment. Stormwater inlet grates should be retained in their historic locations wherever possible.
  - If loop roads are decommissioned (e.g. the connector road north of Memorial Circle), return to green space and plant with meadow, consistent with the overall treatment recommendations for this character area.
  - Add a Rectangular Rapid Flashing Beacon at the crosswalk on the west side of the circle (between Memorial Circle and the Boundary Channel Bridge), consistent with other crossings in the corridor.
- **Maintain the planting beds at the base of the Memorial Circle pylons with flowering plants.** The planting beds should be maintained within the current footprints. Contractors and/or NPS staff should continue to plant flowers (not trees or shrubs) to add visual interest and color year-round. Flowers planted in recent years have typically been annuals, and have included tulips (*Tulipa* sp.) and canna (*Cannova* 'red shades'). This CLR recommends a spring-fall blend of annuals and perennials, such as: [spring] tulips (*Tulipa* sp.), for which species are preferable to hybrids; [summer-fall] canna (*Cannova* sp.); and [summer-fall] black-eyed susans (*Rudbeckia Goldsturm*).
- **Mulch around the dogwoods** with organic material (e.g. shredded leaf mulch), in order to preserve and sustain the Stone-era dogwoods, which are vulnerable to damage from mowing. Cover the base of the tree with an approximately 3-inch layer of organic mulch extending to the dripline of the canopy, leaving approximately 3 inches of mulch-free area surrounding the trunk so the root flare at the base of the trunk is still exposed to the air. For younger trees, the mulch ring should be approximately 3 feet wide. Inorganic mulch (e.g. lava rock) should not be used.
- **Conserve, clean, and maintain the Memorial Circle pylons.** Monitor the pylons annually, take updated photographs, record conditions, and clean as necessary, including removing any biogrowth and vegetation growing on the structures.
- **Install additional signs to orient pedestrians/cyclists** and offer wayfinding information (e.g. travel distances to significant features).
  - New signs should be small in profile, similar to the existing pedestrian-scale signage around

Memorial Circle.

  - Avoid cluttering of signs that will be difficult for vehicle drivers to comprehend.

- **Maintain the existing Lady Bird Johnson plaque** and surrounding concrete apron on the southeast side of Memorial Circle.
  - Monitor the plaque annually, take updated photographs, record conditions, and conserve/maintain as necessary, including removing any vegetation growing around the plaque.
  - Additional small-scale features in this area would be appropriate if they support the historic land uses. For example, a bench, small interpretive panel, and/or drinking fountain would be appropriate. Consult with a historical landscape architect before adding any features.

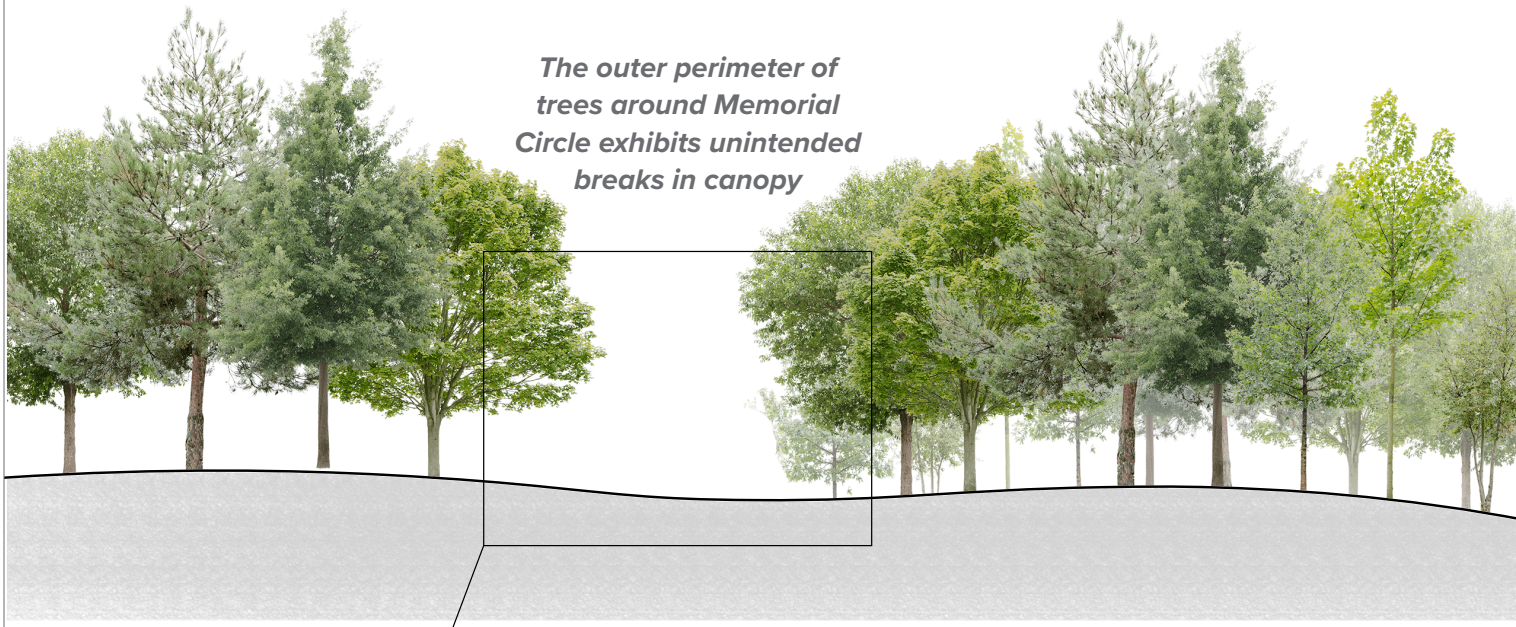
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Desired Landscape Character: Memorial Circle Character Area

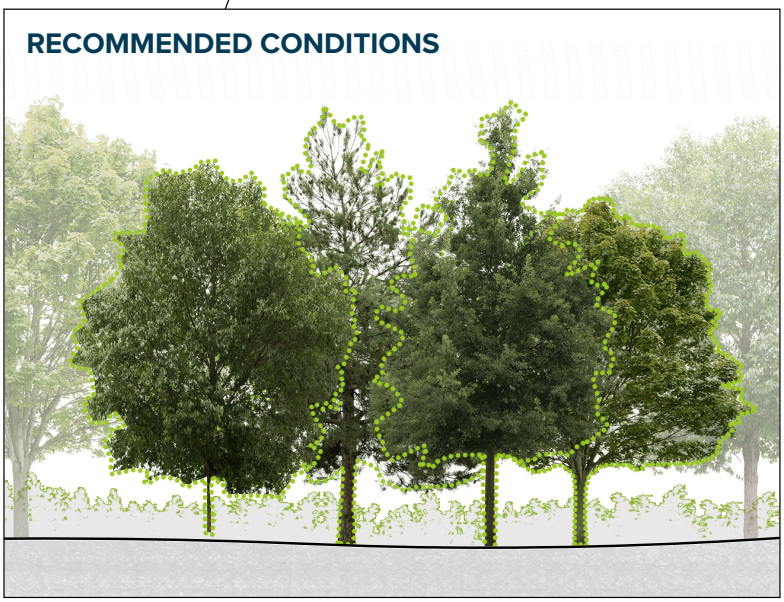
Existing conditions noted in ***gray italics***

Recommended conditions noted in **blue bold**

EXISTING CONDITIONS



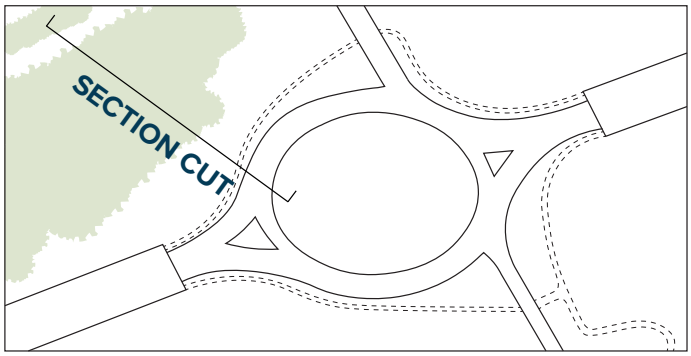
RECOMMENDED CONDITIONS



Gaps in the outer perimeter of trees should be filled with new plantings, in keeping with the existing palette of character-defining trees established by the Stone planting plan. Turf in and around these tree groupings should be transitioned to meadow grasses and maintained at a height of 3-4 feet.

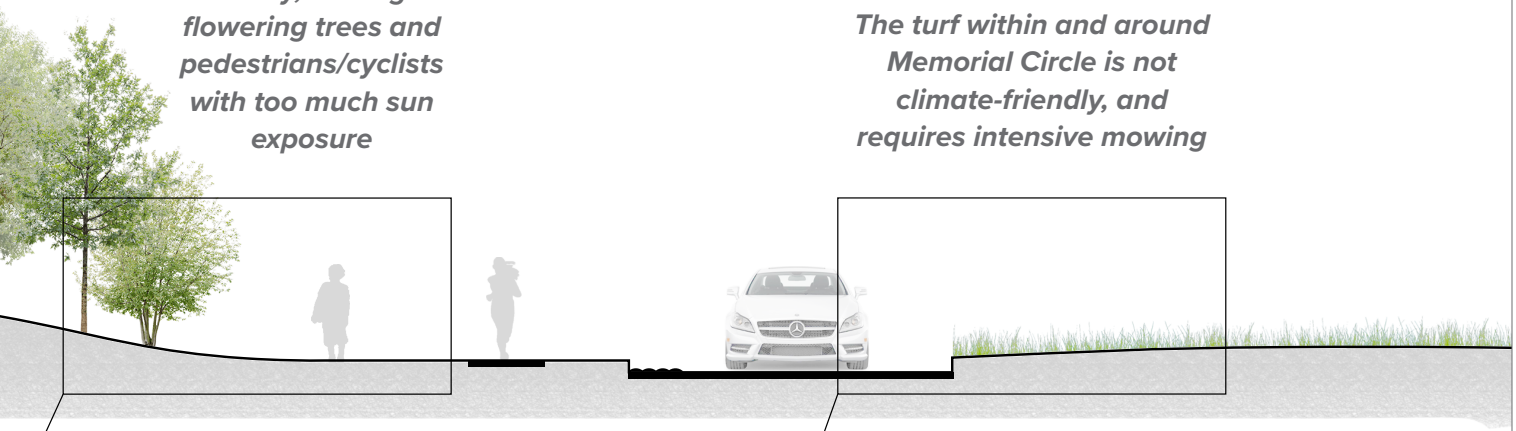


New tree plantings Circle, feathering the forested edge The turf should be These meadow co feathered-edge ef around the circle t



The circumferential tree line is set too far back from the rotary, leaving flowering trees and pedestrians/cyclists with too much sun exposure

The turf within and around Memorial Circle is not climate-friendly, and requires intensive mowing

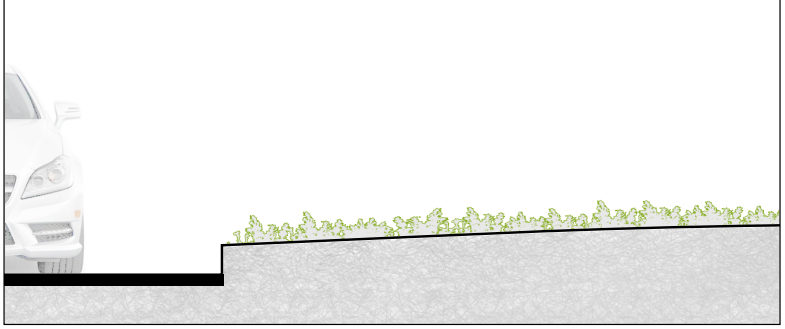


D CONDITIONS



s should be introduced around Memorial the edge with flowering trees to bring closer to the sidewalks and roadway. transitioned to native grasses. nditions should be maintained with a fect, tapering up in height from 1-2 feet o 3-4 feet near the tree groupings.

RECOMMENDED CONDITIONS



The turf within Memorial Circle should be transitioned to a meadow of native grasses and maintained at a height of 1-2 feet. The seed mix (see recommended species) should be selected based on ecological resilience objectives, and should maintain the lawn's relatively low profile.

APPENDIX B: MEMORIAL INSCRIPTIONS

SEABEES MEMORIAL

On the bronze base beneath the figures, the inscription read:

FELIX DE WELDON SC. 1971

A. BRUNI. FUSE ROMA

WITH COMPASSION FOR OTHERS

WE BUILD –WE FIGHT

FOR PEACE WITH FREEDOM

FELIX DE WELDON SC. 1973.

The area above the bas relief along the back wall contained the following inscription:

SEABEES –CAN DO; WITH WILLING HEARTS AND

SKILLFUL HANDS, THE DIFFICULT WE DO AT

ONCE; THE IMPOSSIBLE TAKES A BIT LONGER;

1863; 1942.

The individual steles featured the following inscription:

IN MEMORIAM

DEDICATED TO

THE MEN OF THE UNITED STATES

NAVAL CONSTRUCTION BATTALIONS

THE SEABEES

BORN IN THE EARLY DAYS OF WORLD WAR II

WHEN THE NATION WAS IN DIRE PERIL

THEIR MISSION WAS TO BUILD BASES FOR THE

COMBAT FORCES, TO DEFEND THOSE BASES

AND TO PROVIDE OTHER SUPPORT

OF WHATEVER KIND REQUIRED.

ORGANIZED AND COMMANDED BY OFFICERS

OF THE CIVIL ENGINEER CORPS OF THE

NAVY, RECRUITED LARGELY FROM THE

BUILDING TRADES OF ORGANIZED LABOR,

BUTTRESSED BY THE CONSTRUCTION INDUSTRY

THE SEABEES QUICKLY PROVED

THEIR TOTAL COMPETENCE.

HIGH MORALE, EXPERT SKILLS, VERSATILE

INGENUITY, STRONG DEVOTION TO DUTY

AND DEEP SYMPATHY FOR THE NEEDY

ARE THE HALLMARKS OF THEIR RECORD.

THEIR MOTTO “CAN DO” SYMBOLIZES

THEIR TRADITION AND THEIR ACHIEVEMENTS.

GENERATIONS OF SEABEES HAVE ADDED

TO THE LAURELS OF THEIR FOREBEARS.

IN WAR AND IN PEACE THEY HAVE MAINTAINED

THEIR HIGH REPUTE AS BUILDERS,

FIGHTERS AND HUMANITARIANS.

FELIX DE WELDON SC. 1973

SEABEE DEPLOYMENT SITES

[WITH A LIST OF SITES BELOW, LISTED FROM A TO H]

ETERNAL FATHER, STRONG TO SAVE

WHOSE ARM HATH BOUND THE RESTLESS WAVE

WHO BIDDEST THE MIGHTY OCEAN DEEP

ITS OWN APPOINTED LIMITS KEEP

O HEAR US WHEN WE CRY TO THEE

FOR THOSE IN PERIL ON THE SEA.

LORD, STAND BESIDE THE MEN WHO BUILD

AND GIVE THEM COURAGE, STRENGTH AND

SKILL

O GRANT THEM PEACE OF HEART AND MIND

AND COMFORT LOVED ONES LEFT BEHIND

LORD, HEAR OUR PRAYER FOR ALL SEABEES

WHERE ERE THEY BE ON LAND OR SEA.

[On the outer face of the east stele]

SEABEE DEPLOYMENT SITES

[with a list of sites below from I to W]

Spanish War Veterans Memorial ("The Hiker")

The inscription reads as follows:

THE HIKER

1898-1902

AD 1965; SPANISH WAR VETERANS 1898-1902

CUBA, PORTO-RICO, USA, PHILIPPINE ISLANDS

ERECTED BY THE SPANISH WAR VETERANS

AND AFFILIATED ORGANIZATIONS

THEO. A. R. KITSON, SC.

THE GORHAM CO FOUNDERS

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Urban Heritage Project
www.cultural-landscapes.org