National Park Service
Cultural Landscapes Inventory
2022



View of Washington Monument from the Vicinity of Capital Overlook, 1932 (Historic American Engineering Record 1932a).

Mount Vernon Memorial Highway – North of Alexandria

George Washington Memorial Parkway

[Final]

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Introduction

Cultural Landscapes in the Cultural Resources Inventory System:

Cultural Landscapes in the Cultural Resources Inventory System:

CRIS is the National Park Service's database of cultural resources on its lands, consisting of archeological sites, historic structures, ethnographic resources and cultural landscapes. The set of CRIS records for cultural landscapes is referred to as CRIS-CL. CRIS-CL records conform to a standardized data structure known as the Cultural Landscapes Inventory (CLI).

The legislative, regulatory and policy directions for conducting and maintaining the CRIS are: Section 110 of the National Historic Preservation Act, NPS Management Policies (2006), Director's Order 28 (Cultural Resources) and Director's Order 28a (Archeology).

The Cultural Landscapes Inventory (CLI)
The CLI is the data structure within CRIS used to document and evaluate all potentially significant landscapes in which NPS has, or plans to acquire any enforceable legal interest.
Each CRIS-CL record is certified complete when the landscape is determined to meet one of the following:

Landscape individually meets the National Register of Historic Places criteria for evaluation; or,
Landscape is a contributing element of a property that is eligible for the National Register; or,
Landscape does not meet the National Register criteria, but is managed as cultural resources because law, policy or decisions reached through the park planning process.

Cultural landscapes vary from historic sites, historic designed landscapes, historic vernacular landscapes to historic ethnographic landscapes, but may also fit within more than one type. Those eligible for the National Register have significance in the nation's history on a national, state or local level, as well as integrity or authenticity.

The legislative, regulatory and policy directions for conducting and maintaining the CLI within CRIS are: *National Historic Preservation Act of 1966 (16 USC 470h-2(a)(1)). Each Federal agency shall establish…a preservation program for the identification, evaluation, and nomination to the National Register of Historic Places…of properties…*

Executive Order 13287: Preserve America, 2003. Sec. 3(a)…Each agency with real property management responsibilities shall prepare an assessment of the current status of its inventory of historic properties required by section 110(a)(2) of the NHPA…No later than September 30, 2004, each covered agency shall complete a report of the assessment and make it available to the Chairman of the Advisory Council on Historic Preservation and the Secretary of the Interior…

Executive Order 13287: Preserve America, 2003. Sec. 3(c) each agency with real property management responsibilities shall, by September 30, 2005, and every third year thereafter, prepare a report on its progress in identifying…historic properties in its ownership and make the report available to the Councill and the Secretary…

The Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act, 1998. Standard 2: An agency provides for the timely identification and evaluation of historic properties under agency jurisdiction or control and/or subject to effect by agency actions (Sec. 110 (a)(2)(A) Management Policies 2006. 5.1.3.1 Inventories: The Park Service will (1) maintain and expand the following inventories…about cultural resources in units of the national park system…Cultural Landscape Inventory of historic designed landscapes, historic vernacular landscapes,…and historic sites…

Cultural Resource Management Guideline, 1997, Release No. 5, page 22 issued pursuant to Director's Order #28. As cultural resources are identified and evaluated, they should also be listed in the appropriate Service-wide inventories of cultural resources.

General Information

Cultural Landscape Inventory Name	**Mount Vernon Memorial Highway – North of Alexandria**
Cultural Landscape Inventory Number	**976126**
Parent Cultural Landscape Inventory Name	**George Washington Memorial Parkway**
Parent Cultural Landscape Inventory Number	**600057**
Park Name	**George Washington Memorial Parkway**
Park Alpha Code	**GWMP**
Park Org Code	**3300**
Property Level	**Component Landscape**

Landscape/Component Landscape Description

The Mount Vernon Memorial Highway - North of Alexandria (MVMH-North) cultural landscape consists of an approximately 4.45-mile long, 813-acre parcel that extends from the intersection of First and North Washington Streets in Alexandria, Virginia to the Boundary Channel in Arlington, Virginia (Figure 1–Figure 10). A small section of the Alexandria Waterfront is also included in the cultural landscape boundary, although this area is not physically connected to the larger parcel. MVMH-North is a component landscape of the Mount Vernon Memorial Highway (MVMH) parent landscape. MVMH extends along the Virginia shoreline of the Potomac River from Mount Vernon at its southern terminus to the Arlington Memorial Bridge (Memorial Bridge).

MVMH-North is located just south of Lady Bird Johnson Park. Both MVMH-North and Lady Bird Johnson Park are administered by the George Washington Memorial Parkway (GWMP), a unit of the National Park Service. The MVMH-North cultural landscape abuts the City of Alexandria at its southern limits. Washington National Airport is located adjacent to MVMH-North, on its eastern boundary. The developed areas of Pentagon City and Crystal City in Arlington and Potomac Yard in Alexandria are located along portions of MVMH-North's western boundaries.

The MVMH–North cultural landscape is comprised of a linear park that includes a limited-access, four-lane highway, divided by a central median, that provides unparalleled views of the

Potomac River and nationally significant landmarks. It is the first comprehensively designed modern motorway constructed by the federal government and among the first roadways that combined transportation, recreation, and commemoration into one coherent design. The engineers and landscape architects of the highway utilized state of the art technology and created detailed plans and models to ensure that the roadway would be well-integrated into the existing topography and to maximize its scenic qualities. Just as great efforts were made to preserve and enhance the natural character of the river's shoreline and the undulating topography along its banks, an equally significant undertaking resulted in the reclamation of the river's tidal flats and the creation of new land, as nearly 20 percent of the full length of the MVMH-North was built on imported fill (EDAW 1992, 7). In addition to the use of the roadway for recreational driving and general transportation, MVMH-North provides myriad recreational opportunities including wildlife and wildflower viewing, organized sports, hiking, bicycling, kayaking and canoeing, picnicking, fishing, and enjoying cultural activities. Picnic areas, boat launches and a marina, multipurpose playfields, natural areas, access to the shoreline, and the Mount Vernon Trail all support passive and active recreational needs.

MVMH, in its entirety, bears the distinction of being, at once, a recreational parkway designed to be a pleasurable driving experience and a commemorative memorial meant to celebrate the life and significance of George Washington. The earliest organized efforts to build a roadway from Mount Vernon to Washington, DC originated with the efforts of the Mount Vernon Avenue Association in 1888, with the first congressional appropriation of funds for construction of the highway coming 40 years later. Construction on the MVMH commenced in 1929 and the highway was opened in 1932, the bicentennial of George Washington's birth.

SIGNIFICANCE SUMMARY

The MVMH—the entire segment from Arlington Memorial Bridge to Mount Vernon—was the first portion of the GWMP to be listed in the National Register of Historic Places (NRHP) on May 18, 1981 (NRIS #81000079). The nomination form states that the MVMH is eligible for listing under Criteria A and C in the areas of engineering, landscape architecture, sculpture, transportation, and commemoration with an overall period of significance of 1925 to 1949. The

MVMH was also included in the 1995 NRHP listing of the GWMP under Criterion C in the areas of transportation and landscape architecture, Criterion B for association with George Washington, and Criteria Consideration G, with an overall period of significance of 1930 to 1966.

As of February 2022, the NPS was in the process of updating the NRHP nomination form (i.e., additional documentation and boundary increase) for the GWMP, including the expansion of the statement of significance. The draft documentation cites Criteria A, B, and C in the areas of community planning and development, conservation, engineering, landscape architecture, transportation, recreation, and commemoration, and includes two periods of significance: 1785–1802 and 1929–1976. Except a specific portion of the Patowmack Canal, which is identified as representative of George Washington's lifelong association with the Potomac corridor, the larger MVMH segment is not presented as supporting Criterion B.

In 1991, the parkway system of Washington, DC was recorded on a multiple property documentation form as the Parkways of the National Capital Region, 1913–1965. The Washington, DC parkway system is one of the most comprehensive and monumental examples in the nation, other than the precedent-setting New York Parkway system. The Washington, DC system represents the culmination of several national trends in the early twentieth century including the City Beautiful movement's emphasis on integrated green spaces in urban areas; the increased reliance on automobiles and the rapid development of road systems; and the decline of quality city life and the increased popularity of outdoor recreation. Four primary parkways and numerous small regional strip parks are the key elements of the system. The parkways serve as links among the parks, monuments, and suburbs in the region. The MVMH (1928–1932)/GWMP (1930–1965) is identified as one of the four major contributing parkways to the Washington, DC parkway system. The ceremonial and recreational route provides occasional overlooks, parking for picnic areas, and views of Washington, DC across the Potomac River.

Based upon this existing NRHP documentation, the MVMH-North is understood to possesses historical significance on a national, state, and local level under Criterion A in the areas of community planning and development, conservation, transportation, commemoration, and

entertainment/recreation, and on a national, state, and local level under Criterion C in the areas of engineering and landscape architecture. The period of significance for MVMH-North is 1929, the year in which construction began, to 1972, when the Mission 66 program completed alterations to the MVMH-North recreational areas and the Mount Vernon Trail was added. A summary of the MVMH-North's significance by Criterion is provided below.

Criterion A:

MVMH-North is significant in the area of Community Planning and Development as part of the 1902 McMillan Plan for Washington, DC. It is also significant at the national, state, and local levels in the area of Conservation as part of the overall GWMP's effort to integrate recreation and conservation of both natural and historic resources as key features of its route from Mount Vernon in Virginia to Great Falls in Maryland. In the area of Transportation, at the national, state, and local levels, MVMH-North is significant as the first comprehensively designed modern motorway constructed by the federal government. MVMH-North is significant at the national, state, and local levels in the area of Commemoration as the first portion of the parkway built to commemorate the bicentennial of George Washington's birth. Finally, MVMH-North is significant at the national, state, and local levels in the area of Entertainment/Recreation as a part of NPS's nationwide Mission 66 program to reinvigorate and re-envision national parks.

Criterion C:

MVMH-North is significant at the national, state, and local levels in the area of Engineering as it received national attention for its extensive landfilling operation needed to construct the highway through the marshes and estuaries of the Potomac riverfront and for its innovative grade-separated interchange. It is also significant in the area of Landscape Architecture at the national, state, and local levels as part of the national parkway movement and as a model for subsequent parkways and highways throughout the United States. MVMH-North is also significant for its Mission 66 improvements including the recreation areas at Gravelly Point and the Daingerfield Island Mission 66 Comfort Station constructed in 1972 as part of the Parkscape USA period (1967 to 1973) of the Mission 66 program (Quinn Evans Architects 2019, 7–8).

ANALYSIS AND EVALUATION SUMMARY AND CONDITION

The MVMH-North cultural landscape consists of the following contributing landscape characteristics: natural systems and features, spatial organization, land use, topography, vegetation, circulation, buildings and structures, and views and vistas. This CLI finds that the cultural landscape retains sufficient integrity of setting, location, design, workmanship, materials, feeling, and association to convey its significance under NRHP Criteria A and C. The aspects of integrity that have changed the most since its completion in 1932 are setting and feeling, due to significant urban and transportation development along the parkway corridor. However, the design of the parkway, including the landscape buffers and some vistas to historical features, have been preserved and as such the experience of the parkway as set apart from the urban environment is intact. The construction of additional recreational and circulation features from the NPS Mission 66 program within MVMH-North between 1965 and 1972 enhance the recreational mission and do not detract from the significance of the cultural landscape. This CLI finds the condition of the cultural landscape to be fair. Additional information can be found in the Analysis and Evaluation Summary and in the Condition Assessment section of this CLI.

For the purposes of this CLI, the MVMH-North inventory unit is subdivided into seven locales, or character areas, herein described from north to south:

The Bridges section of the inventory unit extends from Gravelly Point to the Boundary Channel and consists of the roadway and several bridges that permit other roadways to cross over the MVMH and the Potomac River.

The Gravelly Point part of the inventory unit comprises all of the mostly reclaimed landmass known as Gravelly Point and the part of the roadway therein.

The Roaches Run segment includes the Roaches Run Waterfowl Sanctuary and the roadway that parallels the Sanctuary.

The Airport segment of the inventory unit is the roadway and its right-of-way that lies adjacent the Washington National Airport.

The Daingerfield Island portion of the inventory unit consists of the landmass known as Daingerfield Island (a lobular peninsula that juts out into the Potomac River from the mainland) and the parkway that extends alongside it.

The Alexandria Approach segment includes the portion of the inventory unit that lies between the intersection of First and North Washington Streets in Alexandria to the southern extent of Daingerfield Island and serves as the transition from the more picturesque part of the MVMH-North to the more urbanized setting of Alexandria.

The Alexandria Waterfront locale is the detached portion of the inventory unit that lies along the Potomac River to the east of the industrialized, presently abandoned power generating plant and consists primarily of shoreline and a paved multi-use trail (a portion of the Mount Vernon Trail, an 18-mile-long recreational trail).

These character areas, depicted in the following maps, are aligned with those used in "The Vegetation of the George Washington Memorial Parkway Central Section: Alexandria to Arlington Memorial Bridge" Cultural Landscape Report (Kelsch 2009, 11). However, that report included the segment of the GWMP that stretches between the Boundary Channel and the Memorial Bridge, known as Lady Bird Johnson Park, and did not include the Alexandria Waterfront character area.

Landscape Hierarchy Description

The Mount Vernon Memorial Highway – North of Alexandria section is one of two component landscapes within the Mount Vernon Memorial Highway parent cultural landscape (Resource ID 600057) (Figure 11). A CLI for the Mount Vernon Memorial Highway – South of Alexandria (Resource ID 97588) section was completed in 2014.

Landscape Type

Historic Designed Landscape

Site Plan

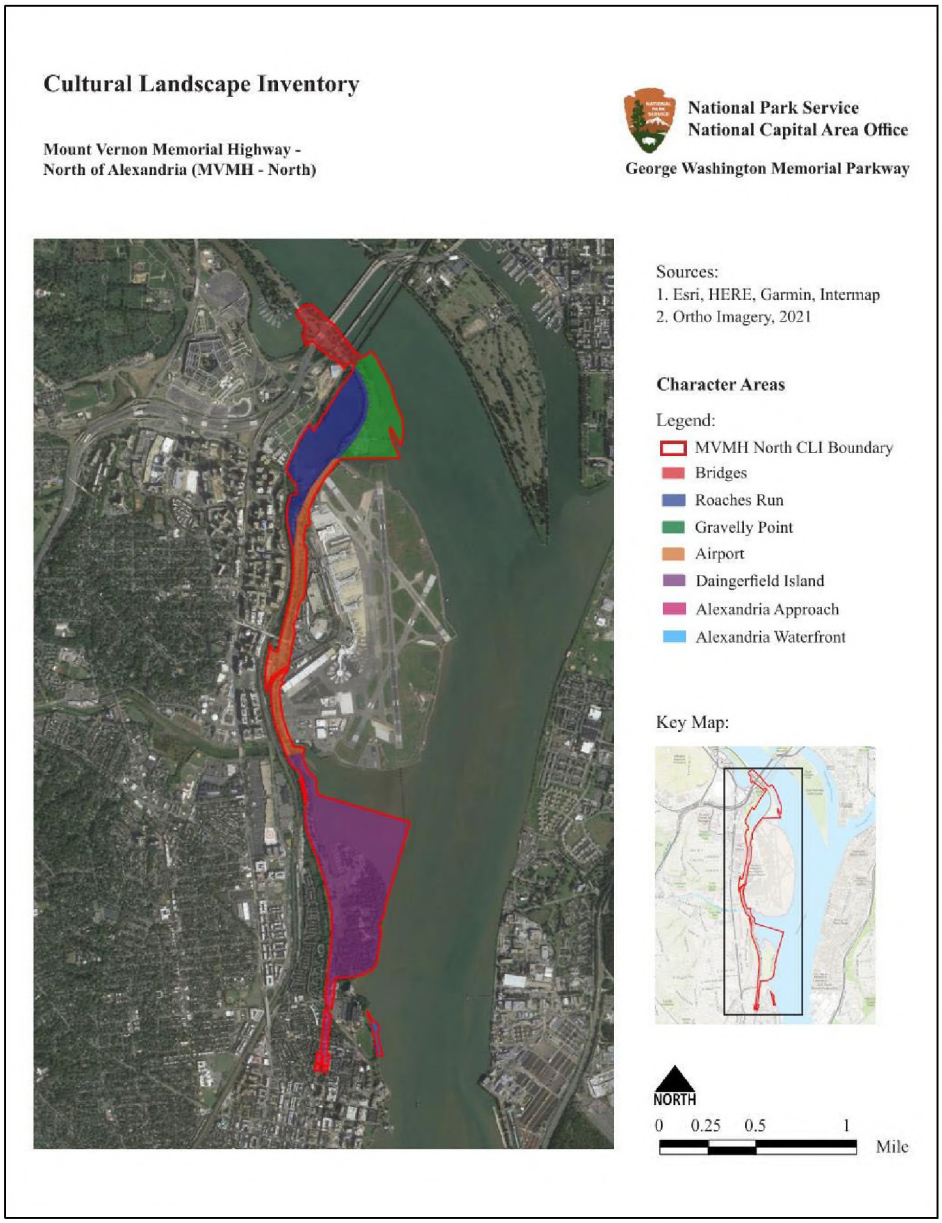


Figure 1. MVMH-North character areas key plan (SmithGroup, RHI, and Gray & Pape 2022).

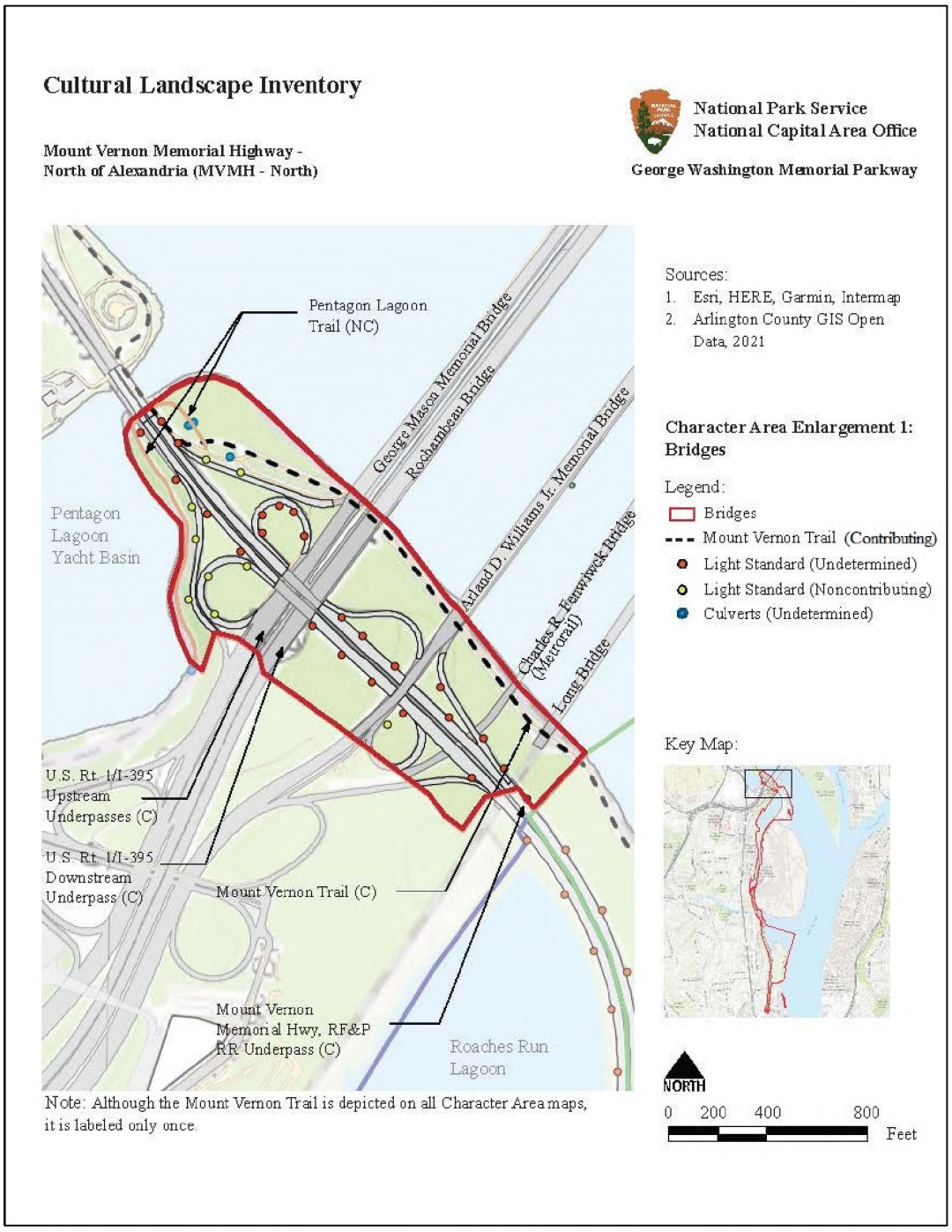


Figure 2. MVMH-North character areas enlargement plan: Bridges (SmithGroup, RHI, and Gray & Pape 2022).

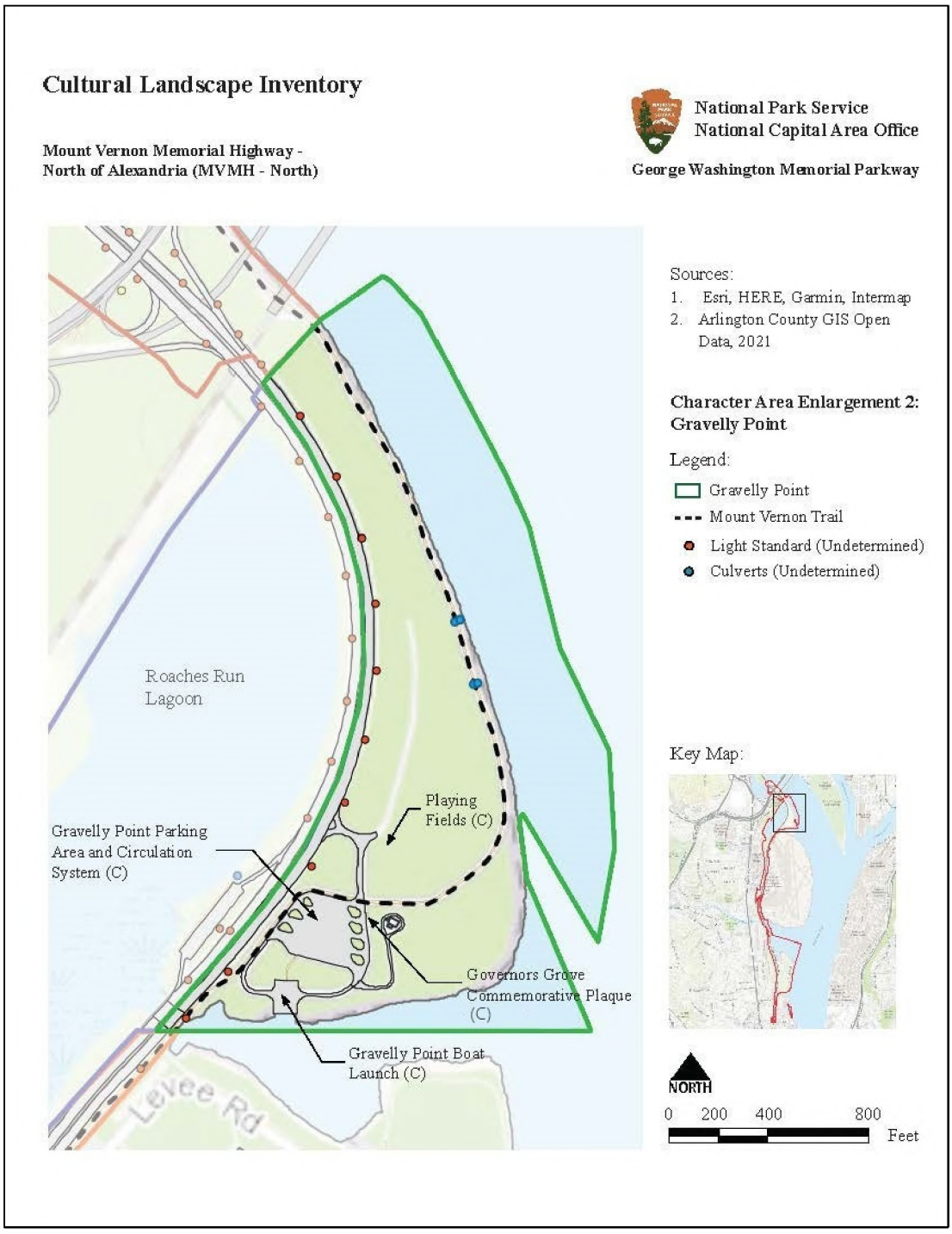


Figure 3. MVMH-North character areas enlargement plan: Gravelly Point (SmithGroup, RHI, and Gray & Pape 2022).

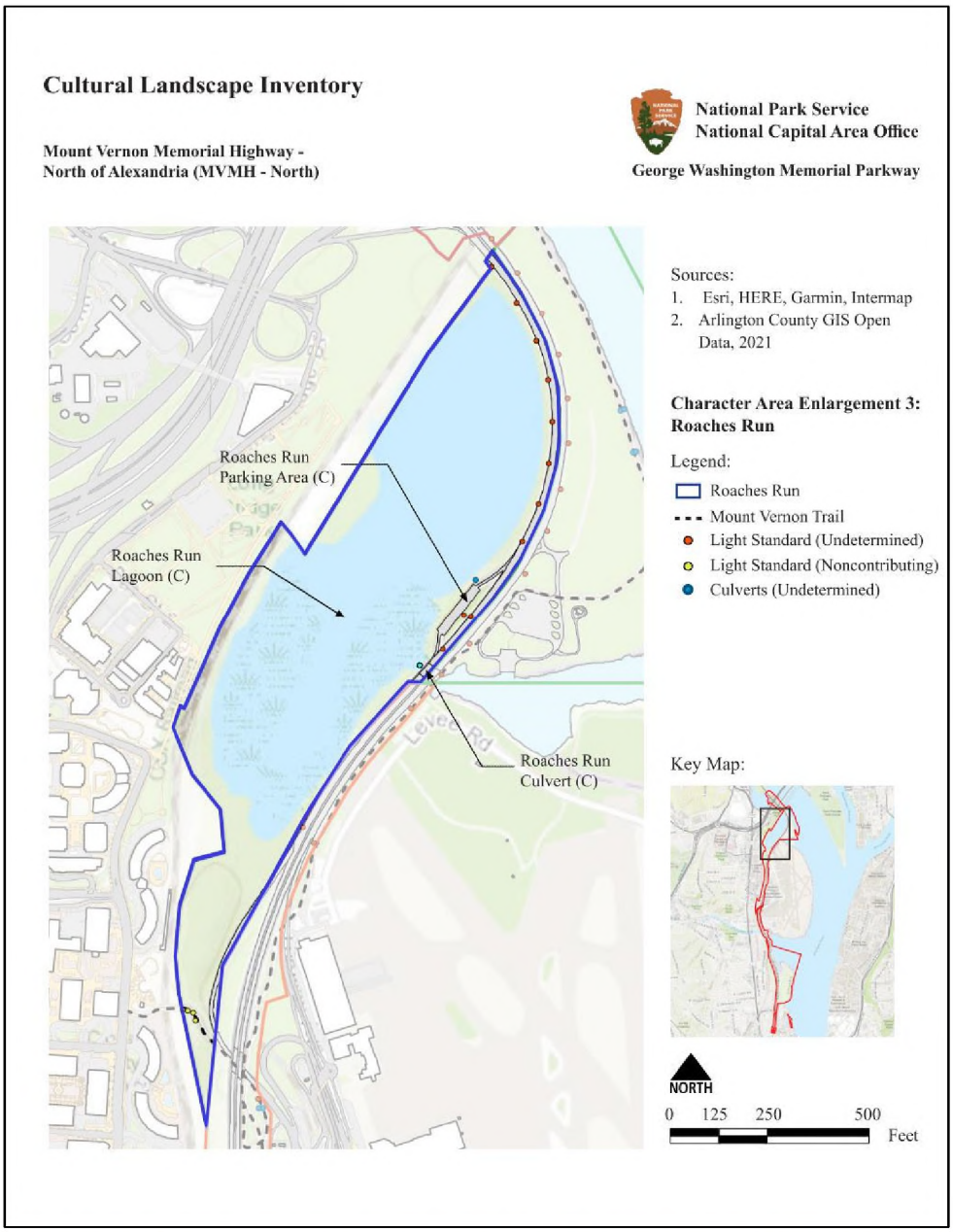


Figure 4. MVMH-North character areas enlargement plan: Roaches Run (SmithGroup, RHI, and Gray & Pape 2022).

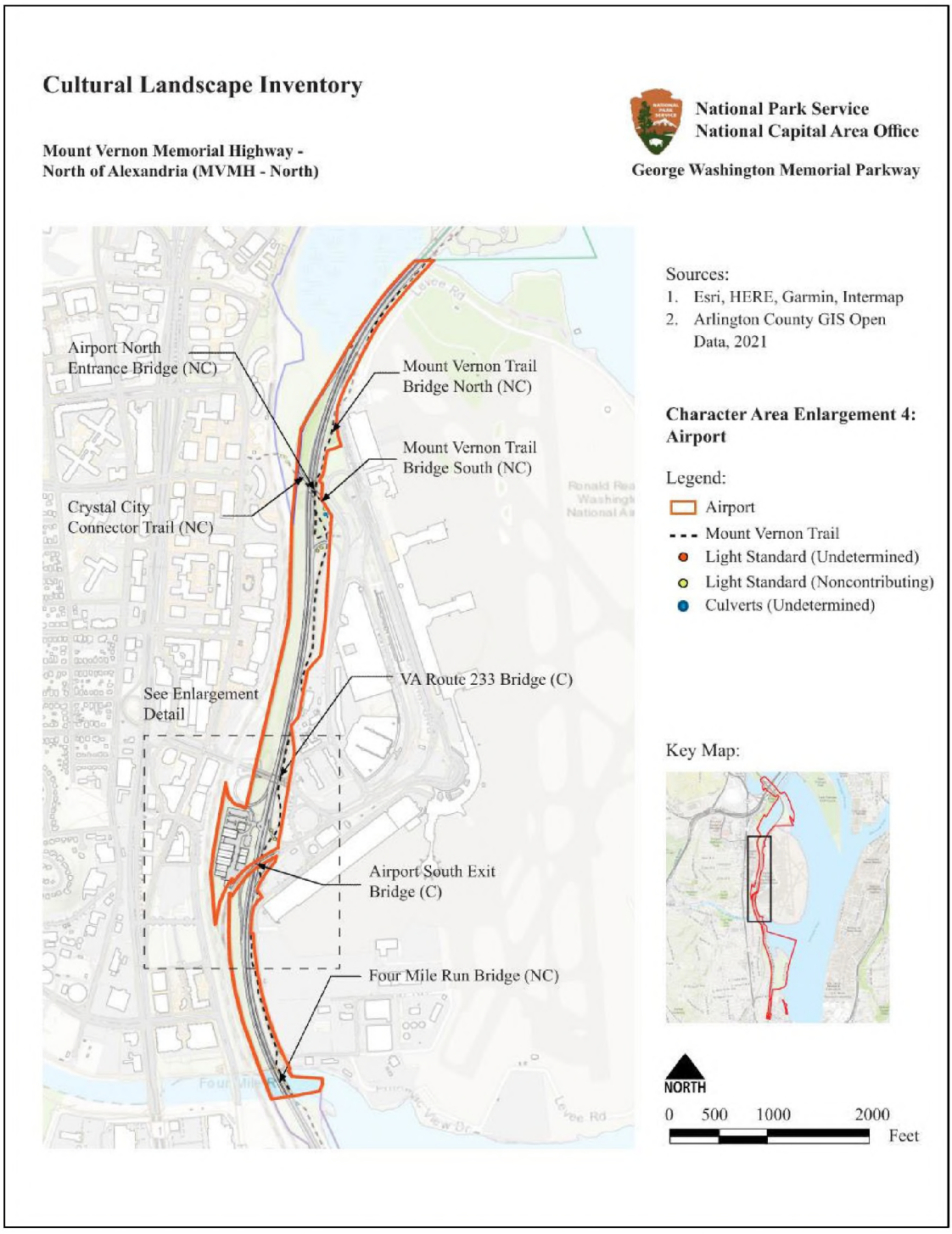


Figure 5. MVMH-North character areas enlargement plan: Airport (SmithGroup, RHI, and Gray & Pape 2022).

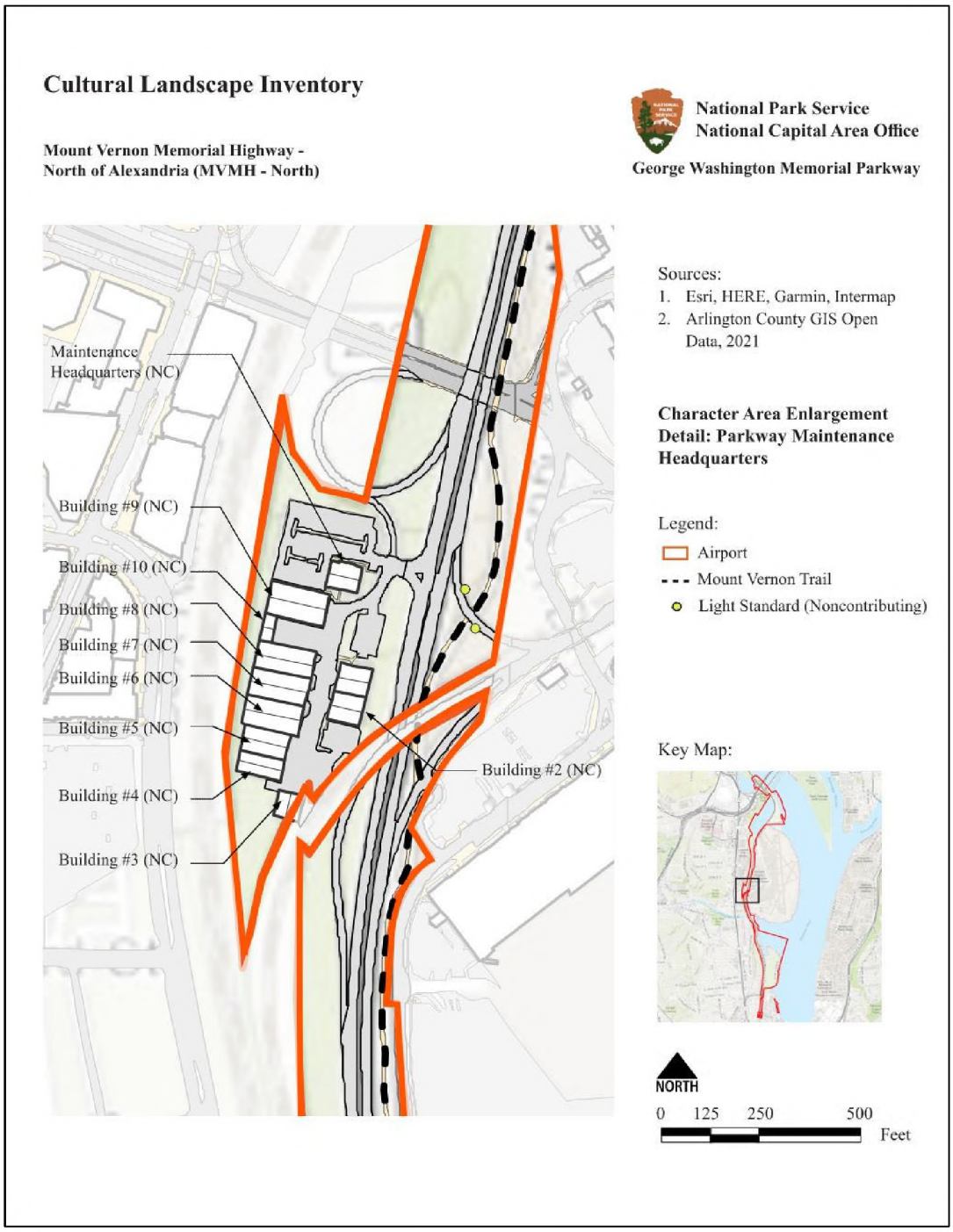


Figure 6. MVMH-North character areas enlargement plan: Parkway Maintenance Headquarters (SmithGroup, RHI, and Gray & Pape 2022).

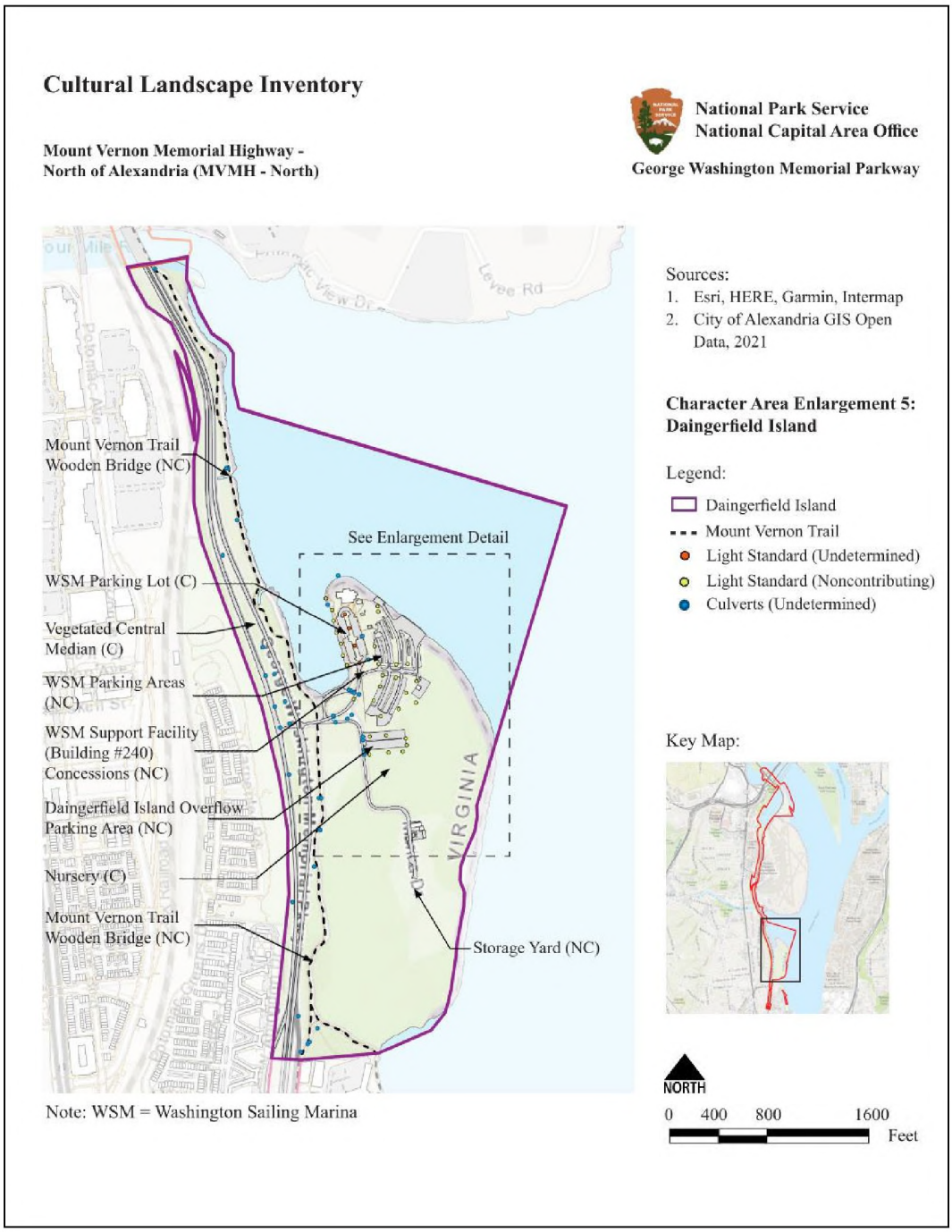


Figure 7. MVMH-North character areas enlargement plan: Daingerfield Island (SmithGroup, RHI, and Gray & Pape 2022).

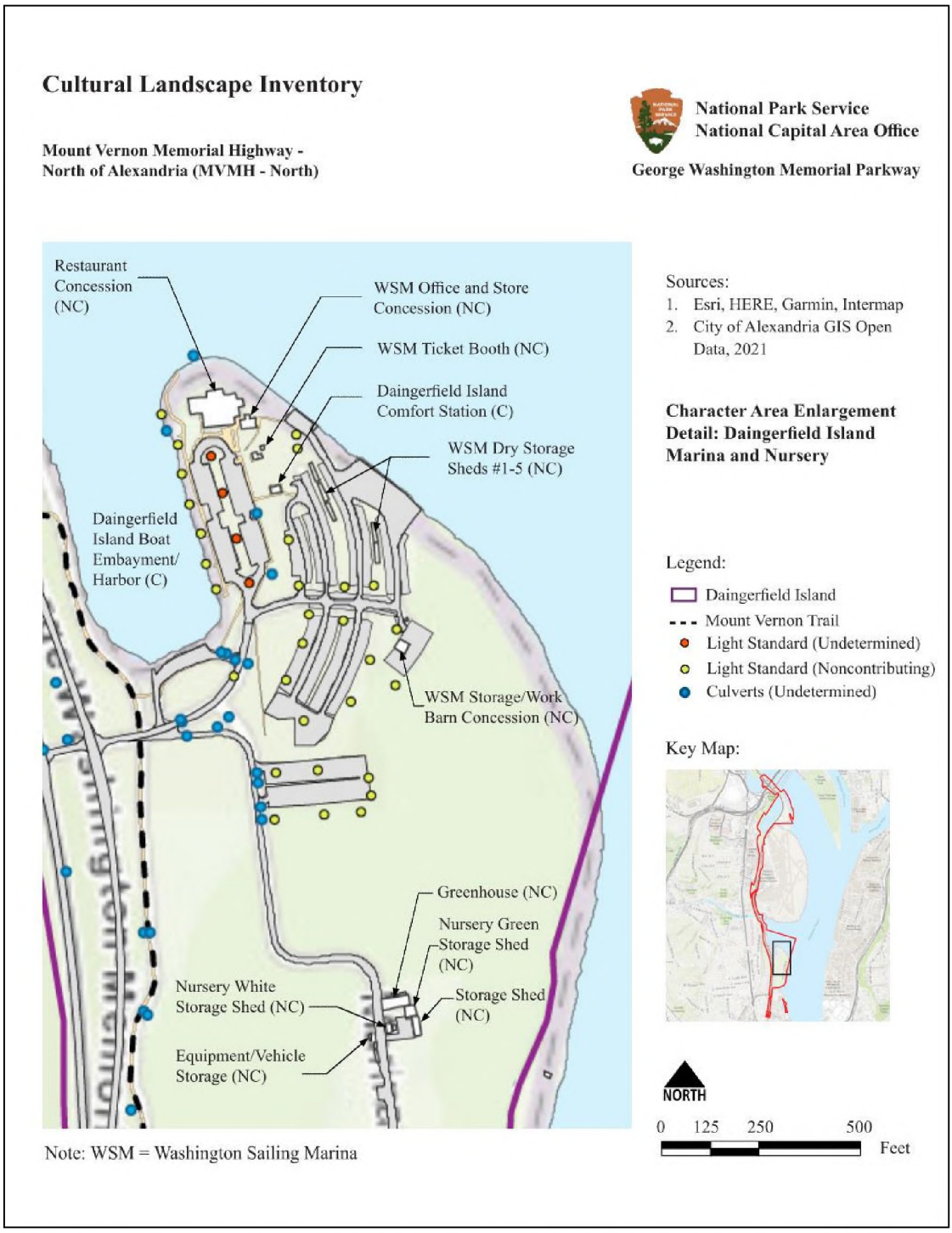


Figure 8. MVMH-North character areas enlargement plan: Daingerfield Island Marina and Nursery (SmithGroup, RHI, and Gray & Pape 2022).

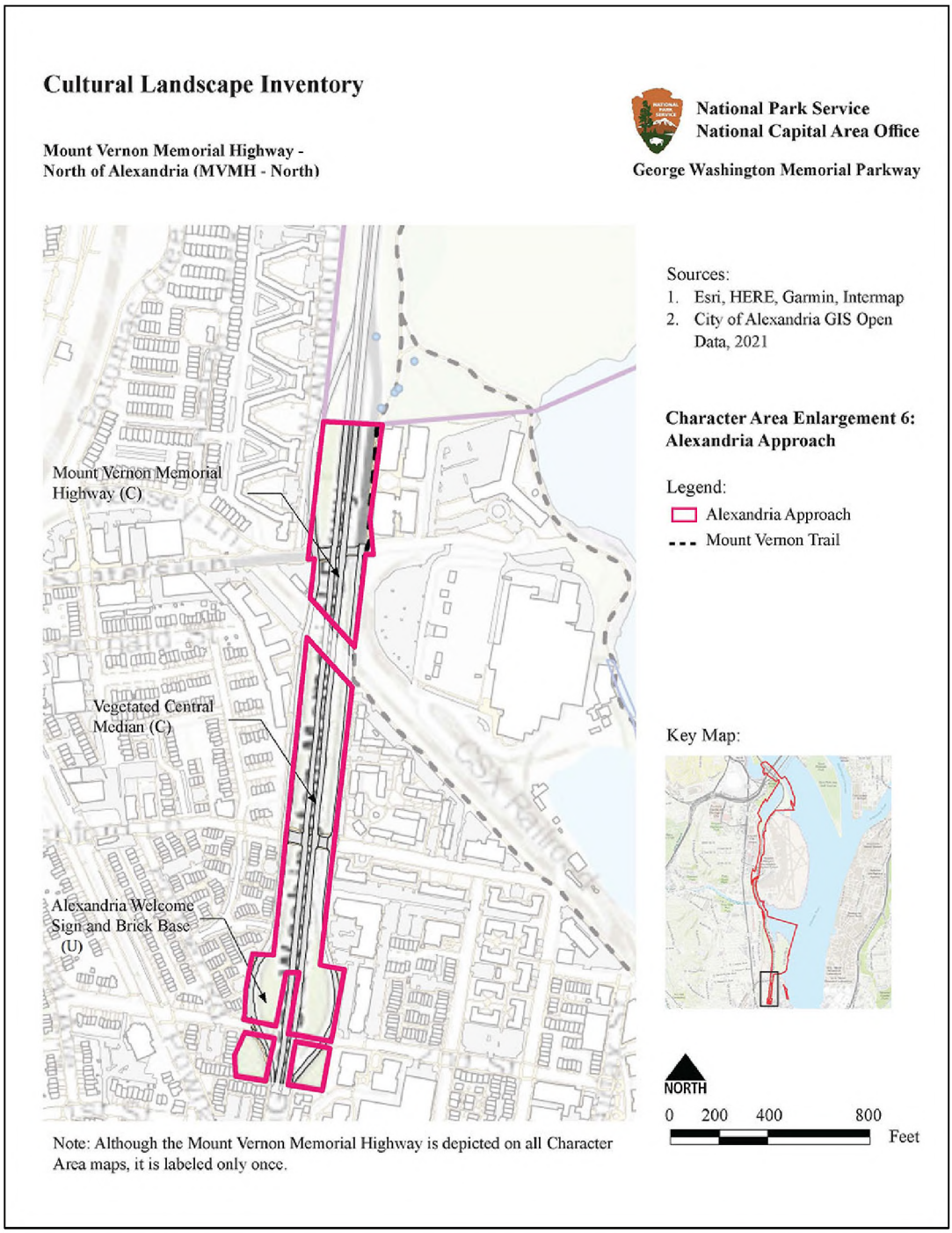


Figure 9. MVMH-North character areas enlargement plan: Alexandria Approach (SmithGroup, RHI, and Gray & Pape 2022).



Figure 10. MVMH-North character areas enlargement plan: Alexandria Waterfront (SmithGroup, RHI, and Gray & Pape 2022).

Site Plan

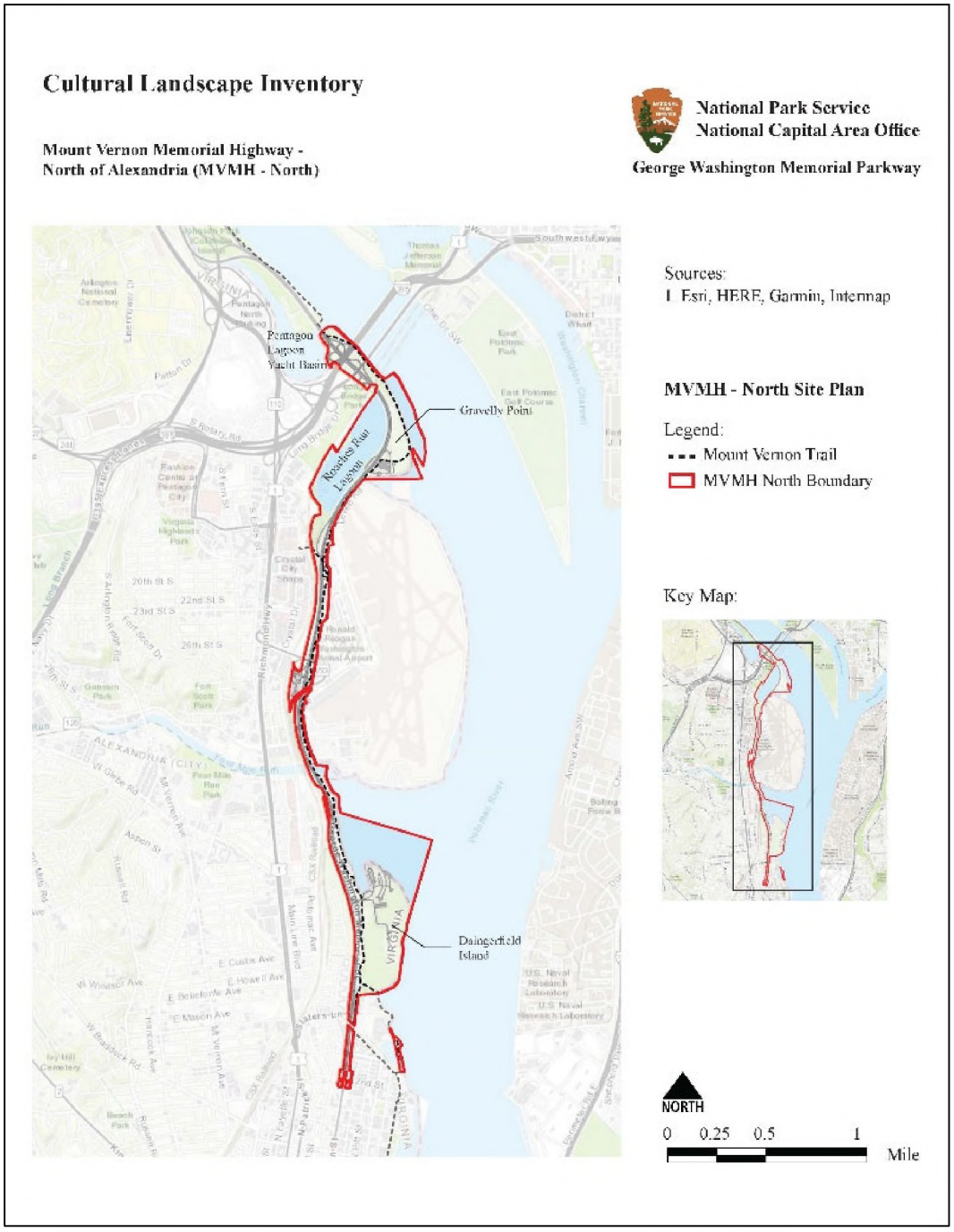


Figure 11. MVMH-North site plan (SmithGroup, RHI, and Gray & Pape 2022).

Other Names

Name	Type
Mount Vernon Memorial Highway	Both Current and Historic
Mount Vernon Memorial Highway-North	Both Current and Historic
Mount Vernon Memorial Boulevard	Historic
Mount Vernon Road	Historic
MVMH	Both Current and Historic
MVMH-North	Both Current and Historic
George Washington Memorial Parkway	Both Current and Historic

Concurrence Information

Park Superintendent Concurrence

Yes

Park Superintendent Concurrence Date

08/23/2022

United States Department of the Interior

NATIONAL PARK SERVICE
National Capital Region
1100 Ohio Drive, S.W.
Washington, D.C. 20242

IN REPLY REFER TO:
J.B. (NCR-RESS)

August 8, 2022

Memorandum:

To: Cultural Landscapes Inventory Coordinator, National Capital Region

From: Superintendent, George Washington Memorial

Subject: Statement of Concurrence, Mount Vernon Memorial Highway North

I, Charles Cuvelier, Superintendent of George Washington Memorial Parkway, concur with the findings of the Mount Vernon Memorial Highway North Cultural Landscapes Inventory, including the following specific components:

PERIOD OF SIGNIFICANCE:	The Mount Vernon Memorial Highway North cultural landscape retains integrity to the following period of significance: 1929-1972.
INTEGRITY:	The landscape displays the seven aspects of integrity (location, setting, design, materials, workmanship, feeling, and association) as defined by the National Register of Historic Places.
MANAGEMENT CATEGORY:	Must be Preserved and Maintained
CONDITION ASSESSMENT:	Fair

The Cultural Landscapes Inventory for the Mount Vernon Memorial Highway North is hereby approved and accepted.

Superintendent, George Washington Memorial Parkway — Date: 8/23/2022

INTERIOR REGION 1 • NORTH ATLANTIC-APPALACHIAN
CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, VERMONT, VIRGINIA, WEST VIRGINIA

SHPO Concurrence

Yes

SHPO Concurrence Date

9/20/2022

Statement of Concurrence
Mount Vernon Memorial Highway North Cultural Landscapes Inventory

The preparation of this Cultural Landscapes Inventory for the Mount Vernon Memorial Highway North is part of the National Park Service's efforts to update cultural resource inventories, as required by Section 110 (a) (1) of the National Historic Preservation Act.

- The VA State Historic Preservation Office (VA SHPO) concurs with the findings of the Mount Vernon Memorial Highway North Cultural Landscapes Inventory. The VA SHPO further concurs that the cultural landscape resources of the Mount Vernon Memorial Highway North, as enumerated, retain integrity to the site's periods of significance (1929-1972) and contribute to its historic character.



Julie Langan
Virginia State Historic Preservation Officer

9/20/2022
Date

Please email signed PDF copy to Cortney Gjesfjeld, National Capital Region Cultural Landscapes Inventory Coordinator at cortney_c_gjesfjeld@nps.gov.

Completion Status Explanatory Narrative

This CLI for the MVMH-North cultural landscape was written by Matthew Traucht of Rhodeside & Harwell, Inc. and by Katie Watts, Kerry González, Carrie Albee, and Christopher Polglase of Gray & Pape, Inc. Editorial contributions were provided by James Shepherd and Merrill St. Leger Demian of the SmithGroup and by Mary Zimmerman of Rhodeside & Harwell, Inc. The graphics for this Cultural Landscape Inventory were prepared by Yuran Shen of the SmithGroup. The overall study was directed by Mr. Shepherd and Susan Pommerer of the SmithGroup. The fieldwork was conducted by Mr. Traucht, Alexander Bailor, and Josh Penn of Rhodeside & Harwell, Inc. and by Seth VanDam of Gray & Pape, Inc. Research and fieldwork for this Cultural Landscape Inventory started in 2021 and extended through the COVID-19 Pandemic. Due to restrictions in travel (both in the field and to local repositories) and the closure of federal research repositories, the research was limited to site visits and to digital resources available online or provided by the National Park Service. Consequently, this Cultural Landscape Inventory reflects what could be deduced from records available to the research team under conditions through March 2022.

Access to National Park Service documents, guidance, and editorial comments were provided by: Cortney Cain Gjesfjeld, Cultural Landscapes Inventory Coordinator, National Capital Region, National Park Service; Matthew Virta, Cultural Resources Program Manager/Archeologist, George Washington Memorial Parkway, National Park Service; Suzanne Bouchard, Cultural Landscape Preservation Program/Horticulturist, George Washington Memorial Parkway, National Park Service; Megan Bailey, Cultural Resources Specialist, George Washington Memorial Parkway, National Park Service; Maureen Joseph, Chief of Resource Management, George Washington Memorial Parkway, National Park Service; and Julie McGilvray, Preservation Services Program Manager and Regional Historical Landscape Architect, National Capital Region, National Park Service.

Geographic Information

Area (Acres)

813

Land Tract Number(s)

107-002; 107-003; 107-004; 107-005; 107-006; 107-006E; 107-007; 107-008; 107-009; 108-001; 108-002; 108-003; 108-004; 108-005; 108-006; 108-007; 108-014; 108-014B; 108-014D; 108-014F; 108-019; 108-021; 108-023A; 108-026; 109-007; 109-008; 109-009; 109-012; 109-013; 109-014; 109-018; 109-019; 109-020; 109-022; 109-025; 109-028; 110-001.

Boundary Description

The boundaries of the 813-acre MVMH-North cultural landscape comprise National Park Service (NPS) lands that consist of the approximately seven-mile-long roadway and adjoining land that was designed as part of the parkway, as well as associated natural features such as the shoreline of the Potomac River and its tributaries, and the naturally undulating topography of the region (Figure 12). At its southern end, the MVMH-North begins in the City of Alexandria at First Street where East and West Abingdon Drives intersect North Washington Street / MVMH. The northern terminus of the MVMH-North CLI boundary is the southern bank of the Boundary Channel just south of Lady Bird Johnson Park. Although the MVMH extended as far as the Arlington Memorial Bridge (Memorial Bridge) when it was originally constructed, the area between the Boundary Channel and the Memorial Bridge has not been included in this Cultural Landscape Inventory as it falls within the boundaries of the Lady Bird Johnson CLI, as does the Boundary Channel itself. The western boundary coincides with the property boundary between NPS and adjacent landowners. The eastern boundary is identified as the shoreline of the Potomac River except for the section associated with Washington National Airport, where the eastern boundary is the property line between NPS and airport properties. A small, non-contiguous parcel of the MVMH-North cultural landscape lies between the Potomac River shoreline and the decommissioned Potomac River Generating Plant.

Latitude/Longitude

MVMH-North Mainline from Alexandria to Boundary Channel

Geometry	Latitude	Longitude	GeoDatum	Elevation (Meters)		Position Source	Position Accuracy
Point 1 *Most Southerly*	38.81579276	-77.04408537	1983 NAD			GIS	1 m
Point 2	38.81712847	-77.04378316	1983 NAD			GIS	1 m
Point 3	38.81717708	-77.04412147	1983 NAD			GIS	1 m
Point 4	38.82310769	-77.04324444	1983 NAD			GIS	1 m
Point 5	38.82324902	-77.04108639	1983 NAD			GIS	1 m
Point 6	38.82412748	-77.03922612	1983 NAD			GIS	1 m
Point 7 *Most Easterly*	38.83525391	-77.03583620	1983 NAD			GIS	1 m
Point 8	38.83738003	-77.04500608	1983 NAD			GIS	1 m
Point 9	38.84132153	-77.04749501	1983 NAD			GIS	1 m
Point 10	38.84624319	-77.04864856	1983 NAD			GIS	1 m
Point 11	38.85650151	-77.04611298	1983 NAD			GIS	1 m
Point 12	38.86353581	-77.04271607	1983 NAD			GIS	1 m
Point 13	38.86359319	-77.03682437	1983 NAD			GIS	1 m
Point 14	38.86666505	-77.03656785	1983 NAD			GIS	1 m

Point 15	38.87187519	-77.03976545	1983 NAD			GIS	1 m
Point 16	38.87139300	-77.04064258	1983 NAD			GIS	1 m
Point 17 *Most Northerly*	38.87552792	-77.04602928	1983 NAD			GIS	1 m
Point 18	38.87490622	-77.04712856	1983 NAD			GIS	1 m
Point 19	38.87229774	-77.04604281	1983 NAD			GIS	1 m
Point 20	38.87055717	-77.04237667	1983 NAD			GIS	1 m
Point 21	38.87079353	-77.04137235	1983 NAD			GIS	1 m
Point 22	38.86623335	-77.04589387	1983 NAD			GIS	1 m
Point 23	38.86284708	-77.04817719	1983 NAD			GIS	1 m
Point 24	38.86078950	-77.04708739	1983 NAD			GIS	1 m
Point 25	38.85891272	-77.04810764	1983 NAD			GIS	1 m
Point 26	38.85626788	-77.04746178	1983 NAD			GIS	1 m
Point 27	38.84848109	-77.04906633	1983 NAD			GIS	1 m
Point 28	38.84919729	-77.04976748	1983 NAD			GIS	1 m
Point 29 *Most Westerly*	38.84527282	-77.05012966	1983 NAD			GIS	1 m
Point 30	38.84600205	-77.04963288	1983 NAD			GIS	1 m
Point 31	38.84232740	-77.04903924	1983 NAD			GIS	1 m
Point 32	38.83962030	-77.04758014	1983 NAD			GIS	1 m
Point 33	38.83624851	-77.04626483	1983 NAD			GIS	1 m
Point 34	38.83446961	-77.04604841	1983 NAD			GIS	1 m
Point 35	38.82809582	-77.04365008	1983 NAD			GIS	1 m
Point 36	38.82162531	-77.04429254	1983 NAD			GIS	1 m

Point 37	38.81729150	-77.04477363	1983 NAD			GIS	1 m
Point 38	38.81729838	-77.04506473	1983 NAD			GIS	1 m
Point 39	38.81595641	-77.04530634	1983 NAD			GIS	1 m

MVMH-North Alexandria Waterfront Section

Geometry	Latitude	Longitude	GeoDatum	Elevation (Meters)	Position Source	Position Accuracy
Point 1 *Most Westerly*	38.81710516	-77.03903480	1983 NAD		GIS	1 m
Point 2	38.81983947	-77.03972900	1983 NAD		GIS	1 m
Point 3 *Most Northerly*	38.82052286	-77.04009210	1983 NAD		GIS	1 m
Point 4	38.82050991	-77.03999995	1983 NAD		GIS	1 m
Point 5	38.81987657	-77.03965947	1983 NAD		GIS	1 m
Point 6 Most Easterly	38.81931253	-77.03886771	1983 NAD		GIS	1 m
Point 7	38.81888577	-77.03911174	1983 NAD		GIS	1 m
Point 8 *Most Southerly*	38.81708528	-77.03857274	1983 NAD		GIS	1 m

Regional Landscape Contexts and Narratives

Physiographic

The MVMH-North cultural landscape falls entirely within the Coastal Plain, or Tidewater, physiographic province, situated just east of the fall line, which is a transitional zone that separates the Coastal Plain from the Piedmont province. The Piedmont is characterized by rolling hills graduating, further west, into the Blue Ridge Mountains. Bedrock near the fall line is composed of schist, gneiss, and other metamorphic rocks. The Coastal Plain comprises younger formations of sedimentary rock. The United States Geological Survey (USGS) has classified the Virginia side of the Potomac River as recent alluvium. Alluvium is defined by the USGS as unconsolidated material such as clay, silt, sand, and gravel deposited, during recent geologic time, by a stream or other moving body of water. Within the Coastal Plain, these unconsolidated materials are located atop a crystalline rock containing small quantities of lignite and gravel (USGS n.d.).

MVMH-North falls within the Humid Subtropical, "Cfa," climate zone, characterized as a warm temperate climate with humid conditions and having hot summers. Rain falls throughout the year, with a yearly average of 115 days with annual precipitation amounting to 43.28 inches. Annual high temperatures are 65 degrees Fahrenheit and annual lows are 47 degrees Fahrenheit (National Weather Service National Oceanic and Atmospheric Administration 2021).

Cultural

The MVMH-North CLI project area is in the Commonwealth of Virginia, in a suburban portion of Arlington County on the outskirts of the City of Alexandria. A small portion of the MVMH-North CLI project area is also within the City of Alexandria, at First Street where East and West Abingdon Drives intersect the highway. The proximity to the Potomac River and to Washington, DC, has greatly influenced how this area has developed. There is evidence of continual human occupation since 11,000 BCE. Native Americans took advantage of the navigability of the Potomac River, with the area that would become Arlington located downriver from the fall line. The Powhatan, Doeg, and Manahoac peoples, among other Native American groups, hunted, gathered, and fished in the area. European colonists arrived in the seventeenth century. For much

of the eighteenth-century Arlington remained agricultural. Pierre L'Enfant created a plan in 1791 for the nation's capital city, ten-square-miles of land, and Benjamin Banneker created a survey depicting this plan which included Arlington (Jones 2021, 20). It was not until 1846 that the land on the west side of the Potomac was returned to the Commonwealth of Virginia (Arlington County Government 2006, 6).

Arlington remained predominantly rural until the late-nineteenth century when technological advances, population growth, and the expansion of the Federal government prompted developers to purchase land in Arlington for the creation of suburbs (Arlington County Government 2006, 6). African Americans were also present in Arlington from its establishment, with many enslaved and then later freed. A Freedmen's Village was located near what is now the southern part of Arlington National Cemetery. When it closed in the late nineteenth century, African Americans migrated to other neighborhoods like Nauck, Hall's Hill, Queen City, Arlington View, and Green Valley. Segregation ensured these areas remained predominately African American until the mid-twentieth century (Arlington County Government 2006, 9).

Jackson City was a neighborhood in Arlington just south of the Long Bridge that had a number of African American residents. It was also known as a destination where people went for gambling, which sometimes resulted in lawlessness, violence, and other criminality in the late nineteenth and early twentieth century. Jackson City was established in the 1830s by a group of investors from New York who thought a city located near the capital would spur a cultural and industrial revolution in the District of Columbia with its location near the newly constructed Long Bridge across the Potomac. During the Civil War, Fort Jackson was established at the Virginia end of the Long Bridge and named after Jackson City. It was built in the days following the Union Army's occupation of northern Virginia in May 1861. The fort was initially armed with four cannons to protect the bridge, but they were removed after the completion of a line of defenses to the south. After 1862 the fort was a wooden palisade (fence) backed by earthworks. Two cannons were returned to the fort in 1864 after the Battle of Fort Stevens. After the war, the fort was abandoned, and the earthworks flattened.

Jackson City's popularity rose exponentially in the 1870s and 1880s when Congress began restricting gambling in the District of Columbia. Mostly built of impermanent architecture, at its height Jackson City had evolved from a wagoner's tavern, a few rum mills, and several gambling shops to a full-fledged "shantytown." Jackson City even had telegraph wires linking them to racetracks all over the country to quickly spread the news of the winners. In 1904, a group of armed citizens led by Alexandria County Attorney General Crandal Mackey boarded a train from Washington, DC and arrived in Arlington to lead the first of many raids on Jackson City and nearby Rosslyn. With support from the anti-corruption "Progressives" and the growing Temperance Movement, the continued raids on Jackson City ensured its demise, along with the other casino towns along the Potomac, like Rosslyn (Cleary 2017).

In the late-nineteenth and early-twentieth century Arlington began expanding, as was the case with many other early suburbs in America, with streetcar and railroad developments first, and then neighborhoods further out from Washington, DC, spurred by the popularity of the automobile (Arlington County Government 2006, 7). Unlike other suburbs, however, Arlington did not see a decline in growth during the Great Depression, as the New Deal programs brought an influx of mid-level government employees to the area and fueled the need for affordable housing. Arlington experienced continued growth during the post-World War II era as well (Arlington County Government 2006, 8). During the MVMH-North period of significance, 1929–1972, Arlington saw continued growth, including various immigrant groups that brought diversity to the area and have made significant contributions to society (Arlington County Government 2006, 14).

Political

The MVMH-North cultural landscape is owned by the Federal government under the jurisdiction of the National Park Service. The Washington National Airport, which occupies a peninsula to the east of the central segment of the MVMH-North inventory unit, is owned by the US Department of Transportation and leased by the Metropolitan Washington Airports Authority. The segment that lies between the Boundary Channel and Four Mile Run falls within Arlington County while the segment south of Four Mile Run is in the City of Alexandria. The Arlington

County segment is zoned, according to the Arlington County Zoning Ordinance (ACZO), as S-3A Special District, which encompasses "publicly or privately owned properties which have distinct and unique site advantages or other features so as to make them desirable to retain as active or passive recreation or for a scenic vista" (ACZO 2022, 4–5). Along the western edge of Roaches Run, the rail corridor is zoned as a Light Industrial District. The section of the MVMH-North that lies between Four Mile Run and the south extent of Daingerfield Island is zoned by the City of Alexandria as the WPR/Waterfront park and recreation zone, intended to "enhance the vitality of the Alexandria waterfront by providing for parks, open spaces and recreational opportunities linked by a continuous pedestrian promenade" (Article VI. Special and Overlay Zones Sec. 6-200). The southern section of the MVMH-North cultural landscape is zoned as a POS/Public open space and community recreation zone meant to "preserve and enhance Alexandria's publicly owned open space and recreational areas and to protect the natural and developed amenities they possess by allowing only that development which respects and is consistent with those amenities" (Article VI. Special and Overlay Zones Sec. 6–100).

Location Map Graphic Information

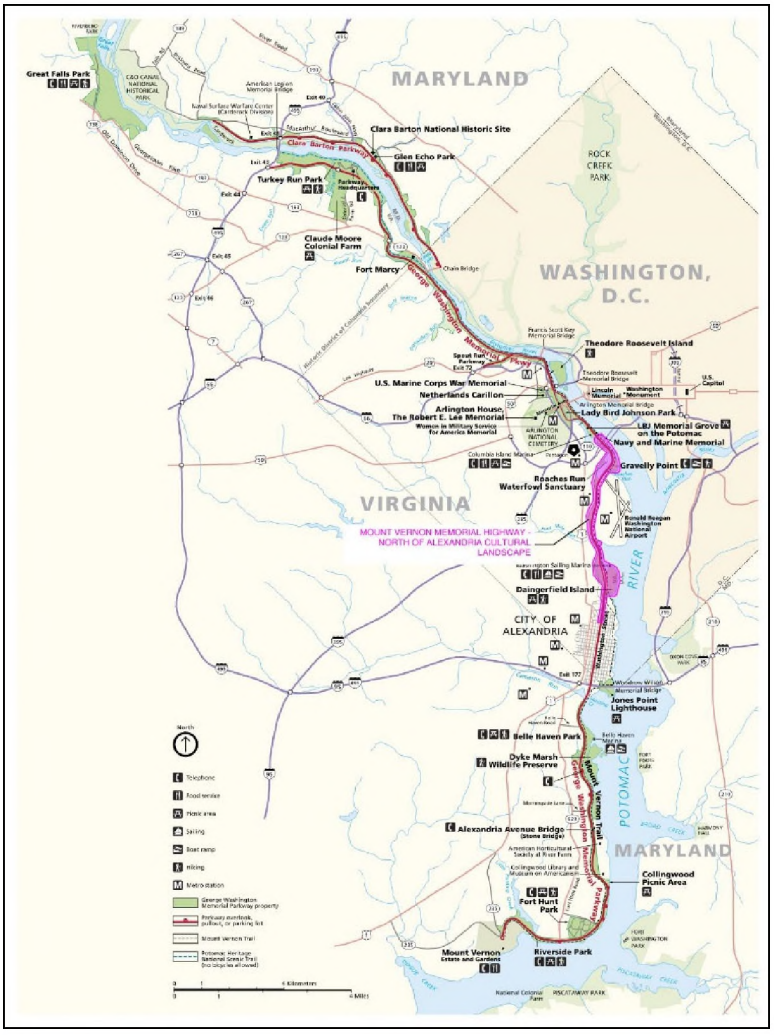


Figure 12. MVMH-North Location Map. Based on George Washington Memorial Parkway map, 1998, National Park Service, with annotation and MVMH-North boundary added (SmithGroup, RHI, and Gray & Pape 2022).

State and County

State

Virginia

County

Arlington County

Alexandria City

Management Information

Management Category

Must be Preserved and Maintained

Management Category Date

8/23/2022

Management Category Explanatory Narrative

The MVMH-North cultural landscape inventory unit is identified as significant for its commemoration of George Washington and for the conservation and enhancement of the Potomac River's natural landscape. The MVMH-North cultural landscape is a component landscape of the Mount Vernon Memorial Highway, which was completed in 1932 and extended from Mount Vernon to the Arlington Memorial Bridge. The Mount Vernon Memorial Highway is the southern portion of the George Washington Memorial Parkway (GWMP), which was authorized by an Act of Congress on May 29, 1930 (46 Strat. 482) and known as the Capper-Cramton Act. The Act is formally entitled "An Act providing for the comprehensive development of the park and playground system of the National Capital." Therefore, the preservation of the MVMH-North cultural landscape is specifically legislated. The GWMP is a 7,600-acre park that preserves and protects the historic sites and native habitat of the Potomac River and interprets some 25 sites associated with George Washington. The mission of the George Washington Memorial Parkway is to develop, manage, and preserve the park, the parkway, and the playground system of the National Capital area; to protect and preserve the variety of cultural, natural, recreational, and scenic resources throughout the park; and to promote learning opportunities and enable visitation of the park's resources (National Park Service 2005). According to the George Washington Memorial Parkway Priorities & Actions Handbook 2019–2021 (NPS 2019), the "mission of the George Washington Memorial Parkway 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" (NPS 2019).

Management Agreements

Management Agreement	Other Management Agreement	Management Agreement Expiration Date	Management Agreement Explanatory Narrative
Concession Contract/Permit		2022	Guest Services holds a concession contract with the NPS for the Daingerfield Island Marina, which was initiated in 1986.

Legal Interests

Legal Interest Type	Fee Simple Reservation Expiration Date	Other Organization/Agency	Legal Interest Narrative
Fee Simple			The majority of land within MVMH-North is Federal land, owned in fee simple.
Less Than Fee Simple			There are two segments of roadway that are less than fee simple within MVMH-North. There is a railroad right of way south of Slater's Lane in Alexandria (Tract 108–007) and there is another railroad right of way near the airport, roughly at S. Smith Boulevard (Tract 108–026) that is also less than fee simple.

Adjacent Lands Information

Yes – Adjacent lands do contribute

Narrative

Adjacent lands are lands located outside of the boundaries of the park.

Adjacent lands to the MVMH-North cultural landscape boundary contribute to the significance of this cultural landscape. The Potomac River on the east side of the historic district and the rail corridor on the west side have both influenced the layout and design of the highway, serving as

boundaries to the cultural landscape, even as the former has been modified over time and the latter has been screened for much of the landscape's history. The following sites are also contributing adjacent lands: Washington National Airport; the Greens Scenic Area Easement; and North Washington Street at the north end of Old Town Alexandria.

The 850-acre Washington National Airport lies approximately midway between Alexandria and the northern terminus of the MVMH-North boundary. Constructed primarily on fill dredged from the Potomac River, the airport opened in 1941, only a few years after substantial completion of the parkway. The construction of the airport resulted in the relocation and realignment of the adjacent segment of the MVMH-North, obliterating Capital Overlook, a pull-off located on the east side of the roadway, and forced the relocation of the District of Columbia Colonial Dames monument, which had been erected at the overlook. In 1941, the Airport North Entrance Bridge (North Airport Entry Underpass) was built as part of the realignment of the highway. In 1965, the National Airport South Exit Bridge (South Airport Exit Underpass) and the VA Route 233 Bridge were constructed. In 1997, an eighteen-acre portion of the airport (Washington National Airport Terminal and South Hangar Line) was listed in the National Register of Historic Places with a period of significance of 1941 to 1956. Within the Washington National Airport property, the ruins of Abingdon (Alexander-Custis Plantation) are present. Established in 1695 by the Alexander family for whom Alexandria is named, the property included a house, servants' quarters large enough for more than fifty enslaved persons, terraced lawns, orchards, and graveled walks that led to the river. In 1778, the parcel was purchased by John Parke Custis, stepson of George Washington. Although the Abingdon property was considered a major historic feature along the MVMH, it was never acquired by the Bureau of Public Roads when the MVMH was designed or constructed, even though the design of the highway would eventually provide access to it. The mansion burned in 1930 and the Washington Branch of the Association for the Preservation of Virginia Antiquities stabilized the ruins and installed a commemorative marker there in 1933. In 1935, workers from the Civilian Conservation Corps (CCC) improved an access road to the ruins, constructed a parking lot for twenty cars, built a reproduction well cover, and did some general landscape work at the site. The property then was conveyed to the Federal Aviation Administration and Washington National Airport was built around the ruins, which

preserved about one acre of the site. In the 1990s, the Airports Authority issued a preservation plan, which resulted in archeological investigations and restoration efforts, the latter led by Greenhorne & O'Mara and completed in 1998. Today, the reconstructed house foundation and historical markers can be seen on a knoll between the airport parking garages. Although Abingdon was never part of the MVMH, its promoters and designers recognized its commemorative significance and built the Capital Overlook nearby, enabling visitors to view the ruins.

The Greens Scenic Area, established in 2000, is an easement held by the National Park Service on land owned by the City of Alexandria but falls outside of the CLI boundary and the boundary of the Mount Vernon Memorial Highway National Register nomination. When established, the easement consisted of 20.54 acres of open, undeveloped land. However, in 2015 as part of the Potomac Yard Metrorail Station project, a portion of the Easement was released to the City of Alexandria in exchange for mitigation efforts elsewhere. The easement is an approximately 15.25-acre parcel to the west of the MVMH-North extending adjacent from the central to the northern part of Daingerfield Island. The area, comprising freshwater wetlands and woodlots, functions as a public park managed by the City of Alexandria. In 2015, the Keeper of the National Register of Historic Places issued a Determination of Eligibility for the Greens Scenic Area, stating that it is eligible for listing in the NRHP (AECOM 2015).

The southern terminus of the MVMH-North cultural landscape is in the City of Alexandria at the intersection of First Street and North Washington Street, the latter being a continuation of the MVMH roadway. The north-south alignment of Washington Street was laid out in the late eighteenth century. In 1929, the City of Alexandria entered into an agreement with the Federal government to route the MVMH along Washington Street. Development along Washington Street was restricted to “residential and business development of such character and of such type of building as will be in keeping with the dignity, purpose and memorial character” of the MVMH (City of Alexandria Office of Historic Alexandria 2015, 27). The National Capital Parks and Planning Commission (NCPPC) and the National Park Service were both responsible for oversight of this condition, although commercial interests along Washington Street sought to

rezone Washington Street to allow for development. In 1946, the city council passed the Old and Historic Alexandria District preservation ordinance, which mandated the preservation of the district's historic and memorial character. Today, the North Washington Street corridor retains the stylistic characteristics established in the late eighteenth century and the area is an important component of Alexandria's heritage tourism industry.

Uses Information

Functions and Uses

Major Category	Category	Use/Function	Historic Use	Current Use	Primary Use
Commerce/Trade	Business	Concession	Yes	Yes	No
Commerce/Trade	Restaurant		Yes	Yes	No
Government	Government Office	Maintenance Facility	Yes	Yes	No
Government	Government Office	Comfort Station	Yes	Yes	No
Recreation/Culture	Outdoor Recreation	Sports/Athletic Field	Yes	Yes	No
Recreation/Culture	Outdoor Recreation	Picnic Area	Yes	Yes	No
Agriculture/Subsistence	Horticulture Facility		Yes	Yes	No
Agriculture/Subsistence	Wood lot/Forest (Managed)		Yes	Yes	No
Industrial/Processing/Extract	Telecommunications Facility		Yes	No	No
General Storage	Equipment/Vehicle Storage		Yes	Yes	No
General Storage	Storage Yard (Open Area Used)		Yes	Yes	No
Landscape	Leisure – Passive (Park)		Yes	Yes	No

Landscape	Functional Landscape	Vehicular Circulation	Yes	Yes	Yes
Landscape	Functional Landscape	Pedestrian Circulation	Yes	Yes	No
Landscape	Natural Area	Wetland	Yes	Yes	No
Landscape	Natural Area	Forest	Yes	Yes	No
Landscape	Scenic Landscape	Vista	Yes	Yes	No
Landscape	Scenic Landscape	View	Yes	Yes	No
Landscape	Parkway (Landscape)		Yes	Yes	Yes
Transportation	Rail-Related	RR Bridge	Yes	Yes	No
Transportation	Water-Related	Marina	Yes	Yes	No
Transportation	Water-Related	Boat Launching Area	Yes	Yes	No
Transportation	Road-Related	Automobile	Yes	Yes	No
Transportation	Road-Related	Parking Area	Yes	Yes	No
Transportation	Road-Related	Road Bridge	Yes	Yes	No
Transportation	Road-Related	Road Culvert	Yes	Yes	No
Transportation	Pedestrian-Related	Horse/Bridle Trail	Yes	No	No
Transportation	Pedestrian-Related	Bicycle Trail	Yes	Yes	No

Public Access

Unrestricted

Public access to the MVMH-North cultural landscape is unrestricted. Access to the highway from the south is via Washington Street in Alexandria, with secondary access points from this location via East Abingdon Drive. From the north, the property may be accessed via interchanges from Interstate 395. MVMH-North is a section within the larger MVMH / GWMP and can therefore be accessed by continuing north from the MVMH – South section or continuing south from the GWMP – North section. Approximately midway along its length, MVMH-North can be accessed from the Washington National Airport via northbound and southbound entrances; traffic from Crystal City and points west may access the MVMH-North property via the airport entrances.

The multiuse Mount Vernon Trail – used for both recreation and commuting – provides pedestrian and bicycle access to the inventory unit. The property may also be accessed by pedestrians disembarking from boats that can be docked at the marinas on Daingerfield Island; the Gravelly Point Boat Ramp does not include a marina by which to dock boats temporarily. The GWMP is open 24 hours per day, 365 days per year. The visitor use areas at Roaches Run, Gravelly Point, and Daingerfield Island are closed to the public during posted nighttime hours. Public access is restricted from the National Park Service Maintenance area on Daingerfield Island and to the George Washington Memorial Parkway Maintenance Facility adjacent to Washington National Airport.

Associated Ethnographic Groups

Yes – Unrestricted Information

Ethnographic Narrative

In 2020, an Ethnographic Resources Study entitled "Subsistence Fishing on the Potomac and Anacostia Rivers" (Fiske et al. 2020) was prepared under a cooperative agreement between the University of Maryland, Department of Anthropology, and the National Park Service, National Capital Region, Cultural Anthropology Program in conjunction with the Chesapeake Watershed

Cooperative Ecosystem Studies Unit. Within MVMH-North, there are numerous creeks and waterways including at Roaches Run, Gravelly Point, and Daingerfield Island, in addition to the Washington Sailing Marina at Daingerfield Island. The Mount Vernon Trail provides pedestrian access to some of the fishing spots as well. Because food insecurity is widespread in the Washington, DC area, the fish that are caught are often shared amongst family, friends, and neighbors and help offset the hunger faced by many. Subsistence fishing not only provides a source of food for the fishermen, fisherwomen, and their family, friends, and extended network, it also continues a tradition that spans many generations and can serve as a family bonding activity (Fiske et al. 2020).

Ethnographic Groups

Ethnographic Group	Type
African American	Both Current and Historic

National Register Information

Documentation Status

Entered – Inadequately documented

Documentation Narrative Description

The Mount Vernon Memorial Highway (approximately 15-mile span from Arlington Memorial Bridge to Mount Vernon) was entered in the National Register of Historic Places (NRHP) in 1981 (NRIS 81000079) with the following areas of significance: Engineering, Landscape Architecture, Sculpture, Transportation, and Commemoration, with a period of significance from 1929 to 1932.

The George Washington Memorial Parkway was included in a multiple property NRHP nomination entitled "Parkways of the National Capital Region, 1913–1965" with a period of significance listed as 1930–1965.

In 1995, the George Washington Memorial Parkway (38.3-mile span from Capital Beltway / Interstate 495 to Mount Vernon) was listed in the NRHP (Kuhn et al. 2021) with the following areas of significance: Transportation, Landscape Architecture, and Significant Person (George Washington) with a period of significance from 1930 to 1966.

In 2021, a draft revision of the George Washington Memorial Parkway Historic District National Register of Historic Places (updated to address additional information and a boundary increase) was provided to the CLI project team. This document revises the GWMP period of significance to 1929–1976.

In 1969, the Alexandria Historic District was listed in the National Register of Historic Places, after being determined a National Historic Landmark in 1966 and listed in the Virginia Landmarks Register in 1968. The USGS map that was included in the NRHP nomination showed the boundary of the historic district extending north from the center of town to Second Street, but the written boundary description implies that the boundary encompasses land on 500 feet of each side of the MVMH from First Street to Four Mile Run. Further research is required to determine if

the Mount Vernon Memorial Highway – North of Alexandria cultural landscape falls within the Alexandria Historic District.

Concurrence Eligibility

Status

Eligible – SHPO Consensus Determination

Date

9/20/2022

Narrative

The Virginia State Historic Preservation Officer concurred with the findings of the Mount Vernon Memorial Highway North CLI on September 20, 2022.

National Register Significance Level

National

National Register Significance -- Contributing/Individual

Individual

National Register Classification

District

Statement of Significance

Several NRHP nominations were consulted in preparing this CLI. The Mount Vernon Memorial Highway NRHP nomination from 1981 was written by Barry Mackintosh. The George Washington Memorial Parkway was included in a multiple property NRHP nomination entitled "Parkways of the National Capital Region, 1913–1965" written by Sara Amy Leach and listed in the NRHP in 1995. Also in 1995, the George Washington Memorial Parkway (the 38.3-mile span from Capital Beltway / Interstate 495 to Mount Vernon) was listed in the NRHP; that nomination was written by Jere L. Krakow. In 2021, a draft revision of the George Washington Memorial

Parkway Historic District NRHP nomination was updated by Patti Kuhn, Sarah Grosesbeck, and John Bedell to address additional information and a boundary increase. All of the above nominations aided greatly in the preparation of this CLI and especially in the statement of significance. The MVMH-North, a spatially and functionally distinct area within the National Register-listed GWMP, possesses historical significance on a national, state, and local level under Criterion A in the areas of: Community Planning and Development, Conservation, Transportation, Commemoration, and Entertainment/Recreation; and on a national, state, and local level under Criterion C in the areas of Engineering and Landscape Architecture. The period of significance for the MVMH-North is 1929, the year in which construction of the highway began, to 1972, the completion of Mission 66 improvements and the construction of the Mount Vernon Trail.

The MVMH-North is significant as a scenic parkway dedicated to commemorating the life of George Washington and to the preservation of the natural and historic character of the Potomac River. The scenic nature of the parkway is intact as it parallels the Potomac River from Mount Vernon to Washington, DC. Structures such as bridges along the parkway reflect the natural and rustic character of the parkway and underscore the engineering challenges presented by the changing topography. The parkway's association with the planning of Washington, DC and engineering advances of the early to mid-twentieth century are evident in its continuing function as a transportation route and in its well-preserved historic bridges and other features. Its name also connects the parkway to the commemorative and historical purpose for which it was originally intended, to remember the life and accomplishments of George Washington.

National Register Criterion A – Associated with events that have made a significant contribution to the broad patterns of our history.

Area of Significance: Community Planning and Development

The MVMH-North is significant for its association with the overall planning in the Washington, DC area and represents a significant accomplishment in city and regional park planning. In 1887–1888, planning for a highway linking Washington, DC with Mount Vernon began. The Mount

Vernon Avenue Association was chartered by the Commonwealth of Virginia and several routes were surveyed by the US Army Corps of Engineers from the Aqueduct Bridge (predecessor of the Key Bridge) and George Washington's home and tomb at Mount Vernon. Lieutenant Colonel Peter C. Hains envisioned that the highway would "commemorate the virtues of the grandest character in American history… " (United States Army Corps of Engineers 1899, 42). Plans for the highway slowed in 1892 when the Washington, Alexandria, and Mount Vernon Railroad built an electric railway, which traversed a similar route between Mount Vernon and Washington, DC and thus decreased the functional need for a highway. However, the concept of a commemorative highway from Washington, DC to Mount Vernon was still endorsed in the 1902 McMillan Plan for its recreational value and commemorative associations.

Nineteenth-century city planning was fragmentary and rapid expansion of cities resulting from economic bursts of growth was unsystematic and unplanned. The original plan for the Federal City, designed by Pierre (Peter) Charles L'Enfant in 1791 and the only American example of baroque city planning, envisioned public ceremonial open spaces centered around the functions of government and proposed grand avenues oriented in radial compositions to connect—visually, spatially, and functionally—significant structures and monuments. In 1901, the Senate Park Commission (renamed the McMillan Commission in 1902) was formed to direct the future growth of the District of Columbia. Its members – made up of architects, a landscape architect, and a sculptor, who were all influential in the City Beautiful movement – sought to develop a plan for Washington, DC that restored and expanded upon L'Enfant's vision for a city as a work of civic art. The McMillan Report was among the first implementations in the US of the City Beautiful movement, which prioritized Beaux-Arts and neoclassical design to manifest hierarchy, order, and monumentality in urban planning. The McMillan Report was praised as the first comprehensive plan for modern city development and became the basis for comprehensive city planning nationwide. Within the plan, parkways were viewed as essential components to provide a proper approach way to the city. The principal landscape architect of the McMillan Plan was Frederick Law Olmsted, Jr., who advocated for the extensive use of parks and connections between parks including a road network to extend parks to the perimeters of the regional city, in particular Mount Vernon.

The McMillan Commission report also included recommendations for the "Mount Vernon Road," even though it was outside of Washington, DC. The Commission viewed the "Mount Vernon Road" as an important part of its plan for its "priceless recreative value" and its "sentimental value" in linking the capital to Mount Vernon and drew upon previous plans for a Mount Vernon Avenue, first proposed as a grand avenue from Mount Vernon to Washington, DC in the 1880s. The McMillan Commission was aware of and reviewed a USACE survey of potential routes, recommending the inland route as potentially "the most refreshing and delightful drive to be had in any direction from Washington, and not to be equaled at any great capital in the world." The north end of the road was to connect with the proposed Arlington Memorial Bridge at a circle or plaza near the base of the hill. The Mount Vernon terminus was to have a simpler scale in keeping with the historic character, yet dignified and suitable as the end of a 15-mile pilgrimage from Washington to George Washington's home. Although the McMillan Commission's plan was never fully implemented, it formed the basis for subsequent planning efforts in the Nation's Capital. Plans for the "Mount Vernon Road" had stagnated since the 1902 McMillan Plan. In 1922, planning activities for the "Mount Vernon Road" began again with the Bureau of Public Roads (BPR) reconnaissance survey that recommended using an existing highway route and acquiring easements on adjoining lands. Charles Moore, chairman of the US Commission on Fine Arts and formerly secretary of the McMillan Commission, testified that the Mount Vernon Highway proposal was "an essential feature of [the McMillan Commission] report." Support for the road was furthered by the impending celebration of the George Washington Bicentennial in 1932, which was seen as a world event that would draw visitors to the capital. Legislation authorizing the construction of the MVMH was passed on May 23, 1928, and provided funding for the section of parkway between Mount Vernon and Arlington Memorial Bridge, followed soon after by additional legislation to fund the remainder of the parkway plan. Construction on the MVMH began in 1929 and the highway opened in 1932, the bicentennial year of George Washington's birth.

Area of Significance: Conservation

The MVMH-North is significant for its association with conservation efforts in the Washington, DC area and represents a significant accomplishment in regional park planning. The MVMH reflects important city planning trends in the 1920s and 1930s, such as the focus on park planning and concern for protecting natural and historic resources in the city and region. During construction of the MVMH, a bill was championed by Rep. Louis C. Cramton of Michigan and passed as the 1930 Capper-Cramton Act (PL 71-284, 46 Stat. 482). The bill focused on preserving natural and historic resources and authorized the Federal government to acquire land on both sides of the Potomac River for development of the GWMP. Plans for the GWMP were representative of late nineteenth and early-twentieth century conservation movement and reflect the John Muir school of thought. Muir, often referred to as the "Father of the National Parks," advocated for nature as an antidote to modern life and that public access to nature was key to inspire spiritual renewal. Construction of the GWMP was in line with conservation efforts as it protected the Potomac River from private development and allowed the public access to the scenic views along the river. In addition to beginning the GWMP, the Capper-Cramton Act transferred the completed MVMH to the Office of Public Buildings and Public Parks of the National Capital, which was subsumed by the National Park Service in 1933, and the highway became a component of the larger GWMP. By the mid-twentieth century, conservationists in the DC area were no longer aligned with the concept of the parkway system: however, integration of natural and cultural resources into the parkway experience remained a central tenet of the parkway system through the 1970s.

Area of Significance: Transportation

The MVMH-North is nationally and locally significant in the area of Transportation as an excellent example of the national trend toward "highway planning" and as one of the first federally built parkways. The MVMH was authorized in 1928, when the form and function of modern motor parkways was initially becoming standardized. Nineteenth century parkways were typically attractive landscaped carriage drives that connected city centers with suburban parks and residential areas. Fashionable new residential districts in large cities, such as Chicago, Boston, Cleveland, and Richmond, were modeled after European examples, including Berlin's Unter den Linden, Vienna's Ringstrasse, and Haussmann's Parisian avenues. The sophistication

of these areas was highly sought after by American civic leaders and developers. Frederick Law Olmsted, Sr. and his partner, Calvert Vaux introduced the term "parkway" to refer to tree-lined boulevards intended for pleasure traffic. The intent was to separate the term "parkway" from other terms such as "boulevard" and "avenue" and have it refer to a designed way for pleasure in walking, driving carriages, or riding horses. Olmsted, Sr. and Vaux included this term in their 1868 Brooklyn Prospect Park plan. During the early twentieth century, the use of automobiles increased, and technical aspects of road design and construction improved. The typical highway department road design was to straighten out curves, cut away slopes, and cut roadside growth back from the right-of-way. Parkways and park roads were not usually designed in the typical highway department road design, rather, they were considered the responsibility of landscape architects.

Following the passage of the Federal Aid Highway Act of 1916, federal funds were used to improve rural roads but left adjacent areas unimproved and subject to development by landowners. The conventional roadways were often deemed ugly and unsafe with the main problems the dangerous, inefficient, poorly designed intersections and the highways lined with unregulated commercial development. Concern for roadside appearance spurred government regulation and involvement in total design of roadways and their surroundings. New motorway design combined the aesthetic and traffic circulation features with technical improvements for higher speeds. Funding for the MVMH was driven primarily by the swell of patriotism inspired by the George Washington bicentennial in 1932. However, officials at the time were debating on improving the congested, unsightly, and dangerous conditions of the main existing roadways between Washington, DC and Mount Vernon or on building a completely new, landscaped, motor parkway using principles of modern highway design.

The construction of the MVMH marked the beginning of a period of federally sponsored "historic" parkways such as the Skyline Drive, Blue Ridge Parkway, Colonial Parkway, and Natchez Trace. Unlike highways built during the same period, these parkways focused on recreation and preservation of natural and historic features along their routes. Although constructed in seemingly natural landscapes, these parkways were specifically crafted to provide

a historical narrative that drivers could experience in juxtaposition to the fast pace of modern life. The overall GWMP, along with the MVMH, was a prototype for historic parkways, its roadway linking sites associated with life and legacy of George Washington while its naturalistic landscape provided a feeling of escape from urban life.

Area of Significance: Other- Commemoration

The MVMH was designed and completed to mark the bicentennial of George Washington's birth. The highway is representative of nationwide efforts to commemorate this founding father and America's first president. More than any other historical figure in the United States, George Washington's legacy was interpreted variously to meet the needs of each generation through monuments, fables, images, and souvenirs. The American proclivity to memorialize the first president began during his lifetime and has continued to the present day; the height of his popularity stretched more than 50 years, from the Philadelphia Centennial Exposition of 1876 and culminated in the George Washington Bicentennial of 1932. Countless memorial trees were planted, streets and parks were dedicated, and pageants and ceremonies were held during that bicentennial year. The MVMH was part of a larger national trend of commemorating the president during the bicentennial, including the construction of the George Washington Masonic National Memorial in Alexandria, Virginia, and the naming of the George Washington Bridge from Fort Lee, New Jersey, to Manhattan.

The commemorative aspects of the MVMH-North are vital to the resource. Early efforts to plan and build the highway focused on its purpose as a patriotic pilgrimage. Even though the later designs focused on engineering and landscape design, the commemorative purpose of the highway influenced its route and design by incorporating visual and physical connections to the life and legacy of the president. Memorials to the nation's first president were common during several years of bicentennial celebrations culminating in 1932, but the MVMH was touted at the time as the "most appropriate" and "perhaps the only bicentennial memorial that will endure" (Davis 2001, 132).

As parkway designers envisioned MVMH's route toward Washington, DC, views were principal considerations as they provided a visual link to the city named after the first president and the monument erected to commemorate him. Intended views along the parkway not only provide panoramic vistas of the natural landscape along the Potomac River. The Navy-Marine Memorial, placed on Columbia Island in 1934, was the first memorial within the overall GWMP, specifically within the MVMH lands, not associated with George Washington. The overall GWMP is part of NCPC's Memorials and Museums Master Plan as a potential location for memorials and is within Area I (memorials of preeminent historical and lasting significance) of the 1986 Commemorative Works Act. A small portion of Area I overlaps with the MVMH-North CLI boundary; this area is located north of the George Mason Bridge, south of the Boundary Channel, and fronts the Potomac.

Area of Significance: Entertainment/Recreation

The MVMH-North is significant in the area of Recreation as part of the Mission 66 program, which was a NPS directive that brought substantial improvements to the design, use, and interpretation of national parks. Mission 66 planning and construction within the MVMH fulfilled the goals of the program and the purposes of the parkway itself. The program provided improvements designed to facilitate access to natural and historic resources through visitor facilities, new roads, and interpretation that were in keeping with the original intent of the parkway.

Following World War II, national parks experienced a tremendous increase in visitors, which was paralleled by an overall deterioration of parks caused by deferred maintenance during the war. The NPS initiated the Mission 66 program to modernize, enlarge, and reinvent the park system for its fiftieth anniversary in 1966. Planners used Modernist principles of architecture, landscape architecture, and planning, including the use of prefabricated structural elements, steel, concrete, and glass which were more economical as they were mass-produced and made construction less time consuming. The style was a departure from the rustic architectural style employed in the 1920s and 1930s. Out of $53 million requested for circulation construction in the National Capital Region, $41 million was designated for road and trail construction in the overall GWMP, with the

majority of that amount used for the construction of the Montgomery County, Maryland, section of the GWMP. The program also funded additional picnic areas, as well as several recreation areas along the MVMH-North.

Daingerfield Island/Washington Sailing Marina and Gravelly Point were created or updated as part of the Mission 66 program. In the 1950s, plans for larger, more broadly based recreational facilities were introduced for Daingerfield Island, which had been purchased by NPS from Smoot Sand and Gravel Co. in 1942. A master plan adopted in the 1960s proposed the development that exists now on Daingerfield Island: the Washington Sailing Marina, related launch facilities, parking, restaurants, and retail shops. The Daingerfield Island Comfort Station was completed in 1972 as part of the Mission 66 program's later period known as the Parkscape USA period, which ran from 1967 to 1973 (Quinn Evans Architects 2019, 7–8). Gravelly Point was enlarged in the 1960s by filling. Originally, there was no pull-off or recreation area in that location along the MVMH-North– the Capital Overlook just south of Gravelly Point was demolished when the Washington National Airport was constructed in the 1940s. Gravelly Point consists of an access road, a four-tiered parking lot, boat access ramp, and large playing fields. Recreational facilities, including the boat launch, playing fields, and parking, were built around 1965 as part of Mission 66. In addition to the recreation and boating facilities, Gravelly Point serves as an observation area for watching planes take off and land at the adjacent Washington National Airport.

In addition to its association with the Mission 66 program, the MVMH-North includes access to scenic and recreational features, such as Roaches Run. The highway's original designers recommended a wildlife sanctuary at Roaches Run, located near Washington National Airport today, and a study was completed in 1934. Promotional literature for the highway described the bird sanctuary as

> a PWA project which provides more than 90 acres of land and water along the highway for the preservation of wild bird life. Rare wild duck, beautiful swan, geese and other birds swim, eat and fly the day long in this birds' paradise. During the migratory season, thousands of birds dot the Potomac for miles and the new sanctuary, located as it is, is expected to prove a valuable experiment. (Kuhn et al. 2021, 12)

The area includes a small parking area originally constructed by the CCC and the original culvert/tidal gate, which controls the flow of water from the Potomac into the Roaches Run Lagoon, is intact (although modified in 1969).

National Register Criterion C – Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction.

Area of Significance: Engineering

The MVMH-North is significant in the area of Engineering as a pioneer of the historic parkway concept. The design of the MVMH followed the precedents of the highly praised parkways of Westchester County, New York, especially the Bronx River Parkway, and introduced modern parkway design principles into a nationally prominent federal highway project. The BPR applied the successful Westchester parkway design principles to the federally funded MVMH, including the principles of traffic circulation, incorporation of natural features and prominent views, and stone-faced structures. The team included several of Westchester's key players: landscape architects Gilmore Clarke and Wilbur Simonson, engineer Jay Downer, and horticulturist Henry Nye.

The design of the MVMH was the first federally built parkway to incorporate innovative twentieth-century parkway design principles into its roadway design, including the first federally built cloverleaf interchange. The BPR selected the route for the parkway by considering the suitability of two options: an inland terrain and a riverfront route. The hilly terrain of the inland route had a rolling profile with steep grades. The riverfront route was relatively flat with a few gently rolling hills. In addition, the riverside route minimized the number of intersections and only required two or three grade-separation structures to ensure free-flowing traffic. The inland route would require a number of overpasses and underpasses, as that route crossed numerous local roads, major turnpikes, and railroads leading into Alexandria. However, the downside of the riverside route was the cost. Engineers estimated that the riverfront route would

cost 25 percent more than the inland terrain, at $4.2 million versus $3.1 million. The riverfront route would extend a length of 14.6 miles and the inland route was 12.5 miles. A design team and plans began following the passage of the Swanson-Moore bill on May 23, 1928; however, the George Washington Bicentennial Commission delayed the decision on the roadway's location. The commission announced the riverfront route on January 25, 1929. BPR engineers were trained primarily in utilitarian highway construction and design, which led to the initial BPR drawings critiqued as amateur and outdated. Outside consultants, including Gilmore Clarke, Jay Downer, and Wilbur Simonson, were approached by Chief Thomas H. McDonald. The basic design team was in place by the end of May 1929 with R.E. Toms as principal engineer, Junius W. Johnson with BPR in charge of basic engineering and construction, and BRP Senior Bridge Engineer J.V. McNary in charge of the bridge engineering and construction. Clarke and Downer, as outside consultants, were hired on a per diem basis while remaining employees of the Westchester County Park Commission. As a result of their busy schedules, Clarke and Downer convinced McDonald to hire their assistant Wilbur Simonson full-time as the Senior Landscape Architect. In addition, Henry Nye, a Westchester County Park Commission employee, was hired to aid in completing the planting plans and oversee the planting process.

The MVMH was featured in professional journals, BPR publications, and books on highway construction for the extensive landfilling operation needed to construct the roadway through the marshes and estuaries of the Potomac riverfront, and the sprawling grade-separated interchange at the intersection of the MVMH and US Route 1. Engineering challenges separated the MVMH project from predecessors, such as its route across marshes, estuaries, and creeks of the Potomac riverfront. In addition, the shoreline location required close to five million cubic yards of hydraulic fill consisting of sand and gravel pumped from the bottom of the Potomac River, which made it the most extensive use of hydraulic fill in any highway project at the time of its construction. The MVMH was also innovative for its use of "safety flare" intersections, teardrop-shaped traffic islands, and flared pavement widenings that aided motorists attempting to make left turns on the undivided highway. Structures, such as bridges, culverts, and retaining walls, played an integral role in making the route along the Potomac River possible. The use of stone facing on many of the structures is one of the defining characteristics of the design of the

parkway and it conveyed the sense of rusticity that the designers sought to help the highway fit into the surrounding topography. The use of traditional stone combined with reinforced concrete contributes to the modern character of the MVMH while retaining the rustic feeling important to the parkway's design.

Area of Significance: Landscape Architecture

The MVMH-North is significant for its designed landscape that stresses the preservation and enhancement of the surrounding natural scenery and incorporates unparalleled views of the Potomac River, inland wooded views, and manmade features tied to the life and commemoration of George Washington. As a designed landscape, the highway exemplifies important trends in landscape architecture that integrated engineering, land planning, and vegetation to create a naturalistic setting for a modern parkway. The MVMH's landscape was greatly influenced by Frederick Law Olmsted, Jr., landscape architect for both the Commission of Fine Arts and the NCP&PC, Charles W. Eliot, NCP&PC's director of planning, landscape architects Gilmore Clarke and Wilbur Simonson, engineer Jay Downer, and horticulturist Henry Nye.

The MVMH-North incorporated landscape design throughout the entire design and construction process, rather than following the conventional roadbuilding schedule in which trees, shrubs, and flowers were typically added after the highway was completed. The alignment of the highway was designed to wind around existing trees and the roadbed was designed to conform to existing topography in order to reduce cut-fill. Necessary cuts were widened to reduce the gradient of slopes and the final contours were sculpted to resemble natural conditions. New plantings augmented the existing forests, fields, and marshes to create a naturalistic yet stylized version of the landscape. Aerial photography was used to establish an alignment that required minimal grading and avoided transplanting of existing trees. The completed highway created the impression that it had been a longstanding part of the landscape and followed a route through the rolling terrain without the need for cuts or fills or the removal of trees.

During the Mission 66 program of the NPS, improvements were made to the MVMH-North and additional recreation features were built. As outdoor recreation was soaring in the United States,

the need for greater services in the parks became clear. In the MVMH-North, new recreational, landscape, and circulation facilities were added at Gravelly Point including the boat launch, play fields, and parking lots, which were constructed in 1965. Also, a new comfort station was built at Daingerfield Island in 1972 during the Parkscape USA period of Mission 66. These alterations, although completed after the original MVMH construction (1929 to 1932), enhance the recreational mission of the MVMH-North and do not detract from its significance as a commemorative and recreational highway.

National Register Significance Criteria

Criterion A: Event

Criterion C: Design/Construction

National Register Criteria Considerations

None

National Register Periods of Significance (with Historic Context Themes)

Start Year/Era and End Year/Era	Historic Context Theme	Subtheme	Facet
1929 CE–1972 CE	Creating Social Institutions and Movements	Recreation	General Recreation
1929 CE–1972 CE	Expressing Cultural Values	Landscape Architecture	The 1930s: Era of Public Works
1929 CE–1972 CE	Developing the American Economy	Transportation by Land and Air	Planned Roads, Highways and Freeways
1929 CE–1972 CE	Transforming the Environment	Conservation of Natural Resources	The Conservation Movement Matures 1908–1941
1929 CE–1972 CE	Transforming the Environment	Historic Preservation	The Federal Government Enters the Movement, 1884–1949: The National Park Service and the New Deal

National Register Areas of Significance

Category	Subcategory (only for Archeology and Ethnic Heritage)	Narrative
Community Planning and Development		
Conservation		
Engineering		
Landscape Architecture		
Transportation		
Entertainment/ Recreation		
Other/Commemoration		

National Historic Landmark

No

World Heritage Site

No

NRIS Information (with Other Certifications)

NRIS Name

1. Mount Vernon Memorial Highway
2. Alexandria Historic District
3. Parkways of the National Capital Region, 1913–1965
4. George Washington Memorial Parkway

NRIS ID

1. 81000079
2. 100001639

3. 05000367
4. 95000605

Primary Certification Date

1. 05/18/1981
2. 11/13/1966
3. 05/09/1991
4. 6/2/1995

State Register Documentation

Identification Number

029-0218

Name

Mount Vernon Memorial Highway

Listed Date

03/17/1981

Chronology & Physical History

Chronology

Start Year	Start Era	End Year	End Era	Major Event	Major Event Description
11,000	BCE	9600	BCE	Inhabited	During the earliest period of known settlement of the Potomac Valley, Paleo-Indian peoples were highly mobile and traveled in small groups of no more than around 150 to hunt game and gather other resources.
9600	BCE	7600	BCE	Inhabited	The Early Archaic Period was characterized by increased human settlement and archeological evidence of human habitation during this period has been found in the vicinity of Little Falls and along the Anacostia River.
3800	BCE	2400	BCE	Inhabited	Changes in forest composition surrounding the Potomac Valley corresponded with a rise in Late Archaic cultural groups, which suggests that the people around present-day Washington, DC during this time period took advantage of the food sources provided by the oak, hickory, and chestnut-dominated forests, such as edible nuts and game animals.
2400	BCE	1400	BCE	Inhabited	Peoples of the Terminal Archaic Period were less mobile than those of earlier periods, spending more of their year in large riverside encampments and traveling via canoe to Potomac River islands.
1300	CE	1300	CE	Inhabited	The Piscataway Indians settled in and around the greater Washington, DC region.
1608	CE	1608	CE	Explored	Captain John Smith explored and mapped the Chesapeake Bay and many of its tributaries, including the Potomac River and its Eastern Branch (Anacostia River). Smith was the first European to do so.
1608	CE	1608	CE	Inhabited	Nameranghquend Indian villages were extant in and around what is now Washington National Airport. This village was noted by Captain John Smith.

Start Year	Start Era	End Year	End Era	Major Event	Major Event Description
1624	CE	1624	CE	Platted	Captain John Smith published "The Generall Historie of Virginia, New-England, and the Summer Isles," which chronicled his navigations and mapping of the Potomac River and its Eastern Branch (Anacostia River).
1650	CE	1700	CE	Settled	European settlers arrived in the Washington, DC area, clearing the forests for cultivation of food crops and tobacco.
1669	CE	1669	CE	Land Transfer	6,000-acres were granted to Robert Howsing.
1674	CE	1674	CE	Land Transfer	John Washington and Nicholas Spencer received a 5,000-acre tract from Lord Culpepper.
1743	CE	1743	CE	Built	Half of the original Culpepper grant went to Lawrence Washington, who named Mount Vernon for the British Admiral under whom he had served.
1746	CE	1746	CE	Established	The plantation known as Abingdon was established.
1752	CE	1752	CE	Land Transfer	Lawrence Washington died having bequeathed the tract to his half-brother, George Washington.
1761	CE	1761	CE	Land Transfer	George Washington inherited Mount Vernon.
1790	CE	1790	CE	Established	Congress established the District of Columbia.
1791	CE	1791	CE	Planned	The L'Enfant plan designated the Potomac and Anacostia Rivers and Rock Creek as opportunities to generate development of the city throughout the entire area.
1808	CE	1809	CE	Built	The first Long Bridge, which connected Virginia to 14th Street in Washington, DC, was constructed.
1836	CE	1836	CE	Established	Jackson City was established at the end of the Long Bridge in Virginia.

Start Year	Start Era	End Year	End Era	Major Event	Major Event Description
1835	CE	1835	CE	Established	The Baltimore & Ohio Railroad began operation between Baltimore and the District of Columbia.
1853	CE	1853	CE	Established	The Mount Vernon Ladies' Association was founded.
1858	CE	1858	CE	Purchased/ Sold	The Mount Vernon Ladies' Association purchased the 202-acre Mount Vernon estate on the banks of the Potomac River from John Augustine Washington III, the great grandnephew of George Washington.
1863	CE	1864	CE	Built	A new bridge alongside the Long Bridge was built to accommodate rail traffic.
1870	CE	1870	CE	Damaged	Both the Long Bridge and Railroad were damaged by flooding from heavy rains.
1871	CE	1872	CE	Built	On May 15, 1872, a new Long Bridge opened for pedestrian and carriage traffic with services running continually until 1906. This bridge replaced the Long Bridge and Railroad Bridge damaged in 1870.
1887	CE	1888	CE	Established	The Mount Vernon Avenue Association was chartered by the Commonwealth of Virginia with the intent to identify and promote a route from the Virginia end of the Aqueduct Bridge (predecessor of Key Bridge) to George Washington's home and tomb.
1889	CE	1890	CE	Planned	Lt. Col. Peter C. Hains surveyed several direct routes from the Virginia end of the Aqueduct Bridge (predecessor of Key Bridge) to George Washington's home and tomb.
1892	CE	1896	CE	Built	The Washington, Alexandria, and Mount Vernon Railroad completed an electric railway (streetcar) between Washington and Mount Vernon.
1900	CE	1900	CE	Planned	Following the World's Columbian Exposition that inspired the City Beautiful Movement, the American Institute of Architects addressed

Start Year	Start Era	End Year	End Era	Major Event	Major Event Description
					landscape and public building design at its convention in Washington, DC.
1901	CE	1902	CE	Planned	The Senate Park Commission urged protection of Great Falls and Palisades and endorsed a national road to Mount Vernon. The Commission's McMillan Plan called for "parkways" linking the Great Falls, Mount Vernon, and Potomac River Bridges and existing parks.
1903	CE	1904	CE	Built	A new railroad bridge was constructed to replace the Long Bridge constructed in 1871-1872.
1904	CE	1904	CE	Urbanized	The first automobile tourists arrived at Mount Vernon.
1905	CE	1906	CE	Built	The Highway Bridge for vehicular and pedestrian traffic was constructed. The trolleys of the Mount Vernon Railway used this bridge until 1931.
1910	CE	1910	CE	Built	The Commission of Fine Arts began to implement the McMillan Plan recommendations.
1918	CE	1918	CE	Planned	The Commission of Fine Arts recommended a "permanent system of highways [to] be revised to allow for the new park schemes."
1922	CE	1922	CE	Established	Congress appropriated funding for the construction of Arlington Memorial Bridge, a key impetus to plans for a road linking it to Mount Vernon.
1924	CE	1924	CE	Planned	The National Capital Park Commission began planning for parkways.
1924	CE	1927	CE	Planned	Congress created the George Washington Bicentennial Commission, authorizing it to initiate a Bureau of Public Roads study of monumental highway proposals.

Start Year	Start Era	End Year	End Era	Major Event	Major Event Description
1926	CE	1926	CE	Established	National Capital Park Commission was restructured and replaced by the National Capital Park and Planning Commission (NCP & PC).
1926	CE	1926	CE	Built	Construction of Arlington Memorial Bridge commenced, serving as impetus for a road linking the bridge to Mount Vernon once completed.
1926	CE	1927	CE	Developed	Resolution of House Committee on Roads instructed the Bureau of Public Roads to make a survey for a roadway to Mount Vernon. A survey was delivered the following year.
1928	CE	1928	CE	Established	On May 23, 1928, Congress authorized the construction of Memorial Boulevard between Washington, DC and Mount Vernon. The boulevard was later renamed the Mount Vernon Memorial Highway.
1928	CE	1928	CE	Retained	A field engineers' office for the highway was opened in the Naval Torpedo Station in Alexandria.
1929	CE	1929	CE	Planned	The Bicentennial Commission selected the route for the Mount Vernon Memorial Highway (MVMH), which followed the river except where it passed through the City of Alexandria along Washington Street. This route was preferred over alternative routes because it cost less, had higher scenic and historic qualities, afforded better opportunities for the creation of shorefront areas for recreation, and it better honored George Washington.
1929	CE	1929	CE	Altered	Dredging of the Potomac River was undertaken by Corps of Engineers for seawall construction between Columbia Island and the railroad.
1929	CE	1932	CE	Built	The MVMH was constructed under the direction of the Bureau of Public Roads (BPR).

Start Year	Start Era	End Year	End Era	Major Event	Major Event Description
1930	CE	1930	CE	Established	The Capper-Cramton Act authorized the federal acquisition of land on both sides of the Potomac River for the development of a parkway extending northwest to Great Falls on the Virginia side of the river and from Chain Bridge to Cabin John on the Maryland side. The act also renamed the road, known heretofore as the Memorial Highway, as the George Washington Memorial Parkway (GWMP).
1930	CE	1930	CE	Graded	Grading for the Mount Vernon Memorial Highway began.
1930	CE	1930	CE	Built	Construction of bridges along the MVMH commenced.
1932	CE	1932	CE	Developed	On January 16, 1932, the Mount Vernon Memorial Highway was opened to traffic.
1932	CE	1932	CE	Land Transfer	On July 1, 1932, the MVMH was officially transferred from the Bureau of Public Roads to the Office of Public Buildings and Public Parks of the National Capital.
1932	CE	1932	CE	Memorialized	President Hoover officially dedicated the GWMP as part of the Washington Bicentennial celebration.
1933	CE	1933	CE	Established	Oversight for the completed Mount Vernon Memorial Highway was transferred to the National Park Service through reorganization and abolishment of the Office of Public Buildings and Public Parks of the National Capital by Executive Order.
1934	CE	1935	CE	Built	Civilian Conservation Corps (CCC) workers constructed bridle paths along the MVMH and, at Roaches Run, they built a feed storage building and a game warden cabin, and installed chain link fencing.
1934	CE	1935	CE	Reconstructed	CCC workers worked on the ruins at Abingdon and built a reconstructed well cover.

Start Year	Start Era	End Year	End Era	Major Event	Major Event Description
1934	CE	1935	CE	Built	CCC workers constructed a 20-car parking area at Roaches Run with concrete curbing and log guard rail as well as a cinder access road with concrete gutters.
1934	CE	1935	CE	Built	At Roaches Run, CCC workers constructed a tidal gate, bank erosion control, built two miles of trails around the lagoon, removed nuisance water plants, and planted trees and shrubs.
1936	CE	1936	CE	Built	Construction began on the George Washington Memorial Parkway section from the Francis Scott Key Bridge to Columbia Island.
1938	CE	1940	CE	Built	Construction was completed for the Washington National Airport (today called Ronald Reagan Washington National Airport), forcing the MVMH to be realigned and obscuring numerous views to the US Capitol and other landmarks.
1942	CE	1942	CE	Land Transfer	Daingerfield Island was purchased by the National Park Service from Smoot Sand and Gravel Co.
1947	CE	1950	CE	Built	Construction of new bridge, originally named the 14th Street Bridge was undertaken. This bridge was opened with the existing Highway Bridge becoming southbound-only.
1955	CE	1966	CE	Established	In 1955, Conrad Wirth, National Park Service director, proposed to Congress an initiative to improve and modernize park facilities and expand visitor services. The ten-year Mission 66 program was funded in 1956 and ended in 1966, the 50th anniversary of the establishment of the National Park Service.
1958	CE	1958	CE	Established	The 14th Street Bridge was renamed Rochambeau Bridge to honor Jean-Baptiste Donatien de Vimeur, comte de Rochambeau.

Start Year	Start Era	End Year	End Era	Major Event	Major Event Description
1959	CE	1959	CE	Built	The GWMP was extended to Langley, Virginia.
1960	CE	1962	CE	Built	Completion of the George Mason Bridge replaced the old Highway Bridge. The new 4-lane bridge ran southbound-only with the Rochambeau Bridge still running northbound.
1961	CE	1961	CE	Built	A second lane of traffic was constructed from Alexandria to Four Mile Run, transforming the MVMH into a divided highway with a wide median and preserving a large number of plantings, including numerous willow oaks.
1961	CE	1961	CE	Altered	Vehicular circulation at the north end of Alexandria was altered with the removal of the traffic circle.
1962	CE	1962	CE	Removed	The old steel truss Highway Bridge was removed.
1962	CE	1962	CE	Built	The Capital Beltway (I-495) was built and served as the GWMP northern terminus in Virginia.
1963	CE	1963	CE	Planted	An extensive planting plan introduced new trees from the northern end of Gravelly Point to Alexandria, establishing a more continuous character to the MVMH in contrast to Simonson's 1932 plan.
1965	CE	1965	CE	Built	Gravelly Point recreational facilities including the boat launch, play fields, and parking lots were constructed through the Mission 66 initiative.
1969	CE	1971	CE	Built	Construction of the then-called Center Highway Bridge was undertaken. The bridge was later renamed to Rochambeau Bridge in 1985.
1972	CE	1973	CE	Built	The Mount Vernon Trail was constructed. The section north of Alexandria was completed in 1972 and the section south of Alexandria was completed the following year.

Start Year	Start Era	End Year	End Era	Major Event	Major Event Description
1973	CE	1977	CE	Built	The Metro station at the Washington National Airport and associated tracks were built beginning in 1973 with Metrorail service (the Blue Line) running to the airport by 1977.
1972	CE	1972	CE	Built	The Daingerfield Island Comfort Station was built near the end of the NPS Mission 66 campaign.
1974	CE	1977	CE	Built	The US Army Corps of Engineers worked with local municipalities in Arlington and Fairfax Counties to develop a flood-control channel in the lower part of Four Mile Run. This project straightened the stream, created a trapezoidal flow channel, and installed a flood control levee.
1976	CE	1983	CE	Built	Construction of the Charles R. Fenwick Bridge (metro Yellow Line) began circa 1976–1977 with service beginning on April 30, 1983.
1977	CE	1977	CE	Built	The Four Mile Run Bridge, constructed in 1977, replaced a 1939 bridge, which had replaced the original 1931 bridge carrying the MVMH over Four Mile Run.
1982	CE	1983	CE	Land Transfer	The National Park Service settled suits against private landowners on the Alexandria Waterfront, receiving a half-acre parcel near the Potomac River Generating Station and gaining easements that allowed for the expansion of the GWMP park unit and forming an important connection for nonvehicular circulation between Alexandria and Daingerfield Island.
1984	CE	1986	CE	Rehabilitated	The NPS and the Federal Highway Administration repaired and replaced deteriorating concrete along the entire length of the MVMH. The project, costing $2 million, included the reconfiguration of access points for safety and utilized concrete specifications that would mimic the original surfacing.

Start Year	Start Era	End Year	End Era	Major Event	Major Event Description
1985	CE	1985	CE	Dedicated	The former Rochambeau Bridge was renamed in honor of Arland D. Williams, Jr. after he gave his life to save his fellow passengers on Air Florida Flight 90.
1985	CE	1985	CE	Established	The former Center Highway Bridge was renamed the Rochambeau Bridge.
1986	CE	1986	CE	Established	Congress passed the Commemorative Works Act, which created a Commission to review all proposals for memorials under NPS jurisdiction. The GWMP falls within an area that allows only memorials related to subjects of lasting historical significance.
1992	CE	1992	CE	Built	The Mount Vernon Trail was extended to Crystal City, VA via an abandoned tunnel under the railroad tracks near the Washington National Airport, which was rehabilitated to permit the connection. This became known as the Crystal City Connector Trail.
1994	CE	1994	CE	Built	A series of new utility buildings were constructed at the Parkway Maintenance Headquarters adjacent to the Washington National Airport.
1998	CE	1998	CE	Established	The Potomac River was designated as an American Heritage River, which encouraged natural resource protection, economic revitalization, and cultural resource preservation.
2000	CE	2000	CE	Preserved	The Greens Scenic Area Easement was acquired to protect a 15-acre area of woodland and marsh that belonged to the City of Alexandria.
2005	CE	2005	CE	Established	The US Department of Transportation designated the GWMP as an All-American Road in the National Scenic Byways Program.

Start Year	Start Era	End Year	End Era	Major Event	Major Event Description
2007	CE	2007	CE	Rehabilitated	The 1941 Airport North Entrance Bridge was reconstructed in 2007 according to the 2021 draft GWMP NRHP nomination. In 2006, it had been determined that the bridge was deteriorating and that the Mount Vernon Trail (MVT) was a safety concern because of its proximity to the roadway.
2011	CE	2011	CE	Established	The stub "Pentagon Lagoon Trail" was constructed as part of the Humpback Bridge rehabilitation project.
2016	CE	2016	CE	Damaged	A transformer tank owned by Virginia Electric and Power Company at the Crystal City Substation ruptured and discharged approximately 13,500 gallons of mineral oil dielectric fluid. An undetermined amount entered Roaches Run, resulting in compensatory restoration actions and habitat enhancement.

Physical History

The following section provides information on the physical development and evolution of the site, organized by time periods.

PRECONTACT TO EUROPEAN SETTLEMENT, 13,000 BCE–1608 CE

Portions of the following narrative were adapted from the LBJ Memorial Grove on the Potomac Cultural Landscapes Inventory (2022) authored by Angelina R. Jones.

The area now traversed by the MVMH-North CLI project area was a terrestrial floodplain and riverine terraces for millennia during and after the last ice age (Kreisa et al. 2019). With lower water levels during that period, these floodplains and terraces would have provided a natural environment for some of North America's early inhabitants. Humans inhabited the Potomac Valley since 11,000 BCE. While the archeological record shows varying densities of occupation along the Potomac River west of Washington, DC, there is evidence of continual human occupation from this time period. The Potomac River has itself existed in approximately the same

location for two million years and the Lower Potomac River has been a tidal estuary for about 8,000 years (Garrison and Lester 2017: 32). The MVMH-North located at the boundary between the Coastal Plain and the Piedmont; two physiographic regions that extend from New Jersey to Georgia. The Piedmont is characterized by igneous and metamorphic rock that create falls where they meet the clay and silt of the Coastal Plain. For this reason, this junction is known as the fall line and, due to the powerful water velocity generated by the falls, was historically the head of navigation.

The Paleoindian Period (11,000 BCE-9600 BCE) is the earliest well-understood era of Native American occupation of the Eastern United States. According to Dent (1995, 132–133), during the Paleoindian Period, areas along the Potomac River would have had the much-needed resources to support the early inhabitants of the regions. During this period, sea levels were around 300 feet lower than in the present day, which created a very different physiographic environment. This time corresponds with a harsh cold period known as the Younger Dryas. There was no Chesapeake Bay and the Potomac and Susquehanna Rivers converged before entering the Atlantic Ocean as one body of water. The people of this time were highly mobile and traveled in small groups of no more than around 150 to hunt game and gather other resources. Early settlements, specifically in the Chesapeake Bay Region, were typically situated where a higher diversity of resources was available and either consisted of larger settlements or were smaller, more specialized camps that focused on specific tasks (Dent 1995, 137–138). Archaeologically speaking, these types of sites are typically characterized by the recovery of fluted, lanceolate-shaped projectile points (Dent 1995, 124).

The potential Pre-Contact occupation of the MVMH-North CLI project area likely extended until the Middle Archaic Period (7600 BCE-3800 BCE), a warm humid period that resulted in a gradual rise in sea level and the development of swamps. Up until this time, the project area may have remained a floodplain terrace, continually occupied by the Paleoindian and Archaic peoples. While some of these terraces are now submerged, geotechnical cores taken of terraces on the east side of the river suggest they may still contain evidence of Pre-contact occupation by Native Americans (Kreisa et al. 2019). Additional borings completed in the Potomac Yard property, west

of the MVMH-North CLI project area showed evidence of buried cultural horizons beneath approximately 12 feet of fill (Mullen and Barse 2012). This intact horizon contained pottery from the Early Woodland period and likely represents the temporary use of the nearby terraces and upland settings above small streams favored during this period (Mullen and Barse 2012). Nearby smaller waterways such as Four Mile Run and Cameron Run would have been an ideal location for prehistoric habitations, especially during the Late Archaic and Early Woodland periods.

While a variety of cultures developed throughout Eastern North America during the Late Archaic Period (3800-2400 BCE), the Halifax culture is the most common in the vicinity of present-day Washington, DC. However, it should be noted that the area of the capital city was likely a dividing line between the southeastern Halifax and northeastern Otter Creek/Brewerton cultures and there would have been overlap in the land that these groups occupied (Bedell et al. 2009: 18). Cultures of the Late Archaic Period lived in widely dispersed settlements in small, highly mobile groups. This pattern of habitation changed around 2400 BCE when the people of the Chesapeake region began living in relatively larger sites most often adjacent to major bodies of water such as the Potomac River. This cultural shift signals the start of the Terminal Archaic Period (2400 BCE-1400 BCE). The people of this period were less mobile than Halifax and similar peoples, spending more of their year at these large riverside encampments, often traveling by canoe.

CONTACT PERIOD, 1607–1750

By the contact period and likely prior to that, the MVMH-North CLI project area was likely inhabited by Native American settlements. The well-known John Smith map of Virginia (1608) suggests the village of Nameranghquend is near the present-day Washington National Airport making the MVMH-North CLI project area a prime location for potential satellite camps or even potentially traversing through the former village itself (Figure 13). However, some interpretations of the map suggest the village was further north on Roosevelt Island (Albright et al. 2013). Regardless, this region has a high potential for buried cultural horizons in those areas where there were well-drained landforms during the early seventeenth century.

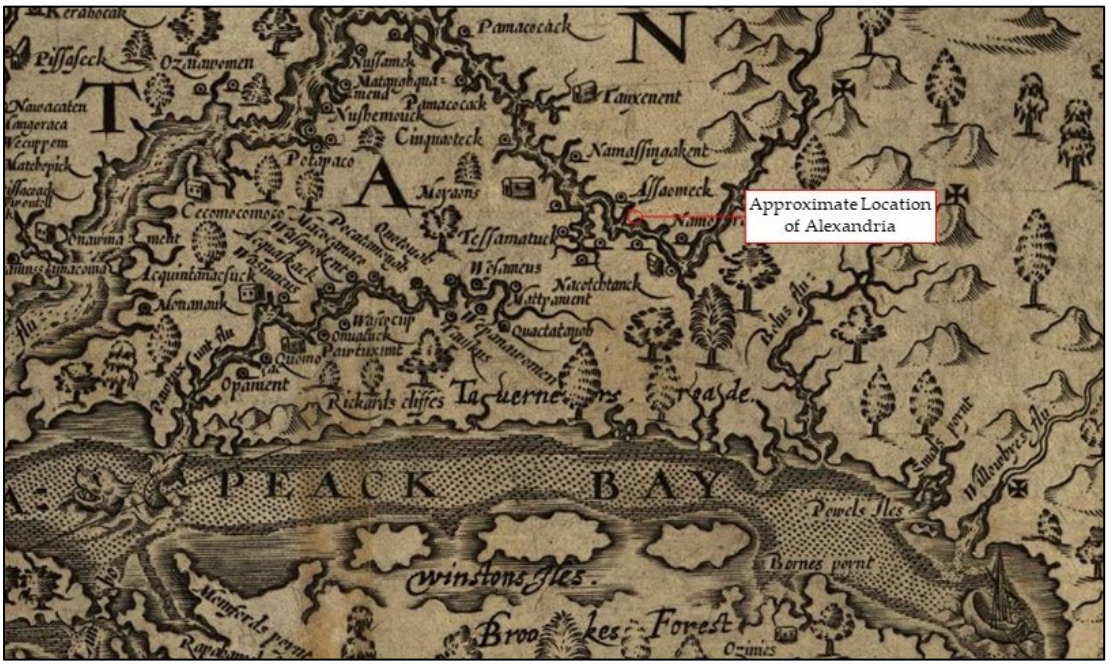


Figure 13. Detail from Virginia discouvered [sic] and described showing location of Nacotchtanke (Smith 1624).

The shores of the Potomac and smaller waterways such as Four Mile Run (formerly called Four Mile Creek) would have been prime areas for fishing and exploitation of other natural resources like fish, duck, and marshland plant species (Figure 14). Easy access to anadromous fish like shad and herring and hunting duck prior to the Lacey Act, continued during the Colonial and Antebellum periods and provided a source of revenue and food for nearby plantations. Enslaved individuals on George Washington's plantation, for example, harvested shad and herring as a source of income for the property (Fiske et al. 2020). Additionally, small communities of freed blacks also worked the deeper waters of the Potomac much like commercial fishermen.
During the early European settlement of the area, trading of furs and provisions occurred along the Potomac as far north as the falls. By 1621, fur trade had become so lucrative that the number of trappers dramatically increased and eventually had to be regulated (Mullen and Barse 2012).

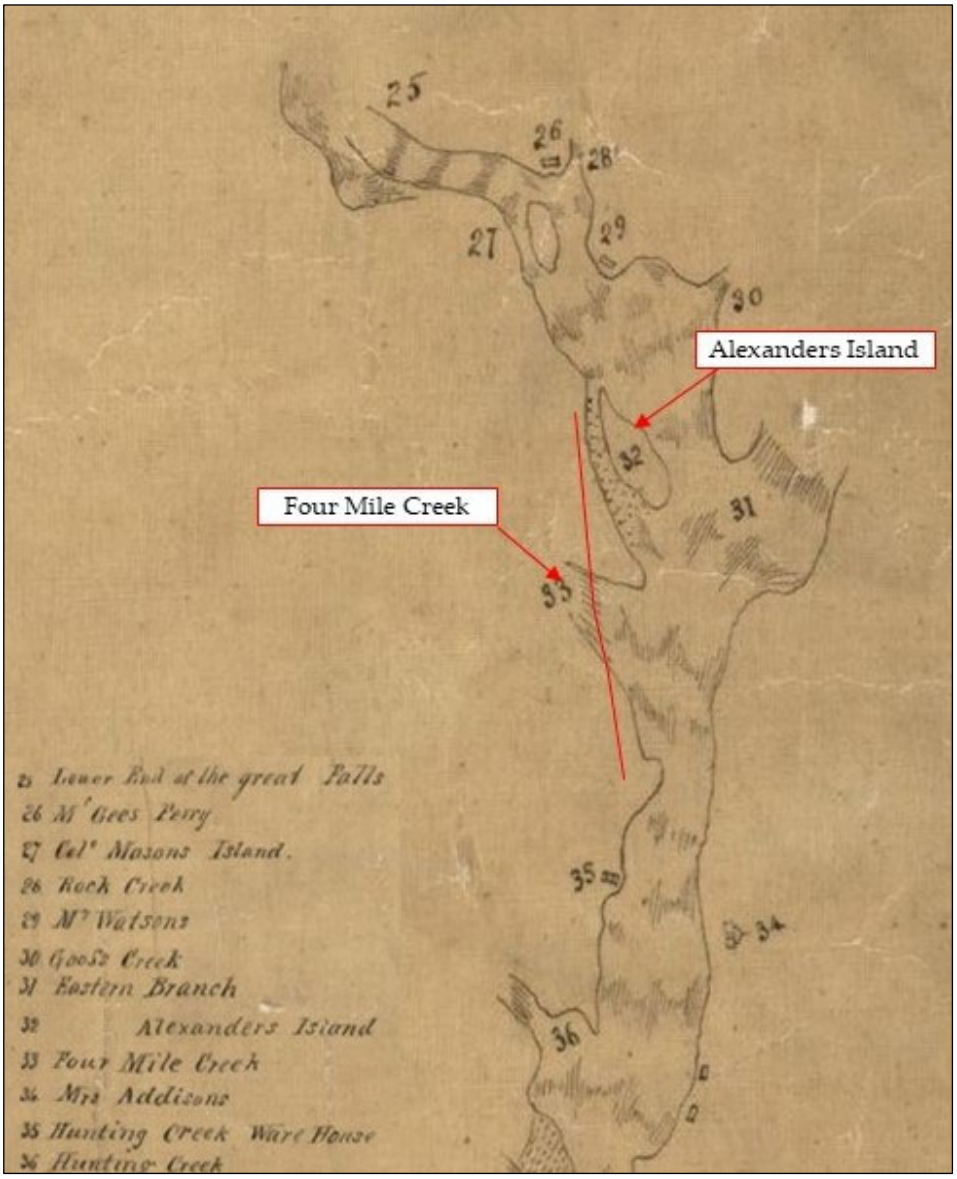


Figure 14. An excerpt from Robert Brooke 1737 "plan of Patomack River, from the mouth of Sherrendo, down to Chapawamsick" (Brooke 1737). General alignment of MVMH shown in red. Map not to scale.

In October of 1669, a large 6,000-acre tract of land (encompassing much of the MVMH-North CLI project area), was granted to Robert Howsing as an award for bringing 120 new settlers to the Virginia Colony (Parsons Management Consultants 1989). A total of 50 acres was given to each settler and by November of the same year, Howsing sold his land patent to John Alexander (Stetson 1935, 1). This property was eventually subdivided with smaller tracts being located on the north and south sides of Four Mile Creek. John Alexander bequeathed his land to his two

sons, Robert and Phillip (The William and Mary Quarterly Volume 10, No 3). Philips's portion of the property was bounded by land owned by Hugh West on the north, the Potomac River on the east, Great Hunting Creek to the south, and Hoofs Run on the west. The 1746 survey of these tracts shows warehouses situated at an area referred to as "Ralph's gut," believed to be close to where Franklin and Potomac Streets intersect, just south of the current MVMH-North CLI project area. While not within the current project these warehouses highlight the early development of the area and character landscape of the MVMH-North CLI project area during this time period.

Another notable land grant occurred in 1674 when Lord Thomas Culpeper granted 5,000 acres to Colonel Nicholas Spencer and Lieutenant Colonel John Washington (Mountvernon.org 2022). In 1690 this land grant was equally divided between the Washington and Spencer families, with Lawrence, the son of John Washington, claiming the land bordered by Little Hunting Creek. At the time, this property would be known as Little Hunting Creek and would eventually become the center of George Washington's farms (Mountvernon.org 2022). Lawrence passed away in 1698, leaving his land in possession of his daughter Mildred Washington, who sold the estate to Augustine Washington in 1726 (Mountvernon.org 2022).

During the 1730s, the south side of Four Mile Run was reportedly settled by Susannah Alexander, sister to Constant Pearson Chapman. In an effort to be near his sister, Chapman also settled on the south side of Four Mile Run and named his home "Summer Hill" (Parsons Management Consultants 1989). Charles Alexander, son of John, built 'Preston' on the north side of Four Mile Creek sometime between 1750 and 1765 (Mullen and Barse 2012). Such large, well-made, homes were sporadic across the area, with there being more of a propensity for smaller tenant-owned farms. These properties were typically surrounded by small areas of cultivated land, as opposed to large expanses of clear fields, common on larger plantations (Raszick and Bedell 2018).

The area continued to grow with larger plantations, such as Abingdon, located In the vicinity. The plantation known as Abingdon witnessed the first house built on the property in 1746 by a member of the Alexander family (Figure 15 and Figure 16). This plantation would eventually contain several ancillary buildings dotting the landscape. While this area was certainly settled

prior to the establishment of Abingdon, the archaeological record of these types of sites have yet to be located or have been destroyed by the extensive development and growth of infrastructure in the area (Raszick and Bedell 2018).

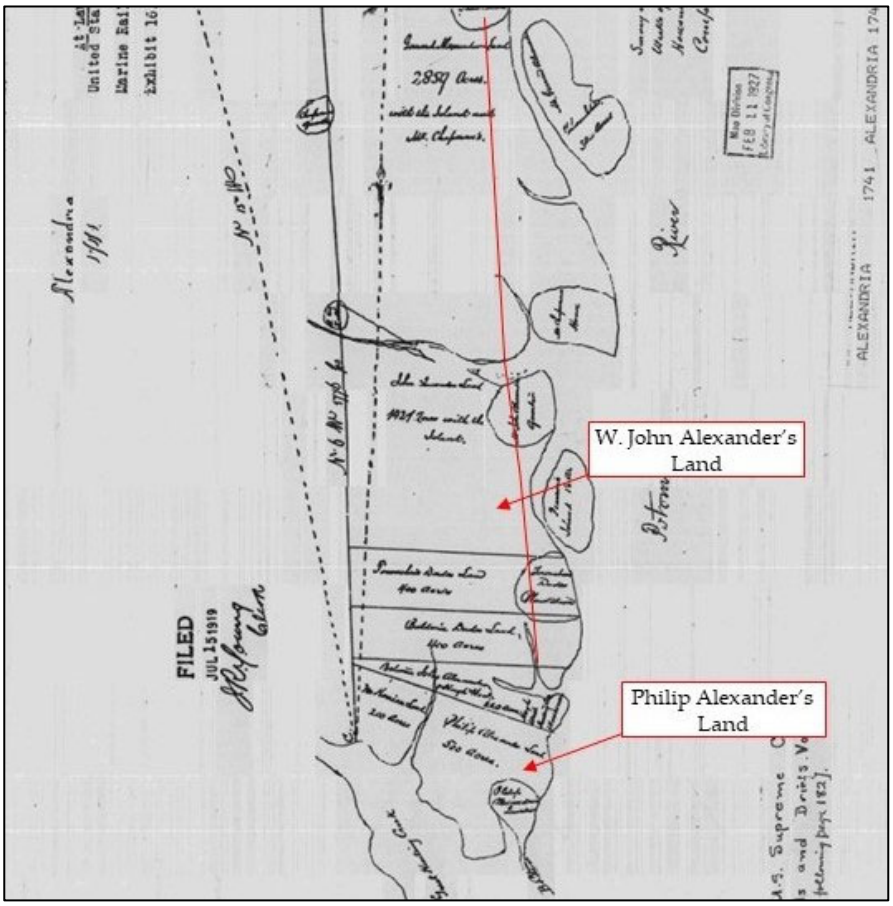


Figure 15. Howsing's patent survey map northeast Virginia and vicinity of Washington, DC (Berry 1741). General alignment of MVMH shown in red. Map not to scale.

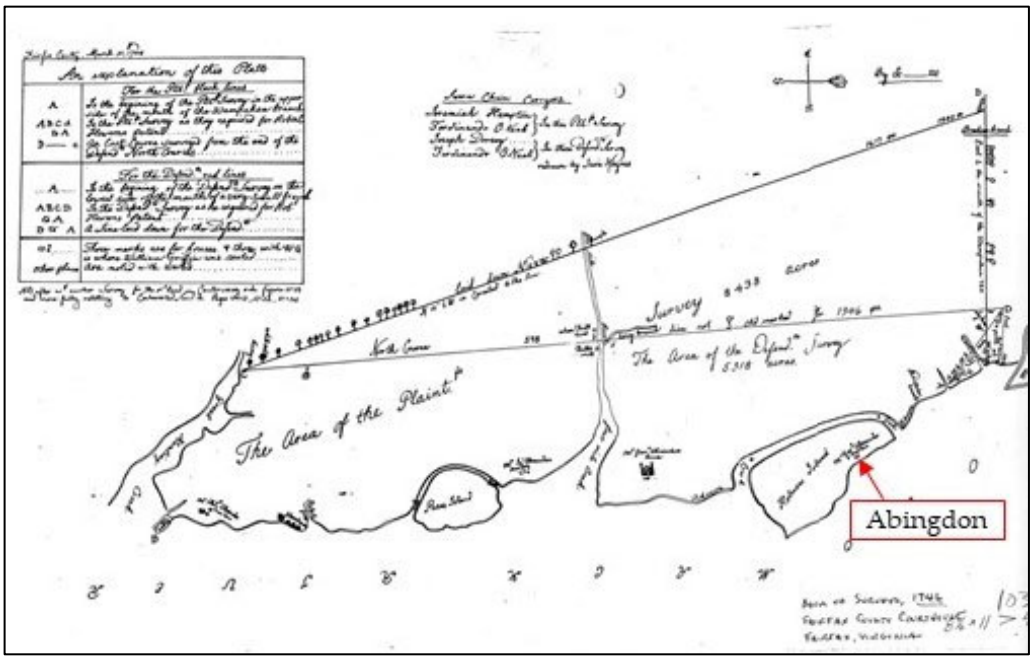


Figure 16. 1746 Platt survey of 4,438 acres. Not to scale. (Fairfax County Record of Surveys (redrawn). Map not to scale (Fairfax County Record of Surveys 1746).

In 1743, the property formerly known as Little Hunting Creek was renamed Mount Vernon by Lawrence Washington, George Washington's half-brother. Lawrence received the property after the death of his father Augustine and honored Admiral Vernon with the property's namesake (Mountvernon.org 2022). Lawrence passed in 1752 and granted his land to George Washington. By 1761, George Washington inherited all of Mount Vernon as stipulated in Lawrence's will (Mountvernon.org 2022).

In 1748, George Washington surveyed the land mass that would eventually become the City of Alexandria (Figure 17). Washington had hoped the population and commercial ventures of this area would rapidly expand and designated lots to proprietors; at the time the city blocks were open fields and pastures (NPS 2015). This land was owned by Phillip Alexander, Jr., John Alexander, and Hugh West. Phillip Alexander was initially against a town being established on his estate; however he was easily convinced by the town being named after his family (Pippenger 1990, 322).

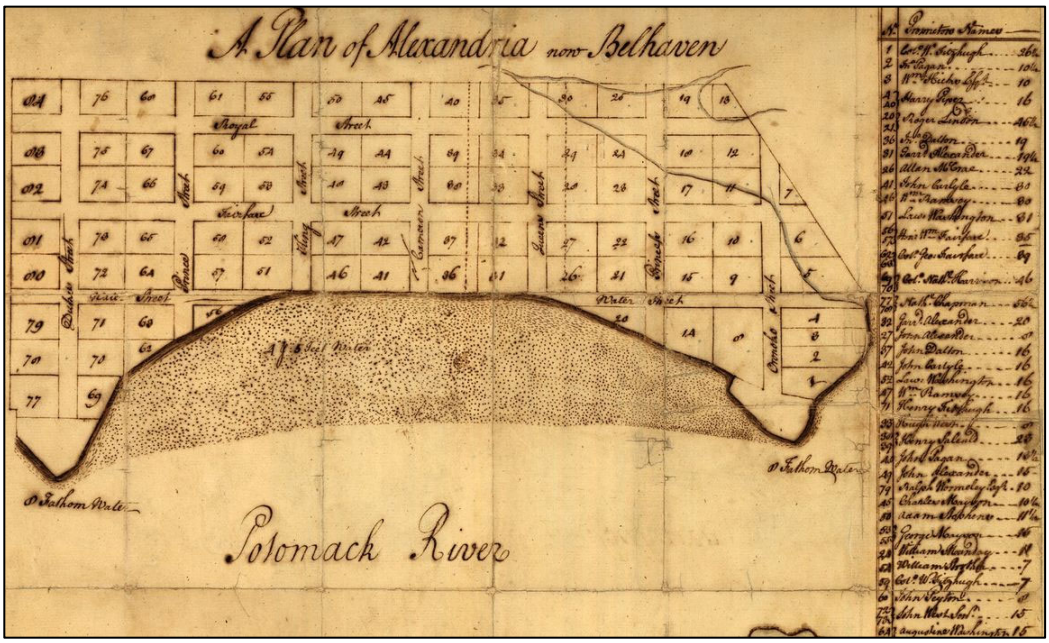


Figure 17. 1749 Plan of Alexandria, now Belhaven (Washington 1749).

COLONY TO NATION, 1751–1789

The MVMH-North CLI project area continued to grow during the mid- to late-eighteenth century with Alexandria serving as a commercial port for the rapidly expanding region. The overall growth of the area also expanded outside of the populated areas, with steady expansion of roads, mills, churches, and stores. Goods like tobacco and flour, being produced on nearby farms and plantations, were shipped through Alexandria. Flour became especially important to the area, with export of this resource to overseas markets increasing in the 1780s. This growth slowed briefly after the Revolutionary War. Although the area was not damaged from wartime activities, a postwar depression caused many issues for the region's residents and absentee landowners. Many went bankrupt from credit being withdrawn and decreased cash flow due to trading ties with Britain being damaged. In response to this, many residents chose to uproot themselves and head west, seeking fertile soils and a stable economy (Raszick and Bedell 2018). Conversely, this was also a time when the consolidation of land into 'unified' plantations was occurring (Raszick and Bedell 2018).

It was also during this period that new land was being created. In the 1780s the Potomac shoreline was systematically filled to extend the shoreline to the deeper waters for wharves that

could support larger, ocean-going, vessels. While most of these wharves are now submerged, there remains a potential for ship remains and wharves, preserved by the waters of the Potomac.

EARLY NATIONAL PERIOD, 1790–1829

The year 1790 saw the establishment of the District of Columbia by an act of Congress and in 1791 a 10-mile square National Capital district was designated by George Washington (Arlington Historical Commission 2001; Netherton and Netherton 1987, 46), Pierre Charles L'Enfant, a French engineer who fought for the Continental Army during the American Revolutionary War, was appointed by President George Washington to plan the new city. L'Enfant's plan designated the Potomac and Anacostia Rivers and Rock Creek as opportunities to generate development of the city by using the waterways as means of transportation.

Due to a great demand for American goods in Europe, there was an increase in grain prices as well as other goods, such as cotton from the southern states. By 1801, the new Federal government placed the cities of Alexandria and Georgetown within the limits of the District (Raszick and Bedell 2018). Not until 1847 would Alexandria be retroceded back to Virginia. This area also served as one of the largest locations for the slave trade. Specifically, in 1828 a business located on Duke Street in Alexandria, was one of the most successful slave trading businesses in the Mid-Atlantic. During this period the MVMH-North CLI project area remained largely rural with Alexandria serving as a large commercial center.

ANTEBELLUM PERIOD, 1830–1860

The Antebellum Period experienced exponential growth in transportation routes. Although George Washington proposed the construction of canals in the area in 1784 to access the west, it was not until 1830 that there was a charter for the Alexandria Canal Company. This canal would eventually cross the Potomac River in an aqueduct bridge between Georgetown and Rosslyn, then traverse on level ground to Alexandria (City of Alexandria n.d.) (Figure 18 and Figure 19). In 1843 the canal was officially opened to commercial use, and by 1845 the four lift locks at Alexandria were completed.



Figure 18. Excerpt from chart of the head of navigation of the Potomac River shewing the route of the Alexandria Canal (Stone et al. 1838).

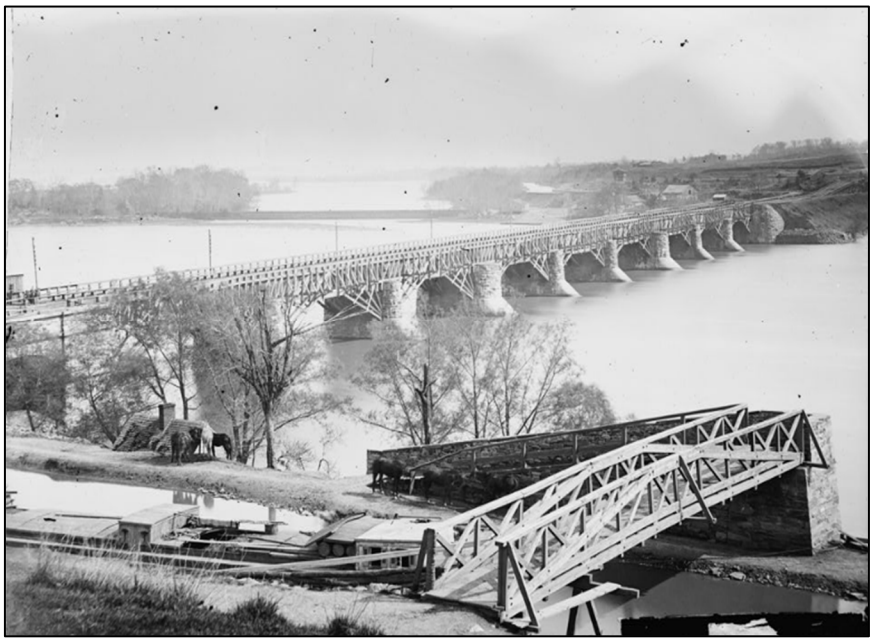


Figure 19. Closer view of aqueduct bridge with Chesapeake and Ohio Canal in foreground (Barnard 1860–1865).

Additional infrastructure improvements in the area included a turnpike and three rail lines. Prior to this period, roads were poorly maintained, and a turnpike was a much-needed improvement to the area. These roads were likely deeply rutted and largely impassable after any amount of rain.

The Alexandria Turnpike began in Alexandria on Washington Street and ran north to a toll bridge over Four Mile Run with tolls collected on the south side of the newly constructed bridge (Mullen and Barse 2012). By 1845, the trajectory of the turnpike slowly shifted west to follow the alignment of present-day Route 1. The new rail lines, the Orange and Alexandria Railroad (O&A) (1845), the Alexandria & Washington Railroad (A&W) (1857), and the Alexandria, Loudon, and Hampshire Railroad (AL&H) (1860) also brought about new transportation opportunities for the residents of the area. Not only did these new routes allow for more accessibility to goods for distant markets, but they also allowed for passenger travel. However, even with all these improvements, travel during this period was still hazardous. Additionally, these changes were often met with resistance as the railroad companies purchased or seized land from locals, reducing the acreage of profitable land. In some cases, the railroad even bisected large properties, often resulting in a decrease in property values.

Regardless of all the transportation improvements and construction of wharves for ships, the area remained relatively rural. The region was largely dominated by agricultural fields or open fallow fields, dotted with homes, primarily located along major roadways like the Alexandria Turnpike.

One attempt to capitalize on the region's proximity to Washington, DC was the planning of Jackson City on the Virginia end of the Long Bridge. The "city" was conceived of by speculators as a new development during the early 1830s (Figure 20). However, the area saw minimal actual development activity until after the Civil War.

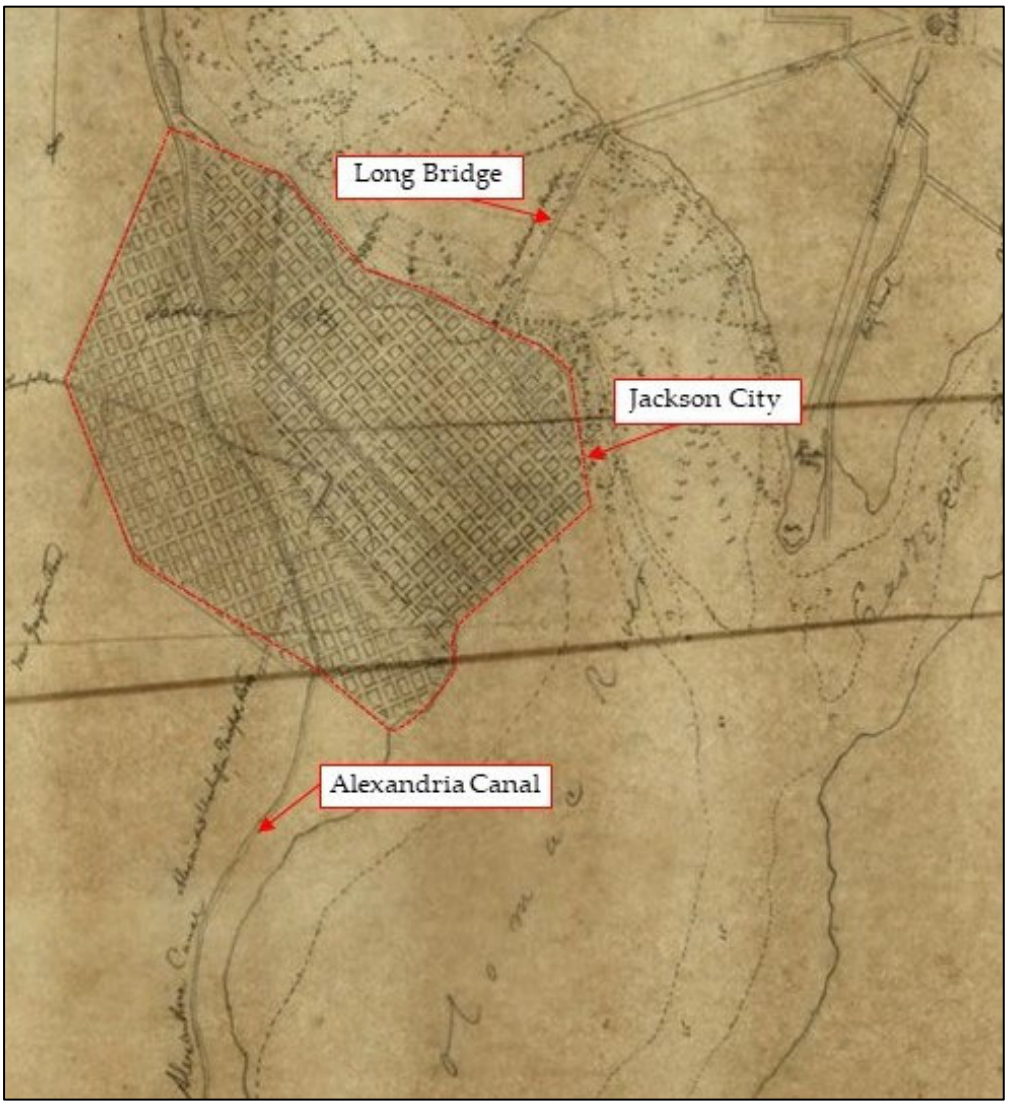


Figure 20. 1843 Map of Jackson City opposite the city of Washington at the south end of the Potomac Free Bridge (Long Bridge) (Library of Congress 1843). Jackson City shown in red dashed line.

CIVIL WAR, 1861–1865

Although the area was not subjected to any direct military action during the Civil War, the region was heavily occupied by Union troops for much of the war. The close proximity to the rail lines, specifically the O&A, was likely the primary motivator, as this rail line was the most direct route from Washington to Richmond (Albright et al. 2013) (Figure 21). Mapping from this period provides very accurate depictions of the overall landscape of the MVMH-North CLI project area as seen in the following figures. The area had a vast network of primary and secondary roads,

many of which were in various states of disrepair, as well as a fair number of homes for the time period. Figure 21 and Figure 22 provide the best examples of the transportation routes available during the mid- to late-nineteenth century and is a good visual example for the intense troop occupation of the area.

During the Civil War, Union troops would commandeer larger plantation homes for use as headquarters and hospitals, Preston Farm being no exception. This home, located on the north side of Four Mile Creek, was converted into a hospital and then burned by Union troops in 1862 (Albright et al. 2013). As an additional means of accessing Washington, DC, the Union Army drained the Aqueduct Bridge so it could be converted to a pedestrian and wagon bridge (Mullen and Barse 2012). This new bridge was used until the end of the war, and at this point the Alexandria Canal restarted its operations.

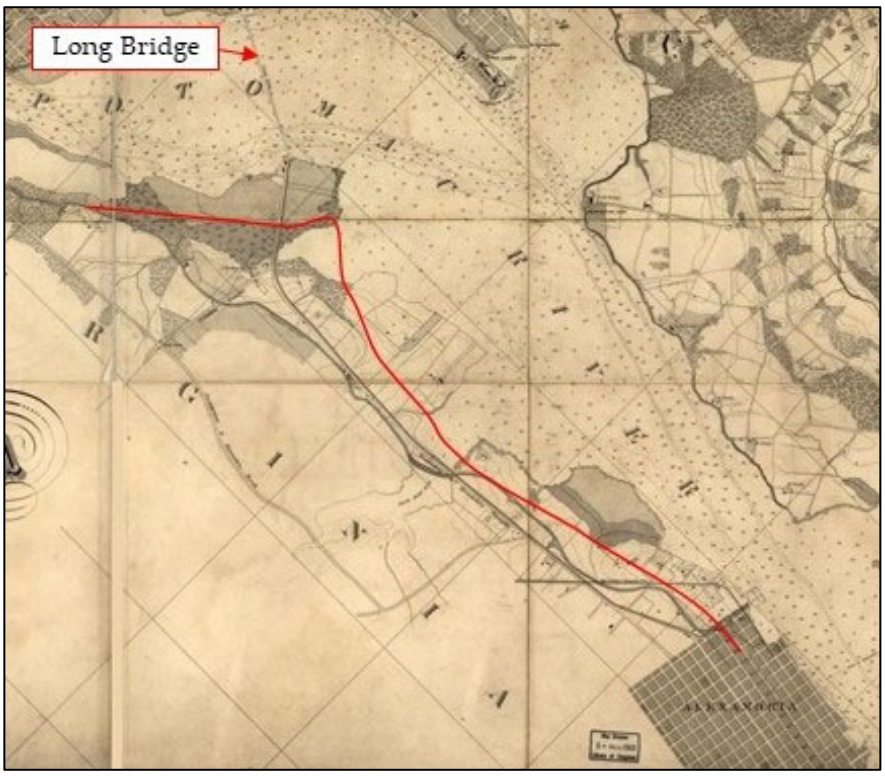


Figure 21. Topographic map of the District of Columbia (Boschke et al. 1861). General alignment of MVMH shown in red. Map not to scale.

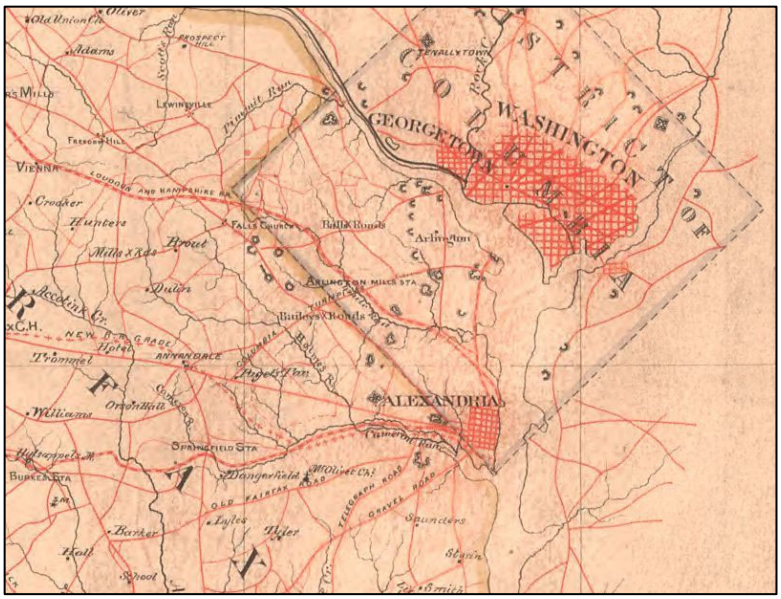


Figure 22. Map of eastern Virginia (Confederate State of America 1864).

Two Civil War-era fortifications, Fort Runyun and Fort Jackson, were constructed in close proximity to the northern portion of the MVMH-North CLI project area. Both were part of the defenses of Washington, DC, specifically constructed to protect the Long Bridge (NPS n.d.). Fort Runyun was positioned to block northbound advances trying to get into the District, while Fort Jackson was positioned directly at the southern terminus of the bridge (Figure 23–Figure 25).

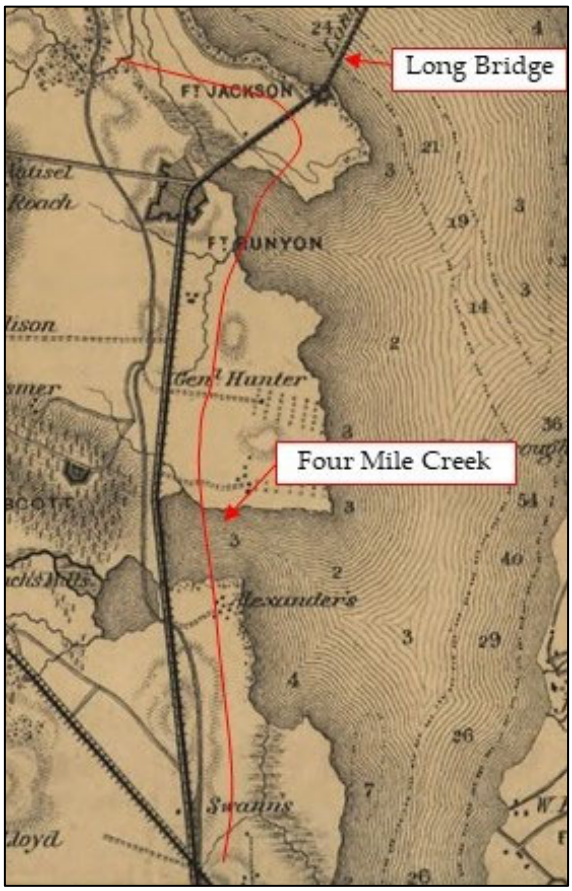


Figure 23. Map of northeastern Virginia and vicinity of Washington (McDowell 1862). General alignment of MVMH shown in red. Map not to scale.



Figure 24. Long Bridge Wash, DC [Between 1861 and 1869] (Library of Congress 1861–1869).



Figure 25. Long Bridge Washington, DC Showing General Daniel Craig McCallum, Military Director and Superintendent of the Union Railroads (Library of Congress 1861–1865). Note the two bridges in view.

RECONSTRUCTION AND GROWTH, 1866–1886

After the war, growth of the area was slow. While the Alexandria Canal resumed activities, it would never be as successful as it was in previous years (Albright et al. 2013). Railroads continued to prosper, and new settlers were moving to the area. By the 1870s, the region had largely recovered from the war. The 1879 Atlas of 15 Miles around Washington (Figure 26) most accurately illustrates the post-war development within and near the MVMH-North CLI project area during the Reconstruction Period. While most businesses were located along the rail line, there was a hotel on the southern shore of the Potomac by the Long Bridge and a fishery just west of the Long Bridge. The remainder of the landscape was largely rural and dominated by larger tracts of land. However, it is likely that smaller farms were not depicted on this map and the area within the MVMH-North CLI project area was more populated than the map indicates.

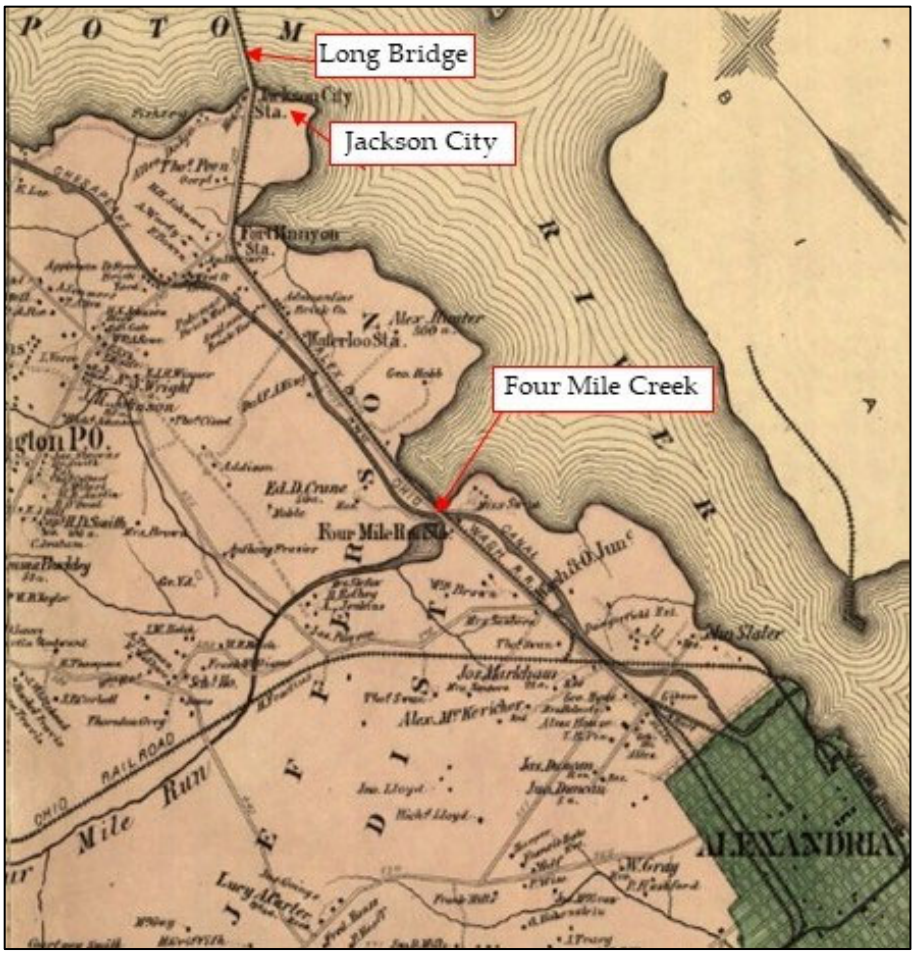


Figure 26. Atlas of fifteen miles around Washington, including the counties of Fairfax and Alexandria, Virginia (Hopkins 1879). Not to scale.

PLANNING THE MEMORIAL HIGHWAY, 1886–1928

In 1887, Alexandria city treasurer and local businessman M.B. Harlow began to promote the idea of a road that would connect Washington, DC. To Mount Vernon. Editorials championing the concept began to appear in local newspapers, with the assertion that the thoroughfare would have, among other things, financial benefits for local commerce. On September 15, 1887, a group of community leaders including Harlow, E.W. Fox, editor of the National Republican newspaper, Park Agnew, Harlow's business partner at the Alexandria Real Estate Investment-, Trust-, and Title Company, and Alexandria Mayor John B. Smoot assembled with other prominent businessmen and political leaders in Alexandria where they formed the Mount Vernon Avenue Association (Leach 1993, 41). Subsequently, members of the Association made two excursions

into the territories between Mount Vernon and the Aqueduct Bridge, which extended across the Potomac from Rosslyn, Virginia, to Georgetown in Washington, DC. Searching for a route that would capitalize on both scenic and historical aspects, the excursions resulted in three alternatives described as ridge, valley, and interior routes. The group made a third trip to survey the landscape in November 1887, this time accompanied by C.W. Ridley of the US Army Corps of Engineers. Throughout the following year, the Association weighed the costs and benefits of each of the routes, considering economic impacts, associations with historic roads and vistas that may have been visited by Washington and his contemporaries, and the presence of potential conflicts such as the convergence of railroads near Four Mile Run. As the ideal route was still being considered, the Association began to envision the throughfare as a formal avenue lined with memorials that would honor significant national figures. Seeking to garner broad political support, the Association suggested that the avenue would become an "American Appian Way." Each state would be allowed to install monuments to local figures and plant trees native to those states along the avenue at quarter-mile increments, with the original thirteen states being granted stations closest to Mount Vernon.

In February 1888, Commonwealth of Virginia legislators formally incorporated the Association and gave it the authority to acquire a 200-foot-wide right-of-way extending from Alexandria to the Aqueduct Bridge. Although the actual route had not yet been determined, the legislation required it to pass through Alexandria along Washington Street. With this, the US Congress appropriated funds for a survey, which was assigned to the US Army Corps of Engineers and conducted by District Engineer Lieutenant Colonel Peter C. Hains. The survey and follow up work, conducted between April 1889 and January 1890, resulted in the development of three routes extending from Mount Vernon to the Aqueduct Bridge. In his report, Hains stated:

> the survey was started from the south end of [the Aqueduct Bridge], but it would be far more in keeping with its character as a 'national road' to have it start from some point on the Arlington estate, at the terminus of a handsome bridge spanning the Potomac. (Hains 1890, 3567)

A map dated 1900, shown below, illustrates the private property along the MVMH-North CLI project area with large industrial areas just south and west of Alexander Island (Strum 1900). These large parcels were designated for brick production, likely due to the increased need for

building materials in the area (Figure 27). In terms of transportation improvements and modifications, the Strum map also shows the Alexandria Canal as the 'Old Alexandria Canal' and the Pennsylvania Railroad traverses north to cross the Potomac on the Long Bridge. The map also depicts the Washington, Alexandria, and Mount Vernon Electric Railway which began transporting citizens in 1892 between Alexandria and Mount Vernon (Figure 28 and Figure 29). By 1896, the line extended to Washington, DC.



Figure 27. 1900 Map of Alexandria County (Strum 1900).



Figure 28. Calvert and Rogers, West Brothers Brick kilns, circa 1920 (Arlington Historical Society 2019).



Figure 29. Washington, Alexandria, and Mount Vernon Electric Railway (Library of Virginia n.d.).

In 1901, the Senate Park Commission urged protection of Great Falls and Palisades and endorsed a national road to Mount Vernon. The Commission's McMillan Plan called for "parkways" linking the Great Falls, Mount Vernon, and Potomac River Bridges and existing parks with project planning being completed in 1902. Two years, later the first automobile tourists arrived at Mount Vernon.

The area continued to expand during the turn of the century. Jackson City, now known as the Monte Carlo of the East, saw a couple of decades of prosperity before Crandal Mackey raided the town in an effort to clean up the "bars and tawdry gaming clubs of Jackson City" (Washington Post 2012). While Mackey was successful in controlling the gambling and other offensive recreational activities within the Jackson City, the Jones Family of Arlington was able to secure a charter from the Grange Camp Association of Virginia to invest their funds in a racetrack (Figure 30) (Arlington County Government 2022). Homes and businesses continued to occupy Jackson

City with many having the appearance of small shacks (Figure 31). The racetrack was able to stay in business until the 1940s when the land was taken over for the Pentagon and associated parking (Arlington County Government 2022).

Additional improvements to the area occurred between 1910–1924. In 1910, the McMillan Plan recommendations were implemented by the Commission of Fine Arts with the planning of roads along the Potomac shoreline in Virginia, with tree-lined boulevards. By 1922, Congress appropriated funding for the construction of Arlington Memorial Bridge, with construction beginning in 1926.

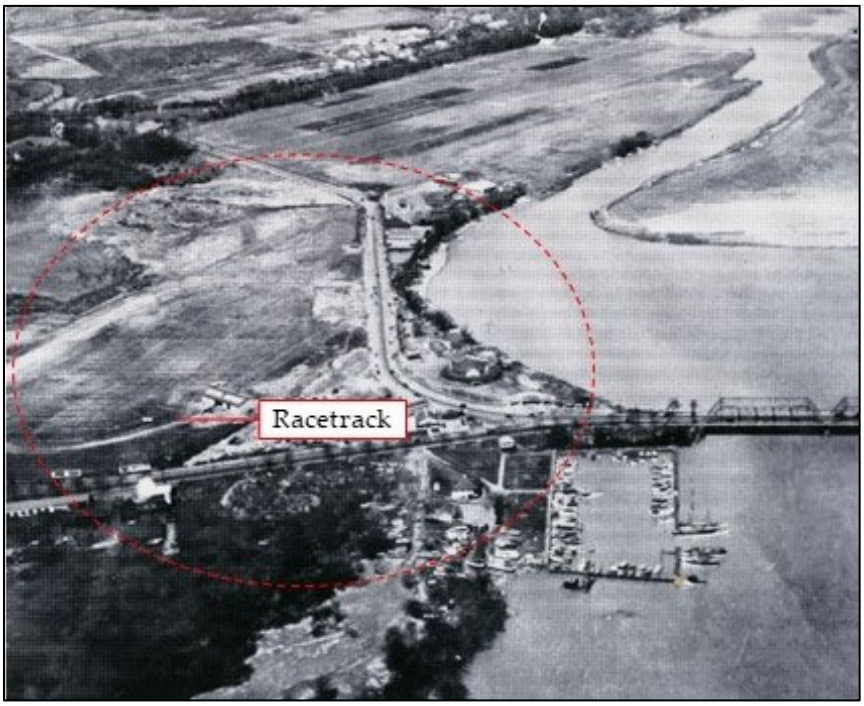


Figure 30. Circa 1920 view of Jackson City with the railroad bridge on the right. Photo facing northwest (Arlington Historical Society 2019). General location of a portion of Jackson City circled in red.



Figure 31. Circa 1920 storefront in Jackson City (Arlington Historical Society 2019).

DESIGN AND CONSTUCTION, 1929–1932

The design and construction of the MVMH-North was undertaken in different, overlapping sections, or units: From the Boundary Channel Bridge at the north end of the MVMH-North inventory unit to the railroad bridge, the installation of riprap foundations and the hydraulic fill operation were included in Unit I (EDAW 1992, 115–146). Unit II included grading, small drainage structures, and incidental construction (Figure 32). The construction of bridges was accomplished in Unit III. Unit IV comprised paving and miscellaneous details (EDAW 1992, 115–146). Lighting was done under Unit V. Landscape improvements and planting made up all of Unit VI (EDAW 1992, 115–146).

The earliest reclamation project began in the northernmost part of the proposed highway, with an emphasis on creating and stabilizing the river's edge. Detailed studies of the grading for the highway began on August 5, 1929, and were completed on November 6, 1929. Rough grading plans for the project comprised 141 sheets of plans, sections, and details. Control maps for the final layout included general existing topographic conditions and the speculative draft of the

roadbed's centerline. The maximum uphill slope along the MVMH-North section was 2:1 and the maximum downhill slope was 4:1; compared with a maximum 3:1 slope for the southern section's inland grading and 2:1 for its grading on the river side of the roadbed (EDAW 1992, 118). The road and its 200-foot-wide right-of-way were designed to take advantage of the natural topography as much as possible. Aerial photography was intensively used to create an alignment that clung to the existing topography, requiring minimal grading.

At the close of 1929, a riprap seawall was constructed at the Columbia Basin to prevent fill material from eroding into the Potomac River. The base of the eighteen-foot-wide seawall was submerged six feet below mean low water level and rose three feet above it. Extending from Columbia Island to the Richmond, Fredericksburg & Potomac (RF&P) Railroad bridge, the project, managed by the Smoot Land and Gravel Co., deposited some 29,000 tons of loose stone in the construction of the seawall. The US Army Corps of Engineers, under the direction of Major Brehan Somervell, then filled this new construction with dredge material, extending the fill operation beyond the railroad bridge to include areas of shoreline at the Gravelly Point Inlet, Roaches Run estuary, and Four Mile Run estuary before continuing south to create more land at the Hunting Creek estuary and Little Hunting Creek. Upon completion, the finished grade of the fill varied from 8 to 28 feet above mean sea level (EDAW 1992, 115). The dredging and filling operation involved the use of hydraulic dredging equipment and pumps that deposited muddy, silty material laden with gravel directly from the Potomac River floor to the desired location, usually the centerline of the proposed highway alignment. The operation required several passes as softer material repeatedly migrated under the weight of the gravel (Leach 1993, 102). Hydraulic filling was completed in July 1931. Wilbur Simonson, the project's landscape architect, estimated that, of the five million cubic yards of hydraulic fill used in the project, fifteen percent (750,000 cubic yards) was used in the area between the Boundary Channel and the railroad bridge (Simonson 1933, 182).

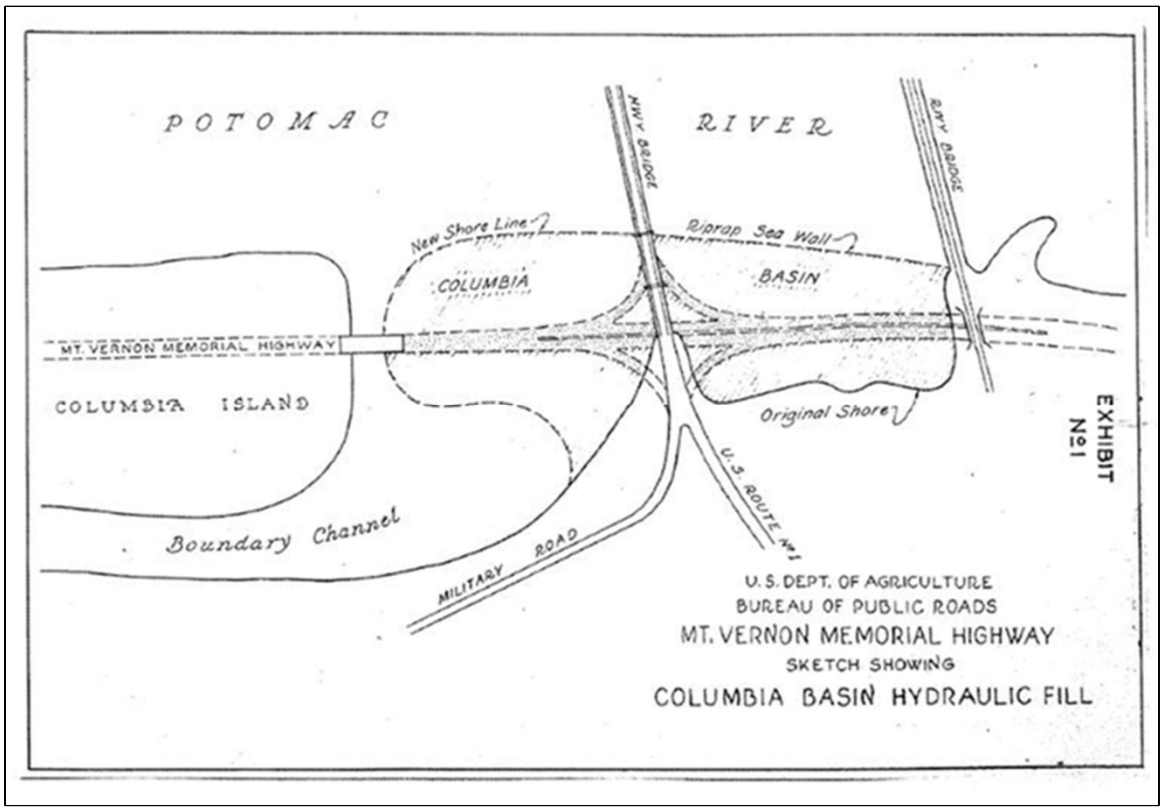


Figure 32. Plan showing extents of hydraulic fill at the north end of the MVMH-North cultural landscape. Note "original shore" and "new shore line" (Taken from Leach 1993, 266).

Rough grading of the site, performed prior to the final layout and grading of the roadbed, was accomplished based upon typical sections and grading plans issued in 1929. Consulting engineer Jay Downer and consulting landscape architect and bridge designer Gilmore Clarke led the efforts to develop the grading plans. Because soil borings were not taken when the centerline of the roadbed was laid out, engineers often encountered unexpected soil characteristics that required revisions of the typical sections. Grading efforts of the roadbed were flattened or rounded to blend with the natural topography to balance the cut and fill operations (Figure 33). Outside of the roadbed improvements areas, grading work was also required to widen the Potomac Yards wetlands, develop overlooks and parking areas, smooth out abandoned roadways and old beds of trolley tracks, and remove artificial ditches and hillocks that were visible from the parkway.

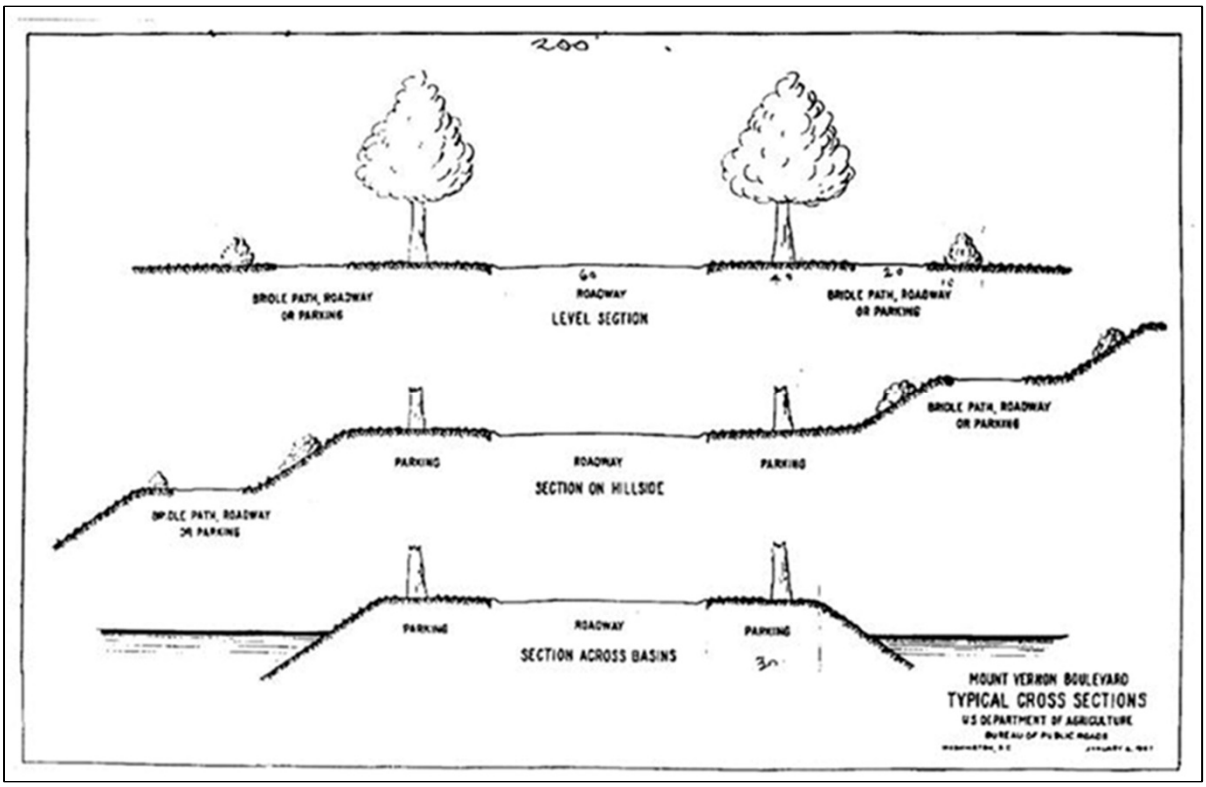


Figure 33. Typical cross sections of the roadway where adjacent conditions are level, at a hillside, or alongside water. "Mount Vernon Boulevard Typical Cross Sections, January 4, 1927" (Taken from Leach 1993, 256).

Topsoil and rock excavated during rough grading was stockpiled and protected for later use at newly graded locations. Much of the stockpiled topsoil was eventually utilized for the planting of the mainland areas. For the topsoiling of the hydraulic fill areas that reclaimed open water sections with sandy or gravelly fills, additional material was required. River silt, dredged from areas excavated for bridge construction, was stockpiled and allowed to dewater in large piles before being spread across the gravel fill areas. Where planting would occur, the silt was blended with large amounts of peat humus and gravel. Preliminary estimates in 1929 assumed that more than 68,500 cubic yards of topsoil would be required to create a nine-inch-deep profile from Alexandria to the railroad bridge. Because only 26,240 cubic yards was salvaged in this section and made available for planting areas, the engineers were forced to look elsewhere to make up the difference. Suitable topsoil was difficult to find in this region at the time. Hence, additional humus and moss peat was added to the available stockpiled topsoil and the proposed depth was revised from nine inches to five or six inches. Additionally, borrow pits of nearby, government-

controlled lands were accessed: Topsoil from a borrow pit east of the Potomac Yards was utilized for the Gravelly Point and Roaches Run shoulders, the grading of the highway bridge section, and the railroad wetland section (Simonson 1933, 114–116).

The contract for grading was awarded to Vincent Schiavi of Buffalo, NY and commenced on March 10, 1930 at the Mount Vernon terminus, advancing north to be completed in May 1931 (Leach 1993, 102). Although the grading plans were finalized prior to the actual work, minor revisions were made in the field to preserve certain remarkable landscape features, such as stands of trees. Schiavi's crew employed gas powered shovels, bulldozers, tractors, trucks, tractor-hauled scrapers, a road grader, and one-cubic-yard gas-powered dragline for grading and pile-driving.

Although the creation of land for the building of the MVMH-North CLI project area was necessary to develop the route and views that the highway's designers and promoters promised, it also resulted in disputes about the jurisdiction of the Potomac River shoreline. The issues dated to the passage of the Organic Act of 1801 when portions of Virginia, including Alexandria, were ceded to the federal government. In 1846, some of the land lying to the east of the Potomac River was retroceded to Virginia and the irregular shoreline was identified as the boundary between the District of Columbia and Virginia. The City of Alexandria was incorporated as a separate jurisdiction from Alexandria County (renamed Arlington County in 1920), and expanded twice by annexation, first in 1915 and again in 1929 when the City's boundary was extended thus:

> "Beginning at the intersection of the north corporate limits of Alexandria Virginia with the west shore of the Potomac River, thence extending… to the center line of the channel of Four Mile Run; thence down the mid-channel line of said Four Mile Run following the meanderings thereof as the same passes under the Washington Virginia Railway (now the Mount Vernon, Alexandria and Washington Railway) and the Washington and Alexandria Road, and extending to the intersection of said Run with the Potomac River, thence following along the west shore line of said Potomac

River southwardly to the point of beginning" (Text of the order of the Supreme Court of Appeals setting the area to be annexed by Alexandria as of December 31, 1929) .

In 1921, the US Supreme Court presided over a case entitled Marine Railway & Coal Co. v. US. The suit was brought to recover possession of a piece of land on the Potomac River waterfront in Alexandria, which had been below the "low-water mark" until the US Corps of Engineers erected a seawall in 1910–12 as part of navigation improvements in the river. The Supreme Court ultimately upheld the jurisdiction of the United States to claim possession of the reclaimed land, arguing that arbitration in 1877 found that the "original boundary was the high-water mark on the Virginia side, but held that the low water mark was established by prescription" (Figure 34) (Smoot Sand & Gravel Corp. v. Washington Airport, Inc., 283 US 348 1931). In 1930, plans were drawn for the development of the MVMH-North CLI project area. Figure 34 shows existing roadways as well as planned infrastructure. In 1931, the "high-water mark" on the Virginia shore was identified as the boundary between Virginia and Washington, DC, a decision made by the US Supreme Court in a case regarding excavations by Smoot for the reclamation of land that would become National Airport a decade later (Larson 1976).

Even before the design and construction of the MVMH-North CLI project area, conversations were already taking place about the eventual siting of a municipal airport for the Washington region (Figure 35). At the time, air service to the nation's capital was through Hoover Field, which opened in 1926 near the present site of the Pentagon, and Washington Airport, which was opened in 1927 adjacent to Hoover Field. In 1927, a joint committee was assembled and, after reviewing two sites, they voted to approve the location at Gravelly Point (the other location being considered was Camp Springs, MD). Debate over the site, accompanied by numerous committee reports, stretched on for over a decade until, in 1938, President Roosevelt announced that he had selected the Gravelly Point site. Roosevelt created the Civil Aeronautics Administration (CAA) whose five members (appointed by the President) concurred that the site was ideal because it was easily accessed via the MVMH-North CLI project area (Robinson & Associates 1997). Because Potomac River dredging operations could readily deposit materials needed to construct the landmass and for future expansion projects, it had a clear approach across the open water, the

site selected was the highest point between Alexandria and Washington. Much of the land around the site was already controlled by the federal government (Robinson & Associates 1997). Much like the claims made about the MVMH-North being a model for modern highway design and construction, the CAA referred to the Gravelly Point site as "an excellent possibility for development as a model airport from the standpoint of beautification, sea and land plane base, and adequate area" (Robinson & Associates 1997, 8). Congressional authority facilitated the appropriation of most of the land between Four Mile Run and the Gravelly Inlet to Roaches Run, including the MVMH-North right-of-way, for the airport (Leach 1993, 178).



Figure 34. Plan for development of Mount Vernon Memorial Highway (US Bureau of Public Roads 1930). Approximate Location of old Long Bridge shown in red.

Early project maps for the MVMH-North CLI project area included labels for a new airport east of the roadway alignment and construction documents included a grade-separated entrance and exit for a road to "Gravelly Point Airport," employing an interchange commonly referred to as "jug handle" or "trumpet" due to its resemblance, in plan, to those objects.



Figure 35. Post-1932 Alexander's Island surrounded by water (atlasobscura.com 2019).

Regardless of all the debates and land disputes, the MVMH was opened in January of 1932 and designed to commemorate the significant contributions of George Washington on the 200th anniversary of Washington's birth and was immediately used by locals and tourists (Figure 36 and Figure 37). It continues to serve its intended purpose of memorializing sites that would have been important to the nation's first president such as the Potomac River, the City of Alexandria, and the US Capitol. It also provides views to landmarks erected in his honor and allows for a continuous patriotic pilgrimage route by which to visit Washington's home, Mount Vernon.



Figure 36. Mount Vernon Memorial Highway. Two [older model] automobiles on Mount Vernon Highway (Horydczak 1920–1950a).



Figure 37. Mount Vernon Memorial Highway. Automobile [older model] in wooded area of Mount Vernon Highway (Horydczak 1920–1950b).

RECREATIONAL AND TRANSPORTATION DEVELOPMENT, 1932–1972

The jurisdiction of the MVMH was transferred from the Office of Public Buildings and Public Parks of the National Capital (OPB&PP) to the National Park Service National Capital Parks in 1934, the same year that the former agency was dissolved, and the latter created (Robinson & Associates 2008).

In 1934 and 1935, several CCC initiatives helped to improve the overall aesthetic and function of MVMH-North. CCC workers constructed bridle paths along MVMH, built a feed storage building and game warden cabin at Roaches Run, remade a well cover at Abingdon, constructed a 20-car parking area at Roaches Run with concrete curbing as well as a tidal gate, bank erosion control, and two miles of trails around the lagoon (Figure 38).



Figure 38. Roaches Run Culvert, Spanning Roaches Run, Arlington, Arlington County, Virginia (HAER 1968).

Aerial photographs from 1934 indicate that, while the offramp from the MVMH-North southbound lane was paved and the bridge that would carry the MVMH-North over the airport arterial was built, the actual road that circles back underneath the overpass and northward to the east was likely only a gravel road (Figure 39). Project landscape architect Wilbur Simonson considered this grade-separated entrance, which would provide "access to the river without cross traffic" to be one of the project's special design features (Simonson 1933, 184). Simonson championed the comprehensiveness of the design, writing:

> The potential opportunities for future development were varied and interesting and presented the desirability of coordinating the highway program with the ultimate possibilities of river front development in harmony with this national memorial project. (Simonson 1933, 25)

Unfortunately, Simonson underestimated the scale of the airport and the eventual impedance upon views of the Capitol from the MVMH-North's only designated overlook, which would be obliterated by the eventual change. Although Simonson wrote that the design created the:

> opportunity of creating for the Nation's Capital, an enlarged water front [sic] area for intensive usefulness by means of river reclamation, with the buildings, if any, in controlled locations that will not interfere with the views of the Capitol and the Potomac from the Memorial Highway. (Simonson 1933, 26)



Figure 39. Aerial photo (January 11, 1934) of MVMH-North of Four Mile Run (left) and Gravelly Inlet (top) with "trumpet" interchange (red box) (Arlington. County Government 2021).

Dredging and land reclamation, carried out by the Smoot Land and Gravel Co. with oversight by the US Army Corps of Engineers, occurred in 1938–1939 (Figure 40). An estimated 20 million cubic yards of sand and gravel were deposited over 325 acres of tidal flats and another 404 acres of open water, producing a 729-acre landmass enclosed by a perimeter dike (EDAW 1992, 49). The general plan for the Washington National Airport was developed by the US Army Corps of Engineers (eTIC 850/85139) in 1939 and was depicted as occupying an oblong land mass that protruded some 2,200 feet into the Potomac from Hunters Point, which was the easternmost part of the shoreline prior to land reclamation for the airport. The newly-built land would push the shoreline more than 3,330 feet from the original alignment of the roadway, which had previously

been just 550 feet from the river's edge. The land reclamation and change in use also necessitated the removal of Capital Overlook as well as the Bureau of Public Roads Test Track and associated buildings. Incidental facilities such as a pistol range, underground film vault, and radio ranges were also demolished to make way for the airport.

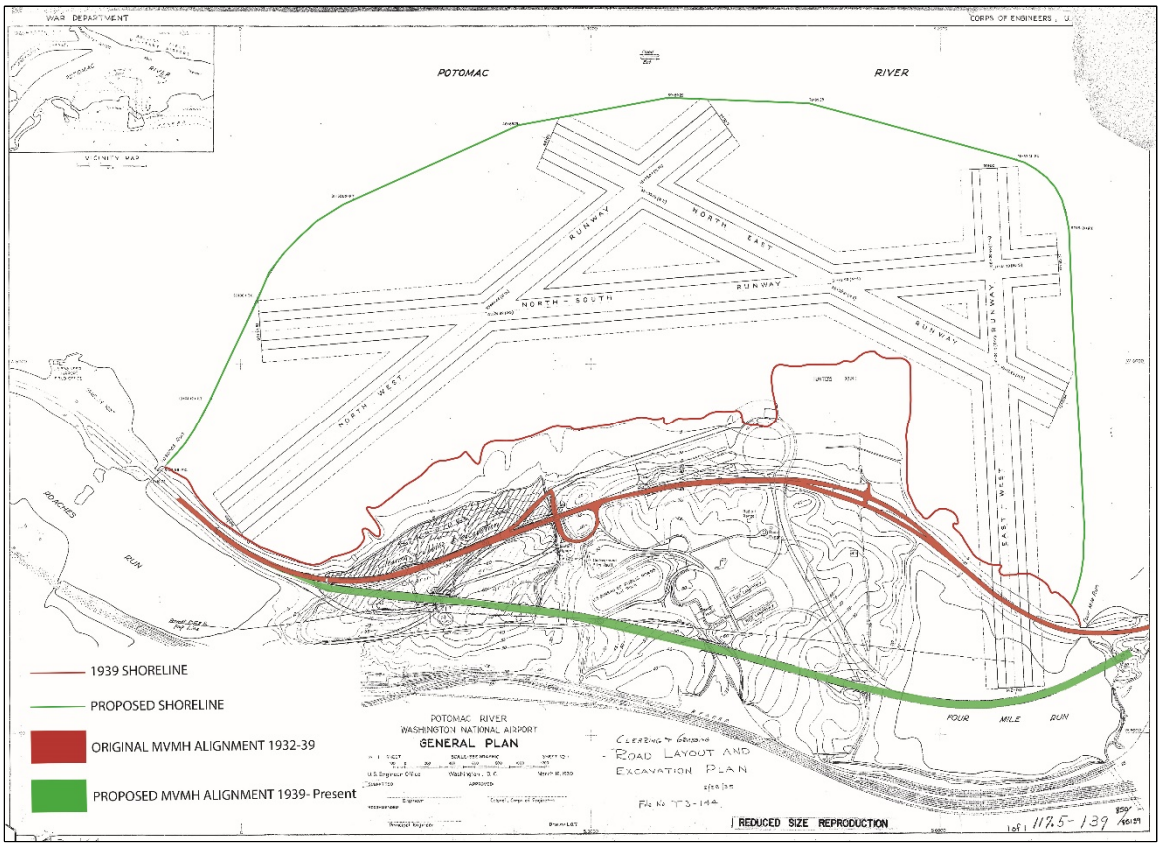


Figure 40. General Plan for Washington National Airport showing the 1939 shoreline and MVMH alignment (red) and the proposed shoreline and MVMH alignment (green) (eTIC850/85139).

The MVMH-North CLI project area between the south extent of Roaches Run and the mouth of Four Mile Run was realigned to accommodate the construction of the airport. The highway was relocated to the west of the original alignment, shortened by 228 feet, and reconnected to the original route. The rerouting required the construction of a new bridge in 1939 at Four Mile Run, replacing the original one designed by Gilmore Clarke in 1931 (this second bridge has since been replaced as well by a circa-1977 Four Mile Run Bridge). As part of the realignment, entrance and exit ramps were inserted to provide access to the airport. From the southbound lanes, an exit ramp was inserted just south of Roaches Run to provide access to the airport by traveling under

the realigned MVMH. The Airport North Entrance Bridge was constructed in 1941 to carry the realigned highway over the airport access road (the bridge was significantly rehabilitated in 2007). From the northbound lanes, an exit ramp to the airport was included with the realigned highway. It departed from the highway and then paralleled the airport's South Hangar Line. An entrance ramp to the highway's northbound lanes spurred from the airport road to facilitate traffic entering the highway traveling towards Washington while an at-grade crossing of the highway permitted traffic to access the MVMH-North southbound lanes. This condition was altered in 1965 with the construction of the Washington National Airport South Exit Bridge and the exit from the highway's northbound lanes to the airport was relocated to the north where it is presently sited. A parking lot for the airport was built to the west of the MVMH-North in the 1950s and was accessed via a pedestrian underpass from the airport to the west side of the highway.

On December 10, 1942, the National Park Service acquired the deed for Daingerfield Island from the Smoot Sand and Gravel Company. The funds for the acquisition came, in part, from a post-construction surplus of $89,839.23 of appropriations provided in 1931 for the Memorial Highway project. By purchasing Daingerfield Island, the federal government prevented the development of it for residential or commercial functions (Leach 1993, 182).

The "island" was a peninsula, although it had formerly been referred to as an island due to the presence of tidal marshlands to its immediate west that often flooded prior to development of the area. An existing conditions survey from 1941 (eTIC 850/122485) illustrates that some development on the island had already occurred: an unimproved road from the MVMH provided access to a fenced 325-square-foot area in the center of the landmass that enclosed five radio towers, and a notch (250 ft x 680 ft) was inserted into the northern part of the island that was not present in a 1927 aerial photograph of the island. The edge of the landmass was depicted, in the 1941 survey, as a sinuous, natural appearing edge with no indication of any bulkhead. By 1943, the National Capital Parks Planning and Construction Division had developed grading and dredging plans (eTIC 850/85624) for Daingerfield Island, which indicated that the earliest improvements took place in the southern part of the landmass (Figure 41). The work included the

removal of some existing dikes and the retention of others, as well as the installation of earthen drainage channels and the filling of low areas. In the mid- to late-1940s, the marina was constructed along the north edge of the previously mentioned notch, with an arcing road from the MVMH-North providing access to a parking lot and small building lying to the north of the marina slips.

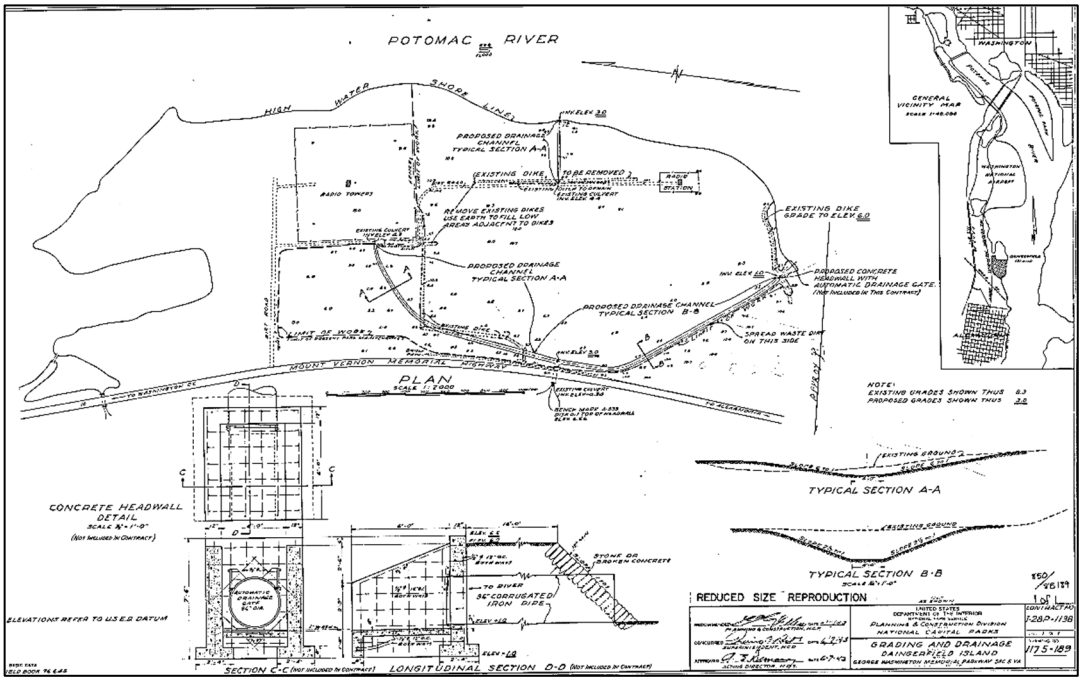


Figure 41. Grading and Drainage Plans for Daingerfield Island (eTIC GWMP-85189).

In 1945, a Federal Act established, within the boundaries of Alexandria, the western pierhead of the Potomac as the legal boundary between federal lands and those controlled by the Commonwealth of Virginia. The Act identified the boundaries as beginning "at a point where the northwest boundary of the District of Columbia intercepts the high-water mark of the Virginia shore of the Potomac River and following the present mean high-water mark…" (Code of Virginia 1950). In 1947, the high-water line was determined by the US Coast and Geodetic Survey and monuments were established, recording the mean high-water line (Van Zandt 1976, 91).

The shoreline of the Potomac River between Daingerfield Island and Jones Point, which lies to the south of Alexandria's Old Town, has been the subject of a myriad of planning efforts meant to

guide development of the City's historic waterfront, none of which have been fully implemented. In 1965, the City of Alexandria published the Alexandria Waterfront Study, which included analysis and a survey as well as a conceptual plan that forecasted development for the next two decades. The Plan was adopted by the City in 1967 and it was followed in 1971 with the City's Urban Design Study. That study called for, among other things, diverse development that attracts many people, a pedestrian promenade, and the identification or creation of landmarks to define the length of the Waterfront (Alexandria.gov 2012, 7).

In 1965, recreational facilities including the boat launch, play fields, and parking lots constructed through the Mission 66 initiative were built at Gravelly Point. The NPS's Mission 66 initiative (1956–1966) was influential in the recreational facilities at Gravelly Point and Daingerfield Island along MVMH-North. Mission 66 was designed to modernize the national park system after decades of deferred maintenance and decreased funding. One of the primary goals of Mission 66 was to bring the parks up to modern standards of comfort, health, efficiency, and innovation (Quinn Evans Architects 2019, 5–6). When first built, the MVMH-North had a series of wooden bus stops, bridges, underpasses, culverts, and the highway itself, but very few associated buildings and structures. As the road was realigned for the Washington National Airport and then for the interstate highway system, and the highway's scenic and recreational functions, additional features were added to MVMH. Prior to the reclamation of land this area was largely undeveloped. These transportation improvements and installation of recreational facilities at Gravelly Point speak to the intense modifications to the landscape that occurred during this time period. Additional improvements were part of Lady Bird Johnson's highway beautification program. This resulted in the planting of a grove of dogwoods at Gravelly Point in 1967 which came to be known as Governors Grove. The First Lady described the scene thus:

> Our destination was Gravelly Point…. We had fifty-four white flowering dogwoods ready…– one for each state and territory. We had planned for all of the Governors' wives to throw their spadefuls of dirt simultaneously. The trees were located as much as two blocks apart. We walked through mud to the shoe tops, and the temperature was at a freezing 29 degrees. (Johnson 1970, 505)

At the time of the tree planting a plaque was also installed, however by 2021 the plaque was all that remained due to unsuitable land for tree growth. Mission 66 improvements within

Daingerfield Island occurred in 1972 and included a Type F Comfort Station, with restrooms, showers, and a utility sink and was located near the marina.

Public interest in outdoor recreation in the United States in the 1960s and 1970s led to the creation of the MVT, a multi-use trail stretching from Mount Vernon north to Memorial Bridge. Prior to the development of the MVT, cyclists traveled on the vehicular lanes of the MVMH-North. Due to the popularity of bicycling, one lane of the MVMH-North was closed on Sundays to accommodate the numbers of cyclists. In 1971, local bicycling advocates Ellen Pickering and Barbara Lynch began to solicit the NPS to construct a trail along the MVMH-North. Citing a lack of funds, then-assistant director at NPS Manus "Jack" Fish, Jr., agreed that, if volunteers would participate as a manual labor force, NPS would provide gravel, a crew to operate machinery, and a right-of-way for the trail. The first section – constructed by volunteers, surfaced with compacted gravel, and measuring six-feet-wide – extended from Slaters Lane in Alexandria to the 14th Street Bridges and opened on April 15,1972 (Tabor 2001). The entire length of the MVT paralleled the MVMH-North, lying just to the east of the roadbed.

PRESENT USE, DEVELOPMENT, AND ALTERATIONS, 1973–PRESENT

In 1973, the federal government entered into litigation with the City of Alexandria and several private landowners regarding the jurisdiction of 39.5 acres of the waterfront between Daingerfield Island and Jones Point. The litigation resulted in settlement agreements for each parcel, which has complicated the development of the shoreline (Robinson & Associates 2011, 59).

In 1974, a feasibility study authorized by the National Trails System Act (1968) provided the basis for the Potomac Heritage Trail (PHT), a corridor linking the mouth of the Potomac River to its sources in Pennsylvania and Maryland.

Transportation improvements were also being completed during this time. The Metro station at Washington National Airport and associated tracks were built beginning in 1973. By 1977 the WMATA opened the Blue Line with trains running from Washington National Airport to Stadium-Armory, and in 1983 the Yellow Line had trains running from Huntington to Gallery

Place. Beginning in 1974, and in response to flooding associated with development along Four Mile Run, the US Army Corps of Engineers worked with local municipalities in Arlington and Fairfax Counties to develop a flood-control channel in the stream's lower portion. This project straightened the lower part of Four Mile Run, created a trapezoidal flow channel, and installed a flood control levee. The bridge constructed in 1939 (which replaced the 1931 bridge) to carry the Mount Vernon Memorial Highway over Four Mile Run was demolished and replaced in 1977 by a wider one to accommodate increased traffic. In 1983, legislation was passed to amend the 1968 Act to include the PHT, of which the 17-mile-long MVT between Mount Vernon and Theodore Roosevelt Island was a part (Robinson & Associates 2008).

In 1981, a joint-use plan was developed between the City of Alexandria and the Federal government resulting in the rezoning of 11.5 acres of city-owned land. Through the plan, the Federal government would relinquish fee ownership of the waterfront properties and grant scenic and access easements to protect public interest where development was concerned (Robinson & Associates 2011, 59). This was the result of the 1974 Consolidated Master Plan produced by the City of Alexandria, which replaced all previous planning documents. In 1979, the US Department of the Interior drafted the Alexandria Waterfront Study of Alternatives, which included a "maximum open space" plan and a "mixed open space" plan (Figure 42). It also outlined several goals and objectives for the Potomac River shoreline from Daingerfield Island to Jones Point. Among these, the Study called for the retention of the natural shoreline and prevention of major infill, the preservation of open space, the removal of obsolete or incompatible uses, the protection and enhancement of cultural, scenic, and natural values, the protection and interpretation of archaeological resources, the establishment of land use controls, and the enhancement of recreational uses through the establishment of parkland and a multiuse promenade. The Study also outlined the history of the associated land disputes and provided a map that identified the 1791 shoreline in relationship to those disputes (Figure 42).

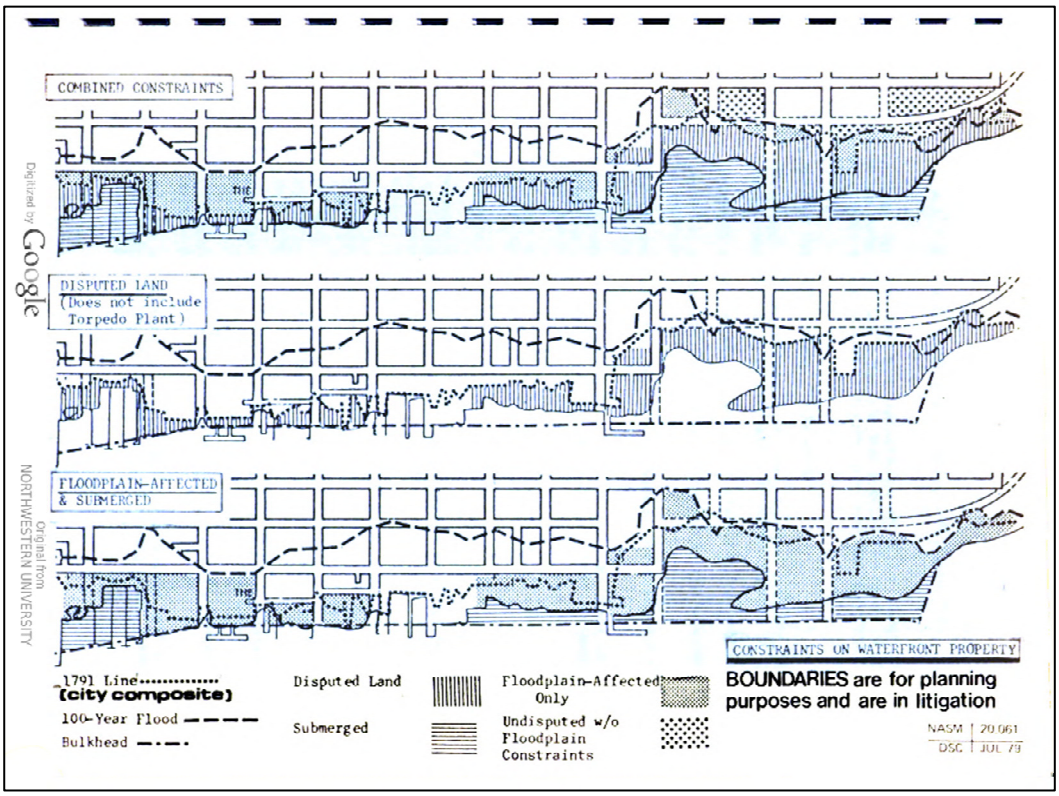


Figure 42. Constraints on Waterfront Property (NPS 1979).

Between 1982 and 1983, the National Park Service settled its suit against the Potomac Electric Power Company (Pepco) and another suit with the Marina Towers condominium. The Potomac River Generating Station, a coal-fired power plant on a 25-acre site at 1300 N. Royal Street on the banks of the Potomac River, began operating in 1949 to provide electricity for Washington, DC. The Marina Towers is a riverfront 14-story, 282-unit condominium complex built between 1967 and 1970 just to the north of the power plant at 501 Slaters Lane. The settlements with both Pepco and Marina Towers resulted in a permanent easement for a multiuse trail along the river. The settlement with Pepco also included a land swap, with the National Park Service gaining half an acre near the river in exchange for a quarter acre close to the plant given to Pepco.

Additionally, Pepco provided an easement along the shoreline and gave $250,000 for the construction of a bike trail adjacent to their holdings all the way to Daingerfield Island (Figure 43). Pepco also agreed to pay an estimated $172,000 for the construction of a 150-foot-long cantilevered bridge attached to its screen house, which would serve as a connection for the trail

over the river at the property retained by Pepco. The construction of the multiuse trail and cantilevered bridge supplemented a connection that the City had made for the Mount Vernon Trail in 1976, which paralleled the railroad right-of-way just south of Slaters Lane and connected it via East Abingdon Drive to the existing Mount Vernon Trail along the MVMH-North to the west of Marina Towers. The new shoreline trail provided an alternate route that avoided city streets and activated the waterfront in keeping with the recommendations made by NPS in 1979. Both the railroad and the shoreline trail extensions served to connect the MVMH-North section of the MVT with the southern section of the MVT, which was built from Alexandria to Mount Vernon in 1973 with $135,000 in funds secured for its construction by special appropriation (Tabor 2001).

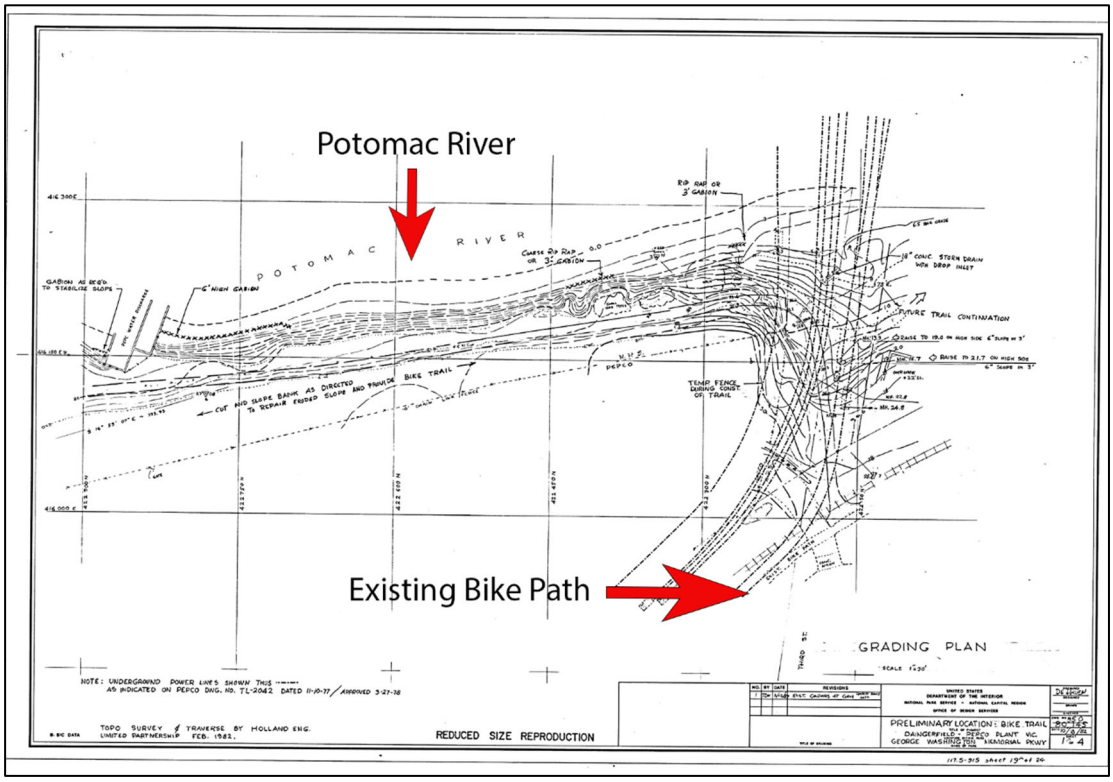


Figure 43. Preliminary Location of Bike Trail along the Alexandria Waterfront, Daingerfield-Pepco Plant (eTIC GWMP-80145).

In an effort to revitalize the MVMH-North, the NPS and the Federal Highway Administration repaired and replaced concrete that was deteriorating along the entire length of the road in 1984. This $2 million project also included the reconfiguration of access points for safety and used materials that would mimic the original surface in an attempt to retain the setting and feeling of this significant roadway. Years later, in 1992, the Mount Vernon Trail was extended to Crystal City, Virginia by adaptive reuse of an abandoned tunnel under the railroad tracks, close to the Washington National Airport. Today the trail is nearly 18 miles long.

In 1994, a series of new buildings were constructed at the Parkway Maintenance Headquarters adjacent to the Washington National Airport. This cluster of buildings includes the Parkway Maintenance Headquarters Building, Building #2 Auto and an Equipment Repair Shop, Building #3 Salt and Sand Storage, Building #4 Grounds Operation Storage, Building #5 Grounds Operations Building, Building #6 Grounds Operation Building, Building #7 Roads and Bridges/Tree Operations, Building #8 B & U/Signs, Building #9, and Building #10 (Breezeway between Buildings #8 and #9).

In 1997, an eighteen-acre portion of Washington National Airport that was once part of the MVMH was listed in the National Register of Historic Places. This area contained the ruins of Abingdon, a plantation owned by the Alexander family for whom Alexandria is named. The property included a brick mansion, servants' quarters large enough for more than fifty enslaved persons, terraced lawns, orchards, and graveled walks that led to the river. To preserve a portion of the archaeological remains of this historic site, the Airports Authority issued a preservation plan, which resulted in archaeological investigations and restoration efforts, completed in 1998. Today, the reconstructed house foundation and historical markers can be seen on a knoll between the airport parking garages.

The same year the Abington restoration efforts were completed, the Potomac River was designated as an American Heritage River which was a program that included natural resource, environmental, historical, and cultural preservation as well as economic revitalization of the river. Designating the Potomac River as an American Heritage River aided in the collaboration of

the community and the NPS to help restore and promote the river. In 2000, the Greens Scenic Area was established. This easement is held by the National Park Service on land owned by the City of Alexandria, comprising freshwater wetlands and woodlots. While it is outside of the MVMH-North CLI project area, it provides an accurate depiction of the physical nature of the area as well as historic scenic qualities for the MVMH-North.

In 2005 the US Department of Transportation designated the GWMP as an All-American Road in the National Scenic Byways Program. This important program recognizes significant historic, scenic, and culturally relevant roads. This endeavor helps to promote tourism and overall economic development, which was one of the impetuses for the construction of the MVMH.

The 1941 Airport North Entrance Bridge was rehabilitated in 2007. In 2006, it had been determined that the bridge was deteriorating and that the MVT was a safety concern because of its close proximity to the roadway. The two-span steel plate girder bridge carries the MVMH-North over the north entrance to Washington National Airport (Kuhn et al. 2021, 13; 96). According to a FHWA Bridge Inspection Report from March 2003, planned improvements to the bridge included cleaning and painting of superstructure beams, replacing and widening of the deck, and construction and attachment of a pedestrian bridge with a barrier wall to separate it (Virta, personal communication 2021).

Between 2008–2011, additional improvements were completed on MVMH-North, including the Boundary Channel Bridge (Humpback Bridge). This structure was originally built in 1932 and was constructed with local stone in an effort to blend into its surroundings (Kuhn et al. 2021). The improvements to this bridge included a wider span to allow for more traffic and associated safety features and was completed in 2011. This bridge is just outside of the CLI boundary, but an important feature of the MVMH overall. That same year, the stub “Pentagon Lagoon Trail” was constructed as part of the Humpback Bridge rehabilitation project. This trail begins at an intersection with the Mount Vernon Trail at the north end of the MVMH-North cultural landscape and then parallels the Boundary Channel as it crosses beneath the MVMH-North and the Humpback Bridge.

In 2016, a portion of the Mount Vernon Trail near the Washington National Airport received upgrades in the form of a realignment of the trail, the installation of a stone masonry guard wall, and asphalt pavement milling (US Department of Transportation n.d.). That same year a Virginia Electric and Power Company-owned transformer tank ruptured at the Crystal City Substation, discharging approximately 13,500 gallons of mineral oil dielectric fluid. An undetermined amount entered Roaches Run, resulting in compensatory restoration actions and habitat enhancement.

In 2020, the NPS conducted a study of the Mount Vernon Trail to assess trail conditions, safety concerns, and the needs of visitors (NPS 2020). This document examined the entire 18-mile corridor, parts of which traverse through the MVMH-North CLI project area and resulted in a number of recommendations on how to improve the user experience.

Future improvements include updates to Boundary Channel Drive at I-395. This work, while largely outside of the MVMH-North CLI project area, will entail adding crosswalks along Boundary Channel Drive, ramp upgrades, and a shared-use path linking the Mount Vernon Trail to Long Bridge Park (VDOT 2022).

Currently there are plans to upgrade the current Long Bridge and add a new bridge to the 14th Street Bridge Complex (The Long Bridge Project). Today the Long Bridge (Potomac Railroad Bridge) houses a CSXT-owned two track line that serves freight, CSXT, Amtrak, and commuter rail (Virginia Railway Express). The Long Bridge Project consists of building a new two-track bridge upstream of the existing Long Bridge and upgrading to a four-track crossing (Long Bridge Project 2020). Components of this project also includes the creation of a new bike-pedestrian shared-use path that spans the George Washington Memorial Parkway and the Potomac River (Long Bridge Project.com 2020). As of 2020 it was expected to be a ten-year construction project (Virginia Mercury 2020).

Analysis & Evaluation

Analysis and Evaluation Summary

The following section provides an inventory of the landscape characteristics and features of the MVMH-North cultural landscape and provides analysis and evaluation of the integrity of those characteristics and features. Each landscape characteristic consists of one or more features, and these features are evaluated as either *contributing* or *noncontributing* to the cultural landscape's integrity. If a feature exhibits integrity and was present during the landscape's period of significance (1929–1972), it is considered contributing. Noncontributing features are those that postdate the period of significance. These are evaluated as *compatible* if they do not compromise the integrity of the historic character of the landscape and as *incompatible* if they diminish the integrity of the landscape. Certain features may be categorized as *undetermined* if further research is needed to determine their date of construction falls within the period of significance.

The landscape characteristics and features most relevant to the analysis and evaluation of the MVMH-North cultural landscape consist of natural systems and features, spatial organization, land use, topography, vegetation, circulation, buildings and structures, and views and vistas. Although constructed water features, small-scale features, and archeological sites are present and have been evaluated, these features contribute only minimally to the MVMH-North cultural landscape. These characteristics and features are described in detail in the following section.

Natural Systems and Features Summary

The MVMH-North cultural landscape was designed, in part, to reveal the Potomac River, its tributaries, and the area's natural environment. Roaches Run was recognized by the MVMH's designers as an asset to the MVMH and they recommended its enhancement for its recreational opportunities and habitat qualities. Reclamation projects filled portions of the tidal wetlands to create a lagoon with a more defined shoreline. Although the shore of the Potomac River was engineered through reclamation activities to enable the construction of the MVMH, these efforts were sensitive to the naturally occurring, sinuous qualities of the river. Cut and fill operations, though extensive, were done sensitively to preserve the naturally undulating character of the Coastal Plain environment. The MVMH ultimately helped preserve the natural qualities of the

Potomac River, much as its designers had intended. In the 1940s, the Four Mile Run estuary was channelized as the Potomac Yards grew, but in the mid-1970s it was daylighted and naturalized where it empties into the Potomac. Similarly, although Daingerfield Island has been developed to include a marina and plant nursery since it was added the GWMP in the 1940s, today it provides habitat for migratory animals, serves as an urban green space, and its wetlands absorb stormwater before it enters the Potomac River. The primary natural systems and features that contribute to the MVMH-North cultural landscape include the Potomac River shoreline, the mouth of Four Mile Run, the Roaches Run Waterfowl Sanctuary, and the wetland and woodland environs of Daingerfield Island. The present condition of these natural systems and features retains a high degree of integrity to the period of significance.

Spatial Organization Summary

Comprising 813 acres along a 4.45-mile-long corridor, the MVMH-North cultural landscape is a linear one and its spatial organization is influenced by natural systems and features, topographic and circulation features, and vegetation. These characteristics—especially topography and vegetation—were exploited by the highway's designers to create a sequence of experiences for the motorist. From south to north, the highway transitioned from Alexandria's historic Old Town and residential environs to a pastoral landscape to an urban one, a sequence that was made more pronounced with vegetation planted to create outdoor rooms. A dedicated and protected right-of-way (200 feet at the minimum and wider at many points along the MVMH) controlled future development and limited physical and visual interruptions, as did the employment of limited access points. The edges of the cultural landscape were largely formed by the Potomac River along the east and the railroad infrastructure along the west. The specific, character-defining features that comprise spatial organization in the MVMH-North cultural landscape are the right-of-way bordered on one side by the Potomac River and on the other by the railroad corridor, the outdoor rooms, the rolling topography, and the linear qualities of the landscape. Although the number of overhead crossings and access points have increased since the original construction of the MVMH, vegetation has matured and become more diverse which has diminished the legibility of the rooms, and urban development has expanded along the western edge of the cultural landscape, the character-defining features related to the spatial organization of the

MVMH-North cultural landscape retain a moderately-high degree of integrity from the period of significance.

Land Use Summary

The MVMH-North cultural landscape was designed, primarily, for recreation and commemoration. It coexisted with one of the largest railroad switching yards on the East Coast, gravel mining operations, brick manufactories, and the ever-enlarging Washington National Airport. The northern part of the MVMH-North cultural landscape was already the location of vehicle and railroad bridge crossings from Virginia to Washington, DC when the MVMH was constructed. Although more bridges are located there now than during the early years of the MVMH, the overall land use in this area has been retained. Roaches Run was recommended to become a wildlife sanctuary as early as 1934 and the subsequent CCC activities there enabled this use. Although the products of the CCC labor no longer exist (save the layout of the parking area and, perhaps, remnants of the fence erected by the laborers), the original land use remains. Daingerfield Island, added to the park in the 1940s, evolved from being used primarily for radio towers and gravel operations before it was purchased by the Federal government to its current recreational use. Once acquired though, the northern part of the peninsula was converted to a marina while the central and southern portion of it was converted to a plant nursery. Although the plant nursery is no longer active, the use of that area for NPS maintenance equipment and materials storage is compatible with the former use. The northern part of the peninsula retains its use for recreational maritime activities and boat storage/mooring. Although the MVMH-North has become a major commuting route, the highway itself still retains its function as a recreational driving route commemorating George Washington. Overall, the MVMH-North cultural landscape retains a high degree of integrity of land use.

Topography Summary

The designers of the MVMH took great care to ensure that the highway was laid lightly upon the land, with field surveys of the natural undulations of the Coastal Plain terrain playing heavily into the layout of the route. The reclamation of areas along the Potomac River shoreline and in some wetland areas did result in minor alterations to the naturally occurring topography, but this

work was done in a way that, once completed and vegetated, left a sinuous and rolling edge that appeared natural, as opposed to one that was battered with a bulkhead or studded with riprap. The naturally occurring topographic features incorporated into the MVMH were considered in the selection and enhancement of designed views and vistas. Cut and fill operations were undertaken in a way to avoid unsightly and unnatural scarring of the rolling terrain. On a more minute scale, the employment of superelevation at curves is a topographic characteristic that enabled a safe driving experience for motorists. The topographic character of the MVMH-North cultural landscape retains a high degree of integrity from the period of significance.

Vegetation Summary

The original planting palette for the MVMH was designed in 1932 by landscape architect Wilbur Simonson and nurseryman Henry Nye to replicate that of the natural Coastal Plain, to screen unwanted views while accentuating desirable ones, and to create a sequence of vegetation zones that motorists would pass through. The original plant selections were limited along that sequence to create outdoor rooms, however later plantings (most notably those from 1936, 1942, 1949, and 1964) introduced greater plant diversity and a proliferation of evergreen species, which resulted in a loss of that sequence as originally designed. The maturation of vegetation and the increase in forest coverage has diminished the legibility of the original composition and has contributed to the obscuring of certain views and vistas. Although the structure of the planting plans is still evident by the presence of mature canopy trees, the absence of ornamental trees and shrubs diminishes the nuanced character originally contrived. On Daingerfield Island, the former plant nurseries are but remnants today, with secondary growth occurring across the peninsula and the presence of invasives is notable. Recent efforts to restore the aquatic and wetland vegetation at Roaches Run have been undertaken, although this area was barely considered in earlier planting plans other than a few specimen trees and numerous willows specified in the original 1932 plans. Memorial trees planted in 1932–1933 near Four Mile Run, at the Capital Overlook, and in the cloverleaf are no longer extant. The dogwoods of Governors Grove, planted in 1967 on Gravelly Point and replaced in 1980, have not survived due to the harsh conditions of the reclaimed peninsula. Near Washington National Airport, the “topping” of trees is regularly practiced, which lends an unnatural appearance to the mature vegetation in this area. Lastly, changing

maintenance regimes has resulted in less care of the MVMH's vegetated character. The integrity of the MVMH-North's vegetation is overall diminished, and the integrity of its memorial groves is lost.

Circulation Summary

The MVMH is, first and foremost, a road built for motorists. The Bureau of Public Roads and the chief designers of the MVMH applied innovative design principles when laying out the highway. These included the use of the cloverleaf and grade-separated interchanges, limited access, spiral curvature, and superelevation. Although some of the original circulation features have been altered, many of these alterations occurred within the period of significance and were done with such care that today's motorist does not discern any difference between these areas and those that are unchanged from the original. The most notable of the alterations include the following: the innovative cloverleaf interchange at the north end of the cultural landscape is no longer extant and has been replaced by a series of on and off ramps; the alignment of the MVMH was revised for the construction of the Washington National Airport; the Alexandria Circle—identified by its designers as both a "logical" and "suitable" transition—has been removed; two lanes were added between Alexandria and Four Mile Run in 1963 to accommodate increased traffic; and more access points have been added to the MVMH. Although the Mount Vernon Trail was added to the cultural landscape late in the period of significance, it is an important circulation feature that accommodates both transportation uses (as a commuter route) and recreation and is compatible with the historic landscape. Overall, despite these many alterations, the MVMH-North cultural landscape's circulation retains a medium degree of integrity.

Buildings and Structures Summary

When first built, the MVMH-North had very few associated buildings and structures. There were a series of wooden bus stops, bridges, underpasses, culverts, and the highway itself. As the highway's scenic and recreational functions expanded, and the road was realigned for Washington National Airport and then for the interstate highway system to expand the Potomac River crossing, additional features were added to the MVMH. The original structures, such as the stone-faced bridges and underpasses, established the rustic style so characteristic of the MVMH.

After the initial period of construction, several buildings and structures were added during the NPS Mission 66 campaign, providing recreational features and support facilities. These buildings and structures are significant for their connection to this building campaign and the "Park Service Modern" architectural style. The Buildings and Structures of the MVMH-North include bridges, culverts, comfort stations, marina buildings, GWMP maintenance buildings, boat launches, and a greenhouse and sheds. Some bridges have been repaired, altered, or replaced over the years, as the highway was realigned. However, overall, the buildings and structures of MVMH-North retain a high level of integrity.

Constructed Water Features Summary

Constructed water features are built features and elements that utilize water for aesthetic or utilitarian functions in the landscape. Water elements and views of and across the Potomac River were an important consideration in defining the route and design of MVMH. There are two constructed water features within MVMH-North: Roaches Run Lagoon and the Daingerfield Island Boat Embayment/Harbor. Roaches Run was part of the original design of the highway, creating a sanctuary for waterfowl and bird watching and was constructed by the CCC. The Daingerfield Island Boat Embayment/Harbor is related to the recreational nature of MVMH-North that expanded during the Mission 66 era. Both constructed water features retain their integrity and contribute to the scenic and recreational nature of the MVMH-North.

Views and Vistas Summary

The design of the MVMH both enhanced natural conditions and created new ones that provided significant views of the Potomac River and of many local landmarks. Proposed cones of view were shown on the original (1932) planting plans for the MVMH. Although the subjects of these views were not labeled, generally they provided long panoramic views of and across the Potomac River and more focused views of the Washington Monument and of the US Capitol Building. Only one overlook was designed for taking-in the view, but, due to the realignment of the MVMH and subsequent building of the Washington National Airport, this overlook was removed and the views it provided were lost. Through the years, as planned vegetation has matured, volunteer vegetation has gone unmanaged, and peripheral development has increased,

many of the views indicated by Simonson in 1932 have been lost. In some areas, views of the Potomac River, of the Washington Monument, and of the US Capitol Building are still available. Overall, the views and vistas associated with the MVMH-North cultural landscape have a low level of integrity.

Small-Scale Features Summary

Many of the small-scale features originally designed for and installed in the MVMH-North cultural landscape provided visual interest and contributed to the commemorative mission of the highway. Among these were rustic timber guardrails, signs for wayfinding and road conditions, light standards, and memorial plaques and markers. Beveled curbs defined the roadway from the vegetated buffers while still allowing motorists to remove disabled vehicles from the traffic lanes. These have been replaced over the years with compatible curbing. Light standards selected for the MVMH-North alignment were different than those specified for the MVMH-South section, which was a response to the more urban character of the MVMH-North section. Signage that was designed for the MVMH to accentuate the commemorative aspect of the driving route was later removed and replaced by standard directional and safety road signs. Rustic timber guardrails have been replaced with modern guardrails, which are not compatible with the parkway experience. Overall, small-scale features have a low level of integrity from the period of significance.

INTEGRITY

Location

Location refers to the place where a historic property was constructed or where a historic event occurred. Although the route of the MVMH-North has changed slightly over time due to the construction of the Washington National Airport, the expanded interstate highway system crossing the Potomac, and general improvements to circulation, overall, the integrity of location remains high to the period of significance (1929–1972).

Design

Design is the combination of elements that create the form, plan, space, structure, and style of a property. The design of the MVMH-North retains high integrity to its period of significance, and this adds to its historical significance as an early parkway construction project. Although changes have been made to its alignment at the Washington National Airport and with the construction of new lanes in the section between Alexandria and Four Mile Run, these alterations have been compatible with the original design and character. Structures retain integrity; spatial organization retains fairly high integrity to the period of significance. Views and vistas, which were important characteristics to the design of the MVMH, have a low level of integrity, as do small-scale features. In addition to maturing, vegetation has been replaced in some areas and supplanted in other areas in ways that are not compatible with the original design. The recreational additions to the MVMH-North from the latter part of the period of significance, which comprise the Mission 66 improvements at Gravelly Point and Daingerfield Island as well as the building of the Mount Vernon Trail, continue the idea of a mixed-use highway for scenic driving, local residents, and recreational use.

Setting

Setting is the physical environment of a historic property or cultural landscape. The setting of the MVMH-North has changed dramatically since its initial construction, as suburbanization in northern Virginia has boomed since the mid-twentieth century and continues today. However, vegetation and topography help to screen this development from the roadway, and the driver's eye is focused, when not on the cars in front of them, on the scenic views and vistas of the Potomac River and the monuments of Washington, DC. Overall, the integrity of setting is moderate for the western edge of the MVMH-North cultural landscape and moderately high along its eastern perimeter.

Materials

Materials are the physical elements that were combined during a particular period of time in an identifiable pattern or configuration. The materials used in the MVMH-North roadway are consistent with the original design, even though resurfacing and other improvements have occurred. When

replacements or new construction have been required, they have used stone facing and other elements to maintain the rustic feel. The most significant material changes are the loss of rustic wood guardrails and the replacement of custom-built signage with more modern highway signage. All these small-scale features were removed from the cultural landscape, most likely within the period of significance. Overall, the materials of the MVMH-North retain a medium level of integrity.

Workmanship

Workmanship refers to the physical evidence of the crafts of a particular culture during any given historic period. Workmanship is seen in the construction and maintenance of the roadway itself, and in the buildings and structures, constructed water features, and vegetation planted and maintained along MVMH-North. While there are some signs of deterioration of materials or plants that have become overgrown, overall, there is a medium level of integrity of workmanship.

Feeling

Feeling is a property's expression of the aesthetic or historic sense of a particular period. The style of the parkway was an important part of its commemorative and recreational design plans. The naturalistic design of the 1932 planting plan was created to reflect the Virginia Coastal Plain landscape. MVMH-North was also designed as a setting for picnicking, scenic driving, and other outdoor recreational activities, which it still retains today. Although the vegetation has grown and additional plants have been added over time, the plant groupings still contribute to the naturalistic feeling of the MVMH-North cultural landscape. To the contrary however, the maturation of vegetation and the planting of additional trees since the original planting period has resulted in the loss of clarity of some of the important views and vistas, which were important to conveying the feeling of the commemorative route. Overall, MVMH-North retains a medium level of integrity of feeling.

Association

Association is the direct link between an important historic event or person and a historic property. The Mount Vernon Memorial Highway was purposefully built as a commemorative landscape to

honor George Washington at the 200th anniversary of his birth, so its associations with George Washington are paramount to its historical significance. The views of the Washington Monument were intentional and framed for MVMH-North. Although some of the views of the Washington Monument have been diminished by the maturation of vegetation, it remains a prominent feature in the landscape. The original associations with George Washington are intact.

Landscape Characteristics and Features

This section presents an analysis of landscape characteristics and their associated features and corresponding CRIS-HS names and numbers, if applicable. It also includes an evaluation of whether the feature contributes to the property's National Register eligibility, contributes to the property's historic character, or if it is noncontributing, undetermined, or managed as a cultural resource. As documented in previous sections, the period of significance for the Mount Vernon Memorial Highway – North of Alexandria (MVMH-North) cultural landscape extends from 1929 to 1972.

Landscape Characteristic Narratives and Features

Natural Systems and Features

Natural systems and features are the natural aspects that have influenced the development and physical form of the landscape, and can include geology, geomorphology, hydrology, ecology, climate, and native vegetation. The MVMH-North design and construction preserved and enhanced the region's naturally occurring Coastal Plain conditions, including the Potomac River and its tributaries, marshland, and the region's rolling topography. The retention and enhancement of the existing natural systems and features was of great value to the designers of the MVMH-North, with care exercised to conserve and protect scenery and to take advantage of natural considerations. "Landscape information, such as foliage lines, specimen tree groups, overlook points, river views, and other existing features of commanding control, were plotted on [the] photostatic layout by transfer from the airmaps as needed" (Simonson 1933, 15). The topographic character of the MVMH-North cultural landscape has been highly influenced by hydrological systems that produced undulating hills, riverine inlets, and marshlands.

Historic Condition

Hydrology

The MVMH-North inventory unit occupies the western bank of the Potomac River. The Potomac River extends some 383 miles from its source at the North Branch at Fairfax Stone in West Virginia to the Chesapeake Bay. The drainage area of the Potomac basin is some 14,670 square miles, draining parts of Pennsylvania, West Virginia, Maryland, and the District of Columbia. The greatest flow along the Potomac (as it passes through Washington, DC) was recorded at 275 billion gallons per day in March 1936. The lowest flow was 388 million gallons per day, recorded in September 1966. The average flow of the Potomac near the inventory unit is seven billion gallons per day (Interstate Commission on the Potomac River Basin). Passing through five physiographic provinces, the Potomac River enters the Coastal Plain near Little Falls and transitions to a wide, broad, shallow condition. George Washington spent most of his life living in and surveying the Potomac basin. The preservation and enhancement of the Potomac River was significant to the final siting and layout of the MVMH.

The MVMH-North cultural landscape is situated within the Northern Atlantic Coastal Plain aquifer system, a hydraulically connected system of regional groundwater units. In sequence from shallowest to deepest, these comprise the surficial aquifer, the Chesapeake aquifer, the Castle Hayne-Aquia aquifer, the Severn-Magothy aquifer, the Peedee-Upper Cape Fear aquifer, and the Potomac aquifer. The Potomac aquifer consists of the local Patapsco aquifer and the Patuxent aquifer, the deepest of the local aquifers (Federal Railroad Administration, District Department of Transportation, Virginia Department of Rail and Public Transportation 2020).

The largest tributary that empties into the Potomac in the MVMH-North cultural landscape is Four Mile Run. The tributary is a 9.4-mile-long stream that drains a 19.6 square mile watershed. Four Mile Run originates in what is, today, Fairfax County and then enters Arlington County, passing from the Piedmont to the Atlantic Coastal Plain. Throughout the colonial period, mills located along the course of the stream provided flour from locally grown wheat and corn. Some 6000 acres surrounding the lower part of Four Mile Run were purchased by John Alexander in 1669 and the land was eventually subdivided. George Washington owned a parcel of wooded

land along the stream, which he surveyed in 1785. Between 1860 and 1968, a railroad paralleled the stream through most of Arlington County. Over the years, Four Mile Run was strikingly modified from a sinuous, natural river corridor into a straightened channel dramatically shaped by industrial urban development. The stream's riparian buffer and adjacent wetlands were eventually supplanted by roads, parking lots, and buildings, with the massive Potomac Yards spreading across the lower portion of the waterway by the first decade of the twentieth century.

Roaches Run is a name used to describe both the approximately 67-acre lagoon lying to the west of Gravelly Point and the tidal inlet that allows water to ebb and flow between the Potomac River and the lagoon. The name may be related to "Roach's Run," which dates to the 1840s and the family of Philip Roach, immigrants from Ireland who owned property on Prospect Hill (Hoe Hill) on the north end of what would become known as Arlington Ridge. The Roach family operated a grist mill on Four Mile Run and brickyards on or near "Mill Branch on Shallow Creek," later known as "Roach's Run" (Pratt 1999). Roaches Run, along with "Gravelly creek" and the Eastern Branch (Anacostia River) were favored locations for snipe hunting near Washington, DC in the 1890s (Evening Star 1897). The Roaches Run watershed is approximately 684 acres, the tenth largest watershed in Arlington County (CH2MHill 2013).

In addition to groundwater and surface water, the inventory unit is characterized by wetlands and associated ecological systems. Wetlands are defined as areas that are "inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (United States Environmental Protection Agency 2021). In support of the building of the highway, engineers filled some of the wetlands and "tidal flats" associated with the Potomac and its tributaries. The 1932 planting plans indicate a large swampy area to the west of the nascent highway right-of-way adjacent to Daingerfield Island. Indeed, the "island," which is, technically, a peninsula connected to the mainland, is so-called due to the presence of that marshland during the period of settlement that predated the construction of the MVMH. Other wetlands would have been present along the river's edge and certainly existed along the margins of Four Mile

Run, Gravelly Inlet, and Roaches Run. These wetlands would have included flora and fauna resources that were displaced by the reclamation efforts associated with the MVMH.

Geomorphology

Coastal Plain geomorphic features typically consist of floodplains, riverbanks, and broad, shallow river bottoms. The shoreline of the tidal Potomac River serves as the eastern edge of the MVMH-North cultural landscape. The western bank of the Potomac River was characterized by marshes and tidal wetlands, with a sloped bank vegetated by woody and herbaceous plant materials. Few, if any, rocky outcroppings were present in the MVMH-North cultural landscape area. Land reclamation projects and the building of dikes was required for the initial construction of the Mount Vernon Memorial Highway and for continued development during the period of significance. In the late nineteenth century, agricultural and industrial activities within the Potomac River watershed upstream of and within the Washington region resulted in siltation of the river and degradation of water quality. This was further exacerbated by the construction of bridges across the Potomac from Virginia to the District. The dredging of the Potomac River, critical to permitting vessels to reach the wharves and Navy Yard in Washington, DC, was important in removing some of the siltation and resulted in the establishment of gravel harvesting operations along its banks. Large deposits of gravel from upstream eventually came to rest at a "point bar" geomorphological landform on the inside of a large bend in the river. Exploitation of this deposit began in the nineteenth century, with one of the largest operations—Smoot Sand & Gravel Company founded in 1900 by Lewis E. Smoot—located at Gravelly Point and Daingerfield Island. Gravel and sand dredged from the Potomac River by Smoot was used in numerous construction projects in Washington, DC and was also utilized as fill for the reclamation of land for the Mount Vernon Memorial Highway.

The construction of the MVMH resulted in extensive manipulation of the local geomorphic character of the Potomac River shoreline and of the local tributaries that drain into the Potomac. Where an amorphous and natural shoreline that responded to the tidal ebbs and flows of the river once occupied the western bank of the Potomac, the reclamation projects and stabilization techniques resulted in a sculpted, reinforced condition. Although the designers of the MVMH

endeavored to "fit the highway to the site" and to "conserve and protect the native scenery of meadow, woodland, and river" (Simonson 1933, 11), the tidal estuaries and open water sections of the selected route required extraordinary quantities of fill material. Initial construction of the highway filled in estuaries, channelized minor tributaries into culverts, regularized natural lobes and coves, and flattened minor topographic irregularities to accommodate the highway. These changes were especially prevalent along the MVMH-North section at the Boundary Channel, Roaches Run, and Four Mile Run where massive quantities of fill—stabilized by riprap and dikes—permanently altered the natural conditions of the shoreline.

Concurrent with the construction and opening of the MVMH, the modification of local geomorphic conditions to accommodate the Potomac Yards filled in the natural estuary at Four Mile Run. Between 1908, when the switching yard opened, and the mid-1930s when it reached capacity, the estuary was capped and the tributary was channelized and, for the most part, buried beneath fill and rails. Between 1938 and 1942, filling to the north of Four Mile Run to reclaim land for the airport further transformed the former shoreline.

Geology

The geology along the MVMH-North section of the GWMP is characterized as fluvial and estuarine deposits. Coastal Plain sediments are geologically younger than the neighboring Piedmont geological deposits, which lie to the west of the Fall Line located approximately three miles west of the MVMH-North cultural landscape. Local soils are well-drained sandy or sandy loam soils consistent with the Coastal Plain. These comprise unconsolidated deposits of clay, silt, sand, and gravel accumulated by alluvial action from streams and other moving bodies of water. The US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS) classifies most of the MVMH-North cultural landscape as consisting of Udorthents and Urban Land Soils. These comprise disturbed soils that are deep, well-drained, loamy and clayey soils on steep to nearly level terrain.

Post-Historic and Existing Conditions:

Native Vegetation

The local native vegetation consists of a complex of floodplain and upland forests and tidal marsh communities; much of the inventory unit is dominated by deciduous woodland. Because much of the region was cleared for agriculture and industry in the nineteenth century, the trees are primarily secondary growth consisting of mesic mixed hardwood forest and oak/heath forest. Flowering trees, shrubs, grasses, sedges, ferns, and wildflowers are also present. Non-native flora exists throughout the cultural landscape: Some of the exotic species were introduced as part of the landscaping of the highway; others occur as "volunteers" that have seeded from planted stock or from seeds deposited through natural processes (Walsh et al. 2016).

Hydrology

In response to flooding associated with development along Four Mile Run, the US Army Corps of Engineers worked with local municipalities in Arlington and Fairfax Counties to develop a flood-control channel in the stream's lower portion. The project, completed between 1974 and 1977, straightened the lower part of Four Mile Run, created a trapezoidal flow channel, and installed a flood control levee. The bridge constructed in 1939 to carry the Mount Vernon Memorial Highway over Four Mile Run was demolished and replaced in 1977 by a wider one to accommodate increased traffic. The 1939 bridge had replaced the original bridge that opened in 1932, which was demolished when the MVMH was realigned in this area to accommodate the new airport.

Geomorphology

The shoreline from Alexandria to Daingerfield Island has remained relatively unchanged since the design and construction of the MVMH (Figure 44). Between 1938 and 1939, massive reclamation operations constructed a dyke, cleared silt, and deposited some 20 million cubic yards of gravel and sand for the construction of the airport, whose runways would be 20 feet above the Potomac. No further land reclamation for the airport occurred after 1941 (Robinson & Associates 1997). At Daingerfield Island, excavations of parts of the northern shoreline for the marina took place in the 1940s. At the marina, the Potomac River is approximately 11-feet-deep

(Daingerfield Basic Data 1977). Just north of the marina, additional landfill was deposited along the Potomac River shoreline between 1957 and 1962, most likely to accommodate the addition of new northbound lanes of the MVMH. The present landform of Gravelly Point came into existence in the 1960s as the last of the reclamation projects in this area was completed.



Figure 44. Marina Cove just south of Daingerfield Island is one of the last areas in the MVMH cultural landscape that retains the natural conditions of the Potomac River shoreline. Photo looking north at the southern shoreline of Daingerfield Island (Matthew Traucht 2022).

Feature Name	Feature Contribution	CRIS-HS Name	CRIS-HS Number	Type of FMSS Record		FMSS Record Number	FMSS record an exact match?
Four Mile Run (mouth)	Contributing						
Roaches Run	Contributing						

Spatial Organization

Spatial organization is the three-dimensional organization of physical forms and visual associations in a landscape, including the articulation of ground, vertical, and overhead planes that define and create spaces.

As a parkway, the MVMH-North is a linear landscape bounded on the east by the Potomac River and on the west by private land and a rail corridor. The MVMH-North inventory unit comprises a series of distinct, yet connected, spaces. For the purposes of this report, these have been identified (from south to north) as the Alexandria Waterfront, Alexandria Approach, Daingerfield Island, Airport, Roaches Run, Gravelly Point, and Bridges. Landscape characteristics that inform the spatial organization are topography, vegetation, circulation systems, and natural systems. Generally, the original design of the Mount Vernon Memorial Highway (MVMH) focused on the roadway and a 200-foot-wide right-of-way. Since the building of the highway, spatial organization has been altered by the following activities: the Daingerfield Island landform was added to the inventory unit; the Potomac River shoreline in the Airport character area was pushed further out into the water through land reclamation and the highway was realigned to accommodate the Washington National Airport; Gravelly Point was enlarged, also through land reclamation; two lanes of highway were added to the section between Alexandria and Four Mile Run; the configuration of the cloverleaf interchange at the 14th Street Bridges has been altered, as has the surroundings, by the construction of the Arland D. Williams, Jr. Memorial Bridge and the Rochambeau Memorial Bridge.

Historic Condition:

Bridges character area

The Bridges character area extends from the railroad bridge to the Boundary Channel. At the outset of the MVMH project, this area required extensive filling with dredge material that was retained by a riprap edge. The new landform was kept level and sparsely planted to provide panoramic views across the Potomac. The MVMH passed beneath the iron segmental arch railroad bridge and then, continuing north, passed beneath the US Route 1 / 14th Street Highway Bridge before continuing across the Boundary Channel Bridge. At the Highway Bridge, the BPR

designed and built a cloverleaf interchange, the layout of which greatly established the spatial organization of this character area. The four-ramp "cloverleaf" design was a novel engineering solution at the time and signs were required to instruct drivers how to use the one-way ramps that provided constant speed connections to and from the grade-separated interchange. With respect to spatial organization, the Bridges character area was unique along the MVMH-North section: the railroad and Route 1 routes passing overhead were the only overhead crossings experienced between the Boundary Channel and Alexandria. Additionally, the

> combination of loops, grade separations, and traffic islands enabled motorists to smoothly and safely transfer from one highway to the other in either direction or to pass straight through without obstruction or danger from turning, crossing, or entering traffic. The cloverleaf was clearly the ideal solution to the problem posed by major roadway interchanges, but the quadruple loops and myriad minor interchanges were initially accused of disorienting motorists, and the complex configuration required a large amount of land and considerable expense to construct. (Leach 1993, 107)

The MVMH then continued north across the Boundary Channel Bridge to Columbia Island and to its northern terminus at the Arlington Memorial Bridge. Although the section north of the Boundary Channel is outside the limits of the MVMH -North cultural landscape, the spatial organization on the opposite side of the Channel was similar to that just described.

Between 1947 and 1962, two new highway bridges (the Arland D. Williams, Jr. Memorial Bridge opened in 1950 and the George Mason Bridge replaced the Highway Bridge in 1962) were installed, resulting in the reconfiguration of the cloverleaf interchange and altering the spatial organization of the adjacent planted areas along the Potomac. These conditions were further altered in 1971 when a new bridge (Rochambeau Bridge) was added immediately downstream of the Mason Bridge.

Roaches Run and Gravelly Point character areas

When the MVMH was laid out between 1929 and 1932, the Roaches Run and Gravelly Point character areas provided a dramatic experience wherein motorists traveled along a narrow (200-foot-wide) causeway, with the Potomac to the east and Roaches Run and Gravelly Inlet to the west. The road and adjacent plantings were kept low, enhancing the experience of being close to

these bodies of open water and their associated tidal wetlands. A simple, single arch bridge carried the roadway from the causeway to the south to a slightly more substantial landmass (Gravelly Point), which quickly gave-way again to another narrow strip of land flanked on both sides by water. On the west, this condition extended all the way to the railroad abutment; on the east the reclaimed land widened minimally just south of where the railroad bridge crossed the Potomac. Shortly after the MVMH opened in 1932, the CCC installed, on the west side of the highway, a parking lot at Roaches Run with short entrance and exit drives from the southbound lane.

Between 1961 and 1963, Gravelly Point was enlarged in a reclamation project that would extend along the Potomac River shoreline from the Roaches Run tidal inlet to the Boundary Channel (Figure 45–Figure 47). A riprap edge was installed, and fill was added and graded, which enlarged the Gravelly Point landmass substantially. The reclamation of land at Gravelly Point simultaneously increased the area of parkland for recreational uses while it diminished the effect of driving close to the river along a narrow causeway. During the same period that the landmass was increased, the highway was widened to accommodate increased traffic. The widening necessitated the lengthening of the Roaches Run Culvert/Tidal Gate from 60 feet to 100 feet. In 1965, a road permitting traffic to access Gravelly Point from the northbound lanes of the MVMH was installed. That same year, with funds from the Mission 66 initiative, a parking lot and boat launch were installed in the southwest quadrant of Gravelly Point. Taken together, the reclamation of land, the widening of the highway, and the installation of recreational facilities at Gravelly Point altered the spatial organization of this character area.

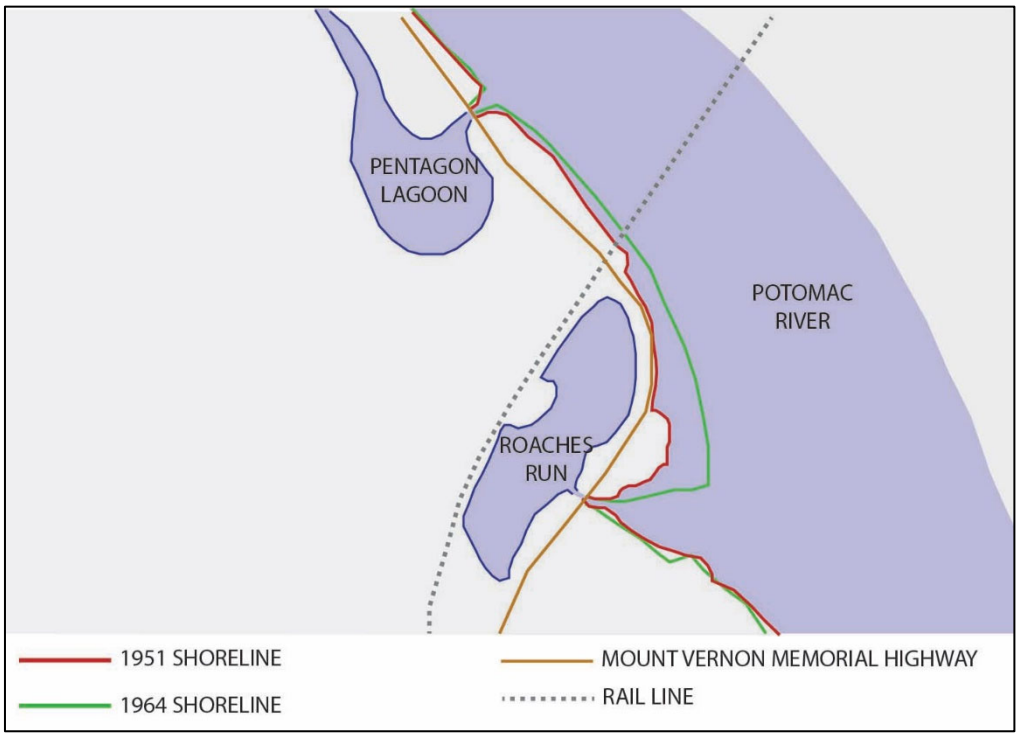


Figure 45. Overlay of 1951 shoreline (red) and 1964 shoreline (green) illustrating extent of reclaimed land at Gravelly Point. Based on USGS 1951 and 1964 aerials (SmithGroup, RHI, and Gray & Pape 2022).

Airport character area

Spatial organization in the Airport character area, when the MVMH opened in 1932, was characterized by the sharpest curve in the MVMH-North highway alignment, a grade-separated "jug handle" intersection that was built in consideration of the future airport, a flared intersection, the Capital Overlook, a road to the Abingdon ruins on Hunters Point, and expansive views of the Potomac River (Figure 48). When the MVMH reopened on August 14, 1940, following the construction of the airport, the spatial organization in this section was drastically altered. The highway alignment was much further from the Potomac because the highway had been relocated to the west and the shoreline had been pushed further to the east. The main terminal of the airport, completed by 1941, and the hangars, in place by 1948 (Robinson & Associates 1997), would have restricted or obliterated most views of the river and the District's landmarks that were so important to the commemorative aspect of the MVMH in this section of its 18-mile length. Capital Overlook was removed, as were the flared intersection and grade-

separated intersection, replaced by new access and exits to and from the airport. The Abingdon ruins had been subsumed into the sprawling network of airport roads and runways.



Figure 46. 1934 aerial image (Arlington County Government) showing MVMH alignment along narrow causeway and large mouth of Four Mile Run to the west of the MVMH. Shoreline is identified in blue for clarity (SmithGroup, RHI, and Gray & Pape 2022).

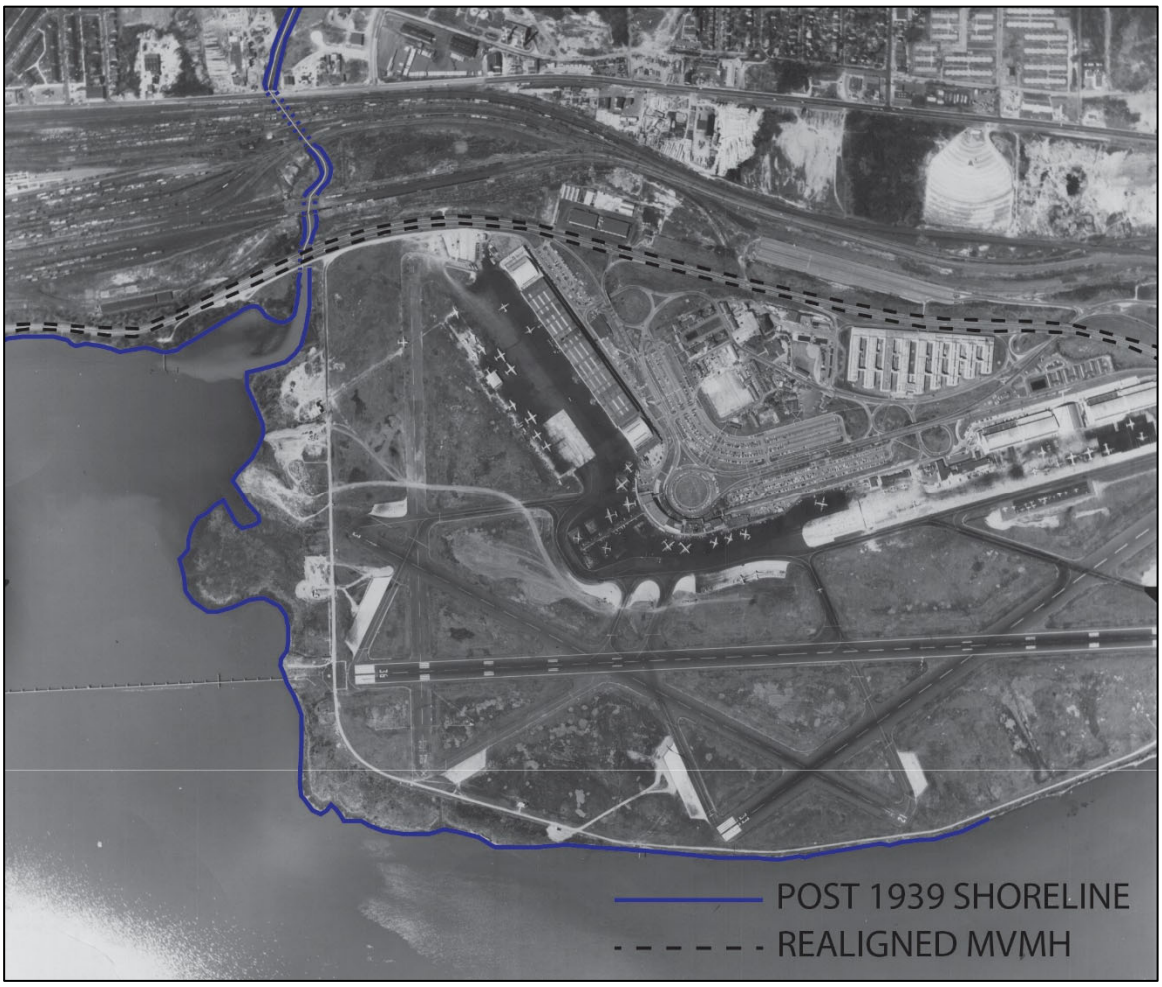


Figure 47. 1957 aerial image (Arlington County Government) showing MVMH realignment for airport and channelized condition of Four Mile Run and Potomac Yards to the west of the MVMH. Shoreline is identified in blue for clarity (SmithGroup, RHI, and Gray & Pape 2022).

Daingerfield Island character area

The low-lying Daingerfield Island character area extends from the south edge of Daingerfield Island to Four Mile Run and includes both the MVMH right-of-way and the peninsular landform that lends its name to the character area. Throughout the period of significance, the character area was bounded on the west by the Potomac Yards railroad switching yard, one of the busiest railyards in the Eastern United States. The Potomac River forms the eastern edge of the character area.

The Daingerfield Island peninsula was under private ownership until it was purchased by the National Park Service in 1942, consequently, the highway designers' efforts were focused upon the MVMH right-of-way. The highway alignment was designed as an arcing curve, skirting the river's edge just north of the peninsula and providing dramatic views of the Potomac. Shade and medium sized trees were planted along the west side of this section to screen the railyard and marshland. To the east, vegetation was planted in rhythmic groupings, enhancing the views of Daingerfield Island and the Potomac River.

During the period of significance, spatial organization of the peninsula was informally delineated into three areas: the north end of Daingerfield Island was primarily given to the marina and its associated parking infrastructure; the central segment transitioned from housing radio towers when the property was purchased to serving as a plant nursery to grow stock for the George Washington Memorial Parkway; and the southern section was managed as improved natural areas. Hence, the northern area was organized around dry slips, parking lots, and a clubhouse; the central area was gridded into tree fields; and the southern area assumed a naturally vegetated condition devoid, for the most part, of any organizing features aside from the peninsula's edge, which was modified over the years with bulkheads and reclamation filling.

At the north end of the character area, the mouth of Four Mile Run was, when the MVMH opened, a wide, amorphous estuary that emptied into the Potomac. Through land reclamation efforts, a narrow causeway (approximately 200 feet wide by 1,500 feet long) was constructed across most of this opening and the mouth of the tributary was confined to a narrow channel that drained into the Potomac. The 100-foot-long and 80-foot-wide Four Mile Run Bridge connected the mainland to the south with the causeway to the north. Land reclamation in 1938–1940 associated with enlarging the landmass that would become Washington National Airport filled in the much of the open water to the east of the causeway. As part of the airport project, the bridge was demolished, the alignment of the highway was altered, and a new bridge was constructed. Consequently, through the manipulation of natural features, topography, and the road alignment, the spatial organization at the north part of this character area was dramatically

altered by these activities. Although these changes were major, they fall within the period of significance.

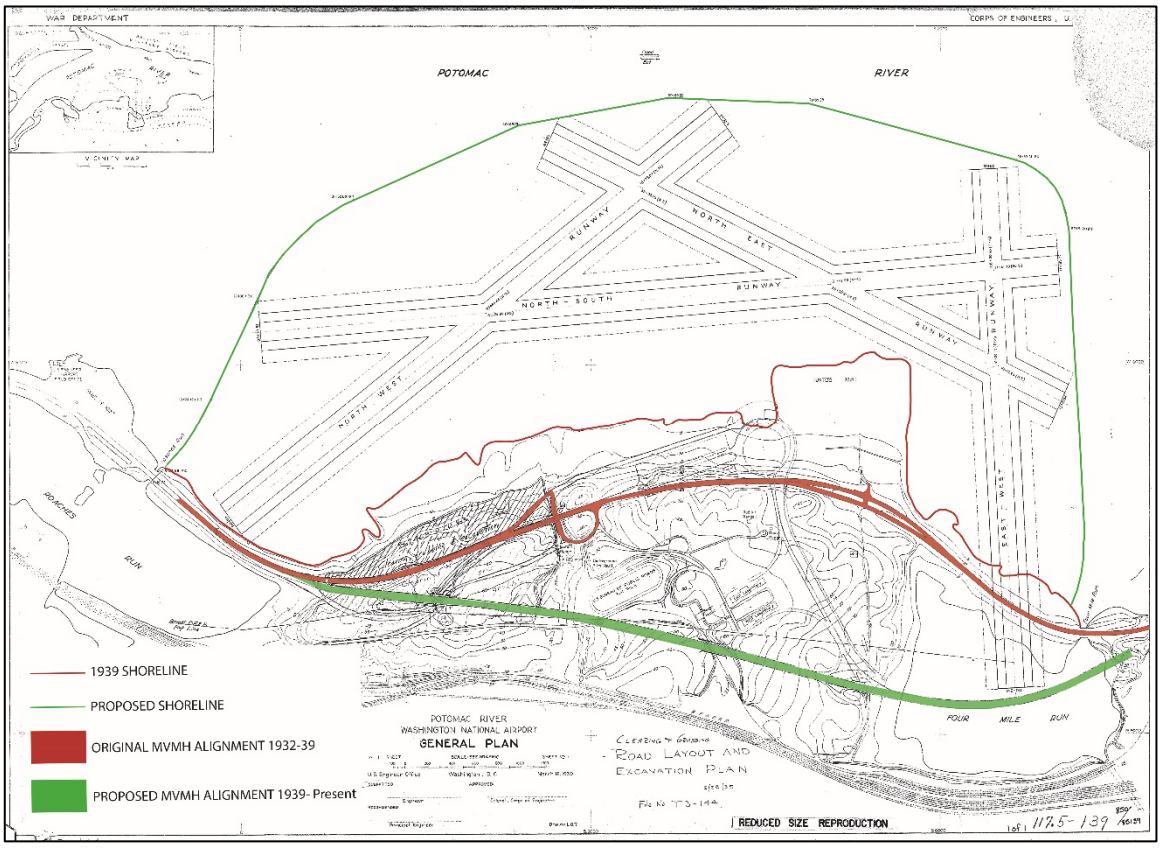


Figure 48. General Plan for Washington National Airport showing the 1939 shoreline and MVMH alignment (red) and the proposed shoreline and MVMH alignment (green) (eTIC850/85139).

Alexandria Approach character area

The Alexandria Approach character area extends from First Street in Alexandria to the southern limit of Daingerfield Island. The area serves as a transition from the higher speed section of the highway to the urban condition of Alexandria. The topography is gently rising from Daingerfield Island to Alexandria. An at-grade rail corridor crosses the MVMH at an oblique angle from the southeast to the northwest. The linear corridor is bounded on the west by multi-family residential blocks; to the east, the section of the character area north of the rail corridor is dominated by the 25-acre Potomac River Generating Station (PRGS), a now-decommissioned coal-fired plant that went online in 1949 while the section south of the railroad is mid-scale residential. When the

MVMH opened in 1932, the designers had employed a traffic circle at the highway's intersection with Second Street, citing the appropriateness of a circle "as it represents the logical point of transition from a high to a low speed zone within the city, and serves at the same time as a suitable transition from the informal country park surroundings to the straight hard lines of the formal city street" (Simonson 1933, 184). The circular space within the traffic circle was planted with several elms (*Ulmus americana*), that were underplanted with honeysuckle (*Lonicera japonica*) while the peripheries of the roadway were planted with a double row of lindens (*Tilia cordata*) that were enclosed by elms. This formalizing structure of vegetation would have further reinforced the transition zone from the highway to the city. To the north of the circle, the MVMH was lined on both sides with a dense mix of native and introduced trees and shrubs that intentionally restricted views of the adjacent areas, forming a "botanical crescendo" for the southbound motorist (Kelsch Volume One 2009, 37).

In 1963, Alexandria Circle was removed and the MVMH was widened from two lanes to four to alleviate traffic congestion, with the southbound lanes occupying the original alignment and the new lanes serving as northbound lanes (Figure 49). Additionally, East and West Abingdon Drives were built to improve adjacent circulation. East Abingdon Drive provides access to the MVMH at the north part of the character area, while West Abingdon Drive serves as an exit from the southbound lanes. Accompanying these modifications to circulation, the vegetation patterns were also revised. Although these changes fall within the period of significance, they drastically changed the spatial organization of the overall Alexandria Approach.

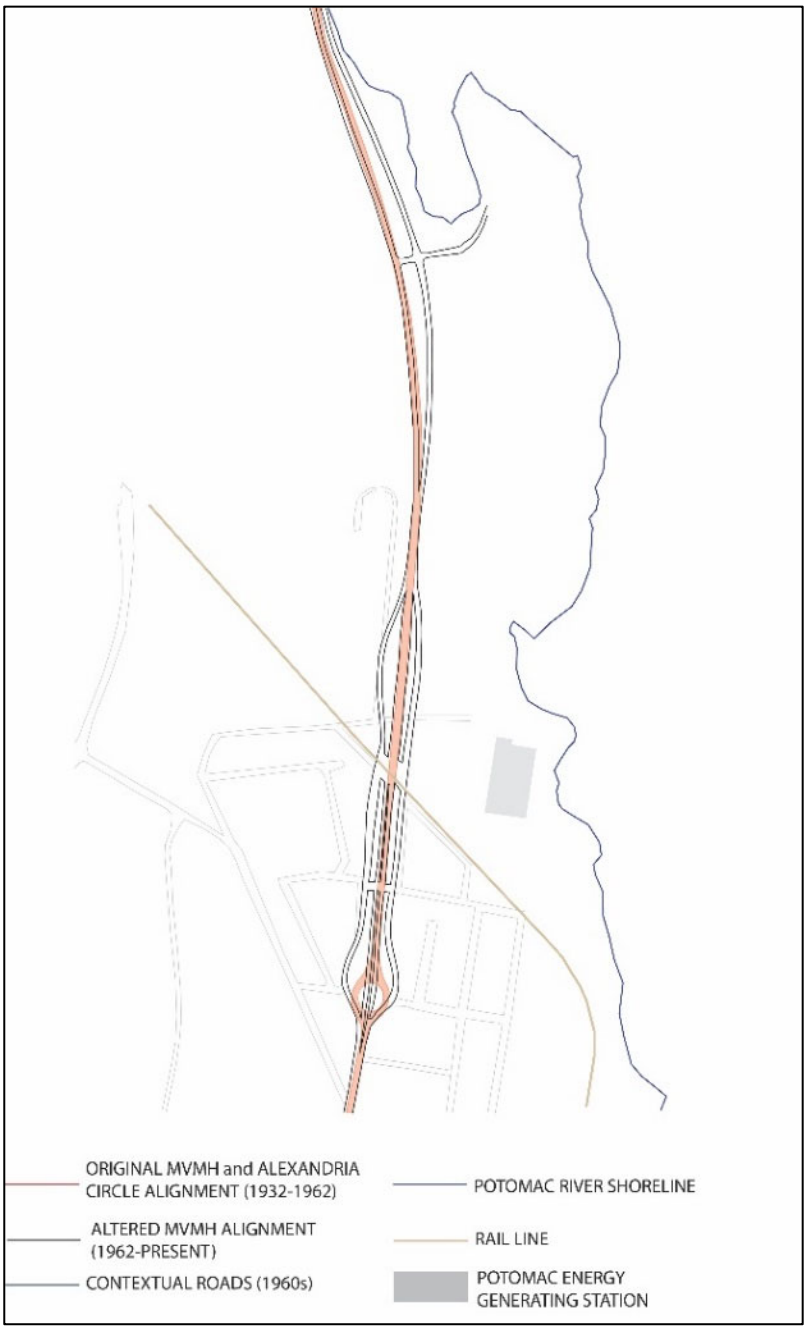


Figure 49. Overlay of original MVMH and updated condition showing removal of the Alexandria Circle, the southbound lanes along the original alignment, and inserted northbound lanes (SmithGroup, RHI, and Gray & Pape 2022).

Post-Historic and Existing Conditions:

Bridges

The spatial organization of the Bridges character area is, today, much as it was at the close of the period of significance. The Charles R. Fenwick Bridge, which opened in 1983 to carry the Metro's Yellow Line across the Potomac added another overhead crossing but did little to alter the overall spatial organization of the character area. The planned insertion of a new railroad bridge will not dramatically change the overall experience of this area.

Gravelly Point, Roaches Run, and Airport character areas

Spatial organization of these character areas remains as it was during the period of significance.

Daingerfield Island character area

Within the Daingerfield Island character area, few changes have occurred to the overall spatial organization of the MVMH alignment or of Daingerfield Island have occurred. In 1983, a development plan for Daingerfield Island divided the peninsula into three management zones. The northern section was identified as the "Development Zone" for intensive visitor activities, a "Special Use Zone" in the central portion of the landmass was reserved for the tree nursery and maintenance activities, and the southern part of the site was reserved as a "Natural Zone." These designations and uses are based upon the spatial organization of Daingerfield Island during the period of significance, whereby the marina and dry slips for public use were sited on the north part of the Peninsula, the nursery was located in the central sections, and the southern part of the peninsula was left in a more naturalized condition. At the northern extent of this section, the mouth of Four Mile Run was altered in 1977. The work entailed a widening of the channel, reinforcing of its banks, and the replacement of the original bridge with one to accommodate the wider span.

Alexandria Approach character area

The spatial organization of the approach to Alexandria is unaltered from what it was during the latter part of the period of significance.

Alexandria Waterfront character area

The Alexandria Waterfront character area was added to the inventory unit in 1982 when the National Park Service settled a suit with private land holders. It is a linear strip of land bounded on the east by the Potomac River on the west and by the Potomac River Generating Station (PRGS). The asphalt-paved Mount Vernon Trail (MVT) passes through the character area and extends beyond it to the north and to the south. A steep edge descends to the Potomac River below: The edge is wooded with naturally occurring trees, shrubs, and groundcover; at the bottom, the toe of the shoreline has been reinforced with large boulders and repurposed concrete pieces as well as with gabion structures filled with cobble. The shoreline in this area is sinuous with several distinct lobes and coves. A buried discharge pipe from the PRGS empties into the Potomac River via large culverts. The discharge comes from a large pond to the immediate west of the character area, which is screened from the MVT by a wood fence. From the MVT, the industrial PRGS occupies much of the viewshed to the west within the character area while the Potomac River and its opposite shoreline draws one's attention to the east.

Feature Name	Feature Contribution	CRIS-HS Name	CRIS-HS Number	Type of FMSS Record	FMSS Record Number	FMSS record an exact match?
Narrow, linear alignment of right-of-way with distinct character areas	Contributing					
Potomac River forming the eastern boundary of the cultural landscape	Contributing					
Concentration of parking and boat launch in southern part of Gravelly Point	Contributing					
Open space between Daingerfield Island and Four Mile Run	Contributing					

Open character of Gravelly Point and Roaches Run	Contributing					
Overhead plane of bridges in the north part of the inventory unit	Contributing					
Open character of shoreline at Boundary Channel	Contributing					

Land Use

Land uses are the principal activities in a landscape that form, shape, and organize the landscape as a result of human interaction. The period of significance for Mount Vernon Memorial Highway North is from 1929 to 1972, and as such, the historic condition focuses on land uses from 1972 and earlier and the post-historic and existing conditions focus on land uses from 1973 to the present.

Introduction:

The Mount Vernon Memorial Highway was originally designed as a recreational and commemorative driving route for motorists travelling from Washington to Mount Vernon. Prior to the memorial highway's construction, the route between the two destinations was most easily navigated by boat along the Potomac. With the proliferation of automobiles in the early twentieth century, the land route extending northward from Alexandria was messy, inconvenient, and heavily influenced by regional commercial interests on both sides. Unsightly billboards lining the roadway influenced the decision to implement managed access throughout the corridor, to limit "the encroachment of residential and commercial interests" and promote a more pleasant experience for motorists (NCS Historic Resource Study 1990; Leach 1993).

While these methods were employed to preclude such uses from MVMH by design, the Capper-Cramton Act of 1930 furthered this goal by authorizing the creation of the GWMP. Passed while the memorial highway's construction was underway, the Capper-Cramton Act provided for the

federal acquisition of lands on both sides of the highway for historic preservation and recreational purposes (EDAW 1992, 62). As tourism brought more visitors to the region each year, recreational uses along the MVMH became a secondary feature as the roadway's use shifted from a scenic road to a high-speed motorway (Leach 1993, 12–13).

Although the area south of Alexandria was a forested and agricultural landscape already used for recreational driving when the MVMH was constructed, the stretch between Alexandria and the Boundary Channel was a more industrialized landscape. As landscape architect Wilbur Simonson described it:

> The existing dry land portion north of [Alexandria] was practically barren of tree growth. The industrial encroachments of brick manufacturies [sic] with their clay pits, and the Potomac Railroad Yards with their clouds of smoke, had been averse to normal tree growth in the region. This section of the highway…demanded the creation of landscape interest. (Simonson 1933, 30)

Railroad use of the area between Long Bridge and Alexandria began in 1857 when the Alexandria and Washington Railroad commenced service. By 1906, the expansive switching yard was in operation. Additionally, gravel mining operations located on the shore of the Potomac River, the Bureau of Public Roads Testing Laboratory facility, and the airport – constructed on fill from 1938 to 1940 – all contributed to a much less pastoral landscape than was present in the southern section of the memorial highway (Alexandria, Virginia Government 1992).

Historic Condition:

The decision to route the highway across the marshes, estuaries, and creeks of the Potomac riverfront brought engineering challenges that separated the project from its predecessors. The shoreline location required close to five million cubic yards of hydraulic fill—sand and gravel pumped from the bottom of the Potomac River—the most extensive use of hydraulic fill in any highway project at the time of its construction. Dredging of the Potomac River by the US Army Corps of Engineers began in 1929 for seawall construction between Columbia Island and the railroad. Approximately 2.75 miles of the MVMH was constructed on land reclaimed from the Potomac River (Kuhn et al. 2021, 158). The biggest landfilling operation occurred in the Columbia Basin area between Boundary Channel and Gravelly Point, where the shoreline was extensively

reconfigured to act as a continuation of Columbia Island—itself a largely artificial creation. Considerable landfilling was also needed between Gravelly Point and Daingerfield Island. The Daingerfield nursery began providing trees and plants for the GWMP and other National Park Service sites beginning in the late 1940s. The Bureau of Public Roads was under enormous pressure to complete these operations as quickly as possible to give the filled land a sufficient interval to settle. A key scheduling consideration was the desire for actual road construction and landscape development process to begin in time to ensure completion of the memorial highway by the onset of bicentennial festivities in February 1932. As previously mentioned, while MVMH was under construction, the Capper-Cramton Act of May 29, 1930, authorized Federal acquisition of additional land on both sides of the Potomac for the development of the GWMP. The act also authorized the transfer of the highway to the Office of Public Buildings and Public Parks of the National Capital (later subsumed by NPS) (Kuhn et al. 2021, 5). Land reclamation was essential to the commemorative, recreational, commuting, and other land uses described below.

Planning began for a highway between George Washington's tomb at Mount Vernon and Washington, DC as early as 1887 with the Mount Vernon Avenue Association. Lieutenant Colonel Peter C. Hains from the US Army Corps of Engineers surveyed several routes between Mount Vernon and the present-day Key Bridge. He submitted a report to Congress in 1890 that spoke to the commemorative nature of MVMH, saying:

> It is to commemorate the virtues of the grandest character in American history…A road, therefore, built from the capital of the nation to the tomb of its founder, would not be such as built for ordinary traffic. It should have the character of a monumental structure…The grades should be light, the alignment in graceful curves… (Mackintosh 1980, Section 8-1)

The highway was delayed in 1892 when the Washington, Alexandria, and Mount Vernon Railroad built an electric railway route to Mount Vernon. However, the highway idea remained in the McMillan Commission Report of 1902 (Mackintosh 1980, Section 8-1).

In 1924, Congress created a Commission for the Celebration of the Two Hundredth Anniversary of the Birth of George Washington. Construction of Arlington Memorial Bridge began in 1926, and by 1928 plans to build a road connecting Mount Vernon to Washington, DC were set in

motion. Congress ordered the survey of routes and then the construction of a "suitable memorial highway" under the supervision of the Washington bicentennial commission. Two routes were chosen as alternatives, both of which were modifications of the alignments by Hains. The commission selected the route nearest the river, which gave MVMH its character-defining views of the river and the Washington Monument (Mackintosh 1980, Section 8-2). The MVMH opened to traffic in January 1932, and in November of that year President Hoover traveled the highway south to Mount Vernon for the formal dedication (Mackintosh 1980, Section 8-2).

The Bureau of Public Roads operated the Arlington experiment Station from the Arlington Experimental Farms area of the former Arlington House Plantation in what is now Arlington National Cemetery. Here they experimented with concrete, asphalt, and other test road surfaces for impact studies. In 1918, they began placing pressure cells under a full-size concrete slab and driving trucks over the surface to determine the force exerted. By 1920, the BPR engineers replaced the trucks with a machine to test the reaction of a slab to impact. Based on the research conducted by BPR, they then released typical construction specifications and standard methods of testing materials, which were widely adopted by local and state road-building agencies. The BPR relocated its 1920s Arlington Experimental Station to the Abingdon Research Center in 1938. The colonial style brick buildings on the Washington National Airport complex are remnants of the BPR operation at the Abingdon Research Center (Virta, personal communication 2021).
The terminal at Washington National Airport was completed in 1941 as part of New Deal era government initiatives and new aviation technology. Although built during wartime, the airport was the first federally-funded and constructed commercial airport in the US for civilian flight. The creation of the airport necessitated rerouting of the highway to the west. Today the airport sits on an 850-acre parcel, which required significant landfilling to create. The airport has grown and expanded within this site, beyond the original "air park" with its circular navigation to and from the terminal. Today the airport is also accessible by Metrorail and is a busy hub (Reagan National 2021).

While first conceived as a scenic and commemorative route between Mount Vernon and the bridge into Washington, DC, the post-war automobile boom and the exponential growth of the

suburbs in the 1950s and 1960s meant that MVMH soon became a commuting route as well. In addition to the scenic nature of the route, the fact that the city of Alexandria has the only portion of the highway that has traffic lights and otherwise traffic is free flowing, makes MVMH attractive to commuters (Mackintosh 1980, Section 8-3). This increased traffic volume has necessitated new intersections, bridges, and lane separation. Transportation as a land use continues into the present as well.

Connections between Virginia and Washington, DC across the Potomac River were important long before planning for MVMH began. The first Long Bridge crossing the Potomac was authorized by Congress in 1808, built in 1809 as a toll crossing, and rebuilt across the Potomac River in 1835. Further rebuilding happened in 1872, the first time it was used for the railroad was in this Civil War period; it was rebuilt in 1904, strengthened in 1942, and the electric catenary was removed in 1981 (Cohen 2003).

The railroad has been an important part of the landscape surrounding MVMH since the second quarter of the nineteenth century. MVMH-North roughly parallels the former Alexandria and Washington Railroad line. The Alexandria and Washington Railroad began service on a new line between the Long Bridge and Alexandria in 1857 (Kuhn et al. 2021, 8). The Richmond, Fredericksburg and Potomac Railroad (RF&P RR) ran from the Potomac River south to Richmond, crossing over the MVMH. A portion of the RF&P railroad historic district intersects with the MVMH-North study area near I-395 with the RF&P Underpass, which is described further in the Buildings and Structures section. From 1837 to 1943, the railroad played a critical role in the development and evolution of the region. It was a double-tracked line that in most places was elevated to avoid at-grade crossings with vehicular traffic (Virginia Department of Historic Resources 2018). The 1901 McMillan Plan called for the consolidation of the region's railroad operations, in addition to a new Long Bridge and construction of Union Station. The Richmond-Washington Company was formed to consolidate the Pennsylvania Railroad, Baltimore & Ohio Railroad, Southern Railway, Chesapeake & Ohio Railroad, Atlantic Coast Line Railroad, and Seaboard Air Line Railway. This new company controlled and opened the Potomac Yard which was a consolidated railroad switching yard that opened in 1906 near the boundary

line of Alexandria and Arlington. CSX freight trains, Amtrak, and VRE commuter rail all travel through the MVMH-North CLI project area today and cross over the Long Bridge into DC. The railroad provided easy transportation for local industry and there were several industrial yards located near the MVMH corridor in the early twentieth century.

In addition to brick yards and clay pits surrounding the highway, there were also rail yards and industrial spaces that would have been in the viewshed of motorists and would have to be taken into consideration when routing the highway along the river route. The planners of MVMH made efforts to screen these industrial views with vegetation so that motorists would not see them (Kuhn et al. 2021, 8; 171).

Roaches Run wildlife sanctuary was recommended as part of the original design of the highway. A study was completed in 1934 on the recommended sanctuary. In literature created to generate interest in the new highway, the bird sanctuary was described as 90 acres of land and water with rare wild ducks, swans, geese, and other birds that could be seen from the MVMH. It was a Public Works Administration (PWA) project. In 1934–1935, laborers from the CCC helped develop the sanctuary from Virginia marshes of the Potomac River. The CCC built a tidal gate between the lagoon and the river, cleared out brush (removing nuisance water plants like caltrop), graded the banks, and landscaped the area (planted 500 trees), built the parking lot with entry/exit road and a trail around the lagoon. They also built a gamekeeper's cottage and feed storage shed (The Living New Deal 2021).

As the MVMH grew in popularity over time, so too did the recreational functions and facilities. The National Park Service's Mission 66 initiative (1956–1966) was influential in the design of recreational facilities at Gravelly Point and Daingerfield Island along MVMH-North. Mission 66 was designed to modernize the national park system after decades of deferred maintenance and decreased funding. One of the primary goals of Mission 66 was to bring the parks up to modern standards of comfort, health, efficiency, and innovation (Quinn Evans Architects 2019, 5–6). Mission 66 acknowledged that many of the national park visitors were now there for day-use and not overnight stays. This day-use included the need for many additional modern toilet facilities

(called comfort stations) to accompany the newly built picnic areas and recreational facilities. As part of Mission 66, the National Park Service built approximately 600 comfort stations around the country following standardized construction plans (Quinn Evans Architects 2019, 7–8).

When MVMH was designed, Gravelly Point as it is today did not exist. It was created by filling in land in the 1960s. The Gravelly Point boat launch was built around 1965 along with playing fields, a parking lot, an access road, and a boat access ramp as part of the Mission 66 park improvements. The boat launch is located on the southwestern end of Gravelly Point. To the north of the boat launch is a paved asphalt parking lot. An access road extends from the northbound side of MVMH south toward the parking lot, forming a full circle around the parking lot and providing vehicular access to the boat launch. The circa-1972 Mount Vernon Trail provides pedestrian access to the Gravelly Point recreation area (Kuhn et al. 2021, 12).

In addition to recreational facilities, scenic views with open fields along the river and to the west of the highway were part of the design of the highway, inspired by the Picturesque landscape and City Beautiful movements. By accumulating the land for the highway and in adjacent areas, the highway was able to preserve and protect open fields and vistas.

Daingerfield Island was purchased from the Smoot Sand and Gravel Co. in 1942 by the National Park Service and beginning in the 1950s plans for recreational facilities on the island were introduced. A master plan was adopted in the 1960s that proposed the development that exists on the island today. The parking areas and marina were built in the 1950s and enlarged in the 1960s. The main restaurant and retail buildings were built in the 1980s. The Daingerfield Island Mission 66 Comfort Station is a one-story, rectangular, stacked concrete masonry unit (CMU) building constructed in 1972 as part of the Mission 66 improvements to the National Capital Region. The Daingerfield Island Comfort Station is a Mission 66 Type F Comfort Station, which were all located near marinas and provided restrooms, showers, and a utility sink (Quinn Evans Architects 2019, 103).

The Mount Vernon Trail is also part of the recreational use of the MVMH. When first planned, bridle and pedestrian paths were part of the proposal for MVMH, but they were never fully implemented. The boom in outdoor recreation in the United States in the 1960s and 1970s led to the creation of a multi-use trail stretching from Memorial Bridge south to Mount Vernon. This boom coincided with the National Park Service's Mission 66 improvements throughout their park system, focusing on day-use of the parks for recreation. Known as the Mount Vernon Trail, the portion that falls within MVMH-North, from the Boundary Channel to Alexandria was completed in April 1972, towards the end of the MVMH-North period of significance. Due to the trail's popularity, it was extended from Alexandria to Mount Vernon in 1973. At first it was a gravel/cinder path but was later paved in asphalt to be more durable. Several timber bridges and boardwalks were built to carry the trail over uneven ground or tributaries, which are described in the Buildings and Structures section below. The trail now extends to Theodore Roosevelt Island as well. The portion of the Mount Vernon Trail within the CLI boundaries, from the Boundary Channel to Alexandria, completed in 1972, is a contributing feature of MVMH-North, as it reflects the original MVMH design's desire for a recreational trail associated with the roadway, and also provides scenic views of Washington, DC for pedestrians (Virginia Department of Historic Resources 2016a).

Post-Historic and Existing Conditions:

While the southern portion of MVMH had two residential developments specifically recognized in plans for the highway, the northern segment has only grown in more recent years, with single-family houses, apartments, condos, and multi-use buildings in nearby Alexandria, and Crystal City and Pentagon City in Arlington. This residential land use has caused increased traffic volumes on MVMH-North, making it even more of a commuting transportation use rather than scenic driving in the twenty-first century (Kuhn et al. 2021, 8).

The Washington Metropolitan Area Transit Authority (WMATA) or Metro opened the Blue Line in July 1977 with trains running from Washington National Airport to Stadium-Armory. The Yellow Line began operating in December 1983 with trains running from Huntington to Gallery Place. The Metro station at Washington National Airport and associated tracks were built

beginning in 1973. The station at Washington National Airport is an above-ground, outdoor station with two island platforms across three tracks. The Metrorail crosses over the MVMH on bridges near the airport and the 14th Street Bridge area (Goldchain 2017) (Figure 50).



Figure 50. WMATA Metro tracks (top) and the Washington National Airport South Exit Bridge (bottom) cross the MVMH. The VA Route 233 Bridge is visible in the distance. Photo looking north from entrance ramp at MVMH (Matthew Traucht 2021).

The Daingerfield Island nursery began providing trees and plants for the GWMP and other National Park Service sites beginning in the late 1940s. The current greenhouse and storage shed buildings, however, date to the 1980s. Daingerfield Island is also used to support GWMP maintenance and resource management activities today and has several areas with gravel, extra jersey barriers, vehicle storage, discarded vegetation, and other scraps/material storage south of the nursery area. These areas can be seen on the Daingerfield Island character area maps and have been referred to as the equipment/vehicle storage and the storage yard (Virginia Department of Historic Resources 2016b) (Figure 51). Much like at the Parkway Maintenance Headquarters near the Washington National Airport, this administrative and management function at Daingerfield Island is noncontributing the MVMH-North CLI.



Figure 51. Photo of the Equipment/Vehicle Storage Area on Daingerfield Island, looking south (Matthew Traucht 2021).

Feature Name	Feature Contribution	CRIS-HS Name	CRIS-HS Number	Type of FMSS Record	FMSS Record Number	FMSS record an exact match?
Recreation	Contributing					
Commemoration	Contributing					
Transportation	Contributing					
Administrative/Resource Management	Noncontributing					

Cultural Traditions

Cultural traditions are the practices that have influenced the development of the landscape in terms of land use, patterns of land division, building forms, stylistic preferences, and the use of materials.

Historic Condition:

Subsistence fishing has been documented as a cultural tradition in George Washington Memorial Parkway, including the portion known as MVMH-North. Both African American and Piscataway fishermen and fisherwomen have used river resources in the Washington, DC area for centuries, and have long-standing, continuous relationships with the Potomac and Anacostia rivers and their tributaries (Fiske et al. 2020).

Post-Historic and Existing Conditions:

The 2020 ethnographic study by Fiske, Callaway, and the University of Maryland also noted that Anglo, Hispanic/Latino, and Asian American Pacific Islanders also fish the rivers. Within MVMH-North, there are numerous creeks and waterways including at Roaches Run, Gravelly Point, and Daingerfield Island, in addition to the Washington Sailing Marina at Daingerfield Island. The Mount Vernon Trail provides pedestrian access to some of the fishing spots as well. As part of the study, 15 fishermen were interviewed within the southern portion of GWMP, from Gravelly Point to Little Hunting Creek (although this southern boundary of their study is outside of the MVMH-North CLI boundary). Because food insecurity is widespread in the Washington, DC area, the fish that are caught are often shared amongst family, friends, and neighbors and help offset the hunger faced by many. Subsistence fishing not only provides a source of food for the fishermen, fisherwomen, and their family, friends, and extended network, it also continues a tradition that spans many generations and can serve as a family bonding activity (Fiske et al. 2020).

Topography

Topography is the three-dimensional configuration of the landscape surface characterized by features (such as slope and articulation) and orientation (such as elevation and solar aspect).

Regional topography played a major role in the selecting of the eventual route of the Mount Vernon Memorial Highway and, subsequently, provided unique challenges and opportunities for its designers. Although other routes were hillier than the selected one that ran along the shoreline of the Potomac River, the gently undulating terrain posed its own complications: the unstable substratum of the various estuaries that needed traversing would require extensive engineering. Approximately twenty percent of the entire project length from Mount Vernon to the Arlington Memorial Bridge was over open water and required vast quantities of fill, much of it dredged from the Potomac River. The estuaries would require bridges while the lesser drainage areas would need culverts and pipe drains.

Grade separation of access points to the highway—most notably the pioneering design of the cloverleaf interchange for the 14th Street Bridges but also employed for the future site of Washington National Airport—were designed to eliminate dangerous intersections. Overlook points at strategic locations also required careful study of existing topography and soil conditions. Topographic engineering aligned with the preparation of the design of bridges such that alignments, profiles, drainage, and finished grading were all coordinated. Grade separated interchanges exploited topographic change to restrict at-grade crossings of the MVMH. In many cases along the highway, grade-separated interchanges—planted with stands of vegetation, contoured gracefully, and supporting overpasses—created the illusion that the MVMH passed through a hillier setting than it did.

As described by Wilbur Simonson in his Final Report,

> The informal development of the Memorial Highway required the use of the 'free-flowing' line... as the basis of structural design. The problem thus resolved itself into discerning what the terrain itself suggested as the line of least resistance and building the design thereon to fit naturally into the countryside; rather than the more costly contrary method of attempting to fit the land to the roadway construction, directly in conflict with nature. (Simonson 1933, 40)

The use of this technique meant that, when completed, there were few instances of incised, bare earth conditions where the highway was cut through the surrounding topography. The free-flowing line that Simonson desired for the MVMH required transition easements for horizontal alignment, vertical profile, and superelevated sections of the roadway. These were particularly

important at points of reverse curvature, at points of curvature entering or leaving a tangent, at flattened midpoints in compound curvature, at access points, at divided roadway openings, at vantage points to enhance views, and at points where shoulders met the existing slopes (Simonson 1933, 40–41). The use of "superelevation" (banking) at curves with a radius of less than 6,000 feet improved safety of the roadway.

Historic Condition:

The natural topography of the MVMH-North cultural landscape is characteristic of the Coastal Plain region, with gently rolling terrain descending into and out of river valleys. The tributaries that flow westerly into the Potomac River in this area—namely Four Mile Run and a few lesser tributaries—contributed to the topographic variation that the designers encountered when beginning the project. Land reclamation undertakings resulted in drastic changes to the natural topography of the shoreline, especially in the areas at the northern reaches of the inventory unit. More subtle changes were brought about by the grading efforts of the MVMH roadbed and corridor, but these were strictly controlled as the designers sought to conform the alignment to the existing conditions. Topographic variation was exploited by the highway engineers to great effect, complemented by vegetation selection, to create sweeping views of distant landmarks and of the Potomac River.

Roaches Run, Gravelly Point, and Bridges character areas

Continuing north, the topographic contours continued to rise gradually to approximately 40 feet above mean sea level and then, just as gradually, descended to approximately twelve feet above sea level at Roaches Run. A narrow causeway through the Gravelly Inlet held the roadbed close to the water's edge, with dramatic views of the Potomac to the immediate east and Roaches Run to the west. This grade and proximity to the river was then continued to the Boundary Channel at the north end of the inventory unit. The grading of the reclaimed land between the Boundary Channel and the railroad bridge was intentionally flat and close to the river to provide views of Washington's landmarks and West Potomac Park across the Potomac.

Airport character area

Passing Four Mile Run, the roadway alignment continued to run close to the shoreline, with the Capital Overlook providing expansive views of the river and Washington, DC in the near distance. Between 1938 and 1940, the highway was realigned in this area and the Capital Overlook was demolished to accommodate the construction of the airport to the east. Intensive land reclamation efforts for the airport pushed the shoreline much further out into the Potomac, thus altering the former topographic conditions to the east of the MVMH inventory unit in this character area.

The entire section of the MVMH-North between Alexandria Circle and Four Mile Run was modified in the early 1960s to accommodate increased commuter traffic. The original roadbed, which had carried traffic in both directions, became two lanes traveling southbound. To the east of the original roadbed, a new roadbed was constructed to carry two lanes of traffic northbound. This change resulted in minor topographic changes to the inventory unit. The northbound and southbound lanes were separated by a wide median, which was graded to taper down to its centerline from the roadbeds.

Daingerfield Island character area

From Monument View Hill, the roadway grade followed the natural topography, descending steadily over the next 1,000 feet of distance to approximately ten feet above mean sea level. This elevation change brought motorists close to the level of the Potomac, providing dramatic views of the river. Much of Daingerfield Island, which lies to the east of the roadway in this section, was a relatively flat landform lying at or near the same elevation of the roadway. A comparison of available USGS topographic maps (USGS 1900; USGS 1941–1942) illustrate that the topography underwent dramatic changes during the period of significance. Within the Daingerfield Island character area, much of the natural topography to the west of the roadway was in the process of being manipulated from lowland marsh to leveled land for the Potomac Yards railyard. A large wetland was preserved, lying several feet below the elevation of the roadbed. The highway designers attempted to screen it with vegetation. The roadway rises gradually between

Daingerfield Island and Four Mile Run to an elevation of about 30 feet above mean sea level. The roadway alignment along this half-mile stretch is a gracefully arcing curve in keeping with the design principles developed by the highway's engineers. At the northern reach of this character area, extensive reclamation efforts narrowed dramatically the wide mouth of Four Mile Run and transformed the topography through filling.

Alexandria Approach character area

From Alexandria Circle, the natural topography rises to the north from approximately 30 feet above mean sea level at the Circle to approximately 45 feet above mean sea level at Slaters Lane. This high point, sometimes referred to as Monument View Hill, was significant to the designers as it accessed an exceptional view of the Washington Monument nearly five miles away (Figure 52).



Figure 52. The natural topographic change at Monument View Hill just north of Alexandria. Looking north. (Matthew Traucht 2021).

Post-Historic and Existing Conditions:

The topographic character of the MVMH-North cultural landscape is overarchingly like that which was present during the period of significance. Minor changes that have occurred at tributaries, such as the improvements at the mouth of Four Mile Run in the 1970s, have not compromised the historic associations of topography within the MVMH-North cultural landscape (Figure 53). The land reclamation activities for the Washington National Airport in the late 1930s and that enlarged the Gravelly Point landform in the 1960s are both compatible with similar activities along the Potomac River shoreline that were accomplished for the original construction of the MVMH. Both reclamation projects transformed the experience of the MVMH by pushing the shoreline further away from the road alignment. The landform created for the airport, which obliterated the Capital Overlook and the experience of driving close to the river, is outside of the inventory unit boundary. The reclamation of land at Gravelly Point effectively increased the inventory unit boundary and created new opportunities for recreation and scenic enjoyment. It also, unfortunately, destroyed the original experience of driving on a narrow causeway between two bodies of water – the Potomac River and Roaches Run.



Figure 53. Photo of the MVMH looking south along the Daingerfield Island character area just south of Four Mile Run. Note gently undulating topographic character of the terrain and the use of superelevation banking where the road curves. (Matthew Traucht 2021).

Feature Name	Feature Contribution	CRIS-HS Name	CRIS-HS Number	Type of FMSS Record	FMSS Record Number	FMSS record an exact match?
River Shoreline and estuaries	Contributing					
Gently undulating character of highway	Contributing					
Superelevation of roadway	Contributing					
Monument View Hill	Contributing					

Flat condition between Boundary Channel and railroad bridge	Contributing					

Vegetation

Vegetation includes deciduous and evergreen trees, shrubs, vines, groundcovers, and herbaceous plants and plant communities, whether indigenous or introduced in the landscape.

The original planting palette for the Mount Vernon Memorial Highway was developed by landscape architect Wilbur Simonson and nurseryman Henry Nye to preserve and enhance the existing Coastal Plain vegetation, to screen the industrial landscape of warehouses and brickyards that dominated the landscape north of Alexandria, and to create a sequence of vegetation zones that motorists would pass through that were emblematic of Virginia's Coastal Plain. Vegetation was used to frame views along the entire length of the MVMH, especially in areas such as the vista from the top of Monument View Hill towards the Washington Monument to the north. Vegetation comprised deciduous shade trees and smaller flowering trees, shrubs, perennials, groundcovers, and vines, although Simonson categorized plants as trees, shrubs, and groundcover. The plant schedule reflected a strong emphasis on native plants and many of the trees, shrubs, and groundcovers were sourced locally and transplanted along the entire length of the MVMH. Aside from a few deodar cedars (*Cedrus deodara*), evergreen trees were not planted along the MVMH-North section, although evergreen shrubs and groundcovers were used (Evergreen trees were utilized more extensively in the section of the MVMH south of Alexandria). The planting strategies developed by Simonson and Nye combined both an emphasis on continuity along the MVMH through the usage of a limited plant palate while also establishing distinct spaces along a continuously evolving sequence. Certain species, such as oaks and maples, were planted as a unifying backdrop to the MVMH, with others, like dogwoods, roses, and elms, were used as specimens in creating visual interest (Kelsch 2009 Volume One, 28). Vegetation was often specified in larger groupings of specific plants to convey the effect of natural colonies and to establish a unified character along the MVMH (Simonson 1936, 174).

Following the opening of the MVMH, subsequent planting plans were implemented throughout the period of significance, which has created layers of vegetation. Additionally, the subsequent planting plans, focused sometimes on discreet areas of the MVMH-North cultural landscape and at other times more broadly along the entire stretch of the roadway, has diminished Simonson's sequence of transitioning from distinct spaces along the route. The planting palate has evolved from the limited one that Simonson and Nye used, which focused on Coastal Plain vegetation, to one that includes trees that were not originally selected for the MVMH, as well as many more evergreens. Additionally, fewer ornamental trees were specified in the later plans than in the original plans, which has contributed to a lack of variety in the vegetated character of the MVMH-North cultural landscape and has reduced the visual interest that once characterized the motorists' experience.

The vegetation of the Mount Vernon Memorial Highway – North of Alexandria section (MVMH-North) is documented hierarchically in the following landscape character areas described from south to north: Alexandria Approach, Alexandria Waterfront, Daingerfield Island, Airport, Roaches Run, Gravelly Point, and Bridges. More information about the vegetation at MVMH-North can be found in The Vegetation of the George Washington Memorial Parkway Central Section: Alexandria to Arlington Memorial Bridge cultural landscape report (Kelsch 2009).

Historic Condition:

MVMH-North Planting Plans

Planting plans were completed in September 1931 and a field conference was held on October 2 to review; consequent changes were then made:

> Trees were the dominant landscape unit in the existing natural beauty adjacent to the highway. Landscape-forestry improvement work, therefore, was an important element in the preservation and enhancement of the woodlands, and of the specimen trees and tree groups of pictorial value. (Simonson 1933, 12)

Simonson's planting plan, which spanned the entire length from Mount Vernon to the Arlington Memorial Bridge, generally favored a naturalistic approach, although formality was inserted at key moments. Groupings on the east side of the highway were strategically sited to frame views of the Potomac River and of Washington's monumental sites. On the west side, the planting plan

called for denser configurations to screen unwanted views of the industrialized conditions along the MVMH-North section. Plantings also responded to the direction of travel along the MVMH and the accentuation of desirable views or the screening of unwanted views. Traveling northbound, the vegetation enhanced views of the Washington Monument, the US Capitol Building, and the Potomac River. The southbound traveler would have experienced views of Roaches Run, the Potomac River, and Four Mile Run. Plantings along these waterbodies were kept low and comprised typical riparian species. Entering Alexandria, the planting plan transitioned to a more formal composition to emphasize the significance of Old Town. Overall, the plan created a sequence of experiences that was inspired by Virginia's natural flora, that presented sights that were significant to George Washington or that commemorated his contributions to the nation, and that showcased the engineering and design of the highway.

After the MVMH opened to traffic, subsequent planting plans were developed along the length of the MVMH-North cultural landscape. These plans, described below in the applicable character areas, were developed in 1936, 1942, and 1949. Lastly, accompanying the addition of new northbound lanes between Alexandria and Four Mile Run, a planting plan (eTIC 850/85634A) was developed in 1964 that addressed the entire length of the MVMH from Alexandria to the Potomac Railroad bridge. Shade and flowering trees, all planted in groups of similar plants, were consistent with earlier plantings from 1932, 1936, 1942, and 1949. But where the Simonson plan used vegetation to create a sequence of experiences along the MVMH's entire length, the 1964 planting plan had a homogenizing effect on the overall character of the MVMH-North section.

Bridges character area

In the Bridges character area, Simonson's planting plan sought to, at once, screen views of the railroad bridge, to amplify views of the new cloverleaf interchange at the 14th Street Bridge, and to frame views of the Washington Monument and other local landmarks. A 2,000-foot-long, flared median extended from south of the railroad bridge to north of the cloverleaf. This was planted with more than 1,000 memorial roses (*Rosa wichuraiana*), a low-growing evergreen shrub with white, late-season blossoms. A specimen honey locust (*Gleditsia triacanthos*) was specified in the median to the south of the railroad bridge and several elms (*Ulmus americana*) were sited to

the north of the bridge. Screening the railroad bridge and its embankment from the south, on both sides of the road, Simonson specified distinct groupings of pin oak (*Quercus palustris*), bur oak (*Quercus macrocarpa*), white mulberry (*Morus alba*), honey locust (*Gleditsia triancanthos*), weeping willow (*Salix pendulina 'Elegantissima'*), Chinese scholar tree (*Styphnolobium japonicum*, formerly *Sophora japonica*) and Japanese snowbell (*Styrax japonicus*), all underplanted with showy thickets of prickly ash (*Zanthoxylum americanum),* and sumacs (*Rhus glabra*; *R. typhina*). To the north of the railroad corridor, groves of American elm (*Ulmus americana*) and Oriental plane (*Platanus orientalis*) were accented by underplantings of flowering dogwood (*Cornus florida*), hawthorn (*Crataegus punctata*), weeping forsythia (*Forsythia suspensa*), witch-hazel (*Hamamelis virginiana*), and multiflora rose (*Rosa multiflora*). Boston ivy (*Ampelopsis tricuspidate*) was planted to screen the railroad embankments. Although willows, Chinese toon, and honey locust were specified for a spit of land that extended into the Potomac to the south of the railroad bridge, these were crossed out in the planting plan.

North of the railroad bridge, the intensive roadside planting strategy became more relaxed, with only specimen elms (*Ulmus americana*) planted at regular intervals. Further west, establishing an enclosing screen, a mixed grove of red maple (*Acer rubrum*), pin oak (*Quercus palustris*), and Oriental plane (*Platanus orientalis*) was underplanted with numerous Nanking cherry (*Prunus tomentosa*) and groupings of flowering shrubs such as viburnum (*Viburnum dentatum*, *V. lentago*), buckthorn (*Rhamnus cathartica*; *R. caroliniana*), witch-hazel (*Hamamelis virginiana*), hawthorn (*Crataegus cordata*), honeysuckle (*Lonicera tatarica*), and flowering dogwood (*Cornus florida*). Simonson marked on his plans the former (1906) high and low water lines that would have predated the reclamation of this section, whereupon he specified a row of privet (*Ligustrum ovalifolium*). To the east of the roadway, shrubs were largely omitted from the greensward between the right-of-way and the Potomac River. The planting palette comprised only American elms (*Ulmus americana*), pin oak (*Quercus palustris*), and Oriental plane (*Platanus orientalis*) planted singly or in groupings (by type) of three or four, mostly in a linear configuration at the shoreline. This was done, most likely, to provide panoramic views of the District of Columbia across the Potomac and to maintain clear sightlines of the cloverleaf interchange, which would have been a novel experience for most motorists in the 1930s. Indeed, to the north of the interchange, a similar

strategy of loose tree groupings framing views of the river was employed. To the west of the MVMH north of the interchange, groupings of American elm (*Ulmus americana*), Oriental plane (*Platanus orientalis*), and pin oak (*Quercus palustris*) formed a linear grove along the edge of the lagoon. These were underplanted with Nanking cherry (*Prunus tomentosa*), Ussurian pear (*Pyrus ussuriensis*) and a shrub layer like that specified for the west side of the right-of-way to the south of the interchange. The only evergreen trees specified for the MVMH-North section, four Deodar cedars (*Cedrus deodara*), were planted on the west side of the MVMH at the cloverleaf interchange. A memorial planting by the Garden Club of America comprised four American elms (*Ulmus americana*), 100 English ivy plants (*Hedera helix*), and 200 honeysuckles (*Lonicera japonica*) were located to the west of the MVMH near the southbound access and exit ramps. These plantings were encircled by locust post and chain enclosure that included DC boundary markers.

Within the interchange itself, the eight triangular-shaped medians that occupied the interstitial areas between the access and exit ramps (four at the MVMH grade and four at the level of the bridge) were planted with the memorial rose (*Rosa wichuraiana*). The four oval-shaped medians at the MVMH grade were planted similarly, combined with hundreds of rock spray cotoneaster (*Cotoneaster horizontalis*), a showy, semi-prostrate shrub with red berries in the winter, a mix of flowering trees, and a single American elm in each of the four medians.

Continuing north of the cloverleaf interchange, American elm (*Ulmus americana*) and pin oak (*Quercus palustris*) were planted in groupings along the banks of the Boundary Channel and Potomac River. These were underplanted with flowering trees such as white fringetree (*Chioanthus virginica*) and flowering dogwood (*Cornus florida*) in addition to hundreds of roses (*Rosa spp*.).

In 1965, a planting plan was developed by the National Park Service National Capital Office for the 14th Street interchange, which was redesigned to remove the cloverleaf and accommodate the new Rochambeau Bridge (now Arland D. Williams, Jr. Memorial Bridge) that was built in 1950. Although the cloverleaf was removed and a new interchange to the bridge was built, the planting plan (eTIC 850/122836) illustrates that many of the existing trees were retained, with some

marked for pruning. New trees were added, including a regular rhythm of zelkova (*Zelkova serrata*) in the median between the MVMH northbound and southbound lanes. In the park areas near the Potomac and adjacent the bridge approaches, the plan added, in informal groupings, two maples (*Acer rubrum*), seven tulip poplar (*Liriodendron tulipfera*), eight London planes (*Platanus × acerifolia*), one northern red oak (*Quercus borealis*), and two pines (*Pinus nigra*). Some 87 flowering dogwoods (*Cornus florida*), twelve eastern redbud (*Cercis canadensis*), and eleven Washington hawthorn (*Crataegus phaenopyrum*) were planted in groups beneath mature trees and in the new planting areas of the interchange. During this same period, Lady Bird Johnson formed the Committee for a More Beautiful National Capital, whose mission included the beautification of entrance routes into the District of Columbia. Because this new interchange and bridge was the major route into the city from Washington National Airport, it received the Committee's attention. Thanks to a financial donation by philanthropist Mary Woodward Lasker, thousands of daffodils and annuals were planted along the MVMH here and extending all the way to Arlington Memorial Bridge (EDAW 1992).

In 1969, following the construction of the George Mason Bridge and removal of the old Highway Bridge, National Park Service landscape architect Darwina Neal developed a planting plan (eTIC 850/85813) for the section of the inventory unit on both sides of the MVMH between the new bridge and the Boundary Channel. Working within the framework of existing trees and daffodil beds, the plan called for 108 dogwoods (*Cornus florida*; *C. florida f. 'Rubra'*) in addition to shade trees such as weeping willow (*Salix babylonica*), tulip tree (*Liriodendron tulipfera*), red oak (*Quercus borealis*) and Japanese zelkova (*Zelkova serrata*). In 1971, additional plantings were added, focused on the part of the interchange to the west of the MVMH. The plan (eTIC 850/85854B) added 13,100 square yards of sod, 400 winter jasmine plants (*Jasminum nudiflorum*), 100 viburnum (*Viburnum tomentosa*), 65 wax myrtle shrubs (Morella cerifera), 31 flowering dogwoods (*Cornus florida*), and few willow oaks (*Quercus phellos*), weeping willow, (*Salix babylonica*), and red maples (*Acer rubrum*).

Roaches Run and Gravelly Point character area

Plantings at the Roaches Run and Gravelly Point character areas were designed to be low to permit unrestricted, dramatic views of the water on both sides of the narrow causeway upon which the MVMH traversed. The plantings also framed views of the US Capitol to the east across Gravelly Point and the Potomac River. Additionally, because of the amount of fill that was used in this area, plants were employed to immediately stabilize the soils and to create a naturalized transition from the new land to the river beyond. Shade trees at Roaches Run included white willow (*Salix alba*), river birch (*Betula nigra*) red maple (*Acer rubrum*), quaking aspen (*Populus tremuloides*), and bald cypress (*Taxodium distichum*), with occasional elms (*Ulmus spp.*) and honey locust (*Gleditsia triacanthos*) planted closer to the roadway. A small island in the lagoon was planted with bald cypress (*Taxodium distichum*) and weeping willow (*Salix 'Elegantissima'*). A peninsula on the western side of the lagoon was planted with twelve bald cypresses (*Taxodium distichum*), 30 quaking aspen (*Populus tremuloides*), 25 red maple (*Acer rubrum*), and 55 golden willow (*Salix alba 'Vitellina'*) and ten scarlet willows (*Salix alba var. vitellina 'Britzensis'*); these were underplanted with the shrubbier bluestem willow (*Salix irrorata*). The combination of the willows and aspen – all of which turn bright yellow and red in the fall—would have been quite striking when seen, reflected in the lagoon, from the roadway. Two massings of American elms (*Ulmus americana*), one on each side of the road, framed views of the Capitol in the distance. American hornbeam (*Carpinus caroliniana*) and river birch (*Betula nigra*) comprise the understory selection. Aside from a few groupings of flowering dogwood (*Cornus florida*) and Chinese toon (*Toona sinensis*), flowering trees were sparingly used in this area.

Plantings along the Potomac shoreline at Gravelly Point consisted of American elm (*Ulmus americana*), white willow (*Salix alba*), and black gum (*Nyssa sylvatica*). The shrub layer consisted of, primarily, bristly locust (*Robinia hispida*), which is a plant used to stabilize slopes and fix nitrogen. Thousands of roses (*Rosa spp.*) were planted in the area close to the roadside, with redosier dogwood (*Cornus sericea 'Flaviramea'*), elderberry (*Sambucus canadensis*), and southern bayberry (*Morella caroliniensis*) utilized closer to the banks, creating a layered effect.

In 1963, the planting plan that addressed the entire length of the MVMH-North cultural landscape added groups of three to four shade trees and massings of mixed shrubs along the east side of the roadway at regular intervals (Figure 54). This undertaking aligned with the timing of the improvements that were concurrently occurring at Gravelly Point, consisting of the installation of new parking areas and a boat ramp and the reclamation of the landmass along the Potomac River. The new vegetation was installed in groupings to create a regular rhythm along the east side of the roadway. Shade trees included maples (*Acer rubrum*; *A. saccharum*), weeping willow (*Salix baylonica*), willow oak (*Quercus phellos*), and eastern white pine (*Pinus strobus)*. To the south of each of the tree groupings, mixed plantings of shrubs included viburnum (*Viburnum acerifolium*; *V. dentatum*; *V. prunifolium*), dogwood (*Cornus stolonifera*), chokeberry (*Aronia arbutifolium*), and winterberry (*Ilex verticillata*).

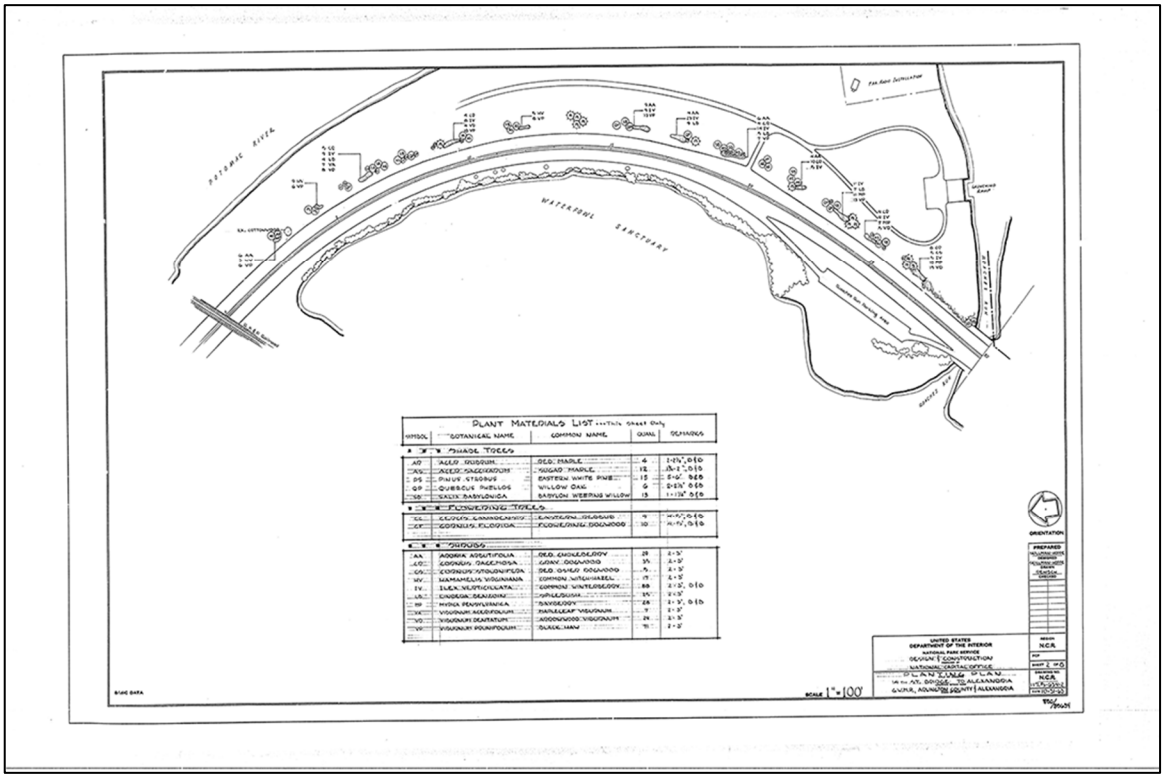


Figure 54. Planting at Gravelly Point, 1963 (eTIC 850/85634).

In 1967, reviving the tradition of planting memorial trees along the MVMH, a grove of dogwood was planted at Gravelly Point and came to be known as Governors Grove (Figure 55). The memorial plantings were part of Lady Bird Johnson's highway beautification program, although the location was selected by the National Park Service. Gravelly Point had recently been enlarged through reclamation efforts and improved with the addition of parking lots and a boat launch through the Mission 66 initiative. The dogwoods, each standing between five and six feet in height, had been donated by DeKalb Nurseries in Norristown, PA (Sheldon 1967). The memorial trees consisted of fifty-four dogwoods, one for each of the fifty states and four US territories. These were organized in alphabetical order, with those trees representing the states at the beginning of the alphabet close to the Potomac River and those at the end of the alphabet closer to the MVMH. Unfortunately, due to poor soils and the exposed conditions beneath the flight path of Washington National, none of the trees survived.

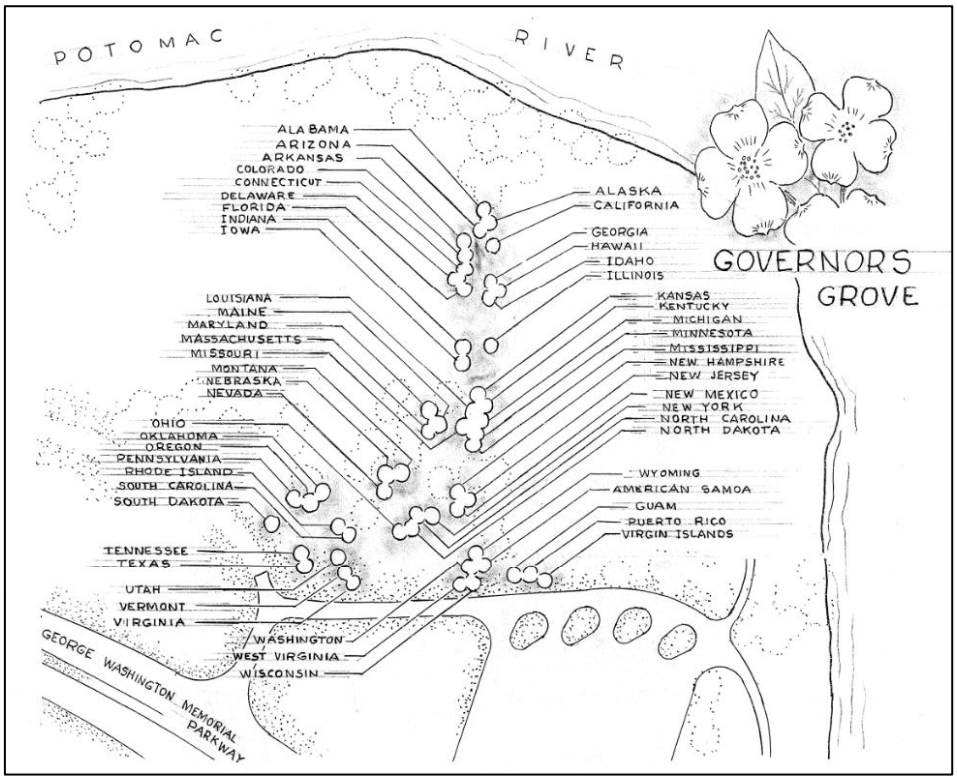


Figure 55. Program map for Governors Grove Dogwood Planting at Gravelly Point, March 18, 1967 (eTIC 850/85870).

Airport character area

During the construction and immediate opening of the highway, the airport character area included the ruins of Abingdon, Capital Overlook, and the entrance to the Gravelly Point Airport. The planting plan treated each of these areas differently. Plant selections generally indicated the fact that this area is at higher elevation than other parts of MVMH-North. Additionally, more ornamentals are used here than other areas, reflecting that the designers intended motorists to stop along the way to explore the immediate surrounding on foot. A short, two-section flared median with an at-grade crossing was constructed just north of Four Mile Run. This was planted with several elms (*Ulmus americana*). The Association for the Preservation of Virginia Antiquities donated four red oak (*Quercus rubra*) trees to be planted at Abingdon and an open grove of oaks (*Quercus macrocarpa*) and tulip poplar (*Liriodendron tulipifera*) were planted there as well. At the cloverleaf entrance to the Gravelly Point Airport, hundreds of flowering dogwood and continuous massings of roses were shaded by, primarily, oaks planted in groupings. At the Capital Overlook, which was at the north end of the Airport character area, two large specimen willow oaks (*Quercus phellos*) were donated by the National Colonial Dames of America, District Chapter. Groupings of flowering dogwood (*Cornus florida*) were planted at the entrance to the Overlook amongst a grove of American beech (*Fagus grandifolia*). The traffic island at the entrance to the Overlook was planted with roses (*Rosa spp.*) that were shaded by two willow oaks (*Quercus phellos*). Throughout the character area, oaks (*Quercus spp.*), elms (*Ulmus spp.*), American beech (*Fagus grandifolia*), and oriental planetrees (*Platanus orientalis*) were used as canopy trees, supplemented by tulip poplar (*Liriodendron tulipifera*), red maple (*Acer rubrum*), and white mulberry (*Morus alba*). American hornbeam (Carpinus caroliniana) and river birch (Betula nigra) served as understory plantings, with more than 200 flowering dogwood (*Cornus florida*) trees as ornamentals. Planting of vines at guardrail posts continued, with virginsbower (*Clematis virginiana*) and summer grape (*Vitis aestivalis*) being added to the previously mentioned plants.

With the construction of Washington National Airport and the realignment of the MVMH to accommodate that construction between 1939 and 1942, Simonson's plantings between Four Mile Run and Roaches Run were obliterated. In 1942, the Federal Works Agency developed planting plans for the airport, which included the MVMH access and exit ramps. In 1949, additional plans

were developed for the section of the MVMH between these ramps and encompassed areas on both sides of the MVMH. This effort included some 300 canopy trees including oaks and elms, grouped together by species. As understory, medium-sized flowering trees such as dogwood, cherries, and hawthorns were planted.

The 1963 planting plan that addressed the entire length of the MVMH-North cultural landscape focused primarily in this character area on increasing the buffer of screening plants that had been in 1942 and 1949. Along the southern extent of the character area, dense groupings of white pine (*Pinus strobus*) were planted to screen the temporary Building T7 that faced the MVMH from the airport. Interspersed among these, and planted along the west side of the MVMH, were single specimens or groupings of a few maples (*Acer rubrum*; *A saccharum*) and oak (*Quercus borealis*; *Q. coccinea*). Mixed sweeps of shrubs included viburnum (*Viburnum acerifolium*; *V. dentatum*; *V. prunifolium*), winterberry (*Ile verticillata*), chokeberry (*Aronia arbutifolium*), and dogwood (*Cornus stolonifera*). In the northern part of the character area, oaks (*Quercus alba*; *Q. coccinea*) and white pines (*Pinus strobus*) were planted along the east side of the MVMH, with eastern redbud (*Cercis canadensis*) and dogwood (*Cornus florida*) providing visual interest.

Daingerfield Island character area

Along the section of the MVMH extending from the Alexandria Approach to Four Mile Run, Wilbur Simonson and Henry Nye abandoned the formulaic symmetry of planting similar trees on both sides of the highway that was used closer to Alexandria and, instead, chose to screen wetlands and the rail corridor to the immediate west of the MVMH with denser stands of vegetation while maintaining and enhancing selected open views of the Potomac River on the east. The roadbed in this section was slightly higher than the surrounding lands, which led the designers to select plant species that were more tolerant of mesic soils. The planting plan responded to the higher speeds of the MVMH in this section by using canopy trees in large groupings spaced widely apart and enhanced the existing stands of natural vegetation that were present here. Elms (*Ulmus spp.*), oaks (*Quercus spp.),* river birch (*Betula nigra*), and maple (*Acer spp.*) trees were utilized on the west side of the highway, with some ornamental trees such as white fringetree (*Chionanthus virginicus*) planted in the foreground. Long swaths of mixed shrubs

and groupings of shrubs such as arrowwood viburnum (*Viburnum dentatum.*), common elderberry (*Sambucus canadensis*), roses (*Rosa spp.*), and dogwood (*Cornus spp.*) along the west side of the highway provided visual interest and screened the wetlands and rail corridor. Along the east side of the MVMH, Wisconsin weeping willows (*Salix babylonica*) were planted in the distance while elms (*Ulmus spp.*) and common hackberry (*Celtis occidentalis*) were planted closer to the roadway. The Daingerfield Island peninsula was, at this time, owned by Smoot Land & Gravel so plantings there associated with the Simonson plan are closer to the roadway. Further north toward Four Mile Run, groupings of honey locust (*Gleditsia triacanthos*) and cork tree (*Phellodendron chinense*) were used on both sides of the highway while several mature elms (*Ulmus americana*) were transplanted to frame the bridge over Four Mile Run. Throughout the Daingerfield Island character area, flowering trees such as dogwood (*Cornus spp.),* white fringetree, hawthorn (*Crataegus spp.*), and Chinese toon (*Toona sinensis*) were planted closer to the roadway for their ornamental effect. Shrub massings were used to immediately screen unwanted views and to stabilize the imported soils and slopes. The rich and diverse palette of screening vegetation along the west side of the highway comprised predominantly sumacs (*Rhus glabra*; *Rhus typhina*; *Rhus copallinum*), dogwood (*Cornus spp.*), roses (*Rosa spp.),* viburnum (*Viburnum spp.*), common elderberry (*Sambucus canadensis),* chokecherry (*Aronia melanocarpa*; *Aronia pyrifolia*), California privet (*Ligustrum ovalifolium),* common buckthorn (*Rhamnus cathartica*), pussy willow (*Salix discolor*), swamp rose (*Rosa palustris*) and honeysuckle *(Lonicera spp.*). A grouping of donated multiflora roses (*Rosa multiflora var Chenault*) was planted near the Four Mile Run bridge. Vines and climbing plants installed along the guardrails included Virginia creeper (*Parthenocissus quinquefolia*) and porcelainberry (*Ampelopsis heterophylla*), while trumpet creeper (*Bignonia radicans*) was planted at the base of light poles.

In March and in November of 1936, two additional planting efforts, concentrated between Alexandria and Four Mile Run, increased the vegetative cover. The first plan added some 1,000 pines, in groupings along the west side of the highway, presumably for additional screening of the Potomac Yards. The specified trees include Scots pine (*Pinus sylvestris*), Virginia pine (*P. virginiana*), red pine (*P. resinosa*), and eastern white pine (*P. strobus*). A note on the planting plan indicates that pines were to be used:

> informally in irregular groups and spacings based on kinds and size of trees, avoiding sharp demarcation of species where practicable….place all pines not less than 10'–15' west of existing west curb line where consistent with available space and drainage conditions. [Scots pine], where used in mixture with other pines, to be planted on low ground having poor drainage, preferably in the background where practicable. (eTIC 850/85168)

Later that year, a second plan for the same section improved upon the screening effect of the one that preceded it. With this effort, nearly 400 white pines (*Pinus strobus*) were planted, along with 250 deciduous trees including American elm, (*Ulmus americana*), swamp white oak (*Quercus bicolor*), red maple (*Acer rubrum*), and plane tree (*Platanus occidentalis*). Although the addition of pines altered the vegetated character that was designed by Simonson for this section of the MVMH, the screening of unwanted views to the west of the highway with vegetation was compatible with his general approach for this area and Virginia pine had been used extensively in the section south of Alexandria. The selected deciduous trees were compatible with Simonson's original plan for the MVMH-North section.

After two drive lanes were constructed from Alexandria to Four Mile Run between 1961 and 1963, new plantings were installed in 1963. In the Daingerfield Island character area, these were planted mostly along the east side of the MVMH and in the new, wide median that was created. This median preserved mature vegetation from the earlier planting plans, mainly willow oaks (*Quercus phellos*), which was supplemented with new shade trees and shrub plantings. The planting plan also specified hundreds of shrubs to be planted in naturalistic groupings of three or four types at regular intervals along the east side of the new road and in the median that was created by the construction of the northbound lanes. These included dogwood (*Cornus racemosa; C. stolonofera*), bayberry (*Myrica pensylvanica*), winterberry (*Ilex verticillata*), and witch-hazel (*Hamamelis virginiana*).

Alexandria Approach character area

Along the approach to Alexandria from the north, the 1932 planting plan sought to create a formalizing transition from the commemorative highway to Old Town Alexandria. Wilbur Simonson referred to this area as "Memorial Circle," however it was more commonly called

"Alexandria Circle" to avoid confusion with the "Memorial Circle" at the Arlington Memorial Bridge. Within the traffic circle, American elms (*Ulmus americana*) were planted in an asymmetrical configuration with Japanese honeysuckle (*Lonicera japonica 'Halliana'*) used at the groundplane, kept low to permit views across the circle. Outside the circle, a formal landscape effect was created: littleleaf lindens (*Tilia cordata*) and hornbeams (*Carpinus betulas*) were planted in double rows while ornamental shrubs such as viburnum (*Viburnum spp.*), rose (*Rosa spp.*), and privet (*Ligustrum ibota var. regelianum*) provided interest at the sightlines visible from vehicles. Continuous plantings of privet (*Ligustrum ovalifolium*), with some roses and vines, defined the perimeter of the formal landscape treatment in the area surrounding Alexandria Circle, with groupings of American elm shading the peripheries. Continuing south along Washington Street (outside of the MVMH-North cultural landscape boundary), Simonson's plan called for a single row of linden (*Tilia vulgaris*) to line both sides of the street. North of the circle, the planting plan became looser and less formal, with trees planted in clusters rather than in linear arrangements. Groupings of tree species were planted on both sides of the MVMH in alternating, complementing arrangements spaced at about 100–150-foot intervals. The shade tree groupings comprised elm (*Ulmus americana*), oak (*Quercus spp.*), oriental planetree (*Platanus orientalis*), honey locust (*Gleditsia triacanthos*), and maple (*Acer spp.*). Flowering trees planted in groupings as understory beneath the shade trees provided visual interest from the MVMH. These included amur maple (*Acer ginnala*), crabapple (*Malus spp.*), Japanese snowbell (*Styrax japonicus*), hawthorn (*Crataegus spp.*), Japanese flowering cherry (*Prunus serrulata*), golden raintree (*Koelreuteria paniculate*), and dogwood (*Cornus spp.*). Shrubs such as honeysuckle (*Lonicera spp.*), viburnum (*Viburnum spp.*), and privet (*Ligustrum ibota var. regelianum*) were employed to screen the surrounding urban character of the approach to Alexandria from the motorists' view. Along North Washington Street, three Oriental planetrees (*Platanus orientalis*) donated by the American War Mothers, Alexandria, Virginia, were installed.

In 1943, a new road was constructed adjacent the west side of the MVMH between the Alexandria Circle and Bashford Lane. To accommodate the excavation for the road, which left an abrupt bank, many existing plants were moved to the east, closer to the MVMH (eTIC 850/80156). The relocated plants included a privet hedge, a hedge of hornbeam, and individual maples, elms,

honey locust, and lindens. The plan also included 220 new privet plants (*Ligustrum ovalifolium*) and about 35 new shade and medium-sized trees.

Between 1961 and 1963, the traffic circle was removed, and two new lanes were constructed from Alexandria to Four Mile Run. With the construction of the new lanes, planting efforts occurred on both sides of the highway for the entire Alexandria Approach character area (Figure 56). Where the circle was removed, new maples (*Acer saccharum*), oaks (*Quercus coccinea*) and pines (*Pinus strobus*) were planted, as were three American hollies (*Ilex opaca*). Eastern redbud (*Cercis canadensis*) and flowering dogwood (*Cornus florida*) were planted for the understory. Along the approach from the south, tulip poplar (*Liriodendron tulipfera*), northern red oak (*Quercus borealis*), and sugar maple (*Acer saccharum*) were planted in gaps between the existing vegetation that existed on both sides of the roadway. Groupings of shrubs were also added along the approach. These comprised viburnums (*Viburnum acerfolium; V. prunifolium)*, spicebush (*Lindera benzoin*) witch-hazel (*Hamamelis virginiana*), and chokeberry (*Aronia arbutifolia*).

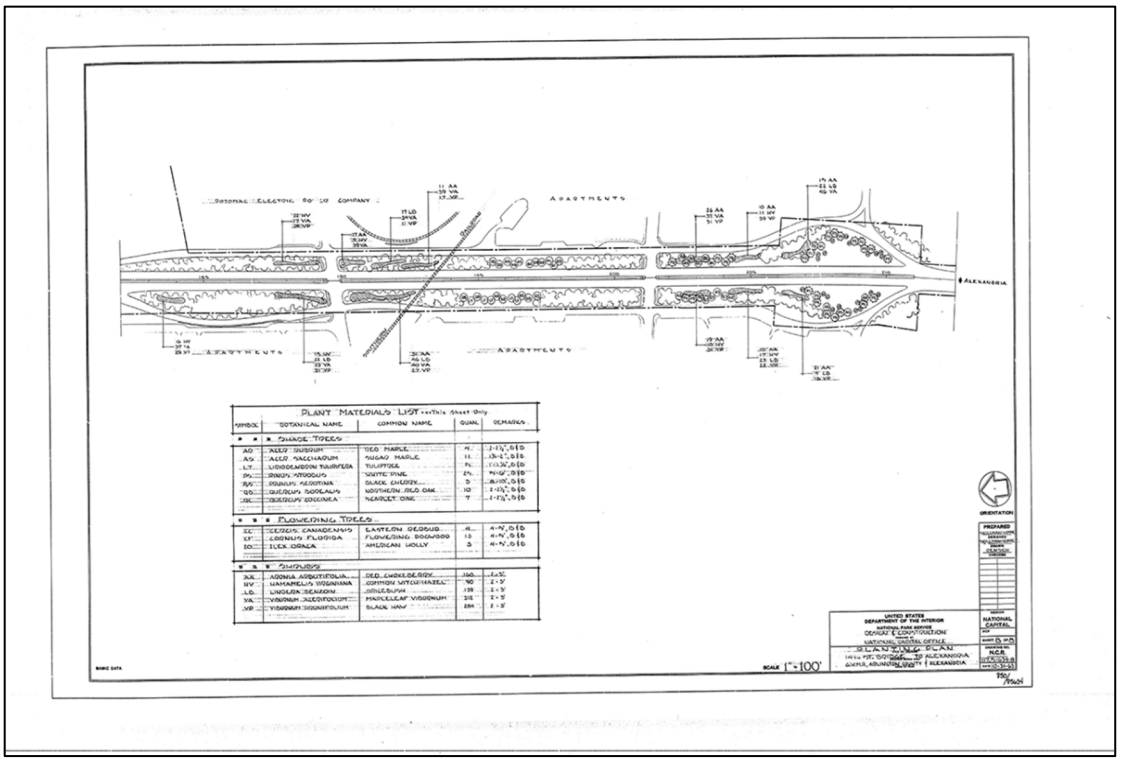


Figure 56. Planting at Alexandria Approach, 1963. Note removal of traffic circle, and vegetation for the revised area (eTIC 850/85634).

Post-Historic and Existing Conditions:

The vegetation along the present-day MVMH is a mix of grassland and woodland communities. Some of existing vegetation is traceable to planting schemes during and after the period of significance while other plants and plant communities are volunteers that have grown from seed deposited through natural processes. The grassland community comprises fescue, perennial rye, foxtail grass, and Kentucky bluegrass, with ivy, chickweed, and Pennsylvania smartweed. Grassland that is not maintained (mowed) consists of foxtail grass and Pennsylvania smartweed. Japanese honeysuckle, broomsedge, goldenrod, aster, and poison ivy are also present. The upland hardwood forest communities consist of black locust, black oak, willow oak, hawthorn, boxelder, and American elm, with some white pine present as well; the understory layer includes Japanese honeysuckle, poison ivy, and greenbrier. The bottomland hardwood forest community comprises green ash, sycamore, boxelder as well as red maple, eastern cottonwood, and

mulberry; the understory consists of Japanese honeysuckle, water hemp, and swamp rose. In some areas, flowering trees such as fringetree, red bud, and dogwood are present.

Remnants of some of the planting plans from the period of significance still exist within the MVMH-North cultural landscape. Some vestiges of the Simonson plan are present on the east side of the Roaches Run lagoon and can be found around the railroad bridge and to the immediate north of that structure, however the presence of later plantings coupled with the altered conditions in that area associated with removed and new bridges has obscured Simonson's design intent. Some of the original plantings can still be found along the approach to Alexandria and along the west side of the right-of-way adjacent Daingerfield Island, although the legibility of the design intent is obscured by subsequent plantings and by volunteers. Several willow oaks planted in 1936 to the west of Daingerfield Island persist, located in the median since the northbound lanes were added in the early part of the 1960s. Between Slaters Lane in Alexandria and Four Mile Run, much of the screen plantings from 1936 to the west of the MVMH are still present. Screen plantings near the airport dating to the 1949 and 1956 planting plans are well established now and accomplish their intended effect. Plantings from the 1970s near the Boundary Channel and 14th Street Bridges are largely intact, intermixed with a few very mature trees from the Simonson period.

Although some of the plants specified by Wilbur Simonson are today considered invasive – namely Japanese honeysuckle and porcelainberry – the GWMP management philosophy does not prescribe eradication, primarily because the MVMH cultural landscape is a designed park. Rather, a philosophy of selective maintenance of historic, non-native plantings and the removal of truly invasive species is practiced and subject to review. Other invasives such as knotweed and common reed that are not associated with historic planting plans are controlled by the park (Robinson & Associates 2011). Following the end of the period of significance, various planting plans for individual sections of the MVMH-North cultural landscape have been developed.

Bridges character area

In the 1980s, a plan called "Renovation and Restoration Planting" was developed for the Bridges character area following work done at the approaches to the 14th Street Bridges (eTIC 850/80116). This plan added Japanese crabapples (Malus floribunda), dogwood (*Cornus kousa*), Eastern redbud (*Cercis canadensis*), regent scholar trees (*Sophora japonica 'Regent'*), Japanese black pine (*Pinus thunbergia)*, and zelkova (*Zelkova serrata*) to the existing vegetation, mostly around the approaches.

Today, due to the major changes to the approaches and bridges in this character area, very little of the original planting character remains. The existing vegetation character is somewhat sparse, due to the number of bridge approaches and ramps. To the east of the road along the edge of the landform at the Boundary Channel and the Potomac River to the north of the George Mason Bridge approach, mature shade trees such as American elm and Japanese zelkova are planted throughout. Some of these date to the 1932 plans but most are from 1969. To the west of the road, most of the mature vegetation is from the 1960s and 1980s plans. Within the cloverleaf interchanges from the 14th Street Bridge approaches, mature stands and specimens comprise elms, zelkova, and oaks. Again, zelkova, elms, and oaks stand as individual specimens or are grouped to form a backdrop to the MVMH corridor. To the west, these stands serve to screen the commercial development but to the east, they obscure views of the river, which may have been intentional as the complexity of the interchanges in this section demand the motorist's full attention. Throughout the Bridges character area, many the flowering trees from the 1969 and 1971 planting plans persist – though in fewer numbers than intended – beneath the mature shade trees. Between the 14th Street Bridge approaches and the Potomac Railroad corridor, several mature elms and oaks remain from the 1932 period. Other mature shade trees are also present, though the period that these date to is undetermined. Flowering trees and shrubs in this area are present in lower numbers than further north. Most of the groundcover throughout the Bridges character area is mown grass. Volunteer vegetation is present along the rail corridor and at the river's edge, as well as along the western edge of the MVMH-North corridor. Along the east side of the MVMH flanking both sides of the Potomac Railroad, a few mature elms and oaks from the 1932 planting period remain. Ornamental trees (Eastern redbud and flowering dogwood) from

the 1969 planting period are also present, although these are fewer than were shown in the planting plan (eTIC 850/122836). Additional trees present (though not associated with any known planting plans), include honey locust, black cherry, white oak, and mulberry. On both the east and west sides of the MVMH flanking the Potomac Railroad, volunteer vegetation is widely present. Throughout the character area, existing trees from the period of significance are considered contributing vegetation the MVMH-North cultural landscape.

Gravelly Point character area

In 1980, a planting plan (eTIC 850/80151_Z1) for Gravelly Point specified the locations of 54 new dogwoods (*Cornus florida*) to replace the Governors Grove dogwoods planted in 1967. At the same time, forty Japanese black pines (*Pinus thunbergii*) were planted adjacent the dogwoods in the hope that they would grow to provide shade necessary for the dogwood. The trees were planted in the large open field to the northeast of the access road and along the southern edge of the peninsula opposite the Mount Vernon Trail that skirts the perimeter of Gravelly Point.

Today, the Gravelly Point character area, is one where trees and shrubs are largely absent. Mature cottonwoods, sycamore, and river birch are present in the northern segment of the character area near the Railroad Bridge. A few bur oaks from the 1932 planting plan are present to the south of the railroad corridor. Along the east side of the MVMH, mature maples and oaks remain from the 1964 planting period, although the pines planted along the road are no longer present, which has left gaps in the rhythm of trees that were planted. The shrub groupings along the south sides of these trees are no longer extant and much of the Gravelly Point landform is vegetated with turfgrass, which is appropriate for the recreational fields in this location. Mature trees along the Potomac River create a loose edge to the peninsula, although it is not clear if these were planted or have established on their own. These include silver maple, red maple, American elm, honey locust, and American sycamore. At the southern end of the peninsula to the east of the parking lot and access road, a number of the Japanese black pines planted in 1980 remain. Unfortunately, again, none of the dogwoods survived. The mature trees in the northern part of this character area that date to the 1932 and 1964 planting periods are contributing resources to the MVMH-North cultural landscape.

Roaches Run character area

Aside from Simonson's plan, no planting plans have been discovered for Roaches Run. Most of what was planted in 1932 is gone or illegible. The massings of shrubs and distinct groves of bald cypress, honey locust, American elm, and red maple that Simonson specified for Roaches Run are no longer present, replaced over the years by volunteer shrubs and trees that have reduced the visibility of the lagoon and obscured the intended effect of the earlier plan. In 2008, efforts to remove the invasive bush honeysuckle were undertaken (Kelsch 2009 Volume Two, 320). The National Park Service has been working for at least a decade to eradicate the invasive common reed (*Phragmites autralis*) and to plant more appropriate wetland species such as narrowleaf cattail, black willow, buttonbush, and alder. In 2021, exclosures comprising a grid of fencing, string, and foil flags were installed to deter waterfowl from eating the young plants meant to replace the common reed (Kelly 2021). Due to the loss of most of the plants from the Simonson period, there are few examples of contributing vegetation in this character area.

Airport character area

Between 1974 and 1979, following the demolition of the sprawling, World War II-era Temporary Building 7 that occupied much of the area west of the airport and east of the MVMH, trees and shrubs were added to screen the airport from the MVMH. The shade trees included maples (*Acer rubrum*; *A. saccharum 'Green Mtn'*), tuliptree (*Liriodendron tulipifera*), and scarlet oak (*Quercus coccinea*) while the flowering trees consisted of American holly (*Ilex opaca*), Washington hawthorn (*Crategeous phaenopyrum*), and flowering dogwood (*Cornus florida*). The shrubs comprised mostly viburnum (*Viburnum acerifolium*; *V. prunifolium*; *V. dentatum*) and cherry laurel (*Prunus laurocerasus 'Schipkaensis'*).

Today, the vegetation of the Airport character area is characterized as a relatively continuous wall of screening plants along both sides of the MVMH. The realignment of the MVMH for the construction of the Washington National Airport destroyed the plantings specified by Simonson in 1932. The plantings that are present today date to the 1942, 1949, and 1963 planting periods. The 1942 plan used elms and flowering trees to enhance the entrances to the airport from the

MVMH (Kelsch 2009 Volume Two, 308). The later plans were meant to create a screening effect, which, as these plants have matured and additional screening trees have been added, has diminished the nuances and legibility of the earlier plans. American hollies have also been added to the vegetation for their year-round screening potential however, as these have matured, they have resulted in a decline of the legibility of the overall planting plans for this area. At the northern end of the character area, several of the white pines and oaks planted on the eastern side of the MVMH in 1963 are still present, as are elms from 1942 and beeches from 1949. Along the western edge of the MVMH, dense stands of screening vegetation from the 1949 planting period dominate, with the variable edge of coves and lobes that was established with that planting plan still somewhat discernible; however, plantings from the 1970s and 1980s and volunteer vegetation has diminished the intended effect. Throughout the character area, some flowering trees and shrubs are still present, providing seasonal interest. A number of mature pines, elms, and honey locust from the period of significance are also extant and are contributing resources to the MVMH-North cultural landscape.

Daingerfield Island character area

In 1974, with the construction of new dry slips and overflow parking areas associated with the Washington Sailing Club on Daingerfield Island, American hollies (*Ilex opaca*), flowering dogwood (*Cornus florida*), eastern redbud (*Cercis canadensis*), and purple wintercreeper (*Euonymus fortunei 'Coloratus'*) were planted (eTIC 850/80012). These were sited to the north of the new parking areas and around the Mission 66 comfort station, which had been constructed two years prior.

The existing conditions at the Daingerfield Island character area retain some of the original plantings from 1932 and 1936, but the loss of the groupings specified by Simonson has diminished the overall character that was intended. Most of the pines planted in 1936 along the western side of the MVMH to serve as screen plants are no longer extant. Some of the oaks, elms maples, and American sycamore planted in 1936 remain, though the groupings are somewhat sparse and do not effectively screen the development to the west as originally intended. In the median, willow oaks preserved from the earlier plans remain. Lindens are also present along the

southbound lane and in the median, however it is not known when these were planted. The Daingerfield Island character area is the only section of the MVMH-north where median plantings exist (Figure 57). The maturation of vegetation along the east side of the MVMH in this area has diminished the views of the Potomac River along this section. The Daingerfield Island peninsula is densely vegetated with both wetland and woodland plant communities. The plant nursery is no longer in production and, overall, the vegetation on the peninsula has a naturalized character. The oaks, elms, maples, pines, and sycamore trees along the MVMH and in the median that date to the 1932 and 1936 plans are contributing resources to the MVMH-North cultural landscape.



Figure 57. Photo of the MVMH looking south toward the Alexandria Approach from the Daingerfield Island character area (Matthew Traucht 2021).

Alexandria Approach character area

Since the removal of the traffic circle and the construction of the northbound lanes in the Alexandria Approach character area, few changes to the vegetation have occurred in this area. In 1998, the "Gateway Concept Master Plan" was developed by the National Park Service and the

City of Alexandria for the area where the traffic circle once served as the terminus to the MVMH-North. The plan resulted in the planting of a double row of lindens designed to restore the formality of the earlier planting plans and the geometry of the traffic circle (Kelsch 2009 Volume Two, 288). During field survey conducted for this CLI, only a few of those lindens were observed. These are amidst some white pines and red maples that exist from the 1963 planting plan. Oaks, elms, and hornbeams from the 1932 planting plan still exist on the peripheries of the former Alexandria Circle location. The flowering trees and shrubs that once provided such formal grandeur are mostly no longer extant. Some flowering dogwood and eastern redbud were observed, which may date to the 1963 planting plan. The extant plantings from the 1932 plan and from the 1963 plan are contributing resources to the cultural landscape. The later plantings are noncontributing and, in many cases, incompatible.

Feature Name	Feature Contribution	CRIS-HS Name	CRIS-HS Number	Type of FMSS Record	FMSS Record Number	FMSS record an exact match?
Surviving vegetation from the 1932 planting plan	Contributing					
Surviving vegetation from the 1936 planting plan	Contributing					
Willow oaks (1936) in the median near Daingerfield Island	Contributing					
Screen plantings at Washington national Airport (1949 and 1956)	Contributing					
Vegetation associated with the 1964 MVMH planting plan	Contributing					
Vegetation around the Daingerfield Island marina parking areas	Contributing					

Vegetation from 1969 and 1971 at the 14th Street Bridge complex	Contributing					
Pines on Gravelly Point planted in 1980	Noncontributing					
Volunteer vegetation and naturalized edges	Noncontributing					

Circulation

Circulation refers to the spaces, features, and applied material finishes that constitute systems of movement in a landscape.

Historic Condition:

Vehicular Circulation

The Mount Vernon Memorial Highway – North of Alexandria (MVMH-North) is a parkway with historical, recreational, and commemorative significance. Even as the designers made certain that the road would be set lightly upon the land, circulation is among the most dominant of its character-defining features. With the experience of its designers – chief consulting engineer Jay Downer and consulting landscape architects Gilmore Clarke and Wilbur Simonson – and the authority of Congress, entrusted to the Bureau of Public Roads (BPR) of the United States Department of Agriculture, the roadway would be expertly fit into the landscape for the very purpose of moving vehicles safely, efficiently, and dramatically:

> The route commences near the south end of the Arlington Memorial Bridge on Columbia Island. From this point onward, like a bank of ribbon, it threads its way, deflecting first to the right, then to the left, and so on in long, graceful, serpentine curves as it meanders across tidal inlets and intervening higher ground. Again, we view this lane crowning the hills with long, sweeping, undulating grades, reversing themselves over vales as it wends its way, developing attractive and ever-changing vistas. (Simonson 1933)

The design – and the execution of that design – was innovative for its use of the cloverleaf interchange, flared intersections, limited entrances and controlled at-grade crossings, flared

pavement widenings at curves, spiral curvature, and the insistence for a 200-foot right-of-way to control future development and limit visual and physical intrusions. Using aerial photography, detailed base plans, large-scale (1" = 100' or 1" = 50') "mathematically calculated and graphically depicted" development plans (EDAW 1992, 50), three-dimensional models, and detailed photography, the designers created a circulation system that would be a model for future highway design. Though named a "highway," its skillful designers developed it as a parkway, a linear park with recreational and memorial functions.

The MVMH roadway comprised a two-lane thoroughfare with a planted median, buffered from development with wide, vegetated rights-of-way. The typical section was a roadbed with a forty-foot-wide pavement width. The highway had two lanes in each direction, with the innermost measuring nine feet in width and the outside lanes measuring eleven feet wide. The roadbed was planned to permit future widening between Alexandria and Washington, with an ultimate planned width of sixty feet. Much of the MVMH-North section of the highway consisted of a seven-inch-thick reinforced concrete base topped with a two-inch-thick bituminous-concrete surface. Areas where the road was built on hydraulic fills called for a more flexible pavement: a two-inch bituminous-concrete surfacing was poured atop a three-inch bituminous-concrete base course, which was poured atop a twelve-inch-thick clay-bound gravel base course primed with tar. In concrete sections, longitudinal construction joints and a black-painted center lane formed the lane divisions while on bituminous surfaced sections, a painted center line was flanked on either side by white dots (EDAW 1992, 131). The paint was applied by a hand-driven machine and a two-man crew followed behind applying paint where the machine had missed, part of the BPR's commitment to "the memorial dignity of the project" (Leach 1993, 118).

Design of the highway included, at curves where the roadway could be sufficiently widened, islands to permit small at-grade crossings: the island permits the crossing to be done in two operations as one can wait safely for breaks in traffic in either direction. An extra lane was required for automobiles turning into the island. Access points to the MVMH were carefully controlled and spaced about 1-1/2 miles apart. Safety-flare intersections, already in use elsewhere in modern roadway engineering, were employed on the MVMH to enhance the recreational

aspects of the highway, whereby motorists could access recreational areas and could reverse direction safely. Left turns into oncoming traffic were used sparingly and were designed to safely permit access. "Safety-flare" intersections were tear-drop-shaped traffic islands or flared pavement widenings that permitted motorists to cross one directional lane and then safely wait until a break in opposite-direction traffic allowed a reverse in direction.

Bridges character area

The Bureau of Public Roads sought to improve safety and efficiency of traffic flow by restricting the number of intersecting roadways and reducing the dangers posed by motorists turning into traffic. Designed specifically that purpose, the cloverleaf interchange was designed to limit vehicular conflicts at busy interchanges and keep traffic moving as efficiently as possible by allowing vehicles exiting the roadway to do so without stopping or encountering traffic headed in the opposite direction. Although they proved superior to traditional overpasses in terms of traffic flow, these interchanges required a large land area and were more expensive to construct.

The first cloverleaf intersection built with federal funds was located at the north end of the MVMH-North study area. Spanning the north part of the MVMH, the Fourteenth Street cloverleaf interchange was approached by twenty-foot-wide lanes that gradually curved in a quarter-circle from one arterial to the other. The banked islands separating the access lanes from the arterials were streamlined with thirty, thirty-five, and forty-foot-wide radii (EDAW 1992, 131). The Fourteenth Street cloverleaf was such a new concept for its time, the Bureau of Public Roads constructed a large-scale model to convince the public it was safe and easy to use. Prior to its opening to the public, Washington area newspapers prepared detailed descriptions of how the interchange functioned, and an extended median strip and extra signs were installed to prevent confusion (Leach 1993). The first complete cloverleaf had been built in 1928 in Woodbridge, New Jersey at the intersection of two state highways, but in the 1930s it had not yet been adopted as a common solution to the integration of two high-speed vehicular roads.

Built around 1932, the cloverleaf at the intersection of MVMH and Route 1 was both safe and efficient, eliminating left-hand turns and at-grade intersections with its four geometrically similar

grade-separated ramps. Over time, the cloverleaf was reconfigured to accommodate later bridge construction and the development of the interstate highway system. In the 1940s, responding to the increase in traffic as more people began traveling by automobile, a new northbound-only bridge (named the Arland D. Williams, Jr. Memorial Bridge in 1985) was built downstream of the existing Highway Bridge (14th Street Bridge) that had accommodated travel between Virginia and Washington, DC since it was opened in 1906. The Highway Bridge would become southbound only when the new northbound bridge opened in 1950. The change in traffic patterns resulted in substantial revisions to the MVMH cloverleaf whereby three of the four ramps between Route 1 and the MVMH were removed, with only the exit ramp from the southbound Highway Bridge to the northbound MVMH being retained. New approaches from the MVMH to the new bridge were constructed but did not replicate in any way the former cloverleaf design. A new straight approach from the MVMH northbound lane to the new northbound-only bridge began just north of the RF&P railroad underpass. The new bridge was accessed from the MVMH southbound lane via a cloverleaf ramp that departed the MVMH after passing under the underpass that was created with the construction of the new bridge approach. In 1962, construction of the George Mason Bridge was completed just upstream of the southbound-only Highway Bridge, resulting in the obliteration of the last remaining exit ramp from the original cloverleaf. New exit and entrance ramps between the MVMH and the George Mason Bridge approach further altered the original configuration of the MVMH-North cultural landscape in this area, creating a complicated configuration of exit and entrance ramps. In 1968, the Highway Bridge was removed, replaced in 1971 by the Rochambeau Bridge. A new exit ramp from George Mason Bridge to the MVMH southbound lane was also built at this time, which required reclamation of a portion of the Pentagon Lagoon and the insertion of yet another entrance ramp to the MVMH.

Gravelly Point character area

The Gravelly Point parking lots, boat launch, and circulation system were constructed in 1965 as part of the Mission 66 initiative. When the MVMH was designed, Gravelly Point as it is today did not exist. It was created by filling in the 1960s. Aerial photography from 1969 show the access road, vehicular circulation route, and boat launch as they were depicted, generally, in a 1962 plan

for the "Location of Shoreline" at Gravelly Point (eTIC 850/85625). That drawing did not show the parking lot and instead had the vehicular road circling past the boat launch and then rejoining itself near the access road. Although plans for the lot were not found in the research for this CLI, it is likely that the final construction of the access road and boat launch also included the parking area as it was built by 1969. The parking area, as built, comprised an asphalt lot with angled parking stalls that were large enough to accommodate vehicles with trailers. Seven small, planted islands were incorporated into the ends of the parking aisles, and one larger grassy island was included at the southern end of the lot. The Mount Vernon Trail provides pedestrian access to the Gravelly Point recreation area. Although Gravelly Point did not exist in its current form when MVMH was first built, it was still built during the period of significance and is part of the recreational nature of the resource and is therefore contributing to MVMH-North (Kuhn et al. 2021, 12).

Roaches Run character area

The Roaches Run Parking Area was constructed around 1934–1935 by laborers from the CCC. When built, the Roaches Run Parking Area featured a bituminous concrete surface enclosed by concrete cubs and log guard rails. Today it features an asphalt-paved parking area with concrete curbs with an access road running through the center of it. The basic shape and design are the same, but the original materials have either been removed or paved over. Roaches Run Parking Area is accessed from the southbound side of the MVMH. It provides an overlook to the Roaches Run bird sanctuary, which was recommended as part of the original design of the highway, but not implemented until the mid-1930s. In literature created to generate interest in the new highway, the bird sanctuary was described as 90 acres of land and water with rare wild ducks, swans, geese, and other birds that could be seen from the MVMH. The Roaches Run Parking Area falls within the period of significance for MVMH-North and it relates to the scenic and recreation function of the highway, rendering it a contributing feature of MVMH-North.

Airport character area

The construction of the Washington National Airport between 1939 and 1941 resulted in the realignment of the MVMH in the section between Four Mile Run and the Roaches Run inlet. The

MVMH was shortened by 228 feet and relocated to the west of the original alignment, away from the Potomac River shoreline. The original alignment was incorporated into the Washington National Airport internal circulation system. The realignment and the construction of the airport required the insertion of new approaches for entrance and exit ramps from the MVMH to the airport. The north exit from the MVMH southbound lanes to the airport was constructed in 1941 and included the construction of the Airport North Entrance Bridge (also known as the North Airport Entry Underpass). The two-lane, one-way approach exited from the MVMH just south of Roaches Run, forming an arcing route to the west of the MVMH before passing beneath the MVMH via the underpass and then continuing into the airport internal vehicular circulation system. Mid-way along the MVMH in the Airport character area, exit and entrance ramps from the MVMH northbound lanes provided connections to the airport. Based upon aerial photographs, these appear to be somewhat related physically to a temporary building known as T7, which was built during World War II at the airport. At the southern end of the airport, the airport was accessed via the MVMH northbound lanes via a road retained from the original alignment of the MVMH. Slightly north of this location, internal roads from the airport provided at-grade connections to the MVMH northbound and southbound lanes (USGS 1949; USGS 1963). These connections remained until 1965 when a new exit ramp from the MVMH southbound lanes was constructed in association with the building of the Airport South Exit Bridge (also known as the Smith Boulevard Overpass or the South Airport Exit Overpass).

Daingerfield Island character area

A bus turnout along the west side of the MVMH original alignment, on axis with the entrance to Daingerfield Island, was installed in 1950–51. The project included a slight widening of a 550-foot-long section of the MVMH and minor modifications to the Daingerfield Island entrance drive. Curbs and wooden guardrails were removed, lamp posts were relocated, and the MVMH roadway surfacing was milled to accommodate the turnout. A two-foot-wide concrete divisional island was installed between the northbound and southbound lanes and the turnout was paved with bituminous surfacing (eTIC 850/80200). The bus turnout was removed when the new northbound lanes were added between 1961 and 1963.

While the new northbound lanes were being constructed, a new vehicular entrance to Daingerfield Island was built. Plans for the Mount Vernon Memorial Highway did not include an access road to Daingerfield Island nor is one depicted on the 1936 planting plans. The Daingerfield Island landmass was purchased by the federal government in 1942 and development plans from a year later depict a dirt road leading to radio towers. The dirt road was outside the limit of work and so must have predated the purchase. The marina was opened in 1948, with an access road and parking loop in place. In 1954, the road and parking loop were more formalized, with a roundabout segment of the parking lot removed and the geometry of the parking lot straightened (eTIC 850/85389). A master plan for Daingerfield Island was developed in 1962 and, by 1963, a network of roads and dry slips occupied much of the northern section of the peninsula. The parking areas and associated roadways were expanded south of the existing development around 1974 with the construction of new dry slips to accommodate overflow associated with the Washington Sailing Club. Constructed after the period of significance, these features are noncontributing, but compatible with the historic character of the cultural landscape.

It should be noted that the construction date of the Daingerfield Island maintenance road to the nursery and boneyard is unknown and as a result its status remains undetermined. Additional historical research should be undertaken to better understand the historical development of this area.

Alexandria Approach character area

At Alexandria Circle, the transition from the historic and orthogonal Old Town to modern highway was facilitated using a rotary (or traffic circle) feature. "A circle is particularly appropriate for this purpose as it represents the logical point of transition from a high to a low-speed zone" (Bureau of Public Roads 1930, 16). But by the time that the MVMH was opened, traffic engineers had begun to associate rotaries with traffic accidents. By 1934, a study on the MVMH identified it as the primary source of accidents (Leach 1993, 105). In 1957, a plan was developed (eTIC 850/85428) to remove the Circle and to add circulator roads adjacent the MVMH to accommodate local traffic. Between 1961 and 1963, the Circle was removed and the lanes of the MVMH were straightened to connect directly with Washington Street in Alexandria (EDAW

1992, 103). Adjacent the location of the former circle and paralleling the MVMH, the National Park Service constructed East and West Abingdon Drives. These two roads facilitated the movement of local traffic alongside the MVMH, and served as local access points to the MVMH, which, during the same period, was being realigned to accommodate increased traffic. Between First Street and Four Mile Run, the MVMH was modified from its original two-lane configuration to a four-lane alignment with a narrow median separating the two directions. The original road alignment was retained and would become the southbound lanes. A new roadbed for northbound traffic was constructed to the east of the original one. With these changes, MVMH-North between First Street and Four Mile Run consisted of four lanes, each measuring ten feet in width (EDAW 1992, 50). East Abingdon Drive provided access to the northbound lanes while West Abingdon Drive served as an exit from the southbound lanes. Although the insertion of East and West Abingdon Drives would reduce local traffic on the MVMH in the Alexandria Approach character area, their development also introduced new approaches and access points to the MVMH. Constructed in 1963, East Abington and West Abingdon Drives contribute to the MVMH-North cultural landscape.

Pedestrian Circulation

Bridle paths and hiking trails were considered by the Bureau of Public Roads and included in the development paths that were presented to Congress and the public (Figure 58). The path system was accounted for in the planting plans and was staked-out in the field stretching along the entire length of the MVMH on both sides of the roadway. The stakes were painted white in 1932 to be visible to the crew working on construction of the road and the subsequent installation of plants helped identify the pathway. However, the paths were not surfaced as the Bureau of Public Roads decided that public demand for them was not yet sufficient to justify the expense. Between November 1933 and April 1934, CCC workers constructed a nine-foot-wide, six-mile-long bridle path from Memorial Bridge to Alexandria, parallel with the MVMH. The CCC project included a retaining wall and two 10-foot span bridges.

Bridges character area

In 1950, with the construction of the northbound-only bridge and its approach from the south, a

bus turnout was built along the Route 1 northbound lanes just south of the entrance ramp from MVMH southbound. The bus turnout provided pedestrian access to various establishments outside of the cultural landscape, such as the Twin Bridges Motor Hotel to the south of Route 1 and the and the Hot Shoppes cafeteria to the north of the road. From that bus turnout, a concrete walk was constructed that provided access to another bus turnout that was built along the southbound MVMH just to the north of the RF&P railroad underpass. This walk had to cross the ramp in two locations due to the ramp's 180-degree turn.

Roaches Run character area

By mid-1935, workers from the CCC had, in concert with other CCC projects at Roaches Run, constructed a bituminous concrete parking lot with a concrete curb, which was connected to the MVMH via entrance and exit spurs. The workers also installed a bituminous concrete walk from the parking area, which connected to two miles of foot trails that provided recreational access to the lagoon (Civilian Conservation Corps Activities in the National Capital Region, HABS No. DC-858, 20; 106).

Airport character area

In 1940, the Corps of Engineers developed a preliminary study for the relocation of the bridle trail at the proposed airport, which was under construction at that time. The plan (eTIC 850/85097) detailed three routes, with one being along the outer rim of the airport along the new shoreline and the other two being closer to the proposed MVMH alignment. Research has not confirmed that any of these trails were ever constructed. In 1951, plans (eTIC 850/09007) were developed for a vehicular access lane and pull-off from the MVMH southbound lanes to a 1,000-car parking area to the west of the MVMH. The parking lot was built to the west of the MVMH cultural landscape boundary to provide parking for the temporary T7 building that had been constructed during World War II at Washington National Airport. The parking lot was used for long-term parking at the airport and by government employees who worked in Building T7. According to aerial photographs from the period (USGS 1951b; USGS 1963), the vehicular connection to that lot from the MVMH was not constructed; however, a pedestrian corridor from the lot to the T7 Building was inserted (Figure 59). The pedestrian connection provided passage

between the lot and the T7 building by traversing beneath the MVMH roadway via a tunnel. Although documentation has not been discovered to determine when Building T7 was demolished, the US Army division that used the temporary building, was relocated in 1973 to a purpose-built building in Alexandria, VA, and Building T7 was demolished by 1979 and the parking lot was removed in 1980 (USGS 1979; USGS 1980). It is presumed that the pedestrian tunnel was removed when Building T7 was demolished.

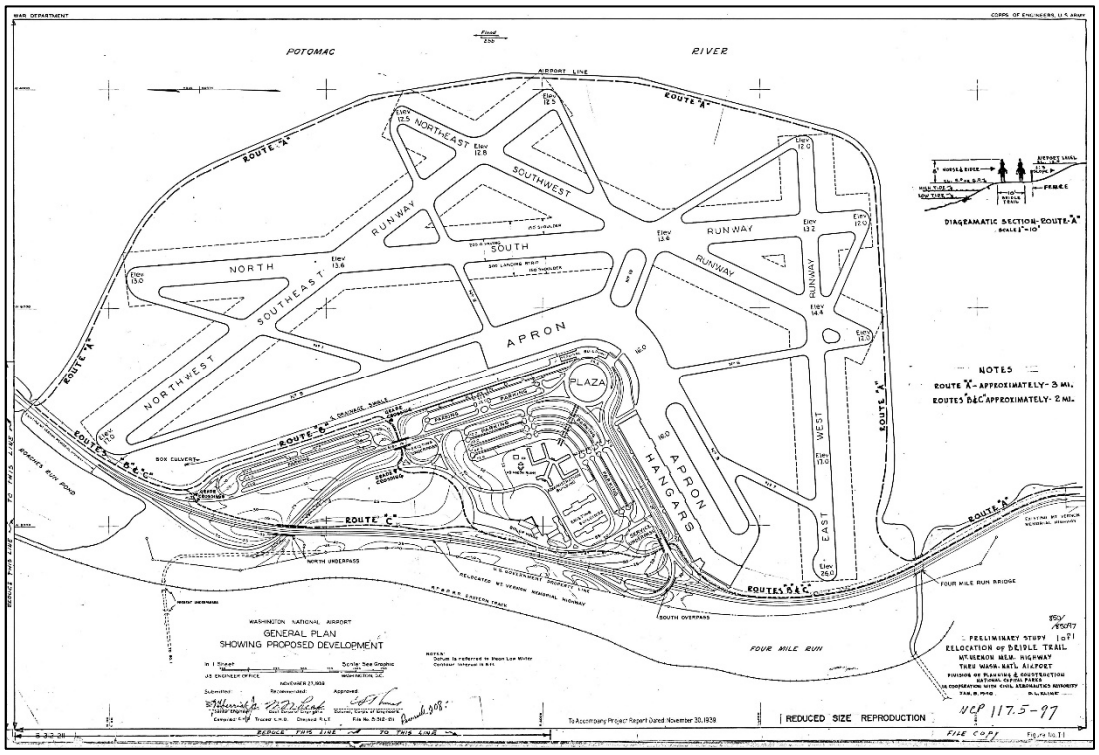


Figure 58. Preliminary Study: Relocation of Bridle Trail Mt. Vernon Mem. Highway Thru Wash. Nat 'l. Airport, 1940 (eTIC 850/85097). Plans show the three proposed locations of relocated bridle trails at the Washington National Airport.

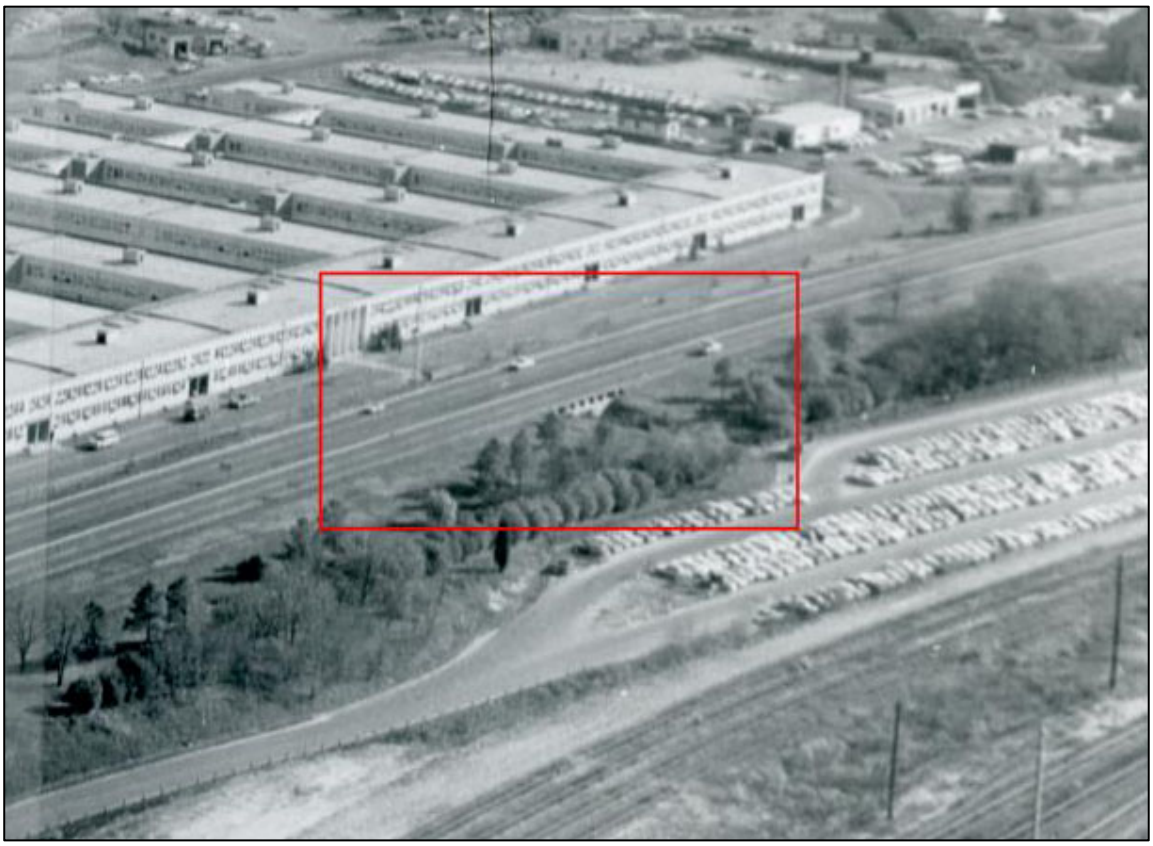


Figure 59. Detail from undated photograph shows Building T7 at the Washington National Airport and the parking lot to the west of the MVMH cultural landscape boundary (Army Material Command n.d). The red box, added by the author, shows the location of a pedestrian passage beneath the MVMH.

Mount Vernon Trail (MVT)

In response to the growing popularity of recreational bicycling, the National Park Service began to consider providing a route along the MVMH in the late 1960s but lacked funds to implement it. Cyclists would often travel along the drive lanes of the highway and, addressing safety concerns, one lane of the MVMH was closed to vehicular traffic on Sundays to accommodate bicyclists. In 1971, responding to lobbying by locals, the National Park Service agreed that, if volunteers would participate as a manual labor force, NPS would provide gravel and a right-of-way for the trail. The first section – constructed by volunteers, surfaced with compacted gravel, and measuring six-feet-wide – extended from Slaters Lane in Alexandria to the 14th Street Bridges and opened on April 15, 1972. Known as the Mount Vernon Trail (MVT) the portion from Memorial Bridge to Alexandria was completed in April 1972 and due to its popularity, it was extended from Alexandria to Mount Vernon in 1974. In comparing the 1932 and 1936 planting

plans with the alignment of the MVT, it is obvious that the MVT was built along the same or similar routes as the bridle trail that was built along the eastern side of the MVMH. Some deviations from the bridle trails are likely, and the MVT's route along the eastern perimeter of Gravelly Point would not have followed any known bridle trails since that portion of the peninsula was expanded through reclamation in the 1960s.

Post-Historic and Existing Conditions:

Vehicular Circulation

The alignment of the MVMH has not been substantially altered since the end of the period of significance (Figure 60–Figure 63). The access point to the Washington National Airport from the MVMH northbound lanes near the former location of the Building T7 was removed between 1994 and 2002 (USGS 1994; USGS 2002). The northbound access to the MVMH from the airport area to the north of the Building T7 location was also reconfigured during this same period. The current configuration of access roads to and from the Washington National Airport is as it was depicted on a plan of the airport roadways in 1996 (eTIC 850/108449), so it is assumed the reconfiguration of the above-mentioned approaches and exit/entrance ramps occurred between 1994 and 1996. Further research may reveal more information about these alterations. The roadway's materials are also like they were during the period of significance, although routine resurfacing of the asphalt and minor repairs to the highway have taken place since the end of the period of significance. A major resurfacing project of the entire length of the MVMH was undertaken in 1984 (EDAW 1992, 103). Alterations to the highway's associated bridges are documented in the Buildings and Structures section of this inventory.

Today, there are many more access points to and from the MVMH than originally intended, especially those related to the Washington National Airport and at the interchange to the 14th Street Bridge complex. For the most part though, these are accomplished using grade-separation, which is in keeping with the designers' intent.



Figure 60. Photo of the MVMH looking north from the former Alexandria Circle location (Matthew Traucht 2021).



Figure 61. Photo of the MVMH looking north along the Daingerfield Island character area (Matthew Traucht 2021).



Figure 62. Photo looking north of the exit ramp from the MVMH southbound lanes to the Airport North Entrance Bridge (Matthew Traucht 2021).



Figure 63. Photo of the MVMH looking north as it transitions from the Gravelly Point to the Bridges character areas. The RF&P underpass is visible in the distance (Matthew Traucht 2021).

Pedestrian Circulation

No remnants of the bridle paths that once flanked the MVMH are present today in the MVMH-North cultural landscape. Pedestrian circulation is limited to, primarily, the Mount Vernon Trail (MVT), although social trails in the wooded areas of the cultural landscape were observed during field survey for this CLI (Figure 64 and Figure 65). These comprise meandering, unimproved foot trails that sometimes lead to small encampment areas, sometimes connect to other social trails, or sometimes provide access to the river on the east or connect to other pedestrian circulation routes outside the cultural landscape boundary on the west. A network of social trails is present in the wooded area of Daingerfield Island. These often end at small clearings in the woods or at the shoreline of the river. A social trail was observed branching from the MVT just south of Four Mile Run, to a small encampment area adjacent to the confluence of that stream and the Potomac River. Social trails were also located in the Bridges character area to the west of the MVMH in the wooded area between the I-395 approaches to the Rochambeau and the Arland D. Williams, Jr.

Memorial Bridge and in the area of the MVMH-North cultural landscape flanking the Pentagon Lagoon. Due to the ephemerality of these social trails, they were not documented by the field survey crew and are not considered contributing resources to the cultural landscape.

In the Airport character area, a small remnant was observed during field survey of the pedestrian crossing that once led from Building T7 at the Washington National Airport to the parking area to the west of the MVMH cultural landscape. Located along the southbound lane of the MVMH approximately 1,070 feet south of the Airport North Entrance Bridge, the remnants are in an overgrown grove of volunteer vegetation. The remnants comprise a compacted surface and some fragments of asphalt enclosed on two sides by a chain link fence. An abandoned water spigot was also observed. No indication of the tunnel beneath the MVMH was seen, however a timber guardrail is set upon a concrete foundation, which may have been part of the tunnel superstructure. It is likely that a guardrail at this location would have been present when the pedestrian tunnel was active, although the one observed during filed survey appeared to be of relatively recent construction. A parking lot is located outside of the cultural landscape boundary to the west.



Figure 64. A noncontributing guardrail at the former location of a pedestrian underpass from Building T7 to a parking lot. The concrete foundation may be a remnant of the tunnel superstructure (Matthew Traucht 2021).



Figure 65. The former pedestrian path has a compacted surface and some remnants of asphalt surfacing. The former path is flanked on its north and south sides by chain link fence (Matthew Traucht 2021).

Mount Vernon Trail (MVT)

The popularity of the Mount Vernon Trail grew considerably in the 1980s and today the trail serves as the primary form of nonmotorized travel in the MVMH-North cultural landscape (Figure 66). When it first opened, the MVT was a gravel/cinder path but was later paved with asphalt to be more durable. Several timber bridges were built to carry the trail over uneven ground or tributaries. In 1976, the City of Alexandria extended the MVT along the railroad right-of-way just south of Slaters Lane to connect it to the shoreline near Tide Lock Park. In 1978, a connection from the MVT to the Washington National Airport was built by the Metropolitan Washington Airports Authority. A year later, the section between Arlington Memorial Bridge and Alexandria was paved with asphalt. In 2007 and again in 2016, sections of the MVT in the Airport character area were rehabilitated and widened. The MVT is a contributing feature of MVMH-North, as it traces the general route of the bridle trail that paralleled the MVMH and serves as a recreational trail associated with the roadway and provides scenic views of Washington, DC for pedestrians (Virginia Department of Historic Resources 2016a).



Figure 66. The Mount Vernon Trail parallels the alignment of the MVMH roadway, at times separated from the road by topographic or vegetated interventions. Looking south (Matthew Traucht 2021).

In 1980, the MVT was connected to the Four Mile Run Trail as part of a larger project to replace automobile and railroad bridges along that tributary. The connection is just to the north of Four Mile Run, branching from the MVT with an arcing form to travel west along the northern shoreline beneath the bridge that carries the MVMH over Four Mile Run. Between 1983 and 1984, the MVT was extended along the Potomac Shoreline from Alexandria to Daingerfield Island thanks to a land swap and the creation of easements (Figure 67). The paved section of trail passes the Potomac Energy Generating Station via a wood bridge that connects to a cantilevered bridge (See Buildings and Structures section of this report.). The section of the MVT in the Alexandria Waterfront character area is a noncontributing, compatible circulation feature because it was added to the cultural landscape boundary after the period of significance.



Figure 67. The Mount Vernon Trail in the Alexandria Waterfront character area passes the Potomac Energy Generating Station via a cantilevered bridge built in the early 1980s. Looking west from the Potomac River shoreline (Matthew Traucht 2021).

In 1992, the Crystal City Connector Trail was opened to serve as a pedestrian and bicycle connection from Crystal City and Alexandria to the Washington National Airport and the Mount Vernon Trail. It originates outside the cultural landscape boundary to the west of the MVMH and then parallels the southbound side of the MVMH southbound exit to the airport, which becomes the West Entrance Road once it enters the airport parcel. In 2011, the stub "Pentagon Lagoon Trail" was constructed as part of the Humpback Bridge rehabilitation project. The paved multi-use trail begins at an intersection with the Mount Vernon Trail at the north end of the MVMH-North cultural landscape and then parallels the Boundary Channel as it crosses beneath the MVMH and the Humpback Bridge. The trail then follows the forested shoreline of the Pentagon Lagoon just to the west of the interchange lane from MVMH southbound to I-395 southbound where it ends at a social trail, which continues a short distance before also ending in the vegetation between I-395 and the Pentagon Lagoon (Figure 68). The trail, from its origination point at the Mount Vernon Trail to its end at the southern shoreline of the lagoon is approximately 1,500 linear feet. Because the Crystal City Connector and the Pentagon Lagoon

Trail were built after the period of significance and do not trace the route of any known bridle path, they are considered a noncontributing, compatible circulation feature.



Figure 68. The paved Pentagon Lagoon Trail passes through dense vegetation along the shoreline of the lagoon before ending at a short, unpaved social trail (Matthew Traucht 2021).

Feature Name	Feature Contribution	CHRI-HS Name	CRIS-HS Number	Type of FMSS Record	FMSS Record Number	FMSS record an exact match ?
Mount Vernon Memorial Highway alignment	Contributing	Mount Vernon Memorial Highway	17247	Location	26831	No
Mount Vernon Trail adjacent to the MVMH	Contributing			Location	27296	Yes
Access road to Daingerfield Island	Contributing			Location	104871	Yes

Washington Sailing Marina main parking lot and historic roadways	Contributing			Location	104871	Yes
Gravelly Point access drive	Contributing					
Gravelly Point parking area and roadway	Contributing			Location	104708	Yes
Roaches Run parking area	Contributing			Location	104540	Yes
East Abingdon Drive	Contributing			Location	104370	Yes
West Abingdon Drive	Contributing			Location	104369	Yes
Daingerfield Island maintenance road to nursery and boneyard	Undetermined			Location	26451	Yes
Non-historic Washington Sailing Marina dry slip roadways	Noncontributing, compatible					
Daingerfield Island marina overflow parking area	Noncontributing, compatible			Location	27283	Yes
Crystal City Connector Trail	Noncontributing, compatible					
Pentagon Lagoon Trail	Noncontributing, compatible					
Mount Vernon Trail in Alexandria Waterfront character area	Noncontributing, compatible			Location	27296	Yes

Buildings and Structures

Introduction

When first built, the Mount Vernon Memorial Highway had very few associated buildings and structures. There were a series of wooden bus stops, bridges, underpasses, culverts, and the highway itself. As the highway's scenic and recreational functions expanded, the road was realigned for the construction of Washington National Airport. Then for the interstate highway system to expand the Potomac River crossing, additional features were added to the MVMH. Original structures like the stone-faced bridges and underpasses help establish the rustic style so characteristic of the MVMH. For the MVMH-North, the portion of the highway is from the northern city limits of Alexandria, at the intersection of First and North Washington Streets, to the Boundary Channel, a navigable watercourse just south of Lady Bird Johnson Park (formerly Columbia Island) in the District of Columbia. The period of significance is from 1929 to 1972 for the MVMH-North. The buildings and structures within this area are described below, with discussion of their historic and post-historic/existing conditions beneath each feature.

Bridges

Historic Condition:

Bridges were an integral feature of the MVMH design and made possible the scenic drive and alignment along the Potomac River. The majority of the bridges were of reinforced concrete with stone facing, allowing them to span greater distances, with greater vertical clearance, at a lower cost and with less material. The stone facing helps contribute to the rustic parkway appearance that was part of the initial highway design. While these bridges are more economical than the grand monumentality aspired to by the Mount Vernon Avenue Association, they represent the economical formalism of the Bureau of Public Roads' designs at this time.

Post-Historic and Existing Conditions:

Replacement and repair of some original bridges has occurred over time, including construction of some entirely new bridges. However, most new bridges have attempted to maintain the rustic parkway appearance, that was part of the original MVMH design, by continuing to use stone facing. Individual bridges are described in detail below.

Route 1/I-395 Upstream Underpass

Historic Condition:

The Route 1/I-395 Upstream Underpass is one of the original rustic style stone bridges constructed as part of the original MVMH. While it appears to be a stone bridge, it is actually a rigid frame, filled spandrel concrete arch bridge that is faced in stone and completed in 1929. When the MVMH was routed through Alexander Island, a decision was made to route the new highway beneath the Route 1 Highway Bridge. In keeping with National Park Service design practices for the period, the bridge was designed by the Bureau of Public Roads as a modern state-of-the-art rigid frame concrete structure, but it was faced in native stone. The MVMH underpass passed under the southwest approach to the bridge. In 1950, the 14th Street Bridge over the Potomac River was replaced with the Rochambeau Memorial Bridge, a modern steel girder and concrete bridge, but the old rustic underpass was retained. In 1962, a second span, the George Mason Memorial Bridge, was added, and the underpass was altered to accommodate the widening of Shirley Highway to become Interstate 395. The northbound wall is the original 1930s structure (Kuhn et al. 2021,102).

Post-Historic and Existing Conditions:

As an original feature (with some alterations) of the construction of MVMH, it is a contributing feature of MVMH-North (Kuhn et al. 2021,102).



Figure 69a. Photograph of Route 1/I-395 Upstream Underpass, 2016 (NPS, CRIS-HS).

Route 1/I-395 Downstream Underpass

Historic Condition:

During construction of the MVMH in the early 1930s, the highway passed beneath a rustic stone-faced concrete underpass that carried an extension of the 14th Street Bridge (Route 1/Henry G. Shirley Memorial Highway). Vehicular traffic increased and the upper roadway was consolidated into the interstate highway system, so a second span was added to the upstream bridge, but it proved to be not enough. The Route 1/I-395 Downstream Underpass was built from 1966 to 1971 to accommodate additional traffic, providing a third vehicular crossing of the Potomac River. Known as the Heroes Bridge, it was later renamed as a memorial for Arland D. Williams, Jr., a passenger who rescued others on an Air Florida flight that hit the bridge in 1982 and lost his life (Kuhn et al. 2021,102).

Post-Historic and Existing Conditions:

The Route 1/I-395 Downstream Underpass was built to mimic the adjacent upstream underpass in its design and materials. The Route 1/I-395 Downstream Underpass falls within the period of significance for the MVMH-North and it has stylistic references to other bridges along the highway, rendering it a contributing feature of the MVMH-North (Kuhn et al. 2021,102).



Figure 69b. Photograph of Route 1/I-395 Downstream Underpass, 2016 (NPS, CRIS-HS).

Richmond, Fredericksburg & Potomac Railroad (RF&P) Underpass

Historic Condition:

The Richmond, Fredericksburg & Potomac Railroad underpass (also called the Bridge, CSX Tracks over GWMP in DHR database) is a two-span silicon steel plate girder bridge supported by heavy stone-faced (with granite and mica schist) reinforced concrete abutments and a matching central pier (Figure 69c). The reinforced concrete footings rest on concrete pilings since this is unstable, partially filled land. Two 24-foot concrete struts connect the footings below the highway and help prevent inward rotation of the abutments. The 122-foot-long bridge has spans that

measure 55 feet 9 inches over three lanes on each side (two highway lanes and ramps to and from Arland D. Williams, Jr. Memorial Bridge). Built in 1932, this underpass is part of the original construction of the MVMH and is unique for its exposed steel plate girder superstructure. The 8-foot deep plate girders are tapered to a shallow arch only 5 feet 7 inches deep at midspan. The riveted girders are spaced 27 feet apart. Wide flanged laterals spaced at 2 feet 6 inches on center join the two girders. The structural steel is predominantly carbon steel, though stronger silicon steel was used for girder flanges, webs, web splices, and floor beams. The 27-foot ballasted concrete deck carries two railway tracks over the MVMH and is skewed 15 degrees to the roadway below (Kuhn et al. 2021, 13).

Post-Historic and Existing Conditions:

The underpass was originally painted grey but is now light green like many other NPS bridges; otherwise, no significant changes have been made to the structure, making it a contributing feature to the MVMH-North (Kuhn et al. 2021, 13).



Figure 69c. Photo of the Richmond, Fredericksburg and Potomac Railroad Bridge looking north (Matthew Traucht 2021).

Mount Vernon Trail Bridge North

Post-Historic and Existing Conditions:

The Mount Vernon Trail Bridge North (sometimes called the Mount Vernon Trail North Bridge) is a four span, cast-in-place, continuous concrete box girder bridge that carries Mount Vernon Trail over the MVMH Ramp from Smith Boulevard near the Washington National Airport (Figure 70). The 300-foot bridge is supported by concrete abutments and circular piles. The 14-foot concrete deck is used by pedestrians and bicyclists and does not have curbing. According to its draft Virginia Cultural Resources Information System (VCRIS) survey form, the bridge was completed in 1999 (Virginia Department of Historic Resources 2022a). Because the bridge post-dates the period of significance for MVMH-North, is less than fifty years of age, and is made of common materials in a common form, it is a noncontributing, compatible feature of the MVMH-North CLI.



Figure 70. Photo of the Mount Vernon Trail North Bridge near the Washington National Airport, looking north (Matthew Traucht 2021).

Airport North Entrance Bridge

Historic Condition:

The Airport North Entrance Bridge, also known as the North Airport Entry Underpass, was originally built in 1941 as part of the first major changes in the alignment of the MVMH to the west around the airport (Figure 71). The two-span steel plate girder bridge has reinforced concrete abutments with masonry facing on the east and west returns. The bridge's wing walls are reinforced concrete with a stone facing. The two-span steel plate girder bridge carries the MVMH over the north entrance to Washington National Airport (Kuhn et al. 2021, 13, 96).

Post-Historic and Existing Conditions:

According to a FHWA Bridge Inspection Report from March 2003, planned improvements to the Airport North Entrance Bridge included cleaning and painting of superstructure beams, replacing and widening of the deck, and construction and attachment of a pedestrian bridge (Virta, personal communication 2022). In 2006, it was determined that the bridge was

deteriorating and that the Mount Vernon Trail was a safety concern because of its close proximity to the roadway. The 1941 bridge was then repaired in 2007 based on the inspection report findings and according to the 2021 draft GWMP NRHP nomination was recommended as a noncontributing feature for this reason (Kuhn et al. 2021, 13, 96). Due to the above-mentioned alterations, the Airport North Entrance Bridge is a noncontributing, compatible feature of the MVMH-North.



Figure 71. Photo of the Airport North Entrance Bridge looking west from the Washington National Airport West Entrance Road (Matthew Traucht 2021).

Mount Vernon Trail Bridge South

Post-Historic and Existing Conditions:

The Mount Vernon Trail Bridge South (sometimes called Mount Vernon Trail South Bridge) is a four span, cast-in-place, continuous concrete box girder bridge that carries Mount Vernon Trail over the West Entrance Road near the Washington National Airport (Figure 72). The 240-foot bridge is supported by stone-faced concrete abutments and circular piles. The 14-foot concrete deck is used by pedestrians and bicyclists and does not have curbing. According to its draft

VCRIS survey form, the bridge was completed in 1999 (Virginia Department of Historic Resources 2022b). Because the bridge post-dates the period of significance for MVMH-North, is less than fifty years of age, and is made of common materials in a common form, it is a noncontributing, compatible feature of the MVMH-North CLI.



Figure 72. Photo of the Mount Vernon Trail South Bridge, near the Washington National Airport, looking east (Matthew Traucht 2021).

VA Route 233 Bridge

Historic Condition:

The VA Route 233 Bridge, also known as the Route 233 Overpass, is a reinforced concrete, multi-cell, box-girder bridge that carries VA Route 233, also known as Airport Access Road, from Crystal City to Washington National Airport (Figure 73). The two-span bridge has concrete wing walls with stone facing and corner quoins of rock-faced granite. The bridge was built around 1965 likely as part of circulation improvements.

Post-Historic and Existing Conditions:

Other than routine maintenance, the bridge retains original materials and falls within the period of significance for the MVMH-North, making it a contributing feature (Kuhn et al. 2021,13).



Figure 73. Photo of the Route 233 Bridge looking north (Matthew Traucht 2021).

Airport South Exit Bridge

Historic Condition:

The Airport South Exit Bridge, also known as the Smith Boulevard Overpass or the South Airport Exit Overpass, was built in 1965, likely to improve circulation around what was then known as Washington National Airport (Figure 74). The two-span, rigid-frame, reinforced concrete, filled spandrel arch bridge with concrete deck and asphalt cladding is supported by triple-square columned concrete piers with a solid concrete abutment. There are separate arches over the northbound and southbound lanes. The arches each rise from vertical abutments and a central pier and have a segmental arch intrados. The arch is defined by radiating voussoirs. A stone-facing covers portions of the abutment, spandrel, and wing walls (Kuhn et al. 2021,13).

Post-Historic and Existing Conditions:

Other than routine maintenance, the bridge retains original materials and falls within the period of significance for the MVMH-North, making it a contributing feature (Kuhn et al. 2021,13).



Figure 74. Photo of the Airport South Exit Bridge with the Metro Bridge in the background, looking north (Matthew Traucht 2021).

Four Mile Run Bridge

Historic Condition:

The Four Mile Run Bridge, constructed in 1977, replaced a 1939 bridge, which had replaced the original 1931 bridge carrying the MVMH over Four Mile Run, a tributary of the Potomac River (Figure 75). The replacements of the bridge were due to realignments of the highway. The current bridge is a two-span steel girder bridge with a cast-in-place concrete deck and stone-faced, reinforced concrete wing walls (Kuhn et al. 2021, 18).

Post-Historic and Existing Conditions:

The current bridge is outside of the period of significance and although it is stylistically similar to other bridges along the highway, it is the second replacement of the original bridge and therefore lacks integrity and is a noncontributing but compatible feature of the MVMH-North (Kuhn et al. 2021, 18).



Figure 75. Photo of the Four Mile Run Bridge, looking south (Matthew Traucht 2021).

Mount Vernon Trail Wooden Foot Bridges

Post-Historic and Existing Conditions:

Three wooden bridges that are part of the Mount Vernon Trail were documented as part of this CLI. All are constructed of round wooden piers topped with rubber or polyvinyl pointed caps, wood framing, and wood fascia. There are chains strung between the piers and wooden kick rail

spanning the full length of the bridge. One bridge is located at the southern end of Daingerfield Island and meanders through a wetlands area with several bends and turns (Figure 76). The second bridge is located at the northern end of Daingerfield Island and is shorter (Figure 77). The third bridge is located near the Alexandria waterfront, south of the cantilevered pedestrian bridge (Figure 78).

All three bridges have likely been repaired or replaced in recent years, due to their location in, and close to, water features that would naturally cause aging and the need for repairs or replacement. The bridges appear to be of fairly recent construction. The three Mount Vernon Trail Wooden Foot Bridges are noncontributing, compatible features of the MVMH-North.



Figure 76. Photo of the wooden foot bridge at the southern end of Daingerfield Island (Matthew Traucht 2021).



Figure 77. Photo of the wooden foot bridge at the northern end of Daingerfield Island (Matthew Traucht 2021).



Figure 78. Photo of the wooden foot bridge near the Alexandria Waterfront (Matthew Traucht 2021).

Alexandria Waterfront Cantilevered Bike/Pedestrian Bridge

Post-Historic and Existing Conditions:

Between 1982 and 1983, the NPS settled its suit against the Potomac Electric Power Company (Pepco) and another suit with the Marina Towers condominium. The Potomac River Generating Station (PRGS), a coal-fired power plant on a 25-acre site at 1300 N. Royal Street on the banks of the Potomac River, began operating in 1949 to provide electricity for Washington, DC. The Marina Towers is a riverfront 14-story, 282-unit condominium complex built between 1967 and 1970 just to the north of the power plant at 501 Slaters Lane. The settlements with both Pepco and Marina Towers resulted in a permanent easement for a multiuse trail along the river. The settlement with Pepco also included a land swap, with the National Park Service gaining half an acre near the river in exchange for a quarter acre close to the plant given to Pepco. Additionally, Pepco provided an easement along the shoreline and gave $250,000 for the construction of a bike trail adjacent their holding all the way to Daingerfield Island. Pepco also agreed to pay an estimated $172,000 for the construction of a 150-foot-long cantilevered bridge attached to its screen house, which would serve as a connection for the trail over the river at the property retained by Pepco (Figure 79–Figure 80). The construction of the multiuse trail and cantilevered bridge supplemented a connection that the City of Alexandria had made for the Mount Vernon Trail in 1976, which paralleled the railroad right-of-way just south of Slaters Lane and connected it via East Abingdon Drive to the existing Mount Vernon Trail along the MVMH-North to the west of Marina Towers. The new shoreline trail provided an alternate route that avoided city streets and activated the waterfront in keeping with the recommendations made by the NPS in 1979.

Constructed in 1982–1983, the 150-foot-long cantilevered pedestrian/bike bridge in the Alexandria Waterfront area of the MVMH-North features a concrete deck, metal posts with metal chain link fence enclosure and a redwood fence screening on the side where the building is located. The cantilevered bridge is a noncontributing feature of the MVMH-North, as it falls outside of the period of significance.



Figure 79. Photo of the cantilevered bike/pedestrian bridge along the Alexandria Waterfront (Matthew Traucht 2021).

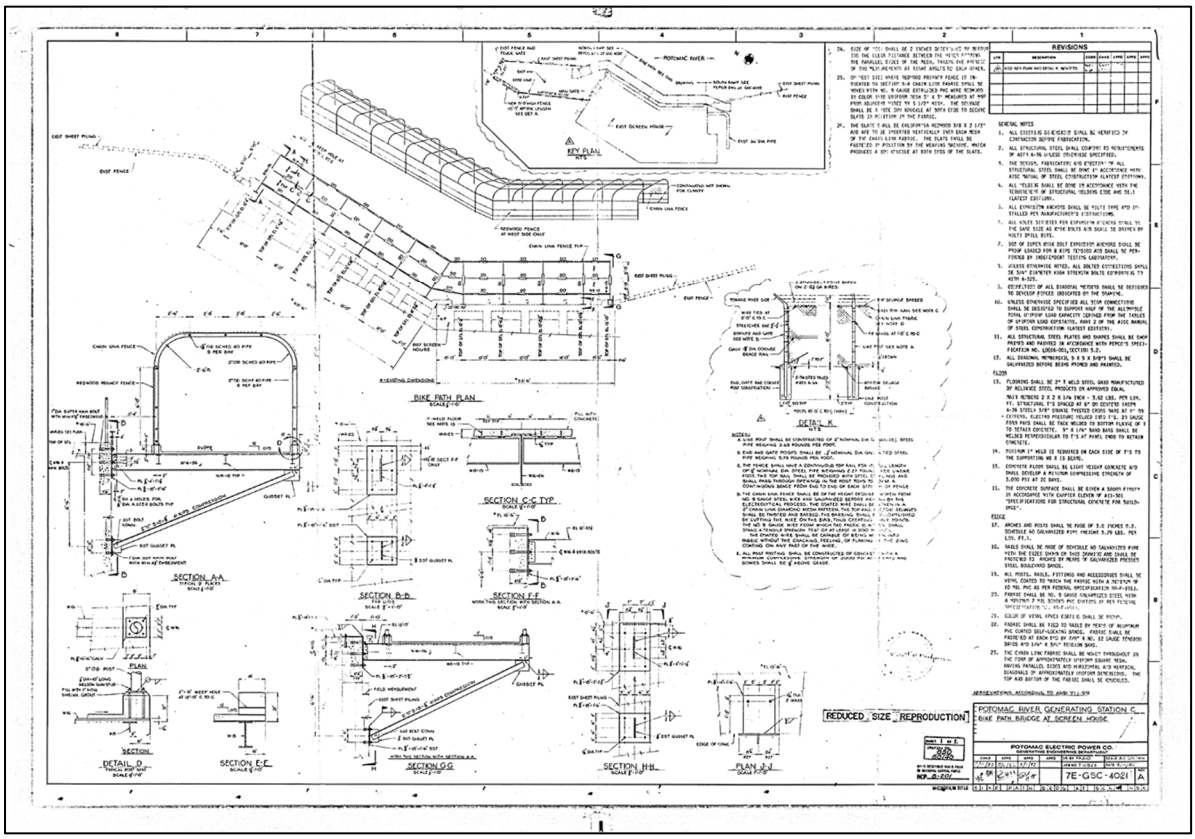


Figure 80. Drawing of the cantilevered bike/pedestrian bridge along the Alexandria Waterfront, 1982 (eTIC 850/80140).

Culverts

Historic Condition:

There are 52 culverts along the MVMH-North today. The majority of them are 12- to 18-inch concrete pipes. There are a few 8-inch corrugated metal pipes. It is likely that few of these are original to the construction of the MVMH; and many may be related to the realignment of the MVMH west around Washington National Airport or in response to increased traffic and the widening of the highway. There were also likely improvements and additional culverts constructed during the Mission 66 improvements to MVMH-North. Roaches Run Culvert is original to the highway construction and has been described separately below.

Post-Historic and Existing Conditions:

Culverts built between 1929 and 1972 are contributing features to the MVMH-North, but further research is needed beyond the location and materials of the culverts to determine their construction dates and contributing status. All culverts are undetermined features of the MVMH-North.

Stormwater Drainage System

Historic Condition:

On the west side of Daingerfield Island there reportedly are three drainage channels that originated at the Potomac Railroad Yard. All three channels run under the MVMH-North through culverts and drain into the Potomac River. The southernmost of these drainage channels drains the marsh area that runs along the western side of MVMH and the central depression between the parkway roadbeds. These drainage channels were seen on the 1932 Simonson planting plan of the Potomac Yard. They were likely part of the larger stormwater drainage system when the road was originally planned and constructed. They have not been field verified during the current survey.

Post-Historic and Existing Conditions:

Similar to the culverts, further research is needed on the channels and the other extant elements of the stormwater drainage system: drop inlets and outfalls to determine their construction dates and contributing status. It is likely that many of these were replaced in the 1980s per the GWMP 2021 draft NRHP nomination (Kuhn et al. 2021, 15–16). The stormwater drainage system is an undetermined feature of the MVMH-North.

Roaches Run Tidal Gate/Culvert

Historic Condition:

The Roaches Run Tidal Gate/Culvert is a reinforced concrete box culvert that is 16-feet long and originally was 60-feet wide; the southbound inlet side wall and arch feature random rubble and dimensioned masonry (Figure 81). According to data in the NPS CRIS-HS, the culvert was built from 1930 to 1932 by the Merritt-Chapman and Scott Corporation of New York. J.V. McNary was Engineer-in-Charge for the Bureau of Public Roads and Tony Kennedy of Philadelphia and Louis

Hiller of Statesville, NC, the primary stonemasons for the parkway construction, probably did the stonework. The structure was completed in 1932 at a cost of $36,941.25. According to an *Evening Star* newspaper article in September 1930, the bulk of the dredging at Roaches Run had been completed, and they hoped to finish the culvert in a few months; the project was apparently delayed, as the culvert was not finished until 1932 (Evening Star 1930, 17). In 1934–1935, CCC laborers helped develop the Roaches Run Bird Sanctuary from Virginia marshes of the Potomac River. The CCC cleared out brush (removing nuisance water plants like caltrop) graded the banks, and landscaped the area (planting 500 trees), built the parking lot with entry/exit road and a trail around the lagoon. They also built a gamekeeper's cottage and feed storage shed (The Living New Deal 2021). According to a survey completed by Louis Berger Group in 2016 when documenting the GWMP, the Roaches Run Culvert/Tidal Gate was lengthened by 40 feet from its original 60 feet to 100 feet when the highway above it was widened to four lanes in 1969 and the stone facing was removed from the northbound outlet side, except for the parapet (Virginia Department of Historic Resources 2016c).

Post-Historic and Existing Conditions:

Although altered, the Roaches Run Tidal Gate/Culvert still falls within the period of significance for the MVMH-North, is one of the only original culverts, and it has stylistic references to other bridges and structures along the highway, rendering it a contributing feature of the MVMH-North. The gamekeeper's cottage and feed shed are no longer extant (Virginia Department of Historic Resources 2016c).



Figure 81. Photo of Roaches Run Tidal Gate/Culvert on west side of the Mount Vernon Memorial Highway (Matthew Traucht 2021).

Gravelly Point Boat Launch

Historic Condition:

When the MVMH was designed, Gravelly Point as it is today did not exist. It was created using fill in the 1960s. The Gravelly Point boat launch was built around 1965 as part of the Mission 66 park improvements, along with playing fields, a parking lot, an access road, and a boat access ramp (Figure 82). The boat launch has two sloped poured concrete ramps with a poured concrete sidewalk with metal railings and a small wooden dock (Kuhn et al. 2021, 12).

Post-Historic and Existing Conditions:

The boat launch is located on the southwestern end of Gravelly Point (Kuhn et al. 2021, 12). Although Gravelly Point did not exist in its current form when MVMH was first built, it was still built during the period of significance and is part of the recreational nature of the resource, in

addition to being part of the Mission 66 improvements and is therefore contributing to the MVMH-North.



Figure 82. Photo of Gravelly Point Boat Launch showing concrete pad, gangplank, and wood piers (Matthew Traucht 2021).

Parkway Maintenance Headquarters

The National Park Service maintains an administrative and maintenance area located on the west side of the highway adjacent to Washington National Airport (Figure 83). The group, built around 1994, includes the Parkway Maintenance Headquarters Building, Building #2 Auto and Equipment Repair Shop, Building #3 Salt and Sand Storage, Building #4 Grounds Operation Storage, Building #5 Grounds Operations Building, Building #6 Grounds Operation Building, Building #7 Roads and Bridges/Tree Operations, Building #8 B & U/Signs, Building #9, and Building #10 (Breezeway between Buildings #8 and #9). These buildings are mostly utilitarian in nature, and it is likely that many of these buildings were prefabricated (Kuhn et al. 2021, 19).

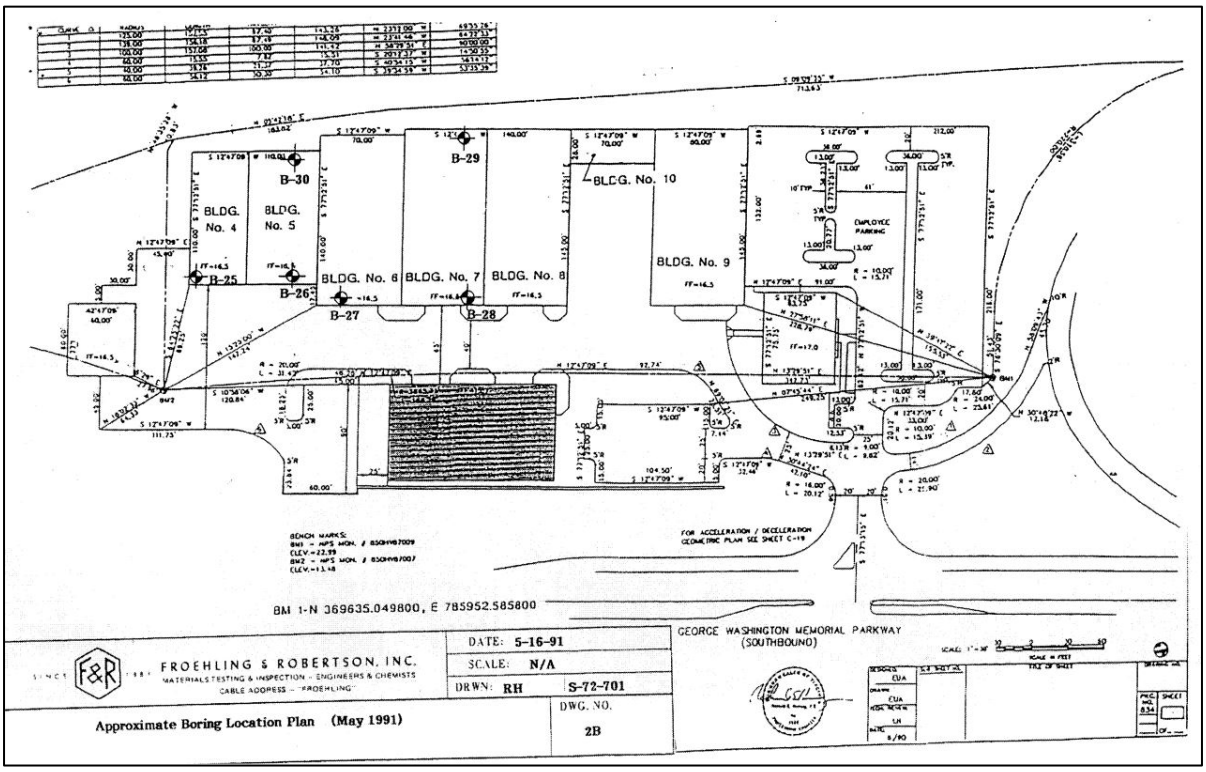


Figure 83. Location plan for boring at Parkway Maintenance Headquarters showing new buildings (Froehling & Robertson, Inc. 1991 (eTIC GWMP-850-D96)).

Parkway Maintenance Headquarters Building

Post-Historic and Existing Conditions:

The headquarters building is a two-story office building with a side-gabled roof with front-gabled peak. The roof is sheathed in metal, while the structural system is clad in stucco. This office building was built around 1994. This building is not associated with the significance of the MVMH-North, and post-dates the period of significance, in addition to being less than 50 years of age. The Parkway Maintenance Headquarters Building is a noncontributing, incompatible feature of the MVMH-North (Kuhn et al. 2021, 19).

Building #2

Post-Historic and Existing Conditions:

Building #2 houses the auto and equipment repair shop and is two connected buildings that are metal-clad with gable roofs (Figure 84). Building #2 is opposite the long line of connected

buildings, closer to the airport than Buildings #4–9. This building is not associated with the significance of the MVMH-North, and post-dates the period of significance, in addition to being less than 50 years of age. Building #2 is a noncontributing, incompatible feature of the MVMH-North (Kuhn et al. 2021, 19).



Figure 84. Photo of Parkway Maintenance Headquarters, including Building #2 at right (Matthew Traucht 2021).

Building #3

Post-Historic and Existing Conditions:

Building #3 is a stand-alone building for salt and sand storage that is also gable-roofed and metal-clad (Figure 85). This building is not associated with the significance of the MVMH-North, and post-dates the period of significance, in addition to being less than 50 years of age. Building #3 is a noncontributing, incompatible feature of the MVMH-North (Kuhn et al. 2021, 19).



Figure 85. Photo of Building #3 at the Parkway Maintenance Headquarters (Matthew Traucht 2021).

Building #4

Post-Historic and Existing Conditions:

Building #4 is a metal-clad, gable-roofed building that is connected to its neighboring buildings and serves as Grounds Operation Storage. This building is not associated with the significance of the MVMH-North, and post-dates the period of significance, in addition to being less than 50 years of age. Building #4 is a noncontributing, incompatible feature of the MVMH-North (Kuhn et al. 2021, 19).

Building #5

Post-Historic and Existing Conditions:

Building #5 is a metal-clad, gable-roofed building that is connected to its neighboring buildings and serves as a Grounds Operations Building (Figure 86). This building is not associated with the

significance of the MVMH-North, and post-dates the period of significance, in addition to being less than 50 years of age. Building #5 is a noncontributing, incompatible feature of the MVMH-North (Kuhn et al. 2021, 19).

Building #6

Post-Historic and Existing Conditions:

Building #6 is a metal-clad, gable-roofed building that is connected to its neighboring buildings and serves as a Grounds Operations Building (Figure 86). This building is not associated with the significance of the MVMH-North, and post-dates the period of significance, in addition to being less than 50 years of age. Building #6 is a noncontributing, incompatible feature of the MVMH-North (Kuhn et al. 2021, 19).

Building #7

Post-Historic and Existing Conditions:

Building #7 is a metal-clad, gable-roofed building that is connected to its neighboring buildings and serves as a Roads and Bridges/Tree Operations Building (Figure 86). This building is not associated with the significance of the MVMH-North, and post-dates the period of significance, in addition to being less than 50 years of age. Building #7 is a noncontributing, incompatible feature of the MVMH-North (Kuhn et al. 2021, 19).

Building #8

Post-Historic and Existing Conditions:

Building #8 is a metal-clad, gable-roofed building that is connected to its neighboring buildings and serves as a B&U/Signs Building (Figure 86). This building is not associated with the significance of the MVMH-North, and post-dates the period of significance, in addition to being less than 50 years of age. Building #8 is a noncontributing, incompatible feature of the MVMH-North (Kuhn et al. 2021, 19).



Figure 86. Photo of Parkway Maintenance Headquarters, Buildings #5-8, from left to right (Matthew Traucht 2021).

Building #9

Post-Historic and Existing Conditions:

Building #9 is a metal-clad, gable-roofed building that is connected to its neighboring buildings. This building is not associated with the significance of the MVMH-North, and post-dates the period of significance, in addition to being less than 50 years of age. Building #9 is a noncontributing, incompatible feature of the MVMH-North (Kuhn et al. 2021, 19).

Building #10

Post-Historic and Existing Conditions:

Building #10 is the metal breezeway connecting Buildings #8 and #9. This building is not associated with the significance of the MVMH-North, and post-dates the period of significance, in

addition to being less than 50 years of age. Building #10 is a noncontributing, incompatible feature of the MVMH-North (Kuhn et al. 2021, 19).

Daingerfield Island Plant Nursery Greenhouse and Associated Structures

Historic Condition:

Daingerfield Island was purchased by the National Park Service from the Smoot Sand and Gravel Co. in 1942 and beginning in the 1950s, plans for recreational facilities on the island were introduced. According to the 2021 draft GWMP NRHP nomination, a master plan was adopted in the 1960s that proposed the development that exists on the island today. The Daingerfield nursery began providing trees and plants for the GWMP and other National Park Service sites beginning in the 1940s (Kuhn et al. 2021, 11–12).

Post-Historic and Existing Conditions:

Associated with the Greenhouse, Daingerfield Island are three storage sheds: the Nursery Green Storage Shed, the Nursery White Storage Shed, and an additional Storage Shed.

The Greenhouse, Daingerfield Island features a circa-1980 one-story, square, flat-roofed, concrete block building attached to a one-story greenhouse building with arched metal supports and a poured-concrete foundation.

The Storage Shed is a circa-1980, one-story storage shed clad in vertical brown wood siding (Figure 87). The flat roof is sheathed in metal. Portions of the shed are open bays like a machine shed. The storage shed is located immediately south of the Nursery Green Storage Shed.

The Nursery White Storage Shed is a circa-1980, one-story, concrete block building with a shed roof sheathed in asphalt shingles (Figure 88). While it is described correctly in VCRIS, it is mapped on the location of the brown storage shed instead of in its actual location near the road, across the nursery yard from the greenhouse and other sheds.

The Nursery Green Storage Shed is a circa-1980, one-story, steel-framed, metal-clad, light green, prefabricated building with a side-gabled roof (Figure 89).

These four buildings currently on the nursery site all post-date the period of significance for the MVMH-North, but they do relate to the previous use of the site as a nursery for the NPS, so they are individually noncontributing, but compatible features to the MVMH-North (Kuhn et al. 2021, 11–12).



Figure 87. Photo of Daingerfield Island Plant Nursery Wooden Storage Shed (Matthew Traucht 2021).



Figure 88. Photo of Daingerfield Island Plant Nursery White Storage Shed with the Greenhouse addition in the distance (Matthew Traucht 2021).



Figure 89. Photo of Daingerfield Island Plant Nursery Greenhouse and associated buildings from the rear (Matthew Traucht 2021).

Daingerfield Island Mission 66 Comfort Station

Historic Condition:

The Daingerfield Island Mission 66 Comfort Station is a one-story, rectangular, stacked concrete masonry unit (CMU) building constructed in 1972 as part of the Mission 66 improvements to the National Capital Region, during the Parkscape USA period (1967 to 1973) of the Mission 66 program, which also coincides with the construction of the MVT for active recreation beginning in 1972 (Figure 90). This building features a poured-concrete slab foundation, a flat roof, metal doors, and two-light aluminum-sash sliding windows with sunscreens. The Daingerfield Island Comfort Station is a Mission 66 "Type F" Comfort Station, which were all located near marinas and provided restrooms, showers, and a utility sink (Quinn Evans Architects 2019, 7–8).

Post-Historic and Existing Conditions:

While not built during the original construction of the highway, this building is a contributing feature to the MVMH-North, as a key component of its recreational function and as an example of Mission 66 improvements to the MVMH area. While the comfort station was designed in the "Park Service Modern" style, particular to its period of construction, it enhances the recreational features on Daingerfield Island and furthers that purpose of recreation for the MVMH-North. The Daingerfield Island Comfort Station falls within the period of significance and is a contributing feature of the MVMH-North (Quinn Evans Architects 2019, 7–8). Note that the 2021 GWMP NRHP draft nomination does not attribute this comfort station to Mission 66, uses a construction date of the 1980s, and lists it as a noncontributing feature.



Figure 90. Photo of Mission 66 Comfort Station on Daingerfield Island (Matthew Traucht 2021).

Daingerfield Island Marinas and Associated Buildings

Daingerfield Island was purchased by the National Park Service from Smoot Sand and Gravel Co. in 1942 and beginning in the 1950s plans for recreational facilities on the island were introduced. According to the 2021 draft of the GWMP NRHP nomination, a master plan was adopted in the 1960s that proposed the development that exists on the island today (Figure 91). The parking areas and marina were built in the 1950s and enlarged in the 1960s (Kuhn et al. 2021, 11–12).

The main restaurant and retail buildings on Daingerfield Island were built in the 1980s (Kuhn et al. 2021, 12). Daingerfield Island marinas and associated buildings include the Washington Sailing Marina (WSM) Indigo Landing & Afterdeck Restaurant Concessions, WSM Office & Store Concessions, WSM Ticket Booth #249 Concessions, WSM Dry Storage Shed #1, WSM Dry Storage Shed #2, WSM Dry Storage Shed #3, WSM Dry Storage Shed #4, WSM Dry Storage Shed #5, WSM Support Facility (Bldg. #240) Concessions, and WSA Storage/Work Barn Concession (Kuhn et al. 2021, 11–12). The Daingerfield Island Boat Embayment/Harbor is discussed in the Constructed Water Features section.



Figure 91. Photo of WSM Marina area with Indigo Landing & Afterdeck Restaurant Concessions to the right, on Daingerfield Island (Josh Penn 2021).

WSM Indigo Landing & Afterdeck Restaurant Concessions

Post-Historic and Existing Conditions:

The WSM Indigo Landing & Afterdeck Restaurant Concessions is a circa-1980 building constructed in the Contemporary style with vertical wood siding and a roof sheathed in asphalt shingles (Figure 92). It has two projecting two-story towers with clerestory windows. This building is made of common materials in a common form and was constructed outside of the period of significance for the MVMH-North and is less than fifty years of age; it is a noncontributing but compatible feature of the MVMH-North.



Figure 92. Photo of WSM Indigo Landing & Afterdeck Restaurant Concessions on Daingerfield Island (Josh Penn 2021).

WSM Office & Store Concessions

Post-Historic and Existing Conditions:

The WSM Office & Store Concessions is a circa-1980, one-story building constructed in the Contemporary style with vertical wood siding and a shed roof sheathed in asphalt shingles. The Office and Store has a flat-roof addition clad in the same materials as the core. This building is made of common materials in a common form and was constructed outside of the period of significance for the MVMH-North and is less than fifty years of age; it is a noncontributing but compatible feature of the MVMH-North.

WSM Ticket Booth #249 Concessions

Post-Historic and Existing Conditions:

The WSM Ticket Booth #249 Concessions is a circa-1980, one-story building constructed in the Contemporary style with vertical wood siding and a shed roof with shed dormer sheathed in asphalt shingles. This building is made of common materials in a common form and was constructed outside of the period of significance for the MVMH-North and is less than fifty years of age; it is a noncontributing but compatible feature of the MVMH-North.

WSM Dry Storage Shed #1

Post-Historic and Existing Conditions:

The WSM Dry Storage Shed #1 is a one-story, circa-1980, steel-framed open shed with a hipped roof sheathed in asphalt shingles. It provides storage for small boats and sailing equipment. This building is made of common materials in a common form and was constructed outside of the period of significance for the MVMH-North and is less than fifty years of age; it is a noncontributing but compatible feature of the MVMH-North.

WSM Dry Storage Shed #2

Post-Historic and Existing Conditions:

The WSM Dry Storage Shed #2 is a one-story, circa-1980, steel-framed open shed with a hipped roof sheathed in asphalt shingles. It provides storage for small boats and sailing equipment. This building is made of common materials in a common form and was constructed outside of the period of significance for the MVMH-North and is less than fifty years of age; it is a noncontributing but compatible feature of the MVMH-North.

WSM Dry Storage Shed #3

Post-Historic and Existing Conditions:

The WSM Dry Storage Shed #3 is a one-story, circa-1980, steel-framed open shed with a hipped roof sheathed in asphalt shingles. It provides storage for small boats and sailing equipment. This building is made of common materials in a common form and was constructed outside of the

period of significance for the MVMH-North and is less than fifty years of age; it is a noncontributing but compatible feature of the MVMH-North.

WSM Dry Storage Shed #4

Post-Historic and Existing Conditions:

The WSM Dry Storage Shed #4 is a one-story, circa-1980, steel-framed open shed with a hipped roof sheathed in asphalt shingles. It provides storage for small boats and sailing equipment. This building is made of common materials in a common form and was constructed outside of the period of significance for the MVMH-North and is less than fifty years of age; it is a noncontributing but compatible feature of the MVMH-North.

WSM Dry Storage Shed #5

Post-Historic and Existing Conditions:

The WSM Dry Storage Shed #5 is a one-story, circa-1980, steel-framed open shed with a hipped roof sheathed in asphalt shingles (Figure 93). It provides storage for small boats and sailing equipment. This building is made of common materials in a common form and was constructed outside of the period of significance for the MVMH-North and is less than fifty years of age; it is a noncontributing but compatible feature of the MVMH-North.



Figure 93. Photo of one of the WSM Dry Storage Sheds on Daingerfield Island (Matthew Traucht 2021).

WSM Storage/Work Barn

Post-Historic and Existing Conditions:

The WSM Storage/Work Barn is a circa-1980, one-story, prefabricated steel-framed and metal clad front-gabled building with metal garage door (Figure 94). This building is made of common materials in a common form and was constructed outside of the period of significance for the MVMH-North and is less than fifty years of age; it is a noncontributing but compatible feature of the MVMH-North.



Figure 94. Photo of the WSM Storage/Work Barn on Daingerfield Island (Matthew Traucht 2021).

WSM Support Facility (Bldg. #240) Concessions

Post-Historic and Existing Conditions:

The WSM Support Facility (Bldg. #240) Concessions appears to be a circa-1980 parking lot attendant station/booth and is a small one-story, rectangular building with metal siding and a flat roof. This building is made of common materials in a common form and was constructed outside of the period of significance for the MVMH-North and is less than fifty years of age; it is a noncontributing but compatible feature of the MVMH-North.

Stacked Stone Circular Walls

Post-Historic and Existing Conditions:

During the field survey conducted for this cultural landscape inventory, researchers discovered several semi-circular dry-stacked stone walls in the area to the west of the MVMH just north of

the railroad embankment (Figure 95). These are inserted into the sides of the embankment and an adjacent natural hillside. Although no record of these has been located, documentation for "Standard Tree Walls and Tree Wells Suggested Treatment" by the Virginia Department of Highways (GWMP-80041-C) was found. Although a plan that accompanies the details shows embankments along the GWMP, a locator map is not included. Nonetheless, these details may shed some light on the provenance of the stacked-stone circles and further research may provide additional information about these.



Figure 95. Dry-stacked stone retaining wall located to the north of the railroad embankment on the west side of the MVMH. The pictured wall is one of five located during field investigations (Matthew Traucht 2021).

Feature Name	Feature Contribution	CRIS-HS Name	CRIS-HS Number	Type of FMSS Record	FMSS Record Number	FMSS record an exact match?
Richmond, Fredericksburg & Potomac Railroad (RF&P) Underpass	Contributing	Mount Vernon Memorial Hwy, RF&P RR Underpass	045303	Location	26789	Yes

Airport South Exit Bridge	Contributing			Location	26788	Yes
Route 1/I-395 Upstream Underpass	Contributing	Rt.1/I-395 Upstream Underpasses	045304			
Route 1/I-395 Downstream Underpass	Contributing	Rt.1/I-395 Downstream Underpass	045305			
VA Route 233 Bridge	Contributing			Location	26511	Yes
Roaches Run Culvert/Tidal Gate	Contributing	Mt. Vernon Memorial Highway, Roaches Run Culvert	017248			
Daingerfield Island Mission 66 Comfort Station	Contributing			Location	27282	Yes
Gravelly Point Boat Launch	Contributing			Location	26508	Yes
Airport North Entrance Bridge	Noncontributing-compatible			Location	26510	Yes
Four Mile Run Bridge	Noncontributing-compatible			Location	26509	Yes
Daingerfield Island Greenhouse and associated buildings	Noncontributing-compatible			Location	26447 26448 26452 26490	Yes
WSM Indigo Landing & Afterdeck Restaurant Concessions	Noncontributing-compatible			Location	85785	Yes
WSM Office & Store Concessions	Noncontributing-compatible			Location	85787	Yes
WSM Ticket Booth #249 Concessions	Noncontributing-compatible			Location	85788	Yes
WSM Dry Storage Shed #1	Noncontributing-compatible			Asset	1168834	Yes
WSM Dry Storage Shed #2	Noncontributing-compatible			Asset	1168839	Yes
WSM Dry Storage Shed #3	Noncontributing-compatible			Asset	1168840	Yes
WSM Dry Storage Shed #4	Noncontributing-compatible			Asset	1168841	Yes
WSM Dry Storage Shed #5	Noncontributing-compatible			Asset	1168843	Yes

WSM Storage/Work Barn	Noncontributing-compatible			Location	85794	Yes
WSM Support Facility (Bldg. #240) Concessions	Noncontributing-compatible			Location	93646	Yes
Parkway Maintenance Headquarters Building	Noncontributing-incompatible			Location	26492	Yes
Building #2 Auto and Equipment Repair Shop	Noncontributing-incompatible			Location	26493	Yes
Building #3 Salt and Sand Storage	Noncontributing-incompatible			Location	26494	Yes
Building #4 Grounds Operation Storage	Noncontributing-incompatible			Location	26495	Yes
Building #5 Grounds Operations Building	Noncontributing-incompatible			Location	26496	Yes
Building #6 Grounds Operation Building	Noncontributing-incompatible			Location	26496	Yes
Building #7 Roads and Bridges/Tree Operations	Noncontributing-incompatible			Location	26497	Yes
Building #8 B & U/Signs	Noncontributing-incompatible			Location	26498	Yes
Building #9	Noncontributing-incompatible			Location	26499	Yes
Building #10 (Breezeway between Buildings #8 and #9)	Noncontributing-incompatible			Location	26500	Yes
Cantilevered Pedestrian/Bike Bridge	Noncontributing					
Mount Vernon Trail Wooden Foot Bridges	Noncontributing-compatible			Location	27325 27326 27322	Yes
Mount Vernon Trail Bridge North	Noncontributing-compatible			Location	27328	Yes
Mount Vernon Trail Bridge South	Noncontributing-compatible			Location	27327	Yes
Culverts and Stormwater Drainage System	Undetermined					
Stone circular walls	Undetermined					

Views and Vistas

A view is the expansive and/or panoramic prospect of a broad range of vision that may be naturally occurring or deliberately contrived. A vista is a controlled prospect of a discrete, linear range of vision, which is deliberately contrived.

Historic Condition:

A continuous interplay between views of natural and manmade features, the MVMH's alternating views of the Potomac River and the nation's capital from across the river were engineered as a highly curated visual narrative in tribute to George Washington's life and for the conservation of the existing Potomac River valley. The designers of the MVMH were challenged with adapting traditional landscape architecture methods of creating views to the fast pace of the highway. While landscape compositions were simplified to be appreciated at these higher speeds, their design remained consistent with traditional methods, invoking a strong connection between the viewer and the landscape being viewed. Wilbur Simonson's strategic choreography of significant views transformed the MVMH experience from the disorganized compilation of swamps, railyards, and gravel quarries that preceded its construction into a dramatic and contrived composition of symbolic markers celebrating George Washington's life along the Potomac. Early site reconnaissance efforts identified existing and potential views of natural and cultural features along the selected route. The design proposed relatively sparse plantings where views of the Washington, DC skyline would be enhanced, with denser screen plantings employed where industrial operations intruded upon the visual qualities of the route. After the initial layout of the roadway was complete, the designers made adjustments in the field to preserve specimen trees and other landscape features that would contribute to the appreciation of the setting. Contrary to the usual practice in highway design of leaving bare cuts in the existing topography, the designers of the MVMH rounded the edges of cut and fill areas to create smooth, integrated transitions from the constructed to the natural areas. The final layout, alignment, and details of the highway and its right of way were carefully designed to help fit it, simply, to the natural and cultural landscape.

The key to appreciating the emphasis of selective views was included in Simonson's 1932 planting plans: Numerous V-shaped cones indicated the anticipated lines of sight at dozens of locations along the highway – some narrow in focus upon a single element or passing moment, others broad to establish a panorama – many of which fall upon two major landmarks (Figure 96). The Washington Monument and the US Capitol would have been the two most significant and easily recognized landmarks in view, and at varying points of interest these would have

provided the backdrop against which all of Simonson's planting plans were designed (Kelsch 2011, 87). All planned views had to compete with the swamps, brickyards, railyards, airport, and gravel operations.

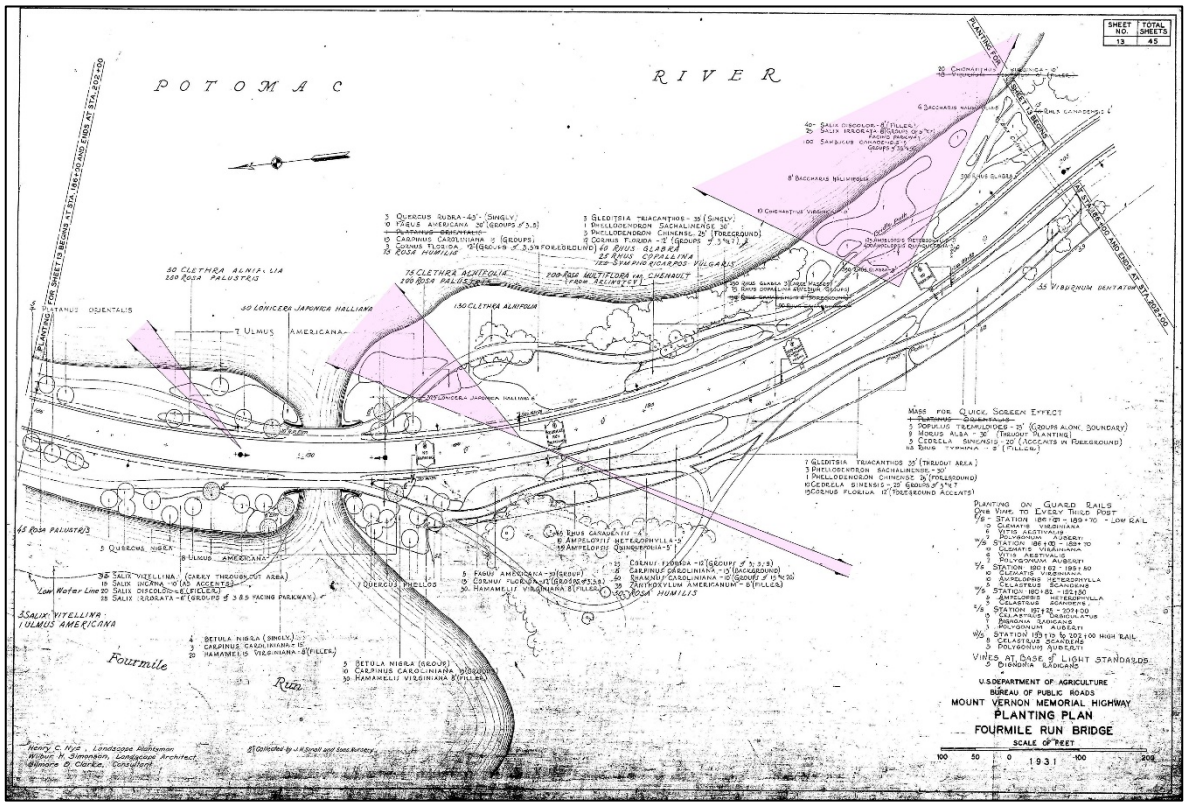


Figure 96. 1931 Planting Plan of Proposed Mt. Vernon Memorial Highway (eTIC 850/80156). V-shaped cones were drawn to indicate planned vistas that vegetation would frame.

Because Simonson's plans for the MVMH were never fully realized due to alterations in the roadway alignment, and certain views were lost or obscured by development such as the construction of Washington National Airport, what follows is a description of what motorists may have experienced in the 1930s and 1940s after the opening of the MVMH, passing through the character areas from south to north.

Roaches Run and Gravelly Point character area

From there north, denser plantings created a sense of anticipation for motorists' final approach to the river crossing, where they would pass through groupings of low shrubs along the causeway at Gravelly Point before coming into the open with Roaches Run on the west and the Potomac River to the east. This effect created a striking visual of the Washington Monument and US Capitol, revealed from behind stands of elms, much larger than at any previous vantage point on the MVMH. This view disappeared as the road turned, crossing beneath the railroad underpass and approaches to the cloverleaf interchange, itself a marvelous sight but not the subject of any of Simonson's planned views.

Airport character area

Crossing Four Mile Run Bridge, motorists passed through two stands of American elms that framed the bridge before ascending the broad hill at Abingdon, the former home of Washington's descendants and a stately view of the river. Descending again, motorists reached Capital Overlook, which was the only designated overlook for this section of the MVMH, providing a sweeping panorama of the Nation's capital, with the Washington Monument and Capitol immediately visible.

Daingerfield Island character area

Descending the approach toward Daingerfield Island, the motorist was flanked by wetlands to the east and the railroad to the west. Attempting to draw attention toward and across the river, plantings to the east of the roadway here were sparse, while the west side of the highway was screened to hide the industrial activities. The openness of the shoreline offered glimpses of the Capitol followed by views of the Washington Monument. Immediately north of the Daingerfield Island landmass, the highway swung closer to the water.

Alexandria Approach character area

Travelling north out of Alexandria, shade trees grouped on both sides of the roadway frame an unmistakable, though distant, view of the Washington Monument atop "Monument View Hill" just beyond Slaters Lane (Figure 97). This striking view was the first in a series of views motorists

would encounter on their journey northward, with each view revealing the Washington Monument in higher detail and as it grew nearer.

Post-Historic and Existing Conditions:

The layering and maturation of vegetation, in addition to other changes along the MVMH-North alignment such as the realignment of the highway and the construction of the Washington National Airport to the north of Four Mile Run (during the period of significance), resulted in the loss of numerous views and vistas identified on Simonson's 1932 planting plans. Subsequent planting plans prior to 1972 for the MVMH-North cultural landscape did not reference the retention or restoration of any of Simonson's intended views, nor did they explicitly establish new or preserve existing ones.

Roaches Run and Gravelly Point character areas

Just north of the airport as the MVMH passes over the West Entrance Road and begins the long spiral curve easterly, the Washington Monument comes into view, obscured to this point by mature vegetation and the airport. Just beyond this point, the Monument would have been visible to motorists across the Roaches Run lagoon however, today, mature vegetation between the MVMH and that body of water – much of it volunteer vegetation – obscures its base and diminishes the overall effect that would have been available during the period of significance.



Figure 97. Looking north just past the airport, image shows the first view of the Washington Monument along the northbound MVMH since Monument View Hill, the top of the Monument is visible as the highway bends easterly just north of the airport (Matthew Traucht 2021).

Simonson's plans indicated views from the MVMH in the area adjacent where the Roaches Run parking lot is now present. Although the subjects of the views are not labeled in the plans, this area provided views of both the Washington Monument and the Capitol (Figure 98). Today, the view of the Capitol is still available from the MVMH but vegetation at Gravelly Point makes it difficult to see. The view of the Washington Monument is obscured from the MVMH but is available if one parks in the Roaches Run parking area and gazes across the lagoon.



Figure 98. The view of the Washington Monument across the Roaches Run lagoon as it may have appeared from the MVMH before vegetation obscured it from the highway (Matthew Traucht 2021).

Airport character area

The realignment of the MVMH for the airport, and the subsequent construction and expansion of that facility, has resulted in the complete loss of the views of the Potomac River and of the District of Columbia's landmarks. At the north end of the Airport character area, the Capital Overlook that was designed and constructed to allow motorists to stop for a moment to appreciate the view of Washington, DC was destroyed with the realignment and building of the airport. Today, from a vantage point available on a pedestrian bridge that carries the Mount Vernon Trail over an airport access road, the view of the Capitol is still present across the north runway in the vicinity of the lost overlook (Figure 99). The view is not accessible from the MVMH.



Figure 99. The view of the US Capitol Building from the Mount Vernon Trail in the vicinity of the former Capital Overlook (Matthew Traucht 2021).

Daingerfield Island character area

The formerly expansive, panoramic views of the Potomac River to the east of the MVMH in the Daingerfield Island character area have been lost due to the maturation of vegetation associated with the 1963 planting plan. Occasional glimpses of the Capitol in the distance may be achieved via the slight openings between trees, but the presence of the Washington National Airport between this point and the Capitol intrudes upon them. Views of the Potomac River are still available to the motorist in the section of the highway between the marina on Daingerfield Island and Four Mile Run.

Alexandria Approach character area

The view of the Washington Monument from the top of "Monument View Hill" as the motorist leaves Alexandria northbound remains a striking one, with mature trees on both sides of the

MVMH framing it (Figure 100 and Figure 101). The maturation of vegetation at the bottom of the hill obscures the horizon and the point where the Monument touches the ground. The installation of modern safety and directional signs, especially in the median, creates visual intrusions upon the view, however the Monument remains prominent on the horizon among the signs.



Figure 100. The view of the Washington Monument from "Monument View Hill" remains extant, however modern road sign and mature vegetation mar that view somewhat (Matthew Traucht 2021).

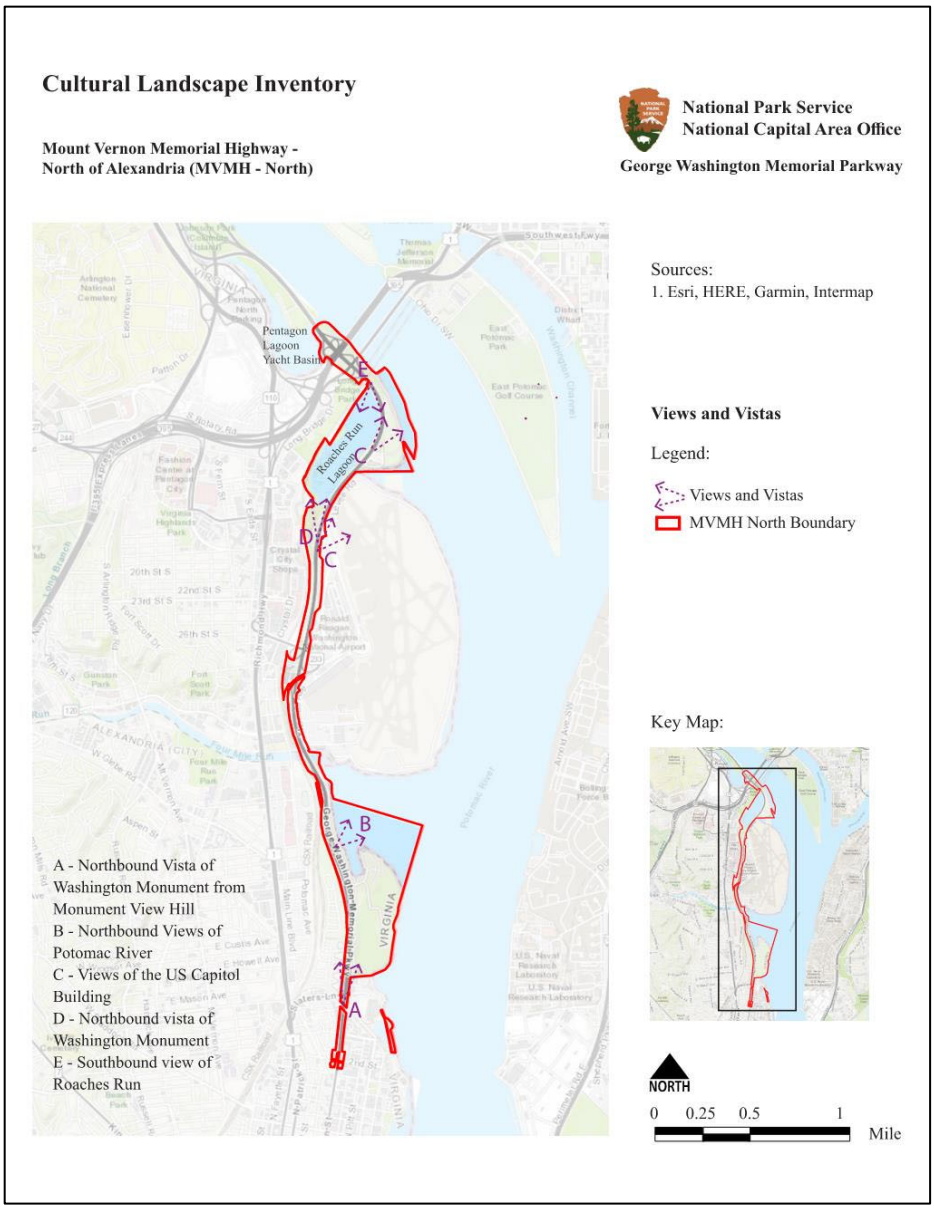


Figure 101. Diagram depicting major views and vistas that remain in the MVMH-North cultural landscape (SmithGroup, RHI, and Gray & Pape 2022).

Feature Name	Feature Contribution	CRIS-HS Name	CRIS-HS Number	Type of FMSS Record	FMSS Record Number	FMSS record an exact match?
Northbound vista of the Washington Monument from Monument View Hill	Contributing					
Northbound views of the Potomac from the MVMH between Daingerfield Island and Four Mile Run	Contributing					
Views of the US Capitol Building from the MVT across the runways and from the MVMH near Roaches Run	Contributing					
Northbound vista of the Washington Monument as the MVMH arcs to the east and across the Roaches Run lagoon	Contributing					
Southbound view of the Roaches Run lagoon	Contributing					

Constructed Water Features

Constructed water features are built features and elements that utilize water for aesthetic or utilitarian functions in the landscape.

Introduction

When first built, the MVMH had no buildings associated with it, only structures like bridges, underpasses, culverts, constructed water features, and the roadway itself. As the highway's scenic and recreational functions expanded, and the road had to be realigned for Washington National Airport and then for the interstate highway system to expand the Potomac River crossing, additional features were added to the MVMH. The original structures like the stone-

faced bridges and underpasses help create the rustic style so characteristic of the MVMH. For the MVMH-North, the portion of the highway is from the northern city limits of Alexandria, at the intersection of First and North Washington Streets, to the Boundary Channel, a navigable watercourse just south of Lady Bird Johnson Park (formerly Columbia Island) in the District of Columbia. The period of significance is from 1929 to 1972 for the MVMH-North. Two constructed water features have been identified within the MVMH-North.

Roaches Run Lagoon

Historic Condition:

The Roaches Run Lagoon was constructed around 1934–1935 by the CCC. The Roaches Run bird sanctuary was recommended as part of the original design of the highway, but not implemented until the mid-1930s. In literature created to generate interest in the new highway, the bird sanctuary was described as 90 acres of land and water with rare wild ducks, swans, geese, and other birds that could be seen from the MVMH (Kuhn et al. 2021, 12; The Living New Deal 2021).

Post-Historic and Existing Conditions:

The Roaches Run Lagoon continues to be an area for bird watching and recreation. The total area of Roaches Run is still about 90 acres of water and land, while the lagoon itself is about 60 acres. The character-defining features are the views of the Washington Monument, the nation's capital, and planes coming and going from Washington National Airport, the passive recreation of birdwatching and fishing, and the relative calm of the wooded area surrounding the lagoon that has remained despite nearby development and highway traffic. In 2016, there was a mineral oil spill from the Dominion Energy Virginia Crystal City Substation. An undetermined amount of oil ended up in Roaches Run Lagoon, where an oil sheen was observed and several bird species were oiled, cleaned, and released. Mitigation to enhance the wildlife habitat in Roaches Run and compensatory restoration actions were pursued after the clean-up (National Park Service 2018). The restoration included planting native plants, which benefit wildlife and improve the water quality of the Potomac River (and Roaches Run Lagoon) and adding educational signs to teach visitors about the habitat and species of birds that use Roaches Run Wildlife Sanctuary (Figure 102). The Roaches Run Lagoon falls within the period of significance for the MVMH-North and it

relates to the scenic and recreation functions of the highway, rendering it a contributing feature of the MVMH-North (Kuhn et al. 2021, 12; The Living New Deal 2021).



Figure 102. Roaches Run lagoon from its western shoreline looking northeast (Matthew Traucht 2021).

Daingerfield Island Boat Embayment/Harbor

Historic Condition:

Daingerfield Island was purchased from Smoot Sand and Gravel Co. in 1942 and beginning in the 1950s, plans for recreational facilities on the island were introduced. According to the 2021 draft GWMP NRHP nomination, a master plan was adopted in the 1960s that proposed the development that exists on the island today. The parking areas and marina were built in the 1950s and enlarged in the 1960s (Kuhn et al. 2021, 12).

Post-Historic and Existing Conditions:

The Washington Sailing Marina is located on Daingerfield Island today, using the boat embayment/harbor located to the east of the northern tip of the island (Figure 103). The Washington Sailing Marina is operated by Guest Services, Incorporated, which is the concessionaire selected by the National Park Service. The main restaurant and retail buildings on Daingerfield Island were built in the 1980s. The Daingerfield Island Boat Embayment/Harbor has the character-defining features of views of and quick access to the Potomac River for sailing and other water recreation like kayaks, canoes, and stand-up paddleboards. The Washington Sailing Marina is home to many sailing clubs, youth camps, and sailboat races that use the Daingerfield Island Boat Embayment/Harbor as their launching place. It is a contributing constructed water feature of the MVMH-North, as it was constructed during the period of significance and is part of the recreational and scenic nature of the highway.



Figure 103. Daingerfield Island Boat Embayment/Harbor and Marina, looking west (Josh Penn 2021).

Feature Name	Feature Contribution	CRIS-HS Name	CRIS-HS Number	Type of FMSS Record	FMSS Record Number	FMSS record an exact match?
Roaches Run Lagoon	Contributing					

Daingerfield Island Boat Embayment/Harbor	Contributing			Location	93575	

Small-Scale Features

Small-scale features are elements that provide detail and diversity for both functional needs and aesthetic concerns in the landscape.

Introduction

The traveler driving the Mount Vernon Memorial Highway is not struck by the details. Rather, their eyes are watching the moving vehicles around them, the exit signs, and the many intended views of the Potomac River and local landmarks. Signs, plaques, lighting, and guardrails are character builders. One is never struck by the uniqueness of one highway lamppost or sign; the contribution of these features is cumulative. Knowing this, the designers of the MVMH thought about the details. Added to the plantings, these small-scale features help fit the highway and the details of a highly engineered, modern transportation artery into its natural and historical surroundings.



Figure 104. View of Washington Monument from the Vicinity of Capital Overlook, 1932. Note rustic timber guardrails, metal lamp standards, and decorative signage (HAER, 30-____,8—212 1932a).

Historic Condition:

Signage

When the MVMH opened, there were four basic types of signage used. With few exceptions, these were specifically created for the MVMH not only to be functional, but also to contribute to the overall feel of the space as specific design elements with "decorative value." (Simonson quoted in Leach 1993, 122) While these signs were part of the design, there was a great effort made to reduce the overall quantity to the minimum necessary to control traffic and provide information important to the motorist. The signage designed for the MVMH contributed to the distinctive commemorative character of the Memorial Highway.

The "Colonial" Sign

A silhouette of George Washington was the official emblem of the Bicentennial Commission of his birth. Approved by the Commission of Fine Arts, it graced the overwhelming number of

traffic, directional, and informational signs placed on the memorial highway. The signs were designed to reflect the motif of colonial times. The top and bottom were decoratively carved, the sides rolled to suggest a scroll, and the painted silhouette set in an oval at the top. They were painted white with "colonial" style lettering and set in the landscape on cedar posts (Simonson 1933, plate 83A).

Great care was given to the placement of the original signs of this type. The design made them easy to read, but their placement ensured that they were seen. The locations were chosen so as not to interfere with the landscape views and to provide motorists with the necessary information in a timely manner. Care was also taken to place them within the cone of light created by the lampposts to facilitate night driving (Leach 1993, 122). These signs indicated places of interest such as the Capital Overlook, but also provided direction to the motorist such as "keep right center lane for passing" and "do not enter" (Figure 104).

Reflector Signs

Safety signs were designed to alert drivers to the presence of intersections and traffic islands. Maintaining the rustic nature of the lighting and guardrails, the rounded-top, oblong signs were made using short logs driven into the ground and arrayed with three reflectors and an arrow to mark traffic direction. These signs were kept low to capture the motorists' attention and to reflect their headlights in the dark.

Signboards

This type of signage was a pared-down version of the "Colonial" sign. They were rectangular in shape and without the Washington profile. The white signs had green letters which, along with their smaller size, made them blend in more with their surroundings. These signs were secondary in importance and were made for places where the traffic was slower, or for pedestrian use in picnic areas, parking places, and scenic overlooks (Leach 1993, 122).

Regulation Traffic Signs

In the end, there was still a need for some regulation traffic signs. Stop signs were installed at all major approaches to the highway. At a time when standardization was just taking root, these

signs met the standards developed by the American Association of State Highway Officials (the forerunner to AASHTO).

In 1965, a comprehensive "Sign Plan" for the entire length of the Mount Vernon Memorial Highway was developed (eTIC 850/85731) (Figure 105). The plan illustrated the locations of standard traffic signs (e.g., No Turns, Service Vehicles Only, Speed Checked by Radar) and showed the locations of other signs that were not labeled. Presumably a supplemental sheet provided the types of the unlabeled signs. Further research is required to determine if the signs were installed per the plan and if the original MVMH signage was removed at this time.

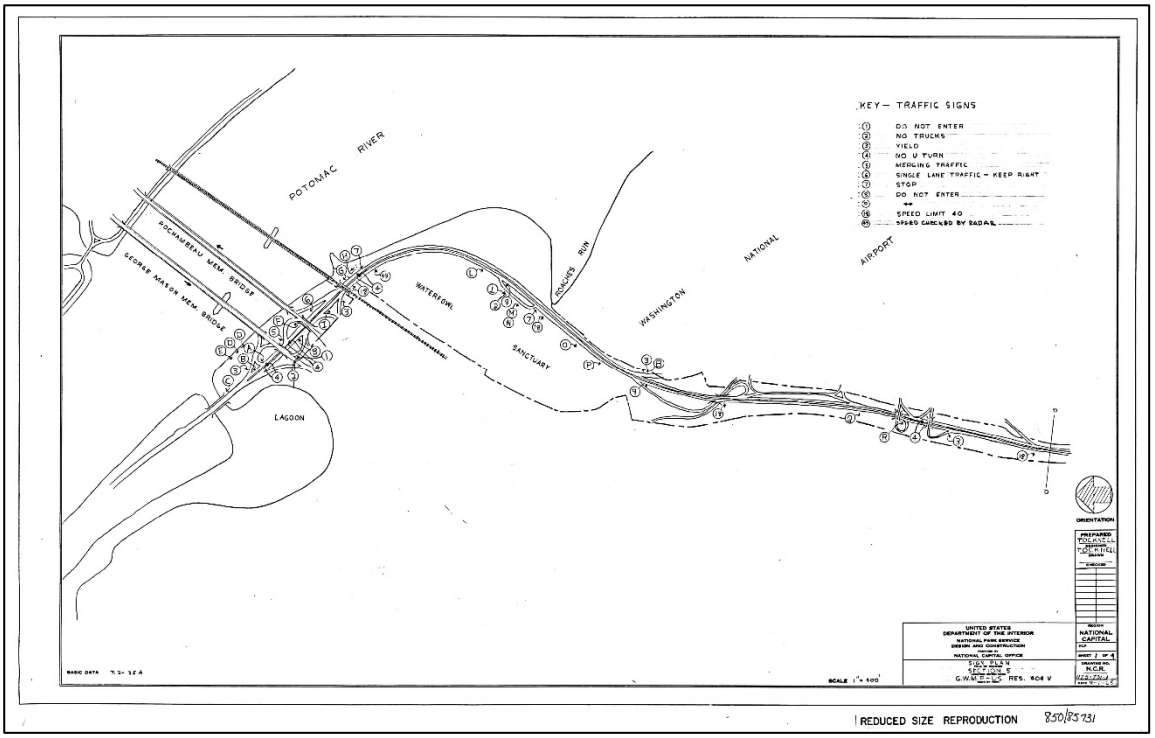


Figure 105. "Sign Plan" sheet 1 of 4 indicating the proposed locations of traffic and other signs along the MVMH, 1965 (eTIC 850/85731).

Monuments and Memorial Plaques

Memorial plaques were sited to commemorate certain memorial plantings by various groups, erected mostly to correspond with the opening of the MVMH in 1932. One such plaque, mounted to a large boulder sited at the Capital Overlook, announced "THESE WILLOW OAKS ARE

PLANTED IN HONOUR OF THE BICENTENNIAL OF GEORGE WASHINGTON BY THE NATIONAL COLONIAL DAMES OF AMERICA IN THE DISTRICT OF COLUMBIA 1732-1932" (Figure 106). When the MVMH was realigned to accommodate the Washington National Airport, the boulder and plaque was relocated to the Hillcrest overlook along the section south of Alexandria (Leach 1993, 123). At the boundary of Virginia and Washington, DC along the Highway Bridge within the cloverleaf interchange, four large elms and understory plantings were dedicated by the Garden Club of America. At these plantings, District of Columbia boundary markers were installed and enclosed with locust posts and chains.



Figure 106. Memorial Marker for Bicentennial Tree Planting, Capital Overlook, the National Colonial Dames of America, District Chapter, 1932 (HAER VA,30-____,8—220 1932b).

Curbs, Guard Rails, and Fences

Low (typically three-inch-tall), continuous, bevel-face curbing defined the edge of the pavement and permitted the pulling-off of vehicles from the highway in an emergency. Along the curb, integrated stormwater grates facilitated drainage of surface water. The design of these curbs differentiated the MVMH from conventional highways: the latter do not typically have curbs due to the potential for serious accidents at high speeds (Leach 1993, 190).

The 1932 Simonson planting plans show the locations for guardrails separating the roadway from the surrounding landscape at places such as bridges, near intersections, or where the grade falls quickly away from the road. They also appear where the road runs near water, bridle and pedestrian paths, or on the outside of some curved alignments. These rustic barriers did not appear where the highway extends through the more urban sections of its route.

The designers created two different types of these barriers: one was a standard height, double rail fence that was used where there were hazardous conditions. The other type appears where they wanted to "…prevent promiscuous parking which would eventually result in users of the highway driving between solid lines of automobiles occupying the best vantage points for scenery" (Leach 1993, 119). There were also concerns that drivers would begin creating their own exits and entrances, defeating the purpose of the grade-separated interchanges. The posts and top rails on both types of barriers were black locust, "set alternately, one bending downward, the next bending upward "to present a serpentine appearance." The face strip on the higher rails was made from "dense heart" long leaf yellow pine. A double coat of "thatch brown" shingle stain was applied as a preservative (EDAW 1992, 138).

By 1935, the CCC had erected a chain link fence at the Roaches Run Bird Sanctuary. Although no documentation of the character of that fence has been uncovered, a chain link fence is present around the west side of the lagoon. Further research is needed to determine if this fence is the one constructed by the CCC or if it was built later.

In 1954, plans for a screening fence along the north part of the airport at the runway were prepared (eTIC 850/80221). The approximately 1,000-foot-long fence was depicted paralleling the curvature of the MVMH, at a 19-foot offset from the east edge of the highway. Although documentation has not been found to confirm that the fence was installed, an existing fence is present along that same alignment.

Lighting

Light poles were spaced approximately 75-feet on-center along the entire length of the highway, staggered on alternating sides of the road. The siting of individual light poles may have varied from the 75-foot interval where the standard may have conflicted with specimen trees, grade-separation features, or planned vistas. Although a rustic-style cedar pole was used along the section south of Alexandria, the designers specified a 20-foot-tall metal standard for the MVMH-North section to harmonize with those standards used in Washington, DC and in Alexandria. These were set back slightly from the highway edge to accommodate future expansion of the highway. The wiring and transformer vaults for the lighting were buried underground to avoid compromising the commemorative nature of the highway. Pendant style 600-candle lamps were equipped with either bowl or dome refractors (Leach 1991). The lighting, which became operational in May 1932, was turned off by the federal government a year later due to the Depression. The lighting along the length of the MVMH was relit in 1939 but many of the original fixtures were not reinstalled when the MVMH was realigned for the airport. In 1941, new lighting plans for the realigned MVMH at the airport were developed (eTIC 850/80171,) however it is not clear if that plan was implemented. In 1959, details for pole-mounted lighting for the MVMH were prepared by the Union Metal Mfg. Co (eTIC 850/85979) (Figure 107). Among the details provided was a steel octaflute monotube pole with an 8-foot single upsweep arm, 30-foot mounting height, and transformer base. Although no documentation was discovered to confirm that lighting meeting these specifications was installed, a number of existing lights between the north limit of the MVMH-North cultural landscape and the northbound exit from the Washington National Airport do match the detail provided and they bare a tag that reads Union Metal Mfg. Co, which indicates that the lights may have been installed at around this time from these details.

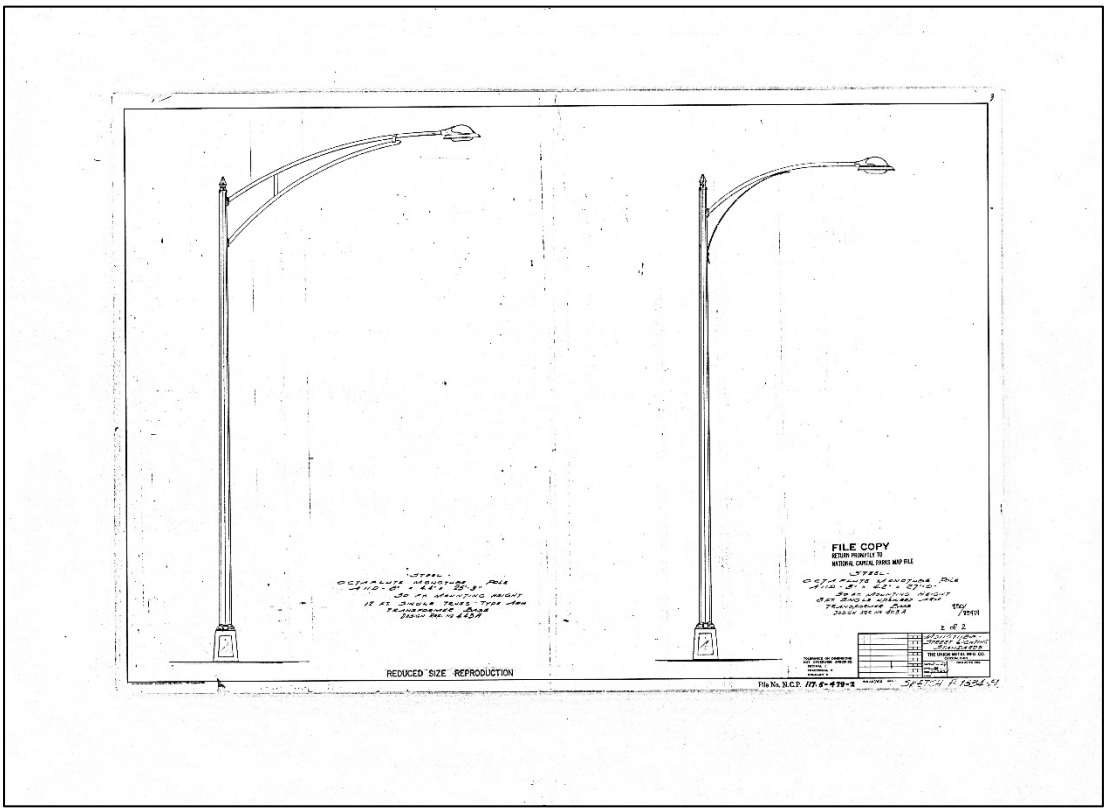


Figure 107. Prop. Street Lighting Equipment 1959. Detail on the right is a match to the existing light poles in the northern section of the MVMH-North cultural landscape (eTIC 850/85479).

Post-Historic and Existing Conditions:

Signage

None of the wooden colonial-style signs from the original design persist along the MVMH-North cultural landscape. Research did not reveal when the original signs were removed. The original signs have been replaced by standard highway traffic signage (e.g., No Parking, Do Not Enter) and by standard National Park Service brown informational signs to indicate recreational areas such as Daingerfield Island and Roaches Run or, on occasion, to provide distance to points of interest such as Mount Vernon. The signage located today along the MVMH may be most related to the 1965 "Sign Plan" (eTIC 850/85731). The existing signs lack the character of the original signage used on the MVMH. In some cases, the modern signs detract from the overall feel and experience of the MVMH and impede significant views and vistas, such as the designed vista of

the Washington Monument as one travels northbound leaving Alexandria (Figure 108–Figure 109).

Signs such as those mentioned above, as well as mile marker signs, are presently located along both the MVMH roadway and along the Mount Vernon Trail multi-use path. Where the Mount Vernon Trail and the Four Mile Run Trail intersect, an interpretive sign about the Mount Vernon Trail is present. At the Roaches Run parking area, two interpretive signs provide details about the history of the Waterfowl Sanctuary and about the lagoon's habitat. These types of signs are of recent construction and installation and are considered noncontributing resources to the cultural landscape.



Figure 108. Photo of informational sign and directional/safety signs where the Mount Vernon Trail intersects with the Four Mile Run Trail (Matthew Traucht 2021).



Figure 109. Photo of informational signs at Roaches Run Waterfowl Sanctuary (Matthew Traucht 2021).

Along the southbound lane just before the location of the former Alexandria Circle, a small sign and brick feature were observed during field survey (Figure 110). The wood sign is mounted to a wood post, which stands adjacent a small brick feature that was constructed atop a concrete slab. The sign, which faces southbound traffic, reads "Alexandria Virginia Established 1749 Welcome." The brick feature has three piers with concrete center posts that have been cut off. It also has two rectangular openings, which may have been used at one time for bedding plants, and low-growing (though unmanicured) cedars are planted in front of the brick feature. From its appearance, this may have supported a larger signboard on three posts. Research did not reveal any record of when this was installed but aerial photographs from the late 1970s and the 1980s (USGS 1979; USGS 1988) do show something in this approximate location, thus its status as a contributing resource to the MVMH-North cultural landscape is considered undetermined.



Figure 110. Photo of brick feature and wooden sign along southbound approach to Alexandria (Matthew Traucht 2021).

Monuments and Memorial Plaques

None of the original monuments or memorial plaques sited along the MVMH-North cultural landscape are extant. The monument at Capital Overlook was relocated to the Hillcrest overlook along the section of MVMH south of Alexandria when the MVMH-North was realigned to accommodate the construction of the airport, while the boundary markers at the cloverleaf interchange were removed, likely when the highway bridges were built between 1947 and 1962.

A small bronze plaque embedded into a concrete pad on Gravelly Point commemorates the 1967 planting of dogwoods, known as the Governors Grove (Figure 111). Located near the northwest corner of the Gravelly Point parking area, the plaque reads "GOVERNORS GROVE THIS GROVE OF DOGWOOD TREES WAS PLANTED BY THE WIVES OF THE STATE GOVERNORS MARCH 16, 1967." Research did not reveal when this plaque was installed, however, it is likely that it was installed when the trees were planted. Because the marker is the only remaining evidence of the significant effort that was part of Lady Bird Johnson's beautification program as it

was manifested in the planting of trees at Gravelly Point, it is considered a contributing resource to the MVMH-North cultural landscape.



Figure 111. Photo of Governors Grove commemorative plaque on Gravelly Point (Matthew Traucht 2021).

Curbs, Guard Rails, and Fences

The original curbs along the MVMH-North cultural landscape have been replaced with a compatible design, most likely as pavement rehabilitation projects have been undertaken through the years. The existing curbs along the MVMH, constructed of exposed aggregate concrete, are angled in profile and are approximately four inches tall (Figure 112).The concrete curbs are noncontributing, but compatible to the cultural landscape.



Figure 112. Photo of typical curb along the MVMH-North (Matthew Traucht 2021).

None of the original locust guardrails are present along the MVMH-North cultural landscape. Although documentation has not been found about their removal, they were no longer present in 1986 (EDAW 1992). The existing guardrails along the MVMH-North roadway alignment are, predominantly, metal W-beam crash barriers in the highway median that prevents errant vehicles from sliding off the roadway. The barriers are painted brown and consist of a combination of square wood and metal posts embedded into a linear concrete pad supporting horizontal W-beams on both sides of the post. Within the median, the W-beam guardrail is offset approximately 18 inches from the inside edge of the northbound lane. Guardrails are not present in the Alexandria Approach or much of the Daingerfield Island character areas of MVMH-North cultural landscape, however one in the median between the northbound and southbound lanes begins 0.25 miles south of the Four Mile Run Bridge and then terminates at a concrete jersey barrier spanning the bridge. The W-beam guardrail continues north of the bridge in the median to the underpass of the National Airport South Exit Bridge, where it breaks to allow for the exit

and entrance ramps in this area (Figure 113). The W-beam barrier then continues for the entire stretch of highway to a point just north of the RF&P bridge where it transitions to concrete jersey barriers. From a point just north of the Charles R. Fenwick Bridge to the north limit of the MVMH-North cultural landscape, the barrier between the northbound and southbound lanes is a 27-inch-tall steel-backed timber guardrail (Figure 114). According to the George Washington Memorial Parkway North Section Rehabilitation Environmental Assessment (NPS 2018), the installation of W-beam guardrails on the GWMP began in 1997 and that, while functionally effective for highway use, is "not of the typical historic barrier style of the parkway architecture and is classified as temporary by the NPS" (NPS 2018, 15). That document goes on to say that, although the steel-backed timber guardrail does open views of the Potomac River and its use would provide some cohesiveness throughout the GWMP cultural landscape, its use as a replacement for guardwalls would not be acceptable (NPS 2018, 22). As such, for the MVMH-North cultural landscape, the W-beam guardrail is considered noncontributing, incompatible, and the steel-backed timber guardrail is considered noncontributing, compatible (Figure 115).



Figure 113. Photo looking north of W-beam guardrail. Note concrete paving beneath the guardrail and the alignment of the guardrail along the edge of the northbound lane (Matthew Traucht 2021).



Figure 114. Photo looking south of steel-backed timber guardrail between the I-395 Express overpass to the Rochambeau Bridge and the I-395 northbound overpass to the Arland D. Williams, Jr. Memorial Bridge (Matthew Traucht 2021).

Timber guardrails were documented in two locations of the MVMH during field investigations. One section extends along the northbound lane of the MVMH between the exit ramp to the Washington National Airport West Entrance Road and a point just beyond the Airport North Entrance Bridge. The guardrail is built of square timbers on square timber posts. It is present along a stretch where the Mount Vernon Trail is close to the MVMH alignment and was probably installed between 1996 and 1999 when the access road to the airport was reconfigured and the Mount Vernon Trail Bridge North was constructed although it may have been built in 2007 when the Airport North Entrance bridge was repaired, in part to address safety concerns related to the proximity of the MVT and the MVMH alignment. In any event, the guardrail is a noncontributing, compatible resource to the cultural landscape. Another small section of timber guardrail is located along the southbound lane of the MVMH approximately 1,070 feet south of the Airport North Entrance Bridge. That guardrail is aligned with the remnants of the abandoned pedestrian tunnel that traversed beneath the MVMH to connect the Building T7 at the Washington National Airport with the parking lot on the west side of the MVMH cultural

landscape boundary (see Pedestrian Circulation in this report). It is not known when this approximately thirty-foot-long section of timber guardrail was installed, but it most likely is to prevent cars from exiting the MVMH at this location.



Figure 115. Noncontributing timber guardrail provides separation between the MVMH and the MVT. Looking south (Matthew Traucht 2021).

In the Airport character area, a chain link fence encloses the George Washington Memorial Parkway Maintenance Facility adjacent to Washington National Airport. Documentation about its origin or age has not been found. Its status is considered undetermined for this cultural landscape inventory and further research is recommended.

A chain link fence is present along the east side of the Mount Vernon Trail adjacent the north end of the Washington National Airport. Some sections comprise dark-painted chain link sections and dark-painted T-shaped steel posts regularly spaced. In between the T-shaped posts, intermediate round poles supporting barbed wire strands are present. In other sections, painted hollow steel pipes approximately five-feet on-center support the chain link and the barbed wire. The fence has one locked gate along its length to facilitate restricted access to the airport and

terminates outside of the MVMH cultural landscape in the Washington National Airport property. On the airport-side of the fence, a swale and berm are present. These were indicated on the 1954 plan (eTIC 850/80221) for the proposed fence. Although there is no documentation suggesting that the present fence is the one proposed in 1954, its alignment appears to match that shown on the plan. Its status is considered undetermined for this cultural landscape inventory and further research is recommended.

Along the west side of the Roaches Run character area, a chain link fence is present, restricting access to the woodland, wetland, and lagoon areas from the railroad right-of-way. The fence consists of painted chain link sections with hollow steel square posts (Figure 116). Some sections are topped with barbed wire, a horizontal metal band, or a combination of the two. This fence, or sections of it, may date to the 1935 construction of a fence at Roaches Run by the CCC. Additional research is required to determine if it is a contributing resource, thus it is considered undetermined in this cultural landscape inventory.



Figure 116. Chain link fence at the Roaches Run Bird Sanctuary adjacent the railroad right-of-way. Note barbed wire and horizontal metal band (Matthew Traucht 2021).

In the Roaches Run character area, a black-painted chain link fence is present along the southern bank of the Roaches Run Inlet just to the north of the Washington national Airport. This fence is shorter and less robust than the one at the runway, and its posts are different. It is topped with barbed wire. It terminates along the Mount Vernon Trail where a temporary wood "snow fence" is present for a short length atop the Roaches Run culvert. A chain link fence is also present along the southeastern section of Gravelly Point where a small building is present. These chain link fences are considered noncontributing.

Lighting

The MVMH-North right-of-way is not lighted between First Street in Alexandria and the north entrance ramp from Washington National Airport. Between the north entrance ramp and the north limit of the cultural landscape boundary, steel monotube light standards are present.

Research conducted for this CLI uncovered two sheets of lighting details from 1959 (eTIC 850/85479) that include drawings of light poles that are the same as those located along the previously mentioned section of the MVMH (Figure 117). The details are standards from the Union Metal Mfg. Co., which matches the metal tags that can still be found on some of the existing light poles. Thus, there is a strong likelihood that the existing lights date to that time. However, because no plans were found to show the locations of lights installed at that time, the contributing status of these standards are considered undetermined. The lamps are obviously not original and likely were replaced with more efficient ones within the last decade. As some light standards of similar construction have been observed along the modern approaches to the 14th Street Bridges, further research is needed to confirm is any of these date to the period of significance. Continuing north of the Boundary Channel, the light poles and lamp fixtures do not match those found in the northern stretch of the MVMH-North inventory unit.

Modern overhead lighting on metal poles is present along the access drive to the Daingerfield Island marina and amidst the dry slips and associated buildings. Modern solar powered light standards were recently installed in the overflow parking area to the south of the marina. In the main parking lot at the marina, overhead lighting is atop poles made of exposed aggregate concrete, which indicates that these were installed at a different time than the others nearby. Further research may indicate that these were installed during the period of significance and are considered undetermined.



Figure 117. Photo of thirty-foot mounting height, eight-foot single upsweep arm light standard along the MVMH north of the Washington National Airport (Matthew Traucht 2021).

Site Furnishings

Research conducted for this CLI did not reveal any indication that benches, or other seating elements, were present in the MVMH-North cultural landscape during the period of significance. Further research is required. It is unknown when site furnishings were added, however the few fixed benches documented within the cultural landscape are located along the Mount Vernon Trail, indicating that they were installed at least at the time of its construction if not later. Along the west side of the Mount Vernon Trail, two wood and metal benches on a concrete pad just north of the marina at Daingerfield Island overlook the Potomac River and a single bench overlooks the wetland to the south of the marina (Figure 118). Moveable picnic tables are located at Daingerfield Island near the restaurant and near the south overflow parking area. At Gravelly Point, moveable picnic tables are located in several locations at the southern end of the peninsula

near the parking area and the Gravelly Point Boat Launch. The site furnishings are noncontributing resources to the MVMH-North cultural landscape.



Figure 118. Photo of standard wood and metal benches on concrete pad. Benches pictured are located along the Mount Vernon Trail to the north of Daingerfield Island (Matthew Traucht 2021).

Feature Name	Feature Contribution	CRIS-HS Name	CRIS-HS Number	Type of FMSS Record	FMSS Record Number	FMSS record an exact match?
Governors Grove plaque	Contributing					
Union Metal Mfg. Co. light standards	Undetermined					
Daingerfield Island parking lot light standards (exposed aggregate poles)	Undetermined					
Chain link fence at George Washington	Undetermined					

Memorial Parkway Maintenance Facility						
Chain link fence at Roaches Run	Undetermined					
Chain link fence at north end of airport	Undetermined					
Concrete curbs	Noncontributing – Compatible					
Steel-backed timber guardrails	Noncontributing – Compatible					
Timber guardrails in the Airport character area	Noncontributing – Compatible					
W-beam guardrails	Noncontributing – incompatible					
Site Furnishings	Noncontributing			Asset	1746407 1746408	No
Signage	Noncontributing					

Archeological Sites

Archeological sites are the locations of ruins, traces, or deposited artifacts in the landscape and are evidenced by the presence of either surface or subsurface features.

Introduction

There are numerous archeological sites found along MVMH. They include both pre-contact Native American and historic period sites. In the MVMH-North CLI boundary, a total of ten archeological sites have been previously identified. They illustrate the continued use of the land for farming, hunting, and gathering, and as a transportation route between Washington, DC and Alexandria. The archeological evidence of both prehistoric and historic settlement may be minimally disturbed during the MVMH North's period of significance, but there has been substantial commercial and residential development in the late-twentieth and early-twenty first

centuries, in addition to the re-routing of MVMH in the twentieth century at least once, which may have compromised the integrity of some archeological sites, especially those previously unrecorded.

Overall, the majority of the archeological sites in the MVMH-North CLI boundary retain a moderate to high level of integrity. To be considered as contributing to the cultural landscape of MVMH-North, the criteria used in this study was to include: (1) archeological sites that had previously been determined as eligible to the National Register of Historic Places; or (2) archeological sites that have been examined sufficiently to know that they have good integrity, that fall within the cultural landscape's period of significance, and that reflect the themes that make the landscape significant. All of the archeological sites are outside of the cultural landscape's period of significance and/or they do not fall within the themes that make the landscape significant. Consequently, they do not contribute to the MVMH-North cultural landscape. Nevertheless, the archeological sites may have significance on an individual level and in accordance with the National Register of Historic Places criteria and are protected by federal preservation laws.

Site 44AR0037 (Jackson City)

Historic Condition:

The archeological site associated with Jackson City is located just south of the Long Bridge in Arlington. There is no above-ground evidence left of Jackson City, but an archeological site was documented in 2004 when a backhoe trench uncovered a foundation four feet beneath twentieth-century fill.

Post-Historic and Existing Conditions:

According to the records of the Virginia Department of Historic Resources (DHR), Jackson City was not evaluated for NRHP eligibility when it was recorded and is still not formally evaluated. Since the archeological site has not been determined eligible to the National Register of Historic Places and likely is outside of the cultural landscape's period of significance, it is a noncontributing, but compatible feature to the MVMH-North.

Site 44AR0051 (Roaches Run Shipwreck)

Historic Condition:

The Roaches Run Shipwreck archeological site is located in the Roaches Run Waterfowl Sanctuary. The boat appears to have been stripped or intentionally burned after its abandonment in Roaches Run. The boat was likely abandoned between 1916 and 1930.

Post-Historic and Existing Conditions:

According to the records of the DHR, the Roaches Run Shipwreck was not evaluated for NRHP eligibility when it was recorded and is still not formally evaluated. Since the archeological site has not been determined eligible to the National Register of Historic Places and likely is outside of the cultural landscape's period of significance, it is a noncontributing, but compatible feature to the MVMH-North.

Site 44AR0028 (Alexandria Canal)

Historic Condition:

The Alexandria Canal was completed in 1843 and functional until 1886. The majority of the canal remnants, where still present, are buried under modern development and roads. Near the southern end of the MVMH-North, the Alexandria Canal archeological site intersects with the CLI project area.

Post-Historic and Existing Conditions:

According to the records of the DHR, the Alexandria Canal site was not evaluated for NRHP eligibility when it was recorded and is still not formally evaluated. Since the archeological site has not been determined eligible to the National Register of Historic Places and likely is outside of the cultural landscape's period of significance, it is a noncontributing, but compatible feature to the MVMH-North.

Site 44AX0194

Historic Condition:

Archeological Site 44AX0194 was identified on the east side of Daingerfield Island during an archeological survey in 2004. The site contains a mix of Pre-contact and Post-Contact artifacts. The site also reportedly contains features that may date from the mid-twentieth century.

Post-Historic and Existing Conditions:

At time of the survey, the archeological site was determined to be contributing to the GWMP, but not individually NRHP eligible. Archeological Site 44AX0194 was not evaluated for NRHP eligibility when it was recorded with the DHR and is still not formally evaluated. Since the archeological site has not been determined eligible to the National Register of Historic Places and likely is outside of the cultural landscape's period of significance, it is a noncontributing, but compatible feature to the MVMH-North.

Site 44AX0207 (Campsite No. 1 of American Wagon Train, September 1781)

Historic Condition:

Somewhere near this mapped archeological site, located south and west of Washington National Airport, American and French wagon trains traveled empty and without troops to Williamsburg in September 1781, during the American Revolutionary War. This is a map-projected archeological site; no clear evidence of it has been recorded with the DHR.

Post-Historic and Existing Conditions:

Campsite No. 1 of the American Wagon Train was not evaluated for NRHP eligibility when it was recorded with the DHR and is still not formally evaluated. Since the archeological site has not been determined eligible to the National Register of Historic Places and likely is outside of the cultural landscape's period of significance, it is a noncontributing, but compatible feature to the MVMH-North.

Archeological Site 44AX0220

Historic Condition:

This Pre-Contact and Post-Contact artifact scatter is located on the west side of MVMH-North, south of Four Mile Run.

Post-Historic and Existing Conditions:

Site 44AX0220 was not evaluated for NRHP eligibility when it was recorded with the DHR and is still not formally evaluated. Since the archeological site has not been determined eligible to the National Register of Historic Places and may be outside of the cultural landscape's period of significance, it is a noncontributing, but compatible feature to the MVMH-North.

Archeological Site 44AX0221

Historic Condition:

This Pre-Contact and Post-Contact artifact scatter is located on the west side of the MVMH-North, south of Four Mile Run.

Post-Historic and Existing Conditions:

Site 44AX0221 was not evaluated for NRHP eligibility when it was recorded with the DHR and is still not formally evaluated. Since the archeological site has not been determined eligible to the National Register of Historic Places and may be outside of the cultural landscape's period of significance, it is a noncontributing feature, but compatible to the MVMH-North.

Archeological Site 44AX0222

Historic Condition:

This Pre-Contact and Post-Contact artifact scatter is located on the west side of the MVMH-North, south of Four Mile Run. The remnants of a possible nineteenth or early-twentieth century Belgian block foot path or bridle path were also noted.

Post-Historic and Existing Conditions:

Site 44AX0222 was not evaluated for NRHP eligibility when it was recorded with DHR and is still not formally evaluated. Since the archeological site has not been determined eligible to the National Register of Historic Places and may be outside of the cultural landscape's period of significance, it is a noncontributing, but compatible feature to the MVMH-North. However, the presence of the possible foot or bridle path might reflect a feature from the MVMH-North's

period of significance. More information on this above-ground feature or features should be collected in the future.

Site 44AX0230 (Magnolia)

Historic Condition:

The Magnolia archeological site is an artifact scatter related to the nineteenth- or early-twentieth century habitation located on the west side of Daingerfield Island. The area reportedly was disturbed by road construction and clearing activities, and it also on the edge of marshland.

Post-Historic and Existing Conditions:

Magnolia was not evaluated for NRHP eligibility when it was recorded with the DHR and is still not formally evaluated. Since the archeological site has not been determined eligible to the National Register of Historic Places and may be outside of the cultural landscape's period of significance, it is a noncontributing, but compatible feature to the MVMH-North.

Archeological Site 44AX0231

Historic Condition:

Archeological Site 44AX0231 is an historic period artifact scatter located on Daingerfield Island. The artifact scatter may be associated with possible habitation or industrial use of this area.

Post-Historic and Existing Conditions:

Site 44AX0231 was not evaluated for NRHP eligibility when it was recorded with DHR and is still not formally evaluated. Since the archeological site has not been determined eligible to the National Register of Historic Places and may be outside of the cultural landscape's period of significance, it is a noncontributing, but compatible feature to MVMH-North.

Feature Name	Feature Contribution	CRIS-HS Name	CRIS-HS Number	Type of FMSS Record	FMSS Record Number	FMSS record an exact match?

Site 44AR0037 (Jackson City)	Noncontributing-Compatible					
Site 44AR0051 (Roaches Run Shipwreck)	Noncontributing-Compatible					
Site 44AR0028 (Alexandria Canal)	Noncontributing-Compatible					
Site 44AX0194	Noncontributing-Compatible					
Site 44AX0207 (Campsite No. 1 of American Wagon Train, September 1781)	Noncontributing-Compatible					
Archeological Site 44AX0220	Noncontributing-Compatible					
Archeological Site 44AX0221	Noncontributing-Compatible					
Archeological Site 44AX0222	Noncontributing-Compatible					
Site 44AX0230 (Magnolia)	Non Contributing-Compatible					
Archeological Site 44AX0231	Noncontributing-Compatible					

Condition Assessment

Condition

Fair

Condition Date

8/23/2022

Narrative

This CLI finds that, despite some relatively minor changes, the MVMH-North cultural landscape is in fair condition. This indicates that the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within three to five years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the landscape characteristics will cause the inventory unit to degrade to poor condition.

Although the character of the vegetation has changed dramatically since the original planting plans, many of the subsequent plans were implemented during the period of significance. The maturation of vegetation has affected the legibility of views and vistas and has also diminished the originally attended effect of sequential experiences along the MVMH. The loss of ornamental shrubs and trees has also diminished the visual experiences of traveling through the cultural landscape. The absence of memorial plantings and the reduced quality and quantity of views associated with George Washington has diminished the commemorative qualities of the route. The condition of the circulation features is fair, although the MVMH-North section has many more points of access and exit than when it was originally designed and constructed, especially at the Washington National Airport. The recreational aspects associated with Daingerfield Island and Gravelly Point have enhanced the use and enjoyment of the cultural landscape. As a recreational and scenic route, the condition of the overall MVMH-North cultural landscape is consistent with the original design.

Impacts

Type	Impact Type – Other	Internal Source	External Source	Narrative	Date Identified
Adjacent Lands			Yes	The development of the Washington National Airport has obscured views of the US Capitol building from the northbound lanes of the MVMH. In 2016, the rupture of a holding tank owned by Virginia Electric and Power Company at the Crystal City Substation discharged approximately 13,500 gallons of mineral oil dielectric fluid, resulting in damage to the habitat at Roaches Run.	2021
Associative Change		Yes		The abandonment of the Daingerfield Island plant nursery and its transition to a second growth forest is an associative change that impacts the MVMH-North cultural landscape.	2021
Disruption/Loss of Plant Species		Yes		The 2009 CLR documents the loss of numerous species of plants and provided specific recommendations	2009, 2021

				about the rehabilitation or restoration of these plants. The survey work conducted in 2021 noted the absence of additional plant resources. The loss of ornamental plants has diminished the overall experience of traveling along the MVMH. Memorial plantings, once common here, are no longer present.	
Inundation/Sea Level Rise			Yes	The relative rate of sea level rise along the tidal Potomac River is measured at 3.5 millimeters per year, which, in 100 years, is 1.09 feet. Projections developed by the National Oceanic and Atmospheric Administration (NOAA) using baseline data from 2012 indicate that local sea level in Washington, DC may rise another 1.2 feet by 2050 and 4.0 feet by 2100.	2021
Vegetation/Invasive Plants		Yes	Yes	Invasive plants were documented in the 2009 CLR and native alternatives were recommended.	2009, 2021
Deferred Maintenance		Yes		Numerous benches found in the	2021

				MVMH-North cultural landscape exhibit deterioration due to deferred maintenance. Some are in a state of disrepair that prevents their safe use and should be replaced or repaired.	

Treatment

Stabilization Measures

Narrative

Specific stabilization measures are recommended for MVMH-North to protect the contributing resources and the overall integrity of the cultural landscape. Vegetation has become overgrown in areas and should be cut back, especially where views and vistas can be enhanced or restored. Invasive species such as tree of heaven (*Ailanthus altissima*), burning bush (*Euonymus alatus*), and honeysuckles (*Lonicera morrowii*, *L. tatarica*) and others have been identified in the MVMH-North CLI boundary and should be removed. Native alternatives to these plants should be provided. Generally, maintenance and pruning strategies for vegetation in the MVMH-North cultural landscape need to be evaluated and performed with regularity. Encroaching residential and commercial development, including the Washington National Airport, have affected and continue to affect the viewsheds, setting, feeling, and the overall integrity of the cultural landscape. Vegetative screening may help to alleviate some of the viewshed encroachment; however, care must be taken to ensure that designed views and vistas are not blocked. The "topping" of vegetation by the Metropolitan Washington Airports Authority in areas around the airport has led to the degradation of some plant resources.

It was observed that some benches are damaged, and a stabilization measure would be either to repair these benches, remove them from the area, and/or replace in-kind. Overall, routine maintenance is needed on contributing resources to maintain their individual integrity and the integrity of the MVMH-North cultural landscape. Routine maintenance of the roadway and surface of the Mount Vernon Trail is often needed. At the Washington Sailing Marina main parking area, standing water associated with runoff was observed and should be corrected.

Approved Treatments

Type

Undetermined

Document

Cultural Landscape Report

Narrative

In 1990, a cultural landscape report was completed by EDAW, Inc. on the Mount Vernon Memorial Highway. Due to its age, the existing conditions section of the report is likely no longer accurate, but the documentation and history it provides is still a vital resource. The first volume of this cultural landscape report tells the history of the area, including the preparation and legislation that led the construction of MVMH. The second volume documents the character areas along the highway, including those in MVMH-North, with descriptions of their original design, existing conditions, alterations, and an evaluation. Chapter two, Gravelly Point-Airport, covers much of the MVMH-North CLI boundary and gives the development history of this area, noting changes to the views and vistas, realignment of the highway around the airport, and encroaching commercial development in Crystal City. The final chapter of volume two of the CLR is an overall assessment and impact statement with conclusions. While it did not provide specific planting plan or detailed recommendations, it did provide suggestions to improve and/or preserve the integrity of MVMH. Those include the adoption of a Park Management Plan and the enforcement of four documents (the legal agreement between the City of Alexandria and the NPS regarding commercial development, the Final Landscape Plan by Simonson, and Section 106 of the NHPA and its amendments, and Section 1653 (f) of the 1966 department of transportation Act).

Document

Cultural Landscape Report

Narrative

In 2009, a cultural landscape report was completed by the Virginia Tech Landscape Architecture Program from the Washington-Alexandria Architecture Center focused on the vegetation of the George Washington Memorial Parkway. They made specific recommended planting strategies for each of the character areas along the parkway, including those in MVMH-North, following Simonson's design plans (and later designers as well) that distinguished different character areas by species of trees. They made several overall recommendations and then went into specifics by character area for how to rehabilitate the vegetation and views and vistas in the future.

On Daingerfield Island, they recommended rehabilitating the woodland plantings on the western side of the island, the northbound views to the marina and the US Capitol, and the southbound views of the river and marina. Their proposal for Daingerfield Island followed a combination of the 1932 and 1963 planting plans. For the airport character area, they recommended rehabilitating the northern entrance plantings and the spatial scalloping along the eastern side with a new planting plan. They also recommended developing new plans for Crystal City entrance plantings and preserving the spatial scalloping on the western side. For Roaches Run, they recommended rehabilitating the roadside plantings to stabilize the banks and give filtered views of Roaches Run Lagoon. They also recommended rehabilitating the northbound view of the Washington Monument and the southbound view over Roaches Run. At Gravelly Point, they recommended rehabilitating the views to the US Capitol, the roadside plantings, and the Governor's Grove with a species other than dogwoods. In the bridges character areas, they recommended developing a new planting plan to give this area an overarching character of its own. They also recommended rehabilitating the Simonson plantings along the shoreline and at the mouth of the Boundary Channel.

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Supplemental Information

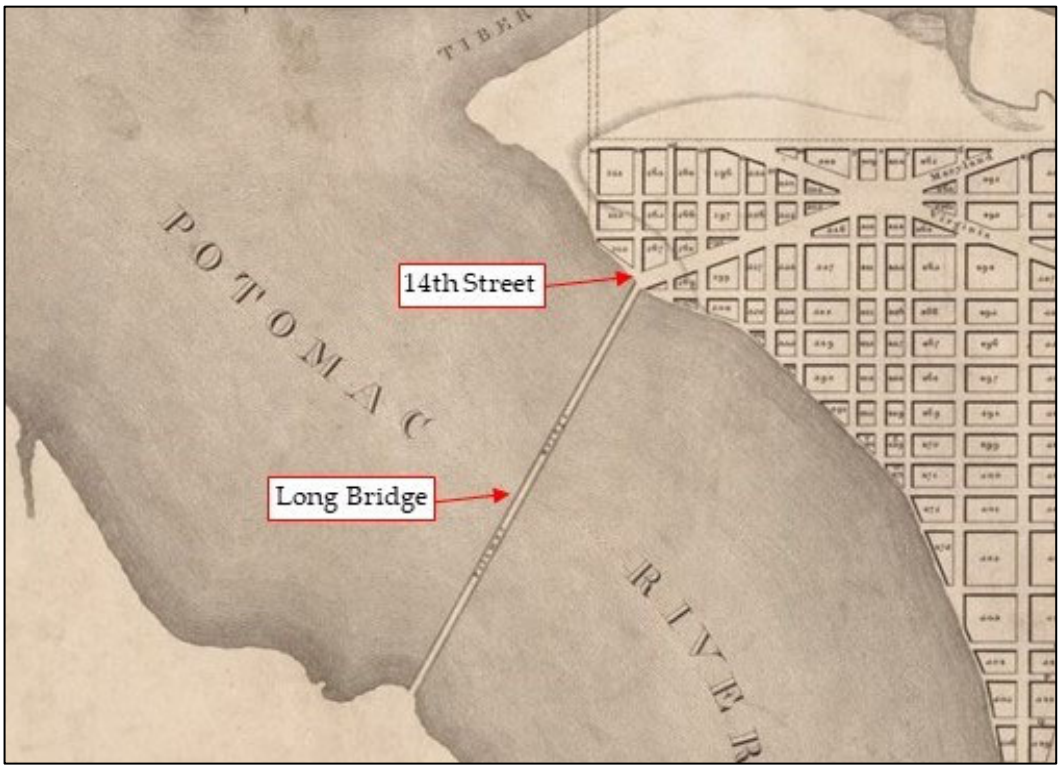
RELEVANT BRIDGE CROSSINGS-THE 14TH STREET BRIDGE COMPLEX 1809–1985

The following section of this cultural landscape inventory describes the history of a series of bridge crossings of the Potomac River from Washington, DC that fall within what was known at the time as Alexander's Island. These bridge crossings set the context for the landscape in the northern portion of the cultural landscape inventory study area.

In February 1808 Congress approved the construction of a bridge across the Potomac River, very near the current location of the current Potomac Railroad Bridge (Figure 1 and Figure 2). Construction started later that year with the bridge opening on May 1, 1809. The bridge, aptly named Long Bridge, was built on thirty-nine earthen piers in the river and connected 14th Street NW to Arlington, Virginia. In 1825, Prince Carl Bernhard of Saxe-Weimar Eisenach wrote about the Long Bridge, spanning the Potomac:

> Over the Potomac there is a long wooden bridge, built upon ordinary cross-beams. I measured it, and found it to be fifteen paces broad, and one thousand nine hundred long. … It required nineteen minutes to walk from one end to the other…This bridge astonishes by its length, but not at all in its execution, for it is clumsy and coarse. (Bernhard 1825)

Prior to the construction of the Long Bridge, Alexander's Island was owned by Robert Howsing who granted several hundred acres to the Alexander Family, the island's namesake. A map from 1900 (Figure 3), depicts how the Long Bridge was positioned on Alexander Island as well as other notable landscape features.



Supplemental Information Figure 1. A map of the city of Washington in the District of Columbia: established as the permanent seat of the government of the United States of America (King, Schwarz, and Cooper 1818).



Supplemental Information Figure 2. City of Washington from beyond the Navy Yard (Cook 1834).



Supplemental Information Figure 3. 1900 Map of Alexandria County (Strum 1900).

In 1864, during the Civil War, a new bridge was built alongside the existing Long Bridge. The new bridge was constructed for rail traffic as the Long Bridge was in various states of disrepair. The rails from the Long Bridge were moved to the new bridge and Long Bridge was to be only used for non-rail traffic (Alexandria Gazette 1865). These bridges did not last for long as heavy rains in 1870 resulted in flooding on October 1st, sweeping away over 500 feet of the railroad bridge (Evening Star 1870). Although the article is titled "500 Feet of Long Bridge Gone," both bridges suffered damage. During this time these bridges were referred to as the "turnpike bridge," which encompassed the old Long Bridge and the newer "railroad bridge" together. However, both bridges were also called the "Long Bridge" or "Long Bridge and the railroad bridge." On May 15, 1872, the newest Long Bridge was opened for pedestrian and carriage traffic with services running continually until 1906 (Figure 4). This bridge certainly aided with the development of Jackson City, originally an African American community located at the end of Long Bridge in Arlington (Figure 5).

A. & W. R. R.—The 4:45 a. m. train on the Alexandria and Washington Railroad, with many persons on board was the first to cross the new Long Bridge, and since then trains have been crossing it all day. Hereafter all the trains on the Alexandria and Washington railroad will pass over the new Long Bridge, and the Alexandria and Fredericksburg and Baltimore and Potomac trains will use that portion of the Alexandria and Washington railroad lying between the Long Bridge and Poor's House Lane—that portion where he Alexandria and Fredericksburg railroad has been enjoined from constructing its track,

Supplemental Information Figure 4. A. & W.R.R (Alexandria Gazette 1872).



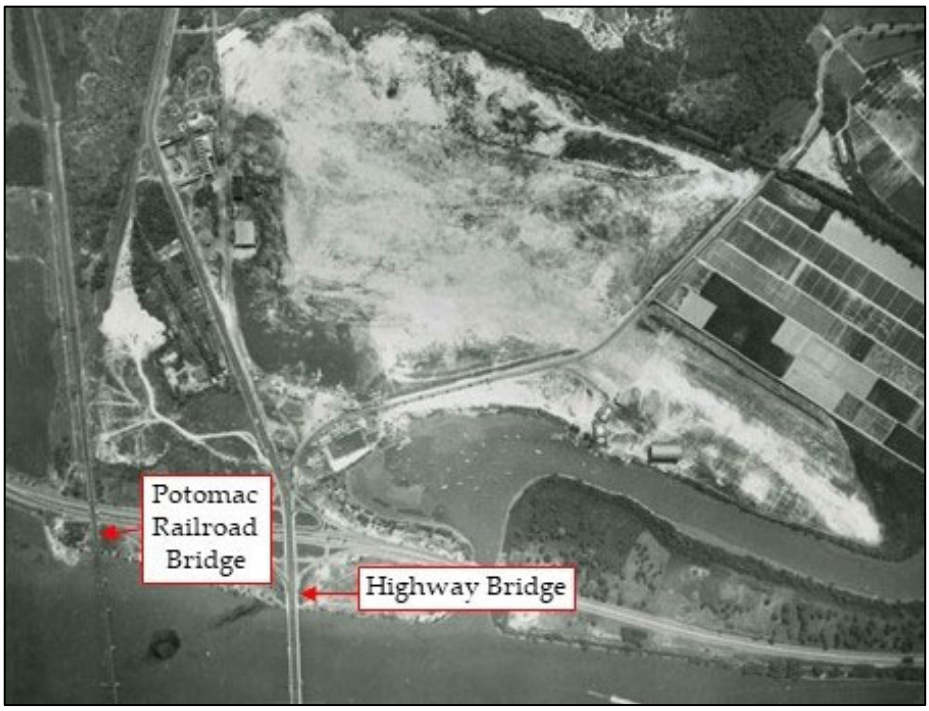
Supplemental Information Figure 5. The vicinity of Washington, D.C. (Hopkins 1894). The Long Bridge depicted here is the new Long Bridge that replaced the one destroyed in the flood of 1870.

Due to continuous damage from flooding of the Potomac to the new Long Bridge, two replacement bridges were constructed. The first, known as the Highway Bridge, opened in 1906. A new railroad bridge was built in 1904. The 1872 Long Bridge was closed in 1906 and torn down by 1907 (Washington Post 1907). The new railroad bridge, the one still in operation today, was built "from 60 to 260 feet…" west of the Old Long Bridge (the 1872 Long Bridge) (Figure 6) (Washington Post 1904).



Supplemental Information Figure 6. Plan for development of Mount Vernon Memorial Highway (US Bureau of Public Roads 1930). Approximate Location of old Long Bridge shown in red.

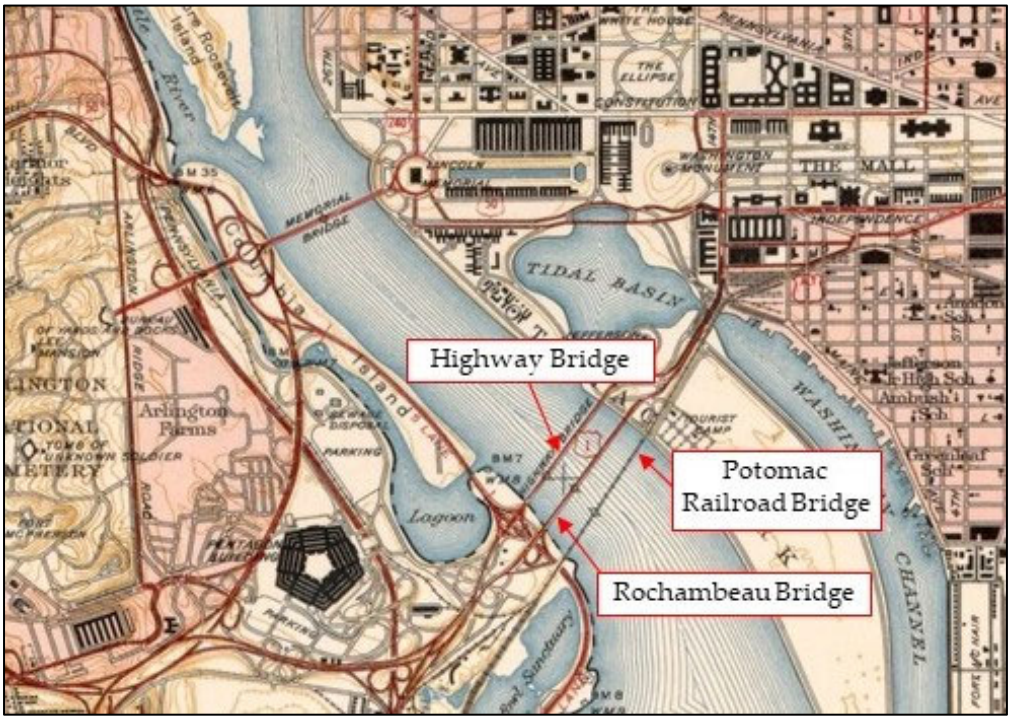
The Highway Bridge and the Railroad Bridge (the current Long Bridge) remained the only two bridges in this location until 1950, when a northbound-only vehicular bridge (originally named the 14th Street Bridge) was opened, with the existing Highway Bridge becoming southbound-only (Figure7–Figure 10). This new span was not formally named until 1957, due to years of debate over who should be honored with the dedication; the name was informally decided upon prior to the 1958. In 1958, the bridge was dedicated to Jean-Baptiste Donatien de Vimeur, comte de Rochambeau (Washington Post 1956).



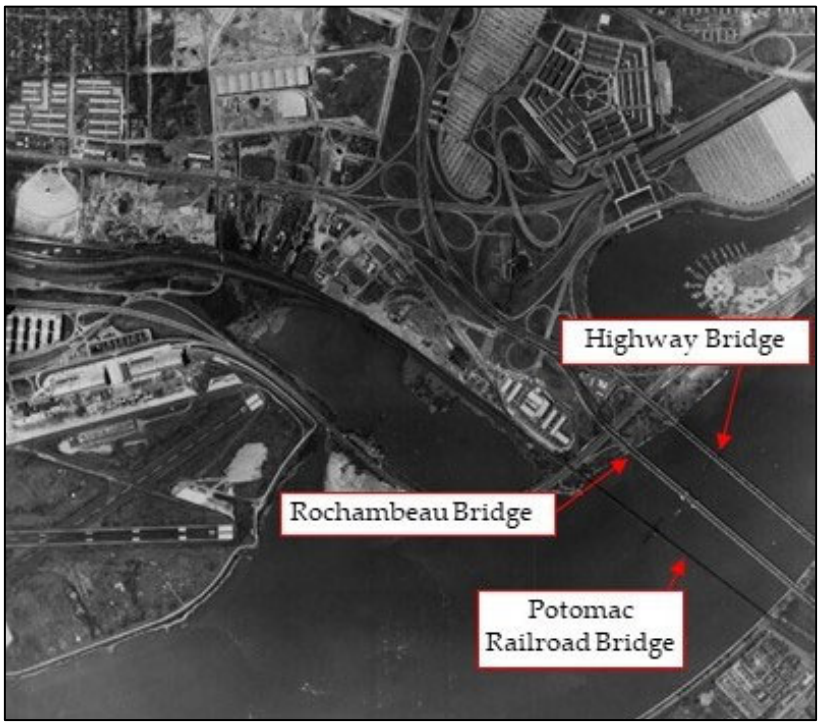
Supplemental Information Figure 7. 1936 Aerial photograph of the future site of the Pentagon (Arlington Public Lib 1936)



Supplemental Information Figure 8. 1949 Aerial photograph showing the bridges over the Potomac and the Pentagon (Arlington County Government 1949).

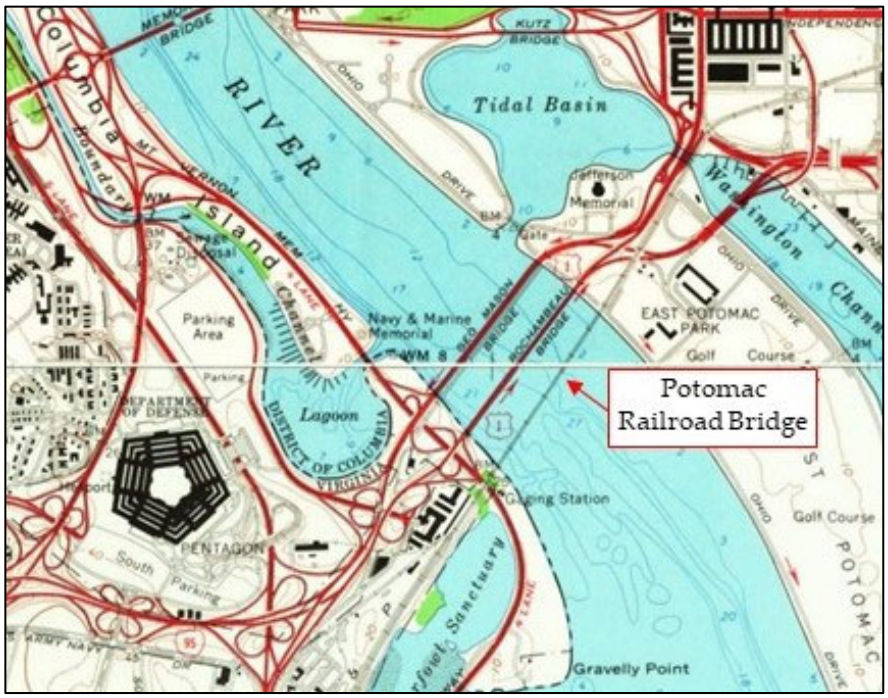


Supplemental Information Figure 9. 1951 Washington West and Alexandria Quadrangle Map (USGS 1951a).

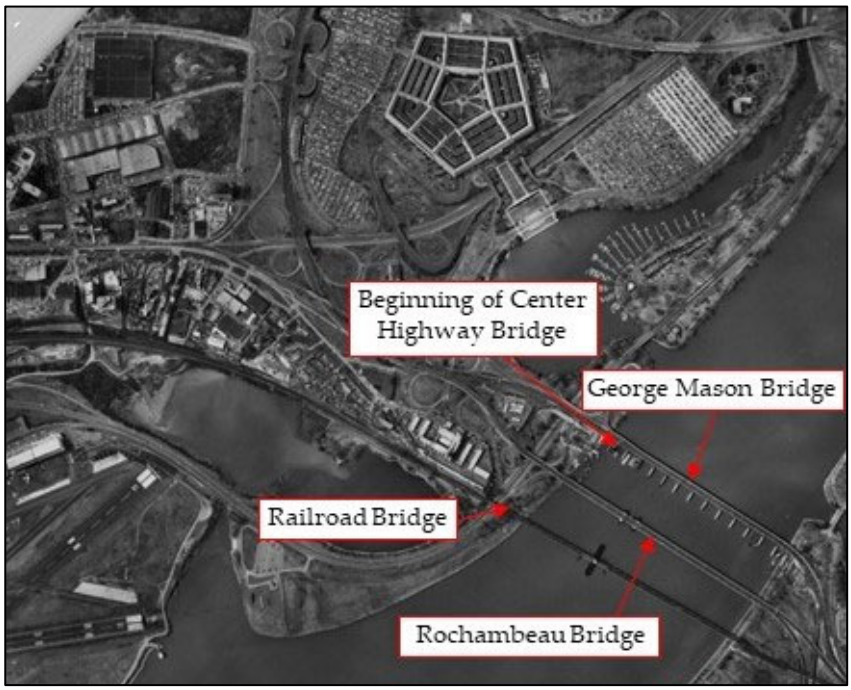


Supplemental Information Figure 10. 1957 Aerial photograph showing the bridges over the Potomac and the Pentagon (Arlington County Government 1957).

In 1962, the George Mason Bridge was completed, replacing the 1906 Highway Bridge. The new 4-lane bridge ran southbound-only with the Rochambeau Bridge still running northbound (Figure 11). Upon the opening of the George Mason Bridge, the 1906 steel truss Highway Bridge was removed. Less than a decade later, in 1971, a new span was opened immediately to the east of the George Mason Bridge (Figure 12). This new bridge had two express lanes running in each direction. It was originally known as the Center Highway Bridge and sometimes as the 14th Street Bridge.



Supplemental Information Figure 11. 1965 Washington West and Alexandria Quadrangle Map (USGS 1965).

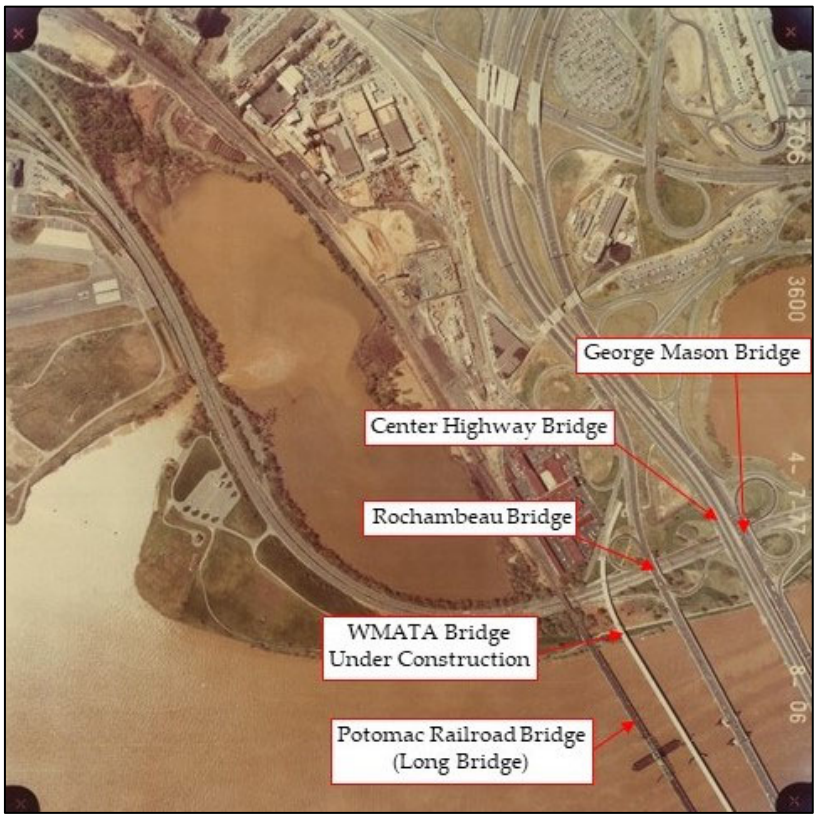


Supplemental Information Figure 12. 1969 Aerial photograph showing the bridges over the Potomac and the Pentagon (Arlington County Government 1969).

The final bridge in the area is the Charles R. Fenwick Bridge, which was opened in 1983 and carries Metro's Yellow Line over the Potomac. Based on aerial photographs from the 1970s, it appears that construction on this bridge started between 1976 and 1977 (Figure 13 and Figure 14).



Supplemental Information Figure 13. 1974 Aerial photograph showing the bridges over the Potomac and the Pentagon (Arlington County Government 1974).

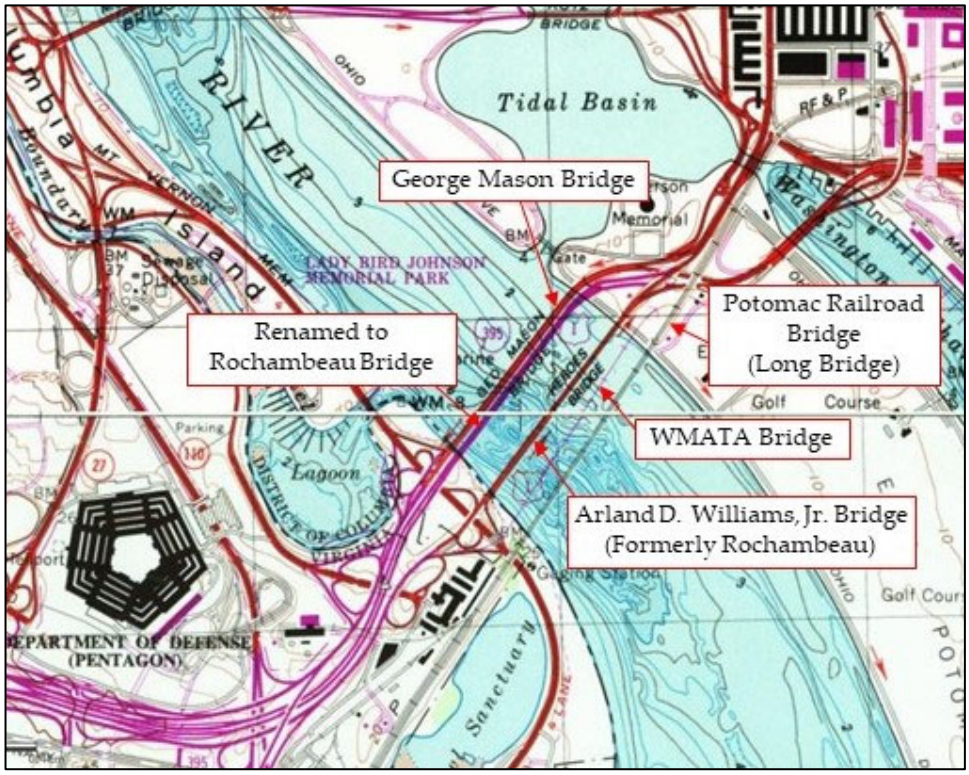


Supplemental Information Figure 14. 1977 Aerial photograph showing the bridges over the Potomac and the Pentagon (Arlington County Government 1977).

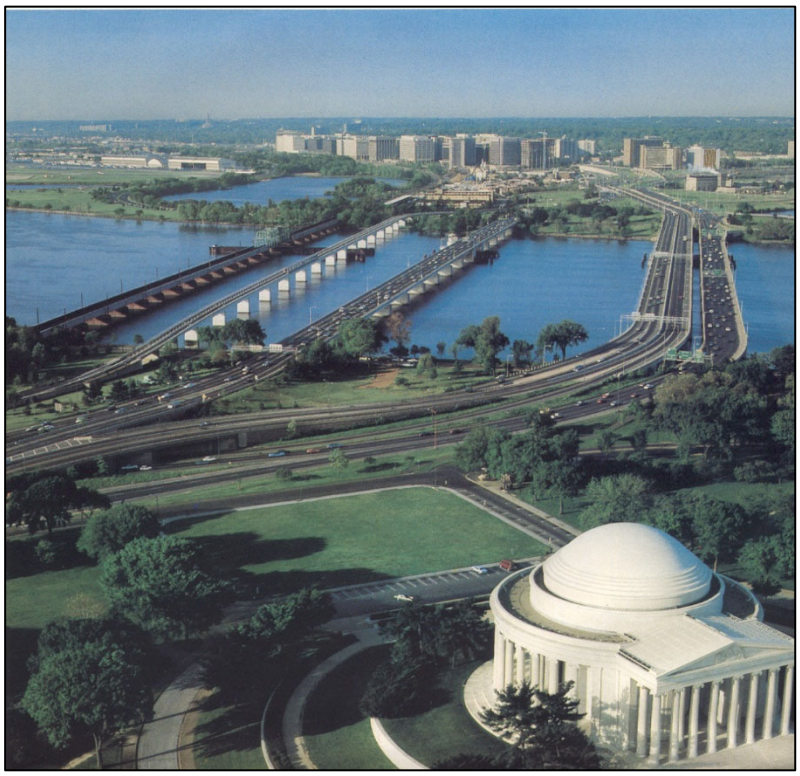
In 1982, Air Florida Flight 90 crashed into the then named Rochambeau Bridge. To honor the man who gave his life saving his fellow passengers, the Rochambeau bridge (also known as Heroes Bridge for a short period of time) was renamed the Arland D. Williams, Jr. Memorial Bridge (Figure 15). To keep the Rochambeau name, the bridge formerly known as the Center Highway Bridge was renamed the Rochambeau Bridge (Figure 16). From this date on, the bridges within the 14th Street Bridge Complex included (from east to west) the Potomac River Railroad Bridge, the WMATA Yellow Line Bridge, the Arland D. Williams, Jr. Memorial Bridge, the Rochambeau Bridge and the George Mason Bridge.

A few years after the opening of the WMATA bridge, the bridges were once again in the news. However, this time it wasn't due to bridge closures, construction, or damage suffered from flooding. This event was more relevant to how the bridge was used, to expel prostitutes from Washington, DC. In the early hours of July 25, 1989, Washington, DC police, in an unsanctioned

effort to clean up the area in and around 14th Street, marched approximately 2 dozen women accused of prostitution across the Rochambeau (14th Street Bridge) into Virginia. While the women never actually made it to Virginia, local representatives were furious that Washington, DC police attempted to force these women into the Commonwealth (New York Times 1989).



Supplemental Information Figure 15. 1986 Washington West and Alexandria Quadrangle Map (USGS 1986).



Supplemental Information Figure 16. 14th Street Bride Complex Looking Towards Arlington, Virginia. From left, Potomac River Railroad Bridge, WMATA Yellow Line Bridge, Arland D. Williams, Jr. Memorial Bridge, Rochambeau Bridge and George Mason Bridge (Metro Memo Tabloid 1983).

Supplemental Information Title	Supplemental Information Narrative
eTIC GWMP-89007	1951 1,000 Car Parking Area Bldg. T7 Drawing
eTIC 850/108449	1996 Topographic Drawing of National Airport Showing Airport Roadways
eTIC 850/122836	1965 Planting Plan 14th Street Bridge Va. Side Approach-Rochambeau Bridge GWMP
eTIC 850/80012	1974 Screen Planting GSI Parking Expansion Daingerfield Island Marina GWMP
eTIC 850/80140	1982 Potomac River Generating Station C Bike Path Bridge at Screen House
eTIC 850/80156	1932 Planting Plan Gravelly Point Station 85 to Station 115

eTIC 850/80171	1937 Potomac Park Levee Concrete Wall Section Drawing
eTIC 850/80200	1950 Bus Turnouts MVMH at Daingerfield Island GWMP Sec 5
eTIC 850/80221	1954 Plans for Proposed Fence for the North End of the Washington National Airport
eTIC 850/85097	1940 Relocation of Bridle Trail at Airport
eTIC 850/85139	1939 Washington National Airport General Plan illustrating proposed land reclamation, realignment of MVMH, and airport configuration superimposed over existing conditions
eTIC 850/85168	1936 Supplemental Planting Plan MVMH
eTIC 850/85625	1962 Location of Shoreline at Gravelly Point
eTIC 850/85389	1955 Revised Road Alignment Washington Sailing Marina GWMP
eTIC 850/85428	1957 Elimination of Memorial Circle
eTIC 850/85634	1963 Planting at Gravelly Point
eTIC 850/85634A	1964 A Planting Plan GWMP From 14th Bridge to Alexandria & Columbia Island Marina
eTIC 850/85731	1965 GWMP Sign Plan
eTIC 850/85813	1969 Dogwood Plantings Gravelly Pt-N. George Mason Bridge GWMP
eTIC 850/85854B	1971 Mixing Bowl Interchange Complex Planting Plan
eTIC 850/85870	1967 Program map for Governors Grove Dogwood Planting at Gravelly Point, March 18
eTIC 850/85479	1959 Monotube Street Lighting Standards
eTIC 850/80151_Z1	2015 Governor's Grove Replanting Gravelly Point GWMP
eTIC GWMP-85189	1943 Grading and Drainage Plans for Daingerfield Island
eTIC GWMP-80145	1982 Preliminary Location of Bike Trail, Daingerfield-Pepco Plant
eTIC GWMP-122485	1941 Drawing Before Dredging the Potomac River at Daingerfield Island
eTIC GWMP-85624	1963 Drawing for Bulkheads at Daingerfield Island and Yacht Maria and Potomac Greens

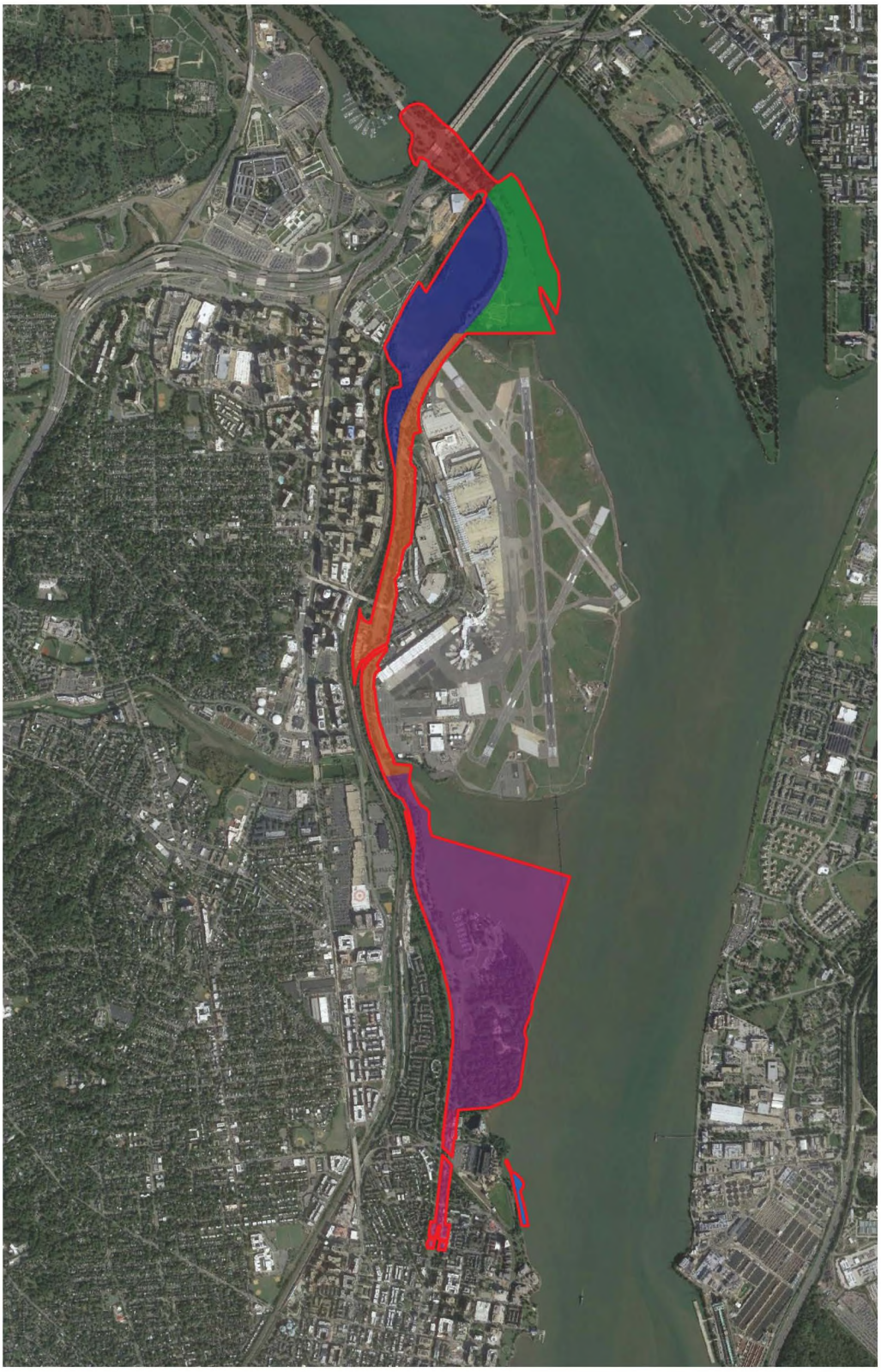
eTIC GWMP-80116	1980 14th Street Bridge Renovation Planting Plan

Cultural Landscape Inventory

Mount Vernon Memorial Highway -
North of Alexandria (MVMH - North)

National Park Service
National Capital Area Office

George Washington Memorial Parkway



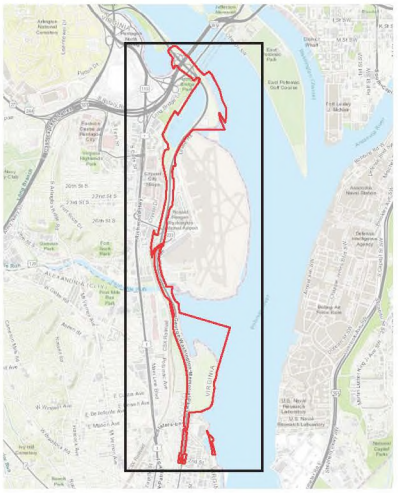
Sources:
1. Esri, HERE, Garmin, Intermap
2. Ortho Imagery, 2021

Character Areas

Legend:

- MVMH North CLI Boundary
- Bridges
- Roaches Run
- Gravelly Point
- Airport
- Daingerfield Island
- Alexandria Approach
- Alexandria Waterfront

Key Map:



NORTH

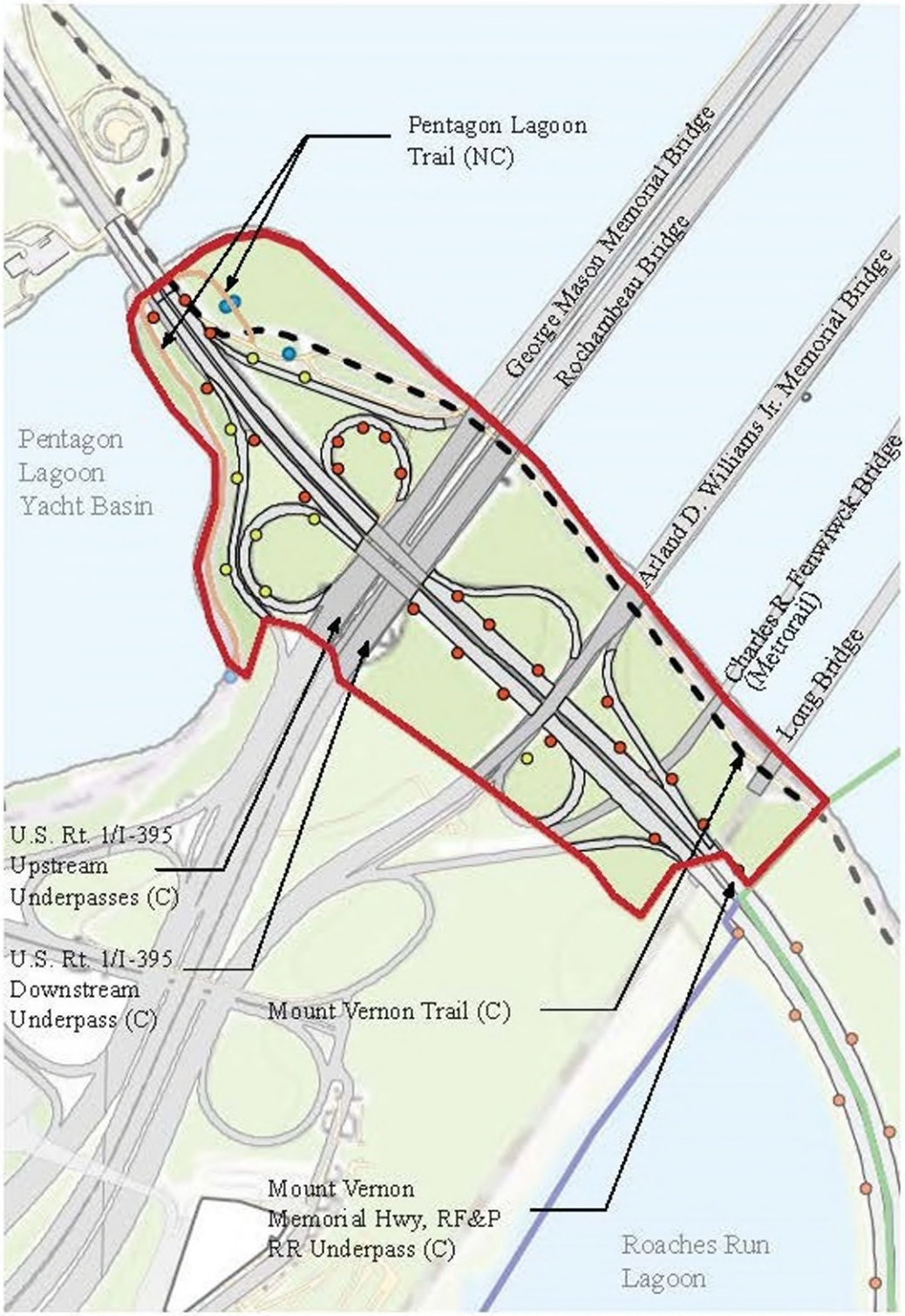
0 0.25 0.5 1 Mile

Cultural Landscape Inventory

Mount Vernon Memorial Highway -
North of Alexandria (MVMH - North)

National Park Service
National Capital Area Office

George Washington Memorial Parkway



Note: Although the Mount Vernon Trail is depicted on all Character Area maps, it is labeled only once.

Sources:

1. Esri, HERE, Garmin, Intermap
2. Arlington County GIS Open Data, 2021

Character Area Enlargement 1: Bridges

Legend:

- Bridges
- Mount Vernon Trail (Contributing)
- Light Standard (Undetermined)
- Light Standard (Noncontributing)
- Culverts (Undetermined)

Key Map:



NORTH

0 200 400 800

Feet

Cultural Landscape Inventory

**Mount Vernon Memorial Highway -
North of Alexandria (MVMH - North)**

**National Park Service
National Capital Area Office**

George Washington Memorial Parkway



Sources:

1. Esri, HERE, Garmin, Intermap
2. Arlington County GIS Open Data, 2021

Character Area Enlargement 2: Gravelly Point

Legend:

- Gravelly Point
- Mount Vernon Trail
- Light Standard (Undetermined)
- Culverts (Undetermined)

Key Map:



NORTH

0 200 400 800

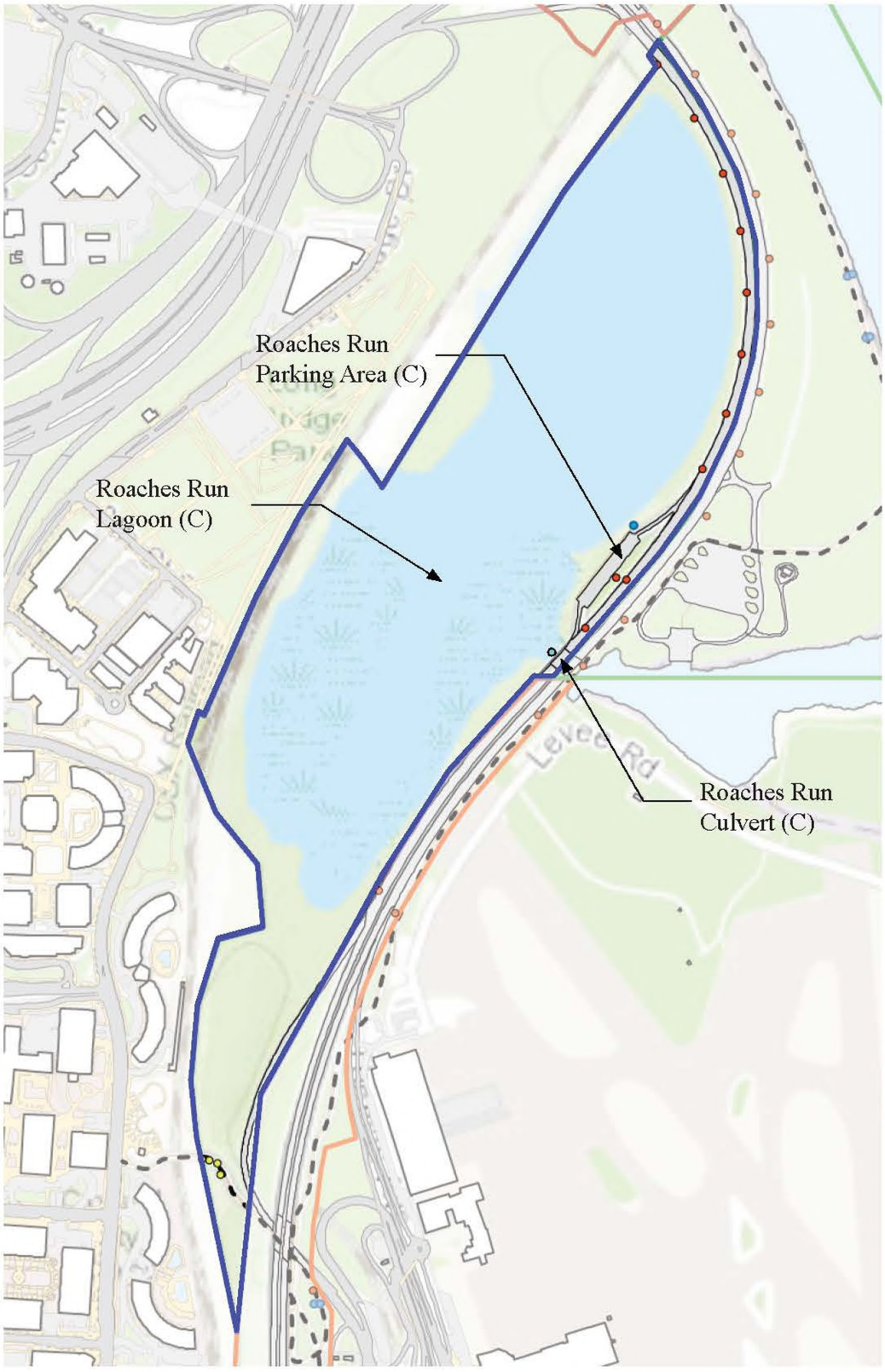
Feet

Cultural Landscape Inventory

Mount Vernon Memorial Highway - North of Alexandria (MVMH - North)

National Park Service
National Capital Area Office

George Washington Memorial Parkway



Sources:
1. Esri, HERE, Garmin, Intermap
2. Arlington County GIS Open Data, 2021

Character Area Enlargement 3: Roaches Run

Legend:
- Roaches Run
- Mount Vernon Trail
- Light Standard (Undetermined)
- Light Standard (Noncontributing)
- Culverts (Undetermined)

Key Map:



NORTH

0 125 250 500

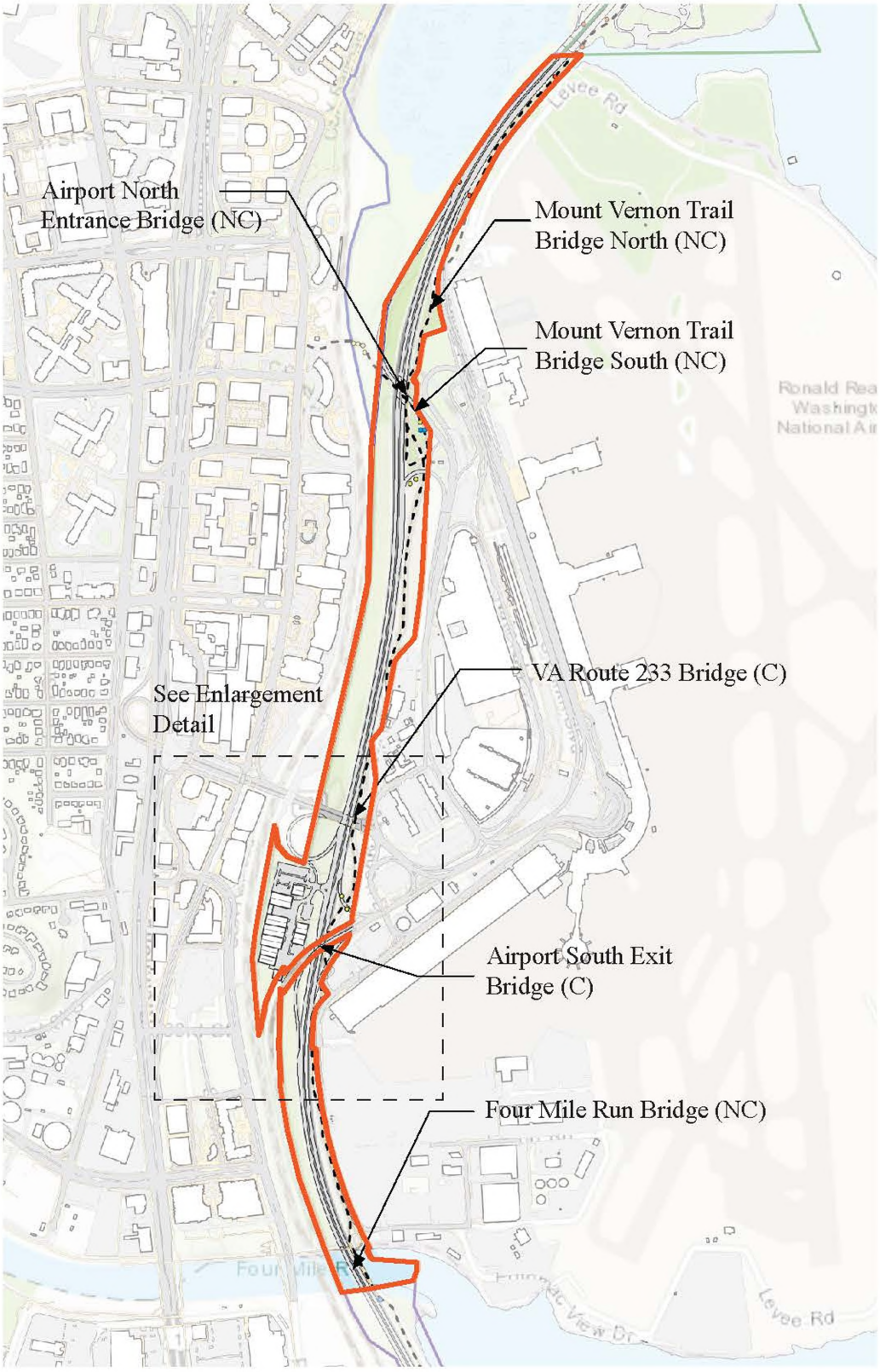
Feet

Cultural Landscape Inventory

Mount Vernon Memorial Highway -
North of Alexandria (MVMH - North)

National Park Service
National Capital Area Office

George Washington Memorial Parkway



Sources:
1. Esri, HERE, Garmin, Intermap
2. Arlington County GIS Open Data, 2021

Character Area Enlargement 4: Airport

Legend:
- Airport
- Mount Vernon Trail
- Light Standard (Undetermined)
- Light Standard (Noncontributing)
- Culverts (Undetermined)

Key Map:



NORTH

0 500 1000 2000

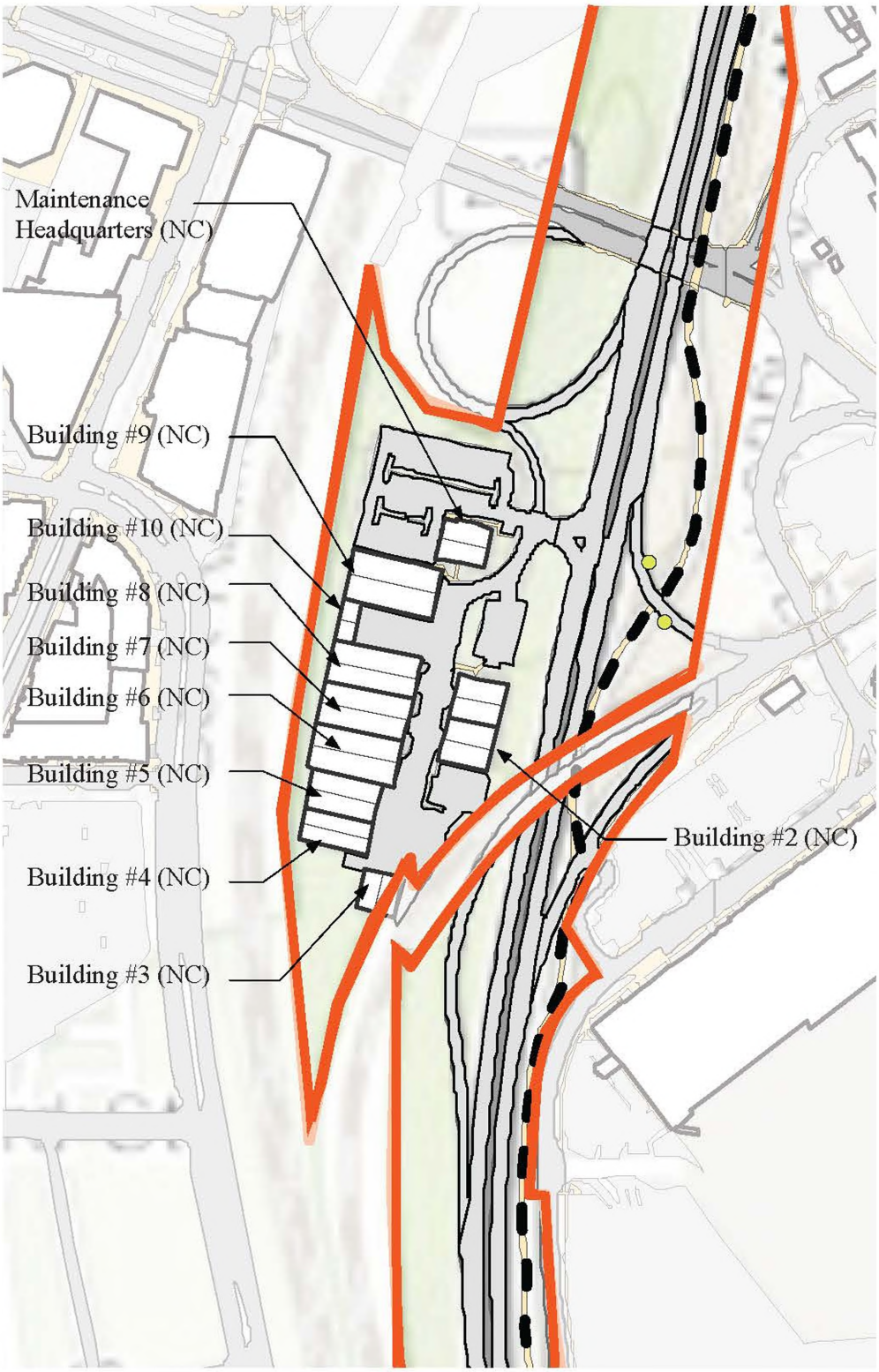
Feet

Cultural Landscape Inventory

Mount Vernon Memorial Highway -
North of Alexandria (MVMH - North)

National Park Service
National Capital Area Office

George Washington Memorial Parkway



Sources:

1. Esri, HERE, Garmin, Intermap
2. Arlington County GIS Open Data, 2021

Character Area Enlargement Detail: Parkway Maintenance Headquarters

Legend:

- Airport
- Mount Vernon Trail
- Light Standard (Noncontributing)

Key Map:



NORTH

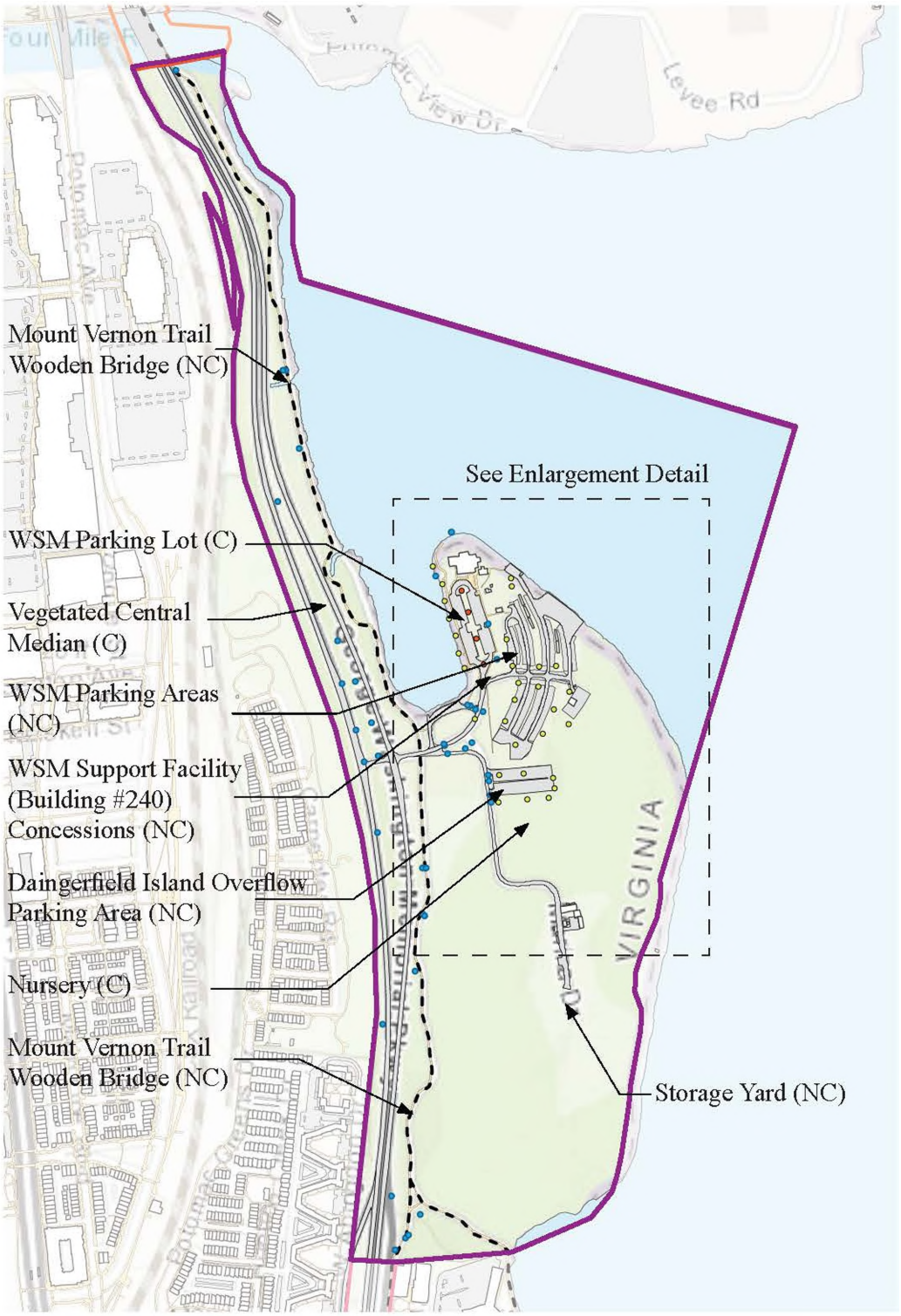
0 125 250 500

Feet

Cultural Landscape Inventory

Mount Vernon Memorial Highway -
North of Alexandria (MVMH - North)

National Park Service
National Capital Area Office
George Washington Memorial Parkway



Note: WSM = Washington Sailing Marina

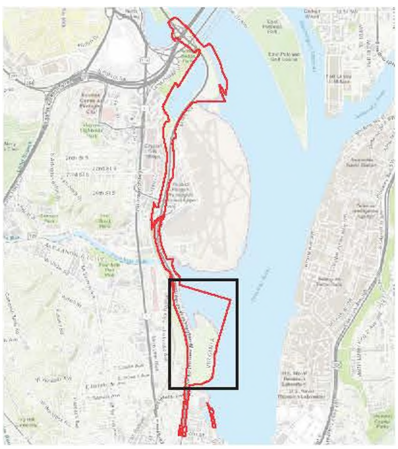
Sources:
1. Esri, HERE, Garmin, Intermap
2. City of Alexandria GIS Open Data, 2021

Character Area Enlargement 5: Daingerfield Island

Legend:

- Daingerfield Island
- Mount Vernon Trail
- Light Standard (Undetermined)
- Light Standard (Noncontributing)
- Culverts (Undetermined)

Key Map:



NORTH

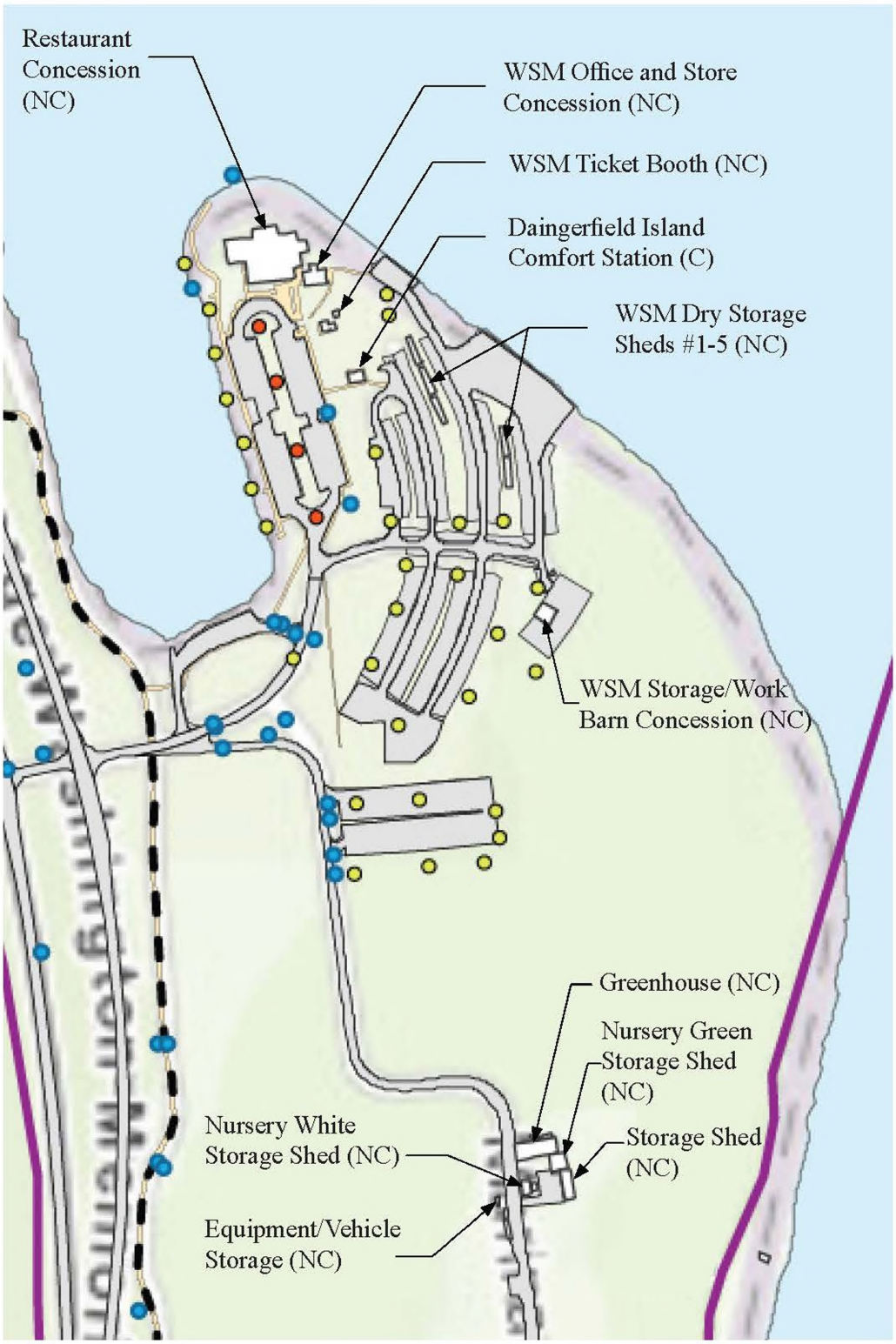
0 400 800 1600

Feet

Cultural Landscape Inventory

Mount Vernon Memorial Highway - North of Alexandria (MVMH - North)

National Park Service
National Capital Area Office
George Washington Memorial Parkway



Note: WSM = Washington Sailing Marina

Sources:
1. Esri, HERE, Garmin, Intermap
2. City of Alexandria GIS Open Data, 2021

Character Area Enlargement Detail: Daingerfield Island Marina and Nursery

Legend:
- Daingerfield Island
- Mount Vernon Trail
- Light Standard (Undetermined)
- Light Standard (Noncontributing)
- Culverts (Undetermined)

Key Map:



NORTH

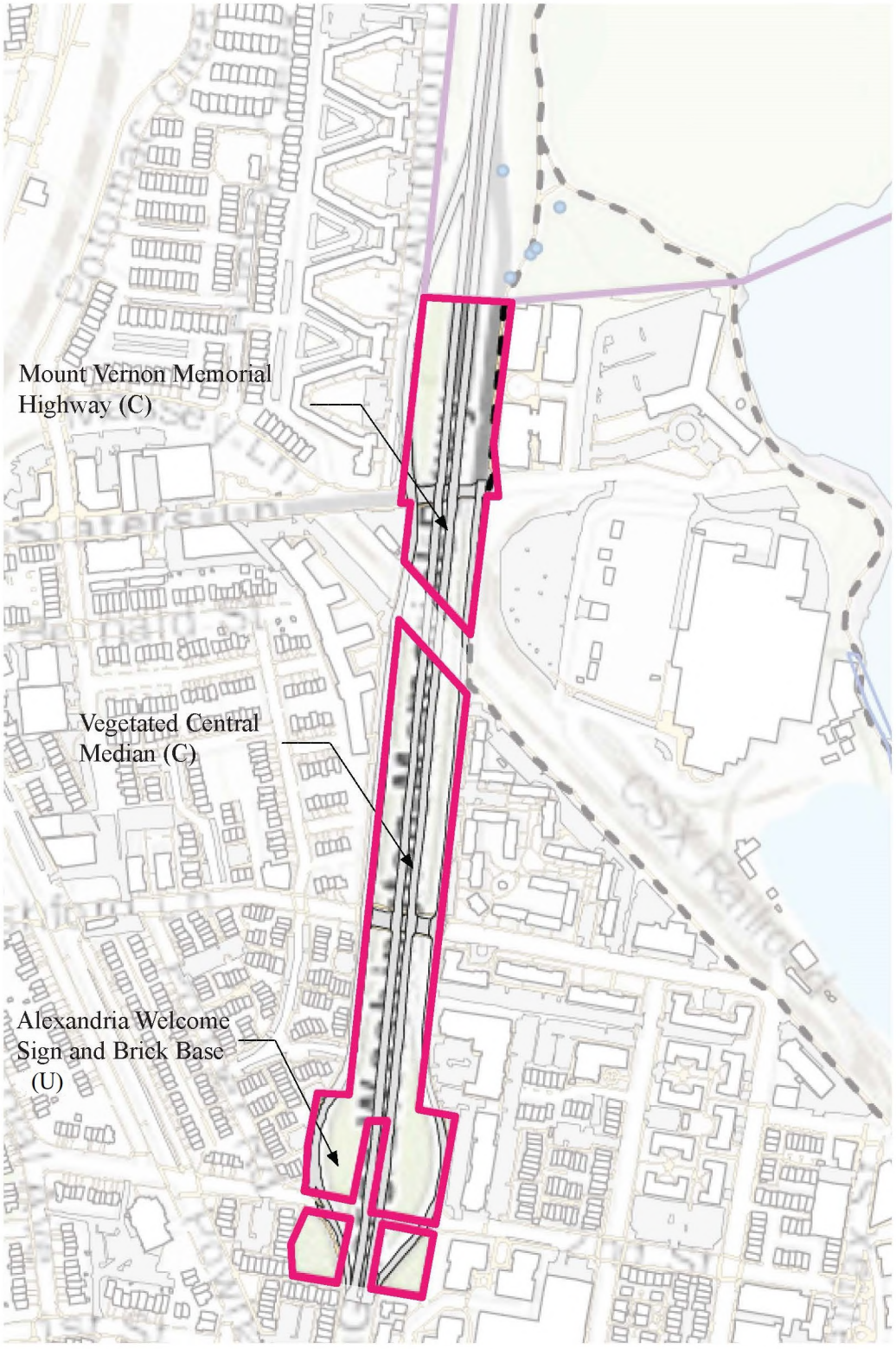
0 125 250 500 Feet

Cultural Landscape Inventory

**Mount Vernon Memorial Highway -
North of Alexandria (MVMH - North)**

**National Park Service
National Capital Area Office**

George Washington Memorial Parkway



Sources:

1. Esri, HERE, Garmin, Intermap
2. City of Alexandria GIS Open Data, 2021

Character Area Enlargement 6: Alexandria Approach

Legend:

- Alexandria Approach
- Mount Vernon Trail

Key Map:



NORTH

0 200 400 800

Feet

Note: Although the Mount Vernon Memorial Highway is depicted on all Character Area maps, it is labeled only once.

Cultural Landscape Inventory

Mount Vernon Memorial Highway - North of Alexandria (MVMH - North)

National Park Service
National Capital Area Office

George Washington Memorial Parkway



Sources:

1. Esri, HERE, Garmin, Intermap
2. City of Alexandria GIS Open Data, 2021

Character Area Enlargement 7: Alexandria Waterfront

Legend:

- Alexandria Waterfront
- Mount Vernon Trail
- Culverts (Undetermined)

Key Map:



NORTH

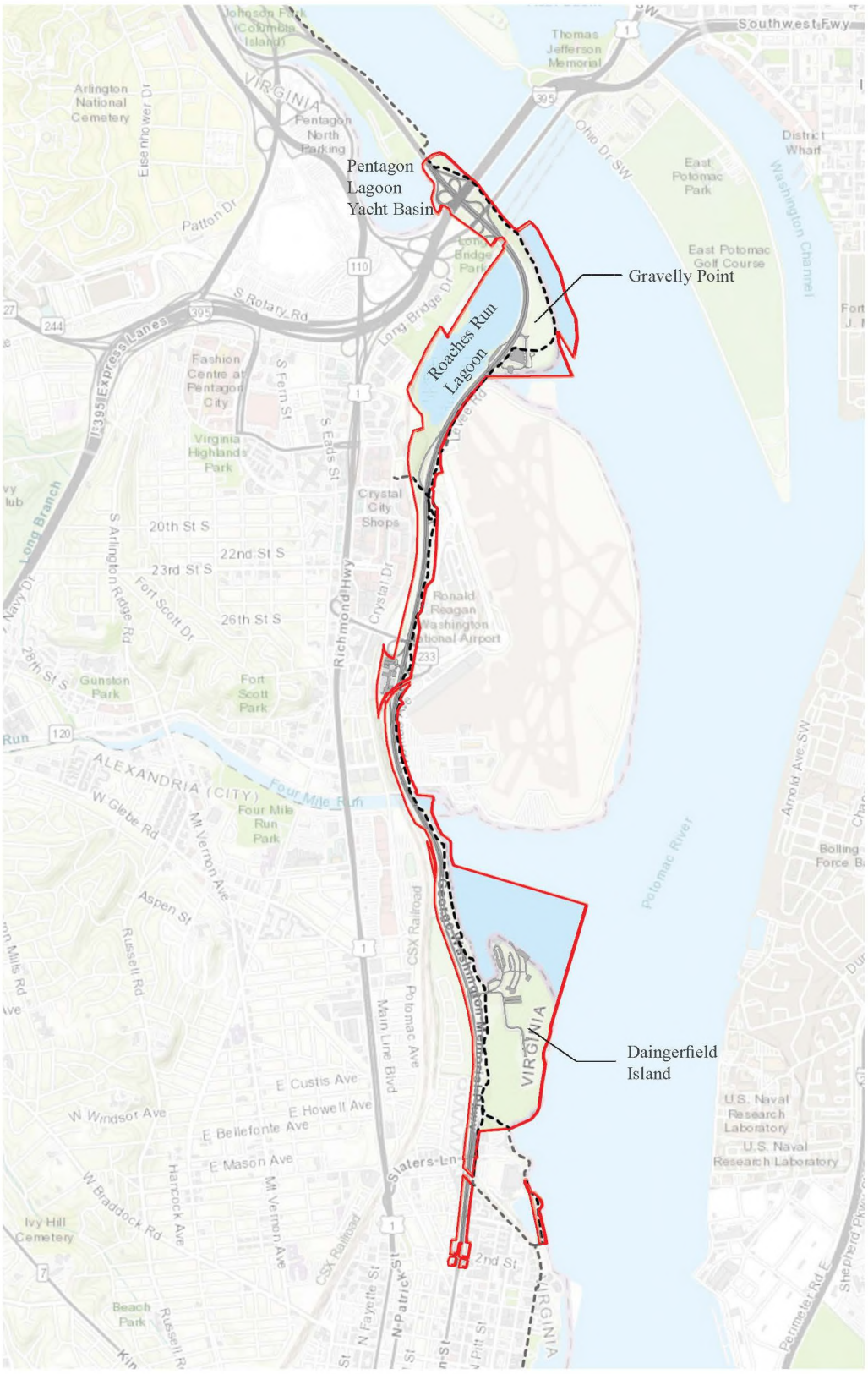
0 125 250 500

Feet

Cultural Landscape Inventory

Mount Vernon Memorial Highway -
North of Alexandria (MVMH - North)

National Park Service
National Capital Area Office
George Washington Memorial Parkway

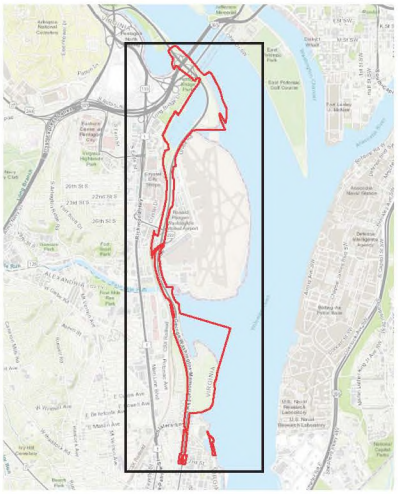


Sources:
1. Esri, HERE, Garmin, Intermap

MVMH - North Site Plan

Legend:
- Mount Vernon Trail
- MVMH North Boundary

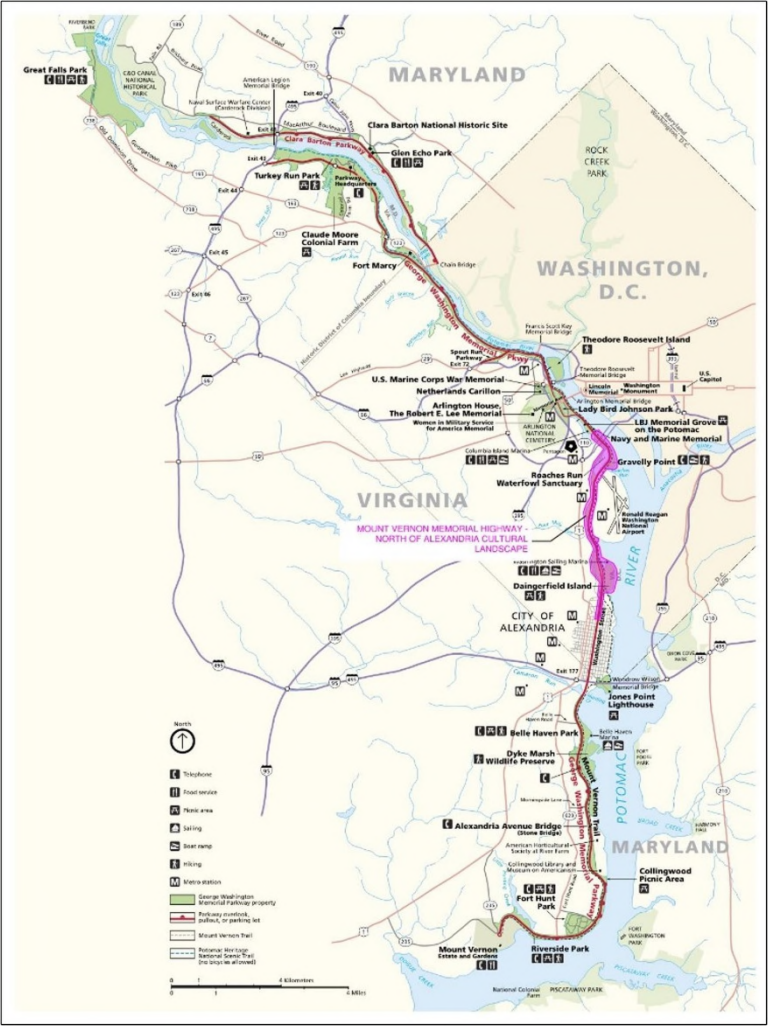
Key Map:



NORTH

0 0.25 0.5 1

Mile


MARYLAND
WASHINGTON, D.C.
VIRGINIA
MARYLAND
ROCK CREEK PARK
POTOMAC RIVER
Great Falls Park
C&O CANAL NATIONAL HISTORICAL PARK
American Legion Memorial Bridge
Naval Surface Warfare Center (Carderock Division)
Clara Barton National Historic Site
Glen Echo Park
Clara Barton Parkway
Turkey Run Park
Parkway Headquarters
Claude Moore Colonial Farm
Fort Marcy
Chain Bridge
George Washington Memorial Parkway
Francis Scott Key Memorial Bridge
Theodore Roosevelt Island
Theodore Roosevelt Memorial Bridge
Sprout Run Parkway
U.S. Marine Corps War Memorial
Netherlands Carillon
Lincoln Memorial
Washington Monument
U.S. Capitol
Arlington House, The Robert E. Lee Memorial
Women in Military Service for America Memorial
ARLINGTON NATIONAL CEMETERY
Arlington Memorial Bridge
Lady Bird Johnson Park
LBJ Memorial Grove on the Potomac
Navy and Marine Memorial
Columbia Island Marina
Gravelly Point
Roaches Run Waterfowl Sanctuary
MOUNT VERNON MEMORIAL HIGHWAY - NORTH OF ALEXANDRIA CULTURAL LANDSCAPE
Ronald Reagan Washington National Airport
Daingerfield Island
CITY OF ALEXANDRIA
Washington Street
Memorial Bridge
Jones Point Lighthouse
Belle Haven Park
Belle Haven Marina
Dyke Marsh Wildlife Preserve
Mount Vernon Trail
Alexandria Avenue Bridge (Stone Bridge)
American Horticultural Society at River Farm
Collingwood Library and Museum on Americanism
Collingwood Picnic Area
Fort Hunt Park
Mount Vernon Estate and Gardens
Riverside Park
National Colonial Farm
PISCATAWAY PARK
North
Telephone
Food service
Picnic area
Sailing
Boat ramp
Hiking
Metro station
George Washington Memorial Parkway property
Parkway overlook, pullout, or parking lot
Mount Vernon Trail
Potomac Heritage National Scenic Trail (no bicycles allowed)
0 1 2 4 Kilometers
0 1 2 4 Miles